Air circuit breaker IZM9

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Air circuit breaker IZM9

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Air circuit breaker IZM9 series

IZM superior feature: compact size

Applying the latest technology, IZM91 has the same size as molded case circuit breakers while possesses protection functions and features of air circuit breakers.

Two withdrawable circuit breakers can be installed into a 600 mm wide section. This enables more economical section design and also saves operating space.

Air circuit breaker IZM97, 99

Air circuit breaker IZM97, 99 series

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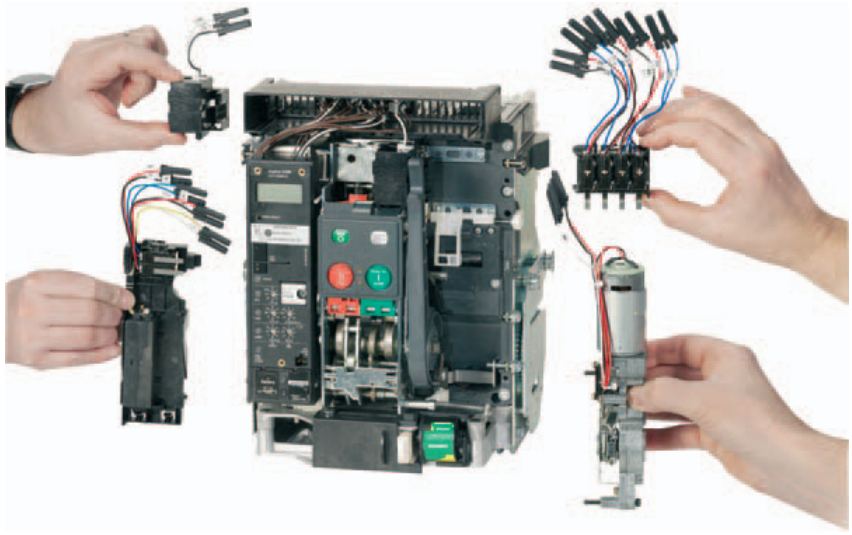
1.1 Air circuit breaker IZM9

Key features



IZM91

The innovative concept of the IZM91 makes it possible to install two withdrawable circuit-breakers in a 600 mm wide section. This enables more economical section design and also performance in a minimum of space goes far beyond the standard available worldwide.

Applications

The circuit-breakers can be used in four main application areas depending on the type of equipment to be protected:

- System protection,
- Motor protection,
- Transformer protection,
- Transformer protection,

These key applications make different demands on the switches, which are met with a range of control units.

Switches with closing release

They are particularly suitable forsynchronization tasks.

Coupler switches

Beside the IZM91 circuit-breakers, IN91 switch-disconnectors are available. These are used, forexample, as coupler switchesbetween different power supplies.

Modular design

The retrofitting of accessories is made considerably easy thanks to the efficient "plug & work" technology. Accessory drawers and snap-fit mechanisms makes it possible to fit the latest accessories with virtually no tools. This allows you to respond flexibly to changing requirements within your system.

Standard scope of delivery as usual

- With the new IZM91, you select a basic device that is already fitted with an electronic release.
- The standard mounting is on a horizontal mounting plate or on horizontal traverses in the switching horizontal traverses in the switching cabinet. The IZM91 can also be fastened to vertical mounting plates.
- With four-pole devices, the neutral conductor is arranged on the left (front view).
- The neutral conductor can be loaded 100% like the phase conductors.
- The circuit-breakers are provided with a standard mechanical reclosing lockout. After an overload trip,the fault is usually examined first of all. After the fault is identified and rectified, the mechanical reclosing lockout is reset by pressing the red mechanical trip indicator on the front of the circuit-breaker.
- An "Automatic Reset" can beordered as an option. This enables the circuit-breaker to be restored to operation immediately at any time after the spring-operated stored energy mechanism is retensioned. In these applications compulsory fault analysis is intentionally avoided.
- The number of control cable terminals depends on the accessories fitted.
- If a cassette is ordered without the basic device, this can be already fitted with the maximum number of control cable terminals. For greater economy in large plants, the cassette is also offered without control circuit terminals so that fitting can be carried out later at the installation or when the required accessories are determined at a later time.
- 2 changeover contacts are provided as standard for ON/OFF status indication.
- A coding mechanism between the basic device and the cassette prevents impermissible combinations("Rejection Interlock").

Expanded standard scope of delivery for IZM91

Some order types from the past can no longer be found since the following options are now already part of the standard scope of delivery:

- The door escutcheon is now always included in the scope of delivery.With withdrawable designs this is supplied with the cassette (withrawable unit).
- On withdrawable units the circuit-breaker can be pulled out to inspect the arc chutes. With fixed units, it is recommended that sufficient space is provided above the circuitbreaker to enable inspection.An additional cover is not required.
- All basic devices that are provided with universal protection (with Digitrip 520M …), now feature a display.
- On each circuit-breaker the integrated Digitrip electronic release is factory fitted with a sealable protective cover.
- If a motor operator is ordered, the "Spring-operated stored energy tensioned" indicator switch is automatically provided.

Other benefits of the IZM91

- The design of the main terminal offers maximum flexibility. The horizontal terminal can be rotated simply at the installation so that it can also be used as a vertical connection. With withdrawable units, additional terminal pieces can.even be dispensed with. The cassette of the IZM91 offers an integrated flange terminal to connected directly. For this reason, the main terminal pieces for IZM91 are not part of the standard scope of delivery. Don't forget to order additionally required terminal pieces if needed.
- Thanks to the separate mounting position, a switching operations counter can now be used also independently of a motor operator.
- Withdrawable unit operation: The unit is actuated with a hand crank supplied as a standard feature and has a secure position in the basic device. This is now possible also with a standard tool (square drive socket 1/4").

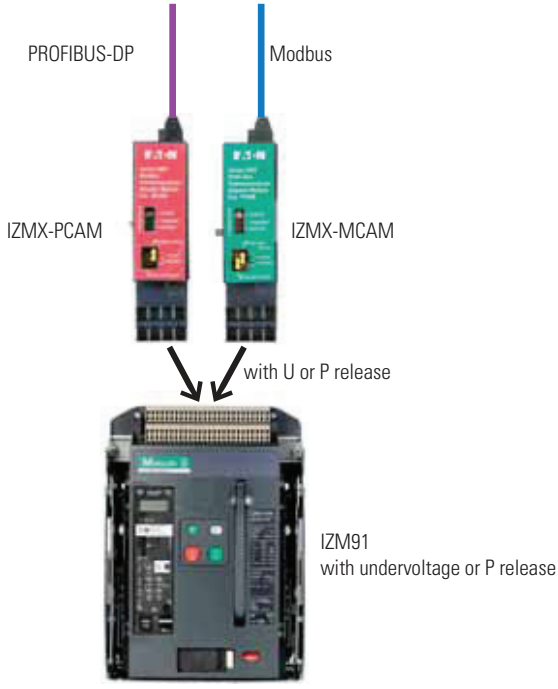
External 24 V supply

- The standard protection functions of the IZVM91 operate generally independently of an external control voltage supply. The power supply of the electronics unit, for example for overload and short-circuit protection, is implemented via the current transformers integrated in the circuit breaker.
- The universal release unit with display can be fed with a 24 V DC supply if required so that the display function can also be used without a load. An external 24 V DC power supply is needed if communication functions are required.

Communication capability

The communication-capability of the IZM91 circuit-breakers open up new possibilities in power distribution. It provides all important operational information and passes this on. This increases system transparency and shortens the response times to states such as overcurrent, phase asymmetry and overvoltage.
A rapid intervention in a process can, for example, prevent downtimes and help to schedule maintenance activities and therefore boost plant availability. A Modbus interface is offered as an alternative in addition to the Profibus interface.

Configuration



Greater safety for maintenance personnel with ARMS™

If the IZM91 is fitted with the newly patented ARMS system (Arcflash Reduction Maintenance System™), a non-delayed immediate disconnection is ensured in the event of an arc fault. This disconnection is even faster than that of a non-delayed short-circuit release.
This function can be activated directly on the circuit-breaker or via an external switch, such as when maintenance enter a hazardous area. Other components of the ARCON arc fault system, in conjunction with the IZM91, enable an expansion of arc fault protection in stages. ARCON on the Internet: www.moeller.net/arcon

Selection criteria for IZM91 circuit-breakers

Fundamental criteria for the selection of circuit-breakers:

- Max short-circuit current I the circuit-breaker' point of installation: this value determines the short- circuit breaking capacity or the short-circuit current carrying capacity of the circuit-breaker. It iscompared with the L_{cu},I_{cs} and L_{cw}values of the switch and essentially determines its size (see Technical data).
- Rated operational current L_n which should flow through the respective branch circuit:This value must not be greater than the maximum switch rated operational current of the circuit breaker.

he rated operational current can be adjusted down using additional rated operational current modules.

- Ambient temperature of the circuitbreaker: This is generally the internal temperature in the control panel.Observe the derating values with increased ambient temperature (see Technical data).
- Circuit-breaker type: fixed mounted or withdrawable units, 3 or 4 pole.
- Minimum short-circuit current, which flows through the switching device: The release must recognize this value as a short-circuit and may react with a trip.
- Protection functions of the This is determined by the selection of the respective overcurrent release.

Documentation

Operating manual AWB1230-1628de (deutsch)
AWB1230-1628en (english)

CurveSelect characteristics program

Display characteristic curves according to specific settings and assess their interaction effectively: www.moeller.net/de/support

Components for IZM91 communication

For the IZM91, PROFIBUS-DP or Modbus RTU are optionally available as fieldbus connections. Communication modules IZMX-PCAM and IZMX-MCAM are compact units for direct mounting in the auxiliary terminal strip. On retrofitting, four modular terminals are replaced with one communication module. This is possible for both for fixed and withdrawable units. The terminals provide all data available in the trip block to the fieldbus, including switching state, current, voltage, power, energy, and diagnostic information such as overcurrent, phase asymmetry and overvoltage.Through the bus the motor operator can also be remotely controlled.

Requirements

The communications modules can be used in combination with IZM91 circuitbreakers …-U or IZM91…-P… (in preparation) circuit-breakers.

Modbus configuration

Communications module IZMX-MCAM has a plug-in screw terminal for connection to Modbus. The module operates as a Modbus slave.

- Baud rate, data format and address (max. 247) for Modbus are set with the input keys of the trip unit. The maximum cable length is 1.2 km.
- The Modbus must be terminated with a 120Ωterminating resistor.
- To operate the IZMX-PCAM, a supply voltage of 24 V DC is required.
- The data connection to the circuit -breaker is implemented internally through a serial high-speed data connection.

Data access via Modbus

The data is contained in comprehensive data tables. Each data point is available as floating-point (IEEE) or fixed-point value. This variance allows the integration of the IZMX to be adapted to the Modbus architecture. This enables a simple means of implementing a data filter, which facilitates the integration of IZMX data in the control system

Data access via PROFIBUS-DP

The data on PROFIBUS-DP are offered according to the profile for low-voltage switchgear (LVSG) of PROFIBUS International (PROFIBUS and PROFINET User Group). Five different data structures with varying numbers of parameters are available through the device master data file. This allows a data filter to be easily implemented, which simplifies integration of the IZM data into the control system.

Documentation

Operator manual
For device series IZM97/IZM99:
AWB1230-1621de (deutsch)
AWB1230-1621en (english)
AWB1230-1622de (deutsch)
AWB1230-1622en (english)

For device series IZM91:
AWB1230-1623de (deutsch)
AWB1230-1623en (english)
AWB1230-1624de (deutsch)
AWB1230-1624en (english)

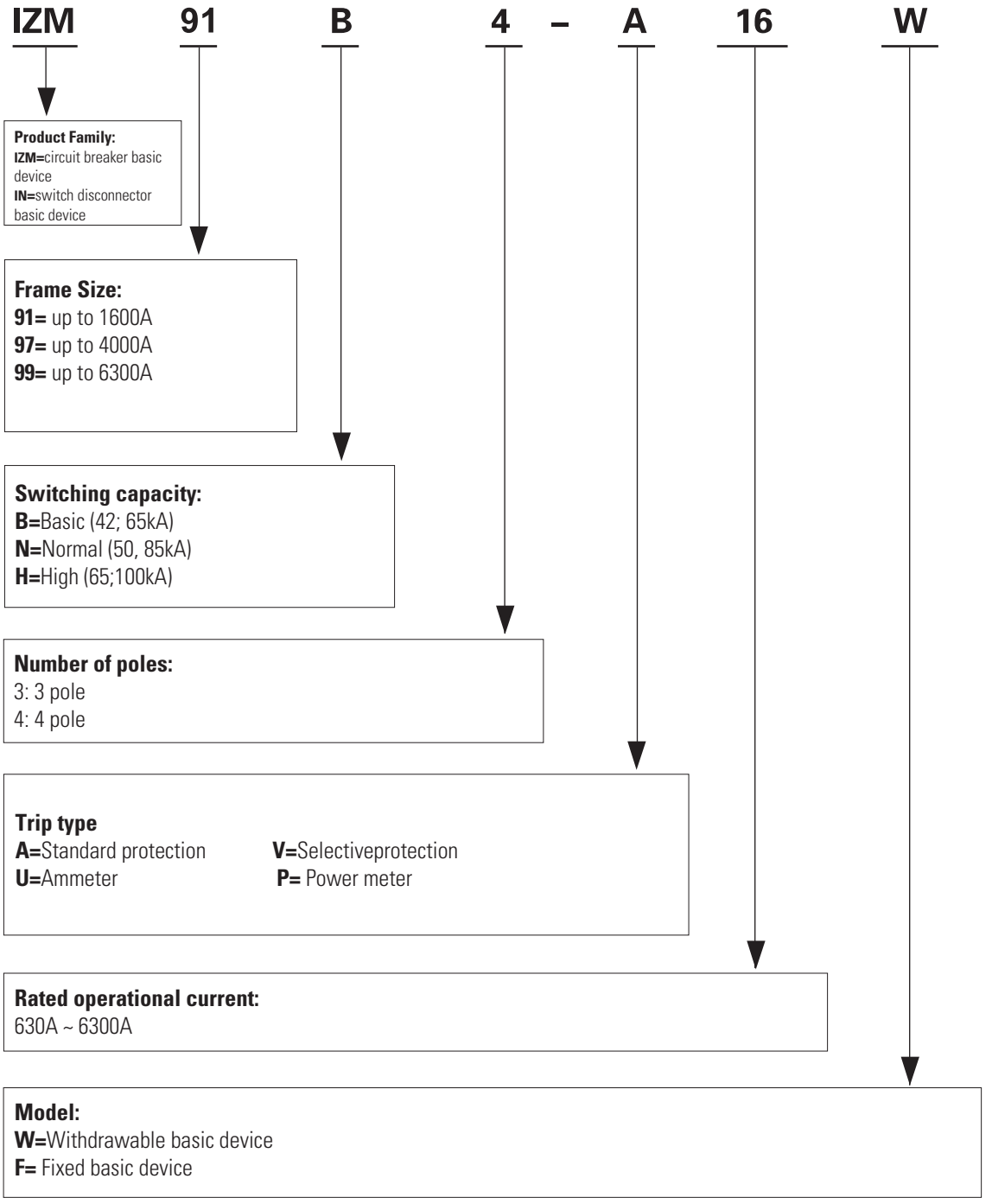
PROFIBUS-DP configuration

Communications module IZMX-PCAM has a 9-pin D-Sub socket for connection to PROFIBUS. The module works as a slave on PROFIBUS-DP; the data is defined through a standardized device master data file, which permits smooth integration of IZMX in a DP line.

- On the PROFIBUS-DP side the module supports automatic baud rate detection;
  The PROFIBUS-DP bus address is set through the trip unit's display. The maximum cable length is 2.4 km.
- To operate the IZMX-PCAM, a supply voltage of 24 V DC is required.
- The data connection to the circuit-breaker is implemented internally through a serial high--speed data connection.

1.2 Air circuit breaker IZM9
Key to type reference

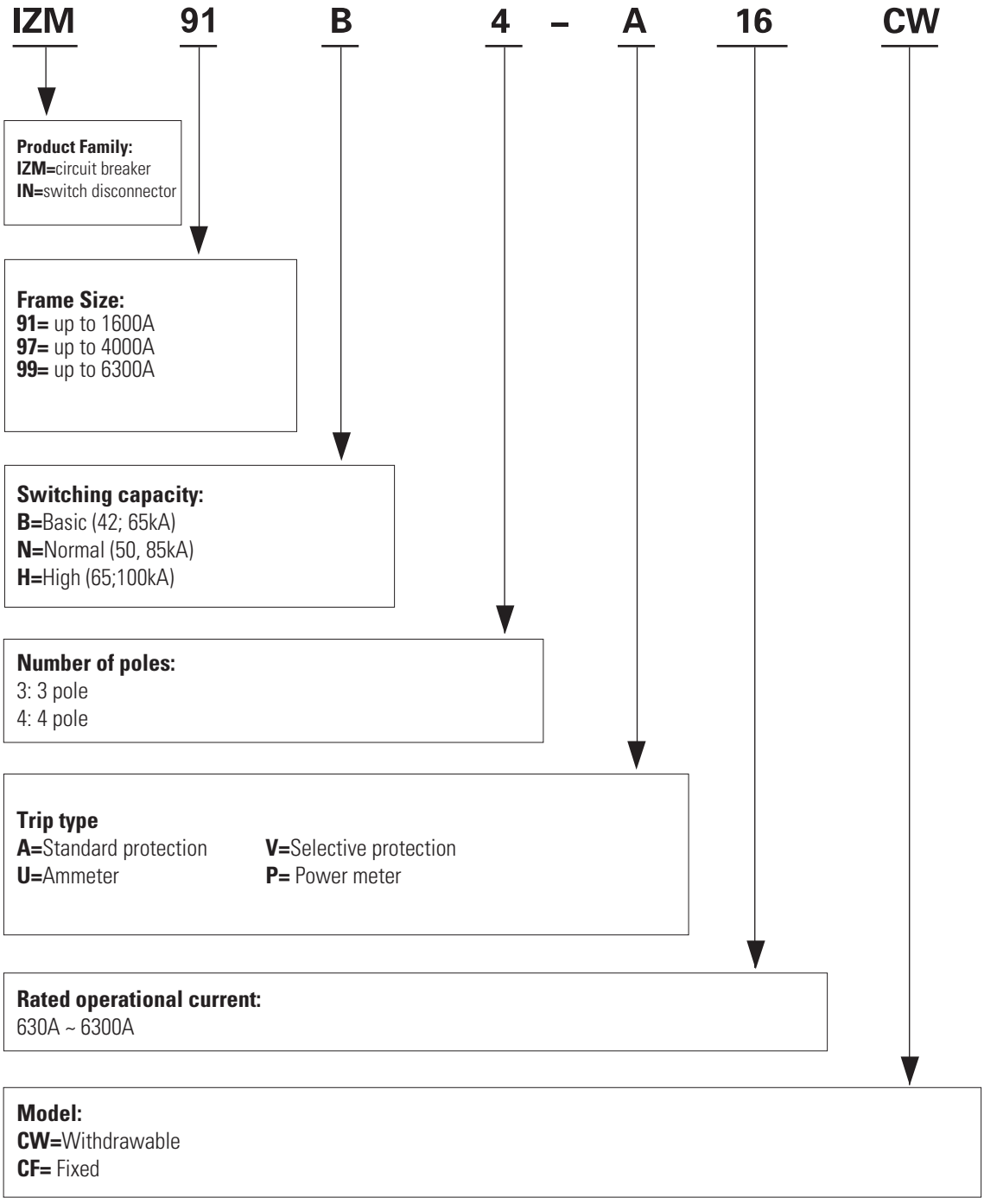
1 Key to type reference of air circuit breaker IZM9



Fixed:
Standard IZM91 basic device includes: fixed circuit breaker basic device, auxiliary contact (2a2b), door escutcheon
Standard IZM93, 97,99 basic device includes: fixed circuit breaker basic device, terminals, auxiliary contact (2a2b), door escutcheon

Withdrawable:
Standard IZM91 basic device includes: withdrawable circuit breaker basic device, auxiliary contact (2a2b), door escutcheon
Standard IZM93,97,99 basic device includes: withdrawable circuit breaker basic device, terminals, auxiliary contact (2a2b), door escutcheon

Key to type reference of air circuit breaker IZM9



Fixed:
Standard: fixed circuit breaker basic device, shunt release (220V AC), closing release (220V AC), motor operator (220V AC), auxiliary contact (4a4b), release signal auxiliary contact (2a2b), door escutcheon, terminals, power supply module (only for U and P type releases)

Withdrawable:
Standard: fixed circuit breaker basic device, shunt release (220V AC), closing release (220V AC), motor operator (220V AC), auxiliary contact (4a4b), trip indication signal auxiliary contact OTS (2a2b), door escutcheon, terminals, power supply module (only for U and P type releases), shutter protection, arc chamber cover, cassette, handle

1.3 Air circuit breaker IZM9
Application range

1

Air circuit breaker

Icu /Ics at Ue=440/690 VAC Icu =rated ultimate short circuit breaking capacity Ics = rated service short circuit breaking capacity		Basic switching capacity (B)		Normal switching capacity (N)		High switching capacity (H)	
	Rated operational current In A	440 V AC I_{cu} /I_{cs} kA	690 V AC I_{cu} /I_{cs} kA	440 V AC I_{cu} /I_{cs} kA	690 V AC I_{cu} /I_{cs} kA	440 V AC I_{cu} /I_{cs} kA	690 V AC I_{cu} /I_{cs} kA
IZM91							
	630-1600	42/42	42/42	50/50	42/42	66/50	42/42
IZM97							
	800-4000	65/65	65/65	85/85	85/85	100/100	85/85
IZM99							
	4000-6300	–	–	85/85	85/85	100/100	100/100

Air circuit breaker

Icw t=1s /t =3s Icw = rated short time withstand current		Basic switching capacity (B)	Normal switching capacity (N)	High switching capacity (H)
	Rated operational current In A	t=1s/t=3 I_{cw} kA	t=1s/t=3s I_{cw} kA	t=1s/t=3s I_{cw} kA
IZM91				
	6300-1600	42/-	42/-	42/-
IZM97				
	800-1600	65/-	85/65	85/65
	2000-3200	65/50	85/65	85/65
	4000	65/50	85/50	85/50
IZM99				
	4000-6300	_	85/65	100/65

Air circuit breaker

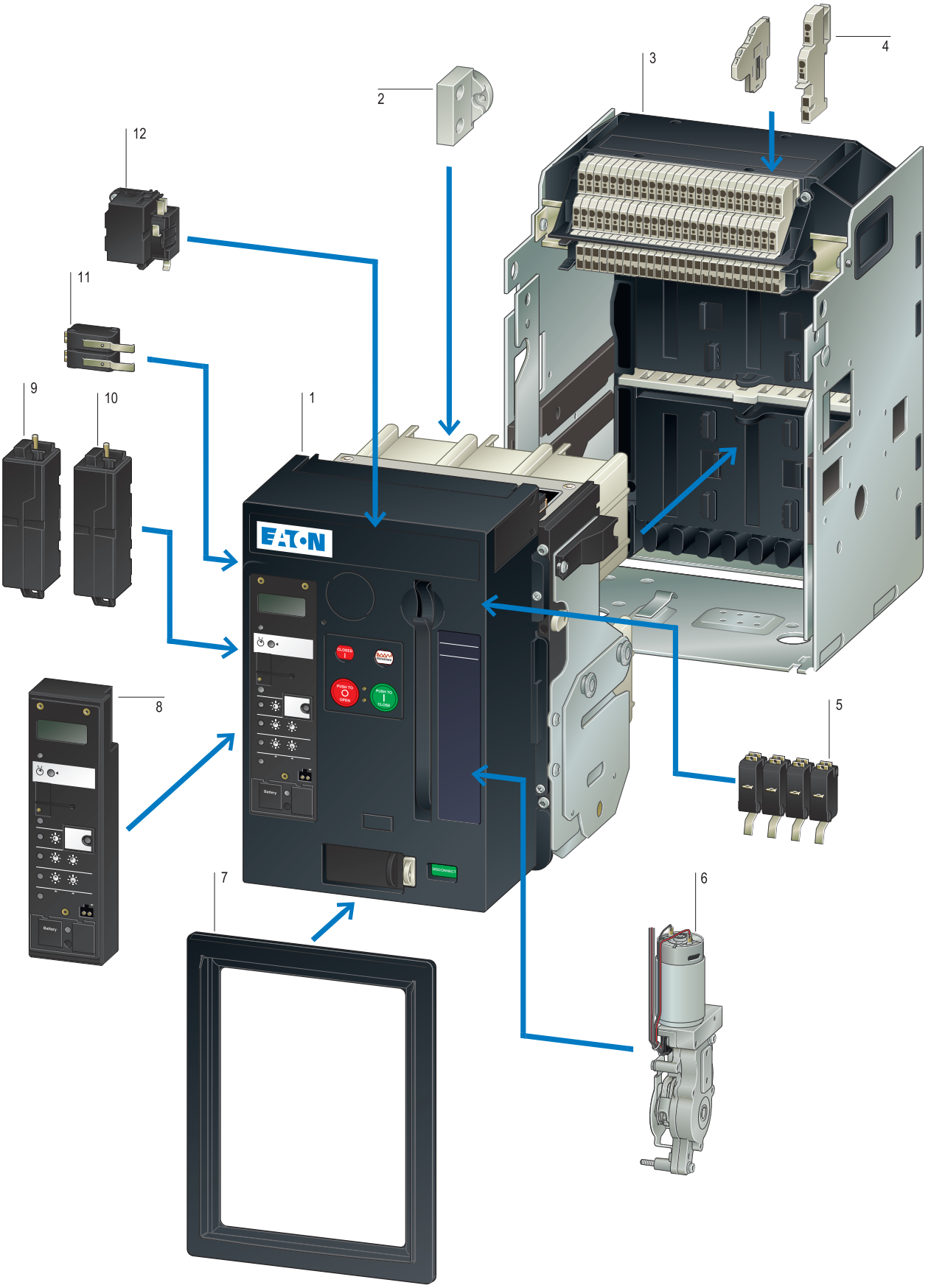
Icm at Ue=440/690 VAC Icm =rated short time making circuit (Peak value)		Basic switching capacity (B)	Normal switching capacity (N)	High switching capacity (H)
	Rated operational current In A	440/690 V AC I_{cm} kA	440/690 V AC I_{cm} kA	440/690 V AC I_{cm} kA
IN91				
	630-1600	88	–	–
IN97				
	800-4000	143	187	–
IN99				
	4000/6300	–	187	220

Air circuit breaker

Icw t=1s/t =3s Icw = rated short time withstand current		Basic switching capacity (B)	Normal switching capacity (N)	High switching capacity (H)
	Rated operational current In A	$t=1_s/t=3_s$ I_{cw} kA	$t=1_s/t=3_s$ I_{cw} kA	$t=1_s/t=3_s$ I_{cw} kA
IN91				
	800/1600	42/-	42/-	–
IN97				
	800/1600	65/-	85/65	–
	2000/3200	65/50	85/65	–
	4000	65/50	85/50	–
IN99				
	4000-6300	–	85/65	100/65

1.4 Air circuit breaker IZM9

System overview



IZM91 air circuit breakers	1	**Door escutcheon**	7
		Within standard delivery range	
Main circuit terminals	2		
- Universal terminals for rear connection to 3 pole /4 pole circuit breakers		**Electronic releases**	8
Horizontal terminals can be converted to vertical terminal, and vise versa		Can not be ordered separately.	
-> Page 22			
		Shunt releases	9
Cassettes	3	-> Page 17	
Up to 1600A			
-> Page 16		Undervoltage releases	10
		-> Page 18	
Secondary circuit terminals	4		
Can order 8, 20 or 30 secondary circuit terminal blocks		**Trip indication auxiliary contacts**	11
-> Page 22			
		-> Page 19	
		OTS, 2CO	
Standard auxiliary contacts	5		
NC/NO		**Closing releases**	12
-> Page 18		-> Page 17	
Motor operator	6		
Energy stored by motor, for remote or local closing operations			
-> Page 16			

Type reference

IZM	91	B	3	-	A(N/A)	06	W
IN		N	4		V	08	F
		H			N	10	
						12	
						16	

IZM, IN = air circuit breaker, switch disconnector

Circuit breaker frame 91: 630-1600A	Switching capacity B=Basic N=Normal HI=High	3: 3 pole 4: 4 pole	Electronic release V= Selective protection = Digitrip 520 LSI(G) U= Ammeter type = Digitrip 520MC LSI (G)	Rated operation current 06: 630 A 08: 800 A 10: 1000 A 12: 1250 A 16: 1600 A	Circuit breaker model W= Withdrawable F= Fixed

1

Circuit breakers with selective protection function (terminals are not included and need to be ordered separately)

Switching capacity	Rated operational current	Setting range			Fixed	Withdrawable
		Overload protection	Short circuit release			
			Delayed	Non-delayed	**Part No**	**Part No**
$I_{cu}=I_{cs}$ A	$I_n=I_u$	I_r A	$I_{sd}=I_r$ x …	$I_i=I_n$ x …	Article No.	Article No. Cassettes to be ordered separately
						
42/42	630	315-630	2-10	2-12,OFF	**IZM91B3-V06F** 128705	**IZM91B3-V06W** 128555
42/42	800	400-800	2-10	2-12,OFF	**IZM91B3-V08F** 128706	**IZM91B3-V08W** 128556
42/42	100	500-1000	2-10	2-12,OFF	**IZM91B3-V10F** 128707	**IZM91B3-V10W** 128557
42/42	1250	625-1250	2-10	2-12,OFF	**IZM91B3-V12F** 128708	**IZM91B3-V12W** 128558
42/42	1600	800-1600	2-10	2-12,OFF	**IZM91B3-V16F** 128709	**IZM91B3-V16W** 128559
50/50	630	315-630	2-10	2-12,OFF	**IZM91N3-V06F** 128730	**IZM91N3-V06W** 128580
50/50	800	400-800	2-10	2-12,OFF	**IZM91N3-V08F** 128731	**IZM91N3-V08W** 128581
50/50	1000	500-1000	2-10	2-12,OFF	**IZM91N3-V10F** 128732	**IZM91N3-V10W** 128582
50/50	1250	625-1250	2-10	2-12,OFF	**IZM91N3-V12F** 128733	**IZM91N3-V12W** 128583
50/50	1600	800-1600	2-10	2-12,OFF	**IZM91N3-V16F** 128734	**IZM91N3-V16W** 128584
65/50	630	315-630	2-10	2-12,OFF	**IZM91H3-V06F** 128755	**IZM91H3-V06W** 128605
65/50	800	400-800	2-10	2-12,OFF	**IZM91H3-V08F** 128756	**IZM91H3-V08W** 128606
65/50	1000	500-1000	2-10	2-12,OFF	**IZM91H3-V10F** 128757	**IZM91H3-V10W** 128607
65/50	1250	625-1250	2-10	2-12,OFF	**IZM91H3-V12F** 128758	**IZM91H3-V12W** 128608
65/50	1600	800-1600	2-10	2-12,OFF	**IZM91H3-V16F** 128759	**IZM91H3-V16W** 128609

Circuit breakers with ammeter type (terminals are not included and need to be ordered separately)

Switching capacity	Rated operational current	Setting range			Fixed	Withdrawable
		Overload protection	Short circuit release			
			Delayed	Non-delayed	**Part No**	**Part No**
$I_{cu}=I_{cs}$	$I_n=I_u$	I_r	$I_{sd}=I_r$ x …	$I_i=I_n$ x …	Article No.	Article No.
A		A				Cassettes to be ordered separately
						
42/42	630	315-630	2-10	2-12,OFF	**IZM91B3-U06F** 128710	**IZM91B3-U06W** 128560
42/42	800	400-800	2-10	2-12,OFF	**IZM91B3-U08F** 128711	**IZM91B3-U08W** 128561
42/42	1000	500-1000	2-10	2-12,OFF	**IZM91B3-U10F** 128712	**IZM91B3-U10W** 128562
42/42	1250	625-1250	2-10	2-12,OFF	**IZM91B3-U12F** 128713	**IZM91B3-U12W** 128563
42/42	1600	800-1600	2-10	2-12,OFF	**IZM91B3-U16F** 128714	**IZM91B3-U16W** 128564
50/50	630	315-630	2-10	2-12,OFF	**IZM91N3-U06F** 128735	**IZM91N3-U06W** 128585
50/50	800	400-800	2-10	2-12,OFF	**IZM91N3-U08F** 128736	**IZM91N3-U08W** 128586
50/50	1000	500-1000	2-10	2-12,OFF	**IZM91N3-U10F** 128737	**IZM91N3-U10W** 128587
50/50	1250	625-1250	2-10	2-12,OFF	**IZM91N3-U12F** 128738	**IZM91N3-U12W** 128588
50/50	1600	800-1600	2-10	2-12,OFF	**IZM91N3-U16F** 128739	**IZM91N3-U16W** 128589
65/50	630	315-630	2-10	2-12,OFF	**IZM91H3-U06F** 128760	**IZM91H3-U06W** 128610
65/50	800	400-800	2-10	2-12,OFF	**IZM91H3-U08F** 128761	**IZM91H3-U08W** 128611
65/50	1000	500-1000	2-10	2-12,OFF	**IZM91H3-U10F** 128762	**IZM91H3-U10W** 128612
65/50	1250	625-1250	2-10	2-12,OFF	**IZM91H3-U12F** 128763	**IZM91H3-U12W** 128613
65/50	1600	800-1600	2-10	2-12,OFF	**IZM91H3-U16F** 128764	**IZM91H3-U16W** 128614

1

Circuit breakers with selective protection function (terminals are not included and need to be ordered separately)

Switching capacity	Rated operational current	Setting range Overload protection	Short circuit release Delayed	Short circuit release Non-delayed	Fixed **Part No** Article No.	Withdrawable **Part No** Article No. Cassettes to be ordered separately
$I_{cu}=I_{cs}$ A	$I_n=I_u$	I_r A	$I_{sd}=I_r$ x …	$I_i=I_n$ x …		
42/42	630	315-630	2-10	2-12,OFF	**IZM91B4-V06F** 128780	**IZM91B4-V06W** 128630
42/42	800	400-800	2-10	2-12,OFF	**IZM91B4-V08F** 128781	**IZM91B4-V08W** 128631
42/42	1000	500-1000	2-10	2-12,OFF	**IZM91B4-V10F** 128782	**IZM91B4-V10W** 128632
42/42	1250	625-1250	2-10	2-12,OFF	**IZM91B4-V12F** 128783	**IZM91B4-V12W** 128633
42/42	1600	800-1600	2-10	2-12,OFF	**IZM91B4-V16F** 128784	**IZM91B4-V16W** 128634
50/50	630	315-630	2-10	2-12,OFF	**IZM91N4-V06F** 128805	**IZM91N4-V06W** 128655
50/50	800	400-800	2-10	2-12,OFF	**IZM91N4-V08F** 128806	**IZM91N4-V08W** 128656
50/50	1000	500-1000	2-10	2-12,OFF	**IZM91N4-V10F** 128807	**IZM91N4-V10W** 128657
50/50	1250	625-1250	2-10	2-12,OFF	**IZM91N4-V12F** 128808	**IZM91N4-V12W** 128658
50/50	1600	800-1600	2-10	2-12,OFF	**IZM91N4-V16F** 128809	**IZM91N4-V16W** 128659
65/50	630	315-630	2-10	2-12,OFF	**IZM91H4-V06F** 128830	**IZM91H4-V06W** 128680
65/50	800	400-800	2-10	2-12,OFF	**IZM91H4-V08F** 128831	**IZM91H4-V08W** 128681
65/50	1000	500-1000	2-10	2-12,OFF	**IZM91H4-V10F** 128832	**IZM91H4-V10W** 128682
65/50	1250	625-1250	2-10	2-12,OFF	**IZM91H4-V12F** 128833	**IZM91H4-V12W** 128683
65/50	1600	800-1600	2-10	2-12,OFF	**IZM91H4-V16F** 128834	**IZM91H4-V16W** 128684

Circuit breakers with ammeter type (terminals are not included and need to be ordered separately)

Switching capacity	Rated operational current	Setting range			Fixed	Withdrawable
		Overload protection	Short circuit release			
			Delayed	Non-delayed	**Part No**	**Part No**
I_{cs}	$I_n = I_u$	I_r	$I_{sd} = I_r$ x ...	$I_i = I_n$ x ...	Article No.	Article No. Cassettes to be ordered separately
kA	A	A				
42/42	630	315-630	2-10	2-12,OFF	**IZM91B4-U06F** 128785	**IZM91B4-U06W** 128635
42/42	800	400-800	2-10	2-12,OFF	**IZM91B4-U08F** 128786	**IZM91B4-U08W** 128636
42/42	1000	500-1000	2-10	2-12,OFF	**IZM91B4-U10F** 128787	**IZM91B4-U10W** 128637
42/42	1250	625-1250	2-10	2-12,OFF	**IZM91B4-U12F** 128788	**IZM91B4-U12W** 128638
42/42	1600	800-1600	2-10	2-12,OFF	**IZM91B4-U16F** 128789	**IZM91B4-U16W** 128639
50/50	630	315-630	2-10	2-12,OFF	**IZM91N4-U06F** 128810	**IZM91N4-U06W** 128660
50/50	800	400-800	2-10	2-12,OFF	**IZM91N4-U08F** 128811	**IZM91N4-U08W** 128661
50/50	1000	500-1000	2-10	2-12,OFF	**IZM91N4-U10F** 128812	**IZM91N4-U10W** 128662
50/50	1250	625-1250	2-10	2-12,OFF	**IZM91N4-U12F** 128813	**IZM91N4-U12W** 128663
50/50	1600	800-1600	2-10	2-12,OFF	**IZM91N4-U16F** 128814	**IZM91N4-U16W** 128664
65/50	630	315-630	2-10	2-12,OFF	**IZM91H4-U06F** 128835	**IZM91H4-U06W** 128685
65/50	800	400-800	2-10	2-12,OFF	**IZM91H4-U08F** 128836	**IZM91H4-U08W** 128686
65/50	1000	500-1000	2-10	2-12,OFF	**IZM91H4-U10F** 128837	**IZM91H4-U08W** 128687
65/50	1250	625-1250	2-10	2-12,OFF	**IZM91H4-U12F** 128838	**IZM91H4-U12W** 128688
65/50	1600	800-1600	2-10	2-12,OFF	**IZM91H4-U16F** 128839	**IZM91H4-U16W** 128689

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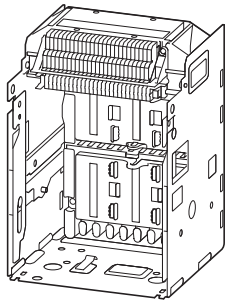
Switch disconnector (terminals are not included and need to be ordered separately. They will be in market soon.)

Rated short-circuit making capacity	Rated operational current		Rated short-time withstand current	Fixed	Withdrawable
I_{cm} kA	$I_n=I_u$ A		I_{cw} kA	**Part No** Article No	**Part No** Article No Cassettes to be ordered separately
88.2	630	IN91	42	**IN91B3-06F** 128720	**IN91B3-06W** 128570
88.2	800	IN91	42	**IN91B3-08F** 128721	**IN91B3-08W** 128571
88.2	1000	IN91	42	**IN91B3-10F** 128722	**IN91B3-10W** 128572
88.2	1250	IN91	42	**IN91B3-12F** 128723	**IN91B3-12W** 128573
88.2	1600	IN91	42	**IN91B3-16F** 128724	**IN91B3-16W** 128574
88.2	630	IN91	42	**IN91B4-06F** 128795	**IN91B4-06W** 128645
88.2	800	IN91	42	**IN91B4-08F** 128796	**IN91B4-08W** 128646
88.2	1000	IN91	42	**IN91B4-10F** 128797	**IN91B4-10W** 128647
88.2	1250	IN91	42	**IN91B4-12F** 128798	**IN91B4-12W** 128648
88.2	1600	IN91	42	**IN91B4-16F** 128799	**IN91B4-16W** 128649

Cassettes equipment supplied as standard: arcing chamber cover, mismatch protection



Cassettesz

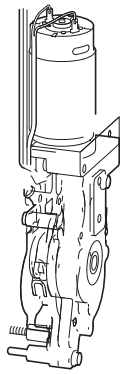
Rated Operational current I_n A	Rated ultimate breaking capacity I_{cu} kA	Pole	For use with	**Part no.** Article no. Part No. Suffix "+" for ordering with basic device	**Notes**
≦1600	≦65	3	IZM91…3-...W IN91…3-...W	**IZMX-CAS163-1600** 101537	Without control terminals
≦1600	≦65	3	IZM91…3-...W IN91…3-...W	**+IZMX-CAS163-1600** 101536	With 20 secondary terminals based on ordered options
≦1600	≦65	3	IZM91…3-...W IN91…3-...W	**IZMX-CAS163-1600-SEC** 123986	With a complete set of secondary terminals (30 pcs)
≦1600	≦65	4	IZM91…4-...W IN91…4-...W	**IZMX-CAS164-1600** 101539	Without control terminals
≦1600	≦65	4	IZM91…4-...W IN91…4-...W	**+IZMX-CAS164-1600** 101538	With 20 secondary terminals based on ordered options
≦1600	≦65	4	IZM91…4-...W IN91 …4-...W	**IZMX-CAS164-1600-SEC** 124175	With a complete set of secondary terminals (30 pcs)

Shutter protection

When withdrawal circuit breakers is withdrawn from its connected position, the shutters automatically close and cover the fixed primary contact.

800 - 1600	–	3	+)IZM91-CAS163	**IZMX-SH163** 101542	–
800 - 1600	–	3	+)IZM91-CAS163	**+IZMX-SH163** 101541	–
800 - 1600	–	4	+)IZM91-CAS164	**IZMX-SH164** 101544	–
800 - 1600	–	4	+)IZM91-CAS164	**+IZMX-SH164** 101543	–

The motor automatically tensions the spring-operated stored energy mechanism for remote or local operations. "Spring-operated energy store tensioned" indictor switch isincluded



Motor operator

Rated Control voltage Us V	For use with	**Part no.** Article no. Part No. Suffix "+" for ordering with basic device	**Notes**
24 DC	IZM91… IN91…	**IZMX-M16-24DC** 123594	Two separate secondary terminal blocks are need, if ordered separately
24 DC	IZM91… IN91…	**+IZMX-M16-24DC** 123593	
48 DC	IZM91… IN91…	**IZMX-M16-48DC** 123596	
48 DC	IZM91… IN91…	**+IZMX-M16-48DC** 123595	
110-127 V AC 110-125 V DC	IZM91… IN91…	**IZMX-M16-110AD** 124247	
110-127 V AC 110-125 V DC	IZM91… IN91…	**+IZMX-M16-110AD** 124265	
220-240 V AC 220-250 V DC	IZM91… IN91…	**+IZMX-M16-230AD** 124266	
220-240 V AC 220-250 V DC	IZM91… IN91…	**+IZMX-M16-230AD** 124267	

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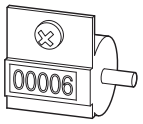
The counter counts the number of On-Off operations of circuit breakers, without any connection to motor operator.

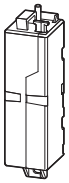


Switching operations counter

Rated Control voltage Us V	For use with	**Part no.** Article no. Part No. Suffix "+" for ordering with basic device	**Notes**
–	IZM91... IN91...	**IZMX-OC16** 123606	–
–	IZM91... IN91...	**+IZMX-OC** 124341	–

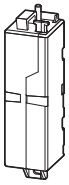
Voltage releases

Shunt releases
A closing release can be combined with a shunt release and an undervoltage release or two shunt releases



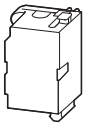
24DC	IZM91… IN91…	**IZMX-ST24DC** 123608	An additional secondary terminal block is required if ordered separately
24DC	IZM91… IN91…	**+IZMX-ST24DC** 123607	
48DC	IZM91… IN91…	**IZMX-ST48DC** 123656	
48DC	IZM91… IN91…	**+IZMX-ST48DC** 123616	
110 - 125 DC 110 - 127 AC	IZM91… IN91…	**IZMX-ST110AD** 123728	
110 - 125 DC 110 - 127 AC	IZM91… IN91…	**+IZMX-ST110AD** 123696	
220 - 250 DC 208 - 240 AC	IZM91… IN91…	**IZMX-ST230AD** 123730	
220 - 250 DC 208 - 240 AC	IZM91… IN91…	**+IZMX-ST230AD** 123729	

2nd Shunt releases
Can not be combined with an Undervoltage release



24DC	IZM91… IN91…	**+IZMX-STS24DC** 123731	An additional secondary terminal block is required if ordered separately
48DC	IZM91… IN91…	**+IZMX-STS48DC** 123732	
110 - 125 DC 110 - 127 AC	IZM91… IN91…	**+IZMX-STS110AD** 123733	
220 - 250 DC 208 - 240 AC	IZM91… IN91…	**+IZMX-STS230AD** 123734	

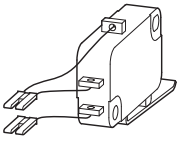
Closing releases
Without latch check switch LCS

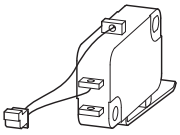


24DC	IZM91… IN91…	**IZMX-SR24DC** 123736	An additional secondary terminal block is required if ordered separately
24DC	IZM91… IN91…	**+IZMX-SR24DC** 123735	
48DC	IZM91… IN91…	**IZMX-SR48DC** 123738	
48DC	IZM91… IN91…	**+IZMX-SR48DC** 123737	
110 - 125 DC 110 - 127 AC	IZM91… IN91…	**IZMX-SR110AD** 123740	
110 - 125 DC 110 - 127 AC	IZM91… IN91…	**+IZMX-SR110AD** 123739	
220 - 250 DC 208 - 240 AC	IZM91… IN91…	**IZMX-SR230AD** 123742	
220 - 250 DC 208 - 240 AC	IZM91… IN91…	**+IZMX-SR230AD** 123741	

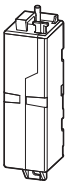
Voltage releases

Latch check switch LCS

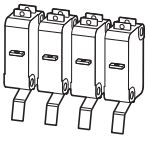




Undervoltage release
Can not be combined in use with the 2nd shunt release

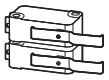


Standard auxiliary contact
The basic device already includes 2 NO/NC auxiliary contacts. Additional two NO/NC contacts may be added



Rated Control voltage Us V	For use with	**Part no.** Article no. Part No. Suffix "+" for ordering with basic device	**Notes**
–	IZM91… IN91…	**IZMX-LCS** 124351	For external application
–	IZM91… IN91…	**+IZMX-LCS** 124347	For external application
–	IZM91… IN91…	**IZMX-LCS-SR** 124396	For use with closing release IZM91-SR
–	IZM91… IN91…	**+IZMX-LCS-SR** 124349	For use with closing release IZM91-SR
24DC	IZM91… IN91…	**IZMX-UVR24DC** 123744	An additional secondary terminal block is required if ordered separately
24DC	IZM91… IN91…	**+IZMX-UVR24DC** 123743	
32DC	IZM91… IN91…	**IZMX-UVR32DC** 123746	
32DC	IZM91… IN91…	**+IZMX-UVR32DC** 123745	
48DC	IZM91… IN91…	**IZMX-UVR48DC** 123748	
48DC	IZM91… IN91…	**+IZMX-UVR48DC** 123747	
110 - 125 DC 110 - 127 AC	IZM91… IN91…	**IZMX-UVR110AD** 12380	
110 - 125 DC 110 - 127 AC	IZM91… IN91…	**+IZMX-UVR110AD** 123761	
220 - 250 DC 208 - 240 AC	IZM91… IN91…	**IZMX-UVR220AD** 123873	
220 - 250 DC 208 - 240 AC	IZM91… IN91…	**+IZMX-UVR220AD** 123841	
380 - 415 AC	IZM91… IN91…	**IZMX-UVR400AC** 123875	
380 - 415 AC	IZM91… IN91…	**+IZMX-UVR400AC** 123874	
480 AC	IZM91… IN91…	**IZMX-UVR480AC** 123877	
480 AC	IZM91… IN91…	**+IZMX-UVR480AC** 123876	
600AC	IZM91… IN91…	**IZMX-UVR600AC** 123879	
600AC	IZM91… IN91…	**+IZMX-UVR600AC** 123878	
–	IZM91… IN91…	**IZMX-AS22-16** 156598	Three additional secondary terminal blocks are required if ordered separately
–	IZM91… IN91…	**+IZMX-AS22** 123880	

Trip indication and reset options

	Rated Control voltage **Us** **V**	For use with	**Part no.** Article no. Part No. Suffix "+" for ordering with basic device	**Notes**
Trip signal auxiliary contact Includes two NO/NC contacts 	–	IZM91	**IZMX-OTS16** 156601	Three additional secondary terminal blocks are required if ordered separately
	–	IZM91	**+IZMX-OTS** 123888	Three additional secondary terminal blocks are required if ordered separately
Non-Interlocked Trip Indicators The switch does contain the mechanical trip-indicator (red pin). Does not interlock with mechanism, allowing for automatic reset of breaker. Can be used in combination with Overcurrent Trip Switches. Cannot be combined with remote reset.	–	IZM91...	**IZMX-RA** 123898	–
	–	IZM91...	**+IZMX-RA** 123897	–
Interlocking devices				
Padlockable button shutter	–	IZM91… IN91…	**IZMX-PLPC16** 123946	–
Padlockable button shutter	–	IZM91… IN91…	**+IZMX-PLPC-P** 124357	–
OFF position locking The "OFF" locking feature	–	IZM91… IN91…	**IZMX-1L1K** 90000019000039	Kirk lock, including one set of lock provision, cylinder lock and key
Factory installation is recommended Please specify which breaker to install	–	IZM91… IN91…	**IZMX-1L1K-B** 90000019000046	The cylinder lock and key of -B and -C are not interchangable with each other and IZMX-1L1K
3 key locks, 2 keys 3 identical key locks, including 3 complete sets of lock frames, key locks and keys	–	IZM91… IN91…	**IZMX-1L1K-C** 90000019000047	–
	–	IZM91… IN91…	**IZMX-3L2K** 90000019000043	Kirk lock, including 3 lock provisions, 3 cylinder locks and 2 keys
	–	IZM91… IN91…	**IZMX-3L2K-B** 90000019000044	The cylinder lock and key of -B and -C are not interchangable with each other and IZMX-3L2K
	–	IZM91… IN91…	**IZMX-3L2K** 90000019000045	–
Withdrawable circuit breaker position indication contact				
	–	IZM91... IN91...	**IZMX-CS16-1** 10825	–
Mechanical cable Interlock				
Type 2, for 2 circuit-breakers: A normal power supply (A) and an emergency network supply (B). 1 set of cables alsorequired in addition.	Drawout	IZM91...W IN91...W	**IZMX-MIL2C-W16** 153585	–
	Fixed	IZM91...F IN91...F	**IZMX-MIL2C-F16** 153581	–
Type 31, for 3 circuit-breakers: Two normal power supplies(A, C) and an emergency network supply (B). When B in Off, A and C can be switched on. B can be switched on only when A and C are in Off. Two sets of cables required in addition.	Drawout	IZM91...W IN91...W	**IZMX-MIL31C-W16** 153586	–
	Fixed	IZM91...F IN91...F	**IZMX-MIL31C-F16** 153582	–
Type 32, for 3 circuit-breakers: Two normal incoming units (A, C) and one coupling (B). Any one or two circuitbreakers can be closed at the same time. Three sets of cables are required in addition.	Drawout	IZM91...W IN91...W	**IZMX-MIL32C-W16** 153587	–
	Fixed	IZM91...F IN91...F	**IZMX-MIL32C-F16** 153583	–
Type 33, for 3 circuit-breakers: Three incoming units (A, B,C), normal or emergency network. Only one of the three circuit-breakers can be switched on at any one time. Three sets of cables are required in addition.	Drawout	IZM91...W IN91...W	**IZMX-MIL33C-W16** 153588	–
	Fixed	IZM91...F IN91...F	**IZMX-MIL33C-F16** 153584	–
Cable kits for mechanical interlock				
Depending on the type of interlock, a particular number of cable connectors is required. With the flexible cable connectors, various different switch arrangements can be implemented. One set contains two cables.	1520 mm long	IZM91... IN91...	**IZMX-MIL-CAB1520** 153597	–
	1830 mm long	IZM91... IN91...	**IZMX-MIL-CAB1830** 153598	–
	2440 mm long	IZM91... IN91...	**IZMX-MIL-CAB2440** 153599	–
	3050 mm long	IZM91... IN91...	**IZMX-MIL-CAB3050** 153600	–

Trip units and accessories

	Rated Control voltage Us V	For use with	**Part no.** Article no. Part No. Suffix "+" for ordering with basic device	**Notes**
A type standard protection trip unit (Digitrip 520)	IZM91...-A... (Digitrip 520)	IZM91...-A... (Digitrip 520)	**+IZMX-DTV-EP** 124012	Not available for retail
U type selective protection trip unit (Digitrip 520LSI)	IZM91...-V... (Digitrip 520LSI)	IZM91...-V... (Digitrip 520LSI)	**+IZMX-DTV-ZSI** 124013	Not available for retail
Add-on functions for IZM91 ….V type Ground fault protection	–	IZM91…-V… (Digitrip 520LSI)	**+IZMX-DTV-G** 126421	–
Zone selective interlocking(ZSI) Avoids stagger time in selective protection	–	IZM91…-V… (Digitrip 520LSI)	**+IZMX-DTV-Z** 126422	–
Ground fault protection and ZSI	–	IZM91...-V... (Digitrip 520LSI)	**+IZMX-DTV-GZ** 126423	–
Standard U type release unit includes: • LCD display • Communication interface • Overload alarming Ground fault protection or ground fault alarming are optional. For communication functions, a communication module must be selected additionally.		IZM91...-U... (Digitrip 520M)	**+IZMX-DTU** 124014	Not available for retail
Add-on functions for IZM91… U type Ground fault protection	24V DC	IZM91…-U… (Digitrip 520M)	**+IZMX-DTU-G** 155561	–
Ground fault alarming	24V DC	IZM91…-U… (Digitrip 520M)	**+IZMX-DTU-A** 155560	–
ARMS function The ARMS function enhances personnel safety by reducing tripping time by simple and reliable means	24V DC	IZM91…-U… (Digitrip 520M)	**+IZMX-DTU-M** 155562	–
Zone selective interlocking (ZSI) Avoids delay time by selection protection	24V DC	IZM91…-U… (Digitrip 520M)	**+IZMX-DTU-Z** 155563	–
Ground fault alarming and ARMS	–	IZM91…-U… (Digitrip 520M)	**+IZMX-DTU-AM** 155564	–
Ground fault alarming and ZSI	–	IZM91…-U… (Digitrip 520M)	**+IZMX-DTU-AZ** 155565	–
Ground fault protection and ARMS	–	IZM91…-U… (Digitrip 520M)	**+IZMX-DTU-GM** 155566	–
Ground fault protection and ZSI	–	IZM91…-U… (Digitrip 520M)	**+IZMX-DTU-GZ** 155567	–
ARMS and ZSI	–	IZM91…-U… (Digitrip 520M)	**+IZMX-DTU-MZ** 155568	–
Ground fault protection, ZSI and ARMS	–	IZM91…-U… (Digitrip 520M)	**+IZMX-DTU-GMZ** 155570	–
Ground fault alarming, ZSI and ARMS	–	IZM91…-U… (Digitrip 520M)	**+IZMX-DTU-AMZ** 155569	–
Test devices Hand-held tester(100-240VAC)	–	IZM91…	**IZM-TEST-KIT** 124161	Compatible with IZM91, IZM97 and IZM99
Communication module MODBUS communication module	24V DC	IZM91…	**IZMX-MCAM** 122892	Four separately secondary terminal blocks are needed if ordered
Profibus communication module	24V DC	IZM91…	**IZMX-PCAM** 122913	Four separately secondary terminal blocks are needed if ordered additionally
Power supply	–	IZM91…	**EASY400-POW** 212319	Input voltage: 50/60HZ, 115V/230V, output voltage:24VD(±3%); output current: 1.25A

Electronic release options and accessories

Rating plugs (rated current module), 3 pole, 4 pole
The rated current can be reduced by changing the rating plug in order to adapt to changed conditions in the application.
The rating plug's nominal value must be less than or equal to the basic device's rated current. The rating plus can be replaced on site without replacing the main sensor.

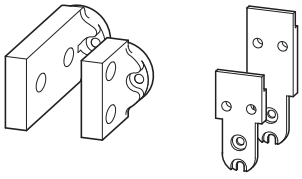
Rated Control voltage **Us** **V**	For use with	**Part no.** Article no. Part No. Suffix "+" for ordering with basic device	**Notes**
200	$I_u \leq 800A$	**+IZMX-RP16-200** 124026	–
250	$I_u \leq 800A$	**+IZMX-RP16-250** 124028	–
400	$I_u \leq 1250A$	**+IZMX-RP16-400** 124032	–

Measuring current transformer for reading off the value of the N conductor. Allows, for example, ground fault protection in four-conductor system in connection with three-pole circuit breakers

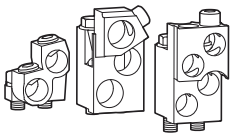
Current transformer for the neutral conductor			
–	IZM91...	**IZMX-CT16-N** 124188	–

Main terminal

Main terminals are not supplied with the standard cassette. This terminal can be horizontal or vertical connected. Each set contains top traverses and bottom traverses. 3 pole=6 pieces, 4 pole = 8 pieces



For use only in combination with front terminal IZMX-TFL



Control circuit terminal blocks for fixed mounting

Control circuit terminal blocks for withdrawable mounting

		Rated operational current In A	Pole	For use with	Part no. Article no.	Notes
Rear universal connection for fixed/withdrawable mounting (standard)		800-1600	3	IZM91···3W/F IN91···3-W/F	**IZMX-THV163** 124181	–
Rear universal connection for fixed/withdrawable mounting (standard)		800-1600	4	IZM91···4-W/F IN91···4-W/F	**IZMX-THV164** 124177	–
Rear universal connection for fixed/withdrawable mounting (long)		800-1600	3	IZM91···3W/F IN91···3-W/F	**IZMX-THVL163** 124233	–
Rear universal connection for fixed/withdrawable mounting (long)		800-1600	4	IZM91···4-W/F IN91···4-W/F	**IZMX-THVL164** 124234	–
Front universal connection for fixed mounting (long)		800-1600	3	IZM91···3W/F IN91···3-W/F	**IZMX-TFL163** 124183	–
Front universal connection for fixed mounting (long)		800-1600	4	IZM91···4-W IN91···4-W	**IZMX-TFL164** 124179	–
Tunnel terminals						
For connecting cables with 50-240mm		800-1600	–	IZM91···3- IN91···3-	**IZMX-TCA16-2** 124230	–
For connecting cables with 95-185mm		800-1600	–	IZM91···3- IN91···3-	**IZMX-TCA16-3** 124231	–
For connecting cables with 120-240mm		800-1600	–	IZM91···3- IN91···3-	**IZMX-TCA16-4** 124232	–
Universal accessories						
Control circuit terminals, 8 blocks		–	–	IZM91···F IN91···F	**IZMX-SEC16-TB8-F** 124166	–
Control circuit terminals, 20 blocks		–	–	IZM91···F IN91···F	**IZMX-SEC16-TB20-F** 124167	
Control circuit terminals, 30 blocks		–	–	IZM91···F IN91···F	**IZMX-SEC16-TB30-F** 124168	
Control circuit terminals, 8 blocks		–	–	IZM91···W IN91···W	**IZMX-SEC16-TB8-W** 124162	–
Control circuit terminals, 20 blocks		–	–	IZM91···W IN91···W	**IZMX-SEC16-TB20-W** 124163	
Control circuit terminals, 30 blocks		–	–	IZM91···W IN91···W	**IZMX-SEC16-TB30-W** 124165	
Protective cover, IP55	The protective cover allows a higher protection type	–	–	IZM91··· IN91···	**IZMX-DC16** 124171	–
Blank cover for door cutout , IP41	Cover for a door cutout (reserved)	–	–	IZM91··· IN91···	**IZMX-BC16** 124172	–
Replacement label, for withdrawable Device	This is a spare part	–	–	IZM91···W IN91···W	**IZMX-CRB16** 124173	–
Replacement hand lever	This is a spare part	–	–	IZM91···W IN91···W	**IZMX-LT16** 124174	–
Spare door seal,	This is a spare part	–	–	IZM91···F IN91···F	**IZMX16-DEG-F** 124335	–
Spare door seal	This is a spare part	–	–	IZM91···W IN91···W	**IZMX16-DEG-W** 124390	–

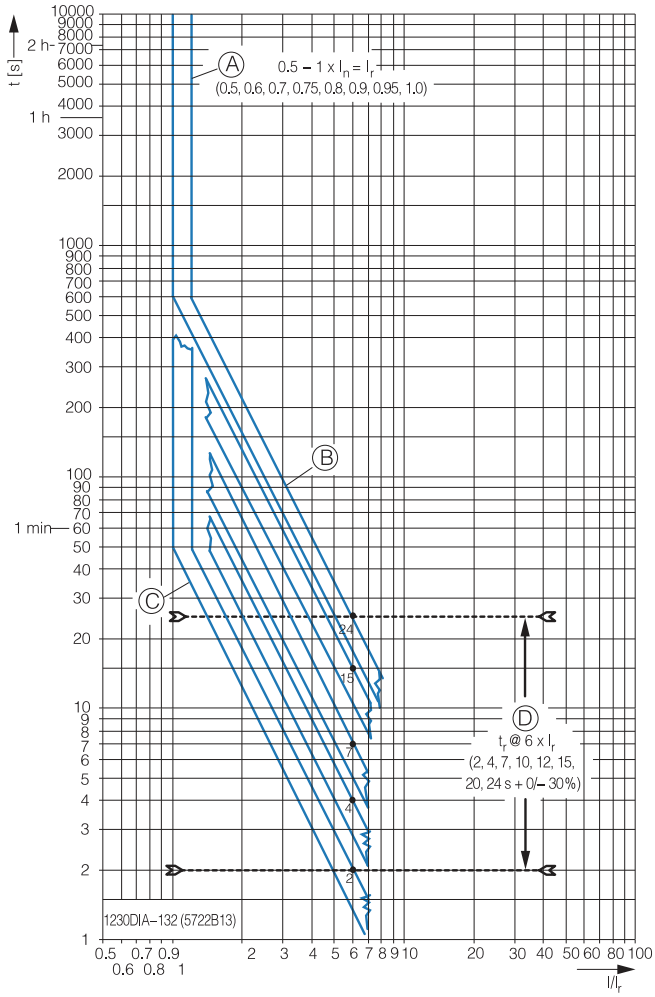
		IZM91… A… Standard protection (N/A) DTA Digital 520	IZM91…V… Selective protection DTV Digitrip 520 LSI(G)	IZM91…U… Ammeter type DTU Digitrip 520M LSI(G)
				
Rated current range		200A-1600A	200A-1600A	200A-1600A
RMS value		●	●	●
Protection and coordination				
Overview Options		LI	LSI,LSIG	LSI,LSIG LSIA
Rated current plug (In)		●	●	●
Over-temperature trip		●	●	●
Long time delay protection Long time delay operating value	L	(0.5-1.0)X1	0.5-1.0X(In)	0.5-1.0X(In)
Long time delay delay-time tr (at 6* Ir)		2-24s	2-24s	2-24s
Long time delay thermal memory		●	●	●
Short time delay protection Short time delay operating value	S	–	200-1000%X(Ir)	200-1000%X(Ir)
Short time delay delay-time tsd , I2t at 8* Ir		–	100-500ms	100-500ms
Short time delay, fixed time		–	100-500ms	100-500ms
Short time delay zone interlock ZSI 1)		○	○	○
Non-delayed protection Non-delayed operating value	I	(2-10)x1	200-1200%x(In)	200-1200%x(In)
Non-delayed switch-off function		●	●	●
Closing release mechanism (MCR)		●	●	●
Ground fault protection Ground fault alarming	G	–	–	○[1]
Ground fault operating value		–	25-100%x(In)[3]	25-100%x(In)[3]
Ground fault delay time tg at 0.625 Ir, ,I2t		100-500ms	100-500ms	100-500ms
Ground fault delay time, fixed time lag		100-500ms	100-500ms	100-500ms
Ground fault zone interlock ZSI1)		○	○	○
Ground fault thermal memory		●	●	●
Neutral conductor protection	N	●	●	●
System diagnosis				
Status/Overload LED display		–	●	●
Trip signal light		–	●	●
Current at trip point		–	–	●[1]
Long-distance ground fault release/alarming contact		–	–	●[1]
Long-distance overload alarm contact		–	–	●[1]
System monitoring				
Digital display		–	–	four-digit LCD display
Communication protocol		–	–	Options: Modbus or Profibus
Additional functions				
Testing method [2]		–	Test unit	Test unit
ARMS maintenance system		–	–	○[1]

Ln =rating plug = rated operational current transformer
Lr=Set value of long delay time operating
1) Requires external 24 VDC auxiliary power supply module
2) test units for secondary plugging
3) In combination with ARMS function limited to 1200A

● standard
○ ptional

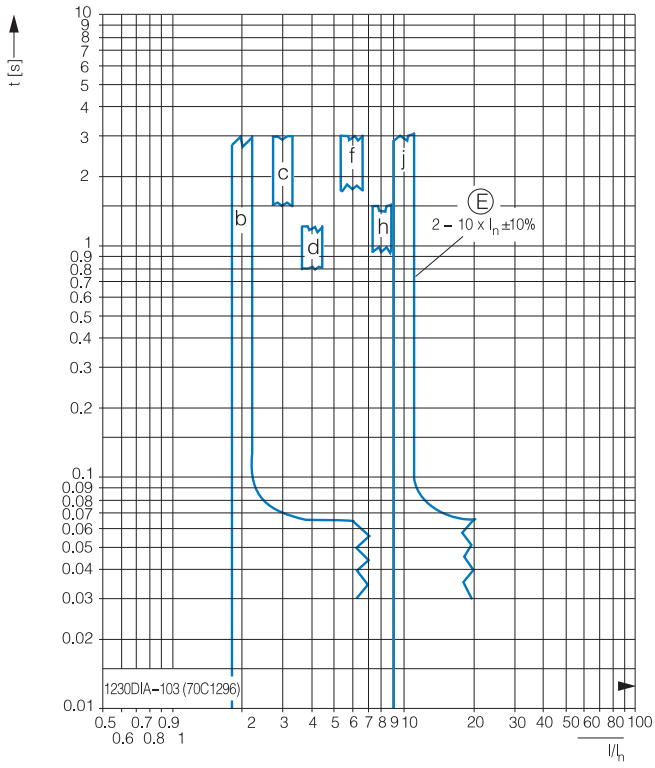
IZM91…A…Tripping characteristics for selective protection

Overload protection (L) and non-delayed short circuit protection
L-protection: Adjustable,
See Notes 1,2,3



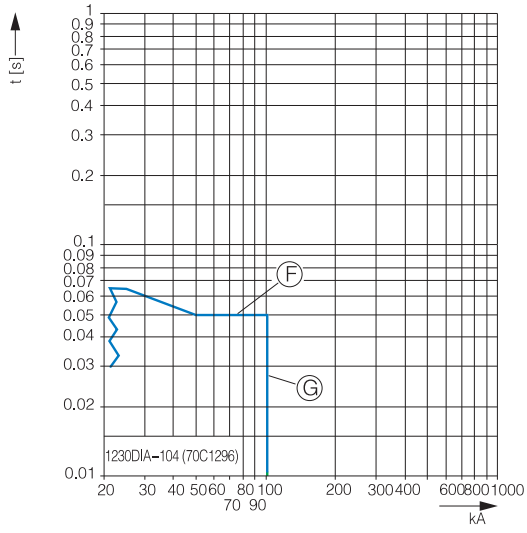
A Set values for overload protection
B Maximum total opening delay
C Minimum total opening delay
D Set values for long delay

I-protection: Adjustable: See Notes 3,4,5,6,7



E Set values for non-delayed short-circuit protection

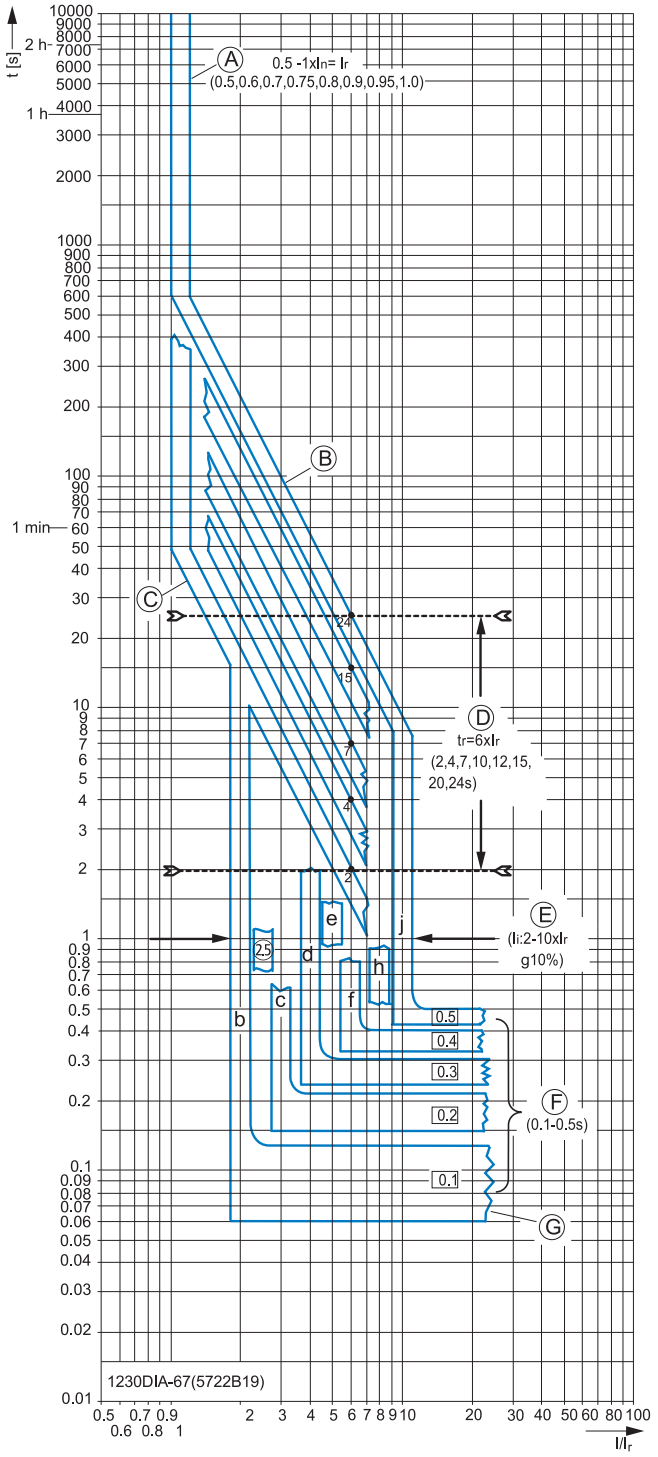
I-protection: For higher short-circuit currents. See Notes 3,4,5,6,7



F Set values for short-time delayed short-circuit protection with flat characteristics curve
G The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch

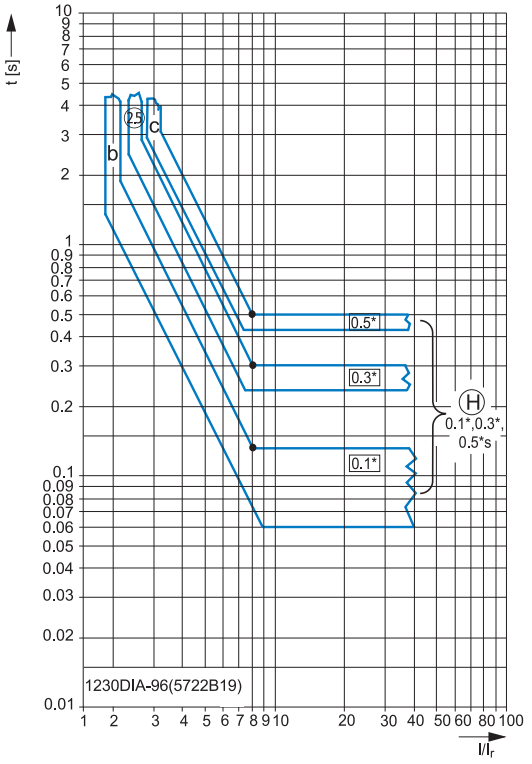
1 IZM91…V(U)…protection characteristics curve

Overload protection (L) and short-time delayed short-circuit protection (S). See Notes 1 to 7.
L-Protection: I2t-inverse time curve and
S-Protection: fixed time



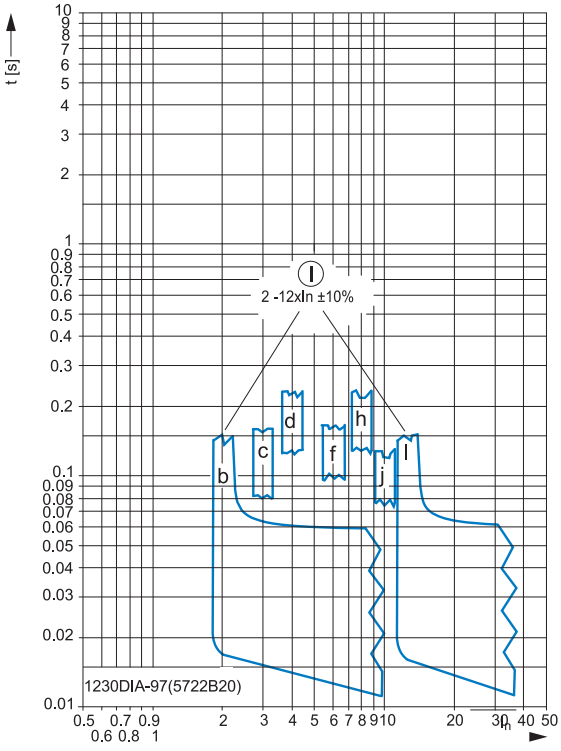
A	Set values for long delay current
B	Maximum switching time
C	Minimum switching time
D	Set values for long delay time
E	Set value for short delay time
F	Set value for short delay time (fixed time)
G	End of the curve (tolerance range)
H	Set value for short delay I2 (inverse time) time
I	Set value for non-delay protection current
J	High non-delay protection
K	Set value for ground fault current
L	Set value for ground fault fixed time
M	Curve type of ground fault fixed time
N	Curve type of ground fault I2 t inverse time
O	Set value for ground fault I2 t time

S – Protection: I2 t inverse time curve

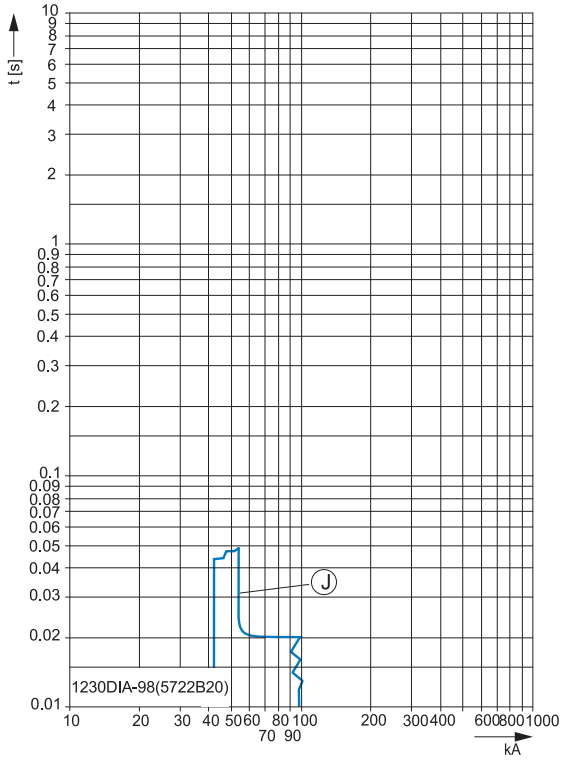


IZM91…V(U)… protection characteristics curve

Non-delayed protection (I) , See Notes 2,6,8,9,10,11
L-protection: Adjustable,



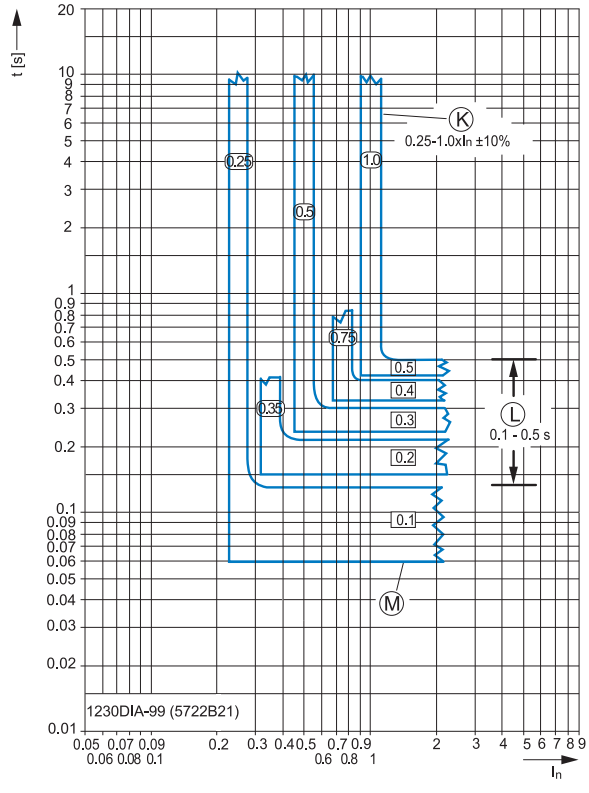
I-protection: For high ground fault current release



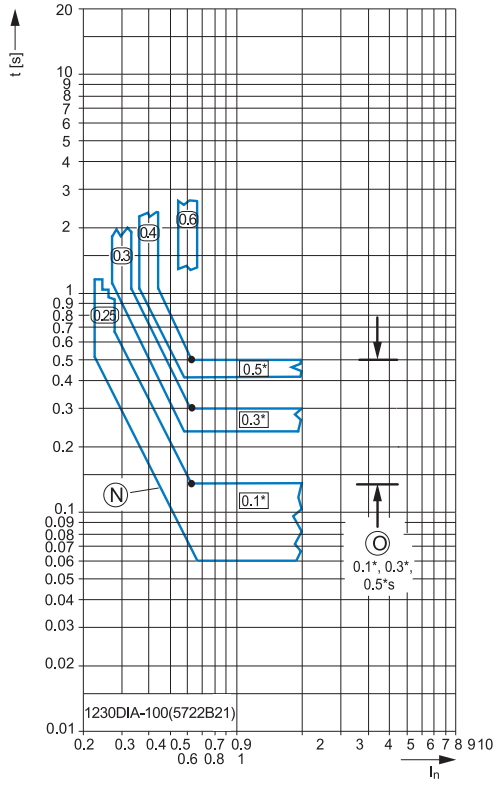
IZM91…V(U)… Optional ground fault protection + IZMX-DTV(U)-EP

See Notes 12, 13,14,15,16

G: Ground fault protection, fixed time



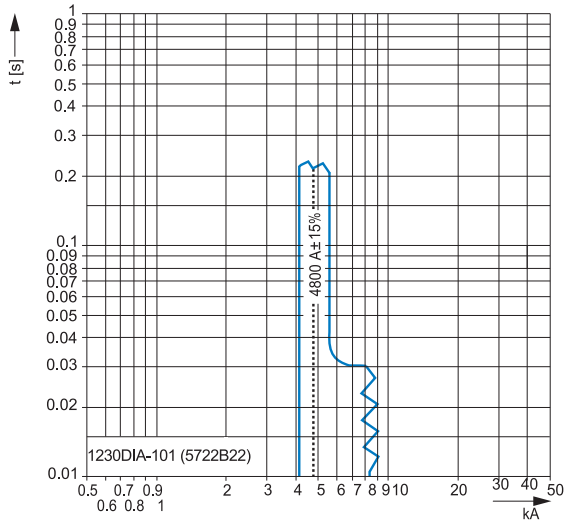
G: Ground fault protection, I2t curve



1

IZM91...U... Optional maintenance mode (ARMS) + IZMX-DTU-ARMS

See Notes 2,6,11,17,18,19,20
ARMS maintenance system



1.Thermal memory can shorten long-delay delay time. This function plays a role whenever a current is higher than the set value of long delay time for a while and which is then isolated by a down-stream device or the circuit-breaker itself. On a subsequent over-load current, the circuit-breaker will trip more quickly than normal. The reduced value is inversely proportional to the time expired since the last overload. After about five minutes the thermal memory is reset.

2. The end of the characteristic curve is determined by the type of application and the switching capacity of the selected circuit breaker.

3. The long-time delay operates at 110 % Ir with a tolerance of ±10 % (flashing rapidly by the "Unit Status" LED in the release unit). The short-time delay is activated at 100 % Isd with a tolerance of ±10 %.

4. If short-time delay applies zone interlock without locking signal, then short-time delay time is irrelevant to the set value.

5. In the I2t curve, when the curve turns from long-time delay to short-time delay, a black dot is used for indication (above the corresponding 8Ir curve).

6. The switching time includes response time of release units, opening time of circuit breakers and current switching time.

7. The curve is applicable in the environment with temperature range from -20 degree to +50 degree. When the temperature is above 85 degree, the orange LED light will turn on to indicate automatic release. Please refer to derating data in technical data file before using circuit breakers.

8. Non-delay set value operates at 100%±10%.

9. Non-delay protection has a OFF setting position to turn off non-delay function.

10. All release units have high non-delay tripping function. This function always exists, even when non-delay protection is set as OFF position. Red "INST" LED light will flash.

11. These curves include all types of IZM91 and their rated currents. The switching time shown above is very conservative. It's based on the assumption of the maximum response time of release units, maximum opening time of circuit breakers and maximum current switching time as the worst scenario. According to actual system situation and type of circuit breakers selected, the switching time will be even shorter.

12. Set value for ground fault operates at 100% with a tolerance of ±10%.

13. Except for the notes mentioned, other current tolerance is ±10%.

14. When ground fault protection is used in combination with ARMS function, then the set value for ground fault current is limited to 1200A.

15. If ground faults apply zone interlock but without locking signal, then delay time is irrelevant to the set value.

16. In the I2t curve of ground fault, when the curve turns from the inverse time to fixed time, a black dot is used for indication (above the corresponding0.625*In curve).

17. If ARMS function is used, then the switch button shall be turn to ON manually or activated via communication. A blue LED indicator will confirm whether ARMS function is activated.

18 Switching time can be shown with an auxiliary power supply.

19. The tripping of ARMSTM mode is indicated by "INST" LED.

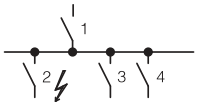
20. The accuracy of set value for ARMS Arcflash reduction is ±15%.

Rating plugs (Plus type)

I_n[A]	I_u[A]	630	800	1000	1250	1600
200			+IZMX-RP16-200			
250			+IZMX-RP16-250			
300			+IZMX-RP16-300			
400				+IZMX-RP16-400		
500						
630		standard				
800			standard			
1000				standard		
1250					standard	
1600						standard

1.8 Air circuit breaker IZM9

IZM9 circuit breaker, IN9 switch disconnector



In: Rated operational current
Iu: Rated uninterrupted current
Icu: Rated short circuit breaking capacity
Ii: Set value non-delayed short circuit protection

Selectivity 415 V AC
Between circuit breakers it enables disconnection of faulty system section.
Selectivity exists between incoming circuit breaker 1 and outgoing circuit breaker 2 if, only outgoing breaker 2 trips at position 2 during a short circuit. System section 3 and 4 remain operational.

Option:
Provided that the short circuit current does not exceed those values specified (Icc rms).
These details represent the limits of selectivity.
Both circuit breakers will switch off with higher short circuit currents.
On IZM 9 circuit breakers with V,U P releases, the delay time. Tsd must be at least 100 ms longer than the delay time of the next downstream levels (2,3,4**)**

Incoming circuit breaker (1)	**IZM91...-A**																								
		I_n[A]	630	630	630	800	800	800	1000	1000	1000	1250	1250	1250	1600	1600	1600	630	630	630	800	800	800
		I_{cu}[KA]	42	50	5065	42	50	65	42	50	65	42	50	65	42	50	65	42	50	65	42	50	65
		I_i[A]	6300	6300	6300	800	800	800	10000	10000	10000	12500	12500	12500	16000	16000	16000	7560	7560	7560	9600	9600	9600
Incoming circuit breaker (2)	I_u [A]	$I_{cu2(415V)}$ [KA]	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H
			Prospective short circuit current (Icc: ms in kA)																				
	20	25-100	6	6	6	**9**	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	25	25-100	6	6	6	**9**	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	32	25-100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	40	25-100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	50	25-100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	63	25-100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	80	25-100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	100	25-100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	125	25-100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	160	25-100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
NZMB(C)(N) (H)2-A(M)(V)...	20	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	25	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	32	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	40	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	50	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	63	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	80	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	90	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	100	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	125	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	140	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	160	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	200	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	220	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	250	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	300	25-150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
NZMC(N)(H) 3–A(M)(V)···	220	36-150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	250	36-150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	320	36-150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	350	36-150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	400	36-150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	450	36-150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	500	36-150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	630	36-150	–	–	–	7	7	7	9	9	9	12	12	12	18	18	18	–	–	–	T	T	T
NZMN(H) 4–A(M)(V)···	550	50-100	6	6	6	7	7	7	9	9	9	12	12	12	15	15	15	T	T	T	T	T	T
	630	50-100	–	–	–	7	7	7	9	9	9	12	12	12	15	15	15	–	–	–	T	T	T
	800	50-100	–	–	–	–	–	–	9	9	9	12	12	12	15	15	15	–	–	–	–	–	–
	875	50-100	–	–	–	–	–	–	9	9	9	12	12	12	15	15	15	–	–	–	–	–	–
	1000	50-100	–	–	–	–	–	–	–	–	–	12	12	12	15	15	15	–	–	–	–	–	–
	1250	50-100	–	–	–	–	–	–	–	–	–	–	–	–	15	15	15	–	–	–	–	–	–
	1400	50-100	–	–	–	–	–	–	–	–	–	–	–	–	15	15	15	–	–	–	–	–	–
	1600	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Notes: B=basic switching capacity, N=Normal switching capacity, H=High switching capacity, T=Total selectivity

IZM91...-V									IZM91...-U														
1000	1000	1000	1250	1250	1250	1600	1600	1600	630	630	630	800	800	800	1000	1000	1000	1250	1250	1250	1600	1600	1600
42	50	65	42	50	65	42	50	65	42	50	65	42	50	65	42	50	65	42	50	65	42	50	65
12000	12000	12000	15000	15000	15000	19200	19200	19200	7560	7560	7560	9600	9600	9600	12000	12000	12000	15000	15000	15000	19200	19200	19200
B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H
Protective short circuit current (Icc: ms in kA)																							
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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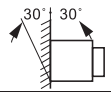
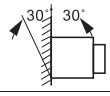
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T
–	–	–	T	T	T	T	T	T	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T
–	–	–	–	–	–	T	T	T	–	–	–	–	–	–	–	–	–	–	–	–	T	T	T
–	–	–	–	–	–	T	T	T	–	–	–	–	–	–	–	–	–	–	–	–	T	T	T
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

General

				IZM91B...06...	IZM91B...08...	IZM91B...10...
Standards and specifications				IEC/EN 60947		
Ambient temperature	Storage		°C	-40 -+70 (devices with LCD display -20 -+70)		
Mounting position	Operation		°C	-25 -+70 (devices with LCD display -20 -+70)		
						
Utilization category				B		
Protection type				IP20, IP54 with protective cover		
Direction of incoming power supply				Top incoming line or bottom incoming line based on requirement		
Main circuit						
Rated uninterrupted current		$I_n=I_u$	A	630	800	1000
Rated current at 50 °C		I_u	A	599	760	950
Rated current at 60 °C		I_u	A	567	720	900
Rated current at 70 °C		I_u	A	504	640	800
Rated impulse withstand voltage		U_{imp}	V AC	12000	12000	12000
Rated operation voltage		U_e	V AC	690	690	690
Short circuit breaking capacity when use in IT electrical system, U=440V		I_{IT}	kA	21.5	21.5	21.5
Short circuit breaking capacity when use in IT electrical system, U=990V		I_{IT}	kA	–	–	–
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1000	1000
Switching capacity						
Rated short circuit making capacity	Up to 440V 50/60 Hz	I_{cm}	kA	88.2	88.2	88.2
	Up to 690V 50/60Hz	I_{cm}	kA	88.2	88.2	88.2
Rated short time withstand current	t=1s	I_{cw}	kA	42	42	42
50/60 Hz	t=3s	I_{cw}	kA	–	–	–
Rated short circuit breaking capacity L_{cu} IEC/EN 60947	Up to 240V 50/60 Hz	I_{cu}	kA	42	42	42
Testing sequence Icu O-t-CO	Up to 440V 50/60 Hz	I_{cu}	kA	42	42	42
	Up to 690V 50/60 Hz	I_{cu}	kA	42	42	42
	Up to 1100V 50/60 Hz	I_{cu}	kA	–	–	–
IEC/EN 60947	Up to 240V 50/60 Hz	I_{cs}	kA	42	42	42
Testing sequence Icu O-t-CO-t-CO	Up to 440V 50/60 Hz	I_{cs}	kA	42	42	42
	Up to 690V 50/60 Hz	I_{cs}	kA	42	42	42
	Up to 1100V 50/60 Hz	I_{cs}	kA	–	–	–
Switching delay Total switching delay 2)			ms	20	20	20
Closing delay 3)			ms	25	25	25
Closing delay electrical 4) (via closing release)			ms	30	30	30
Opening delay electrical 5) (via shunt release / Undervoltage release)			ms	25/50	25/50	25/50
Switching delay via electronic release6) (Non-delayed short circuit protection)			ms	25	25	12500
Lifespan Mechanical, without maintenance		Operations		12500	12500	
Mechanical, with maintenance		Operations		20000	20000	20000
Mechanical, with maintenance		Operations		10000	10000	10000
Electrical, with maintenance		Operations		10000	10000	10000
Maximum operating frequency		Operations		60	60	60
Heat dissipation at rated current In	Fixed		W	36	59	92
In 3-phase symmetric loading	Withdrawable		W	50	80	125
Weight						
	3 pole		kg	15.23	15.23	15.23
	4 pole		kg	20.14	20.14	20.14
Withdrawable	3 pole		kg	38.65	38.65	38.65
	4 pole		kg	47.17	47.17	47.17
Section area of connected copper bar (suggested size)						
Fixed	Black		mm	1x10x50	1x10x50	1x10x50
Withdrawable	Black		mm	1x10x50	1x10x50	1x10x50

otes:1) Continuous rated operational current when used at different temperatures within a switchgear assembly. 2) Breaking time for circuit breaker's mechanism until complete disconnection of the main contact. 3) Closing time for circuit breaker's mechanism until complete closing of the main contact. 4) Closing signaling time via closing release electronic release 5) Opening signaling time via opening release/Undervoltage release. 6) Opening signaling time via

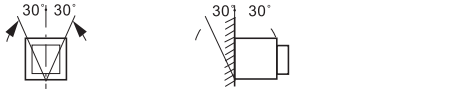
IZM91B...12...	IZM91B...16...	IZM91N...06...	IZM91N...08...	IZM91N...10...	IZM91N...12...	IZM91N...16...
IEC/EN 60947						
-40 -+70 (devices with LCD display -20 -+70)						
-25 -+70 (devices with LCD display -20 -+70)						
						
B						
IP20, IP54 protective cover						
Top incoming line or bottom incoming line based on requirement						
1250	1600	630	800	1000	1250	1600
1188	1520	599	760	950	1188	1520
1125	1440	567	720	900	1125	1440
1000	1280	504	640	800	1000	1280
12000	12000	12000	12000	12000	12000	12000
690	690	690	690	690	690	690
21.5	21.5	21.5	21.5	21.5	21.5	21.5
–	–	–	–	–	–	–
III/3	III/3	III/3	III/3	111/3	111/3	111/3
1000	1000	1000	1000	1000	1000	1000
88.2	88.2	105.0	105.0	105.0	105.0	105.0
88.2	88.2	88.2	88.2	88.2	88.2	88.2
42	42	42	42	42	42	42
–	–	–	–	–	–	–
42	42	85	85	85	85	85
42	42	50	50	50	50	50
42	42	42	42	42	42	42
–	–	–	–	–	–	–
42	42	50	50	50	50	50
42	42	50	50	50	50	50
42	42	42	42	42	42	42
–	–	–	–	–	–	–
20	20	20	20	20	20	20
25	25	25	25	25	25	25
30	30	30	30	30	30	30
25/50	25/50	25/50	25/50	25/50	25/50	25/50
25	25	25	25	25	25	25
12500	12500	12500	12500	12500	12500	12500
20000	20000	20000	20000	20000	20000	20000
10000	10000	10000	10000	10000	10000	10000
10000	10000	10000	10000	10000	10000	10000
60	60	60	60	60	60	60
132	325	36	59	92	132	235
180	320	50	80	125	180	320
15.23	15.23	15.23	15.23	15.23	15.23	15.23
20.14	20.14	20.14	20.14	20.14	20.14	20.14
38.65	38.65	38.65	38.65	38.65	38.65	38.65
47.17	47.17	47.17	47.17	47.17	47.17	47.17
2x8x50	2x10x50	1x10x50	1x10x50	1x10x50	2x8x50	2x10x50
2x8x50	2x10x50	1x10x50	1x10x50	1x10x50	2x8x50	2x10x50

1.9 Air circuit breaker IZM9
Technical data

General

				IZM91H...06...	IZM91H...08...	IZM91H...10...
Standards and specifications				IEC/EN 60947		
Ambient temperature	Storage		°C	-40 -+70 (devices with LCD display -20 -+70)		
	Operation		°C	-25 -+70 (devices with LCD display -20 -+70)		
Mounting position						
Utilization category				B		
Protection type				IP20, IP54 with protective cover		
Direction of incoming power supply				Top incoming line or bottom incoming line based on requirement		
Main circuit						
Rated uninterrupted current		$I_n=I_u$	A	630	800	1000
Rated current at 50 °C 1)		I_u	A	599	760	950
Rated current at 60 °C 1)		I_u	A	567	720	900
Rated current at 70 °C 1)		I_u	A	504	640	800
Rated impulse withstand voltage		U_{imp}	V AC	12000	12000	12000
Rated operation voltage		U_e	V AC	690	690	690
Short circuit breaking capacity when use in IT electrical system, U=440V		I_{IT}	kA	21.5	21.5	21.5
Short circuit breaking capacity when use in IT electrical system, U=990V		I_{IT}	kA	–	–	–
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1000	1000
Switching capacity						
Rated short circuit making capacity	Up to 440V 50/60Hz	I_{cm}	kA	145.2	145.2	145.2
	Up to 690V 50/60Hz	I_{cm}	kA	88.2	88.2	88.2
Rated short time withstand current	t=1s	I_{cw}	kA	42	42	42
50/60 Hz	t=3s	I_{cw}	kA	–	–	–
Rated short circuit breaking capacity L_{cu}						
Testing sequence Icu O-t-CO	Up to 240V 50/60 Hz	I_{cu}	kA	85	85	85
IEC/EN 60947	Up to 440V 50/60 Hz	I_{cu}	kA	66	66	66
	Up to 690V 50/60 Hz	I_{cu}	kA	42	42	42
	Up to 1100V 50/60 Hz	I_{cu}	kA	–	–	–
IEC/EN 60947	Up to 240V 50/60 Hz	I_{cs}	kA	65	65	65
Testing sequence Icu O-t-CO-t-CO	Up to 440V 50/60 Hz	I_{cs}	kA	50	50	50
	Up to 690V 50/60 Hz	I_{cs}	kA	42	42	42
	Up to 1100V 50/60 Hz	I_{cs}	kA	–	–	–
Switching delay	Total switching delay 2)		ms	20	20	20
	Closing delay 3)		ms	25	25	25
	Closing delay electrical 4) (via closing release)			30	30	30
	Opening delay electrical 5) (via shunt release / Undervoltage release)		ms	25/50	25/50	25/50
	Switching delay via electronic release 6) (Non-delayed short circuit protection)		ms	25	25	25
Lifespan	mechanical, without maintenance	Operations		12500	12500	12500
	Mechanical, with maintenance	Operations		20000	20000	20000
	Electrical, without maintenance	Operations		10000	10000	10000
	Electrical, with maintenance	Operations		10000	10000	10000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated current In		Fixed	w	36	59	92
Heat dissipation at rated current In		Withdrawable	w	50	80	125
Weight						
Fixed	3 pole		kg	15.23	15.23	15.23
	4 pole		kg	20.14	20.14	20.14
Withdrawable	3 pole		kg	38.65	38.65	38.65
	4 pole		kg	47.17	47.17	47.17
Section area of connected copper bar (suggested size)						
Fixed	Black		mm	1x10x15	1x10x15	1x10x15
Withdrawable	Black		mm	1x10x15	1x10x15	1x10x15

Notes: 1) Continuous rated operational current when used at different temperatures within a switchgear assembly.
2) Breaking time for circuit breaker's mechanism until complete disconnection of the main contact.
3) Closing time for circuit breaker's mechanism until complete closing of the main contact.
4) Closing signaling time via closing release
5) Opening signaling time via opening release/Undervoltage release.
6) Opening signaling time via electronic release

IZM91H...12...	IZM91H...16...
IEC/EN 60947	
-40 - + 70 (with LCD display -20 -+70)	
-25 - + 70 (with LCD display -20 -+70)	
	
B	
IP 20, IP54 with protective cover	
Top incoming line or bottom based on requirement	
1250	1600
1188	1520
1125	1440
1000	1280
12000	12000
690	690
21.5	21.5
–	–
III/3	III/3
1000	1000
145.2	145.2
88.2	88.2
42	42
–	–
85	85
66	66
42	42
–	–
65	65
50	50
42	42
–	–
20	20
25	25
30	30
25/50	25/50
25	25
12500	12500
20000	20000
10000	10000
10000	10000
60	60
132	235
180	320
15.23	15.23
20.14	20.14
38.65	38.65
47.17	47.17
2x8x50	2x10x50
2x8x50	2x10x50

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General

				IN91B...06...	IN91B...08...	IN91B...10...
Standards and specifications				IEC/EN 60947		
Ambient temperature	Storage		°C	-40-+70		
Mounting position	Operation		°C	-25-+70 (with LCD display -20-+70)		
						
Utilization category				B		
Protection type				iP20, IP54 with protective cover		
Direction of incoming power supplies				Top or bottom incoming line based on requirements		

Main circuit

Rated uninterrupted current		$I_n=I_u$	A	630	800	1000
Rated current at 50 °C 1)		I_u	A	599	760	950
Rated current at 60 °C 1)		I_u	A	567	720	900
Rated current at 70 °C1)		I_u	A	504	640	800
Rated impulse withstand voltage		U_{imp}	V AC	12000	12000	12000
Rated operational voltage		U_e	V AC	690	690	690
Short circuit breaking capacity when use in IT electrical system up to U=440V		I_{IT}	kA	21.5	21.5	21.5
Short circuit breaking capacity when use in IT electrical system up to U=690V		I_{IT}	kA	–	–	–
Overvoltage category / pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1000	1000

Switching capacity

Rated short circuit making capacity	Up to 440V 50/60 Hz	I_{cm}	kA	88.2	88.2	88.2
	Up to 690V 50/60 Hz	I_{cm}	kA	88.2	88.2	88.2
Rated short time withstand current	t=1s	I_{cw}	kA	42	42	42
50/60Hz	t=3s	I_{cw}	kA	–	–	–
Total switching delay 2)			ms	20	20	20
Switching delay Opening delay 3)			ms	25	25	25
Opening delay electrical 4) (via opening release)			ms	30	30	30
Closing delay electrical 5) (via shunt release/Undervoltage release)			ms	25/50	25/50	25/50
Life span Mechanical, without maintenance		Operations		12500	12500	12500
Mechanical, with maintenance		Operations		20000	20000	20000
Electrical, without maintenance		Operations		10000	10000	10000
Electrical, with maintenance		Operations		10000	10000	10000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated current In	fixed		W	36	59	92
In 3-phase symmetric loading	withdrawable		W	50	80	125

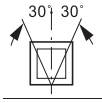
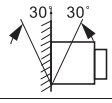
Weight

Fixed	3 pole	kg	15.23	15.23	15.23
	4 pole	kg	20.14	20.14	20.14
Withdrawable	3 pole	kg	38.65	38.65	38.65
	4 pole	kg	47.17	47.17	47.17

Section area of connected copper bar (suggested size)

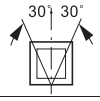
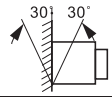
Fixed	Black	m	1X10X50	1X10X50	1X10X50
WithdrawableBlack	Black	m	1X10X50	1X10X50	1X10X50

Notes:
1) Continuous rated operational current when used at different temperatures within a switchgear assembly.
2) Breaking time for circuit breaker's mechanism until complete disconnection of the main contact.
3) Closing time for circuit breaker's mechanism until complete closing of the main contact.
4) Closing signaling time via closing release
5) Opening signaling time via opening release/Undervoltage relea

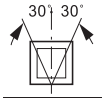
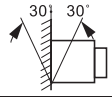
IN91B...12...	IN91B...10...	IN91N...06...	IN91N...08...	IN91N...10...	IN91N...12...	IN91N...16...
IEC/EN 60947						
-40-+70						
-25 -+70 （with LCD display -20-+70）						
						
B						
IP20, IP54 (with protective cover)						
Top or bottom incoming line based on requirement						
1250	1600	630	800	1000	1250	1600
1188	1520	599	760	950	1188	1520
1125	1440	567	720	900	1125	1440
1000	1280	504	640	800	1000	1280
12000	12000	12000	12000	12000	12000	12000
690	690	690	690	690	690	690
21.5	21.5	21.5	21.5	21.5	21.5	21.5
–	–	–	–	–	–	–
III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000
88.2	88.2	88.2	88.2	88.2	88.2	88.2
88.2	88.2	88.2	88.2	88.2	88.2	88.2
42	42	42	42	42	42	42
–	–	–	–	–	–	–
20	20	20	20	20	20	20
25	25	25	25	25	25	25
30	30	30	30	30	30	30
25/50	25/50	25/50	25/50	25/50	25/50	25/50
12500	12500	12500	12500	12500	12500	12500
20000	20000	20000	20000	20000	20000	20000
10000	10000	10000	10000	10000	10000	10000
10000	10000	10000	10000	10000	10000	10000
60	60	60	60	60	60	60
132	235	36	59	92	132	235
180	320	50	80	125	180	320
15.23	15.23	15.23	15.23	15.23	15.23	15.23
20.14	20.14	20.14	20.14	20.14	20.14	20.14
38.65	38.65	38.65	38.65	38.65	38.65	38.65
47.17	47.17	47.17	47.17	47.17	47.17	47.17
2X8X50	2X10X50	1X10X50	1X10X50	1X10X50	2X8X50	2X10X50
2X8X50	2X10X50	1X10X50	1X10X50	1X10X50	2X8X50	2X10X50

1

General

				IN91B...06...	IN91B...08...	IN91B...10...
Standards and specifications				IEC/EN 60947		
Ambient temperature	Storage		˚C	-40-+70		
Mounting position	Operation		˚C	-25-+70 （with LCD display -20-+70）		
						
Utilization category				B		
Protection type				iP20, IP54 with protective cover		
Direction of incoming power supplies				Top or bottom incoming line based on requirements		
Main circuit						
Rated uninterrupted current		$I_n=I_u$	A	630	800	1000
Rated current at 50 °C 1)		I_u	A	599	760	950
Rated current at 60 °C 1)		I_u	A	567	720	900
Rated current at 70 °C1)		I_u	A	504	640	800
Rated impulse withstand voltage		U_{imp}	V AC	12000	12000	12000
Rated operational voltage		U_e	V AC	690	690	690
Short circuit breaking capacity when use in IT electrical system up to U=440V		I_{IT}	kA	21.5	21.5	21.5
Short circuit breaking capacity when use in IT electrical system up to U=690V		I_{IT}	kA	–	–	–
Overvoltage category / pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1000	1000
Switching capacity						
Rated short circuit making capacity	Up to 440V 50/60 Hz	I_{cm}	kA	88.2	88.2	88.2
	Up to 690V 50/60 Hz	I_{cm}	kA	88.2	88.2	88.2
Rated short time withstand current	t=1s	I_{cw}	kA	42	42	42
50/60Hz	t=3s	I_{cw}	kA	–	–	–
Total switching delay 2)			ms	20	20	20
Switching delay Opening delay 3)			ms	25	25	25
Opening delay electrical 4) (via opening release)			ms	30	30	30
Closing delay electrical 5) (via shunt release/Undervoltage release)			ms	25/50	25/50	
Life span Mechanical, without maintenance		Operations		12500	12500	
Mechanical, with maintenance		Operations		20000	20000	20000
Electrical, without maintenance		Operations		10000	10000	10000
Electrical, with maintenance		Operations		10000	10000	10000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated current In	fixed		W	36	59	92
In 3-phase symmetric loading	withdrawable		W	50	80	125
Weight						
Fixed	3 pole		kg	15.23	15.23	15.23
	4 pole		kg	20.14	20.14	20.14
Withdrawable	3 pole		kg	38.65	38.65	38.65
	4 pole		kg	47.17	47.17	47.17

Notes:
1) Continuous rated operational current when used at different temperatures within a switchgear assembly.
2) Breaking time for circuit breaker's mechanism until complete disconnection of the main contact.
3) Closing time for circuit breaker's mechanism until complete closing of the main contact.
4) Closing signaling time via closing release
5) Opening signaling time via opening release/Undervoltage relea

IN91B...12...	IN91B...16...
IEC/EN 60947	
-40-+70	
-25 -+70 （with LCD display -20-+70）	
	
B	
IP20, IP54 (with protective cover)	
Top or bottom incoming line based on requirement	

1250	1600
1188	1520
1125	1440
1000	1280
12000	12000
690	690
21.5	21.5
–	–
III/3	III/3
1000	1000

88.2	88.2
88.2	88.2
42	42
–	–
20	20
25	25
30	30
25/50	25/50
12500	12500
20000	20000
10000	10000
10000	10000
60	60
132	235
180	320

15.23	15.23
20.14	20.14
38.65	38.65
47.17	47.17

2X8X50	2X10X50
2X8X50	2X10X50

Rated control voltage

			Shunt release				Closing release			
			IZMX-ST24DC IZMX-STS24DC	**IZMX-ST48DC IZMX-STS48DC**	**IZMX-ST10AD IZMX-STS10AD**	**IZMX-ST230AD IZMX-STS230AD**	**IZMX-SR24DC**	**IZMX-SR48DC**	**IZMX-SR110AD 110-127**	**IZMX-SR230AD 208-240**
AC 50/60 Hz	U_s	V	–	–	110-127	208-240	–	–		
DC	U_s	V	24	48	110-125	220-250	48	48	110-125	220-250
Power consumption										
AC		VA	–	–	(pick-up 450)	(pick-up 450)	–	–	(pick-up 450)	(pick-up 250)
DC		W	5(pick-up 250)	5(pick-up 250)	(pick-up 450)	(pick-up 450)	(pick-up 250)	(pick-up 250)	(pick-up 450)	(pick-up 250)
Response time of circuit breaker										
		ms	35	35	35	35	40	40	40	40
Operating range										
Drop-out voltage										
AC 50/60 HZ Pick up	Drop-out	x Uc	–							
Pick-up voltage										
Drop-out	x Uc	based on IEC standard								

Rated control voltage

			Undervoltage release			
			IZMX-UVR24DC	**IZMX-UVR48DC**	**IZMX-UVR110AD**	**IZMX-UVR110AD**
AC 50/60 Hz	U_s	V	–	–	110-127	208-240
DC	U_s	V	24	48	110-125	220-250
Power consumption						
AC		VA	–	–	5 (pick-up 890)	5 (pick-up 910)
DC		W	5 (pick-up 500)	5 (pick-up 850)	5 (pick-up 890)	5 (pick-up 910)
Response time of circuit breaker						
		ms	50	50	50	50
Operating range						
Drop out voltage						
AC 50/60 HZ Pick up	Drop out	x Uc based on IEC standard				
Pick up voltage						
	Drop out	x Uc based on IEC standard				

Rated breaking capacity

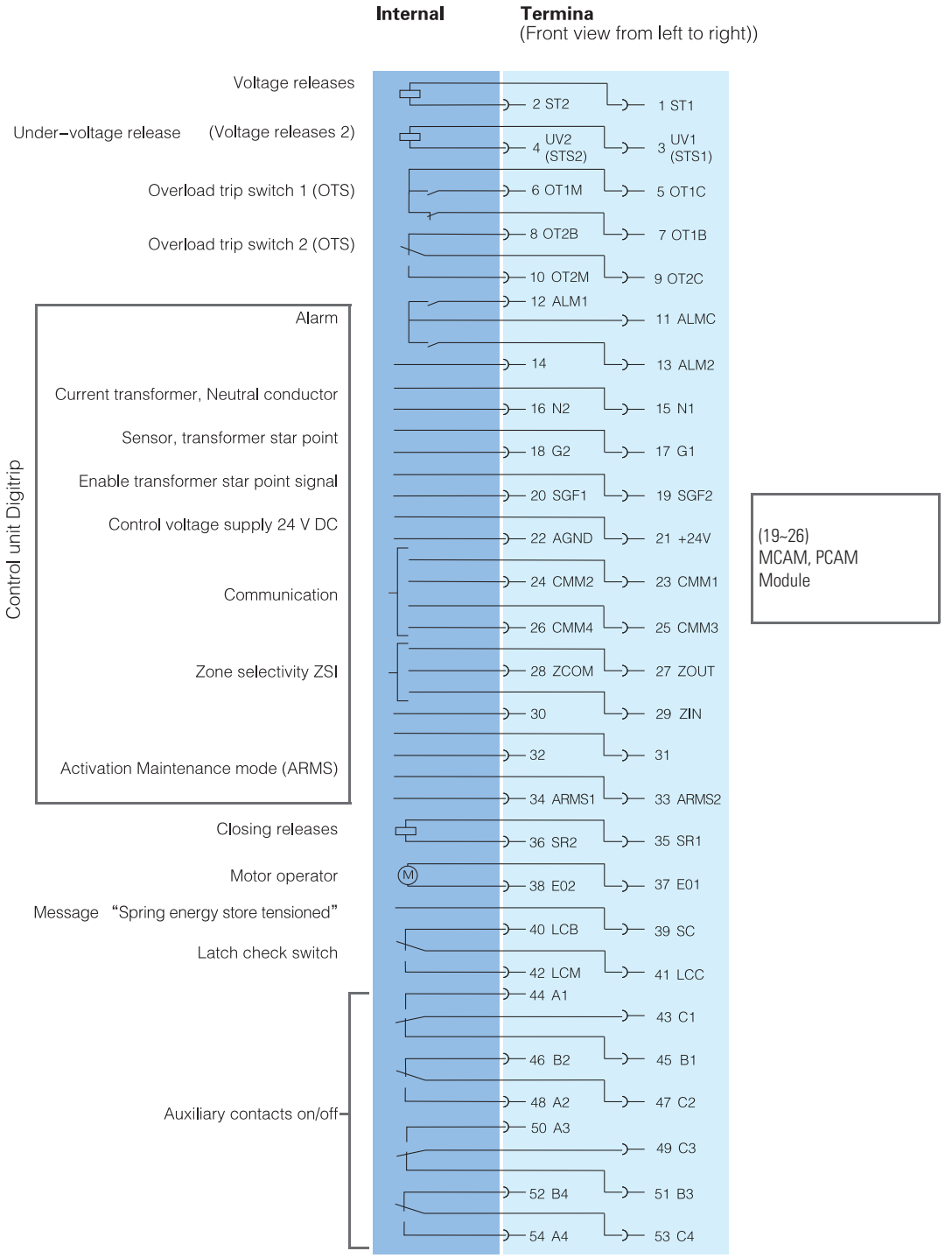
		Standard auxiliary contact	Overload trip switch	Latch check switch
		IZMX-AS22	**IZMX-OTS**	**IZMX-LCS(-SR)**
Inductive load				
250 V AC	A	10	10	10
125 V AC	A	0.5	0.5	0.5
250 V AC	A	0.25	0.25	0.25

Rated control voltage

			Motor operator			
			IZMX-M16-24DC	**IZMX-M16-48DC**	**IZMX-M16-110AD**	**VIZMX-M16-220AD**
AC 50/60 Hz	U_s	V	–	–	110-127	220-240
DC	U_s	V	24	48	110-125	220-250
Necessary time required for charging of the spring-operated stored energy mechanism						
		S	3	3	3	4
Rated current						
	I_n	A	5	3	AC-2A/DC-1A	AC-1A/DC-1A
Starting current						
		A	25	15	AC-6A/DC-5A	AC-10A/DC-10A
Power consumption						
AC 50/60 Hz		VA	–	–	280	280
DC		W	150	150	150	280

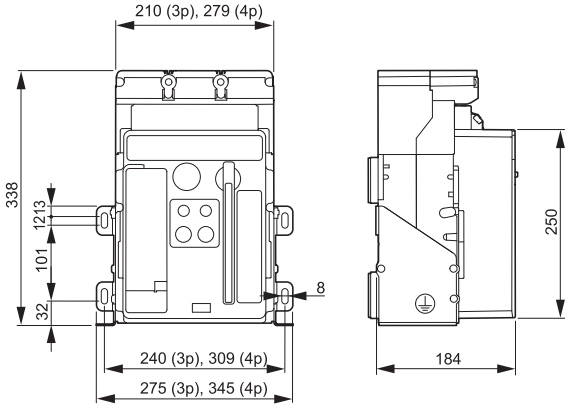
1.10 Air circuit breaker IZM9

Control circuit terminal allocation diagram



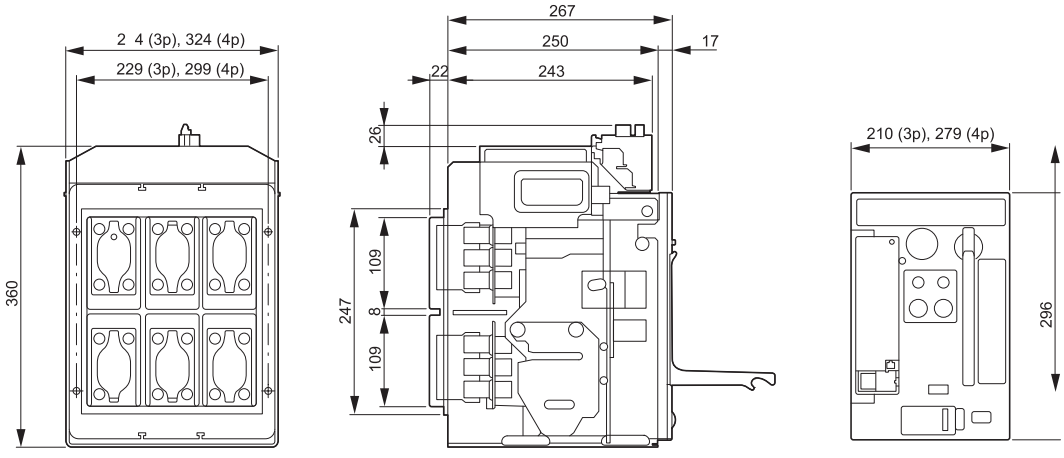
IN91, IZM91 Fixed mounted

IN91...F,IZM91...F



IN91, IZM91 Fixed mounted

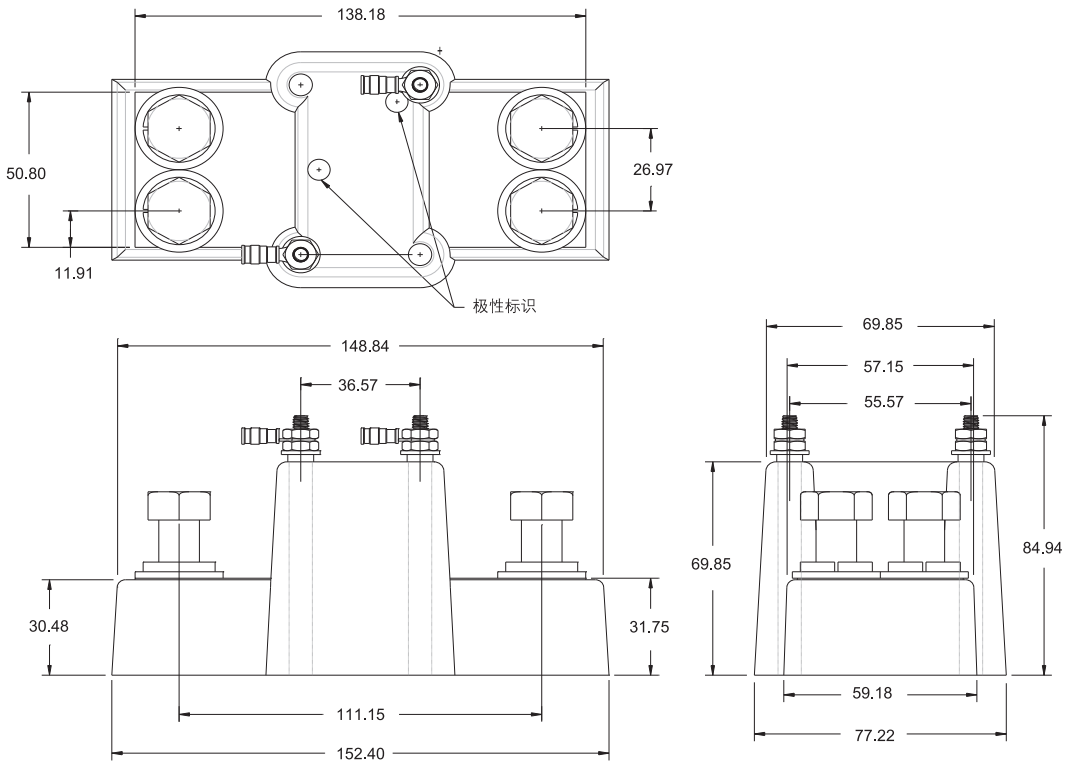
IN91...W,IZM91...W



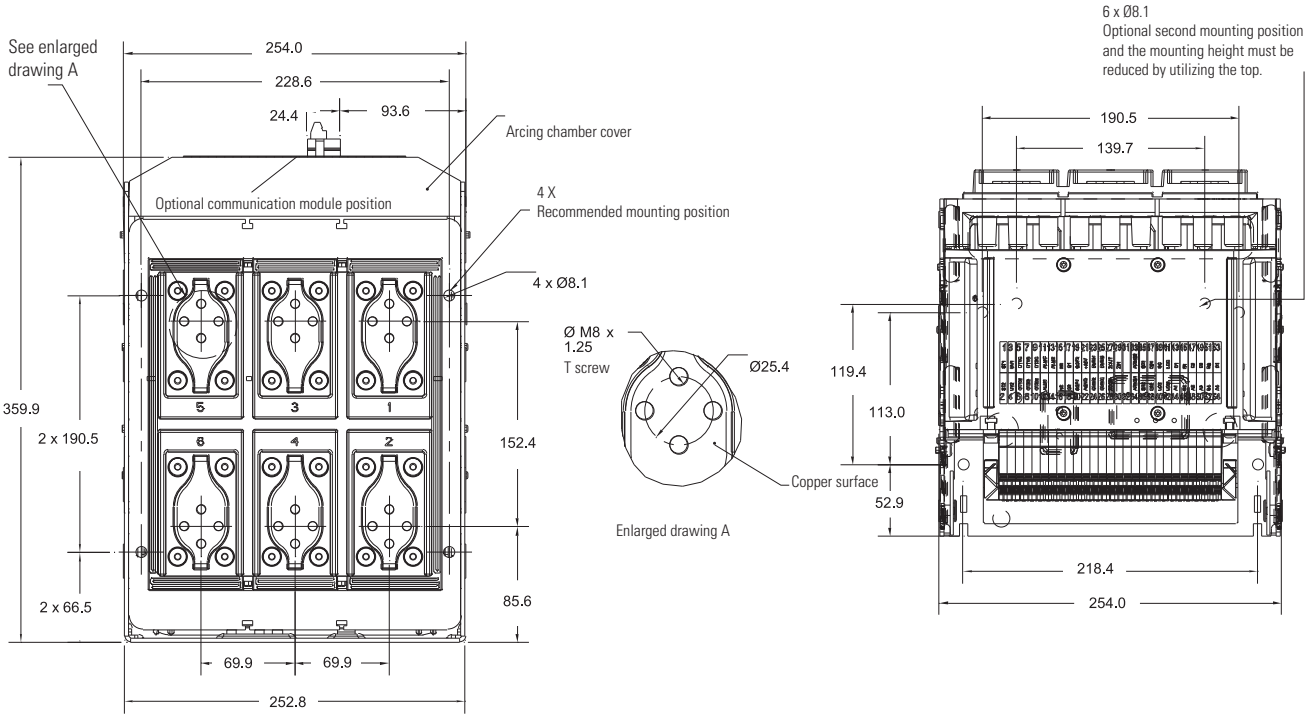
1

Current transformer of neutral conductor of IZM 91

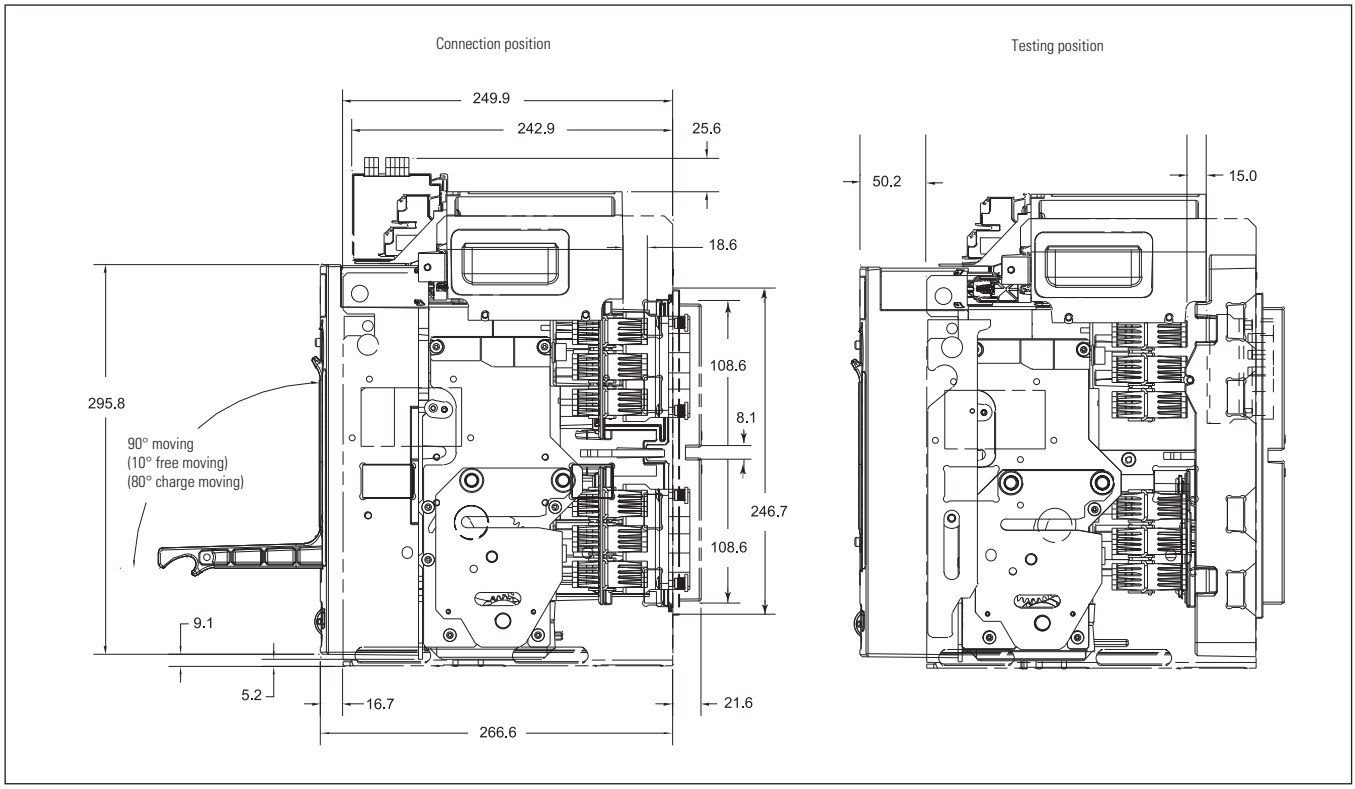
Unit: mm



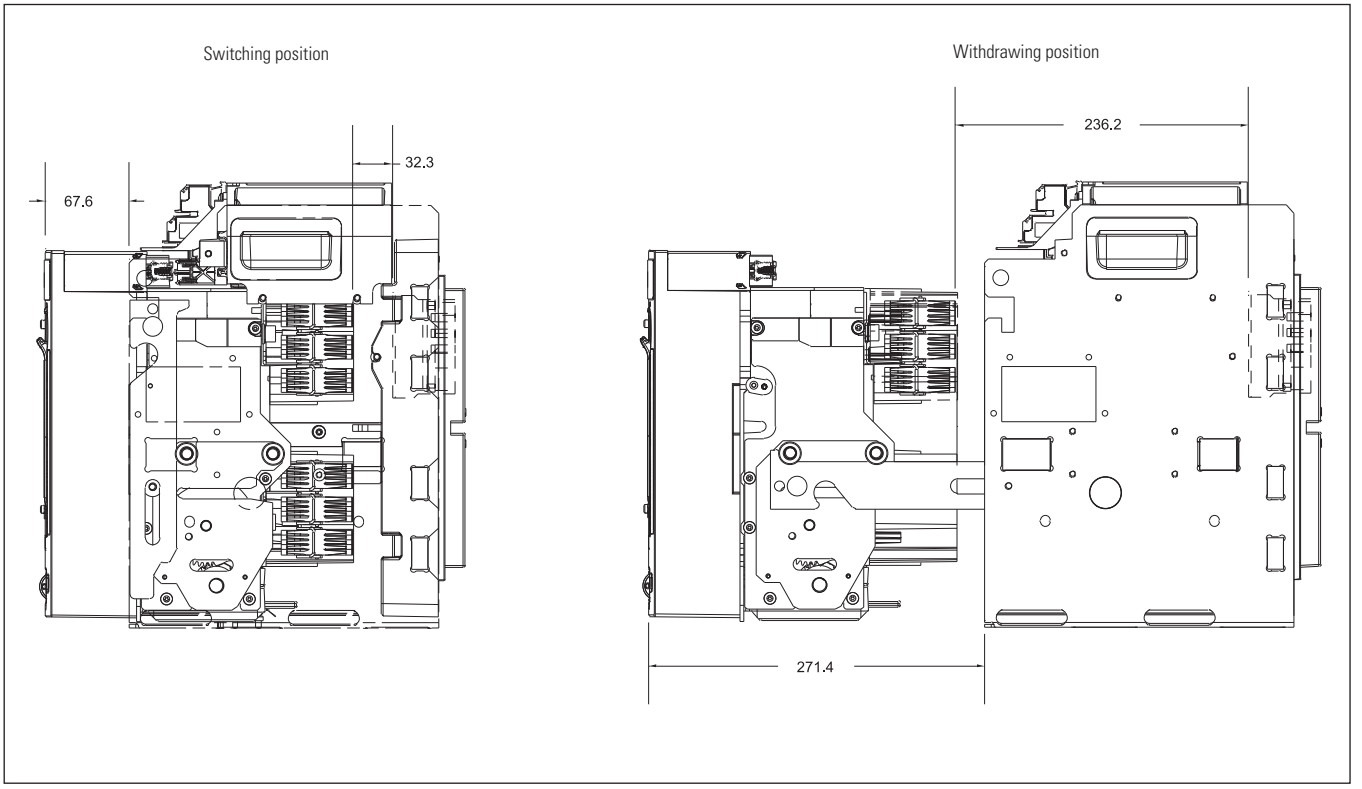
Testing position



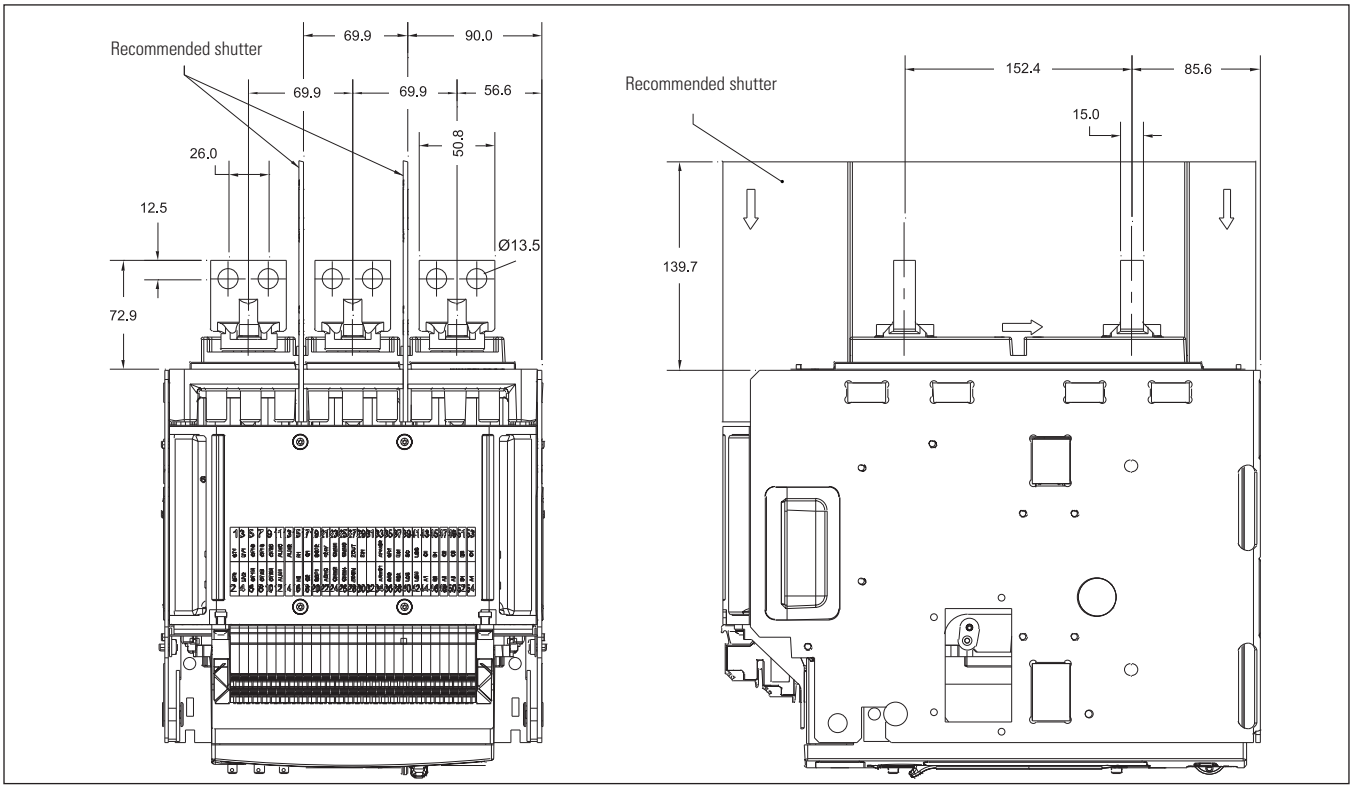
3-pole withdrawable – rear view/ top view (mm)



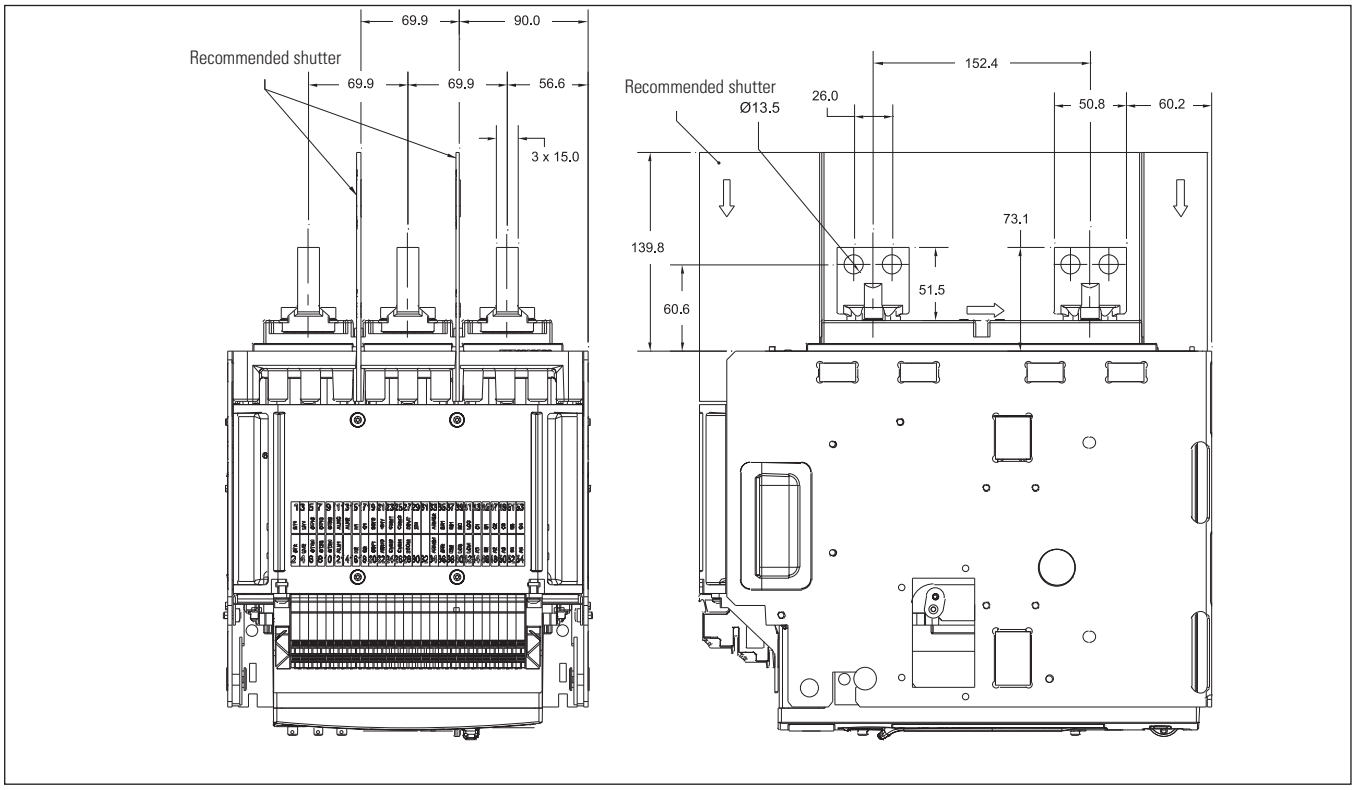
3-pole withdrawable – connection and testing side view



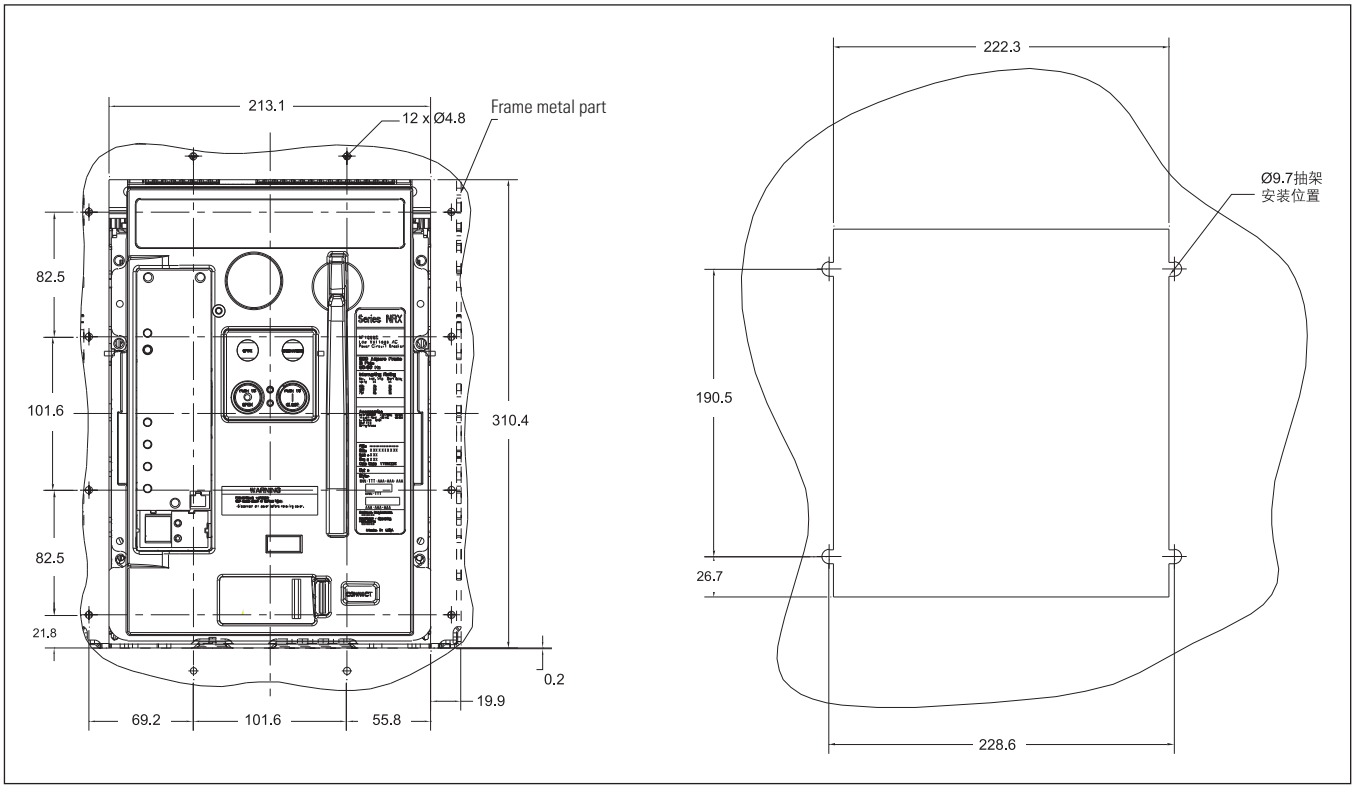
3-pole withdrawable – switching and withdrawing position, side view (mm)



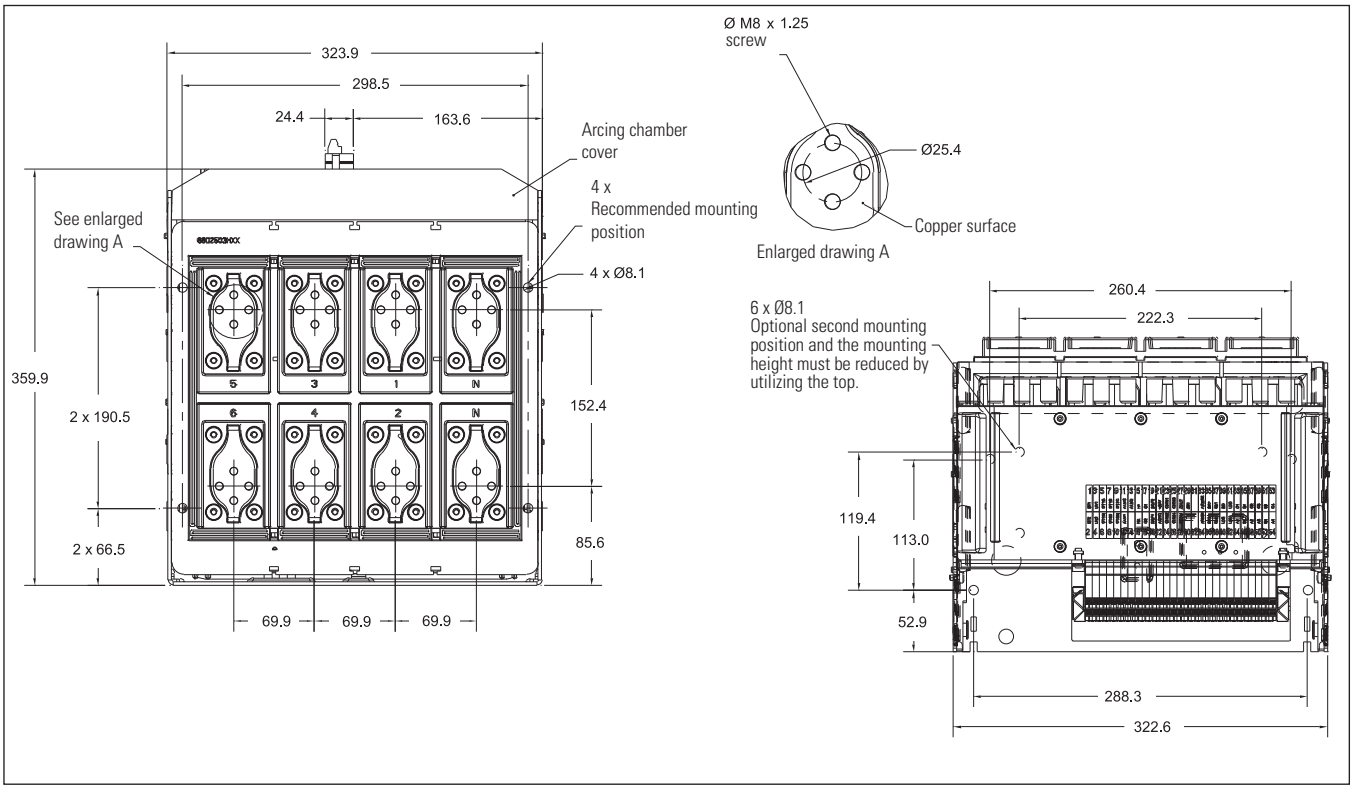
3-pole withdrawable – horizontal mounting top view/ side view (mm)



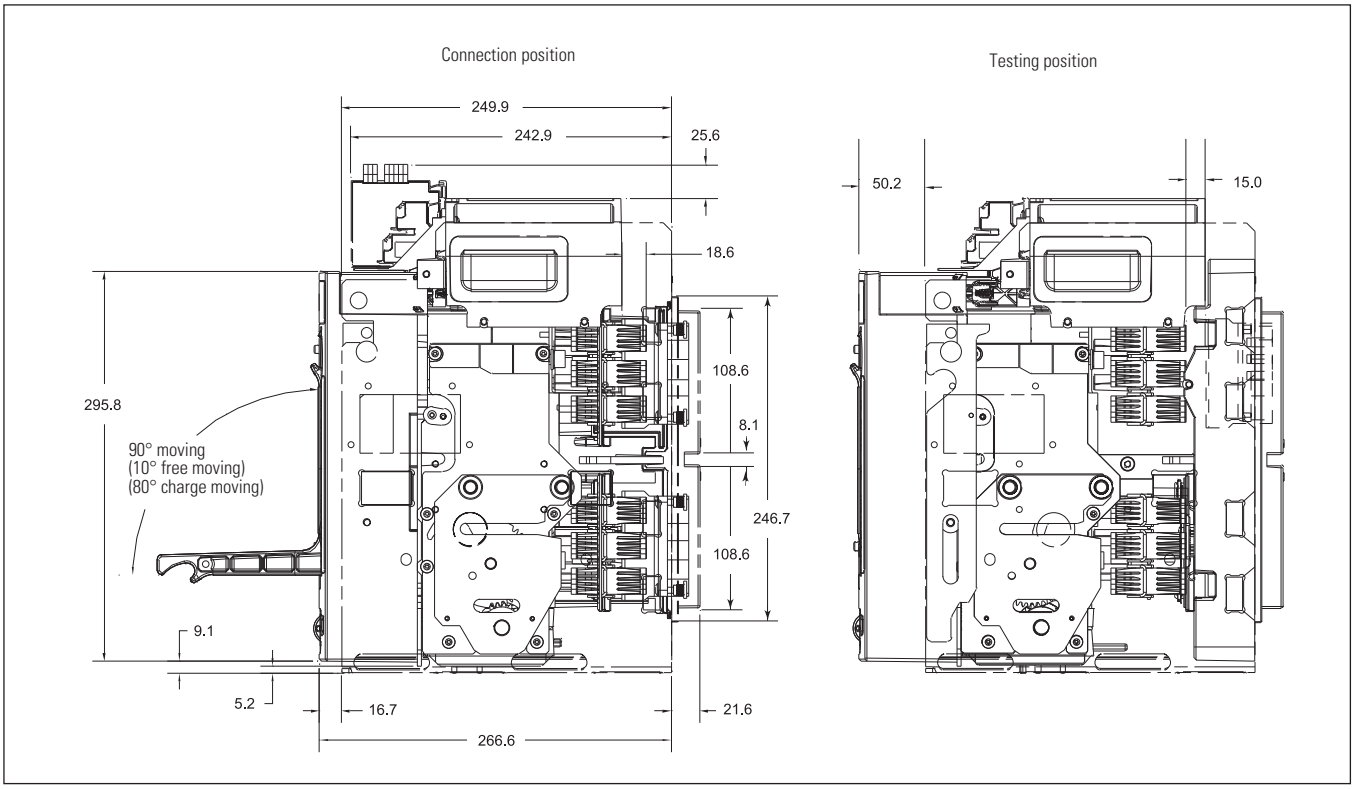
3-pole withdrawable – vertical mounting top view/ side view (mm)



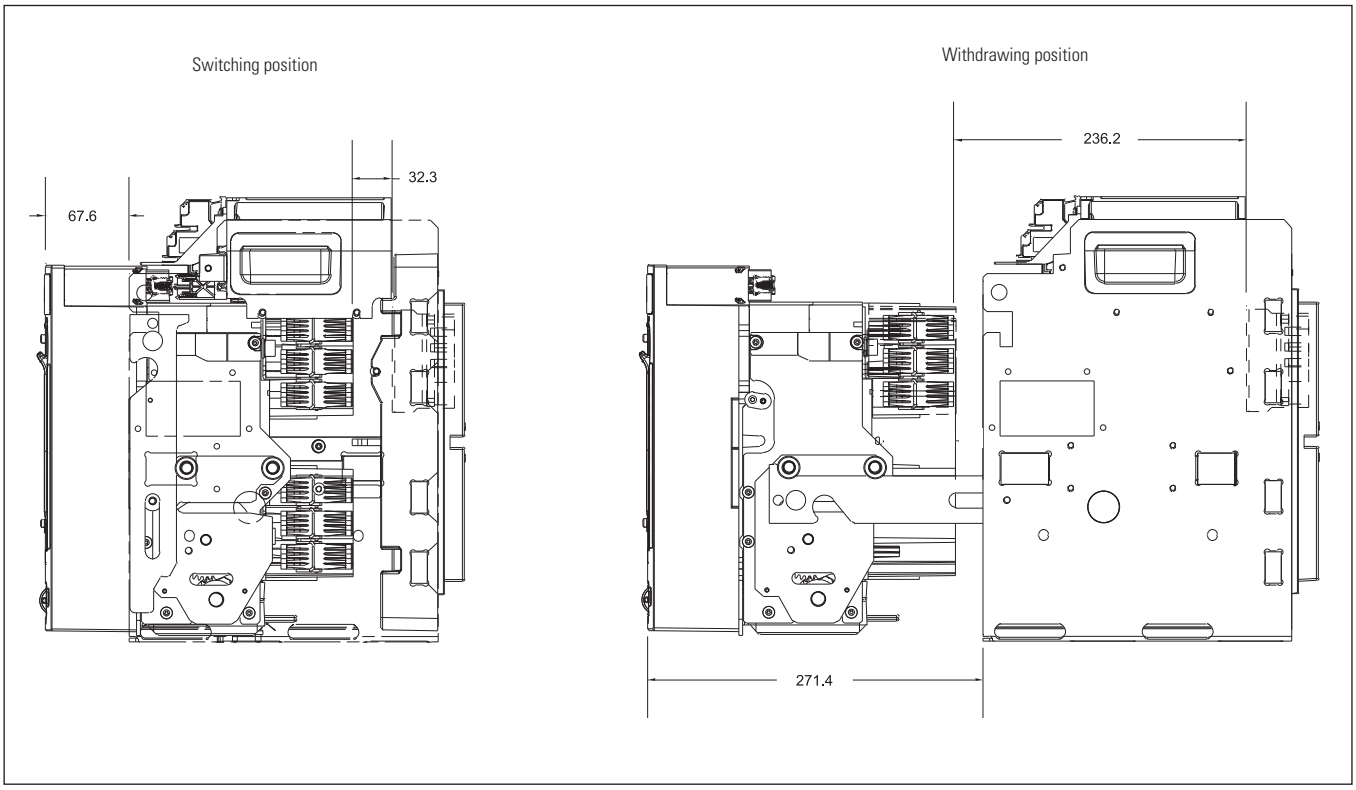
3-pole withdrawable – circuit breaker front view (mm)



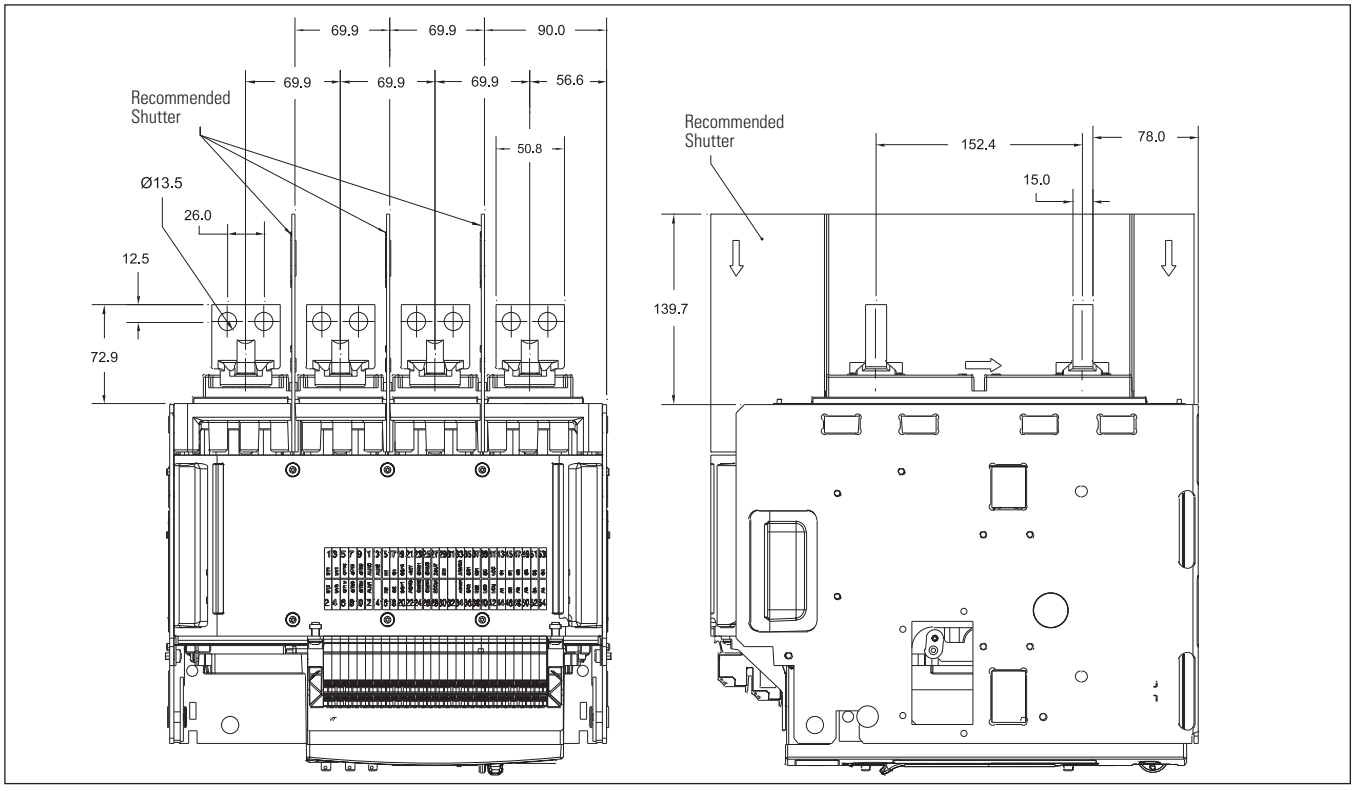
4-pole withdrawable – rear view/ top view (mm)



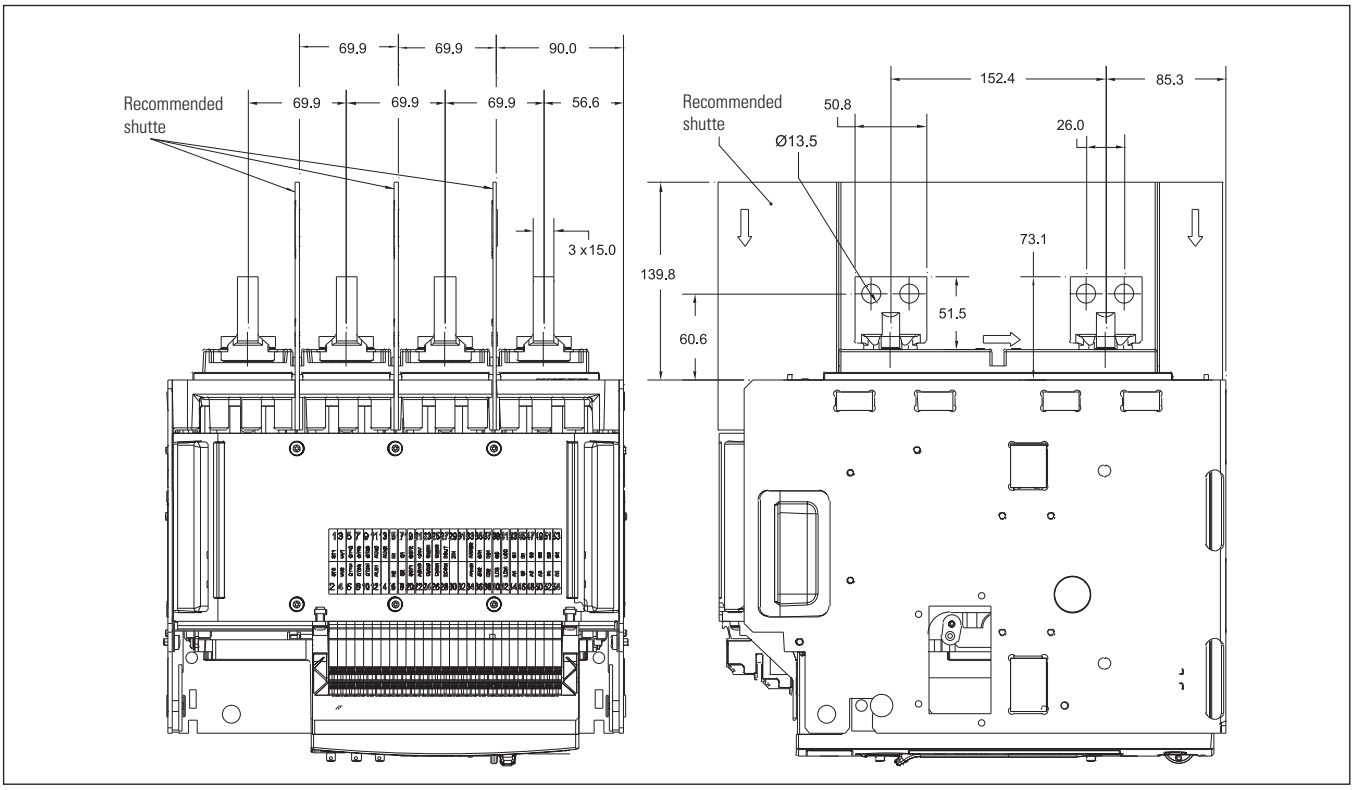
4-pole withdrawable – connection and testing position side view (mm)



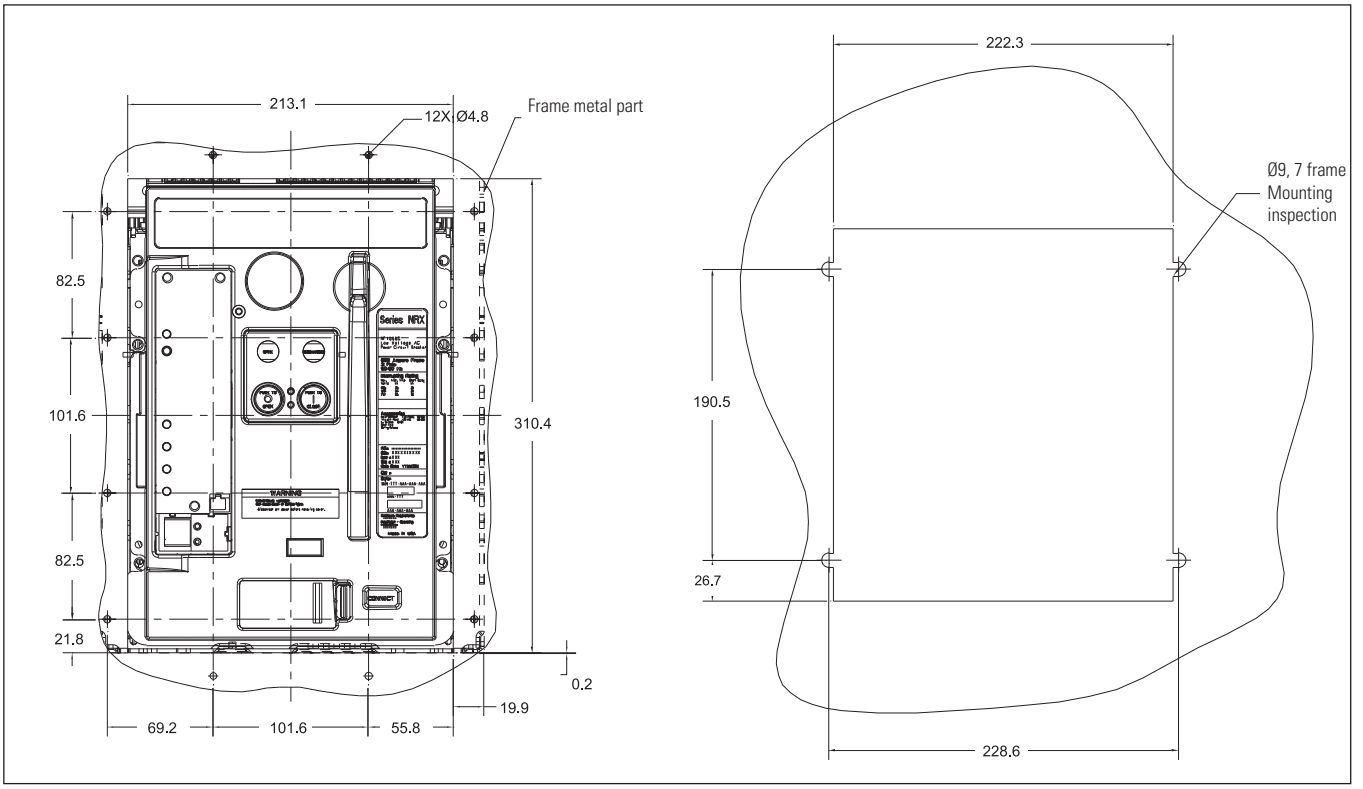
4-pole withdrawable – switching and withdrawing position side view (mm)



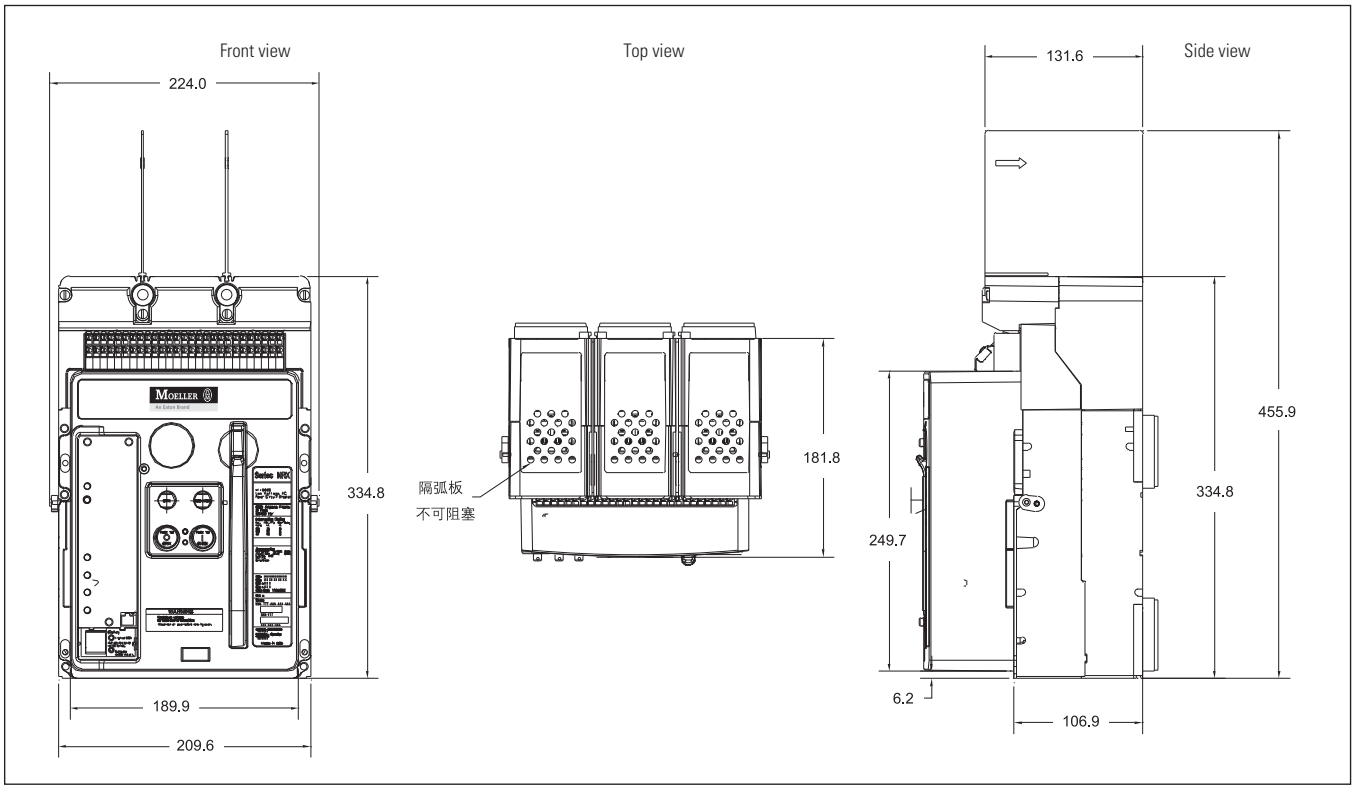
4-pole withdrawable – horizontal mounting top view/side view (mm)



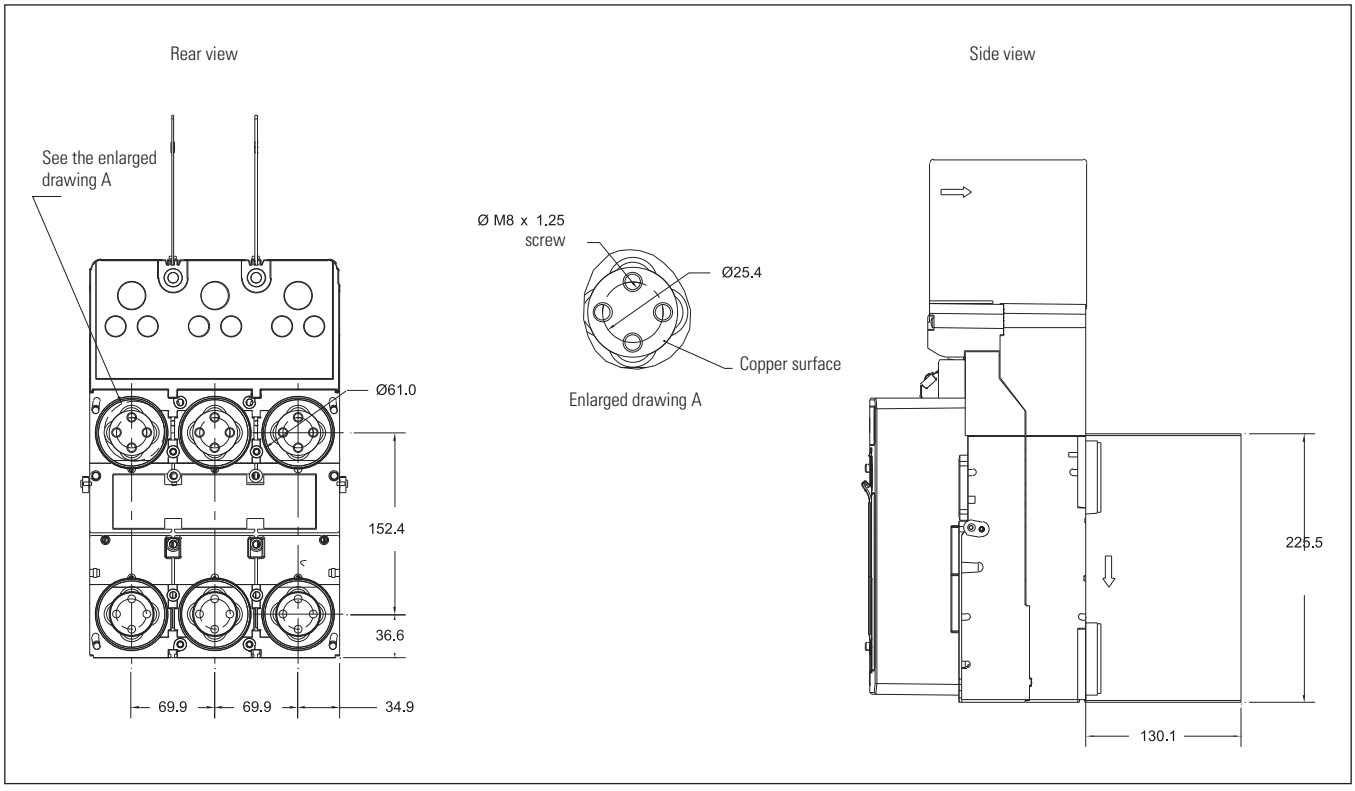
4-pole withdrawable – vertical mounting top view/side view (mm)



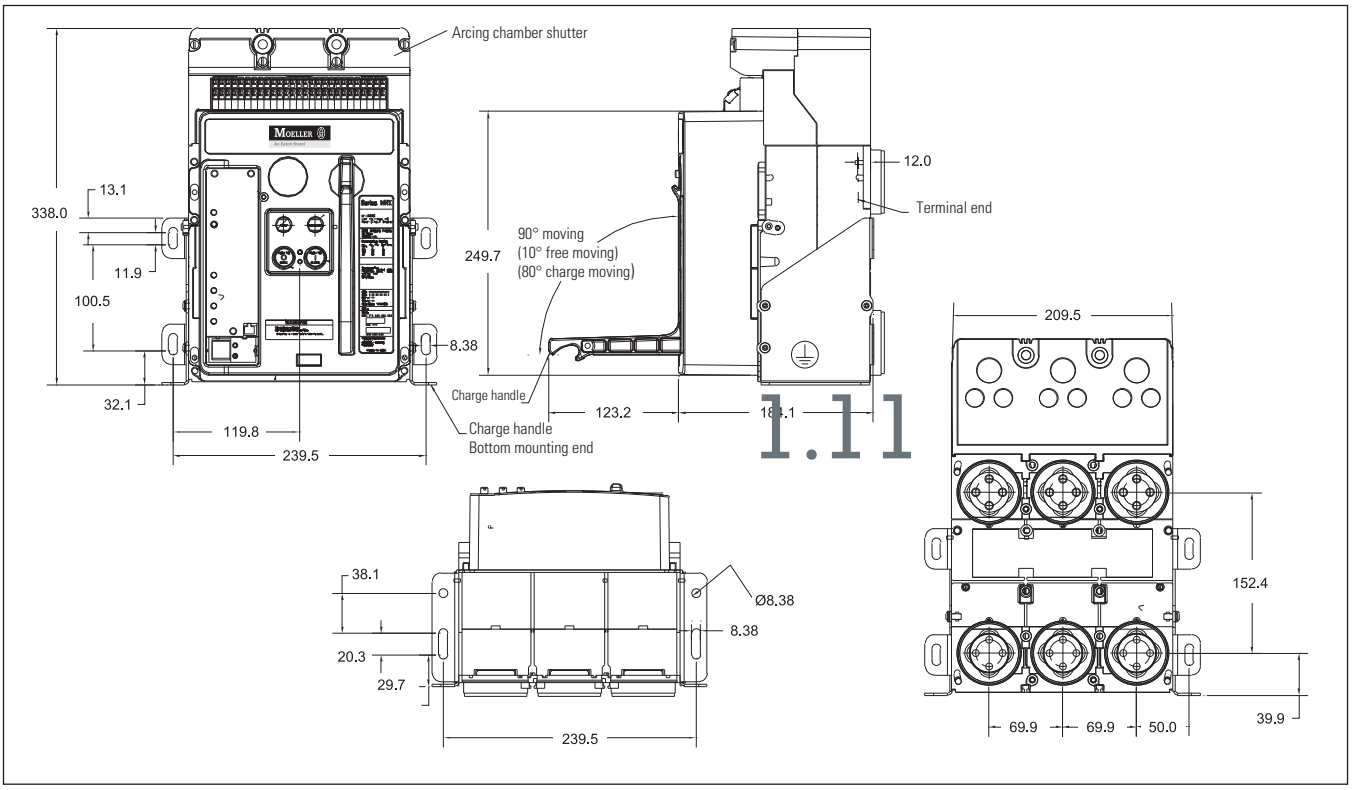
4-pole withdrawable – circuit breaker front view (mm)



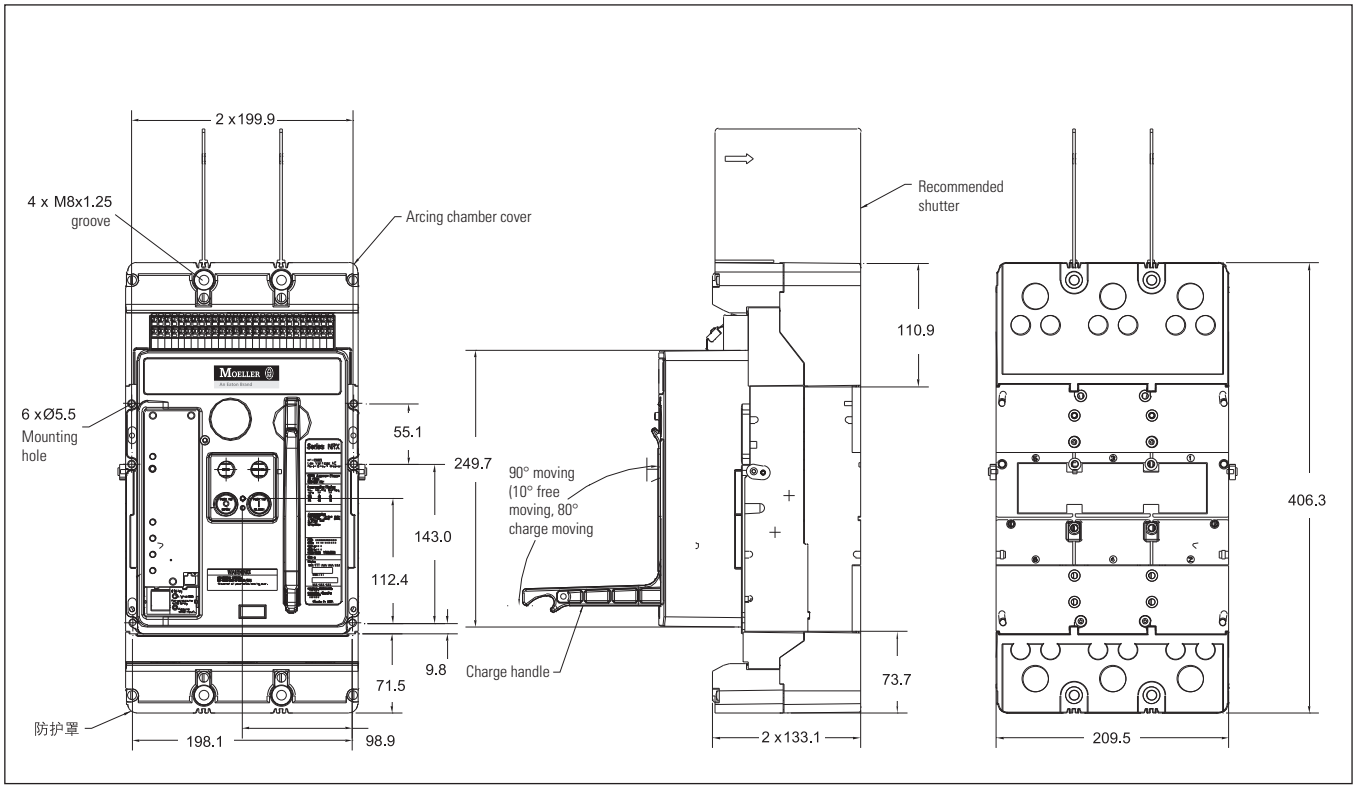
3 pole fixed circuit breaker general view and size (mm)



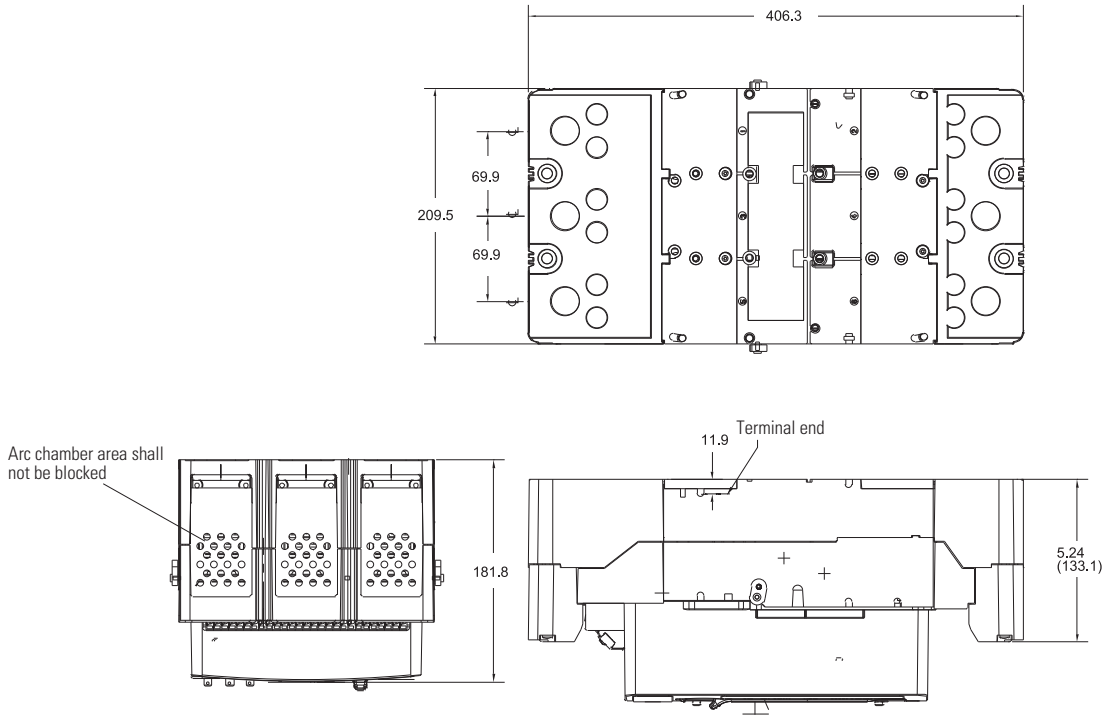
3 pole fixed circuit breaker general view and size (mm)



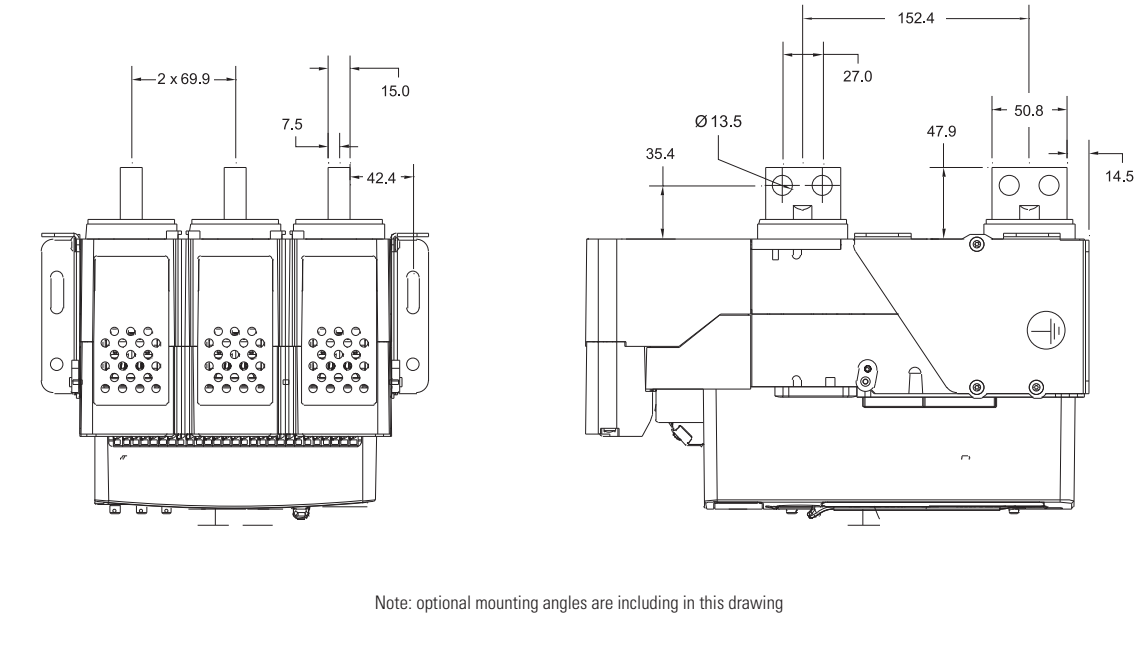
3 pole fixed circuit breaker mounting angle size (mm)



3 pole fixed circuit breaker front connection size (mm)

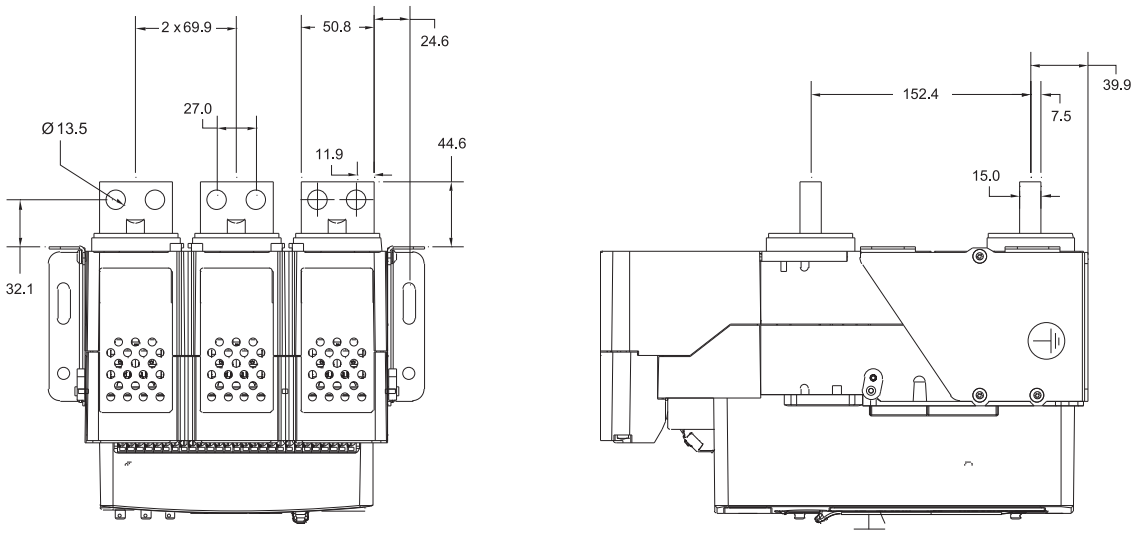


3 pole fixed circuit breaker horizontal connection mounting size (mm)



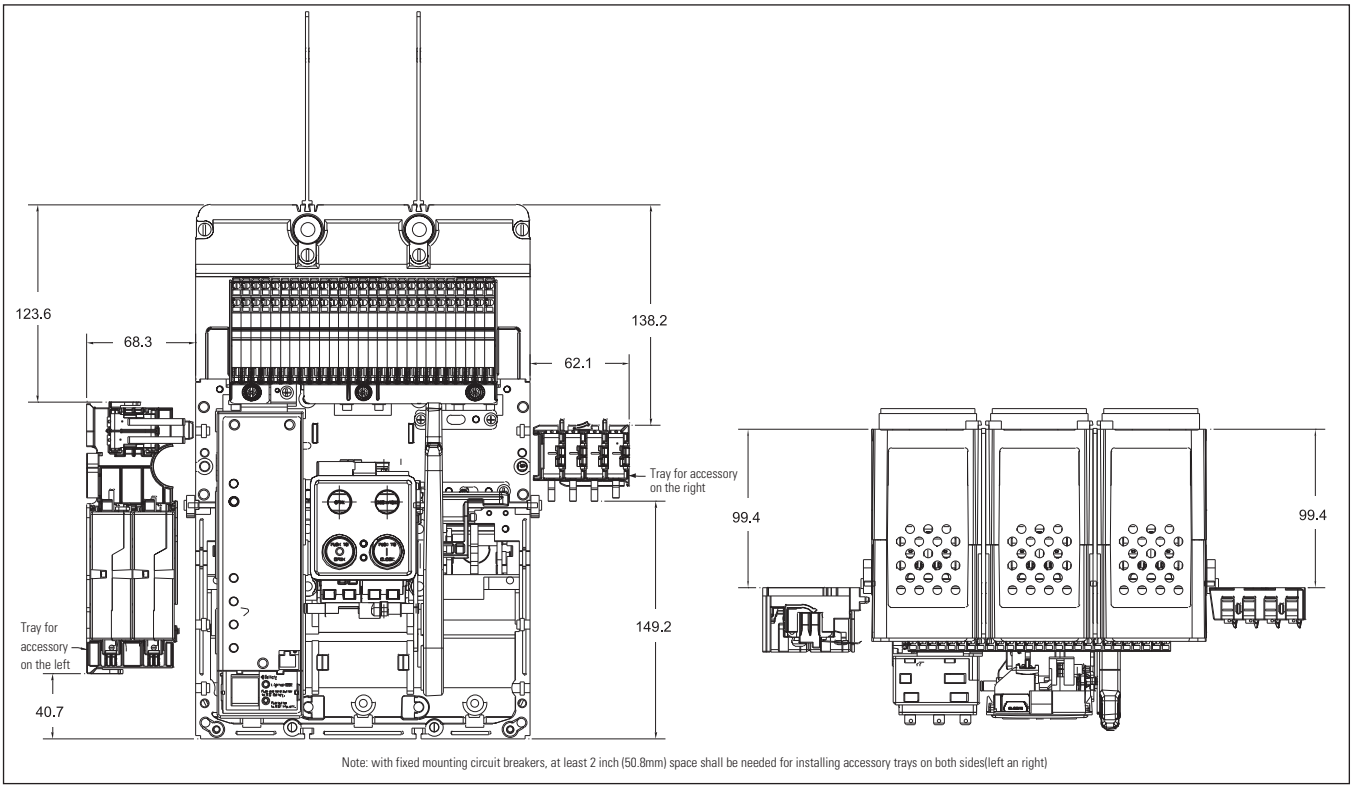
Note: optional mounting angles are including in this drawing

3 pole fixed circuit breaker vertical connection mounting size (mm)



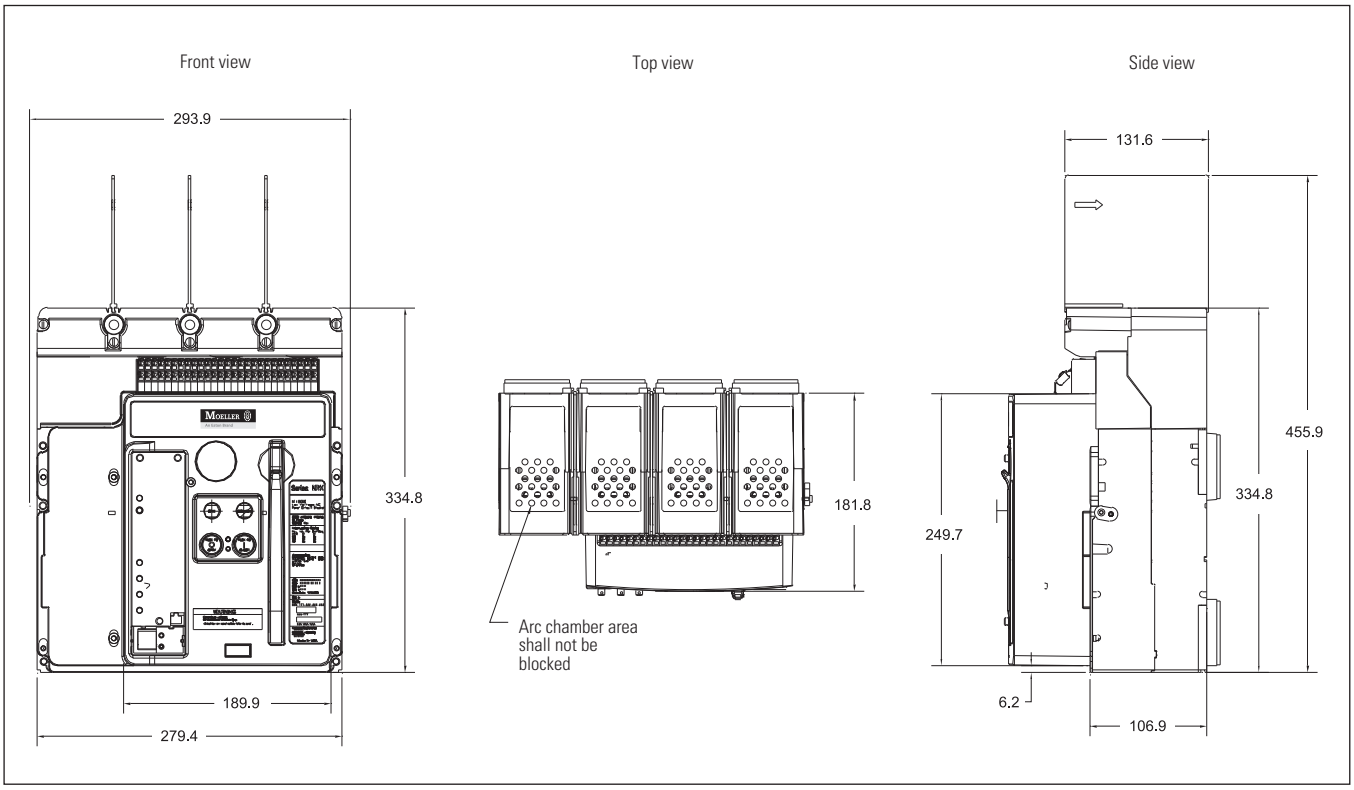
Note: optional mounting angles are including in this drawing

3 pole fixed circuit breaker horizontal connection mounting size (mm)

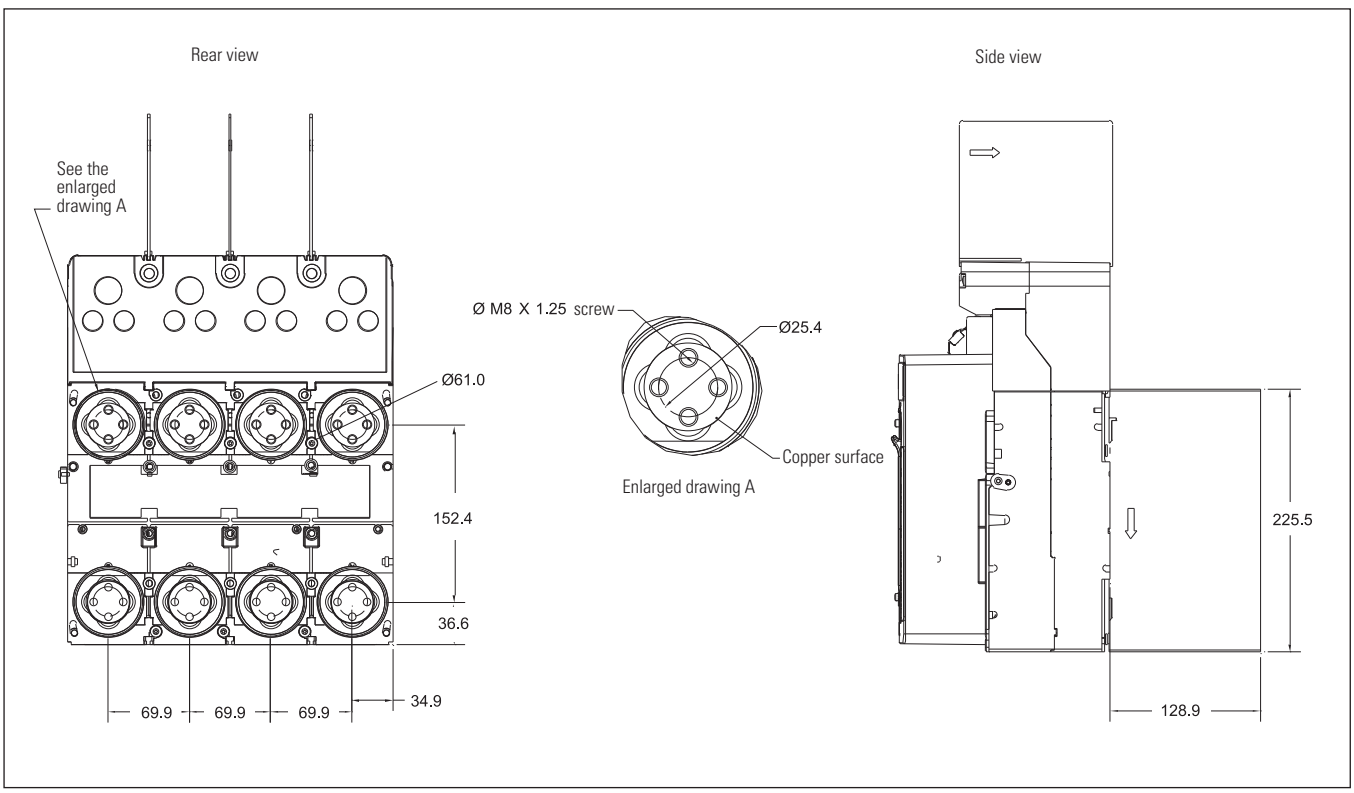


Note: with fixed mounting circuit breakers, at least 2 inch (50.8mm) space shall be needed for installing accessory trays on both sides(left an right)

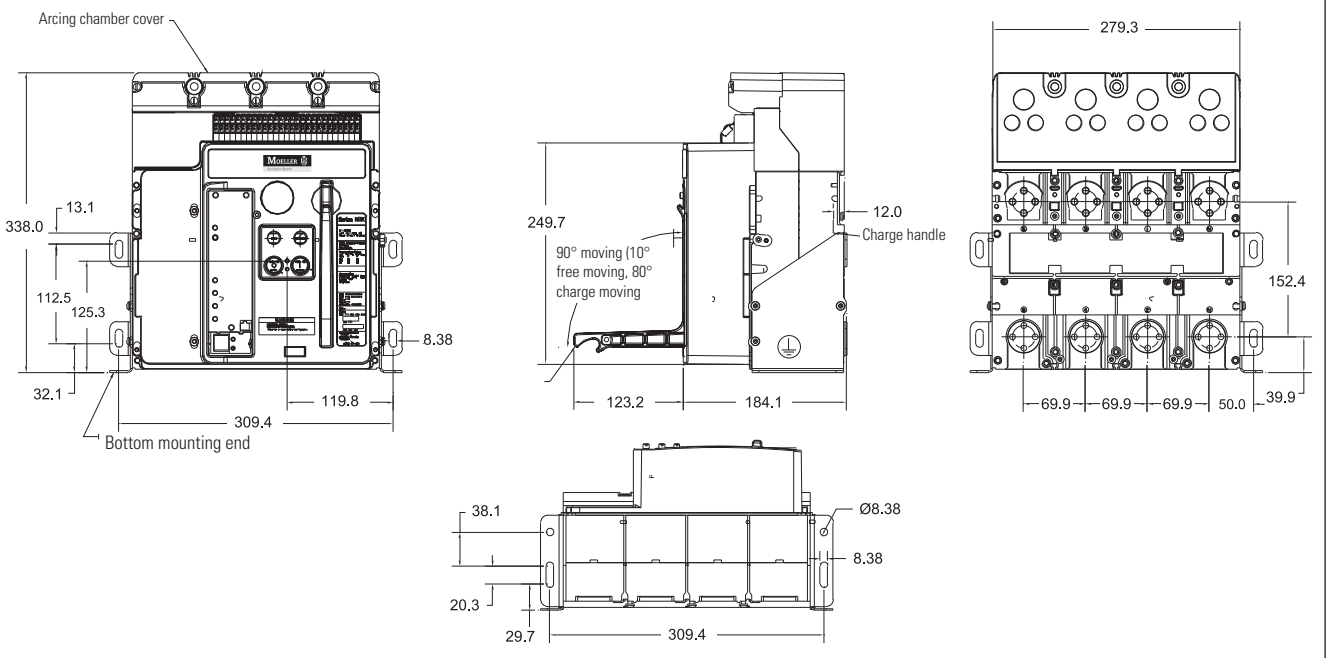
3 pole fixed circuit breaker accessory components mounting size (mm)



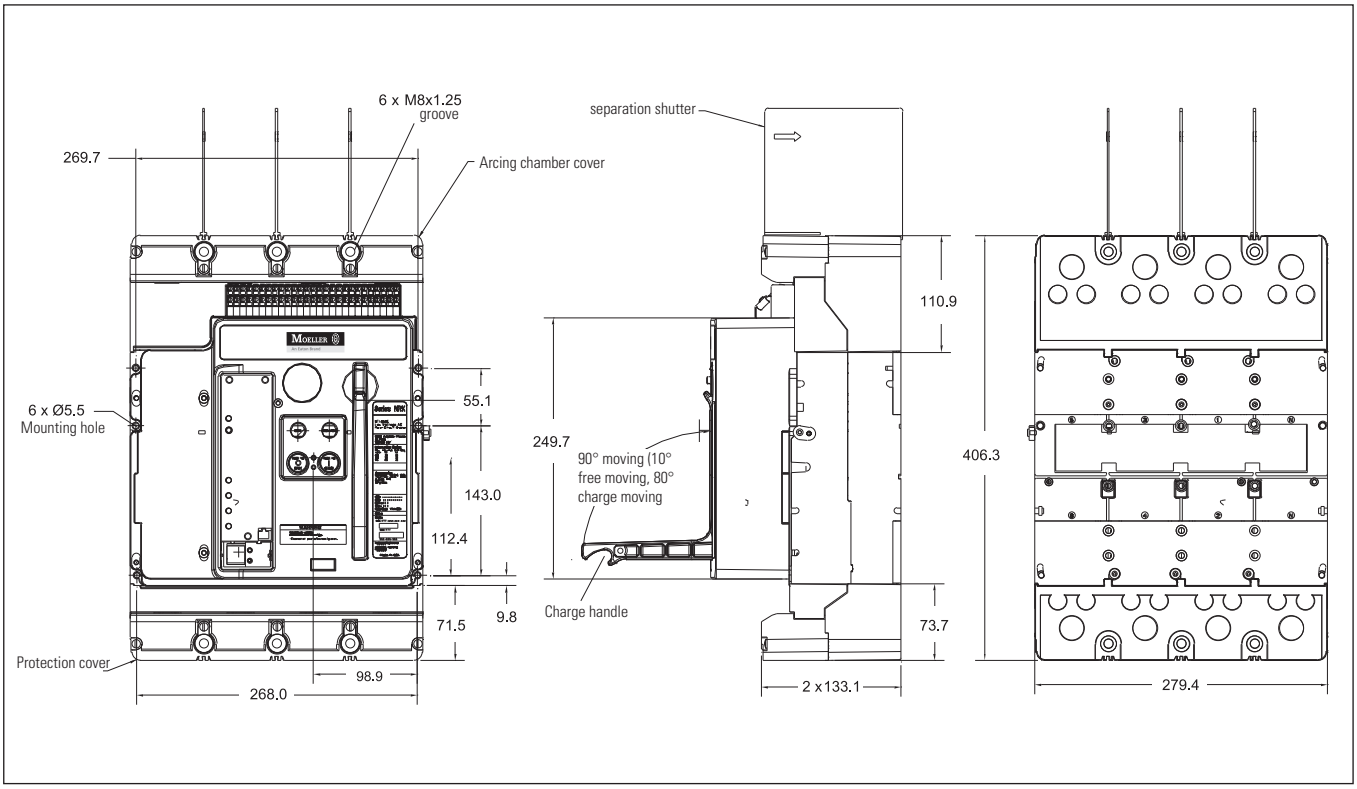
4 pole fixed circuit breaker general view and size (mm)



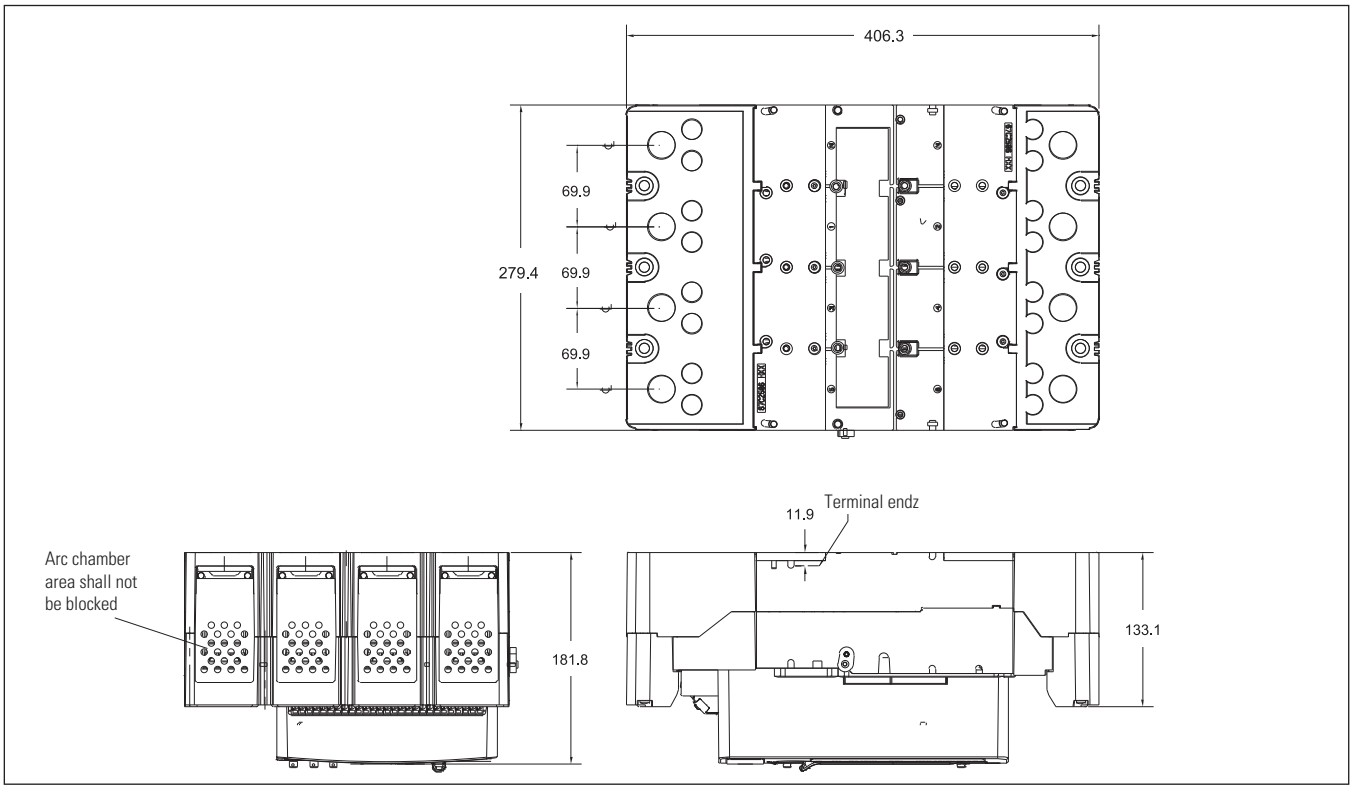
4 pole fixed circuit breaker general vies and size (mm)



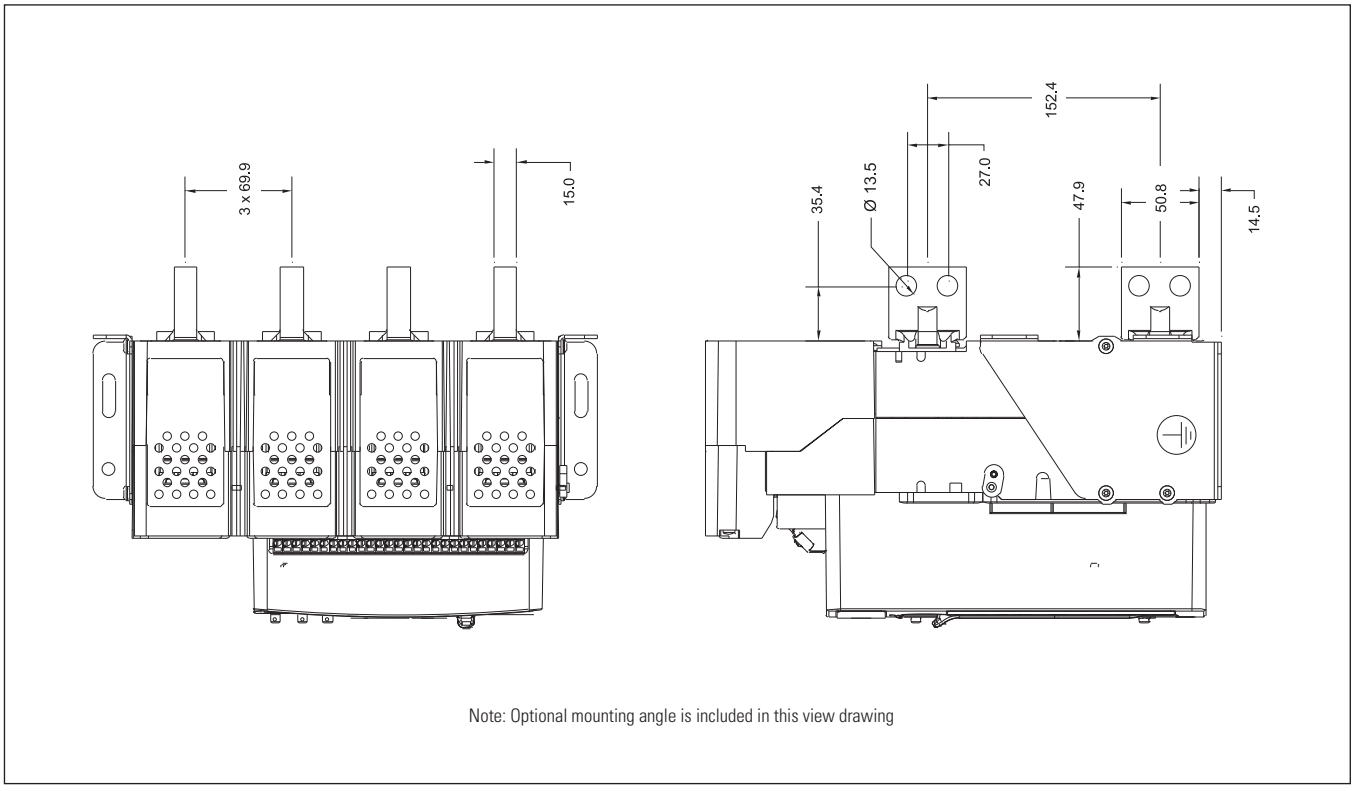
4 pole fixed circuit breaker mounting angle size (mm)



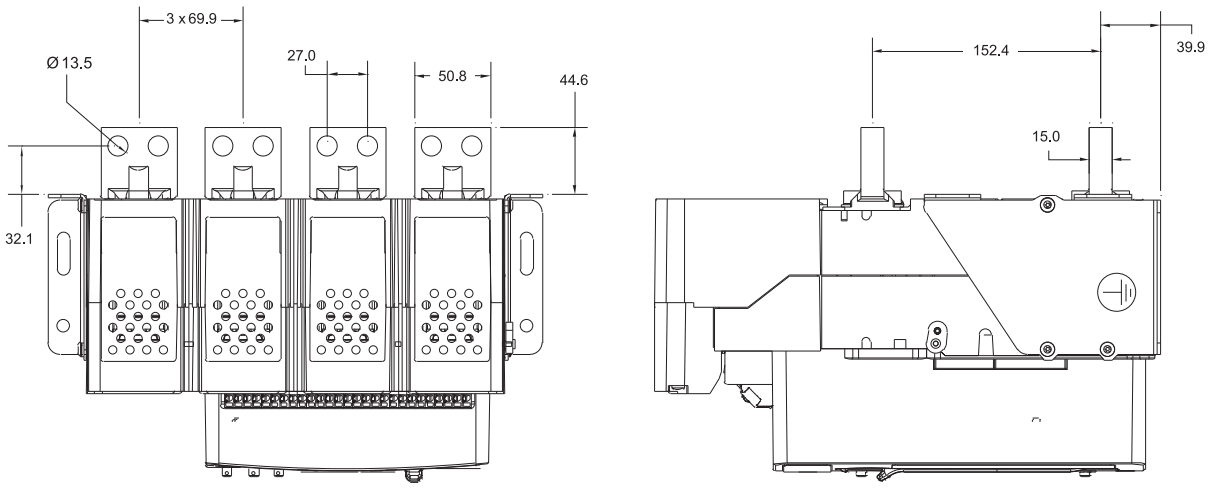
4 pole fixed circuit breaker cable front connection size (mm)



4 pole fixed circuit breaker horizontal connection mounting size (mm)

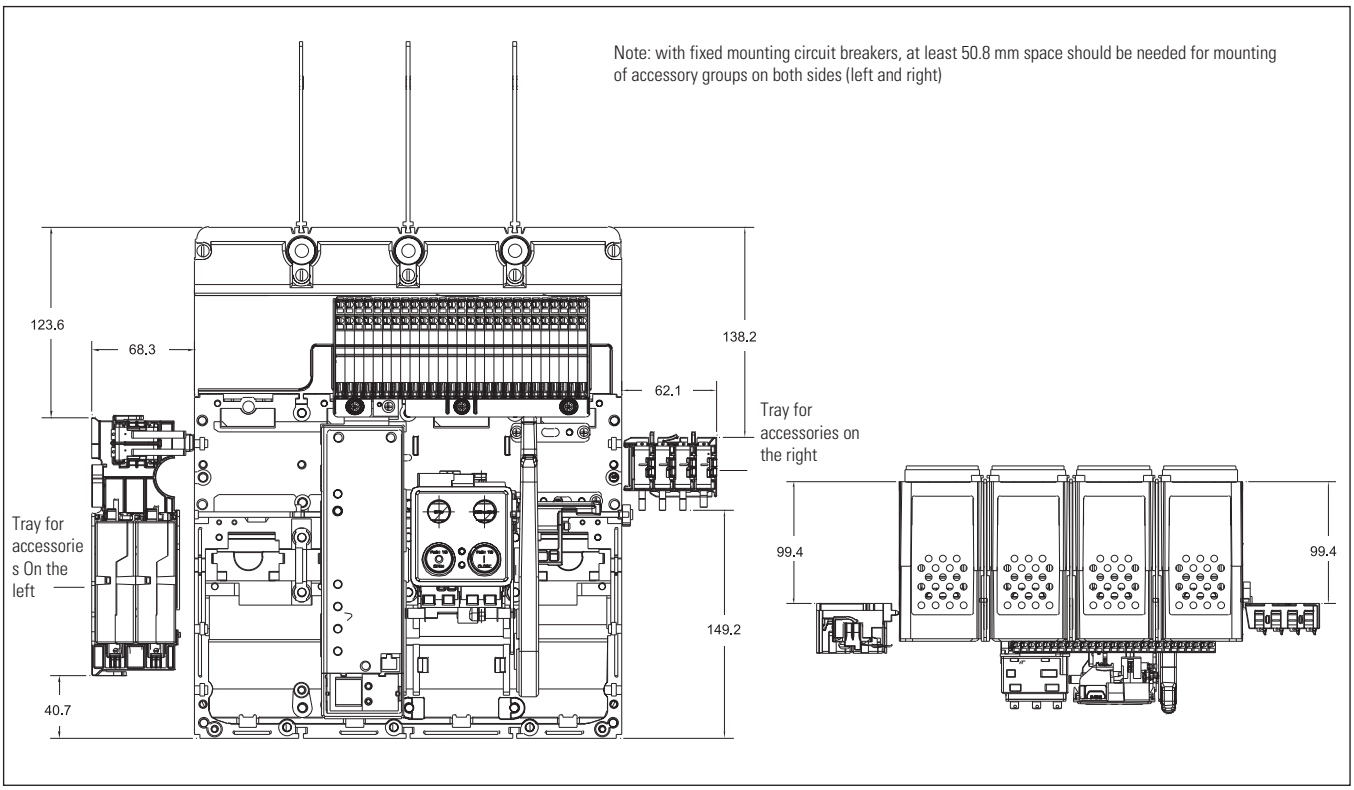


4 pole fixed circuit breaker vertical connection mounting size (mm)



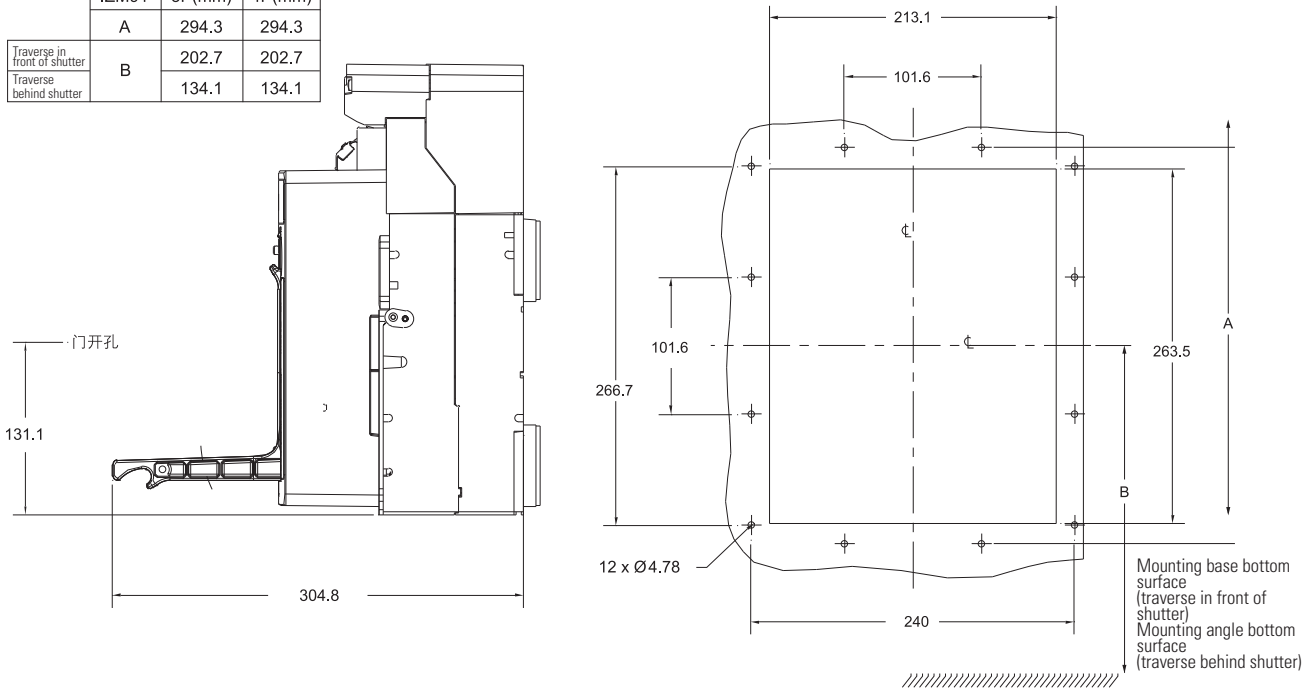
Note: Optional mounting angle is included in this view drawing

4 pole fixed circuit breaker horizontal connection mounting size (mm)



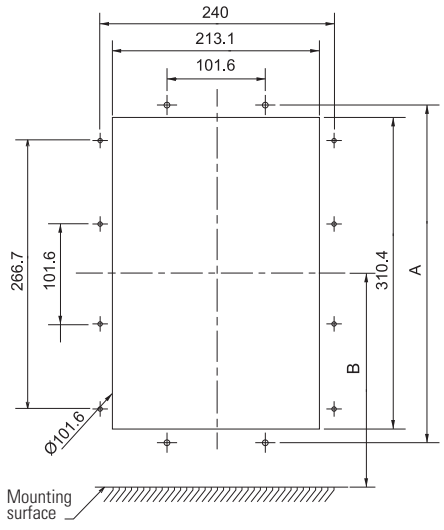
4 pole fixed circuit breaker accessory mounting size (mm)

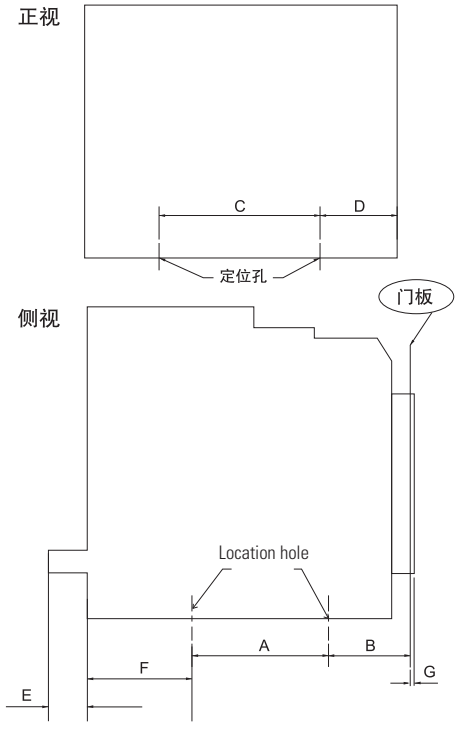
IZM91	3P(mm)	4P(mm)
A	294.3	294.3
Traverse in front of shutter	202.7	202.7
Traverse behind shutter	134.1	134.1



3 pole and 4 pole withdrawable circuit breaker – panel cutout size (mm)

IZM91	3P (mm)	4P (mm)
A	341.1	341.1
B	157.0	157.0

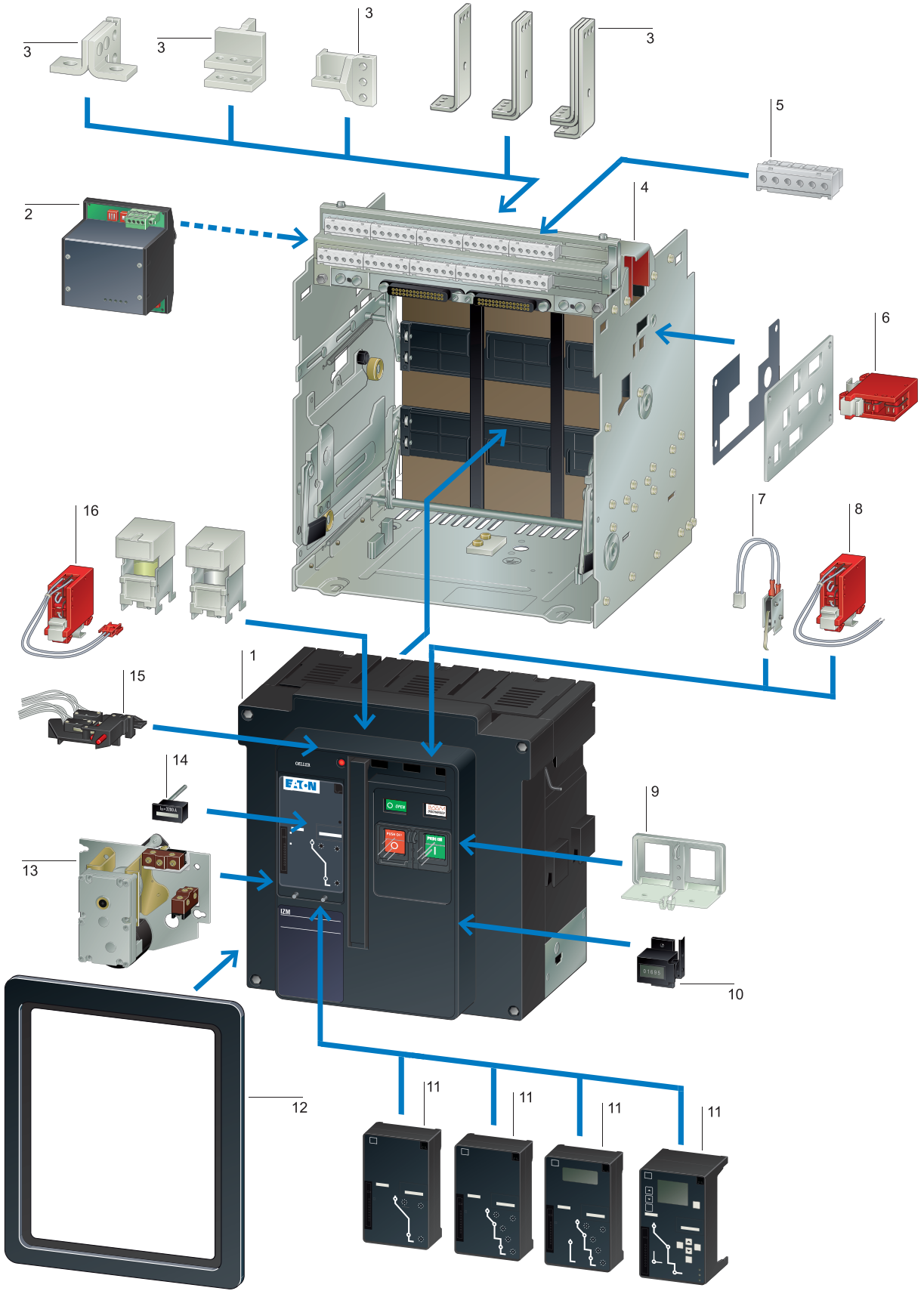




IZM91	3P(mm)	4P(mm)
A	69.9	69.9
B	113.9	113.9
C	139.7	209.5
D	57.2	57.2
E	72.9	72.9
F	77.8	77.8
G	5.2	5.2

Note:
A: recommended location hole to mount.
Users can select optimum solution due to
Their actual needs, based on user guide.

3 pole and 4 pole withdrawable circuit breaker – panel cutout size (mm)


3
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11

IZM97, 99 air circuit breakers	1			7	Motor operator	13	
		-> Page 84			Energy stored by motor, for closing spring		
Communication converter module: INCOM converts	2				-> Page 84		
Into MODBUS/PROFIBUS		Standard auxiliary contacts		8			
-> Page **84**		NC/NO				14	
		-> Page 84					
Main circuit terminals	3				Trip signal switch	15	
Vertical connection terminals 3 /4 pole		Button cover (with optional padlock)		9	OTS, 2CO		
Front connection terminals 3/4 pole		-> Page 84			-> Page 84		
-> Page 88							
		Switching operations counter		10	Shunt releases	16	
Cassettes	4	-> Page 84			-> Page 84		
-> Page 76							
		Electronic releases		11	Closing releases	16	
Secondary circuit terminals	5	Can not be ordered separately.			-> Page 84		
Can order 2, 15 secondary circuit terminal blocks							
-> Page89		Door escutcheon		12	Undervoltage releases	16	
		-> Page 84			-> Page 84		
Withdrawable circuit breaker position indication contact	1						
-> Page77							

Type reference

IZM	97	B	3	-	A	08	W
IN	99	N	4		V	10	F
		H			U	12	
					P	16	
						20	
						25	
						32	
						40	
						50	
						63	

IZM, IN = air circuit breaker, switch disconnectorl

Circuit breaker frame
97: 标准框架800-4000A
99: For double wide 4000-6300 A

Switching capacity
B=Basic
N=Normal
HI=High

3: 3 pole
4: 4 pole

Electronic release
A= Standard protection= Digitrip 520 LI
V= Selective protection= Digitrip 520 LSI(G)
U= Ammeter type= Digitrip 520MC LSI (G)

Rated operation current
08: 800A
10: 1000A
12: 1250A
16: 1600A
20: 2000A
25: 2500A
32: 3200A
40: 4000A
50: 5000A
63: 6300A

Circuit breaker model
W= Withdrawable
F= Fixed

1.13 Air circuit breaker IZM9
Key features

IZM97,99: Robust safety
Eaton's IZM97,99, circuit-breakers offer a proven and complete range of air circuit-breakers up to 6300 A. Four sizes enable the ideal circuit-breaker to be selected economically for any project. In this way, only the module width increases with the required rated operational current, enabling the most compact and economical size to be selected.
The particularly rugged circuit-breakers are already in use 100,000 times in harsh industrial environments worldwide. Large material thicknesses and a high short-time withstand current are its characteristic features.

Applications
The circuit-breakers can be used in four main application areas depending on the type of equipment to be protected:
- System protection,
- Motor protection,
- Transformer protection,
- Generator protection.

These key applications make different These key applications make different demands on the switches, which are met with a range of trip units.

Switches with closing release
They are particularly suitable for synchronization tasks.

Coupler switches
Beside the IZM97,99. circuit-breakers, IN97,99 switch-disconnectors are available. These are used, for example, as coupler switches between different power supplies.

Modular design
Because components are installed from the front, retrofitting accessories is especially quick and easy. This allows flexible response to changing requirements within the system.

Standard scope of delivery as usual
- With the new IZM97,99, you also select a basic device that is already fitted with an electronic release and horizontal terminal adapters.
- The standard mounting is on a horizontal mounting plate or on horizontal traverses in the switching cabinet.
- With four-pole devices, the neutral conductor is arranged on the left (front view).
- The neutral conductor can be loaded 100% like the phase conductors.
- The circuit-breakers are provided with a standard mechanical reclosing lockout. After an overload trip,the fault is usually examined first of all. After the fault is identified and rectified, the fault is identified and rectified, the mechanical reclosing lockout is reset by pressing the red mechanical trip indicator on the front of the circuitbreaker.
- An "Automatic Reset" can be ordered as an option. This enables the circuit-breaker an option. This enables the circuit-breaker to be restored to operation immediately at any time after the spring-operated stored energy mechanism is retensioned. In these applications compulsory fault analysis is intentionally avoided.
- The number of control cable terminals depends on the accessories fitted.
- If a cassette is ordered without the basic device, this is already fitted with the maximum number of control cable terminals.
- The standard consists of 2 NO contacts and 2 NC contacts for ON/OFF status indication.
- A coding mechanism between the basic device and the cassette prevents impermissible combinations ("Rejection Interlock").

Expansion of Standardequipment supplied for IZM97,99
Some order types from the past can no longer be found since the following options are now already part of the standard scope of delivery:
- The door escutcheon is now always included in the scope of delivery. With withdrawable designs this is supplied with the cassette (withdrawable unit).
- On withdrawable units the circuitbreaker can be pulled out to inspect the arc chutes. With fixed units, it is recommended that sufficient space is provided above the circuitbreaker to enable inspection. An additional cover is not required.
- All basic devices that are provided with universal protection (with Digitrip 520M…), now feature adisplay.
- On each circuit-breaker the integrated Digitrip electronicrelease is factory fitted with a sealable protective cover.
- If a motor operator is ordered, the "Spring-operated stored energy mechanism tensioned" indicator switch is automatically provided.

Other benefits of the IZM97,99
- There are still four main variants of overcurrent release units. Only the fourth variant was renamed and is now "P" (as in Power Measurement)instead of "D" (as in Digital trip).On each P circuit-breaker Digitrip 1150) the power measurement is already an integral part of the electronic release.
- The voltage tap-off for power measurement is integrated in the device so that an additional external voltage transformer is unnecessary. This solution saves costs, space and installation effort.
- Certain applications require the use of an interface to the external control voltage supply (see below). A new feature is that the electronic release can be prepared for an external control voltage supply of 120 V AC or 240 V AC (order option).
- A switching operations counter can now be used thanks to the separate mounting position, also independently of a motor operator.
- Withdrawable unit operation: The unit is actuated with a hand crank supplied. This is now possible also with a standard tool (square drive socket 3/8").
- Four sizes are available to ensure the optimum device for any application. As before, the entire rated operational current range from 800 A to 6300 A can be covered with two sizes.
- Sizes IZM40 and IZM63 are produced in simple terms by doubling sizes IZM20 and IZM32. This consequently provides on the IZM40 and IZM63 two terminals for each phase on the incoming side and on the outgoing side. This facilitates the thermal design of the switchboard and in some switchboard systems simplifies production and reduces the number of busbar adapter variants.
- The phase sequence for the IZM40 and IZM63 is as follows: (NN)AABBCC.
- The IZM for 6300 A is now offered with horizontal connection as standard, thus considerably simplifying the busbar connection for most switchboard systems.

External control voltage supply
- The standard protection functions of the IZM97,99, operate generally independently of an external control voltage supply. The power supply of the electronics unit, for example for overload and short-circuit protection, is implemented via the current transformers integrated in the circuit-breaker.
- The universal release unit with display can be fed with a 24 V DC/48 V DC supply or a 120 V AC or 240 V AC supply if required so that the display function can also be used without a load. An external power supply is needed if communication functions are required.
- The P release unit should always be operated with an external power supply as it is normally selected due to its extensive control voltage dependent functions.

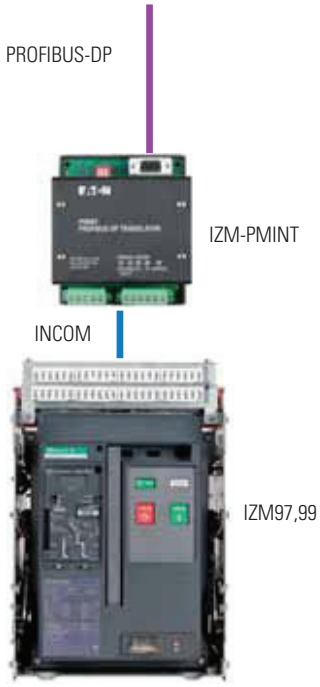
Communication capability
The communication-capability of the IZM97,99 circuit- breakers enable them to open up new possibilities in power distribution. They can thus provide and transmit all important operational information. This increases system transparency and shortens the response times to states such as overcurrent, phase asymmetry and overvoltage. A rapid intervention in a process can,for example, prevent downtimes and help to schedule maintenance activities and there fore boost plant availability.A Modbus interface is offered as an alternative in addition to the Profibus interface.

Greater safety for maintenance personnel with ARMS™
If the IZM97,99 is fitted with the newly patented ARMS system (Arcflash Reduction Maintenance System™), a non-delayed immediate disconnection is ensured in the event of an arc fault. This disconnection is even faster than that of a non-delayed short-circuit release..
This function can be activated directly on the circuit-breaker or via an external switch, such as when maintenance personnel enter a hazardous area.
Other components from the ARCON protective system, in conjunction with the IZM97,99 enable arc fault protection in stages. ARCON on the Internet: www.moeller.net/arcon

Selection criteria for IZM97,99 circuit-breakers
Fundamental criteria for the selection of circuit-breakers:
- Max short-circuit current $I_{k\,max}$ at the circuit-breaker's point of installation: this value determines the short-circuit breaking capacity or the short-circuit current carrying capacity of the

circuit-breaker. It is compared to the I_{cu}, I_{cs} and I_{cw} values of the circuit-breaker and determines essentially its size (see Technical data).
- Rated operational current I_n which should flow through the respective branch circuit: This value must not be greater than the maximum switch rated operational current of the circuit-breaker. The rated operational current can be adjusted down using additional rated operational current modules.
- Ambient temperature of the circuit-breaker: This is generally the internal temperature in the control panel. Observe the derating values with increased ambient temperature (see Technical data).
- Circuit-breaker type: fixed mounted or withdrawable units, 3 or 4 pole.
- Minimum short-circuit current, which flows through the switching device: The release must recognize this value as a shortcircuit and may react with a trip.
- Protection functions of the circuitbreaker: This is determined by the selection of the respective overcurrent release.

PROFIBUS-DP configuration



Components for IZM97.99 communication
The IZM97,99 series devices can be connected to a PROFIBUS-DP or Modbus RTU filed bus. Interfaces IZM-PMINT and IZM-MMINT are compact devices for mounting on top-hat rails, i.e. independently of the switch. They output all information available in the trip unit to the fieldbus, including switch status, current, voltage, power, and energy, as well as diagnostic information such as overcurrent, phase asymmetry and overvoltage. The fieldbus also facilitates actuation of the motor operator and therefore its remote operation.

Requirements
The communications modules can be used in combination with IZMX26…-U or IZMX26…-P… circuit-breakers.

Documentation
Operating manual
AWB1230-1605de (deutsch)
AWB1230-1605en (english)

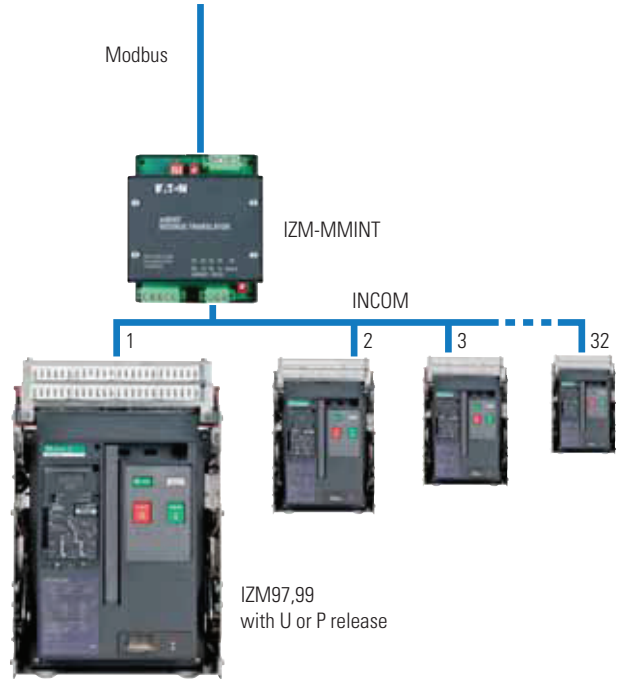
CurveSelect characteristics program
Display tripping characteristics according to user settings and assess their interaction effectively:
www.moeller.net/de/support

Communications module IZM-PMINT has a 9-pin D-Sub socket for connection to PROFIBUS. The module works as a slave on PROFIBUS-DP; the data is defined through a standardized device master data file, which permits smooth integration of the IZM in a DP line.

PROFIBUS
- On the PROFIBUS-DP side the module supports automatic baud rate detection; the PROFIBUS-DP bus address is set through the trip unit's display. The maximum cable length is 2.4 km.
- To operate the IZM-PMINT, a supply voltage of 24-125V DC or 100-240V AC is required.

INCOM
- The data connection to the circuit-breaker is implemented through a serial INCOM data connection. A shielded, twisted-pair data cable (recommended are Belden 9463 or 3073F) can be used.
- The INCOM bus must be terminated with a 100 terminating resistor, connected between the two cable strands at the circuit-breaker end.
- The maximum cable length is 3 km

Modbus configuration



Data access via PROFIBUS-DP
The data on PROFIBUS-DP are offered according to the profile for low-voltage switchgear (LVSG) of PROFIBUS International (PROFIBUS and PROFINET User Group). Five different data structures with varying numbers of parameters are available through the device master data file. This allows a data filter to be easily implemented, which simplifies integration of the IZM data into the controlsystem. Communications module IZM-MMINT has a plug-in screw terminal for connection to Modbus. The module operates as a Modbus slave. The interface to the circuit-breaker can be operated as a bus, so that up to 32 IZM26 units can be connected to an IZM-MMINT. This makes the use of the IZM with the Modbus architecture specially efficient.

Modbus
- The baud rate for Modbus communications is selectable with coding switches on the IZM-MMINT; the bus address (up to 247) is set through the display of the tripunit. The maximum cable length is 1.2 km.
- The Modbus must be terminated with a 120Ω terminating resistor. If the IZM-MMINT is the last device in the network, a built-in terminating resistor can be activated there with a coding switch.
- To operate the IZM-MMINT, a supply voltage of 24-125V DC or 120V AC is required.

INCOM
- The data connection to the circuit-breaker is implemented through a serial INCOM bus connection. A shielded, twisted-pair data cable (recommended are Belden 9463 or 3073F) can be used.
- The INCOM bus must be terminated with a 100Ω terminating resistor, connected between the two cable strands at the circuit-breaker end.
- The maximum cable length is 3 km.

Data access via Modbus
The data for each circuit-breaker connected to the INCOM bus is contained in comprehensive data tables. Each data point is available as floating-point (IEEE) or fixed--point value. This variance allows the integration of the IZM to be adapted to the Modbus architecture. This allows a data filter to be easilyimplemented, which simplifies integration of the IZM data into the control system.

1

Circuit breakers with standard protection (including the main terminal with all the secondary terminal blocks fitted)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayedz	**Part No**	**Part No**
I_{cu}/I_{cs}	I_n/I_u		I_r	$I_{sd}=I_rX...$	$I_{sd}=I_rX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
							
65	800	IZM97	320-800	–	2-10	**IZM97B3-A08F** 126210	**IZM97B3-A08W** 126590
65	1000	IZM97	320-800	–	2-10	**IZM97B3-A10F** 126211	**IZM97B3-A10W** 126591
65	1250	IZM97	320-800	–	2-10	**IZM97B3-A12F** 126212	**IZM97B3-A12W** 126592
65	1600	IZM97	320-800	–	2-10	**IZM97B3-A16F** 126213	**IZM97B3-A16W** 126593
65	2000	IZM97	320-800	–	2-10	**IZM97B3-A20F** 126214	**IZM97B3-A20W** 126594
65	2500	IZM97	320-800	–	2-10	**IZM97B3-A25F** 126215	**IZM97B3-A25W** 126595
65	3200	IZM97	320-800	–	2-10	**IZM97B3-A32F** 126216	**IZM97B3-A32W** 126596
85	800	IZM97	320-800	–	2-10	**IZM97N3-A08F** 126266	**IZM97B3-A08W** 126646
65	1000	IZM97	320-800	–	2-10	**IZM97N3-A10F** 126267	**IZM97B3-A10W** 126647
85	1250	IZM97	320-800	–	2-10	**IZM97N3-A12F** 126268	**IZM97B3-A12W** 126648
85	1600	IZM97	320-800	–	2-10	**IZM97N3-A16F** 126269	**IZM97B3-A16W** 126649
65	2000	IZM97	320-800	–	2-10	**IZM97N3-A20F** 126270	**IZM97B3-A20W** 126650
85	2500	IZM97	320-800	–	2-10	**IZM97N3-A25F** 126271	**IZM97B3-A25W** 126651
85	3200	IZM97	320-800	–	2-10	**IZM97N3-A32F** 126272	**IZM97B3-A32W** 126652
100	800	IZM97	320-800	–	2-10	**IZM97H3-A08F** 126322	**IZM97B3-A08W** 126702
100	1000	IZM97	320-800	–	2-10	**IZM97H3-A10F** 126323	**IZM97B3-A10W** 126703
100	1250	IZM97	320-800	–	2-10	**IZM97H3-A12F** 126324	**IZM97B3-A12W** 126704
100	1600	IZM97	320-800	–	2-10	**IZM97H3-A16F** 126325	**IZM97B3-A16W** 126705
100	2000	IZM97	320-800	–	2-10	**IZM97H3-A20F** 126326	**IZM97B3-A20W** 126706
100	2500	IZM97	320-800	–	2-10	**IZM97H3-A25F** 126327	**IZM97B3-A25W** 126707
100	3200	IZM97	320-800	–	2-10	**IZM97H3-A32F** 126328	**IZM97B3-A32W** 126708

Circuit breakers with selective protection (including the main terminal with all the secondary terminal blocks assembled)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	I_n/I_u		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
65	800	IZM97	320-800	2-10	2-10, OFF	**IZM97B3-V08F** 126224	**IZM97B3-V08W** 126604
65	1000		400-1000	2-10	2-10, OFF	**IZM97B3-V10F** 126225	**IZM97B3-V10W** 126605
65	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97B3-V12F** 126226	**IZM97B3-V12W** 126606
65	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97B3-V16F** 126227	**IZM97B3-V16W** 126607
65	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97B3-V20F** 126228	**IZM97B3-V20W** 126608
65	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97B3-V25F** 126229	**IZM97B3-V25W** 126609
65	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97B3-V32F** 126230	**IZM97B3-V32W** 126610
65	4000	IZM97	1600-4000	2-10	2-10, OFF	-	**IZM97B3-V40W** 126788
85	800	IZM97	320-800	2-10	2-10, OFF	**IZM97N3-V08F** 126280	**IZM97N3-V08W** 126660
85	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97N3-V10F** 126281	**IZM97N3-V10W** 126661
85	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97N3-V12F** 126282	**IZM97N3-V12W** 126662
85	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97N3-V16F** 126283	**IZM97N3-V16W** 126663
85	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97N3-V20F** 126284	**IZM97N3-V20W** 126664
85	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97N3-V25F** 126285	**IZM97N3-V25W** 126665
85	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97N3-V32F** 126286	**IZM97N3-V32W** 126666
85	4000	IZM97	1600-4000	2-10	2-10, OFF	-	**IZM97N3-V40W** 126794
85	4000	IZM99	1600-4000	2-10	2-10, OFF	**IZM99N3-V40F** 126430	**IZM99N3-V40W** 126810
85	5000	IZM99	2000-5000	2-10	2-10, OFF	**IZM99N3-V50F** 126431	**IZM99N3-V50W** 126811
85	6300	IZM99	2520-6300	2-10	2-10, OFF	**IZM99N3-V63F** 126432	**IZM99N3-V63W** 126812

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Circuit breakers with selective protection (including the main terminal with all the secondary terminal blocks assembled)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	I_n/I_u		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
							
100	800	IZM97	320-800	2-10	2-10, OFF	**IZM97H3-V08F** 126336	**IZM97H3-V08W** 126716
100	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97H3-V10F** 126337	**IZM97H3-V10W** 126717
100	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97H3-V12F** 126338	**IZM97H3-V12W** 126718
100	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97H3-V16F** 1263369	**IZM97H3-V16W** 126719
100	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97H3-V20F** 126340	**IZM97H3-V20W** 126720
100	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97H3-V25F** 126341	**IZM97H3-V25W** 126721
100	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97H3-V32F** 126342	**IZM97H3-V32W** 126722
100	4000	IZM97	1600-4000	2-10	2-10, OFF		**IZM97H3-V40W** 126800
100	4000	IZM99	1600-4000	2-10	2-10, OFF	**IZM99H3-V40F** 126448	**IZM99H3-V40W** 126826
100	5000	IZM99	2000-5000	2-10	2-10, OFF	**IZM99H3-V50F** 126449	**IZM99H3-V50W** 126827
100	6300	IZM99	2520-6300	2-10	2-10, OFF	**IZM99H3-V63F** 126450	**IZM99H3-V63W** 126828

Circuit breaker with ammeter type (including the main terminal with all the secondary terminal blocks assembled)

65	800	IZM97	320-800	2-10	2-10, OFF	**IZM97B3-U08F** 126238	**IZM97B3-U08W** 126618
65	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97B3-U10F** 126239	**IZM97B3-U10W** 126619
65	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97B3-U12F** 126240	**IZM97B3-U12W** 126620
65	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97B3-U16F** 126241	**IZM97B3-U16W** 126621
65	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97B3-U20F** 126242	**IZM97B3-U20W** 126622
65	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97B3-U25F** 126243	**IZM97B3-U25W** 126623
65	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97B3-U32F** 126244	**IZM97B3-U32W** 126624
65	4000	IZM97	160-4000	2-10	2-10, OFF	-	**IZM97B3-U40W** 126790

Circuit breakers with ammeter type (including the main terminal with all the secondary terminal blocks assembled)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	I_n/I_u		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
85	800	IZM97	320-800	2-10	2-10, OFF	**IZM97N3-U08F** 126294	**IZM97N3-U08W** 126674
85	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97N3-U10F** 126295	**IZM97N3-U10W** 126675
85	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97N3-U12F** 126296	**IZM97N3-U12W** 126676
85	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97N3-U16F** 126297	**IZM97N3-U16W** 126677
85	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97N3-U20F** 126298	**IZM97N3-U20W** 126678
85	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97N3-U25F** 126299	**IZM97N3-U25W** 1263679
85	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97N3-U32F** 126300	**IZM97N3-U32W** 126680
85	4000	IZM97	1600-4000	2-10	2-10, OFF	-	**IZM97N3-U40W** 126796
85	4000	IZM99	1600-4000	2-10	2-10, OFF	**IZM99N3-U40F** 126436	**IZM99N3-U40W** 126814
85	5000	IZM99	2000-5000	2-10	2-10, OFF	**IZM99N3-U50F** 126437	**IZM99N3-U50W** 126815
85	6300	IZM99	2520-6300	2-10	2-10, OFF	**IZM99N3-U63F** 126438	**IZM99N3-U63W** 126816
100	800	IZM97	320-800	2-10	2-10, OFF	**IZM97H3-U08F** 126350	**IZM97H3-U08W** 126730
100	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97H3-U10F** 126351	**IZM97H3-U10W** 126731
100	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97H3-U12F** 126352	**IZM97H3-U12W** 126732
100	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97H3-U16F** 126353	**IZM97H3-U16W** 126733
100	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97H3-U20F** 126354	**IZM97H3-U20W** 126734
100	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97H3-U25F** 126355	**IZM97H3-U25W** 1263735
100	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97H3-U32F** 126356	**IZM97H3-U32W** 126736
100	4000	IZM97	1600-4000	2-10	2-10, OFF	-	**IZM97H3-U40W** 126802
100	4000	IZM99	1600-4000	2-10	2-10, OFF	**IZM99H3-U40F** 126454	**IZM99H3-U40W** 126832
100	5000	IZM99	2000-5000	2-10	2-10, OFF	**IZM99H3-U50F** 126455	**IZM99H3-U50W** 126833
100	6300	IZM99	2520-6300	2-10	2-10, OFF	**IZM99H3-U63F** 126456	**IZM99H3-U63W** 1263834

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Circuit breakers with power meter type (including the main terminal with all the secondary terminal blocks assembled)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	I_n/I_u		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A						Cassettes to be ordered separately
65	800	IZM97	320-800	2-10	2-10, OFF	**IZM97B3-P08F** 126252	**IZM97B3-P08W** 126632
65	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97B3-P10F** 126253	**IZM97B3-P10W** 126633
65	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97B3-P12F** 126254	**IZM97B3-P12W** 1266334
65	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97B3-P16F** 126255	**IZM97B3-P16W** 126635
65	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97B3-P20F** 126256	**IZM97B3-P20W** 126636
65	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97B3-P25F** 126257	**IZM97B3-P25W** 1262637
65	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97B3-P32F** 126258	**IZM97B3-P32W** 126638
65	4000	IZM97	1600-4000	2-10	2-10, OFF	**IZM97B3-P40F** 126412	**IZM97B3-P40W** 126792
85	800	IZM97	320-800	2-10	2-10, OFF	**IZM97N3-P08F** 126308	**IZM97N3-P08W** 126688
85	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97N3-P10F** 126309	**IZM97N3-P10W** 126689
85	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97N3-P12F** 126310	**IZM97N3-P12W** 126690
85	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97N3-P16F** 126311	**IZM97N3-P16W** 126691
85	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97N3-P20F** 126312	**IZM97N3-P20W** 126692
85	1250	IZM97	1000-2500	2-10	2-10, OFF	**IZM97N3-P25F** 126313	**IZM97N3-P25W** 126693
85	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97N3-P32F** 126314	**IZM97N3-P32W** 126694
85	4000	IZM97	1600-4000	2-10	2-10, OFF	-	**IZM97N3-P40W** 126798
85	4000	IZM99	1600-4000	2-10	2-10, OFF	**IZM99N3-P40F** 126442	**IZM99N3-P40W** 126820
85	5000	IZM99	2000-5000	2-10	2-10, OFF	**IZM99N3-P50F** 126443	**IZM99N3-P50W** 126821
85	6300	IZM99	2520-6300	2-10	2-10, OFF	**IZM99N3-P63F** 126444	**IZM99N3-P63W** 126822

Circuit breakers with power meter type (including the main terminal with all the secondary terminal blocks assembled)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	I_n/I_u		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
100	800	IZM97	320-800	2-10	2-10, OFF	**IZM97H3-P08F** 126364	**IZM97H3-P08W** 126744
100	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97H3-P10F** 126365	**IZM97H3-P10W** 126745
100	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97H3-P12F** 126366	**IZM97H3-P12W** 126746
100	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97H3-P16F** 126367	**IZM97H3-P16W** 126747
100	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97H3-P20F** 126368	**IZM97H3-P20W** 126748
100	2500	IZM97	100-2500	2-10	2-10, OFF	**IZM97H3-P25F** 126369	**IZM97H3-P25W** 126749
100	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97H3-P32F** 126370	**IZM97H3-P32W** 126750
100	4000	IZM97	1600-4000	2-10	2-10, OFF	-	**IZM97H3-P40W** 126804
100	4000	IZM99	1600-4000	2-10	2-10, OFF	**IZM99H3-P40F** 126460	**IZM99H3-P40W** 126838
100	5000	IZM99	2000-5000	2-10	2-10, OFF	**IZM99H3-P50F** 126461	**IZM99H3-P50W** 126839
100	6300	IZM99	2520-6300	2-10	2-10, OFF	**IZM99H3-P63F** 126462	**IZM99H3-P63W** 1263840

IZM97 for use in 1100 V (including main terminals in the back and control circuit terminals)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	I_n/I_u		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
Circuit breaker with standard protection							
25	3200	IZM97	1280-3200	–	2-10	**IZM97S3-A32F-1100V** 126202	**IZM97S3-A32W-1100V**
Circuit breaker with selective protection							
25	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97S3-V32F-1100V** 126204	**IZM97S3-V32W-1100V**
Circuit breaker with ammeter type							
25	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97S3-A32F-1100V** 126206	**IZM97S3-U32W-1100V**
Circuit breaker with power meter type							
25	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97S3-P32F-1100V** 126208	**IZM97S3-P32W-1100V**

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Circuit breakers with standard protection function (including the main terminal with all the secondary terminal blocks assembled)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	I_n/I_u		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
							
65	800	IZM97	320-800	–	2-10	**IZM97B4-A08F** 126217	**IZM97B4-A08W** 126597
65	1000	IZM97	400-1000	–	2-10	**IZM97B4-A10F** 126218	**IZM97B4-A10W** 126598
65	1250	IZM97	500-1250	–	2-10	**IZM97B4-A12F** 126219	**IZM97B4-A12W** 126599
65	1600	IZM97	640-1600	–	2-10	**IZM97B4-A16F** 126220	**IZM97B4-A16W** 126600
65	2000	IZM97	800-2000	–	2-10	**IZM97B4-A20F** 126221	**IZM97B4-A20W** 126601
65	2500	IZM97	1000-2500	–	2-10	**IZM97B4-A25F** 126222	**IZM97B4-A25W** 126602
65	3200	IZM97	1280-3200	–	2-10	**IZM97B4-A32F** 126223	**IZM97B4-A32W** 126603
85	800	IZM97	320-800	–	2-10	**IZM97N4-A08F** 126273	**IZM97N4-A08W** 126653
85	1000	IZM97	400-1000	–	2-10	**IZM97N4-A10F** 126274	**IZM97N4-A10W** 126654
85	1250	IZM97	500-1250	–	2-10	**IZM97N4-A12F** 126275	**IZM97N4-A12W** 126655
85	1600	IZM97	640-1600	–	2-10	**IZM97N4-A16F** 126276	**IZM97N4-A16W** 126656
85	2000	IZM97	800-2000	–	2-10	**IZM97N4-A20F** 126277	**IZM97N4-A20W** 126657
85	2500	IZM97	1000-2500	–	2-10	**IZM97N4-A25F** 126278	**IZM97N4-A25W** 126658
85	3200	IZM97	1280-3200	–	2-10	**IZM97N4-A32F** 126279	**IZM97N4-A32W** 126659
100	800	IZM97	320-800	–	2-10	**IZM97H4-A08F** 126329	**IZM97H4-A08W** 126709
100	1000	IZM97	400-1000	–	2-10	**IZM97H4-A10F** 126330	**IZM97H4-A10W** 126710
100	1250	IZM97	500-1250	–	2-10	**IZM97H4-A12F** 126331	**IZM97H4-A12W** 126711
100	1600	IZM97	640-1600	–	2-10	**IZM97H4-A16F** 126332	**IZM97H4-A16W** 126712
100	2000	IZM97	800-2000	–	2-10	**IZM97H4-A20F** 126333	**IZM97H4-A20W** 126713
100	2500	IZM97	1000-2500	–	2-10	**IZM97H4-A25F** 126334	**IZM97H4-A25W** 126714
100	3200	IZM97	1280-3200	–	2-10	**IZM97H4-A32F** 126335	**IZM97H4-A32W** 126715

Circuit breakers with selective protection function (including the main terminal with all the secondary terminal blocks assembled)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	I_n/I_u		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
65	800	IZM97	320-800	2-10	2-10,OFF	**IZM97B4-V08F** 126231	**IZM97B4-V08W** 126611
65	1000	IZM97	400-1000	2-10	2-10,OFF	**IZM97B4-V10F** 126232	**IZM97B4-V10W** 126612
65	1250	IZM97	500-1250	2-10	2-10,OFF	**IZM97B4-V12F** 126233	**IZM97B4-V12W** 126613
65	1600	IZM97	640-1600	2-10	2-10,OFF	**IZM97B4-V16F** 126234	**IZM97B4-V16W** 126614
65	2000	IZM97	800-2000	2-10	2-10,OFF	**IZM97B4-V20F** 126235	**IZM97B4-V20W** 126615
65	2500	IZM97	1000-2500	2-10	2-10,OFF	**IZM97B4-V25F** 126236	**IZM97B4-V25W** 126231
65	3200	IZM97	1280-3200	2-10	2-10,OFF	**IZM97B4-V32F** 126237	**IZM97B4-V32W** 126617
85	4000	IZM97	1600-4000	2-10	2-10,OFF	–	**IZM97B4-V40W** 126789
85	800	IZM97	320-800	2-10	2-10,OFF	**IZM97N4-V08F** 126287	**IZM97N4-V08W** 126667
85	1000	IZM97	400-1000	2-10	2-10,OFF	**IZM97N4-V10F** 126288	**IZM97N4-V10W** 126668
85	1250	IZM97	500-1250	2-10	2-10,OFF	**IZM97N4-V12F** 1262189	**IZM97N4-V12W** 126669
85	1600	IZM97	640-1600	2-10	2-10,OFF	**IZM97N4-V16F** 126290	**IZM97N4-V16W** 126670
85	2000	IZM97	800-2000	2-10	2-10,OFF	**IZM97N4-V20F** 126291	**IZM97N4-V20W** 126671
85	2500	IZM97	1000-2500	2-10	2-10,OFF	**IZM97N4-V25F** 126292	**IZM97N4-V25W** 126672
85	3200	IZM97	1280-3200	2-10	2-10,OFF	**IZM97N4-V32F** 126293	**IZM97N4-V32W** 126673
85	4000	IZM97	1600-4000	2-10	2-10,OFF	–	**IZM97N4-V40W** 126795
85	4000	IZM99	1600-4000	2-10	2-10,OFF	**IZM99N4-V40F** 126433	**IZM99N4-V40W** 126792
85	5000	IZM99	2000-5000	2-10	2-10,OFF	**IZM99N4-V50F** 126434	**IZM99N4-V50W** 126885
85	6300	IZM99	2520-6300	2-10	2-10,OFF	**IZM99N4-V63F** 126435	**IZM99N4-V63W** 126813

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Circuit breakers with standard protection function (including the main terminal with allZ the secondary terminal blocks assembled)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	$I_n=I_u$		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
100	800	IZM97	320-800	2-10	2-10, OFF	**IZM97H4-V08F** 126343	**IZM97H4-V08W** 126723
100	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97H4-V10F** 126344	**IZM97H4-V10W** 126724
100	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97H4-V12F** 126345	**IZM97H4-V12W** 126725
100	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97H4-V16F** 126346	**IZM97H4-V16W** 126726
100	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97H4-V20F** 126347	**IZM97H4-V20W** 126727
100	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97H4-V25F** 126348	**IZM97H4-V25W** 126728
100	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97H4-V32F** 126349	**IZM97H4-V32W** 126729
100	4000	IZM97	1600-4000	2-10	2-10, OFF	–	**IZM97H4-V40W** 126801
100	4000	IZM99	1600-4000	2-10	2-10, OFF	**IZM99H4-V40F** 126451	**IZM99H4-V40W** 126829
100	5000	IZM99	2000-5000	2-10	2-10, OFF	**IZM99H4-V50F** 126452	**IZM99H4-V50W** 126830
100	6300	IZM99	2520-6300	2-10	2-10, OFF	**IZM99H4-V63F** 126453	**IZM99H4-V63W** 126831

Circuit breakers with ammeter type (including the main terminal with all the secondary terminal blocks assembled)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	$I_n=I_u$		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
65	800	IZM97	320-800	2-10	2-10, OFF	**IZM97B4-U08F** 126245	**IZM97B4-U08W** 126625
65	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97B4-U10F** 126246	**IZM97B4-U10W** 126626
65	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97B4-U12F** 126247	**IZM97B4-U12W** 126627
65	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97B4-U16F** 126248	**IZM97B4-U16W** 126628
65	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97B4-U20F** 126249	**IZM97B4-U20W** 126629
65	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97B4-U25F** 126250	**IZM97B4-U25W** 126630
65	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97B4-U32F** 126251	**IZM97B4-U32W** 126631
65	4000	IZM97	1600-4000	2-10	2-10, OFF	–	**IZM97B4-U40W** 126791

Circuit breakers with ammeter type (including the main terminal with all the secondary terminal blocks assembled)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	I_n/I_u		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
85	800	IZM97	320-800	2-10	2-10, OFF	**IZM97N4-U08F** 126301	**IZM97N4-U08W** 126681
85	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97N4-U10F** 126302	**IZM97N4-U10W** 126682
85	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97N4-U12F** 126303	**IZM97N4-U12W** 126683
85	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97N4-U16F** 126304	**IZM97N4-U16W** 126684
85	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97N4-U20F** 126305	**IZM97N4-U20W** 126685
85	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97N4-U25F** 126306	**IZM97N4-U25W** 126686
85	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97N4-U32F** 126307	**IZM97N4-U32W** 126687
85	4000	IZM97	1600-4000	2-10	2-10, OFF	–	**IZM97N4-U40W** 126797
85	4000	IZM99	1600-4000	2-10	2-10, OFF	**IZM99N4-U40F** 126439	**IZM99N4-U40W** 126817
85	5000	IZM99	2000-5000	2-10	2-10, OFF	**IZM99N4-U50F** 126440	**IZM99N4-U50W** 126818
85	6300	IZM99	2520-6300	2-10	2-10, OFF	**IZM99N4-U63F** 126441	**IZM99N4-U63W** 126819
100	800	IZM97	320-800	2-10	2-10, OFF	**IZM97H4-U08F** 126357	**IZM97H4-U08W** 126737
100	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97H4-U10F** 126358	**IZM97H4-U10W** 126738
100	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97H4-U12F** 126359	**IZM97H4-U12W** 126739
100	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97H4-U16F** 126360	**IZM97H4-U16W** 126740
100	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97H4-U20F** 126361	**IZM97H4-U20W** 126741
100	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97H4-U25F** 126362	**IZM97H4-U25W** 126742
100	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97H4-U32F** 126363	**IZM97H4-U32W** 126743
100	4000	IZM97	1600-4000	2-10	2-10, OFF	–	**IZM97H4-U40W** 126803
100	4000	IZM99	1600-4000	2-10	2-10, OFF	**IZM99H4-U40F** 126457	**IZM99H4-U40W** 126835
100	5000	IZM99	2000-5000	2-10	2-10, OFF	**IZM99H4-U50F** 126458	**IZM99H4-U50W** 126836
100	6300	IZM99	2500-6300	2-10	2-10, OFF	**IZM99H4-U63F** 126459	**IZM99H4-U63W** 126837

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Circuit breakers with power type (including the main terminal with all the secondary terminal blocks assembled)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	$I_n=I_u$		I_r	$I_{sd}=I_r X...$	$I_i=I_n X...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
65	800	IZM97	320-800	2-10	2-10, OFF	**IZM97B4-P08F** 126259	**IZM97B4-P08W** 126639
65	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97B4-P10F** 126260	**IZM97B4-P10W** 126640
65	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97B4-P12F** 126261	**IZM97B4-P12W** 126641
65	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97B4-P16F** 126262	**IZM97B4-P16W** 126642
65	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97B4-P20F** 126263	**IZM97B4-P20W** 126643
65	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97B4-P25F** 126264	**IZM97B4-P25W** 126644
65	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97B4-P32F** 126265	**IZM97B4-P32W** 126645
65	4000	IZM97	1600-4000	2-10	2-10, OFF	-	**IZM97B4-P40W** 126793
85	800	IZM97	320-800	2-10	2-10, OFF	**IZM97N4-P08F** 126315	**IZM97N4-P08W** 126695
85	1000	IZM97	400-1000	2-10	2-10, OFF	**IZM97N4-P10F** 126316	**IZM97N4-P10W** 126696
85	1250	IZM97	500-1250	2-10	2-10, OFF	**IZM97N4-P12F** 126317	**IZM97N4-P12W** 126697
85	1600	IZM97	640-1600	2-10	2-10, OFF	**IZM97N4-P16F** 126318	**IZM97N4-P16W** 126698
85	2000	IZM97	800-2000	2-10	2-10, OFF	**IZM97N4-P20F** 126319	**IZM97N4-P20W** 126699
85	2500	IZM97	1000-2500	2-10	2-10, OFF	**IZM97N4-P25F** 126320	**IZM97N4-P25W** 126700
85	3200	IZM97	1280-3200	2-10	2-10, OFF	**IZM97N4-P32F** 126321	**IZM97N4-P08W** 126701
85	4000	IZM97	1600-4000	2-10	2-10, OFF	-	**IZM97N4-P40W** 126799
85	4000	IZM99	1600-4000	2-10	2-10, OFF	**IZM99N4-P40F** 126445	**IZM99N4-P40W** 126823
85	5000	IZM99	2000-5000	2-10	2-10, OFF	**IZM99N4-P50F** 126446	**IZM99N4-P50W** 126824
85	6300	IZM99	2520-6300	2-10	2-10, OFF	**IZM99N4-P63F** 126447	**IZM99N4-P63W** 126825

Circuit breakers with power type (including the main terminal with all the secondary terminal blocks assembled)

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	$I_n=I_u$		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
100	800	IZM97	320-800	2-10	2-10,OFF	**IZM97H4-P08F** 126371	**IZM97H4-P08W** 126751
100	1000	IZM97	400-1000	2-10	2-10,OFF	**IZM97H4-P10F** 126372	**IZM97H4-P10W** 1263752
100	1250	IZM97	500-1250	2-10	2-10,OFF	**IZM97H4-P12F** 126373	**IZM97H4-P12W** 126753
100	1600	IZM97	640-1600	2-10	2-10,OFF	**IZM97H4-P16F** 126374	**IZM97H4-P16W** 126754
100	2000	IZM97	800-2000	2-10	2-10,OFF	**IZM97H4-P20F** 126375	**IZM97H4-P20W** 126755
100	2500	IZM97	1000-2500	2-10	2-10,OFF	**IZM97H4-P25F** 126376	**IZM97H4-P25W** 126756
100	3200	IZM97	1280-3200	2-10	2-10,OFF	**IZM97H4-P32F** 126377	**IZM97H4-P32W** 126757
100	4000	IZM97	1600-4000	2-10	2-10,OFF	–	**IZM97H4-P40W** 126805
100	800	IZM99	1600-4000	2-10	2-10,OFF	**IZM99H4-P40F** 126463	**IZM97H4-P40W** 126841
100	1000	IZM99	2000-5000	2-10	2-10,OFF	**IZM99H4-P50F** 126464	**IZM97H4-P50W** 126842
100	1250	IZM99	2520-6300	2-10	2-10,OFF	**IZM99H4-P63F** 126465	**IZM97H4-P63W** 126843

IZM 97 for use in 1100V including main terminals on the back and control circuit terminals based on ordered item

Switching capacity	Rated operational current		Setting range Overload protection	Short circuit release		Fixed	Withdrawable
				Delayed	Non-delayed	**Part No**	**Part No**
I_{cu}/I_{cs}	$I_n=I_u$		I_r	$I_{sd}=I_rX...$	$I_i=I_nX...$	Article No.	Article No.
kA	A		A				Cassettes to be ordered separately
Circuit breakers with standard protection							
25	3200	IZN97	1280-3200	–	2-10	**IZM97S4-A32F-1100V** 126203	**IZM97S4-A32W-1100V**
Circuit breakers with standard protection							
25	3200	IZN97	1280-3200	2-10	2-10,OFF	**IZM97S4-A32F-1100V** 126205	**IZM97S4-A32W-1100V**
Circuit breakers with ammeter type							
25	3200	IZN97	1280-3200	2-10	2-10,OFF	**IZM97S4-A32F-1100V** 126207	**IZM97S4-A32W-1100V**
Circuit breakers with power meter type							
25	3200	IZN97	1280-3200	2-10	2-10,OFF	**IZM97S4-A32F-1100V** 126209	**IZM97S4-A32W-1100V**

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Switch disconnector (including the main terminal with all the secondary terminal blocks assembled)

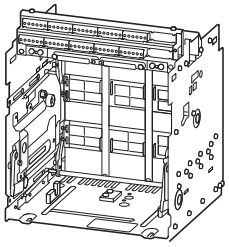
Switching capacity	Rated operational current	Circuit breaker type	Rated short time withstand capacity	Fixed	Withdrawable
				Part No	**Part No**
I_{cm}	$I_n=I_u$		I_{cw}	Article No.	Article No.
kA	A		A		Cassettes to be ordered separately
143KA	800A	IN97	65	**IN97B3-08F** 126380	**IN97B3-08W** 126760
143KA	1000A	IN97	65	**IN97B3-10F** 126381	**IN97B3-10W** 126761
143KA	1250A	IN97	65	**IN97B3-12F** 126382	**IN97B3-12W** 126762
143KA	1600A	IN97	65	**IN97B3-16F** 126383	**IN97B3-16W** 126763
143KA	2000A	IN97	65	**IN97B3-20F** 126384	**IN97B3-20W** 126764
143KA	2500A	IN97	65	**IN97B3-25F** 126385	**IN97B3-25W** 126765
143KA	3200A	IN97	65	**IN97B3-32F** 126386	**IN97B3-32W** 126766
143KA	4000A	IN97	65		**IN97B3-40W** 126806
187KA	800A	IN97	85	**IN97N3-08F** 126394	**IN97N3-08W** 126774
187KA	1000A	IN97	85	**IN97N3-10F** 126395	**IN97N3-10W** 126775
187KA	1250A	IN97	85	**IN97N3-12F** 126396	**IN97N3-12W** 1263776
187KA	1600A	IN97	85	**IN97N3-16F** 126397	**IN97N3-16W** 126777
187KA	2000A	IN97	85	**IN97N3-20F** 126398	**IN97N3-20W** 126778
187KA	2500A	IN97	85	**IN97N3-25F** 126399	**IN97N3-25W** 126779
187KA	3200A	IN97	85	**IN97N3-32F** 126400	**IN97N3-32W** 126780
187KA	4000A	IN97	50		**IN97N3-40W** 126808
187KA	3200A	IN97	-	**IN97S3-32F-1100V**	**IN97S3-32W-1100V**
187KA	4000A	IN99	85	**IN99N3-40F** 126466	**IN99N3-40W** 126844
187KA	5000A	IN99	85	**IN99N3-50F** 126467	**IN99N3-50W** 126845
187KA	6300A	IN99	85	**IN99N3-63F** 126468	**IN99N3-63W** 126846
220KA	4000A	IN99	100	**IN99H3-40F** 126472	**IN99H3-40W** 126850
220KA	5000A	IN99	100	**IN99H3-50F** 126473	**IN99H3-50W** 126851
220KA	6300A	IN99	100	**IN99H3-63F** 126474	**IN99H3-63W** 126852

Switch disconnector (including the main terminal with all the secondary terminal blocks assembled)

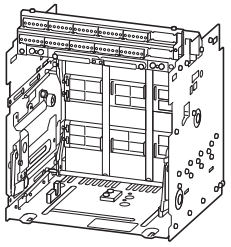
Rated short circuit making capacity I_{cm} kA	Rated operational current $I_n=I_u$ A	Circuit breaker type	Rated short time withstand capacity I_{CW} A	Fixed **Part No** Article No.	Withdrawable **Part No** Article No. Shelf needs to be ordered separately
143KA	800A	IN97	65	**IN97B4-08F** 126387	**IN97B4-08W** 126767
143KA	1000A	IN97	65	**IN97B4-10F** 126388	**IN97B4-10W** 126768
143KA	1250A	IN97	65	**IN97B4-12F** 126389	**IN97B4-12W** 126769
143KA	1600A	IN97	65	**IN97B4-16F** 126390	**IN97B4-16W** 126770
143KA	2000A	IN97	65	**IN97B4-20F** 126391	**IN97B4-20W** 126771
143KA	2500A	IN97	65	**IN97B4-25F** 126392	**IN97B4-25W** 126772
143KA	3200A	IN97	65	**IN97B4-32F** 126393	**IN97B4-32W** 126773
143KA	4000A	IN97	65		**IN97B4-40W** 126807
187KA	800A	IN97	85	**IN97N4-08F** 126401	**IN97N4-08W** 126781
187KA	1000A	IN97	85	**IN97N4-10F** 126402	**IN97N4-10W** 126782
187KA	1250A	IN97	85	**IN97N4-12F** 126403	**IN97N4-12W** 1263783
187KA	1600A	IN97	85	**IN97N4-16F** 126404	**IN97N4-16W** 126784
187KA	2000A	IN97	85	**IN97N4-20F** 126405	**IN97N4-20W** 126785
187KA	2500A	IN97	85	**IN97N4-25F** 126406	**IN97N4-25W** 126786
187KA	3200A	IN97	85	**IN97N4-32F** 126407	**IN97N4-32W** 126787
187KA	4000A	IN97	50		**IN97N4-40W** 126809
187KA	3200A	IN97	-	**IN97S4-32F-1100V**	**IN97S4-32W-1100V**
187KA	4000A	IN99	85	**IN99N4-40F** 126469	**IN99N4-40W** 126847
187KA	5000A	IN99	85	**IN99N4-50F** 126470	**IN99N4-50W** 126848
187KA	6300A	IN99	85	**IN99N4-63F** 126471	**IN99N4-63W** 126849
220KA	4000A	IN99	100	**IN99H4-40F** 126475	**IN99H4-40W** 126853
220KA	5000A	IN99	100	**IN99H4-50F** 126476	**IN99H4-50W** 126854
220KA	6300A	IN99	100	**IN99H4-63F** 126477	**IN99H4-63W** 126855

Cassettes

Cassettes ordered with basic device
Standard cassette equipment:
-Arc chamber cover
-Mismatch protection
-Main terminal for horizontal connection, except for IZM97… 4000A supplied with vertical terminal
-Door escutcheon

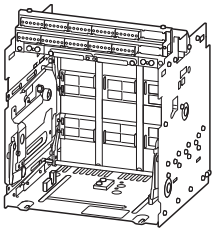
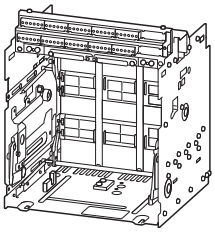


Cassettes ordered separately.
Standard cassette equipment includes:
-Arc chamber cover
-Mismatch protection
-Main terminal for horizontal connection, except for IZM97… 4000A supplied with vertical terminal
-Door escutcheon



Rated operational curren I_n A	Pole	For use with	**Pat No.** Article No. Suffix + for ordering with circuit breaker basic device
≦ 2000	3	IZM97...W IN97...W	**+IZM-CAS323-2000** 122066
2500-3200	3	IZM97...W IN97...W	**+IZM-CAS323-3200** 122067
4000	3	IZM97...W IN99...W	**+IZM-CAS323-E403** 122068
4000	3	IZM99...W IN99...W	**+IZM-CAS633-4000** 122710
5000-6300	3	IZM99...W IN99...W	**+IZM-CAS633-6300** 122711
≦ 2000	4	IZM97...W IN97...W	**+IZM-CAS324-2000** 122714
2500-3200	4	IZM97...W IN97...W	**+IZM-CAS324-3200** 122715
4000	4	IZM97...W IN97...W	**+IZM-CAS-E404** 122716
4000	4	IZM99...W IN99...W	**+IZM-CAS634-4000** 122718
5000-6300	4	IZM99...W IN99...W	**+IZM-CAS634-6300** 122719
≦ 2000	3	IZM97...W IN97...W	**IZM-CAS323-2000** 122856
2500-3200	3	IZM97...W IN97...W	**IZM-CAS323-3200** 122857
4000	3	IZM97...W IN97...W	**IZM-CAS-E403** 122858
4000	3	IZM99...W IN99...W	**IZM-CAS633-4000** 122860
5000-6300	3	IZM99...W IN99...W	**IZM-CAS633-6300** 122861
≦ 2000	4	IZM97...W IN97...W	**IZM-CAS324-2000** 122864
2500-3200	4	IZM97...W IN97...W	**IZM-CAS324-3200** 122865
4000	4	IZM97...W IN97...W	**IZM-CAS-E404** 122866
4000	4	IZM99...W IN99...W	**IZM-CAS634-4000** 122868
5000-6300	4	IZM99...W IN99...W	**IZM-CAS634-6300** 122869

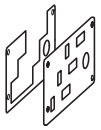
Cassettes

	Rated operational current	For use with	3 pole	4 pole
	I_n A		**Pat No.** Article No. Suffix + for ordering with circuit breaker basic device	**Part No.** Article No. Suffix + for ordering with circuit breaker basic device
Cassettes for 1100V Standard cassette equipment includes: -Arc chamber cover -Coding between shelf and switch -horizontal connection -Door seal 	3200	IZM97...W-1100V IN97...W-1100V	**+IZM-CAS323-3200-1100V** 122712	**+IZM-CAS324-3200-1100V** 122720
Cassettes for 1100V Standard cassette equipment includes: -Arc chamber cover -Complete set of control circuit terminals -Coding between shelf and switch -horizontal connection -Door seal 	3200	IZM97...W-1100V IN97...W-1100V	**+IZM-CAS323-3200-1100V** 122862	**+IZM-CAS324-3200-1100V** 122870

Cassette shutter protection

	4 pole	For use with	**Pat No.** **Article No.** Suffix + for ordering with circuit breaker basic device
When withdrawable circuit breaker is moved from "connection" position, protection shutter will close automatically to block main contact.			
–	3	IZM97...W IN97...W	**IZM-SH323** 122872
–	3	IZM97...W IN97...W	**IZM-SH323** 122722
–	3	IZM99...W IN99...W	**IZM-SH633** 122874
–	3	IZM99...W IN99...W	**IZM-SH633** 122724
–	4	IZM97...W IN97...W	**IZM-SH324** 122876
–	4	IZM97...W IN97...W	**IZM-SH324** 122726
–	4	IZM99...W IN99...W	**IZM-SH634** 122878
–	4	IZM99...W IN99...W	**IZM-SH634** 122728

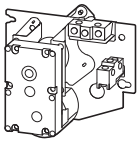
Note: IZM97-4000A with IZM-SH323/324



Position indication contact for withdrawable circuit breaker

For remote indication of circuit breaker's position in the cassette. Maximum three sets of withdrawer position indication contacts (each set includes 4 indication contacts) can be installed. Each withdrawer only requires one mounting support.
If it requires more than 2 sets of position indication contacts, then each additional set of position indication contacts requires 2 additional terminal blocks IZM-SEC or can be directly connected to the outside.

	For use with	**Pat No.** Article No. Suffix + for ordering with circuit breaker basic device
4CO, 1 module without mounting	IZM97,99...W IN97,99...W	**IZM-CS4** 122879
4CO, 1 module with mounting	IZM97,99...W IN97,99...W	**IZM-CS4MB** 122880
8CO， 2 modules with mounting	IZM97,99...W IN97,99...W	**IZM-CS8MB** 122881
12CO, 3 modules with mounting	IZM97,99...W IN97,99...W	**IZM-CS12MB** 122882



Motor operator

It can store energy by motor. When motor operator operates, it requires additionally a closing release and a shunt release. The "Spring energy store tensioned" status indication switch is also included.

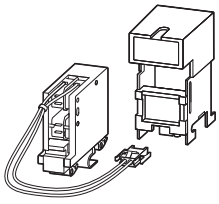
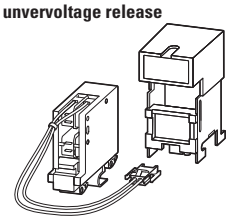
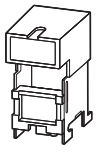
–	IZM97,99... IN97,99...	**IZM-M24DC** 122927
–	IZM97,99... IN97,99...	**+IZM-M24DC** 122729
–	IZM97,99... IN97,99...	**IZM-M48DC** 122928
–	IZM97,99... IN97,99...	**+IZM-M48DC** 122730
–	IZM97,99... IN97,99...	**IZM-M110DC** 122929
–	IZM97,99... IN97,99...	**+IZM-M110DC** 122731
–	IZM97,99... IN97,99...	**IZM-M220DC** 122930
–	IZM97,99... IN97,99...	**+IZM-M220DC** 122732
–	IZM97,99... IN97,99...	**IZM-M110AC** 122931
–	IZM97,99... IN97,99...	**+IZM-M110AC** 122733
–	IZM97,99... IN97,99...	**IZM-M230AC** 122932
–	IZM97,99... IN97,99...	**+IZM-M230AC** 122734

Switching operations counter

To record the number of ON-OFF operations. It can operate without a motor operator.

–	IZM97,99... IN97,99...	**IZM-OC** 122933
–	IZM97,99... IN97,99...	**+IZM-OC** 122735

Voltage release

Rated control voltage U_s V	For use with	Pat No. / Article No. / Suffix + for ordering with circuit breaker basic device
Shunt release	Closing release can be combined in use with 1 shunt release and 1 undervoltage release or with 2 shunt releases	
		
24DC	IZM97,99... IN97,99...	**IZM-ST24DC** 122934
24DC	IZM97,99... IN97,99...	**+IZM-ST24DC** 122736
48DC	IZM97,99... IN97,99...	**IZM-ST48DC** 122935
48DC	IZM97,99... IN97,99...	**+IZM-ST48DC** 122737
110-125 DC 110-127 AC	IZM97,99... IN97,99...	**IZM-ST110DC** 122936
110-125 DC 110-127 AC	IZM97,99... IN97,99...	**+IZM-ST110DC** 122738
220-250 DC 208-240 AC	IZM97,99... IN97,99...	**IZM-ST320DC** 122937
220-250 DC 208-240 AC	IZM97,99... IN97,99...	**+IZM-ST230DC** 122739
2nd shunt release **Can not be used together with unvervoltage release**		
		
24DC	IZM97,99... IN97,99...	**+IZM-ST24DC** 122740
48DC	IZM97,99... IN97,99...	**+IZM-ST48DC** 122741
110-127 DC 110-127 AC	IZM97,99... IN97,99...	**+IZM-ST110DC** 122742
208-250 DC 208-250 AC	IZM97,99... IN97,99...	**+IZM-ST230DC** 122743
Closing release		
		
110-125 DC 110-127 AC	IZM97,99... IN97,99...	**IZM-SR110AD** 122944
110-125 DC 110-127 AC	IZM97,99... IN97,99...	**+IZM-SR110AD** 122746
220-250 DC 208-240 AC	IZM97,99... IN97,99...	**IZM-SR230AD** 122945
220-250 DC 208-240 AC	IZM97,99... IN97,99...	**+IZM-SR230AD** 122747
24DC	IZM97,99... IN97,99...	**IZM-SR24DC** 122942
24DC	IZM97,99... IN97,99...	**+IZM-SR24DC** 122744
48DC	IZM97,99... IN97,99...	**IZM-SR24DC** 122943
48DC	IZM97,99... IN97,99...	**+IZM-SR24DC** 122745

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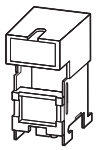
Voltage release

Undervoltage release
Can not be used in combination
With 2nd shunt release

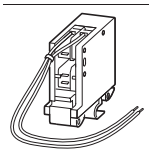


	Rated control voltage U_s V	For use with	**Pat No.** Article No. Suffix + for ordering with circuit breaker basic device
	24 DC	IZM97,99... IN97,99...	IZM-UVR24DC 122946
	24 DC	IZM97,99... IN97,99...	+IZM-UVR24DC 122748
	32 DC	IZM97,99... IN97,99...	IZM-UVR32DC 122947
	32 DC	IZM97,99... IN97,99...	+IZM-UVR32DC 122749
	48 DC	IZM97,99... IN97,99...	IZM-UVR48DC 122948
	48 DC	IZM97,99... IN97,99...	+IZM-UVR48DC 122750
	110-125 DC	IZM97,99... IN97,99...	IZM-UVR110DC 122949
	110-125 DC	IZM97,99... IN97,99...	+IZM-UVR110DC 122751
	220-250 DC	IZM97,99... IN97,99...	IZM-UVR220DC 122950
	220-250 DC	IZM97,99... IN97,99...	+IZM-UVR220DC 122752
	110-127 AC	IZM97,99... IN97,99...	IZM-UVR110AC 122951
	110-127 AC	IZM97,99... IN97,99...	+IZM-UVR110AC 122753
	208-240 AC	IZM97,99... IN97,99...	IZM-UVR230AC 122952
	208-240 AC	IZM97,99... IN97,99...	+IZM-UVR230AC 122754
	380-415 AC	IZM97,99... IN97,99...	IZM-UVR400AC 122953
	380-415 AC	IZM97,99... IN97,99...	+IZM-UVR400AC 122755

Time-delay module
In use with undervoltage module.
Time setting: 0.1s, 0.5s, 1.0s, ,2.0s

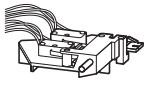
In use with IZM-UVR110VAC	120 AC	IZM97,99... IN97,99...	IZM-UVR-TD-120AC 122956
In use with IZM-UVR230VAC	230 AC	IZM97,99... IN97,99...	IZM-UVR-TD-230AC 122957

Auxiliary contact



For use with		Pat No. Article No. Suffix + for ordering with circuit breaker basic device	Notes
Auxiliary contacts 2 ON and 2 OFF are supplied as standard IZM93, IN93: maximum 4 ON and 4 OFF (with additional AS22) IZM97, 99: maximum 6 ON and 6 OFF (with additional 2 AS22 or 1 AS44), 6 ON and 6 OFF (+IZM-AS44) can only be used without the 2nd shunt release/undervoltage release			
2 CO	IZM97,99... IN97,99...	**+IZM-AS22** 122758	–
4 CO	IZM97,99... IN97,99...	**+IZM-AS44** 122759	Can't be used with 2nd shunt release, Not for use in IZM93, IN93
2 CO	IZM97,99... IN97,99...	**IZM-AS22** 122958	–
Latch check switch Latch check switch = latch check signal with 1 convertible contact (1CO			
–	IZM97,99... IN97,99...	**IZM-LCS-SR** 122974	For connection to closing release
–	IZM97,99... IN97,99...	**+IZM-LCS-SR** 122760	For connection to closing release
–	IZM97,99... IN97,99...	**IZM-LCS** 122959	For external signal
–	IZM97,99... IN97,99...	**+IZM-LCS** 122761	For external signal

Trip signal switch

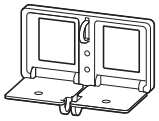


Trip signal switch (OTS) 2CO switches			
–	IZM97,99...	**IZM-OTS** 122960	–
–	IZM97,99...	**+IZM-OTS** 122762	–

Automatic reset

Automatic reset of circuit breaker Can not be combined in use with mechanical trip indication Can not be integrated to remote reset			
–	IZM97,99...	**IZM-RA** 122964	–
–	IZM97,99...	**+IZM-RA** 122766	–

Interlocking devices

	For use with	Pat No. Article No. Suffix + for ordering with circuit breaker basic device
Button cover (with optional padlock) Sealed button cover		
		
Metal cover, ON and OFF position button lock	IZM97,99... IN97,99...	**IZM-PLPC-M** 122966
Metal cover, ON and OFF position button lock	IZM97,99... IN97,99...	**+IZM-PLPC-M** 122768
Plastic cover, ON and OFF position button lock	IZM97,99... IN97,99...	**IZM-PLPC-P** 122965
Plastic cover, ON and OFF position button lock	IZM97,99... IN97,99...	**+IZM-PLPC-P** 122767
OFF position safety lock Kirk lock, including one set of lock provision, cylinder lock and key	Note: Factory mounting to be recommended, with indication in the order about which type of basic device to be mounted.	
With key lock and key	IZM97,99... IN97,99...	**IZM-1L1K** 90000019000028
The cylinder lock and key of -B and -C are not interchangable with each other and IZM-1L1K	IZM97,99... IN97,99...	**IZM-1L1K-B** 90000019000048
	IZM97,99... IN97,99...	**IZM-1L1K-C** 90000019000049
Cassette interlocking device	During mounting, if the circuit breaker is in connection position, then this device prevent the circuit breaker from tripping and avoid the circuit breaking closing.	
Mounting on the right side	IZM97,99...W IN97,99...W	**IZM-KLP-CASS-R** 122973
Mounting on the right side		**IZM-KLP-CASS-L** 122973
3 key locks and 2 keys	3 Identical key locks, including 3 complete set of lock frames, lock cylinder and keys	
Kirk lock, including 3 lock provisions, 3 cylinder locks and 2 keys	IZM97,99... IN97,99...	**IZM-3L2K** 90000019000040
The cylinder lock and key of -B and -C are not interchangeable with each other and IZM-3L2K	IZM97,99... IN97,99...	**IZM-3L2K-B** 90000019000041
	IZM97,99... IN97,99...	**IZM-3L2K-C** 90000019000042

Interlocking devices

		For use with	Pat No. Article No.
Mechanical interlocking of fixed circuit breaker	2 circuit breakers interlocking: 1 for normal power supply (A), 1 for emergency supply (B). It requires additional ropes。	IZM97,99...F IN97,99...F	**IZM-MIL2C-F** 122980
	31 type, 3 circuit breakers interlocking: 2 for normal power supply (A &C), 1 for emergency supply (B). If B breaks, circuit breaker A&C can still turn off. B can turn off only when A&C breaks. It requires 2 set of ropes.		**IZM-MIL31C-F** 122981
	32 type, circuit breakers interlocking: 2 for normal power supply (A &C), 1 for emergency supply (B). If B breaks, circuit breaker A&C can still turn off. Among the 3 circuit breakers, 1 or 2 breakers can turn off simultaneously. It requires 3 set of ropes.		**IZM-MIL32C-F** 122982
	33 type, circuit breakers interlocking: 3 for normal power supply (A&B &C), or in the case of emergency supply, only 1 circuit breaker can turn off. It requires 3 set of ropes.		**IZM-MIL33C-F** 122983
Mechanical interlocking of fixed circuit breaker	2 circuit breakers interlocking: 1 for normal power supply (A), 1 for emergency supply (B). It requires additional rope。	IZM97,99...W IN97,99...W	**IZM-MIL2C-W** 122985
	31 type, 3 circuit breakers interlocking: 2 for normal power supply (A &C), 1 for emergency supply (B). If B breaks, circuit breaker A&C can still turn off. B can turn off only when A&C breaks. It requires 2 set of ropes.		**IZM-MIL31C-W** 122986
	32 type, circuit breakers interlocking: 2 for normal power supply (A &C), 1 for emergency supply (B). If B breaks, circuit breaker A&C can still turn off. Among the 3 circuit breakers, 1 or 2 breakers can turn off simultaneously. It requires 3 set of ropes.		**IZM-MIL32C-W** 122987
	33 type, circuit breakers interlocking: 3 for normal power supply (A&B &C), or in the case of emergency supply, only 1 circuit breaker can turn off. It requires 3 set of ropes.		**IZM-MIL33C-W** 122988
Ropes for mechanical interlocking	Type of mechanical interlock depends on length of rope. One set of rope device includes 2 ropes		
	Length 1520mm	IZM97,99... IN97,99...	**IZM-MIL-CAB1520** 122975
	Length 1820mm		**IZM-MIL-CAB1830** 122976
	Length 2440mm		**IZM-MIL-CAB2440** 122977
	Length 3050mm		**IZM-MIL-CAB3050** 122978

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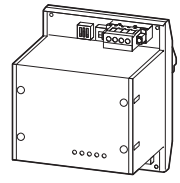
Options and accessories of trip units

	Rated contro Voltage U_s V	Application range	**Pat No.** Article No. Suffix + for ordering with circuit breaker basic device	**Note**
Circuit breaker basic device includes below releases as standard: (DT = Digitrip): • A type: DT-520LI • V type: DT-520LSI • U type: DT-520MC • P type: DT-1150				
A type release (520LI) Standard protection	–	**IZM...-A...** (Digitrip 520LI)	**IZM-DTA** 122774	Not available for retail
V type release (520 LSI) Selective protection	–	**IZM...-V...** (Digitrip 520LSI)	**IZM-DTV** 122775	Not available for retail
Functions of accessories with selective protection (V) Digitrip 520LSI Ground protection	–	**IZM...-V...** (Digitrip 520LSI)	**+IZM-DTV-EP** 122776	–
U type release (520 MC) Add-on functions of ammeter type (U) DIgitrip 520MC		**IZM...-U...** (Digitrip 520MC)	**IZM-DTU** 122777	Not available for retail
Standard U type trip units include: • communication capacity (INCOM communication protocol) • high load alarming • external 24/48V DC incoming supply • (A14=+24VDC, A15= -24VDC) V type release (520 LSI) Selective protection,Can only choose one function among ground fault protection, ground fault alarming and high load alarming function.				
High load alarming, with external supply 120 VAC	120 AC	**IZM...-U...** (Digitrip 520MC)	**+IZM-DTU -HA1** 122778	Can not choose additional ground protection or ground fault alarming.
High load alarming, with external supply 240 VAC	240 AC	**IZM...-U...** (Digitrip 520MC)	**+IZM-DTU-HA2** 122779	Can not choose additional ground protection or ground fault alarming.
Ground protection, action no-alarming 24/48VDC	24/48 DC	**IZM...-U...** (Digitrip 520MC)	**+IZM-DTU-EP** 122780	Can not choose additional high load alarming or ground fault alarming
Ground protection, action no-alarming 120VAC	120 AC	**IZM...-U...** (Digitrip 520MC)	**+IZM-DTU-EP1** 122781	Can not choose additional high load alarming or ground fault alarming
Ground protection, action no-alarming 240VAC	240 AC	**IZM...-U...** (Digitrip 520MC)	**+IZM-DTU-EP2** 122782	Can not choose additional high load alarming or ground fault alarming
Ground fault alarming, alarming no-action 24/48VDC	24/48 DC	**IZM...-U...** (Digitrip 520MC)	**+IZM-DTU-EA** 122783	Can not choose additional ground protection or high load alarming
Ground fault alarming, alarming no-action 120VAC	120 AC	**IZM...-U...** (Digitrip 520MC)	**+IZM-DTU-EA1** 122784	Can not choose additional ground protection or high load alarming
Ground fault alarming, alarming no-action 240VAC	240 AC	**IZM...-U...** (Digitrip 520MC)	**+IZM-DTU-EA2** 122785	Can not choose additional ground protection or high load alarming
The ARMS function enhances personnel safety by reducing tripping time by simple and reliable means	–	**IZM...-U...** (Digitrip 520MC)	**+IZM-DTU-ARMS** 122791	–
NC: U type electronic release does not have communication capacity. Includes power supply module	–	**IZM...-U...** (Digitrip 520MC)	**+IZM-DTU-NC** 122790	Cannot be combined in use with • IZM-DTU-NPC • IZM-DTU-ARMS
NPC: U type electronic release does not have communication capacity. Without external power supply module	–	**IZM...-U...** (Digitrip 520MC)	**+IZM-DTU-NPC** 122788	Can only be used with U type circuit breaker or with IZM-DTU-EP

Options and accessories of P type releases Digitrip 1150

	Rated contro Voltage U_s V	Application range	**Pat No.** Article No. Suffix + for ordering with circuit breaker basic device	**Note**
Standard P type releases include: • Power measurement • Communication capacity • High load alarming contact • External power supply module supplied as standard Ground protection and ground fault alarming functions are combined in use. High load alarming function can be selected additionally.		**IZM...-P...** (Digitrip 1150)	**IZM-DTP** 122894	Not available for retail
High load alarming with external supply 120 VAC.	**120VAC**	**IZM...-P...** (Digitrip 1150)	**+IZM-DTP1** 122895	
High load alarming with external supply 240 VAC.	**240VAC**	**IZM...-P...** (Digitrip 1150)	**+IZM-DTP2** 122906	
Ground protection and ground fault alarming, 24/8 VDC.	**24/48VDC**	**IZM...-P...** (Digitrip 1150)	**+IZM-DTP -EPA** 122915	
Ground protection and ground fault alarming, 120 VAC.	**120VAC**	**IZM...-P...** (Digitrip 1150)	**+IZM-DTP -EPA1** 122916	
Ground protection and ground fault alarming, 240 VAC.	**240VAC**	**IZM...-P...** (Digitrip 1150)	**+IZM-DTU -EPA2** 122938	
The ARMS function enhances personnel safety by reducing tripping time by simple and reliable means.	–	**IZM...-P...** (Digitrip 1150)	**+IZM-DTP -ARMS** 122939	
Voltage monitor relevant on the bottom.	–	**IZM...-P...** (Digitrip 1150)	**+IZM-DTP -PFBT** 122990	
Transmit all the protection parameters into another switch, e.g. maintenance replacement.	–	**IZM...-P...** (Digitrip 1150)	**+IZM-DTP -TL** 122989	
P type tripping digital delay (for measurement).	–	**IZM...-P...** (Digitrip 1150)	**+IZM-DTP -RM** 101534	



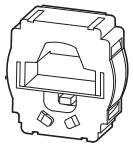
Communication function of U and P type releases

	Rated contro Voltage U_s V	Application range	**Pat No.** Article No.
Converting module from INCOM protocol to PROFIBUS protocol, DIN mounting	24-125VDC 100-240VAC	IZM...-U...(Digitrip 520MC) IZM...-P...(Digitrip 1150)	**IZM-PMINT** 124235
Converting module from INCOM protocol to MODBUS protocol, DIN mounting	24-125VDC 120VAC	IZM...-U...(Digitrip 520MC) IZM...-P...(Digitrip 1150)	**IZM-MMINT** 124236

Testing devices for releases (for use in IZM97/99)

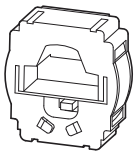
Fully functional portable tester(MTK2000) for A, V and U type trip units. P type trip units provide comprehensive testing function	–	IZM97/IZM99	**IZM-SIM-KIT** 1011535
Handheld Tester(MTST230V)	–	IZM91/IZM97/IZM99	**IZM-TEST-KIT** 124161

Rating plug sensor and current transformer



Rated operational current I_n A	For use with	3 pole **Pat No.** Article No. Suffix + for ordering with circuit breaker basic device	4 pole **Pat No.** Article No. Suffix + for ordering with circuit breaker basic device
This combination is required in the case of decreasing of rated operation current of circuit breakers			
200	IZM97... 800A ⩽ I_u ⩽ 3200A	**IZM-RP323-200** 123005	**IZM-RP324-200** 123036
200	IZM97... 800A ⩽ I_u ⩽ 3200A	**+IZM-RP323-200** 122803	**+IZM-RP324-200** 122834
250	IZM97... 800A ⩽ I_u ⩽ 3200A	**IZM-RP323-250** 123006	**IZM-RP324-250** 123037
250	IZM97... 800A ⩽ I_u ⩽ 3200A	**+IZM-RP323-250** 122804	**+IZM-RP324-250** 122835
300	IZM97... 800A ⩽ I_u ⩽ 3200A	**IZM-RP323-300** 123007	**IZM-RP324-300** 123036
300	IZM97... 800A ⩽ I_u ⩽ 3200A	**+IZM-RP323-300** 122805	**+IZM-RP324-300** 122836
400	IZM97... 800A ⩽ I_u ⩽ 3200A	**IZM-RP323-400** 123008	**IZM-RP324-400** 123039
400	IZM97... 800A ⩽ I_u ⩽ 3200A	**+IZM-RP323-400** 122806	**+IZM-RP324-400** 122837
630	IZM97... 800A ⩽ I_u ⩽ 3200A	**IZM-RP323-630** 123009	**IZM-RP324-630** 123040
630	IZM97... 800A ⩽ I_u ⩽ 3200A	**+IZM-RP323-630** 122807	**+IZM-RP324-630** 122838
800	IZM97... 800A ⩽ I_u ⩽ 3200A	**IZM-RP323-800** 123010	**IZM-RP324-800** 123041
800	IZM97... 800A ⩽ I_u ⩽ 3200A	**+IZM-RP323-800** 122808	**+IZM-RP324-800** 122839

Rating plug sensor and current transformer



Rated operational current I_n A	For use with	3 pole **Pat No.** Article No. Suffix + for ordering with circuit breaker basic device	4 pole **Pat No.** Article No. Suffix + for ordering with circuit breaker basic device
This combination is required in the case of decreasing of rated operation current of circuit breakers			
1000	IZM97... 1000A ⩽ I_u ⩽ 3200A	**IZM-RP323-1000** 123011	**IZM-RP324-1000** 123042
1000	IZM97... 1000A ⩽ I_u ⩽ 3200A	**+IZM-RP323-1000** 122809	**+IZM-RP324-1000** 122840
1250	IZM97... 1250A ⩽ I_u ⩽ 3200A	**IZM-RP323-1250** 123012	**IZM-RP324-1250** 123043
1250	IZM97... 1250A ⩽ I_u ⩽ 3200A	**+IZM-RP323-1250** 122810	**+IZM-RP324-1250** 122841
1600	IZM97... 1600A ⩽ I_u ⩽ 3200A	**IZM-RP323-1600** 123013	**IZM-RP324-1600** 123044
1600	IZM97... 1600A ⩽ I_u ⩽ 3200A	**+IZM-RP323-1600** 122811	**+IZM-RP324-1600** 122842
2000	IZM97... 2000A ⩽ I_u ⩽ 3200A	**IZM-RP323-2000** 123014	**IZM-RP324-2000** 123045
2000	IZM97... 2000A ⩽ I_u ⩽ 3200A	**+IZM-RP323-2000** 122812	**+IZM-RP324-2000** 122843
2500	IZM97... 2500A ⩽ I_u ⩽ 3200A	**IZM-RP323-2500** 123015	**IZM-RP324-2500** 123046
2500	IZM97... 2500A ⩽ I_u ⩽ 3200A	**+IZM-RP323-2500** 122813	**+IZM-RP324-2500** 122844
3200	IZM97... 3200A	**IZM-RP323-3200** 123016	**IZM-RP324-3200** 123047
2000	IZM99... 4000A	**IZM-RP633-2000** 124244	**IZM-RP634-2000** 124321
2000	IZM99... 4000A	**+IZM-RP633-2000** 124319	**+IZM-RP634-2000** 124264
2500	IZM979.. 4000A ⩽ I_u ⩽ 5000A	**IZM-RP633-2500** 124320	**IZM-RP634-2500** 124211
2500	IZM99... 4000A ⩽ I_u ⩽ 5000A	**+IZM-RP633-2500** 124209	**+IZM-RP634-2500** 124299
3200	IZM99... 4000A ⩽ I_u ⩽ 6300A	**IZM-RP633-3200** 124210	**IZM-RP634-3200** 124322
3200	IZM99... 4000A ⩽ I_u ⩽ 6300A	**+IZM-RP633-3200** 124374	**+IZM-RP634-3200** 124354
4000	IZM99... 4000A ⩽ I_u ⩽ 6300A	**IZM-RP633-4000** 123023	**IZM-RP634-4000** 123054
4000	IZM99... 4000A ⩽ I_u ⩽ 6300A	**+IZM-RP633-4000** 122821	**+IZM-RP634-4000** 122852
5000	IZM99... 5000A ⩽ I_u ⩽ 6300A	**IZM-RP633-5000** 123024	**IZM-RP634-5000** 123055
5000	IZM99... 5000A ⩽ I_u ⩽ 6300A	**+IZM-RP633-5000** 122822	**+IZM-RP634-5000** 122853
6300	IZM99... 6300A	**IZM-RP633-6300** 123025	**IZM-RP634-6300** 123056

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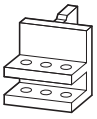
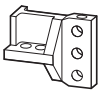
Rating plug sensor and current transformer

Rated Current I_n (A)	For use with	**Part No.** Article No.	内部代号 电流变比
3P circuit breakers must be supplied with sensors to meet requirements for neutral conductor or ground protection.			
200	IZM97...	**IZM-CTN-200** 123057	H01 200:1
250	IZM97...	**IZM-CTN-250** 123058	H02 250:1
300	IZM97...	**IZM-CTN-300** 123059	H03 300:1
400	IZM97...	**IZM-CTN-400** 123060	H04 400:1
630	IZM97...	**IZM-CTN-630** 123061	H14 630:1
800	IZM97...	IZM-CTN-800 123062	H06 800:1
1000	IZM97...	**IZM-CTN-1000** 123063	H07 1000:1
1250	IZM97...	**IZM-CTN-1250** 123064	H15 1250:1
1600	IZM97...	**IZM-CTN-1600** 123065	H09 1600:1
2000	IZM97...	**IZM-CTN-2000** 123066	H10 2000:1
2500	IZM97...	**IZM-CTN-2500** 123067	H11 2500:1
3200	IZM97...	**IZM-CTN-3200** 123068	H13 3200:1
4000	IZM97... IZM99...	**IZM-CTN-4000** 123069	H10 x 2 2000:1
5000	IZM99...	**IZM-CTN-5000** 123070	H11 x 2 2500:1
6300	IZM99...	**IZM-CTN-6300** 123071	H13 x 2 3200:1

Main terminal (with horizontal connection supplied as standard)



6 pcs for 3P
8 pcs for 4P



For double wide
12 pcs for 3P
16 pcs for 4P

Rated Current I_n (A)	Rated ultimate switching capacity Icu KA	Pole	For use with	**Part No.** Article No.	**Note**
Vertical connection by fixed or withdrawable circuit breaker					
≦1600	≦65	3	IZM97... IN97...	**IZM-TV323B-1600** 123074	–
≦2000	≦100	3	IZM97B...20 IN97B...20 IZM97H...,IN97H...	**IZM-TV323H-2000** 123075	–
2500-3200	100	3	IZM97... IN97...	**IZM-TV323H-3200** 123077	–
≦1600	≦65	4	IZM97... IN97...	**IZM-TV324B-1600** 123088	–
≦2000	≦100	4	IZM97B...20 IN97B...20 IZM97H...,IN97H...	**IZM-TV324H-2000** 123089	–
2500-3200	100	4	IZM97... IN97...	**IZM-TV324H-3200** 123091	–
4000	100	3	IZM99... IN99...	**IZM-TV633H-4000** 123082	–
5000-6300	100	3	IZM99... IN99...	**IZM-TV633H-6300** 123084	–
4000	100	4	IZM99... IN99...	**IZM-TV634H-4000** 123096	–
5000-6300	100	4	IZM99... IN99...	**IZM-TV634H-6300** 123098	–
Front traverse of fixed or withdrawable circuit breakers					
≦1250	≦65	3	IZM97B... IN97B...	**IZM-TF323B-1250** 124225	–
1600-2500	≦65	3	IZM97B... IN97B...	**IZM-TF323B-2500** 123104	–
≦3200	≦100	3	IZM97B...32... IN97B...32... IZM97H... IN97H... IZM97H... IN97H...	**IZM-TF323H-3200** 123105	Compatible with IZM99, Need 2 sets for IZM99
≦1250	≦65	4	IZM97B... IN97B...	**IZM-TF324B-1250** 124280	–
≦1250	≦65	4	IZM97B... IN97B...	**IZM-TF324B-2500** 123112	–
≦3200	≦100	4	IZM97B...32... IN97B...32... IZM97H... IN97H... IZM97H... IN97H...	**IZM-TF324H-3200** 123113	Compatible with IZM99, Need 2 sets for IZM99

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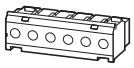
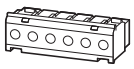
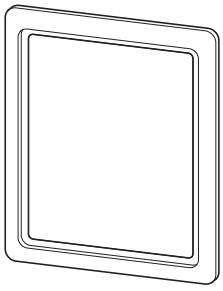
Other accessories

	Rated control voltage Us V	For use with	Part No. Article No.
2nd terminals with 2 terminal blocks 2 sets of 2nd terminal blocks (each with 6 lines) includes label, AMP tools and internal traverse.			
	–	IZM97,99 IN97,99...	**IZM-SEC-TB2** 123116
2nd terminals with 15 terminal blocks 15 sets of 2nd terminal blocks (each with 6 lines) includes label, AMP tools and internal traverse			
	–	IZM97,99 IN97,99...	**IZM-SEC-TB15** 123117
components of terminal blocks 2nd terminals have 90 traverses, to complete internal connection of 15 sets of 2nd terminal blocks			
	–	IZM97,99 IN97,99...	**IZM-SEC-WR90** 122789
IP41 door escutcheon Door escutcheon is supplied as standard with circuit breaker basic device / cassette.			
	–	IZM97,99 IN97,99...	**IZM-DEG** 122925
IP 54 protection cover	–	IZM97,99... IZM97,99...	**IZM-DC** 122926

		IZM97,99 -A... Standard Protection DTA Digitrip 520 LI	IZM97,99 -V... Selective Protection DTA Digitrip 520 LSI(G)	IZM97,99 -U... Ammeter type DTU Digitrip 520 LSI(G)	IZM97,99 -P... Power meter type DTP Digitrip 1150 LSI(G)
					
Rated current range		200A-3200A	200A-6300A	200A-6300A	200A-6300A
RMS value		●	●	●	●
Protection and coordination					
General					
Optional		LI	LSI,LSIG	LSI,LSIG,LSIA	LSI,LSIG,LSIA
Rated current plug (I_n)		●	●	●	●
Over-temperature trip		●	●	●	●
Long delay-time protection	L				
Long delay-time operating value		0.4-1.0X(I_n)	0.4-1.0X(I_n)	0.4-1.0X(I_n)	0.4-1.0X(I_n)
Long delay-time delay time tr (at 6*I_r)		2-24 s	2-24 s	2-24 s	2-24 s
Long delay time I4t		–	–	–	1-5 s
Long delay time thermal memory		●	●	●	●
High load alarming		–	–	○[1]	○[1] :0.5-1.1x(Ir)
Short delay protection	S				
Short delay-time operating value		–	200-1000%x(I_n) and M1[3]	200-1000%x(I_n) and M1[3]	200-1000%x(I_n) and M1[3]
Short delay time tsd, I2t at 8*I_r		–	1000-5000 ms	1000-5000 ms	1000-5000 ms
Short delay time fixed time		–	1000-5000 ms	1000-5000 ms	1000-5000 ms
Short delay zone interlock ZSI		–	○	○	○
Non-delayed short-circuit protection	I				
Non-delayed pickup		200-1000%x(I_n)	200-1000%x(I_n) and M1[3]	200-1000%x(I_n) and M1[3]	200-1000%x(I_n) and M1[3]
Switch-off function		–	●	●	●
Closing release mechanism (MCR)		●	●	●	●
Ground fault protection	G				
Ground fault alarming		–	–	○[1]	○[1]
Ground fault operating value		–	25-100%x(I_n)	25-100%x(I_n)[4]	10-100% x (I_n)[4]
Ground fault delay time tg, (at 0.625 I_n),I^2t		–	100-500 ms	100-500 ms	100-500 ms
Ground fault delay time, fixed time		–	100-500 ms	100-500 ms	100-500 ms
Ground fault zone interlock		–	○	○	○
Ground fault thermal memory		–	●	●	●
Neutral conductor protection	N	●	Only use with LSI module	Only use with LSI module	Only use with LSI module

Notes: I_n = rated current plug or current transformer value
1)I_r = long delay-time action setting value
2)requires auxiliary power supply module
3)test device using analog signal detection
maximum setting value M1 by short circuit protection:

IZM97
M1 =14x I_n – related rated current 400A to 1250A
M1 =12x I_n – related rated current 1600A to 2500A
M1 =10x I_n – related rated current 3200A to 4000A
IZM99
M1 =14x I_n – related rated current 2000A to 2500A
M1 =12xI_n – related rated current 3200A to 5000A
M1 =10xI_n – related rated current 6300A

4) Up to 1200A in combined with ARMS optional current

● Standard
○ Optional

	IZM97,99 -A... Standard Protection DTA Digitrip 520 LI	IZM97,99 -V... Selective Protection DTA Digitrip 520 LSI(G)	IZM97,99 -U... Ammeter type DTU Digitrip 520 LSI(G)	IZM97,99 -P... Power meter type DTP Digitrip 1150 LSI(G)
				
System diagnosis				
Trip signal light	●	●	●	●
Trip current	–	–	●[1]	●[1]
Long-distance signal contact	–	–	●[1]	●[1]
Programmable contact	–	–	–	●[1]
System monitoring				
Digital display	–	–	4-digit LCD display	24-digit LCD display
Current measurement	–	–	●	●
Voltage measurement	–	–	–	●
Energy measurement	–	–	–	●
Real power	–	–	–	●
power	–	–	–	●
Power factor	–	–	–	●
Crest peak factor	–	–	–	●
Power quality	–	–	–	●
Harmonic measurement	–	–	–	●
Communication protocol	–	–	Modbus,Profibus	Modbus,Profibus
Add-on features				
Trip record (triple time)	–	–	–	●
Electronic counter	–	–	–	●
Measurement method 2)	Test device	Test device	Test device	self-supplied comprehensive test device
ARMS maintenance mode (ARMS TM)	–	–	○[1]	○[1]
Waveform capture	–	–	–	●

Notes: I_n = rated current plug or current transformer value
I_r = long delay-time action setting value
1) requires auxiliary power supply module
2) test device using analog signal detection
3) maximum setting value M1 by short circuit protection:

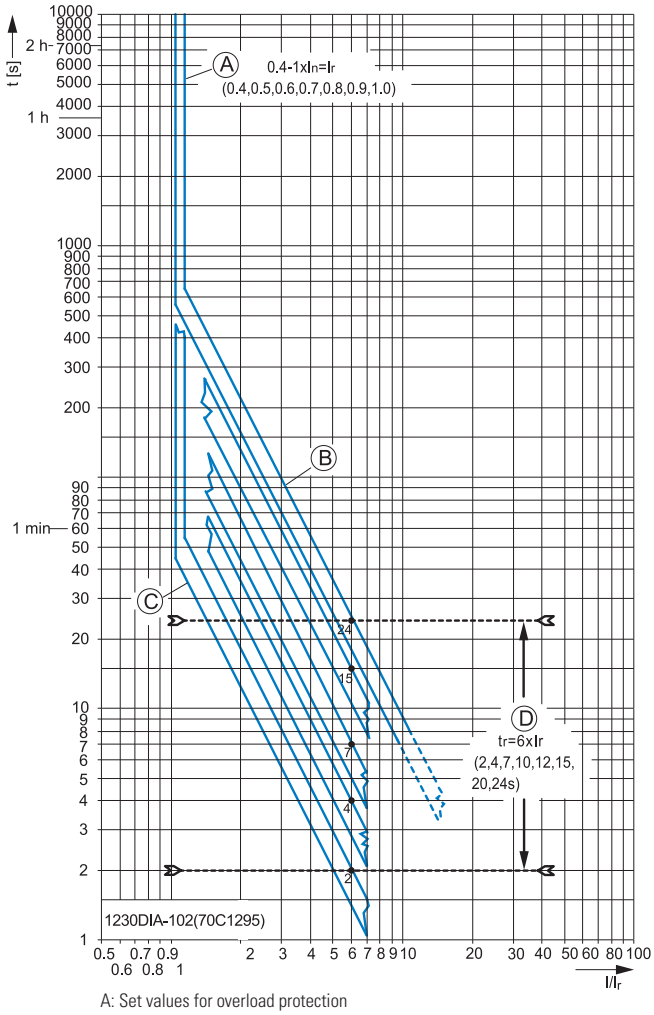
IZM97
M1 =14* I_n – related rated current 400A to 1250A
M1 =12* I_n – related rated current 1600A to 2500A
M1 =10* I_n – related rated current 3200A to 4000A
IZM99
M1 =14* I_n – related rated current 2000A to 2500A
M1 =12* I_n – related rated current 3200A to 5000A
M1 =10* I_n – related rated current 6300A

4) Up to 1200A in combined with ARMS optional current

● Standard
○ Optional

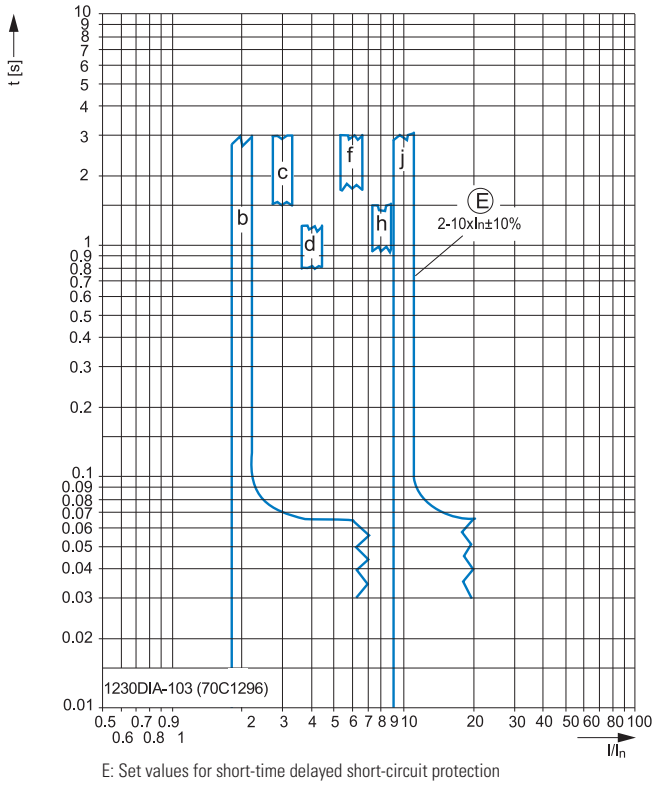
ZM97, 99…A…protective curve

Overload protection (L) and non-delayed
short-circuit protection (I)
L-protection: settable
See Notes 1-3



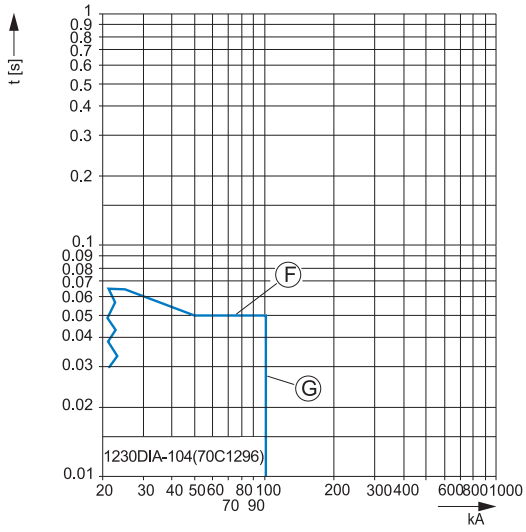
A: Set values for overload protection
B: Maximum total opening delay
C: Minimum total opening delay
D: Set values for long delay

L-protection: settable
See Notes 3-7



E: Set values for short-time delayed short-circuit protection

L-protection: big fault currentnon-delayed trip
See Notes 3-7



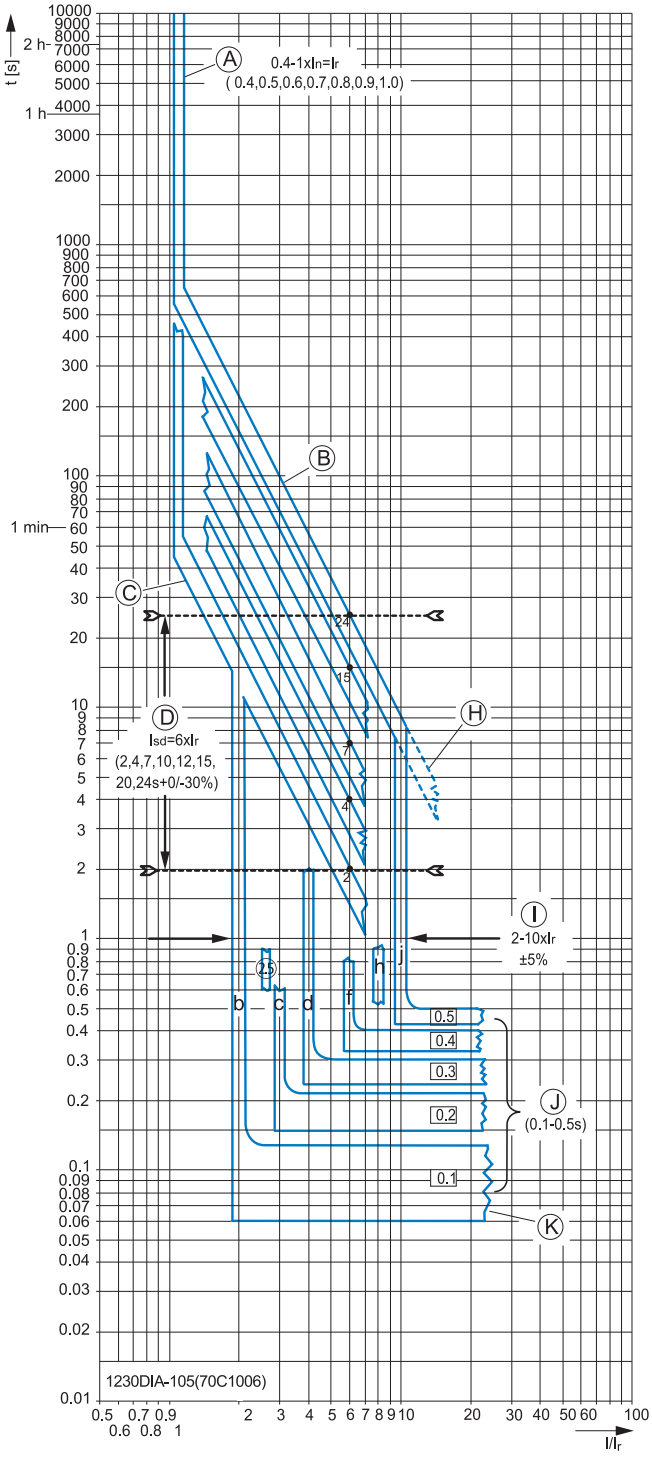
F: Set values for short-time delayed short-circuit protection with flat characteristic curve
G: The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch

1

A Long delay-time current set value
B Maximum total opening delay
C Minimum total opening delay
D Long delay-time set value
E Non-delayed protection current set value
F High non-delayed protection at big fault current
G System application and circuit breaker's rated switching capacity determine curve end
H Long delay-time curve can extend to M1 point
I Short delay-time current set value
J Set value of short delay-time fixed time
K The end of the characteristic curve
L Short delay I^2t inverse time delay set value
M Fixed non-delayed protection
N Curve end
O Ground fault current set value
P Set values for ground-fault protection delay at flat characteristic curve
Q Ground fault fixed time curve shape
R Ground fault I^2t inverse time curve shape
S Ground fault I^2t inverse time set value
T ARMS mode set value: R5=maximum arc reduction, R1=minimum arc reduction
U System application and circuit breaker's rated switching capacity determine curve end
V Characteristic curve turning point
W Ground fault I^2t time set value
X Time delay set value
Y Non-delayed protection current set value
Z Fixed non-delayed protection
AA Trip at point of a big fault current

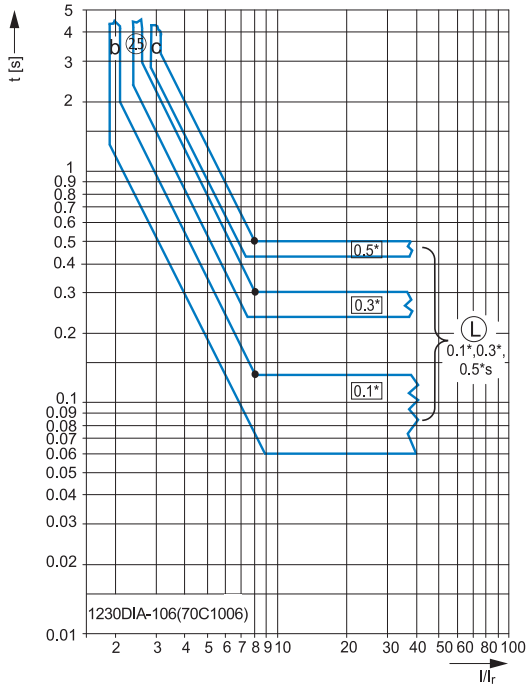
ZM97, 99…V(U)…protective curve

Overload protection (L) and short-time delayed short-circuit protection (S)
L-Protection: I²t characteristic curve and S protection: flat characteristic curve
See Notes 1,3,4,6,7,8,9,10



A: Set values for overload protection
B: Maximum total opening delay
C: Minimum total opening delay
D: Set values for long delay
H: The characteristic curve for the overload release can extend up to the M1 set value.
I: Available set values for short-time delayed short-circuit protection I_{sd}
J: Set value of short delay-time fixed time
K: The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.
L: Short delay I²t inverse time delay set value

S protection: I²t characteristic curve



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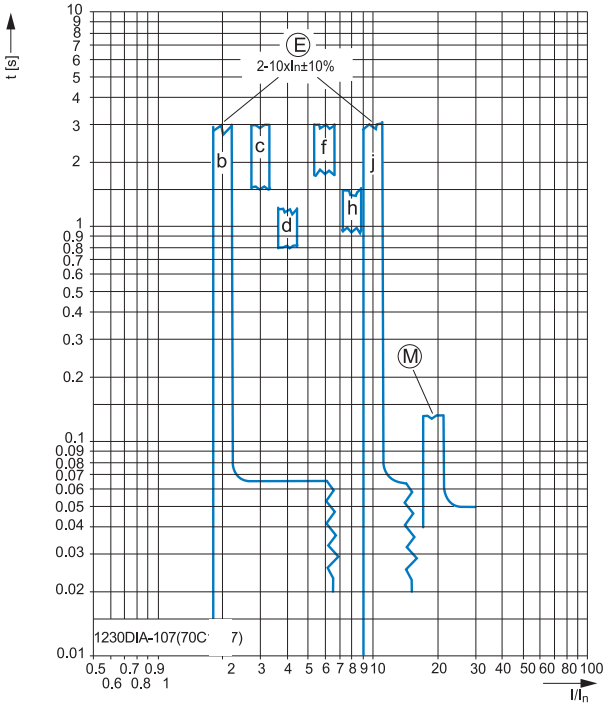
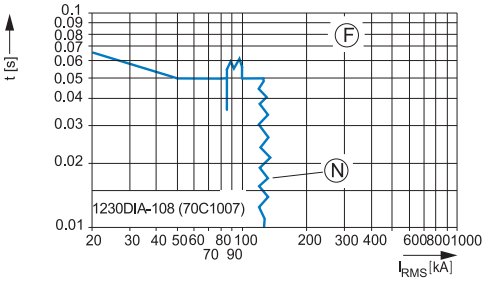
IZM97, 99…V(U)…protective curve

Non-delayed short circuit protection (I)
See Notes 4, 5,6,7,11,12
L-protection: settable
I-protection: Adjustable

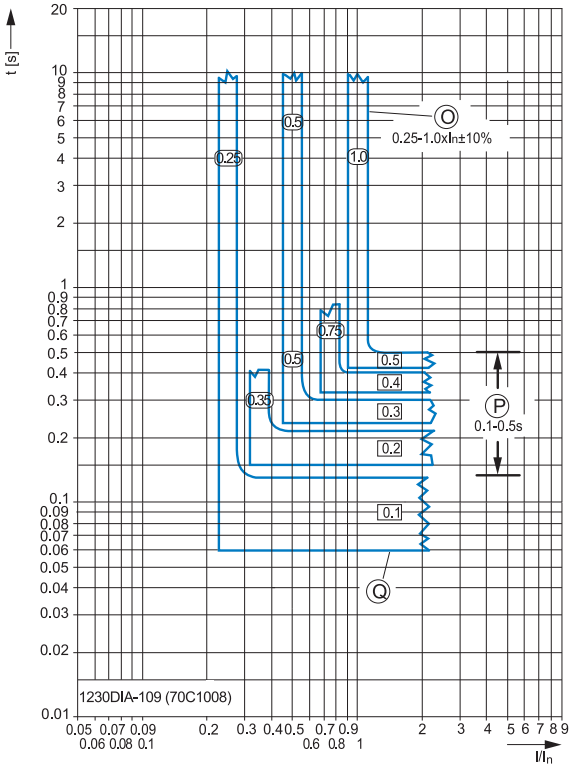


E: Non-delayed protection current set value
M: Fixed non-delayed protection
F: Non-delayed protection at high fault current
N: Curve end
O: Set values for ground-fault protection
P: Set values for ground-fault protection delay at flat characteristic curve
Q: Flat characteristic curve for the delay time fault protection
R: Ground fault I²t inverse time curve shape
S: Ground fault I²t inverse time set value

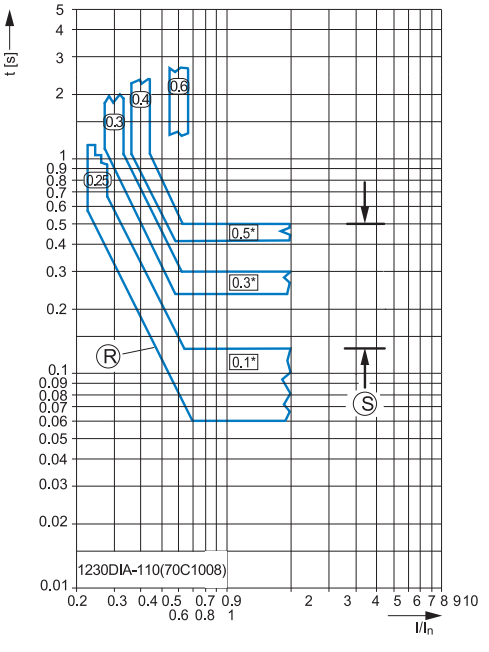


IZM97, 99…V(U)…protective curve +IZM-DTV(U)-E…

G: Ground fault protection, flat characteristic curve
See Notes 4, 6, 13, 14, 15, 16, 17.

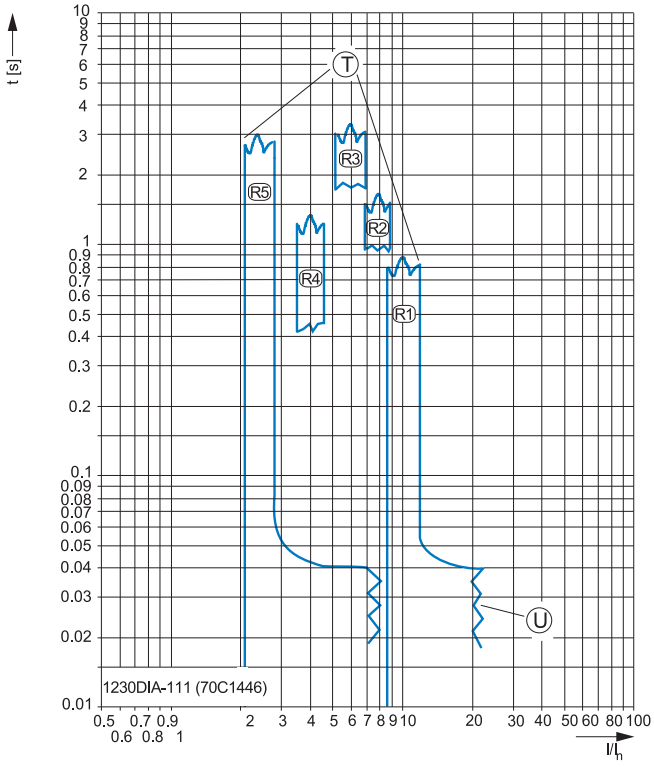


G: Ground fault protection, I²t-Characteristic curve



ZM97, 99…V(U)…optional maintenance mode +IZM-DTV…ARMS

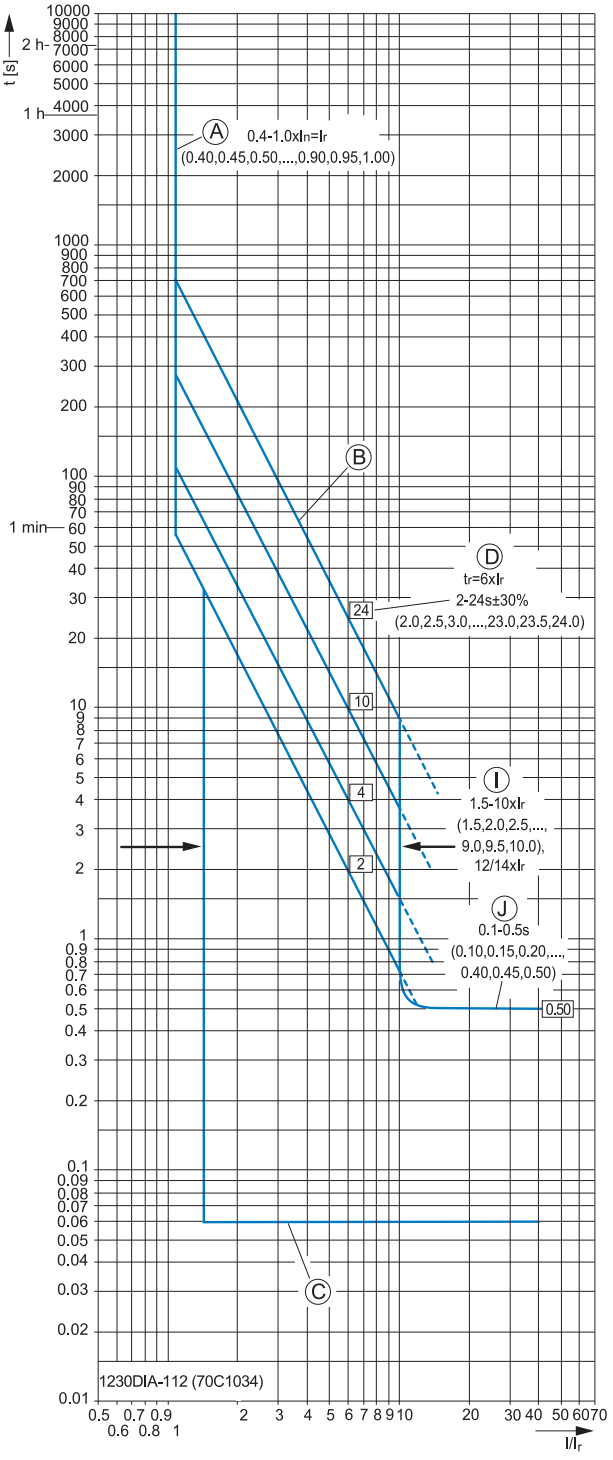
ARMS-maintenance mode
See Notes 4, 6, 12, 18, 19, 20, 21.



T: Set values for maintenance mode (ARMS):
R5 = max. reduction,
R1 = min. reduction
U: The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.

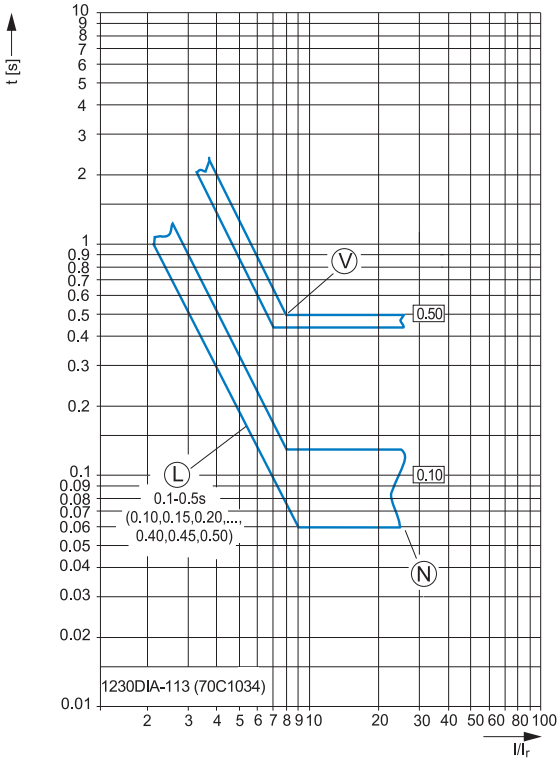
1 IZM97, 99…P…protective curve

Overload protection (L) and short-time delayed short-circuit protection (S)
L-Protection: I²t characteristic curve and S protection: flat characteristic curve
See Notes 1, 3, 7, 9, 22, 23, 24, 25, 26.



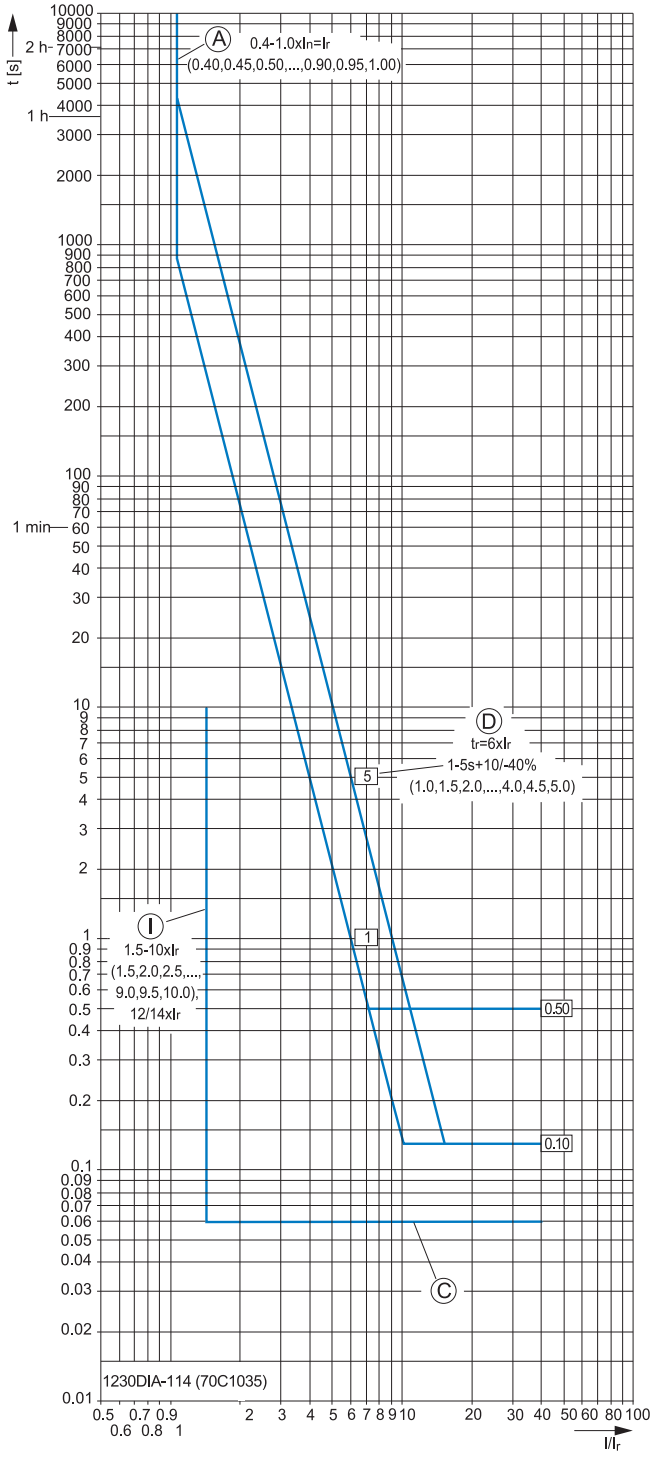
A: Set values for overload protection
B: Maximum total opening delay
C: Minimum total opening delay
D: Set values for long delay
I: Available set values for short-time delayed short-circuit protection I_{sd}
J: Set value of short delay-time fixed time
L: Short delay I²t inverse time delay set value
N: Curve end
V: Characteristic curve turning point

S protection: I²t characteristic curve
See Notes 1, 3, 7, 9, 22, 23, 24, 25, 26.



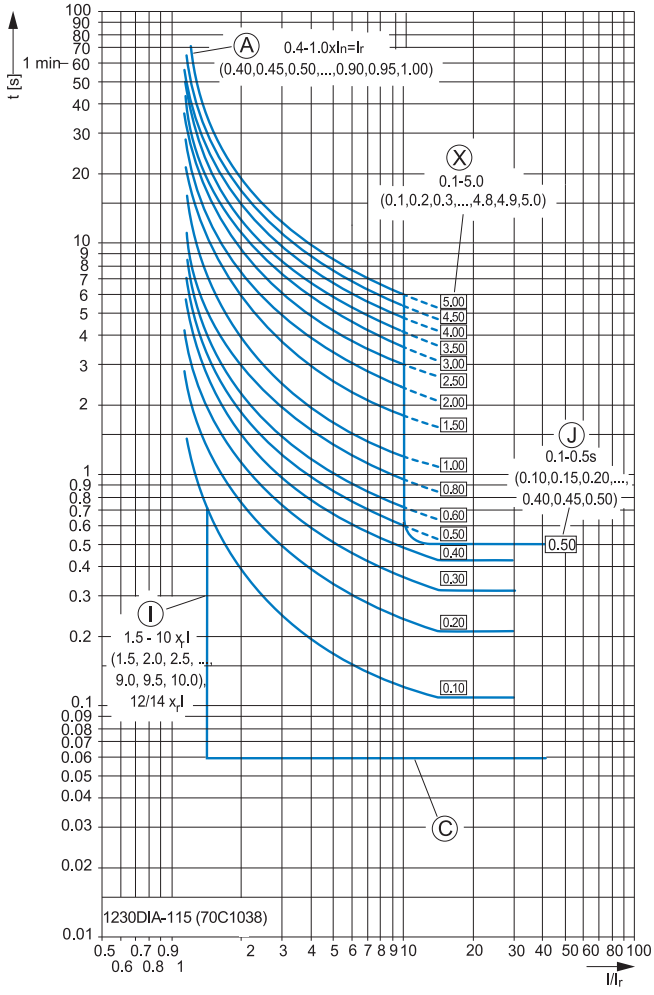
IZM97, 99…P…protective curve

L protection: I^4t characteristic curve and S protection: flat characteristic curve
See Notes 1, 3, 7, 9, 22, 23, 24, 25, 27.



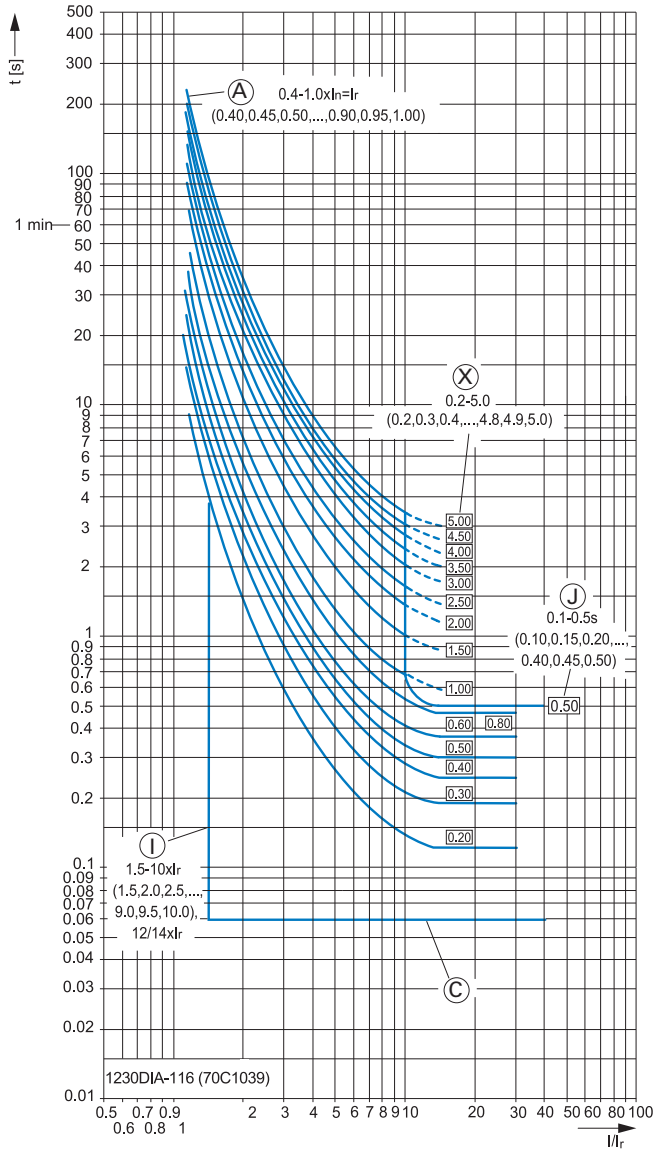
A: Set values for overload protection
C: Minimum total opening delay
D: Set values for long delay
I: Available set values for short-time delayed short-circuit protection I_{sd}
J: Set value of short delay-time fixed time
X: Time delay set value

L protection: IEEE standard inverse tripping, and S protection: flat characteristic curve
See Notes 3, 7, 8, 9, 23, 25, 28, 29,30

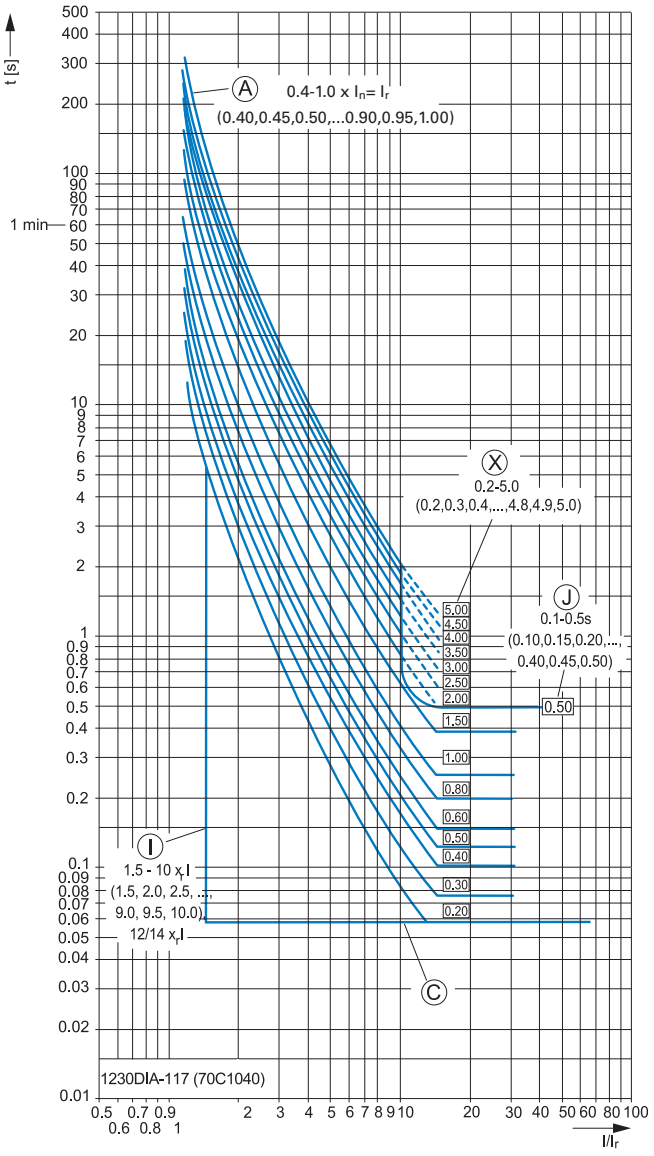


1 IZM97, 99…P…protective curve

L protection: IEEE high inverse tripping, and S protection: flat characteristic curve
See Notes 3, 7, 8, 9, 23, 25, 28, 30, 31



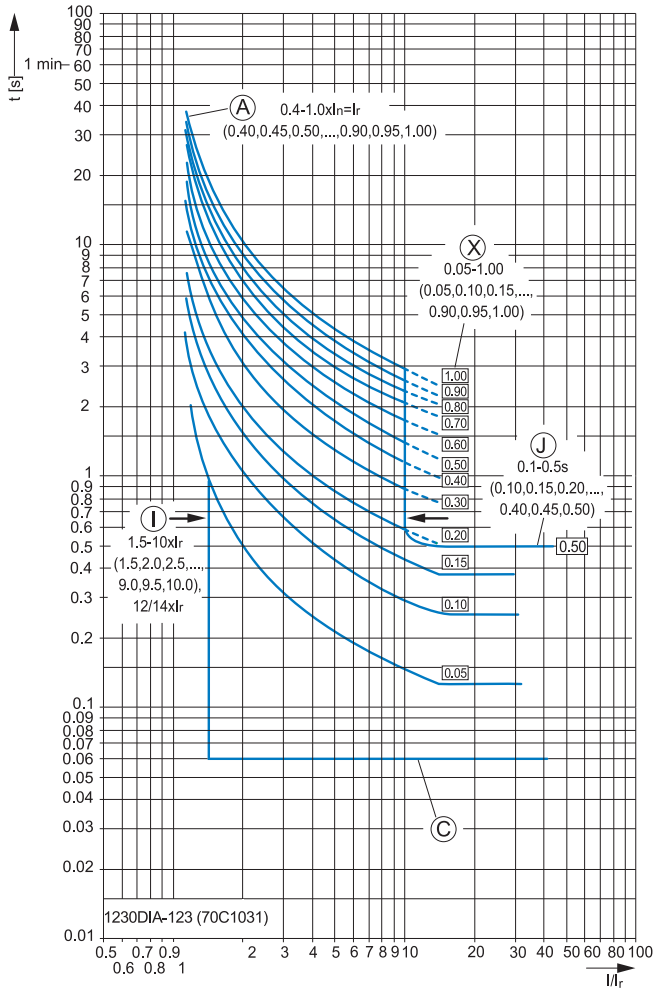
L protection: IEEE extreme inverse tripping, and S protection: flat characteristic curve
See Notes 3, 7, 8, 9, 23, 25, 28, 30, 32



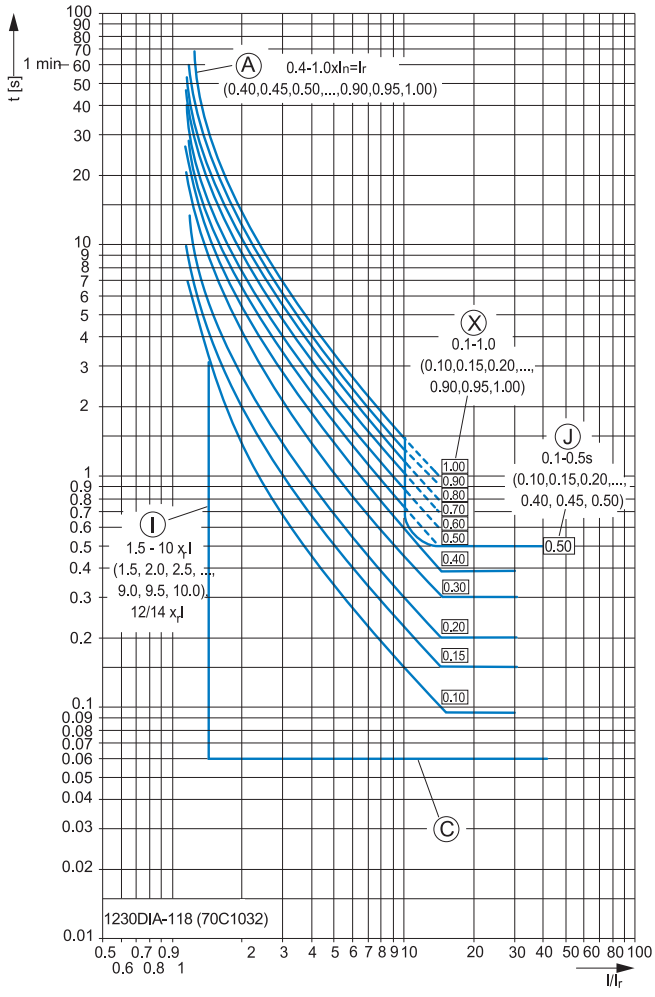
A: Set values for overload protection
C: Minimum total opening delay
I: Available set values for short-time delayed short-circuit protection I_{sd}
J: Set value of short delay-time fixed time
X: Time delay set value

IZM97, 99…P…protective curve

L protection: IEC-A standard inverse tripping, and S protection: flat characteristic curve
See Notes 3, 7, 8, 9, 23, 25, 28, 30, 33



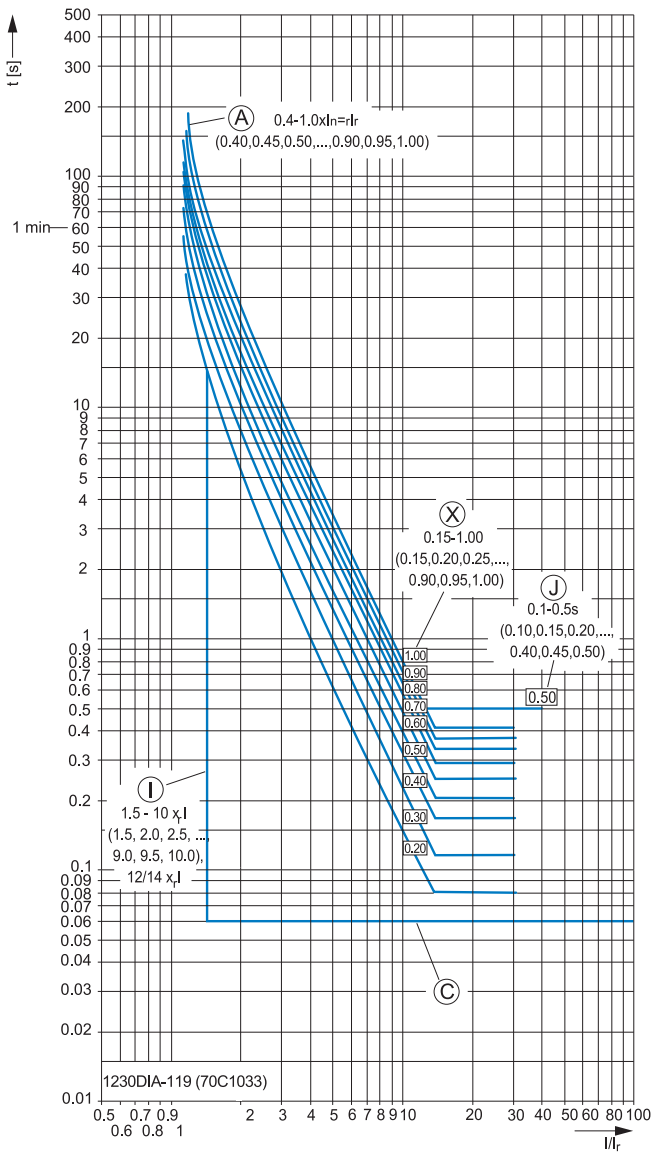
L protection: IEC-B high inverse tripping, and S protection: flat characteristic curve
See Notes 3, 7, 8, 9, 23, 25, 28, 30, 34



A: Set values for overload protection
C: Minimum total opening delay
I: Available set values for short-time delayed short-circuit protection I_{sd}
J: Set value of short delay-time fixed time
X: Time delay set value

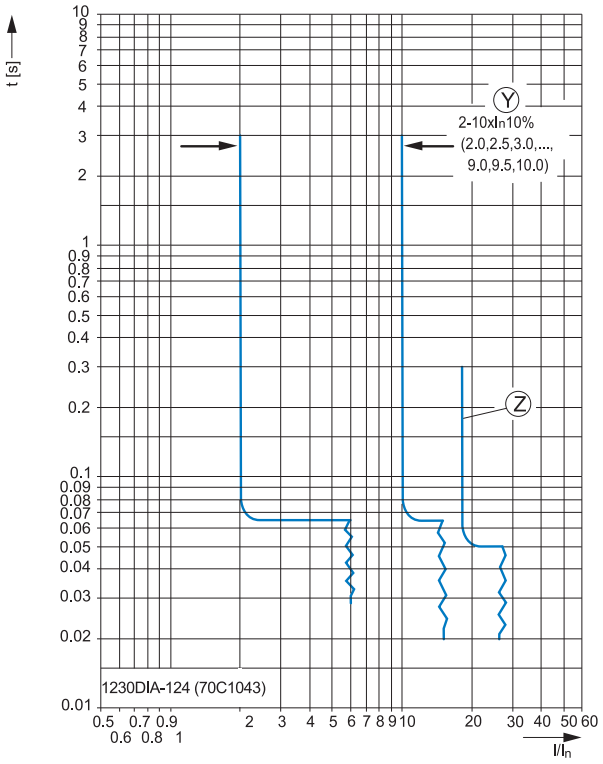
1 IZM97, 99…P…protective curve

L protection: IEC-C extreme inverse tripping, and S protection: flat characteristic curve
See Notes 3, 7, 8, 9, 23, 25, 28, 30, 35

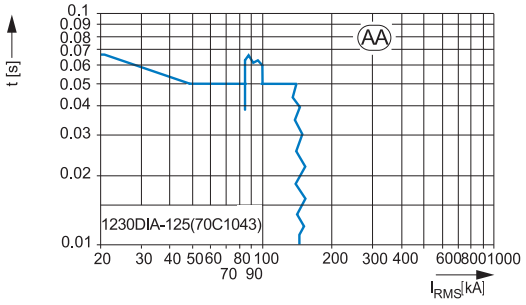


A: Set values for overload protection
C: Minimum total opening delay
I: Available set values for short-time delayed short-circuit protection I_{sd}
J: Set value of short delay-time fixed time
X: Time delay set value

Non-delayed short-circuit protection (I)
I-protection: Adjustable
See Notes 1, 4, 5, 6, 7, 11, 12.



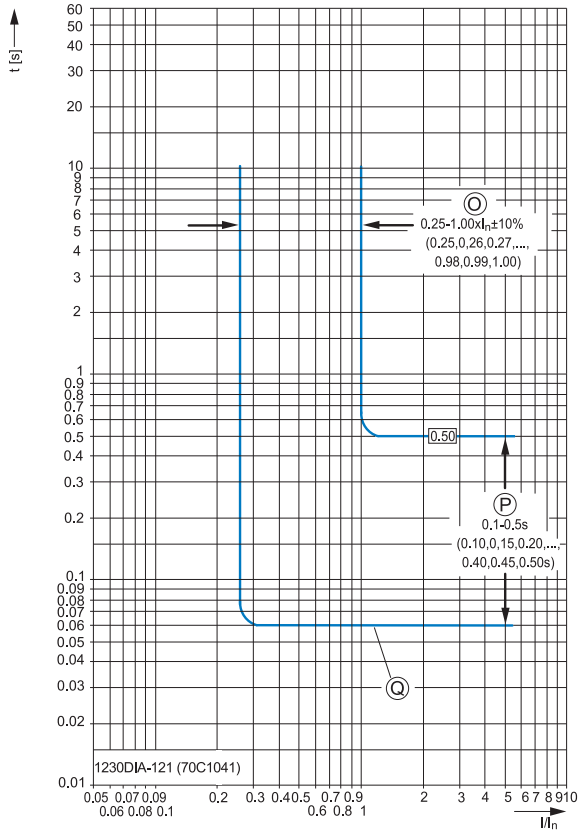
I-protection: For high short-circuit currents



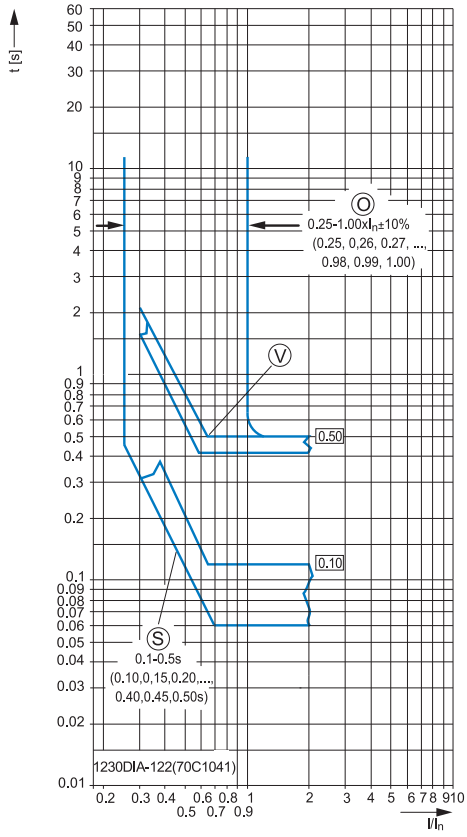
Y: Non-delayed protection current set value
Z: Fixed non-delayed protection
AA: Trip high short-circuit current

IZM97, 99…P…optional ground protection + IZM-DTP-E…

See Notes 4, 6, 13, 14, 15, 16, 25, 26, 36
G: ground fault protection, fixed time

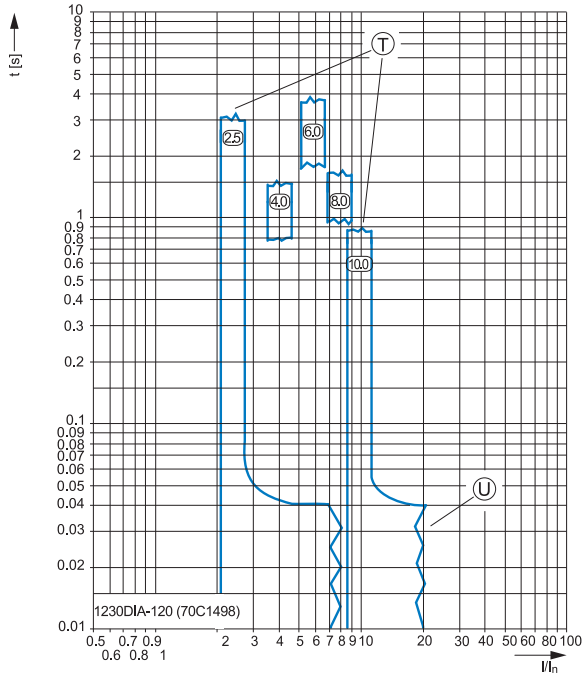


G: ground fault protection, I2t curve



IZM97, 99…P…optional ground protection + IZM-DTP-E…

See Notes 4, 6, 12, 18, 10, 20, 21
ARMSTM maintenance system



O: Set values for ground-fault protection
P: Set values for ground-fault protection delay at flat characteristic curve
Q: Flat characteristic curve for the delay time fault protection
S: Ground fault I2t inverse time set value
T: Set values for maintenance mode (ARMS):
R5 = max. reduction,
R1 = min. reduction
U: The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.
V: Characteristic curve turning point

1

1. Thermal memory can shorten long-delay delay time. This function plays a role whenever a current is higher than the set value of long delay time for a while and which is then isolated by a down-stream device or the circuit-breaker itself. On a subsequent over-load current, the circuit-breaker will trip more quickly than normal. The reduced value is inversely proportional to the time expired since the last overload. After about five minutes the thermal memory is reset..
2. The long-time delay operates at 110 % Ir with a tolerance of ±10% (flashing rapidly by the "Unit Status" LED in the release unit).
3. The curve is applicable in the environment with temperature range from -20 degree to +50 degree. When the temperature is above 85 degree, the orange LED light will turn on to indicate automatic release. Please refer to derated data in technical data file before using circuit breakers.
4. The end of the characteristic curve is determined by the type of application and the switching capacity of the selected circuit breaker.
5. Non-delay set value operates at 100%±10%.
6. The switching time includes response time of release units, opening time of circuit breakers and current switching time.
7. Non-delayed current M1 set value includes:
   IZM97
   M1 =14 × I_n – corresponding rated current 200A to 1250A
   M1 =12 × I_n – corresponding rated current 1600A to 2500A
   M1 =10 × I_n – corresponding rated current 3200A to 4000A
   IZM99
   M1 =14 × I_n – corresponding rated current 2000A to 2500A
   M1 =12 × I_n – corresponding rated current 3200A to 5000A
   M1 =10 × I_n – corresponding rated current 6300A.
8. The long-time delay operates at 110 % Ir with a tolerance of ± 5%(flashing rapidly
   by the "Unit Status" LED on the release). The short-time delay operates at 110% Isd with a tolerance of ± 5%.
9. If short time delay apply zone interlock but without locking signal, then short-time delay time is irrelevant to the set value.
10. In the I²t curve, when the curve turns from long-time delay to short-time delay, a black dot is used for indication (above the corresponding 8Ir curve).
11. With the high-non-delayed trip module supplied as standard with IZM97, the function will be activated when the non-delayed peak current reaches 170KA. Even if the non-delayed protection is set as OFF position, this function will still work normally.
12. These curves include all types of IZM93, 97, 99 and their rated currents. The switching time shown above is very conservative. It's based on the assumption of the maximum response time of release units, maximum opening time of circuit breakers and maximum current switching time as the worst scenario. According to actual system situation and type of circuit breakers selected, the switching time will be even shorter..
13. Set value for ground fault operates at 100% with a tolerance of ±10%.
14. Except for the notes mentioned, other current tolerance is ±10%.
15. When ground fault protection is used in combination with ARMS function, then the set value for ground fault current is limited to 1200A.
16. If ground faults apply zone interlock but without locking signal, then delay time is irrelevant to the set value
17. In ground fault's I²t curve, when the curve turns from long-time delay to short-time delay, a black dot is used for indication (above the corresponding 8Ir curve).
18. If ARMS function is used, then the switch button shall be turn to ON manually or activated via communication. A blue LED indicator will confirm whether ARMS function is activated.
19. Switching time can be shown with an auxiliary power supply.
20. With ARMSTM mode, the trip is indicated by "Instantaneous" LED
21. The accuracy of set value for ARMS Arc reduction is ±15%: 2.5 × I_n (=R5), 4 × I_n (=R4), 6 × I_n (=R3), 10 × I_n (=R1).
22. The currents shown on the curve are expressed by the multiple of long-time delay set value Ir. Long-time delay operates at 110% Ir with a tolerance of ±5%(quick flashing indication by "Unit Status" LED on the release)
23. Short-time delay current also has a M1 set value. It will operate when the short-time delay set value is exceeded.
24. Short-time delay operates at 100% with a tolerance of ±5%.
25. Delay tolerances in the area of the flat characteristic curve:
    The tolerance is +0/-80 ms of the set values, with the following exceptions:
    At 100 ms the tolerance is 6 to 13 ms
    At 150 ms the tolerance is 10 to 17 ms
    At 200 ms the tolerance is 15 to 22 ms
26. I²t-function
    The upper lines of the I²t characteristic curves are horizontal from a value of 8 × Ir (for ground-fault protection 0.625 × In), the lower limit value of the band following the line.
    The characteristic curve has a tolerance of +0/-30 % for all settings except the following ones:
    For 0.10 s +30 %/-25 %
    For 0.15 s +20 %/-25 %
    For 0.20 s +10 %/-25 %
    For all characteristic curves the lower, minimum time value, which merges with the I²t line, determines the break point and the shape of the upper characteristic curve.
27. In the time range ≤ 0.5 s the I4t characteristic curve becomes horizontal. Tripping does not take place faster than the set short-time delay t_{sd}.(In the drawing a displacement of the characteristic curve is avoided.)
28. This characteristic curve is shown as a multiple of the overload release setting Ir. This so-called "E-/IEC-... inverse" characteristic curve results from the time setting "TimeDial" in combination with the delayed short-circuit release I_{sd} and the delay t_{sd} (shown as thick lines). The non-delayed short-circuit release I_i, shown as a separate characteristic curve, can be disabled (Off position).
29. Curve equation: trip time=time set value t_r × [0.0515/(I0.02-1)+0.114], here overload current is the multiple of Ir
30. The accuracy of current >1.2 × I_r is [±15%] or [-15%+90ms]. The bigger value counts. When the current is above 14 × I_r , the long-time delay curve turns into fixed time. Or when long-time delay crosses short-time delay, the short-time delay counts. Their functions are independent from each other. Even the curves have crosses, the complete long-time delay curve still exists.
31. Curve equation: trip time=time set value t_r × [19.61/(I2-1)+0.491], here overload current is the multiple of I_r
32. Curve equation: trip time=time set value t_r × [28.2/(I2-1)+0.1217], here overload current is the multiple of I_r
33. Curve equation: trip time=time set value t_r × [0.14/(I2-1)+1], here overload current is the multiple of I_r
34. Curve equation: trip time=time set value t_r × [13.5/(I-1)], here overload current is the multiple of I_r
35. Curve equation: trip time=time set value t_r × [80/(I2-1], here overload current is the multiple of I_r
36. With P type release without ARMS maintenance mode, its minimum ground fault current set value is 0.1 × I_n.

Rating plug for IZM32

Rating plugs (Plus type)

I_n [A]	I_u [A] 800	1000	1250	1600	2000	2500	3200
200				+IZM-RP323-200			
250				+IZM-RP323-250			
300				+IZM-RP323-300			
400				+IZM-RP323-400			
630				+IZM-RP323-630			
800	Standard			+IZM-RP324-800			
1000		Standard			+IZM-RP324-1000		
1250			Standard			+IZM-RP324-1250	
1600				Standard		+IZM-RP324-1600	
2000					Standard		+IZM-RP324-2000
2500						Standard	+IZM-RP324-2500
3200							Standard

Rating plugs (Plus type)

200				+IZM-RP324-200			
250				+IZM-RP324-250			
300				+IZM-RP324-320			
400				+IZM-RP324-400			
630				+IZM-RP324-630			
800	Standard			+IZM-RP324-800			
1000		Standard			+IZM-RP324-1000		
1250			Standard			+IZM-RP324-1250	
1600				Standard		+IZM-RP324-1600	
2000					Standard		+IZM-RP324-2000
2500						Standard	+IZM-RP324-2500
3200							Standard

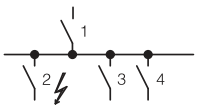
Rating plug for IZM63

Rating plugs (Plus type)

I_n[A]	I_u[A] 4000	5000	6300
2000		+IZM-RP633-2000	
250		+IZM-RP633-2500	
3000		+IZM-RP633-3200	
4000	Standard	+IZM-RP633-4000	
5000		Standard	+IZM-RP633-5000
6300			Standard

Rating plugs (Plus type, 4 pole)

2000		+IZM-RP634-2000	
2500		+IZM-RP634-2500	
3200		+IZM-RP6334-3200	
4000	Standard	+IZM-RP6334-4000	
5000		Standard	+IZM-RP6334-5000
6300			Standard



I_n: Rated operational current
I_u: Rated uninterrupted current
I_{cu}: Rated short circuit breaking capacity
I_i: Set protection value of non-delayed short circuit

Selectivity 415 V AC
Between circuit breakers it enables disconnection of faulty system section.
Selectivity exists between incoming circuit breaker 1 and outgoing circuit breaker 2 if, only outgoing breaker 2 trips at position 2 during a short circuit.
System section 3 and 4 remain operational

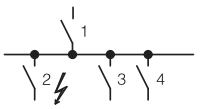
Option:
Provided that the short circuit current does not exceed those values specified (Icc rms).
These details represent the limits of selectivity. Both circuit breakers will switch off with higher short circuit currents.
On IZM 9 circuit breakers with V,U, P releases, the delay time. Tsd must be at least 100 ms longer than the delay time of the next downstream levels (2,3,4)

Incoming circuit breaker (1) incoming circuit breaker IZM97…-A

		I_u [A]	800	800	800	1000	1000	1000	1250	1250	1250	1600	1600	1600	2000	2000	2000	2500	2500	2500	3200
		I_{cu} [kA]	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65
		I_i [A]	8000	8000	8000	10000	10000	10000	12500	12500	12500	16000	16000	16000	20000	20000	20000	25000	25000	25000	32000
Outgoing circuit breaker (2)	I_u [A]	I_{cu}2(415V) [A]	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B
		Prospective short circuit current (Icc: ms in kA)																			
NZMB(C)(N)(H)1-A(M)...	20	25-100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	25	25-100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	32	25-100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	40	25-100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	50	25-100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	63	25-100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	80	25-100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	100	25-100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	125	25-100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	160	25-100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
NZMB(C)(N)(H)2-A(M)(V)	20	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	25	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	32	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	40	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	50	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	63	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	80	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	90	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	100	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	125	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	140	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	160	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	200	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	220	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	250	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	300	25-150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
NZMC(N)(H)3-A(M)(V)...	220	36-150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	250	36-150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	320	36-150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	350	36-150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	400	36-150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	450	36-150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	500	36-150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	630	36-150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
NZMN(H)4-A(M)(V)...	550	50-100	7	7	7	9	9	9	12	12	12	15	15	15	18	18	18	22	22	22	29
	630	50-100	7	7	7	9	9	9	12	12	12	15	15	15	18	18	18	22	22	22	29
	800	50-100	–	–	–	9	9	9	12	12	12	15	15	15	18	18	18	22	22	22	29
	875	50-100	–	–	–	9	9	9	12	12	12	15	15	15	18	18	18	22	22	22	29
	1000	50-100	–	–	–	–	–	–	12	12	12	15	15	15	18	18	18	22	22	22	29
	1250	50-100	–	–	–	–	–	–	–	–	–	15	15	15	18	18	18	22	22	22	29
	1400	50-100	–	–	–	–	–	–	–	–	–	15	15	15	18	18	18	22	22	22	29
	1600	50-100	–	–	–	–	–	–	–	–	–	–	–	–	18	18	18	22	22	22	29

Notes: B=basic switching capacity, N=Normal switching capacity, H=High switching capacity, T=Total selectivity

		IZM97...-V																				
3200	3200	800	800	800	1000	1000	1000	1250	1250	1250	1600	1600	1600	2000	2000	2000	2500	2500	2500	3200	3200	3200
85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100
32000	32000	11200	11200	11200	14000	14000	14000	17500	17500	17500	19200	19200	19200	24000	24000	24000	30000	30000	30000	32000	32000	32000
N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H
		Prospective short circuit current (Icc: ms in kA)																				
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
29	29	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
29	29	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
29	29	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
29	29	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
29	29	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
29	29	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T
29	29	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T
29	29	–	–	–	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T



I_n: Rated operational current
I_u: Rated uninterrupted current
I_{cu}: Rated short circuit breaking capacity
I_i: Set protection value of non-delayed short circuit

Selectivity 415 V AC
Between circuit breakers it enables disconnection of faulty system section.
Selectivity exists between incoming circuit breaker 1 and outgoing circuit breaker 2 if, only outgoing breaker 2 trips at position 2 during a short circuit.
System section 3 and 4 remain operational

Option:
Provided that the short circuit current does not exceed those values specified (Icc rms).
These details represent the limits of selectivity. Both circuit breakers will switch off with higher short circuit currents.
On IZM 9 circuit breakers with V,U, P releases, the delay time. Tsd must be at least 100 ms longer than the delay time of the next downstream levels (2,3,4)

Incoming circuit breaker (1) incoming circuit breaker IZM97…-U

	I_u [A]	800	800	800	1000	1000	1000	1250	1250	1250	1600	1600	1600	2000	2000	2000	2500	2500	2500	3200
	I_{cu} [kA]	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65
	I_i [A]	8000	8000	8000	10000	10000	10000	12500	12500	12500	16000	16000	16000	20000	20000	20000	25000	25000	25000	32000
Outgoing circuit breaker (2)	I_u [A]	I_{cu}2(415V) [A]	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B
		Prospective short circuit current (Icc: ms in kA)																			
NZMB(C)(N)(H)1-A(M)...	20	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	40	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	63	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	80	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	125	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	160	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NZMB(C)(N)(H)2-A(M)(V)...	20	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	40	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	63	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	80	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	90	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	125	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	140	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	160	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	200	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	220	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	250	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	300	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NZMC(N)(H)3-A(M)(V)...	220	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	250	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	320	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	350	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	400	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	450	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	500	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NZMN(H)4-A(M)(V)...	550	50-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	50-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	800	50-100	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	875	50-100	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1000	50-100	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T
	1250	50-100	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T
	1400	50-100	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T
	1600	50-100	–	–	–	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T

Notes: B=basic switching capacity, N=Normal switching capacity, H=High switching capacity, T=Total selectivity

		IZM97...-P																				
3200	3200	800	800	800	1000	1000	1000	1250	1250	1250	1600	1600	1600	2000	2000	2000	2500	2500	2500	3200	3200	3200
85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100
32000	32000	11200	11200	11200	14000	14000	14000	17500	17500	17500	19200	19200	19200	24000	24000	24000	30000	30000	30000	32000	32000	32000
N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H

		Prospective short circuit current (Icc: ms in kA)																				
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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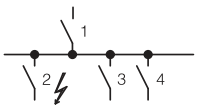
T	T	–	–	–	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T



I_n: Rated operational current
I_u: Rated uninterrupted current
I_{cu}: Rated short circuit breaking capacity
I_i: Set protection value of non-delayed short circuit

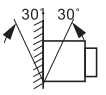
Selectivity 415 V AC
Between circuit breakers it enables disconnection of faulty system section.
Selectivity exists between incoming circuit breaker 1 and outgoing circuit breaker 2 if, only outgoing breaker 2 trips at position 2 during a short circuit.
System section 3 and 4 remain operational

Option:
Provided that the short circuit current does not exceed those values specified (Icc rms).
These details represent the limits of selectivity. Both circuit breakers will switch off with higher short circuit currents.
On IZM 9 circuit breakers with V,U, P releases, the delay time. Tsd must be at least 100 ms longer than the delay time of the next downstream levels (2,3,4)

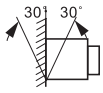
Incoming circuit breaker (1)			**IZM...99-V**						**IZM...99-U**						**IZM...99-U**					
		I_n [A]	4000	4000	5000	5000	6300	6300	4000	4000	5000	5000	6300	6300	4000	4000	5000	5000	6300	6300
		I_{cu}[A]	85	100	85	100	85	100	85	100	85	100	85	100	85	100	85	100	85	100
		I_i[kA]	48000	48000	60000	60000	63000	63000	48000	48000	60000	60000	63000	63000	48000	48000	60000	60000	63000	63000
Outgoing circuit breaker (2)	I_u [A]	$I_{cu2(415V)}$ [kA]	N	H	N	H	N	H	N	H	H	H	N	H	N	H	N	H	N	H
			Prospective short circuit current ($I_{cc\ rms}$ in kA)																	
NZMB(C)(N)(H) 1-A(M)...	20	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	40	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	63	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	80	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	125	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	160	25-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NZMB(C)(N)(H) 2-A(M)(V)...	20	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	40	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	63	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	80	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	90	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	125	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	140	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	160	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	200	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	220	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	250	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	300	25-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NZMC(N)(H) 3-A(M)(V)...	220	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	250	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	320	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	350	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	400	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	450	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	500	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	36-150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NZMN(H) 4-A(M)(V)...	550	50-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	50-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	800	50-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	875	50-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1000	50-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1250	50-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1400	50-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1600	50-100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T

Notes: B=basic switching capacity, N=Normal switching capacity, H=High switching capacity, T=Total selectivity

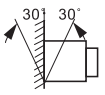
General

				IZM97B...08...	IZM97B...10...	IZM97B...12...
Standards and specifications				IEC/EN 60947		
Ambient temperature	Storage		˚C	-40 -+70 (devices with LCD display -20 -+70)		
	Operation		˚C	-25 -+70 (devices with LCD display -20 -+70)		
Mounting position						
Utilization category				B		
Protection type				IP20， IP54 with protection cover		
Direction of incoming power supply				Top or bottom incoming traverses based on requirements		
Main circuit						
Rated uninterrupted current		$I_n=I_u$	A	800	1000	1250
Rated current at 50 °C1)		I_u	A	800	1000	1250
Rated current at 60 °C 1)		I_u	A	800	1000	1250
Rated current at 70 °C 1)		I_u	A	800	1000	1250
Rated impulse withstand voltage		U_{imp}	V AC	12000	12000	12000
Rated operation voltage		U_e	V AC	690	690	690
Short circuit breaking capacity when use in IT electrical system, U=440V		I_{IT}	kA	13.6	13.6	13.6
Short circuit breaking capacity when use in IT electrical system, U=690V		I_{IT}	kA	13.6	13.6	13.6
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1000	1000
Switching capacity						
Rated short circuit making capacity	Up to 440V 50/60Hz	I_{cm}	kA	143	143	143
	Up to 690V 50/60Hz	I_{cm}	kA	143	143	143
Rated short time withstand current	t=1s	I_{cw}	kA	65	65	65
50/60 Hz	t=3s	I_{cw}	kA	—	—	—
Rated short circuit breaking capacity I_{cu}						
IEC/EN 60947	Up to 240V 50/60Hz	I_{cu}	kA	65	65	65
Testing sequence I_{cu} O-t-CO	Up to 440V 50/60Hz	I_{cu}	kA	65	65	65
	Up to 690V 50/60Hz	I_{cu}	kA	65	65	65
	Up to 1100V 50/60Hz	I_{cu}	kA		—	—
IEC/EN 60947	Up to 240V 50/60Hz	I_{cs}	kA	65	65	65
Testing sequence I_{cs} O-t-CO-t-CO	Up to 440V 50/60Hz	I_{cs}	kA	65	65	65
	Up to 690V 50/60Hz	I_{cs}	kA	65	65	65
	Up to 1100V 50/60Hz	I_{cs}	kA	—	—	—
Switching delay	Total switching delay [2]		ms	30	30	30
	Closing delay [3]		ms	35	35	35
	Closing delay electrical [4] (via closing release)		ms	40	40	40
	Opening delay electrical [5] (via shunt release / Undervoltage release)		ms	35/70	35/70	35/70
	Switching delay via electronic release6) (Non-delayed short circuit protection)		ms	35	35	35
Lifespan	Mechanical, without maintenance	Operations		12500	12500	12500
	Mechanical, with maintenance	Operations		25000	25000	25000
	Electrical, without maintenance	Operations		10000	10000	10000
	Electrical, with maintenance	Operations		10000	10000	10000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated current In, In 3-phase symmetric loading	Fixed		W	40	60	90
	Withdrawable		W	85	130	200
Weight						
Fixed	3 pole		kg	58.00	58.00	58.00
	4 pole		kg	72.00	72.00	72.00
Withdrawable	3 pole		kg	70.00	70.00	70.00
	4 pole		kg	88.00	88.00	88.00
Section area of connected copper bar (suggested dimension)						
Fixed	Black		mm	1x8x80	1x8x80	1x8x80
Withdrawable	Black		mm	1x8x80	1x8x80	1x8x80

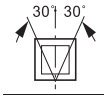
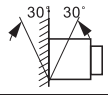
Notes: 1) Continuous rated operational current when used at different temperatures within a switchgear assembly.
2) Breaking time for circuit breaker's mechanism until complete disconnection of the main contact.
3) Closing time for circuit breaker's mechanism until complete closing of the main contact.
4) Closing signaling time via closing release.
5) Opening signaling time via opening release/Undervoltage release.
6) Opening signaling time via electronic release

IZM97B...16...	IZM97B...20...	IZM97B...25...	IZM97B...32...	IZM97N...08...	IZM97N...10...	IZM97N...12...
IEC/EN 60947						
-40 -+70 (devices with LCD display -20 -+70)						
-25 -+70 (devices with LCD display -20 -+70)						
						
B						
IP20, IP54 with protection cover						
Top or bottom incoming traverses based on requirements						
1600	2000	2500	3200	800	1000	1250
1600	2000	2500	3100	800	1000	1250
1600	12000	2500	2800	800	1000	1250
1600	2000	2500	2550	800	1000	1250
12000	12000	12000	12000	12000	12000	12000
690	690	690	690	690	690	690
23.5	28.9	39.6	39.6	13.6	13.6	13.6
23.5	28.9	39.6	39.6	13.6	13.6	13.6
III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000
143	143	143	143	187	187	187
143	143	143	143	187	187	187
65	65	65	65	85	85	85
–	50	50	50	65	65	65
65	65	65	65	85	85	85
65	65	65	65	85	85	85
65	65	65	65	85	85	85
–	–	–	–	–	–	–
65	65	65	65	85	85	85
65	65	65	65	85	85	85
65	65	65	65	85	85	85
–	–	–	–	–	–	–
30	30	30	30	30	30	30
35	35	35	35	35	35	35
40	40	40	40	40	40	40
35/70	35/70	35/70	35/70	35/70	35/70	35/70
35	35	35	35	35	35	35
12500	10000	10000	10000	10000	10000	10000
25000	20000	20000	20000	20000	20000	20000
10000	10000	8000	8000	10000	10000	10000
10000	10000	8000	8000	10000	10000	10000
60	60	60	60	60	60	60
150	190	200	320	35	50	70
330	330	500	800	70	95	140
58.00	63.00	68.00	68.00	68.00	68.00	68.00
72.00	78.00	86.00	86.00	86.00	86.00	86.00
70.00	75.00	86.00	86.00	80.00	80.00	80.00
88.00	94.00	112.00	112.00	102.00	102.00	102.00
2x8x80	2x8x80	2x10x100	2x10x100	1x8x80	1x8x80	1x8x80
2x8x80	2x8x80	2x10x100	2x10x100	1x8x80	1x8x80	1x8x80

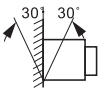
General

				IZM97N...16...	IZM97N...20...	IZM97N...25...
Standards and specifications				IEC/EN 60947		
Ambient temperature	Storage		˚C	-40 -+70 (devices with LCD display -20 -+70)		
	Operation		˚C	-25 -+70 (devices with LCD display -20 -+70)		
Mounting position						
Utilization category				B		
Protection type				IP20，IP54 with protection cover		
Direction of incoming power supply				Top or bottom incoming traverses based on requirements		
Main circuit				1600	2000	2500
Rated uninterrupted current		$I_n=I_u$	A	1600	2000	2500
Rated current at 50 °C1)		I_u	A	1600	2000	2500
Rated current at 60 °C 1)		I_u	A	1600	2000	2500
Rated current at 70 °C 1)		I_u	A	12000	12000	12000
Rated impulse withstand voltage		U_{imp}	V AC	690	690	690
Rated operation voltage		U_e	V AC	23.5	28.9	39.6
Short circuit breaking capacity when use in IT electrical system, U=440V		I_{IT}	kA	23.5	28.9	39.6
Short circuit breaking capacity when use in IT electrical system, U=690V		I_{IT}	kA	III/3	III/3	III/3
Overvoltage category/pollution degree				1000	1000	1000
Rated insulation voltage		U_i	V			
Switching capacity						
Rated short circuit making capacity	Up to 440V 50/60Hz	I_{cm}	kA	187	187	187
	Up to 690V 50/60Hz	I_{cm}	kA	187	187	187
Rated short time withstand current	t=1s	I_{cw}	kA	85	85	85
50/60 Hz	t=3s	I_{cw}	kA	65	65	65
Rated short circuit breaking capacity I_{cu}				–		
IEC/EN 60947	Up to 240V 50/60Hz	I_{cu}	kA	85	85	85
Testing sequence I_{cu} O-t-CO	Up to 440V 50/60Hz	I_{cu}	kA	85	85	85
	Up to 690V 50/60Hz	I_{cu}	kA	85	85	85
	Up to 1100V 50/60Hz	I_{cu}	kA	–	–	–
IEC/EN 60947	Up to 240V 50/60Hz	I_{cs}	kA	85	85	85
Testing sequence I_{cs} O-t-CO-t-CO	Up to 440V 50/60Hz	I_{cs}	kA	85	85	85
	Up to 690V 50/60Hz	I_{cs}	kA	85	85	85
	Up to 1100V 50/60Hz	I_{cs}	kA	–	–	–
Switching delay	Total switching delay [2]		ms	30	30	30
	Closing delay [3]		ms	35	35	35
	Closing delay electrical [4] (via closing release)		ms	40	40	40
	Opening delay electrical [5] (via shunt release / Undervoltage release)		ms	35/70	35/70	35/70
	Switching delay via electronic release6) (Non-delayed short circuit protection)		ms	35	35	35
Lifespan	Mechanical, without maintenance	Operations		10000	10000	10000
	Mechanical, with maintenance	Operations		20000	20000	20000
	Electrical, without maintenance	Operations		10000	10000	8000
	Electrical, with maintenance	Operations		10000	10000	8000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated current In, In 3-phase symmetric loading	Fixed		W	120	190	200
	Withdrawable		W	240	380	500
Weight						
Fixed	3 pole		kg	68.00	68.00	70.00
	4 pole		kg	86.00	86.00	89.00
Withdrawable	3 pole		kg	80.00	80.00	88.00
	4 pole		kg	102.00	102.00	115.00
Section area of connected copper bar (suggested dimension)						
Fixed	Black		mm	2x8x80	2x8x80	2x10x100
Withdrawable	Black		mm	2x8x80	2x8x80	2x10x100

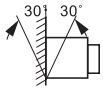
Notes: 1) Continuous rated operational current when used at different temperatures within a switchgear assembly.
2) Breaking time for circuit breaker's mechanism until complete disconnection of the main contact.
3) Closing time for circuit breaker's mechanism until complete closing of the main contact.
4) Closing signaling time via closing release.
5) Opening signaling time via opening release/Undervoltage release.
6) Opening signaling time via electronic release

IIZM97N...32...	IZM97H...08...	IZM97H...10...	IZM97H...12...	IZM97H...16...	IZM97H...20...	IZM97H...25...
IEC/EN 60947						
-40 -+70 (devices with LCD display -20 -+70)						
-25 -+70 (devices with LCD display -20 -+70)						
						
B						
IP20, IP54 with protection cover						
Top or bottom incoming traverses based on requirements						
3200	800	1000	1250	1600	2000	2500
3100	800	1000	1250	1600	2000	2500
2800	800	1000	1250	1600	2000	2500
2550	800	1000	1250	1600	2000	2500
12000	12000	12000	12000	12000	12000	12000
690	690	690	690	690	690	690
39.6	13.6	13.6	13.6	23.5	28.9	39.6
39.6	13.6	13.6	13.6	23.5	28.9	39.6
III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000
187	220	220	220	220	220	220
187	187	187	187	187	187	187
85	85	85	85	85	85	85
65	65	65	65	65	65	65
85	100	100	100	100	100	100
85	100	100	100	100	100	100
85	85	85	85	85	85	85
–	–	–	–	–	–	–
85	100	100	100	100	100	100
85	100	100	100	100	100	100
85	85	85	85	85	85	85
–	–	–	–	–	–	–
30	30	30	30	30	30	30
35	35	35	35	35	35	35
40	40	40	40	40	40	40
35/70	35/70	35/70	35/70	35/70	35/70	35/70
35	35	35	35	35	35	35
10000	10000	10000	10000	10000	10000	10000
20000	20000	20000	20000	20000	20000	20000
8000	10000	10000	10000	10000	10000	8000
8000	10000	10000	10000	10000	10000	8000
60	60	60	60	60	60	60
320	30	50	70	120	190	200
800	60	95	140	240	380	500
70.00	68.00	68.00	68.00	68.00	68.00	70.00
89.00	86.00	86.00	86.00	86.00	86.00	89.00
88.00	80.00	80.00	80.00	80.00	80.00	88.00
115.00	102.00	102.00	102.00	102.00	102.00	115.00
2x10x100	1x8x80	1x8x80	1x8x80	2x8x80	2x8x80	2x10x100
2x10x100	1x8x80	1x8x80	1x8x80	2x8x80	2x8x80	2x10x100

General

				IZM97H...32...	IZM97B...40...	IZM97N...40...
Standards and specifications				IEC/EN 60947		
Ambient temperature	Storage		˚C	-40 -+70 (devices with LCD display -20 -+70)		
	Operation		˚C	-25 -+70 (devices with LCD display -20 -+70)		
Mounting position						
Utilization category				B		
Protection type				IP20，IP54 with protection cover		
Direction of incoming power supply				Top or bottom incoming traverses based on requirements		
Main circuit						
Rated uninterrupted current		$I_n=I_u$	A	3200	4000	4000
Rated current at 50 °C1)		I_u	A	3100	3815	3815
Rated current at 60 °C 1)		I_u	A	2800	3318	3318
Rated current at 70 °C 1)		I_u	A	2550	2752	2752
Rated impulse withstand voltage		U_{imp}	V AC	12000	12000	12000
Rated operation voltage		U_e	V AC	690	690	690
Short circuit breaking capacity when use in IT electrical system, U=440V		I_{IT}	kA	39.6	40	40
Short circuit breaking capacity when use in IT electrical system, U=690V		I_{IT}	kA	39.6	–	–
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1000	1000
Switching capacity						
Rated short circuit making capacity	Up to 440V 50/60Hz	I_{cm}	kA	220	143	187
	Up to 690V 50/60Hz	I_{cm}	kA	187	143	187
Rated short time withstand current	t=1s	I_{cw}	kA	85	85	85
50/60 Hz	t=3s	I_{cw}	kA	65	50	65
Rated short circuit breaking capacity I_{cu}						
IEC/EN 60947	Up to 240V 50/60Hz	I_{cu}	kA	100	65	85
Testing sequence I_{cu} O-t-CO	Up to 440V 50/60Hz	I_{cu}	kA	100	65	85
	Up to 690V 50/60Hz	I_{cu}	kA	85	65	85
	Up to 1100V 50/60Hz	I_{cu}	kA	–	–	–
IEC/EN 60947	Up to 240V 50/60Hz	I_{cs}	kA	85	65	85
Testing sequence I_{cs} O-t-CO-t-CO	Up to 440V 50/60Hz	I_{cs}	kA	85	65	85
	Up to 690V 50/60Hz	I_{cs}	kA	85	65	85
	Up to 1100V 50/60Hz	I_{cs}	kA	–	–	–
Switching delay	Total switching delay [2]		ms	30	30	30
	Closing delay [3]		ms	35	35	35
	Closing delay electrical [4] (via closing release)		ms	40	40	40
	Opening delay electrical [5] (via shunt release / Undervoltage release)		ms	35/70	35/70	35/70
	Switching delay via electronic release6) (Non-delayed short circuit protection)		ms	35	35	35
Lifespan	Mechanical, without maintenance	Operations		10000	5000	5000
	Mechanical, with maintenance	Operations		20000	10000	10000
	Electrical, without maintenance	Operations		8000	3000	3000
	Electrical, with maintenance	Operations		8000	3000	3000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated current In, In 3-phase symmetric loading	Fixed		W	320	380	380
	Withdrawable		W	800	750	750
Weight						
Fixed	3 pole		kg	70.00	–	–
	4 pole		kg	89.00	–	–
Withdrawable	3 pole		kg	88.00	138.8	138.8
	4 pole		kg	115.00	166	166
Section area of connected copper bar (suggested dimension)						
Fixed	Black		mm	2x10x100	4x10x80	4x10x80
Withdrawable	Black		mm	2x10x100	4x10x80	4x10x80

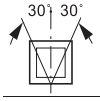
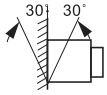
Notes: 1) Continuous rated operational current when used at different temperatures within a switchgear assembly.
2) Breaking time for circuit breaker's mechanism until complete disconnection of the main contact. 3) Closing time for circuit breaker's mechanism until complete closing of the main contact.
4) Closing signaling time via closing release. 5) Opening signaling time via opening release/Undervoltage release. 6) Opening signaling time via electronic release

IZM97H...40...	IZM99N...40...	IZM99N...50...	IZM99N...63...	IZM99H...40...	IZM99H...50...	IZM99H...63...
IEC/EN 60947						
-40 -+70 (devices with LCD display -20 -+70)						
-25 -+70 (devices with LCD display -20 -+70)						
						
B						
IP20, IP54 with protection cover						
Top or bottom incoming traverses based on requirements						
4000	4000	5000	6300	4000	5000	6300
3815	4000	5000	6200	4000	5000	6200
3318	4000	5000	5600	4000	5000	5600
2752	4000	5000	5100	4000	5000	5100
12000	12000	12000	12000	12000	12000	12000
690	690	690	690	690	690	690
40	–	–	–	–	–	–
–	–	–	–	–	–	–
III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000
220	187	187	187	220	220	220
187	187	187	187	220	220	220
85	85	85	85	100	100	100
65	65	65	65	65	65	65
100	85	85	85	100	100	100
100	85	85	85	100	100	100
85	85	85	85	100	100	100
–	–	–	–	–	–	–
100	85	85	85	100	100	100
100	85	85	85	100	100	100
85	85	85	85	100	100	100
–	–	–	–	–	–	–
30	40	40	40	40	40	40
35	35	35	35	35	35	35
40	40	40	40	40	40	40
35/70	35/70	35/70	35/70	35/70	35/70	35/70
35	35	35	35	35	35	35
5000	5000	5000	5000	5000	5000	5000
10000	10000	10000	10000	10000	10000	10000
3000	3000	3000	3000	3000	3000	3000
3000	3000	3000	3000	3000	3000	3000
60	60	60	60	60	60	60
380	380	400	620	380	400	620
750	750	1000	1550	750	1000	1550
–	107.5	125.20	125.20	107.50	125.20	125.20
–	144.70	163.30	163.30	144.70	163.30	163.30
138.8	138.80	157.40	157.40	138.80	157.40	157.40
166	166.00	200.00	200.00	166.00	200.00	200.00
43x10x80	4x10x100	5x10x100	6x10x100	4x10x100	5x10x100	6x10x100
43x10x80	4x10x100	5x10x100	6x10x100	4x10x100	5x10x100	6x10x100

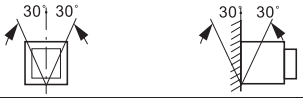
1 General

				IN97B…08…	IN97B…10…	IN97B…12…
Standards and specifications				IEC/EN 60947		
Ambient temperature	Storage		˚C	-40 -+70		
	Operation		˚C	-25 -+70 (devices with LCD display -20 -+70)		
Mounting position						
Utilization category				B		
Protection type				IP20, IP54 with protection cover		
Direction of incoming power supply				Top or bottom incoming traverses based on requirements		
Main circuit						
Rated uninterrupted current		$I_n=I_u$	A	800	1000	1250
Rated current at 50 °C1)		I_u	A	800	1000	1250
Rated current at 60 °C 1)		I_u	A	800	1000	1250
Rated current at 70 °C 1)		I_u	A	800	1000	1250
Rated impulse withstand voltage		U_{imp}	V AC	12000	12000	12000
Rated operation voltage		U_e	V AC	690	690	690
Short circuit breaking capacity when use in IT electrical system, U=440V		I_{IT}	kA	13.6	13.6	13.6
Short circuit breaking capacity when use in IT electrical system, U=690V		I_{IT}	kA	13.6	13.6	13.6
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1000	1000
Switching capacity						
Rated short circuit making capacity	Up to 440V 50/60Hz	I_{cm}	kA	143.0	143.0	143.0
	Up to 690V 50/60Hz	I_{cm}	kA	143.0	143.0	143.0
Rated short time withstand current	t=1s	I_{cw}	kA	65	65	65
50/60 Hz	t=3s	I_{cw}	kA	–	–	–
Switching delay	Total switching delay 2)		ms	30	30	30
	Closing delay 3)		ms	35	35	35
	Closing delay electrical 4) (via closing release)		ms	40	40	40
	Opening delay electrical 5) (via shunt release / Undervoltage release)		ms	35/70	35/70	35/70
Lifespan	Mechanical, without maintenance	Operations		12500	12500	12500
	Mechanical, with maintenance	Operations		25000	25000	25000
	Electrical, without maintenance	Operations		10000	10000	10000
	Electrical, with maintenance	Operations		10000	10000	10000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated current In	Fixed		W	90	90	90
In 3-phase symmetric loading	Withdrawable		W	130	130	200
Weight						
Fixed	3 pole		kg	58.00	58.00	58.00
	4 pole		kg	72.00	72.00	72.00
Withdrawable	3 pole		kg	70.00	70.00	70.00
	4 pole		kg	88.00	88.00	88.00
Section area of connected copper bar (suggested dimension)						
Fixed	Black		mm	1x8x80	1x8x80	1x8x80
Withdrawable	Black		mm	1x8x80	1x8x80	1x8x80

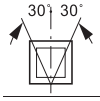
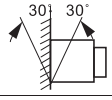
Notes: 1) Continuous rated operational current when used at different temperatures within a switchgear assembly.
2) Breaking time for circuit breaker's mechanism until complete disconnection of the main contact.
3) Closing time for circuit breaker's mechanism until complete closing of the main contact.
4) Closing signaling time via closing release.
5) Opening signaling time via opening release/Undervoltage release.

IN97B…16…	IN97B…20…	IN97B…25…	IN97B…32…
IEC/EN 60947			
-40 -+70			
-25 -+70 (devices with LCD display -20 -+70)			
			
B			
IP20, IP54 with protection cover			
Top or bottom incoming traverses based on requirements			
1600	2000	2500	3200
1600	2000	2500	3100
1600	2000	2500	2800
1600	2000	2500	2550
12000	12000	12000	12000
690	690	690	690
23.5	28.9	39.6	39.6
23.5	28.9	39.6	39.6
III/3	III/3	III/3	III/3
1000	1000	1000	1000
143.0	143.0	143.0	143.0
143.0	143.0	143.0	143.0
65	65	65	65
–	50	50	50
30	30	30	30
35	35	35	35
40	40	40	40
35/70	35/70	35/70	35/70
12500	10000	10000	10000
25000	20000	20000	20000
10000	10000	8000	8000
10000	10000	8000	8000
60	60	60	60
150	190	200	320
330	330	500	800
58.00	63.00	68.00	68.00
72.00	78.00	86.00	86.00
70.00	75.00	86.00	86.00
88.00	94.00	112.00	112.00
2x8x80	2x8x80	2x10x100	2x10x100
2x8x80	2x8x80	2x10x100	2x10x100

1 General

					IN97N…08…	IN97N…10…	IN97N…12…
Standards and specifications					IEC/EN 60947		
Ambient temperature	Storage			˚C	-40 -+70		
	Operation			˚C	-25 -+70 (devices with LCD display -20 -+70)		
Mounting position							
Utilization category					B		
Protection type					IP20, IP54 with protection cover		
Direction of incoming power supply					Top or bottom incoming traverses based on requirements		
Main circuit							
Rated uninterrupted current			$I_n=I_u$	A	800	1000	1250
Rated current at 50 °C1)			I_u	A	800	1000	1250
Rated current at 60 °C 1)			I_u	A	800	1000	1250
Rated current at 70 °C 1)			I_u	A	800	1000	1250
Rated impulse withstand voltage			U_{imp}	V AC	12000	12000	12000
Rated operation voltage			U_e	V AC	690	690	690
Short circuit breaking capacity when use in IT electrical system, U=440V			I_{IT}	kA	13.6	13.6	13.6
Short circuit breaking capacity when use in IT electrical system, U=690V			I_{IT}	kA	13.6	13.6	13.6
Overvoltage category/pollution degree					III/3	III/3	III/3
Rated insulation voltage			U_i	V	1000	1000	1000
Switching capacity							
Rated short circuit making capacity	Up to 440V 50/60Hz		I_{cm}	kA	187.0	187.0	187.0
	Up to 690V 50/60Hz		I_{cm}	kA	187.0	187.0	187.0
Rated short time withstand current	t=1s		I_{cw}	kA	85	85	85
50/60 Hz	t=3s		I_{cw}	kA	65	65	65
Switching delay	Total switching delay 2)			ms	30	30	30
	Closing delay 3)			ms	35	35	35
	Closing delay electrical 4) (via closing release)			ms	40	40	40
	Opening delay electrical 5) (via shunt release / Undervoltage release)			ms	35/70	35/70	35/70
Lifespan	Mechanical, without maintenance	Operations			10000	10000	10000
	Mechanical, with maintenance	Operations			20000	20000	20000
	Electrical, without maintenance	Operations			10000	10000	10000
	Electrical, with maintenance	Operations			10000	10000	10000
Maximum operating frequency		Operations/h			60	60	60
Heat dissipation at rated current In	Fixed			W	35	50	70
In 3-phase symmetric loading	Withdrawable			W	70	95	140
Weight							
Fixed	3 pole			kg	68.00	68.00	68.00
	4 pole			kg	86.00	86.00	86.00
Withdrawable	3 pole			kg	80.00	80.00	80.00
	4 pole			kg	102.00	102.00	102.00
Section area of connected copper bar (suggested dimension)							
Fixed	Black						
Withdrawable	Black						

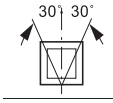
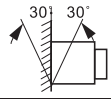
Notes: 1) Continuous rated operational current when used at different temperatures within a switchgear assembly.
2) Breaking time for circuit breaker's mechanism until complete disconnection of the main contact.
3) Closing time for circuit breaker's mechanism until complete closing of the main contact.
4) Closing signaling time via closing release.
5) Opening signaling time via opening release/Undervoltage release.

IN97N…16…	IN97N…20…	IN97N…25…	IN97N…32…
IEC/EN 60947			
-40 -+70			
-25 -+70 (devices with LCD display -20 -+70)			
			
B			
IP20, IP54 with protection cover			
Top or bottom incoming traverses based on requirements			
1600	2000	2500	3200
1600	2000	2500	3100
1600	2000	2500	2800
1600	2000	2500	2550
12000	12000	12000	12000
690	690	690	690
23.5	28.9	39.6	39.6
23.5	28.9	39.6	39.6
III/3	III/3	III/3	III/3
1000	1000	1000	1000
187.0	187.0	187.0	187.0
187.0	187.0	187.0	187.0
85	85	85	85
65	65	65	65
30	30	30	30
35	35	35	35
40	40	40	40
35/70	35/70	35/70	35/70
10000	10000	10000	10000
20000	20000	20000	20000
10000	10000	8000	8000
10000	10000	8000	8000
60	60	60	60
120	190	200	320
240	380	500	800
68.00	68.00	70.00	70.00
86.00	86.00	89.00	89.00
80.00	80.00	88.00	88.00
102.00	102.00	115.00	115.00
2x8x80	2x8x80	2x10x100	2x10x100
2x8x80	2x8x80	2x10x100	2x10x100

1 General

				IN97B…40…	IN97N…40…	IN99N…40…
Standards and specifications				IEC/EN 60947		
Ambient temperature	Storage		˚C	-40 -+70		
	Operation		˚C	-25 -+70 (devices with LCD display -20 -+70)		
Mounting position						
Utilization category				B		
Protection type				IP20, IP54 with protection cover		
Direction of incoming power supply				Top or bottom incoming traverses based on requirements		
Main circuit						
Rated uninterrupted current		$I_n=I_u$	A	4000	4000	4000
Rated current at 50 °C1)		I_u	A	3815	3815	4000
Rated current at 60 °C 1)		I_u	A	3318	3318	4000
Rated current at 70 °C 1)		I_u	A	2752	2752	4000
Rated impulse withstand voltage		U_{imp}	V AC	12000	12000	12000
Rated operation voltage		U_e	V AC	690	690	690
Short circuit breaking capacity when use in IT electrical system, U=440V		I_{IT}	kA	40.0	40.0	–
Short circuit breaking capacity when use in IT electrical system, U=690V		I_{IT}	kA	–	–	–
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1000	1000
Switching capacity						
Rated short circuit making capacity	Up to 440V 50/60Hz	I_{cm}	kA	143	187	187
	Up to 690V 50/60Hz	I_{cm}	kA	143	187	187
Rated short time withstand current	t=1s	I_{cw}	kA	65	85	85
50/60 Hz	t=3s	I_{cw}	kA	50	65	65
Switching delay	Total switching delay 2)		ms	30	30	40
	Closing delay 3)		ms	35	35	35
	Closing delay electrical 4) (via closing release)		ms	40	40	40
	Opening delay electrical 5) (via shunt release / Undervoltage release)		ms	35/70	35/70	35/70
Lifespan	Mechanical, without maintenance	Operations		5000	5000	5000
	Mechanical, with maintenance	Operations		10000	10000	10000
	Electrical, without maintenance	Operations		3000	3000	3000
	Electrical, with maintenance	Operations		3000	3000	3000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated current In	Fixed		W	380	380	380
In 3-phase symmetric loading	Withdrawable		W	750	750	750
Weight						
Fixed	3 pole		kg	–	–	107.50
	4 pole		kg	–	–	144.70
Withdrawable	3 pole		kg	138.80	138.80	138.80
	4 pole		kg	166.00	166.00	166.00
Section area of connected copper bar (suggested dimension)						
Fixed	Black		mm	4x10x80	4x10x80	4x10x100
Withdrawable	Black		mm	4x10x80	4x10x80	4x10x100

Notes: 1) Continuous rated operational current when used at different temperatures within a switchgear assembly.
2) Breaking time for circuit breaker's mechanism until complete disconnection of the main contact.
3) Closing time for circuit breaker's mechanism until complete closing of the main contact.
4) Closing signaling time via closing release.
5) Opening signaling time via opening release/Undervoltage release.

IN99N…50…	IN99N…63…	IN99H…40…	IN99H…50…	IN99H…63…
IEC/EN 60947				
-40 -+70				
-25 -+70 (devices with LCD display -20 -+70)				
				
B				
IP20, IP54 with protection cover				
Top or bottom incoming traverses based on requirements				
5000	6300	4000	5000	6300
5000	6200	4000	5000	6200
5000	5600	4000	5000	5600
5000	5100	4000	5000	5100
12000	12000	12000	12000	12000
690	690	690	690	690
–	–	–	–	–
–	–	–	–	–
III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000
187.0	187.0	220.0	220.0	220.0
187.0	187.0	220.0	220.0	220.0
85	85	65	100	100
65	65	65	65	65
40	40	40	40	40
35	35	35	35	35
40	40	40	40	40
35/70	35/70	35/70	35/70	35/70
5000	5000	5000	5000	5000
10000	10000	10000	10000	10000
3000	3000	3000	3000	3000
3000	3000	3000	3000	3000
60	60	60	60	60
400	6200	380	400	620
1000	1550	750	1000	1550
125.20	125.20	107.50	125.20	125.20
163.30	163.30	144.70	163.30	163.30
157.40	157.40	138.80	157.40	157.40
200.00	200.00	166.00	200.00	200.00
5x10x100	6x10x100	4x10x100	5x10x100	6x10x100
5x10x100	6x10x100	4x10x100	5x10x100	6x10x100

1

Rated switching capacity

		Standard auxiliary contact	Trip signal auxiliary contact	Circuit breaker withdrawer position indication contact
		IZM-AS..	IZM-OTS..	IZM-CS..
Inductive load				
250 V AC	A	10	10	10
125 V AC	A	0.5	0.5	0.5
250 V AC	A	0.25	0.25	0.25

Rated control voltage

			IZM-ST24DC IZM-STS24DC	IZM-ST48DC IZM-STS48DC	IZM-ST110AD IZM-STS110AD	IZM-ST230AD IZM-STS230AD
AC 50/60 Hz	U_s	V	–	–	110-127	208-240
DC	U_s	V	24	48	110-125	220-250
Power consumption						
AC		VA	–	–	(pick-up 450)	(pick-up 450)
DC		W	(pick-up 250)	(pick-up 250)	(pick-up 450)	(pick-up 450)
Response time of circuit breaker		ms	35	35	35	35
Operating rang						
Drop-out voltage		x U_c	–			
Pick up voltage		x U_c	according to IEC standards			

Rated control voltage

			Closing release IZM-SR24DC	IZM-SR48DC	IZM-SR110AD	IZM-SR230AD
AC 50/60 Hz	U_s	V	–	–	110-127	208-240
DC	U_s	V	24	48	110-125	220-250
Power consumption						
AC		VA	–	–	(pick-up 450)	(pick-up 450)
DC		W	(pick-up 250)	(pick-up 250)	(pick-up 450)	(pick-up 450)
Response time of circuit breaker		ms	40	40	40	40
Operating rang						
Drop-out voltage		x U_c	–			
Pick up voltage		x U_c	according to IEC standards			

Rated control voltage

			Undervoltage release				
			IZM-UVR24DC	IZM-UVR32DC	IZM-UVR48DC	IZM-UVR110AC	IZM-UVR110DC
AC 50/60 Hz	U_s	V	–	–	–	110-127	–
DC	U_s	V	24	32	48	–	110-125
Power consumption							
AC		VA	–	–	–	10(pick-up 400)	–
AC		W	18(pick-up 400)	15(pick-up 400)	18(pick-up 400)	–	10(pick-up 400)
Response time of circuit breaker		ms	70	70	70	70	70
Operating range							
Drop out voltage		x U_c	based on IEC standards				
Pick up voltage		x U_c	based on IEC standards				

Rated control voltage

			Undervoltage release		
			IZM-UVR220DC	IZM-UVR230AC	IZM-UVR400AC
AC 50/60 Hz	U_s	V	–	220-250	220-250
DC	U_s	V	220-250	–	–
Power consumption					
AC		VA	–	10(pick-up 400)	10(pick-up 480)
AC		W	10(pick-up 450)	–	–
Response time of circuit breaker		ms	70	70	70
Operating range					
Drop out voltage		x U_c	based on IEC standards		
Pick up voltage		x U_c	based on IEC standards		

Rated control voltage

			Motor operator					
			IZM-M24DC	IZM-M48DC	IZM-M110DC	IZM-M220DC	IZM-M110AC	IZM-M230AC
AC 50/60 Hz	U_s	V	–	–	–	–	110-127	208-240
DC	U_s	V	24	48	110-125	220-250	–	–
Energy storing time		s	5	5	5	5	5	5
Rated current	I_n	A	12	5	2	1	2	1
Starting current		A	3	5	6	6	6	6
Power consumption								
AC 50/60 Hz		VA	300	250	250	250	250	250
DC		W	300	250	250	250	250	250

1

General description

	IZMX-PCAM (for use in IZM91)	IZMX-MCAM (for use in IZM91)	IZM-PMINT (for use in IZM97,99)	IZM-MMINT (for use in IZM97,99)
Size (WxHxD)	24x105x80mm	24x105x80mm	91x111x88mm	92x111x88mm
Mounting	auxiliary contact clip or 35mm top hat DIN rail	auxiliary contact clip or 35mm top hat DIN rail	DIN rail (top hat) 35MM	DIN rail (top hat) 35MM
Protection type	IP20	IP20	IP20	IP20
Mounting position	–	–	Horizontal	Horizontal
Power supply	24 V DC	24 V DC	24-150 V DC or 100-240 V AC (50/60 Hz)	24-150 V DC or 100-240 V AC (50/60 Hz)
LED indicator	DP TxRx Status	Modbus TxRx Status	DP Status INCOM Rx Tx Status	Modbus TxRx INCOM Rx Tx Status
Network				
INCOM	–	–	Plug type terminal	Plug type terminal
PROFIBUS	SUB-Dtype 9 pole socket	–	SUB-Dtype 9 pole socket	–
Mobus	–	Plug type terminal	–	Plug type terminal
Function	submodule	submodule	submodule	submodule
Interface	RS484	RS485	RS484	RS485
Protocol	PROFIBUS-DP	Modbus-RTU	PROFIBUS-DP	Modbus-RTU
Baut rate	automatic search up to 12MBi 1/S	1200/8100/9600/19200baut/S, adjustable via Digitrip	automatic search up to 12MBi 1/S	1200/8100/9600/19200baut/S, adjustable via Digitrip
Digitrip Bus end resistance	plug into socket based on requirements	121Ω , switch on/off externally	plug into socket based on requirements	121Ω, activated by coding switch
INCOM[1)]	–	–	100Ω, activated by coding switch	100Ω, activated by coding
SWITCH	1-127, Set via Digritip	1-127, Set via Digritip	1-127,	1-127,
INCOM的IZM26设备数量	–	–	1	32
Maximum distance	2.4km	1.2km	2.4km	1.2km
INCOM	–	–	3	3
Supported functions	function code	periodical data transmission 03=read register 04=read word variable 08=connection test 16=write register	function code	periodical data transmission 03=read register 04=read word variable 08=connection test 16=write register

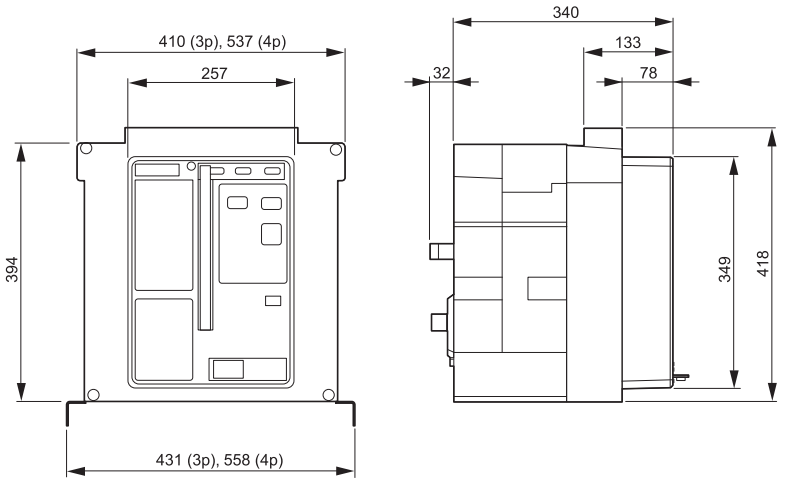
Notes: 1) INCOM= system bus (connection between Digitrip with field bus module)


Internal
Terminals
Message “Spring energy store tensioned”
Digital relay-output modules (A-Bus)
On/Off auxiliary contact unit 3
On/Off auxiliary contact unit 2
On/Off auxiliary contact unit 1
Latch check switch
A16
A17
A18
A19
A20
A21
A22
A23
A24
A25
A26
A27
A28
A29
A30
B16
B17
B18
B19
B20
B21
B22
B23
B24
B25
B26
B27
B28
B29
B30
Internal
Terminals
Overload trip switch 1 (OTS)
Overload trip switch 2 (OTS)
Undervoltage release (2. Voltage releases)
Internal relay module
INCOM enable, Remote On switching
Supply, internal relay module
INCOM Internal system bus
NPOW
Current transformer, Neutral conductor
Sensor, transformer star point
Zone selectivity ZSI
Shunt release
Closing releases
Motor operator
A 1
A 2
A 3
A 4
A 5
A 6
A 7
A 8
A 9
A10
A11
A12
A13
A14
A15
B 1
B 2
B 3
B 4
B 5
B 6
B 7
B 8
B 9
B10
B11
B12
B13
B14
B15
M

1

N97, IZM97 fixed 800-3200A

IN97...F,IZM97...F...

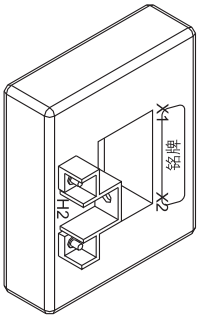


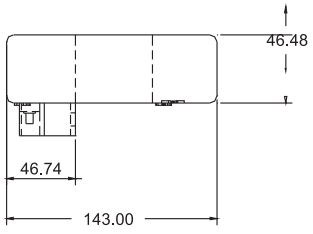
A: Minimum cabinet size recommended (not to scale)

IZM93, 97, 99 neutral conductor current transformer

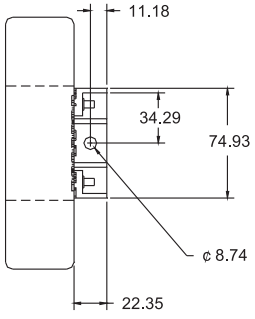
单位：mm

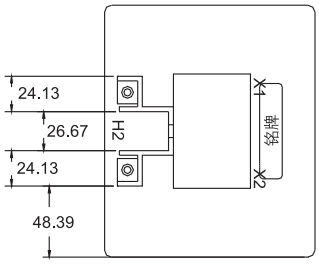
型号	电流变比
H01	200:1
H02	250:1
H03	300:1
H04	400:1
H05	600:1
H06	800:1
H07	1000:1
H08	1200:1
H09	1600:1
H10	2000:1
H11	2500:1
H12	3000:1
H13	3200:1
H14	630:1
H15	1250:1
H16	3150:1
H17	4000:1
H18	100:1





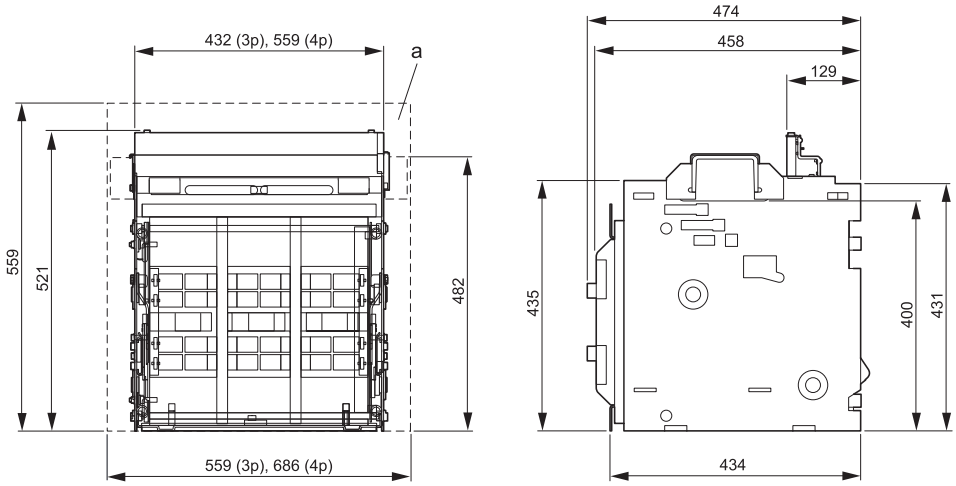
In full scale, all 2nd current rated value is 1.00A.
Insulation degree: 0.6kV, BIL： 10kV(full wave)
Non-interruptive current rated value factor:
1.33 (ambient temperature at 30 degree)
1.0 (ambient temperature at 55 degree)





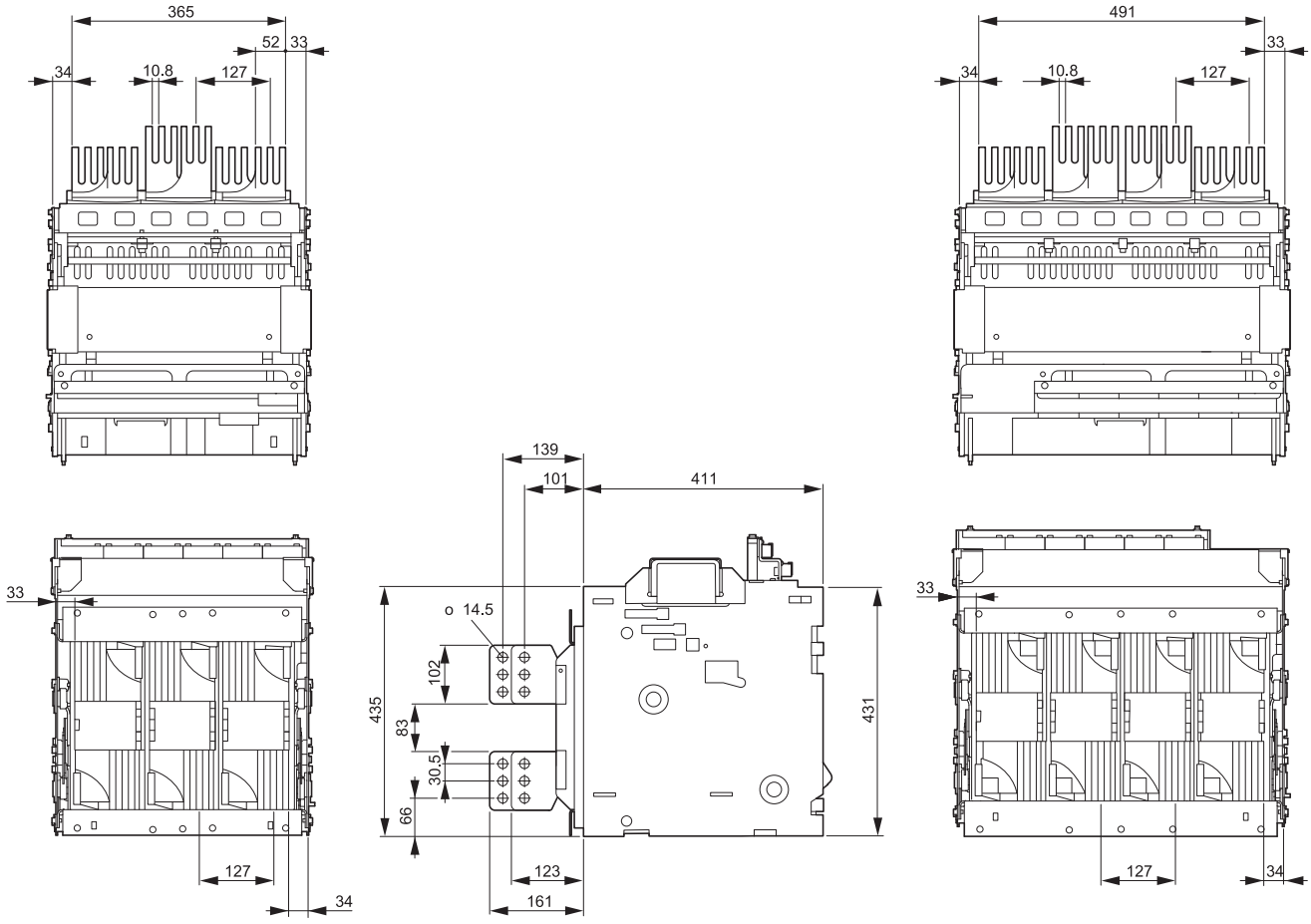
IN97, IZM97 withdrawable 800-3200A

IN97…W, IZM97…W…



IN97, IZM97 withdrawable 4000A

IN97…'W, IZM97…W…



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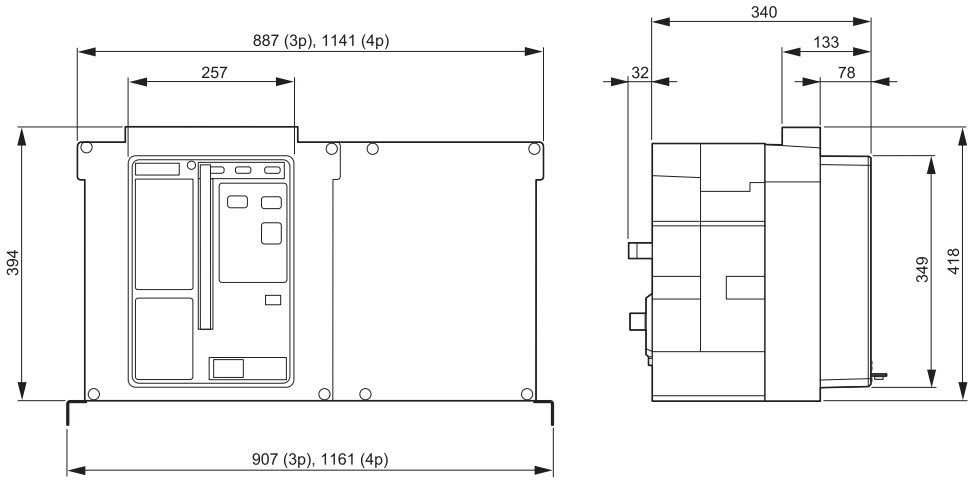
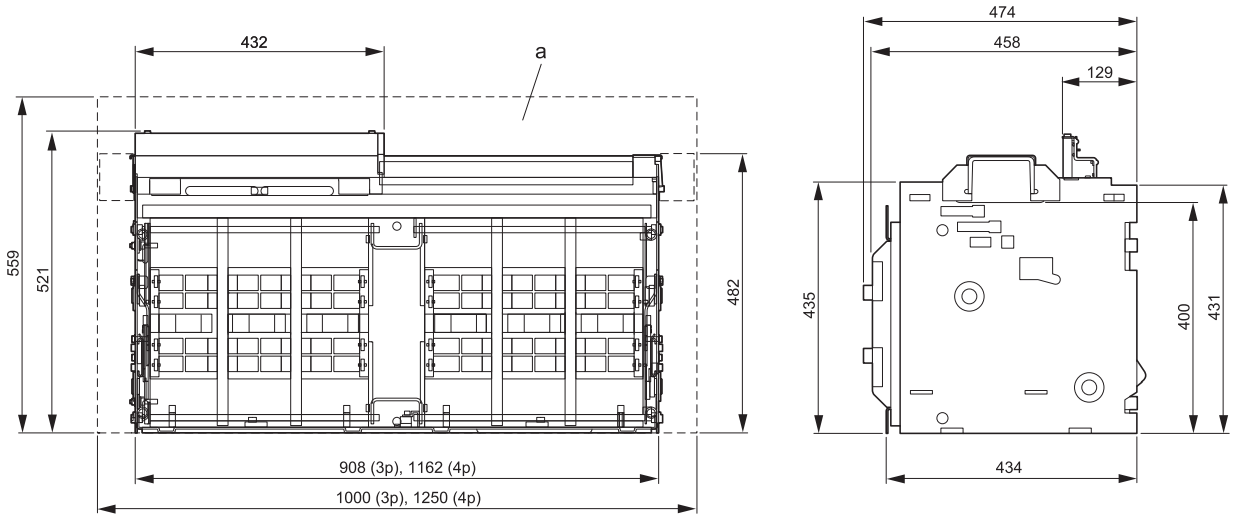
IN99, IZM9 fixed
IN99...F,IZM99...F

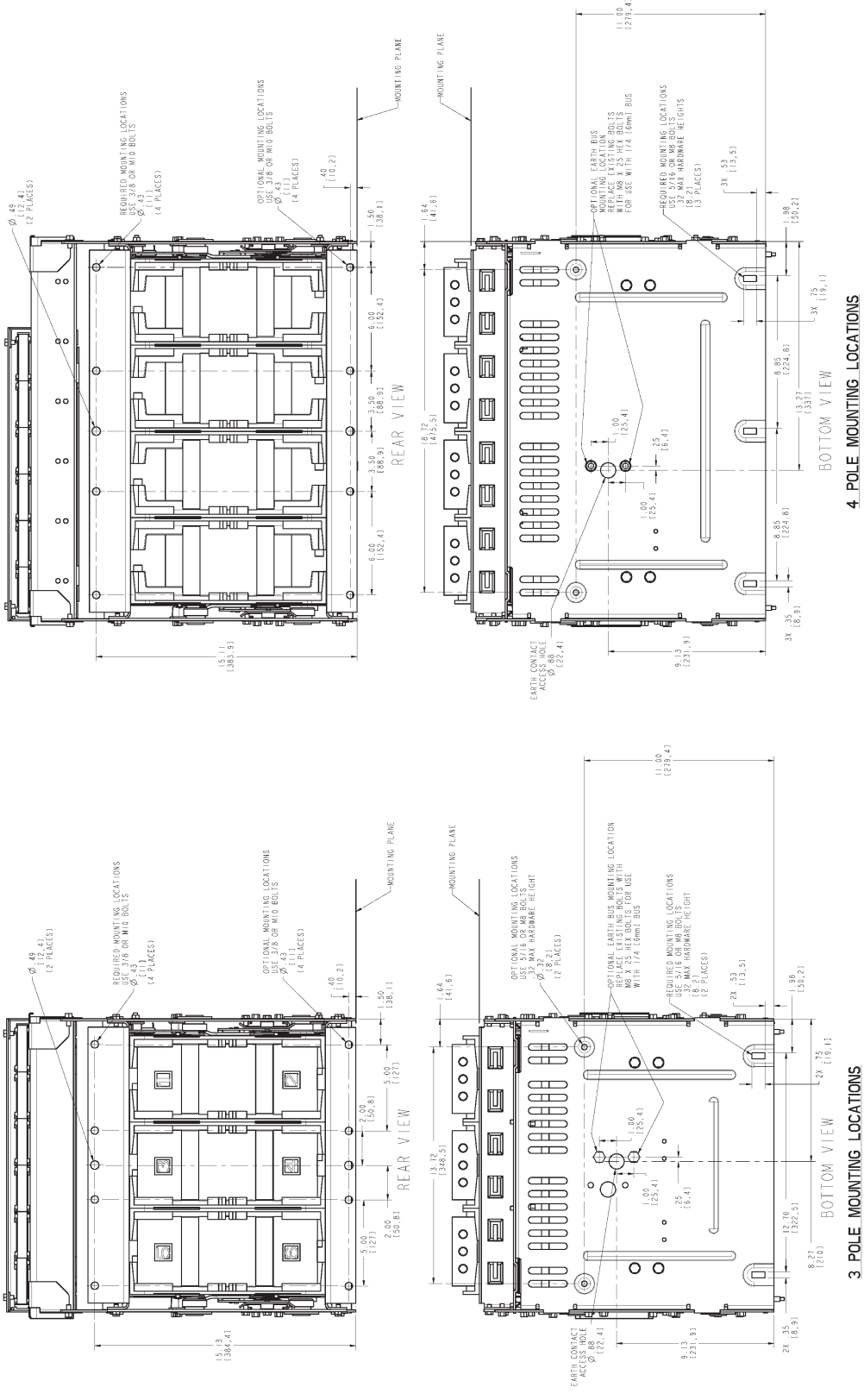


IN99, IZM99 withdrawable
IN99…'W, IZM99…W…



A: Minimum cabinet size recommended (not to scale)

IZM97 cassette dimension (3 pole and 4 pole, 800-3200A)



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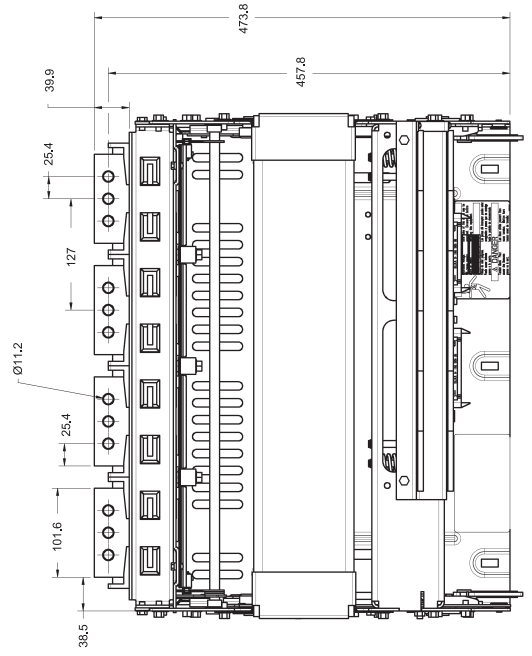
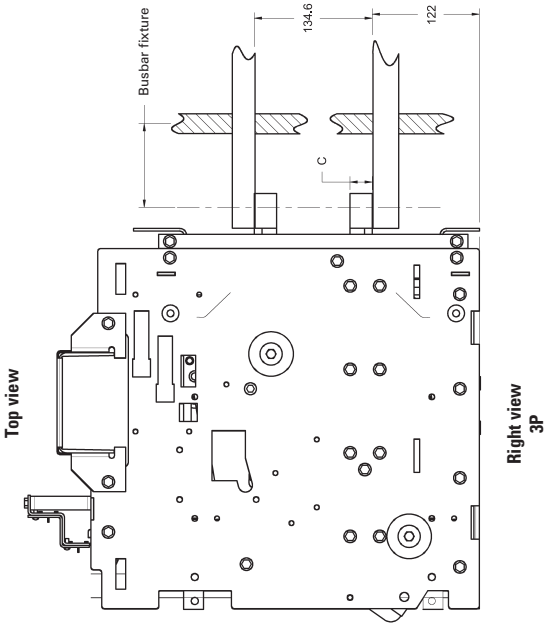
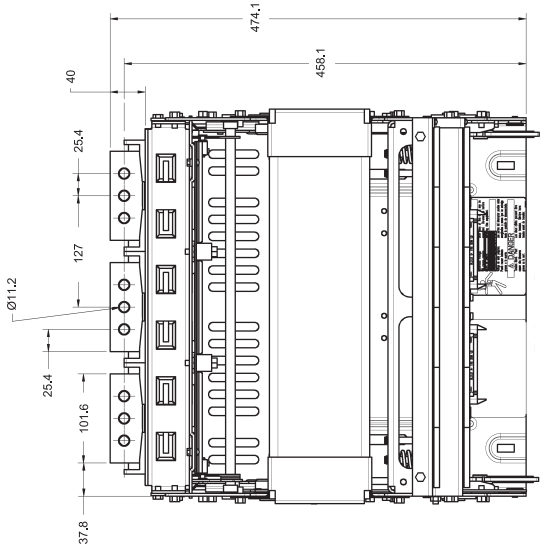
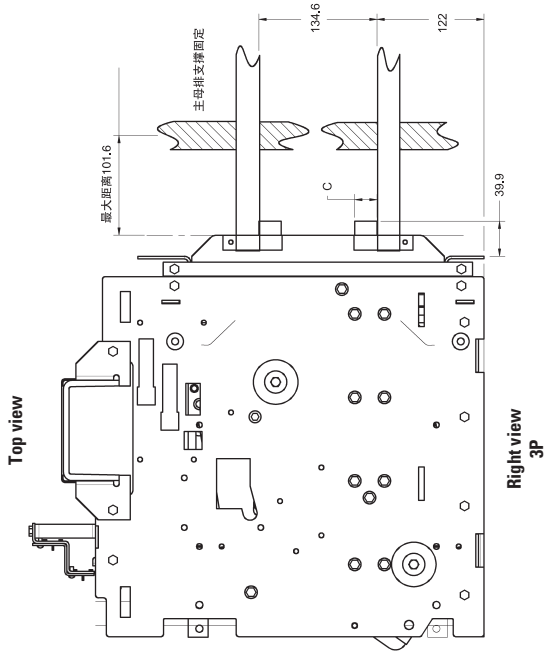
IZM97 main terminal connection dimension (800-3200A)



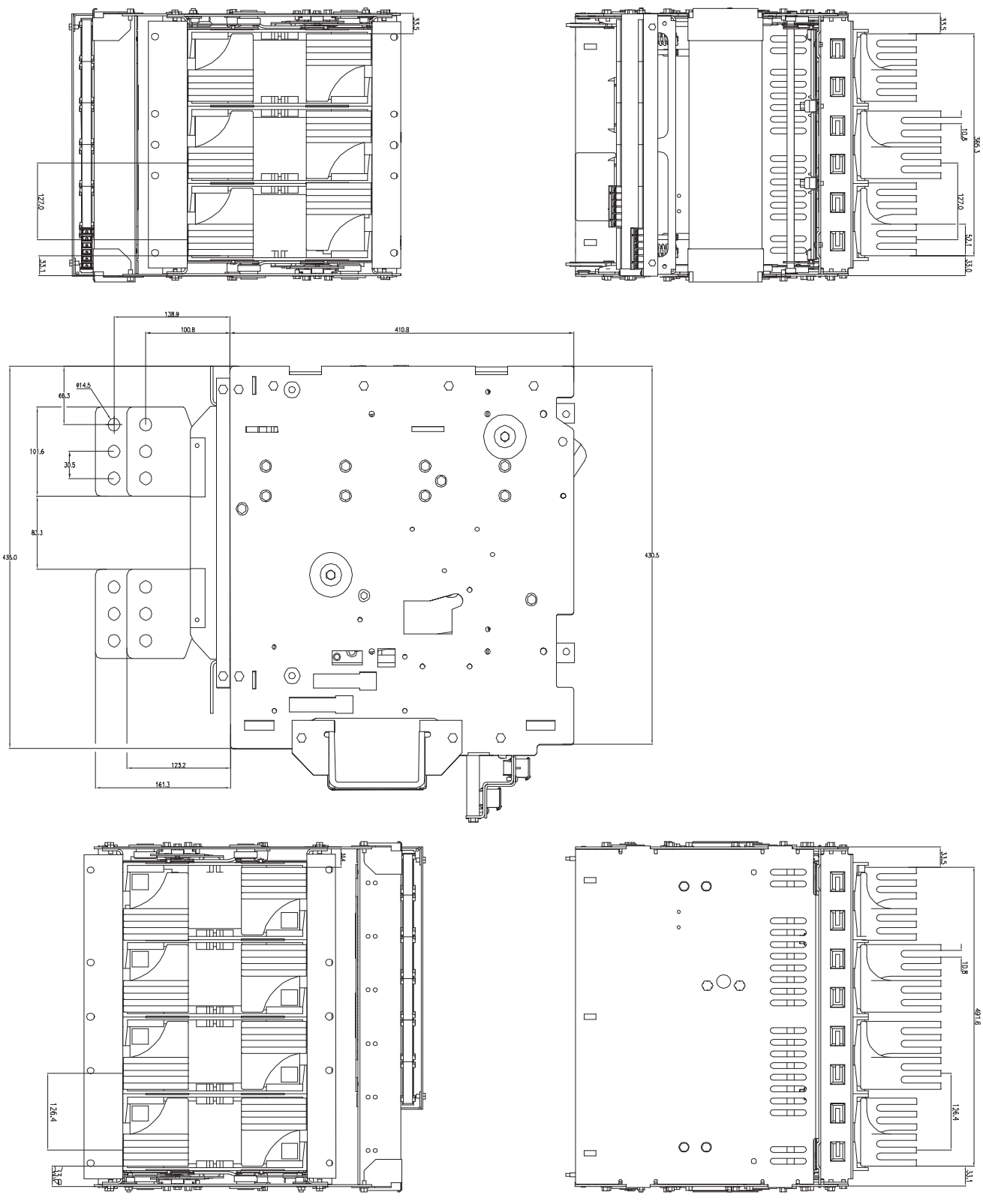


Current	C
800, 1250 1600, 2000 AMP	9.7
2500,3200 AMP	25.4



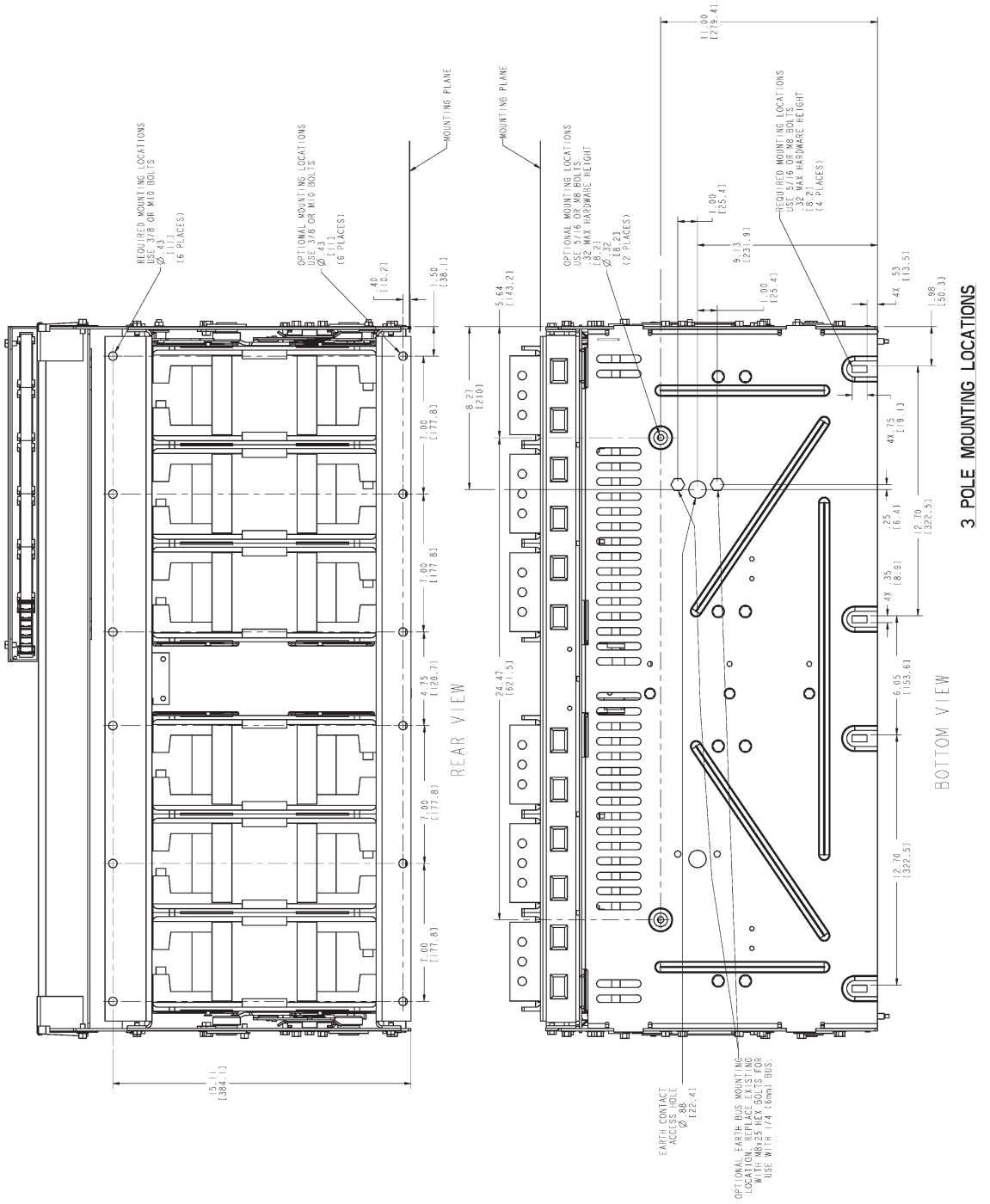


IZM97 main terminal connection dimension (4000A)

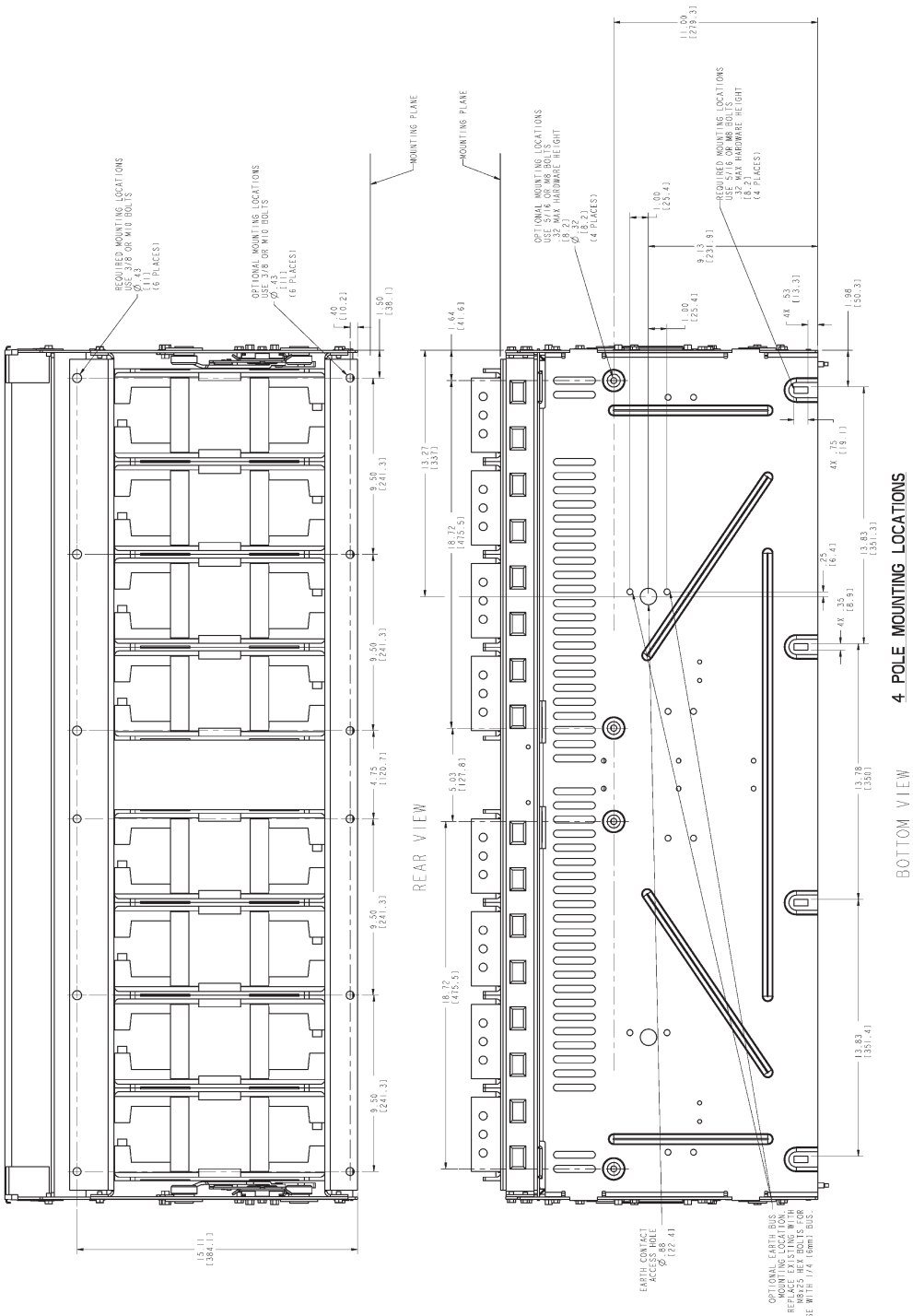


1

IZM99 cassette dimension (3 pole, 4000-6300A)



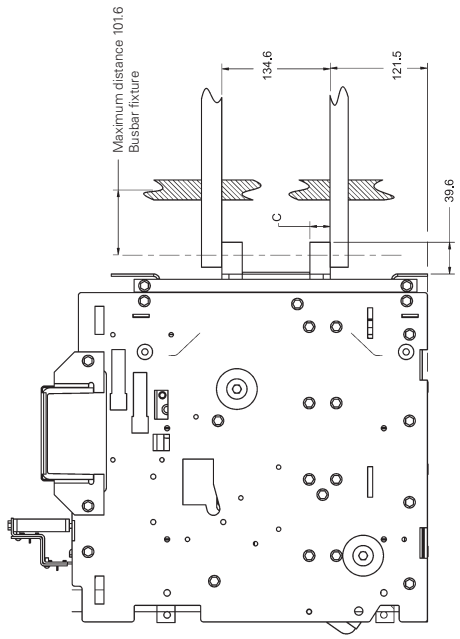
IZM99 cassette dimension (4 pole, 4000-6300A)

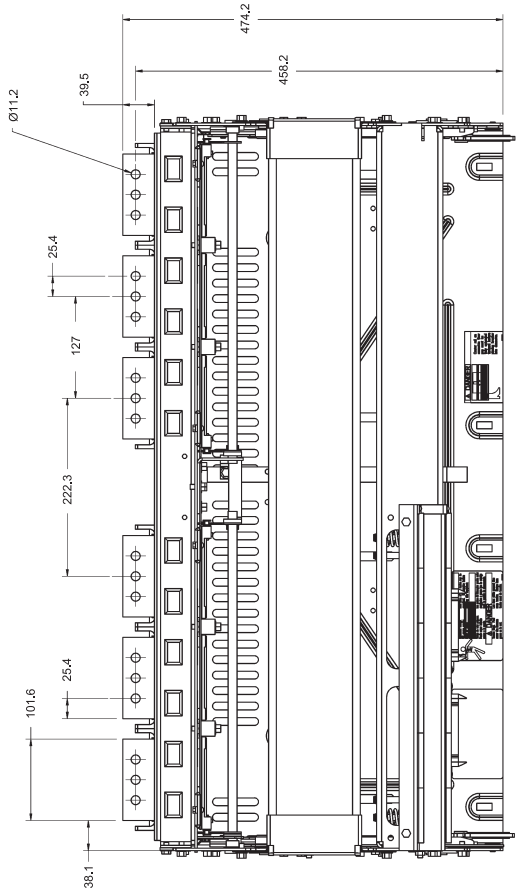


1

IZM99 main terminal connection dimension (3-pole, 4000-6300A)

Current	C
4000 AMP	9.7
5000, 6300 AMP	25.4

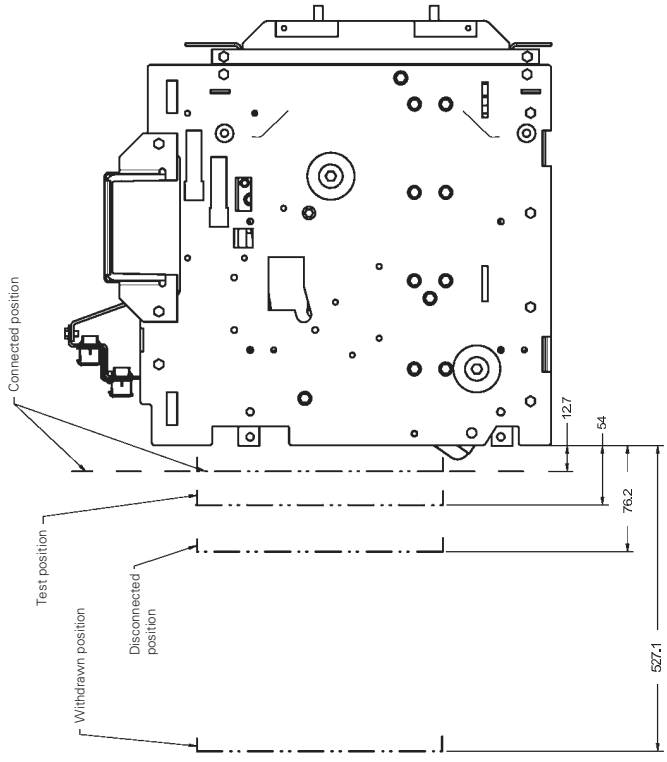




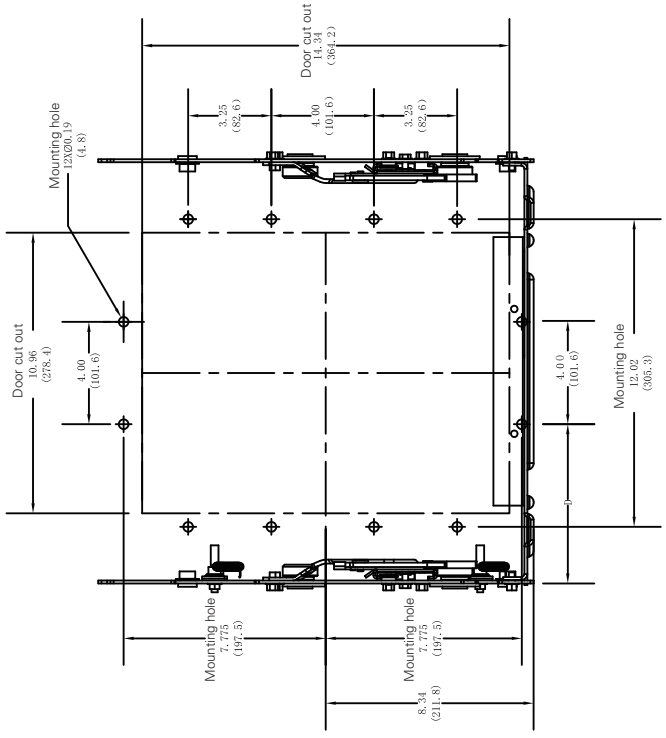
3P

IZM97 cassette panel cutout dimension and circuit breaker position (800-3200A)

ITEM	D
3 POLE	6.50 [165.10]
4 POLE	11.50 [292.10]



Right View



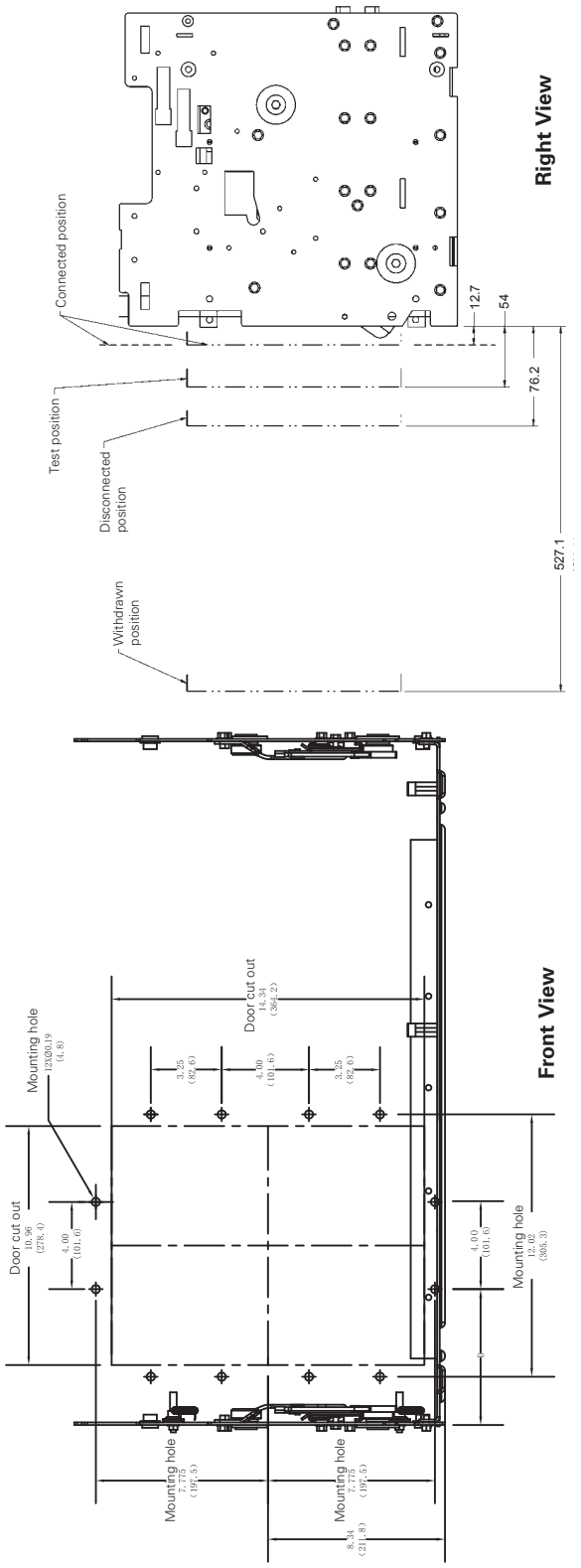
Front View

Panel cutout size and circuit breaker position

1

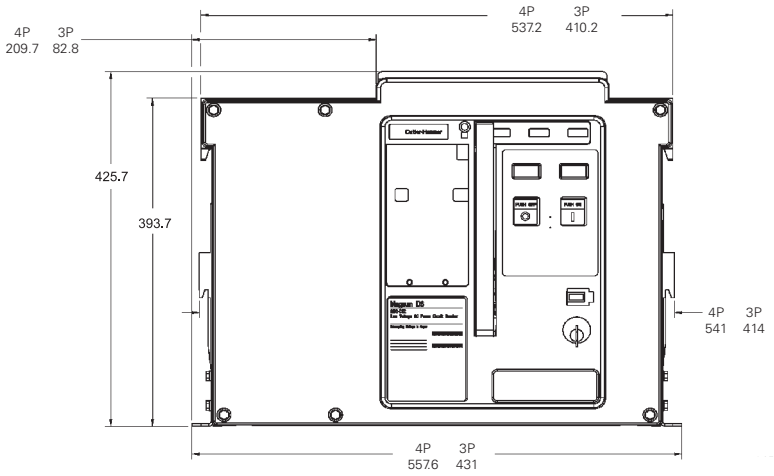
IZM99 cassette panel cutout dimension and circuit breaker position (4000-6300A)

ITEM	D
3 POLE	6.5 [164.59]
4 POLE	11.5 [291.59]

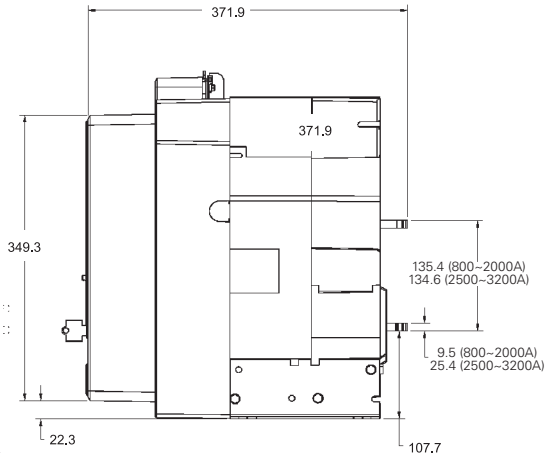


Panel cutout size and circuit breaker position

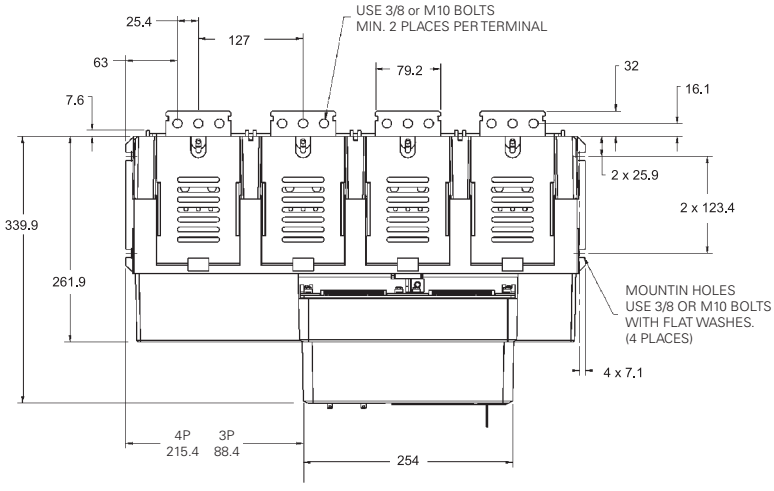
IZM99 cassette panel cutout dimension and circuit breaker position (4000-6300A)



Front view



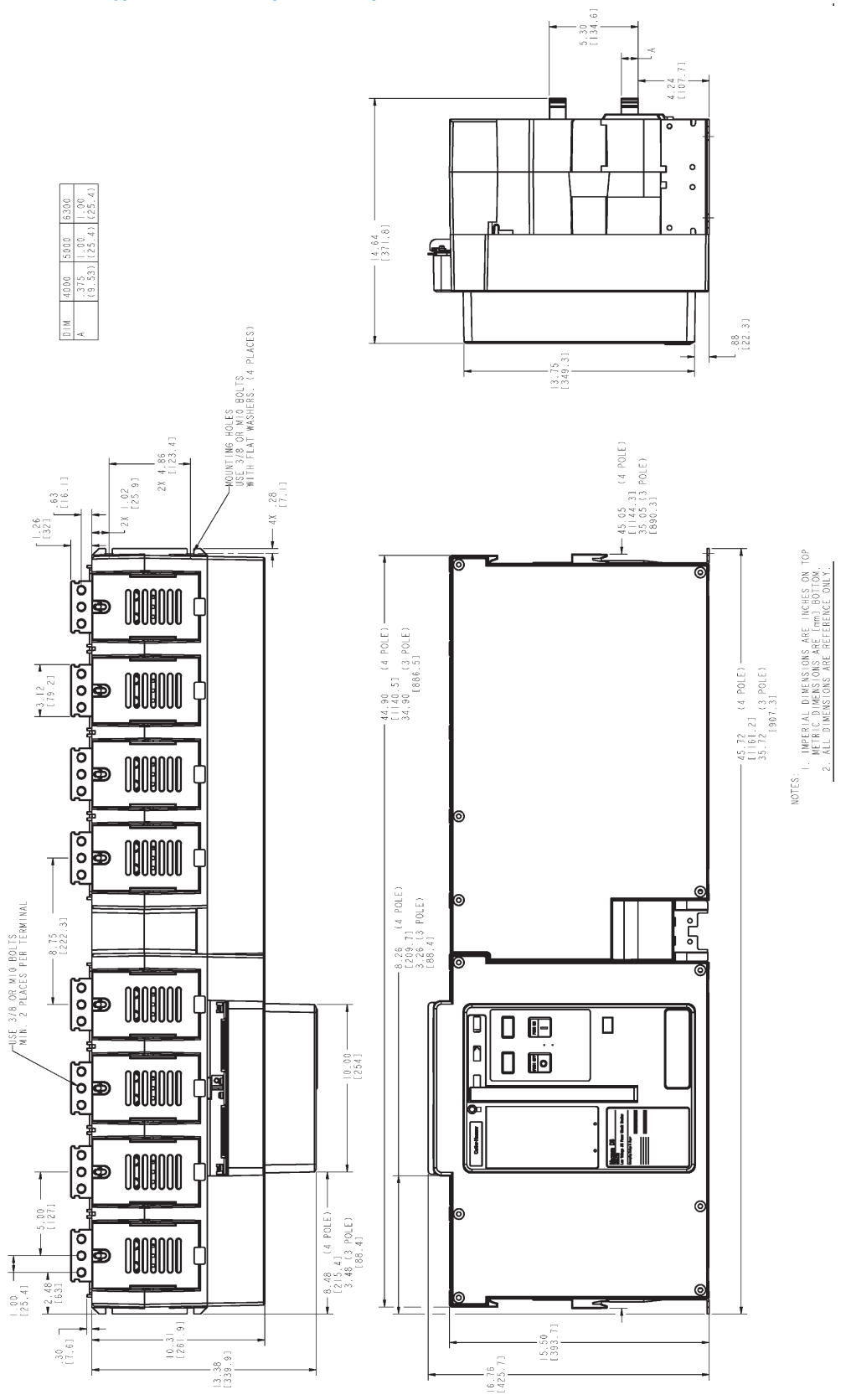
Right view



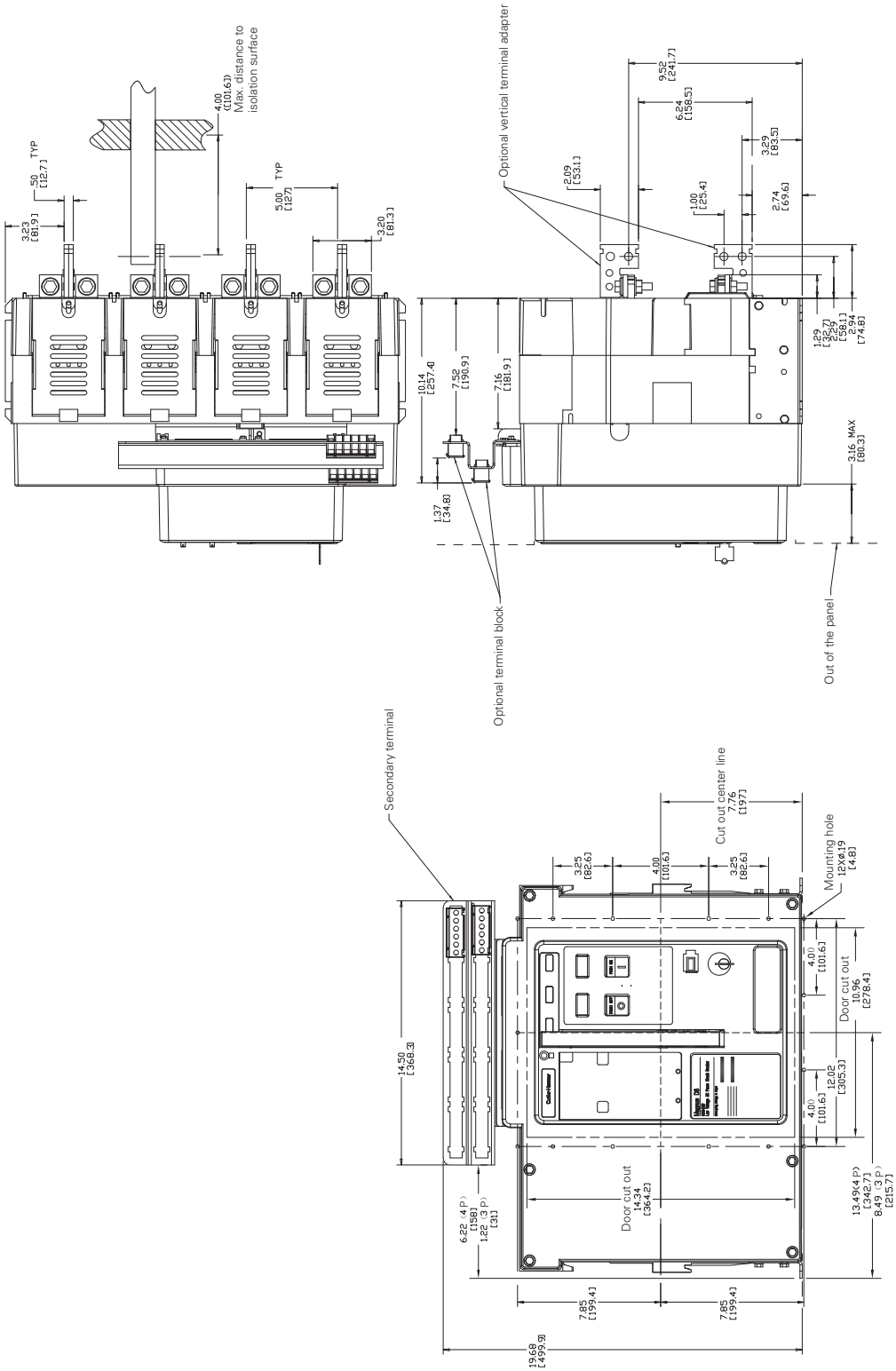
Top view

1

IZM99 frame fixed type dimension (3 pole and 4 pole, 4000-6300A)

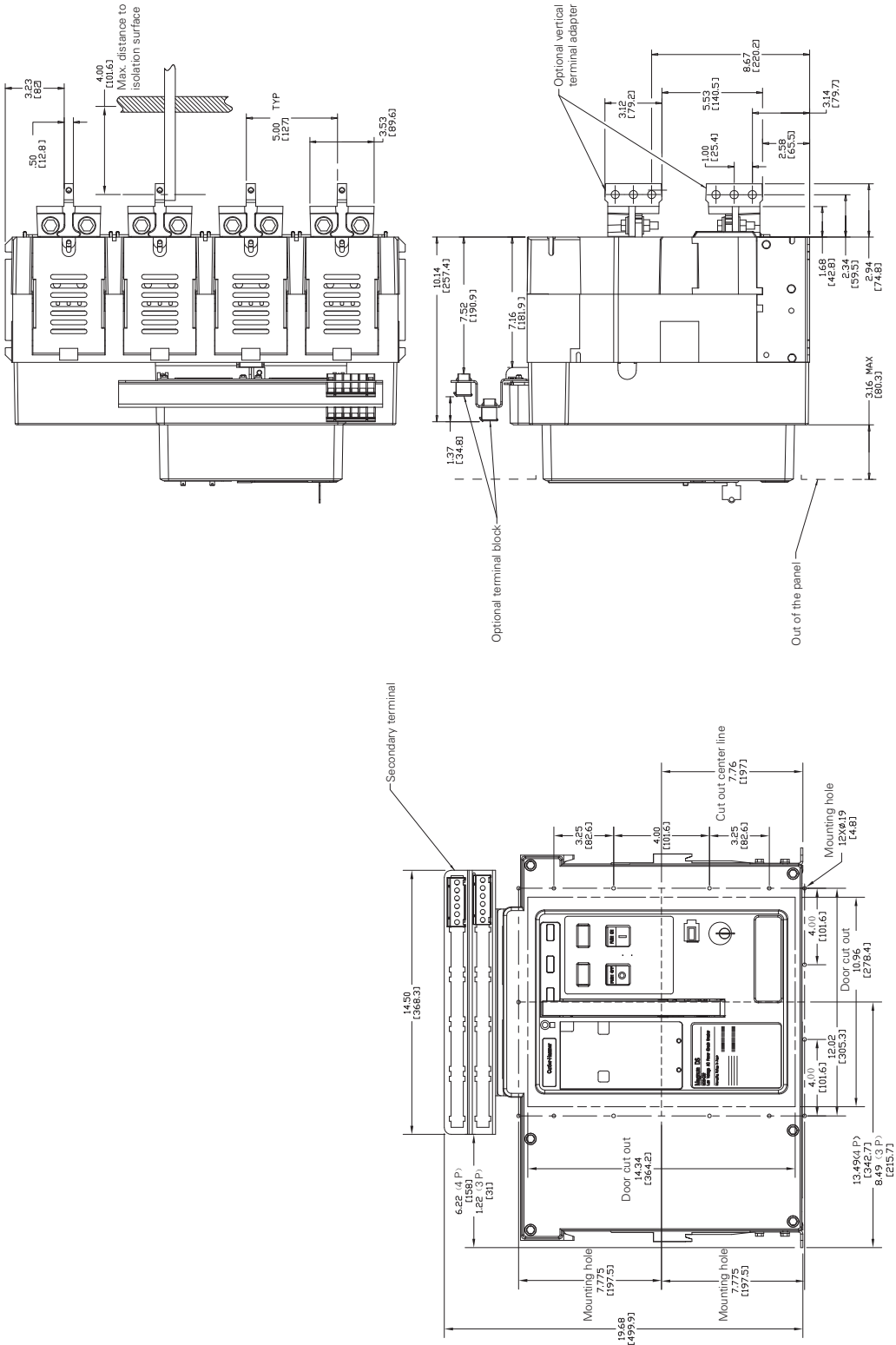


IZM97 fixed circuit breaker panel cutout and vertical main terminal connection (800-1600A)

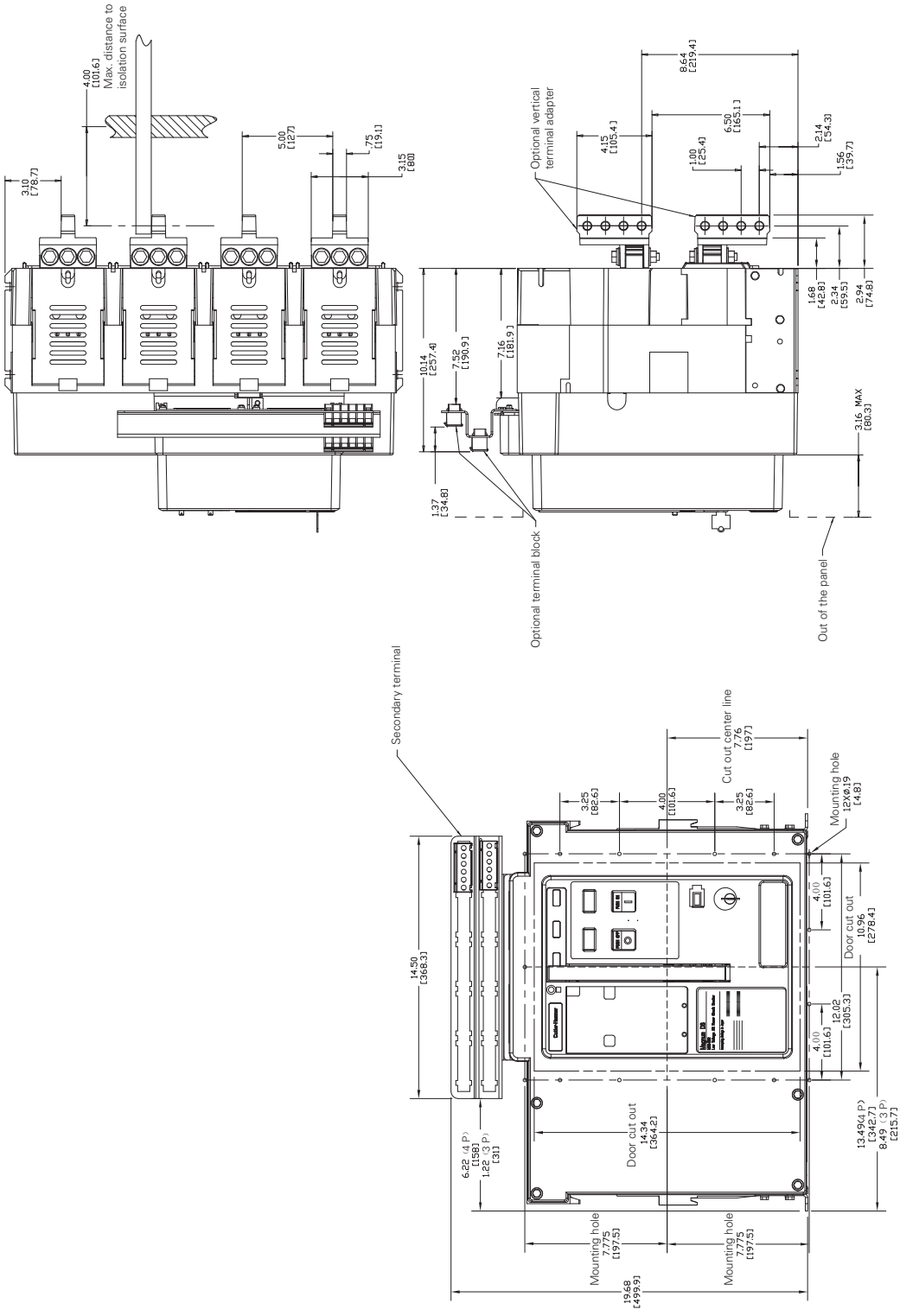


1

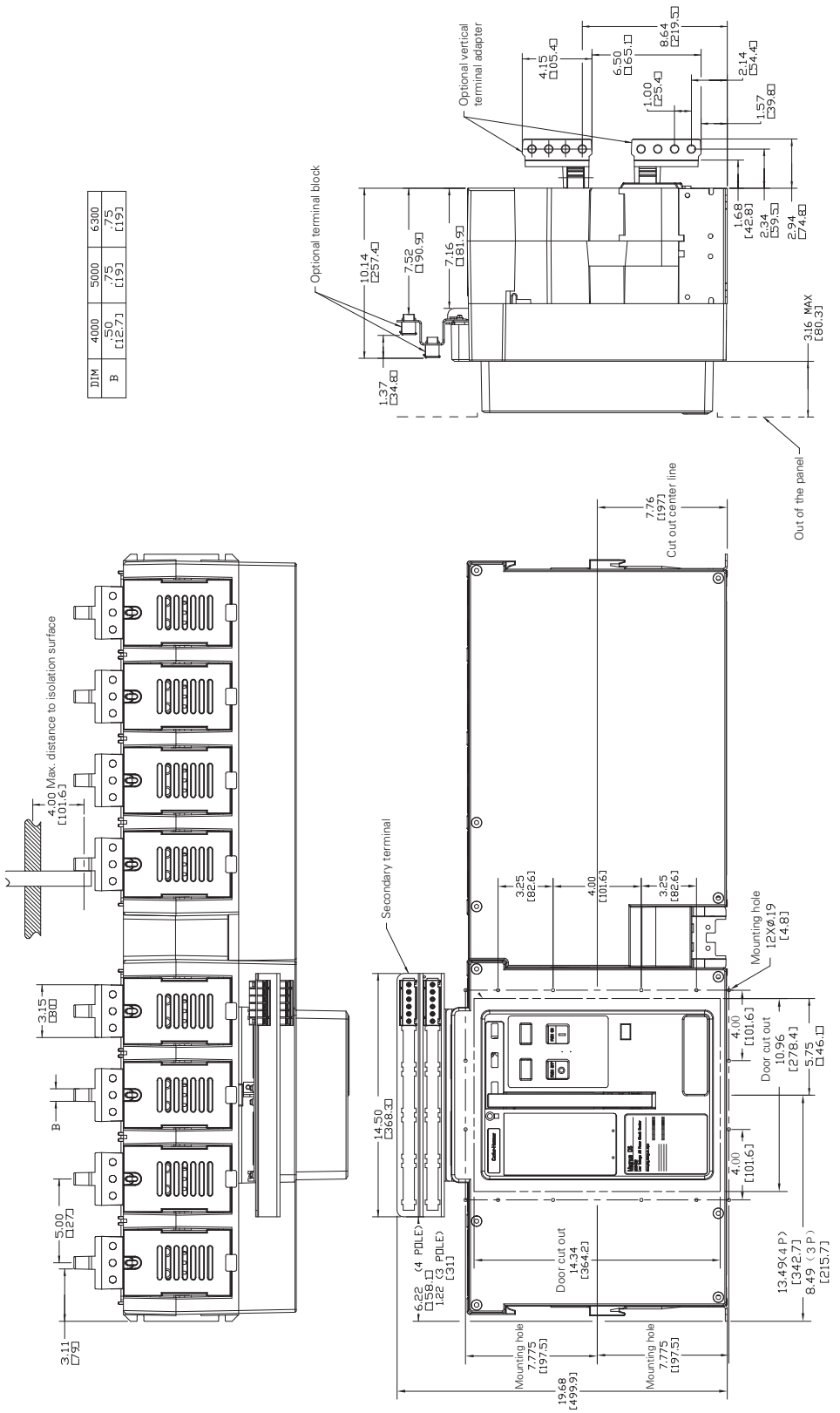
IZM97 fixed circuit breaker panel cutout and vertical main terminal connection (2000A)



IZM97 fixed circuit breaker panel cutout and vertical main terminal connection (2500-3200A)

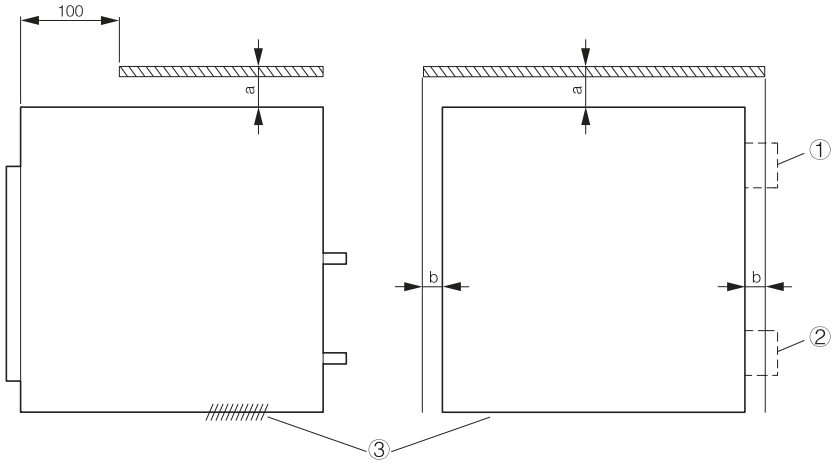


IZM99 fixed circuit breaker panel cutout and vertical main terminal connection (4000A~6300A)



Suggested safety clearance

Below safety clearance information is to instruct mounting of circuit breakers into cabinets.

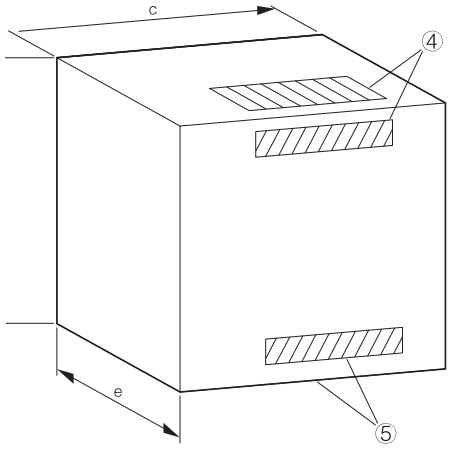


① batter converting switch (optional)
② locking device (optional)
③ air vent (without a cover)

	Case removal	Length to insulation surface	Length to ground metal surface	With position switch or locking device
		mm	m	mm
Withdrawable	a	0	0	0
	b	25	25	25/75
fixed	a	150	250	–
	b	30	70	–

Suggested safety clearance

This picture is a typical case.
Below table lists the minimum distance between the cover and air vent. This information is used for instruction about how to build a proper circuit breaker cabinet



Width:	shelf width+75mm
Height:	550mm
Depth:	450mm （front control panel gap）
Air vent:	160cm2 (800-3200A) 320cm2 (4000-6300A)

④ Air venting on top or at the back
⑤ Air venting at the back or in lower position

1 **Fixed**

	Rated operational current I_n (A)	Switching capacity I_{cu}(kA)	3P		4P	
			Type No.	Article No.	Type No.	Article No.
IZM91	630	42				
	800	42				
	1000	42				
	1250	42				
	1600	42				
	630	50				
	800	50				
	1000	50				
	1250	50				
	1600	50				
	630	65				
	800	65				
	1000	65				
	1250	65				
	1600	65				
IZM97	800	65	**IZM97B3-A08CF**	90000019200517	**IZM97B4-A08CF**	90000019200615
	1000	65	**IZM97B3-A10CF**	90000019200518	**IZM97B4-A10CF**	90000019200616
	1250	65	**IZM97B3-A12CF**	90000019200519	**IZM97B4-A12CF**	90000019200617
	1600	65	**IZM97B3-A16CF**	90000019200520	**IZM97B4-A16CF**	90000019200618
	2000	65	**IZM97B3-A20CF**	90000019200521	**IZM97B4-A20CF**	90000019200619
	2500	65	**IZM97B3-A25CF**	90000019200522	**IZM97B4-A25CF**	90000019200620
	3200	65	**IZM97B3-A32CF**	90000019200523	**IZM97B4-A32CF**	90000019200621
	4000	65				
	800	85	**IZM97N3-A08CF**	90000019200552	**IZM97N4-A08CF**	90000019200650
	1000	85	**IZM97N3-A10CF**	90000019200553	**IZM97N4-A10CF**	90000019200651
	1250	85	**IZM97N3-A12CF**	90000019200554	**IZM97N4-A12CF**	90000019200652
	1600	85	**IZM97N3-A16CF**	90000019200555	**IZM97N4-A16CF**	90000019200653
	2000	85	**IZM97N3-A20CF**	90000019200556	**IZM97N4-A20CF**	90000019200654
	2500	85	**IZM97N3-A25CF**	90000019200557	**IZM97N4-A25CF**	90000019200655
	3200	85	**IZM97N3-A32CF**	90000019200558	**IZM97N4-A32CF**	90000019200656
	4000	85				
	800	100	**IZM97H3-A08CF**	90000019200587	**IZM97H4-A08CF**	90000019200685
	1000	100	**IZM97H3-A10CF**	90000019200588	**IZM97H4-A10CF**	90000019200686
	1250	100	**IZM97H3-A12CF**	90000019200589	**IZM97H4-A12CF**	90000019200687
	1600	100	**IZM97H3-A16CF**	90000019200590	**IZM97H4-A16CF**	90000019200688
	2000	100	**IZM97H3-A20CF**	90000019200591	**IZM97H4-A20CF**	90000019200689
	2500	100	**IZM97H3-A25CF**	90000019200592	**IZM97H4-A25CF**	90000019200690
	3200	100	**IZM97H3-A32CF**	90000019200593	**IZM97H4-A32CF**	90000019200691
	4000	100				
IZM99	4000	85				
	5000	85				
	6300	85				
	4000	100				
	5000	100				
	6300	100				

Equipment supplied as standard includes: breaking/closing releases(220VAC), motor operator (220VAC)，trip indication auxiliary contact (2a2b), auxiliary contract (4a4b), sealed door escutcheon, terminals, cassette, shutter protection, arcflash chamber cover, handler

Fixed

	Rated operational current I_n (A)	Switching capacity I_{cu}(kA)	3P		4P	
			Type No.	Article No.	Type No.	Article No.
IZM91	630	42	**IZM91B3-V06CF**	90000019200001	**IZM91B4-V06CF**	90000019200061
	800	42	**IZM91B3-V08CF**	90000019200002	**IZM91B4-V08CF**	90000019200062
	1000	42	**IZM91B3-V10CF**	90000019200003	**IZM91B4-V10CF**	90000019200063
	1250	42	**IZM91B3-V12CF**	90000019200004	**IZM91B4-V12CF**	90000019200064
	1600	42	**IZM91B3-V16CF**	90000019200005	**IZM91B4-V16CF**	90000019200065
	630	50	**IZM91N3-V06CF**	90000019200021	**IZM91N4-V06CF**	90000019200081
	800	50	**IZM91N3-V08CF**	90000019200022	**IZM91N4-V08CF**	90000019200082
	1000	50	**IZM91N3-V10CF**	90000019200023	**IZM91N4-V10CF**	90000019200083
	1250	50	**IZM91N3-V12CF**	90000019200024	**IZM91N4-V12CF**	90000019200084
	1600	50	**IZM91N3-V16CF**	90000019200035	**IZM91N4-V16CF**	90000019200085
	630	65	**IZM91H3-V06CF**	90000019200041	**IZM91H4-V06CF**	90000019200101
	800	65	**IZM91H3-V08CF**	90000019200042	**IZM91H4-V08CF**	90000019200102
	1000	65	**IZM91H3-V10CF**	90000019200043	**IZM91H4-V10CF**	90000019200103
	1250	65	**IZM91H3-V12CF**	90000019200044	**IZM91H4-V12CF**	90000019200104
	1600	65	**IZM91H3-V16CF**	90000019200045	**IZM91H4-V16CF**	90000019200105
IZM97	800	65	**IZM97B3-V08CF**	90000019200524	**IZM97B4-V08CF**	90000019200622
	1000	65	**IZM97B3-V10CF**	90000019200525	**IZM97B4-V10CF**	90000019200623
	1250	65	**IZM97B3-V12CF**	90000019200533	**IZM97B4-V12CF**	90000019200624
	1600	65	**IZM97B3-V16CF**	90000019200527	**IZM97B4-V16CF**	90000019200625
	2000	65	**IZM97B3-V20CF**	90000019200528	**IZM97B4-V20CF**	90000019200626
	2500	65	**IZM97B3-V25CF**	90000019200529	**IZM97B4-V25CF**	90000019200627
	3200	65	**IZM97B3-V32CF**	90000019200530	**IZM97B4-V32CF**	90000019200628
	4000	85				
	800	85	**IZM97N3-V08CF**	90000019200559	**IZM97N4-V08CF**	90000019200657
	1000	85	**IZM97N3-V10CF**	90000019200560	**IZM97N4-V10CF**	90000019200658
	1250	85	**IZM97N3-V12CF**	90000019200561	**IZM97N4-V12CF**	90000019200659
	1600	85	**IZM97N3-V16CF**	90000019200562	**IZM97N4-V16CF**	90000019200660
	2000	85	**IZM97N3-V20CF**	90000019200563	**IZM97N4-V20CF**	90000019200661
	2500	85	**IZM97N3-V25CF**	90000019200564	**IZM97N4-V25CF**	90000019200662
	3200	85	**IZM97N3-V32CF**	90000019200565	**IZM97N4-V32CF**	90000019200663
	4000	85				
	800	100	**IZM97H3-V08CF**	90000019200594	**IZM97H4-V08CF**	90000019200692
	1000	100	**IZM97H3-V10CF**	90000019200595	**IZM97H4-V10CF**	90000019200693
	1250	100	**IZM97H3-V12CF**	90000019200596	**IZM97H4-V12CF**	90000019200694
	1600	100	**IZM97H3-V16CF**	90000019200597	**IZM97H4-V16CF**	90000019200695
	2000	100	**IZM97H3-V20CF**	90000019200598	**IZM97H4-V20CF**	90000019200696
	2500	100	**IZM97H3-V25CF**	90000019200599	**IZM97H4-V25CF**	90000019200697
	3200	100	**IZM97H3-V32CF**	90000019200600	**IZM97H4-V32CF**	90000019200698
	4000	100				
IZM99	4000	85	**IZM99N3-V40CF**	90000019200783	**IZM99N4-V40CF**	90000019200807
	5000	85	**IZM99N3-V50CF**	90000019200784	**IZM99N4-V50CF**	90000019200808
	6300	85	**IZM99N3-V63CF**	90000019200785	**IZM99N4-V63CF**	90000019200809
	4000	100	**IZM99H3-V40CF**	90000019200795	**IZM99H4-V40CF**	90000019200819
	5000	100	**IZM99H3-V50CF**	90000019200796	**IZM99H4-V50CF**	90000019200820
	6300	100	**IZM99H3-V63CF**	90000019200797	**IZM99H4-V63CF**	90000019200821

Equipment supplied as standard includes: breaking/closing releases(220VAC), motor operator (220VAC)， trip indication auxiliary contact (2a2b), auxiliary contract (4a4b), sealed door escutcheon, terminals, switching power supply (only for U and P type releases, P type release with INCOM communication protocol.

1 **Fixed**

	Rated operational current I_n(A)	Switching capacity I_{cu}(kA)	3P		4P	
			Type No.	**Article No.**	**Type No.**	**Article No.**
IZM91	630		**IZM91B3-U06CF**	90000019200006	**IZM91B4-U06CF**	90000019200066
	800		**IZM91B3-U08CF**	90000019200007	**IZM91B4-U08CF**	90000019200067
	1000		**IZM91B3-U10CF**	90000019200008	**IZM91B4-U10CF**	90000019200068
	1250		**IZM91B3-U12CF**	90000019200009	**IZM91B4-U12CF**	90000019200069
	1600		**IZM91B3-U16CF**	90000019200010	**IZM91B4-U16CF**	90000019200070
	630		**IZM91N3-U06CF**	90000019200026	**IZM91N4-U06CF**	90000019200086
	800		**IZM91N3-U08CF**	90000019200027	**IZM91N4-U08CF**	90000019200087
	1000		**IZM91N3-U10CF**	90000019200028	**IZM91N4-U10CF**	90000019200088
	1250		**IZM91N3-U12CF**	90000019200029	**IZM91N4-U12CF**	90000019200089
	1600		**IZM91N3-U16CF**	90000019200030	**IZM91N4-U16CF**	90000019200090
	630		**IZM91H3-U06CF**	90000019200046	**IZM91H4-U06CF**	90000019200106
	800		**IZM91H3-U08CF**	90000019200047	**IZM91H4-U08CF**	90000019200107
	1000		**IZM91H3-U10CF**	90000019200048	**IZM91H4-U10CF**	90000019200108
	1250		**IZM91H3-U12CF**	90000019200049	**IZM91H4-U12CF**	90000019200109
	1600		**IZM91H3-U16CF**	90000019200050	**IZM91H4-U16CF**	90000019200110
IZM97	800		**IZM97B3-U08CF**	90000019200531	**IZM97B4-U08CF**	90000019200629
	1000		**IZM97B3-U10CF**	90000019200532	**IZM97B4-U10CF**	90000019200630
	1250		**IZM97B3-U12CF**	90000019200533	**IZM97B4-U12CF**	90000019200631
	1600		**IZM97B3-U16CF**	90000019200534	**IZM97B4-U16CF**	90000019200632
	2000		**IZM97B3-U20CF**	90000019200535	**IZM97B4-U20CF**	90000019200633
	2500		**IZM97B3-U25CF**	90000019200536	**IZM97B4-U25CF**	90000019200634
	3200		**IZM97B3-U32CF**	90000019200537	**IZM97B4-U32CF**	90000019200635
	4000					
	800		**IZM97N3-U08CF**	90000019200566	**IZM97N4-U08CF**	90000019200664
	1000		**IZM97N3-U10CF**	90000019200567	**IZM97N4-U10CF**	90000019200665
	1250		**IZM97N3-U12CF**	90000019200568	**IZM97N4-U12CF**	90000019200666
	1600		**IZM97N3-U16CF**	90000019200569	**IZM97N4-U16CF**	90000019200667
	2000		**IZM97N3-U20CF**	90000019200570	**IZM97N4-U20CF**	90000019200668
	2500		**IZM97N3-U25CF**	90000019200571	**IZM97N4-U25CF**	90000019200669
	3200		**IZM97N3-U32CF**	90000019200572	**IZM97N4-U32CF**	90000019200670
	4000					
	800		**IZM97H3-U08CF**	90000019300601	**IZM97H4-U08CF**	90000019200699
	1000		**IZM97H3-U10CF**	90000019300602	**IZM97H4-U10CF**	90000019200700
	1250		**IZM97H3-U12CF**	90000019300603	**IZM97H4-U12CF**	90000019200701
	1600		**IZM97H3-U16CF**	90000019300604	**IZM97H4-U16CF**	90000019200702
	2000		**IZM97H3-U20CF**	90000019300605	**IZM97H4-U20CF**	90000019200703
	2500		**IZM97H3-U25CF**	90000019300606	**IZM97H4-U25CF**	90000019200704
	3200		**IZM97H3-U32CF**	90000019300607	**IZM97H4-U32CF**	90000019200705
	4000					
IZM99	4000		**IZM99N3-U40CF**	90000019300786	**IZM99N4-U40CF**	90000019200810
	5000		**IZM99N3-U50CF**	90000019300787	**IZM99N4-U50CF**	90000019200811
	6300		**IZM99N3-U63CF**	90000019300788	**IZM99N4-U63CF**	90000019200812
	4000		**IZM99H3-U40CF**	90000019300798	**IZM99H4-U40CF**	90000019200822
	5000		**IZM99H3-U50CF**	90000019300799	**IZM99H4-U50CF**	90000019200823
	6300		**IZM99H3-U63CF**	90000019300800	**IZM99H4-U63CF**	90000019200824

Equipment supplied as standard includes: breaking/closing releases(220VAC), motor operator (220VAC)， trip indication auxiliary contact (2a2b), auxiliary contract (4a4b), sealed door escutcheon, terminals, switching power supply (only for U and P type releases, P type release with INCOM communication protocol

Fixed

	Rated operational current I_n (A)	Switching capacity I_{cu}(kA)	3P		4P	
			Type No.	Article No.	Type No.	Article No.
IZM91	630	42				
	800	42				
	1000	42				
	1250	42				
	1600	42				
	630	50				
	800	50				
	1000	50				
	1250	50				
	1600	50				
	630	65				
	800	65				
	1000	65				
	1250	65				
	1600	65				
IZM91	800	65	**IZM97B3-P08CF**	90000019200538	**IZM97B4-P08CF**	90000019200636
	1000	65	**IZM97B3-P10CF**	90000019200539	**IZM97B4-P10CF**	90000019200637
	1250	65	**IZM97B3-P12CF**	90000019200540	**IZM97B4-P12CF**	90000019200638
	1600	65	**IZM97B3-P16CF**	90000019200541	**IZM97B4-P16CF**	90000019200639
	2000	65	**IZM97B3-P20CF**	90000019200542	**IZM97B4-P20CF**	90000019200640
	2500	65	**IZM97B3-P25CF**	90000019200543	**IZM97B4-P25CF**	90000019200641
	3200	65	**IZM97B3-P32CF**	90000019200544	**IZM97B4-P32CF**	90000019200642
	4000	85				
	800	85	**IZM97N3-P08CF**	90000019200573	**IZM97N4-P08CF**	90000019200671
	1000	85	**IZM97N3-P10CF**	90000019200574	**IZM97N4-P10CF**	90000019200672
	1250	85	**IZM97N3-P12CF**	90000019200575	**IZM97N4-P12CF**	90000019200673
	1600	85	**IZM97N3-P16CF**	90000019200576	**IZM97N4-P16CF**	90000019200674
	2000	85	**IZM97N3-P20CF**	90000019200577	**IZM97N4-P20CF**	90000019200675
	2500	85	**IZM97N3-P25CF**	90000019200578	**IZM97N4-P25CF**	90000019200676
	3200	85	**IZM97N3-P32CF**	90000019200579	**IZM97N4-P32CF**	90000019200677
	4000	85				
	800	100	**IZM97H3-P08CF**	90000019300608	**IZM97H4-P08CF**	90000019200706
	1000	100	**IZM97H3-P10CF**	90000019300609	**IZM97H4-P10CF**	90000019200707
	1250	100	**IZM97H3-P12CF**	90000019300610	**IZM97H4-P12CF**	90000019200708
	1600	100	**IZM97H3-P16CF**	90000019300611	**IZM97H4-P16CF**	90000019200709
	2000	100	**IZM97H3-P20CF**	90000019300612	**IZM97H4-P20CF**	90000019200710
	2500	100	**IZM97H3-P25CF**	90000019300613	**IZM97H4-P25CF**	90000019200711
	3200	100	**IZM97H3-P32CF**	90000019300614	**IZM97H4-P32CF**	90000019200712
	4000	100				
IZM91	4000	85	**IZM99N3-P40CF**	90000019300789	**IZM99N4-P40CF**	90000019200813
	5000	85	**IZM99N3-P50CF**	90000019300790	**IZM99N4-P50CF**	90000019200814
	6300	85	**IZM99N3-P63CF**	90000019300791	**IZM99N4-P63CF**	90000019200815
	4000	100	**IZM99H3-P40CF**	90000019300801	**IZM99H4-P40CF**	90000019200825
	5000	100	**IZM99H3-P50CF**	90000019300802	**IZM99H4-P50CF**	90000019200826
	6300	100	**IZM99H3-P63CF**	90000019300803	**IZM99H4-P63CF**	90000019200827

Equipment supplied as standard includes: breaking/closing releases(220VAC), motor operator (220VAC)， trip indication auxiliary contact (2a2b), auxiliary contract (4a4b), sealed door escutcheon, terminals,switching power supply (only for U and P type releases, P type release with INCOM communication protocol

1 **Withdrawable**

	Rated operational current I_n (A)	Switching capacity I_{cu}(kA)	3P		4P	
			Type No.	Article No.	Type No.	Article No.
IZM91	630	42				
	800	42				
	1000	42				
	1250	42				
	1600	42				
	630	50				
	800	50				
	1000	50				
	1250	50				
	1600	50				
	630	65				
	800	65				
	1000	65				
	1250	65				
	1600	65				
IZM97	800	65	**IZM97B3-A08CW**	90000019200321	**IZM97B4-A08CW**	90000019200419
	1000	65	**IZM97B3-A10CW**	90000019200322	**IZM97B4-A10CW**	90000019200420
	1250	65	**IZM97B3-A12CW**	90000019200323	**IZM97B4-A12CW**	90000019200421
	1600	65	**IZM97B3-A16CW**	90000019200324	**IZM97B4-A16CW**	90000019200422
	2000	65	**IZM97B3-A20CW**	90000019200325	**IZM97B4-A20CW**	90000019200423
	2500	65	**IZM97B3-A25CW**	90000019200326	**IZM97B4-A25CW**	90000019200424
	3200	65	**IZM97B3-A32CW**	90000019200327	**IZM97B4-A32CW**	90000019200425
	4000	65				
	800	85	**IZM97N3-A08CW**	90000019200356	**IZM97N4-A08CW**	90000019200454
	1000	85	**IZM97N3-A10CW**	90000019200357	**IZM97N4-A10CW**	90000019200455
	1250	85	**IZM97N3-A12CW**	90000019200358	**IZM97N4-A12CW**	90000019200456
	1600	85	**IZM97N3-A16CW**	90000019200359	**IZM97N4-A16CW**	90000019200457
	2000	85	**IZM97N3-A20CW**	90000019200360	**IZM97N4-A20CW**	90000019200458
	2500	85	**IZM97N3-A25CW**	90000019200361	**IZM97N4-A25CW**	90000019200459
	3200	85	**IZM97N3-A32CW**	90000019200462	**IZM97N4-A32CW**	90000019200460
	4000	85				
	800	100	**IZM97H3-A08CW**	90000019200391	**IZM97H4-A08CW**	90000019200489
	1000	100	**IZM97H3-A10CW**	90000019200392	**IZM97H4-A10CW**	90000019200490
	1250	100	**IZM97H3-A12CW**	90000019200393	**IZM97H4-A12CW**	90000019200491
	1600	100	**IZM97H3-A16CW**	90000019200394	**IZM97H4-A16CW**	90000019200492
	2000	100	**IZM97H3-A20CW**	90000019200395	**IZM97H4-A20CW**	90000019200493
	2500	100	**IZM97H3-A25CW**	90000019200396	**IZM97H4-A25CW**	90000019200494
	3200	100	**IZM97H3-A32CW**	90000019200397	**IZM97H4-A32CW**	90000019200495
	4000	100				
IZM99	4000	85				
	5000	85				
	6300	85				
	4000	100				
	5000	100				
	6300	100				

Equipment supplied as standard includes: breaking/closing releases(220VAC), motor operator (220VAC) , trip indication auxiliary contact (2a2b), auxiliary contract (4a4b), sealed door escutcheon, terminals, cassette, shutter protection, arcflash chamber cover, handler

Fixed

	Rated operational current I_n (A)	Switching capacity I_{cu}(kA)	3P	A	4P	
			Type No.	Article No.	Type No.	Article No.
IZM91	630	42	**IZM91B3-V06CW**	90000019100001	**IZM91B4-V06CW**	90000019100061
	800	42	**IZM91B3-V08CW**	90000019100002	**IZM91B4-V08CW**	90000019100062
	1000	42	**IZM91B3-V10CW**	90000019100003	**IZM91B4-V10CW**	90000019100063
	1250	42	**IZM91B3-V12CW**	90000019100004	**IZM91B4-V12CW**	90000019100064
	1600	42	**IZM91B3-V16CW**	90000019100005	**IZM91B4-V16CW**	90000019100065
	630	50	**IZM91N3-V06CW**	90000019100021	**IZM91N4-V06CW**	90000019100081
	800	50	**IZM91N3-V08CW**	90000019100022	**IZM91N4-V08CW**	90000019100082
	1000	50	**IZM91N3-V10CW**	90000019100023	**IZM91N4-V10CW**	90000019100083
	1250	50	**IZM91N3-V12CW**	90000019100024	**IZM91N4-V12CW**	90000019100084
	1600	50	**IZM91N3-V16CW**	90000019100025	**IZM91N4-V16CW**	90000019100085
	630	65	**IZM91H3-V06CW**	90000019100041	**IZM91H4-V06CW**	90000019100101
	800	65	**IZM91H3-V08CW**	90000019100042	**IZM91H4-V08CW**	90000019100102
	1000	65	**IZM91H3-V10CW**	90000019100043	**IZM91H4-V10CW**	90000019100103
	1250	65	**IZM91H3-V12CW**	90000019100044	**IZM91H4-V12CW**	90000019100104
	1600	65	**IZM91H3-V16CW**	90000019100045	**IZM91H4-V16CW**	90000019100105
IZM97	800	65	**IZM97B3-V08CW**	90000019100328	**IZM97B4-V08CW**	90000019200426
	1000	65	**IZM97B3-V10CW**	90000019300329	**IZM97B4-V10CW**	90000019200427
	1250	65	**IZM97B3-V12CW**	90000019300330	**IZM97B4-V12CW**	90000019200428
	1600	65	**IZM97B3-V16CW**	90000019300331	**IZM97B4-V16CW**	90000019200429
	2000	65	**IZM97B3-V20CW**	90000019300332	**IZM97B4-V20CW**	90000019200430
	2500	65	**IZM97B3-V25CW**	90000019300333	**IZM97B4-V25CW**	90000019200431
	3200	65	**IZM97B3-V32CW**	90000019300334	**IZM97B4-V32CW**	90000019200432
	4000	65	**IZM97B3-V40CW**	90000019300713	**IZM97B4-V40CW**	90000019200724
	800	85	**IZM97N3-V08CW**	90000019300363	**IZM97N4-V08CW**	90000019200416
	1000	85	**IZM97N3-V10CW**	90000019300364	**IZM97N4-V10CW**	90000019200462
	1250	85	**IZM97N3-V12CW**	90000019300365	**IZM97N4-V12CW**	90000019200463
	1600	85	**IZM97N3-V16CW**	90000019300366	**IZM97N4-V16CW**	90000019200464
	2000	85	**IZM97N3-V20CW**	90000019300367	**IZM97N4-V20CW**	90000019200465
	2500	85	**IZM97N3-V25CW**	90000019300368	**IZM97N4-V25CW**	90000019200466
	3200	85	**IZM97N3-V32CW**	90000019300369	**IZM97N4-V32CW**	90000019200467
	4000	85	**IZM97N3-V40CW**	90000019300717	**IZM97N4-V40CW**	90000019200728
	800	100	**IZM97H3-V08CW**	90000019300398	**IZM97H4-V08CW**	90000019200496
	1000	100	**IZM97H3-V10CW**	90000019300399	**IZM97H4-V10CW**	90000019200497
	1250	100	**IZM97H3-V12CW**	90000019300400	**IZM97H4-V12CW**	90000019200498
	1600	100	**IZM97H3-V16CW**	90000019300401	**IZM97H4-V16CW**	90000019200499
	2000	100	**IZM97H3-V20CW**	90000019300402	**IZM97H4-V20CW**	90000019200500
	2500	100	**IZM97H3-V25CW**	90000019300403	**IZM97H4-V25CW**	90000019200501
	3200	100	**IZM97H3-V32CW**	90000019300404	**IZM97H4-V32CW**	90000019200502
	4000	100	**IZM97H3-V40CW**	90000019300721	**IZM97H4-V40CW**	90000019200732
IZM99	4000	85	**IZM99N3-V40CW**	90000019300735	**IZM99N4-V40CW**	90000019200759
	5000	85	**IZM99N3-V50CW**	90000019300736	**IZM99N4-V50CW**	90000019200760
	6300	85	**IZM99N3-V63CW**	90000019300737	**IZM99N4-V63CW**	90000019200761
	4000	100	**IZM99H3-V40CW**	90000019300747	**IZM99H4-V40CW**	90000019200771
	5000	100	**IZM99H3-V50CW**	90000019300748	**IZM99H4-V50CW**	90000019200772
	6300	100	**IZM99H3-V63CW**	90000019300749	**IZM99H4-V63CW**	90000019200773

Equipment supplied as standard includes: breaking/closing releases(220VAC), motor operator (220VAC), trip indication auxiliary contact (2a2b), auxiliary contract (4a4b), sealed door escutcheon, terminals, cassette, shutter protection, arcflash chamber cover, handler

1

Withdrawable

	Rated operational current I_n(A)	Switching capacity I_{cu}(kA)	3P Type No.	3P Article No.	4P Type No.	4P Article No.
IZM91	630	42	**IZM91B3-V06CW**	90000019100006	IZM91B4-V06CW	**90000019100066**
	800	42	**IZM91B3-V08CW**	90000019100007	IZM91B4-V08CW	**90000019100067**
	1000	42	**IZM91B3-V10CW**	90000019100008	IZM91B4-V10CW	**90000019100068**
	1250	42	**IZM91B3-V12CW**	90000019100009	IZM91B4-V12CW	**90000019100069**
	1600	42	**IZM91B3-V16CW**	90000019100010	IZM91B4-V16CW	**90000019100070**
	630	50	**IZM91N3-V06CW**	90000019100026	IZM91N4-V06CW	**90000019100086**
	800	50	**IZM91N3-V08CW**	90000019100027	IZM91N4-V08CW	**90000019100087**
	1000	50	**IZM91N3-V10CW**	90000019100028	IZM91N4-V10CW	**90000019100088**
	1250	50	**IZM91N3-V12CW**	90000019100029	IZM91N4-V12CW	**90000019100089**
	1600	50	**IZM91N3-V16CW**	90000019100030	IZM91N4-V16CW	**90000019100090**
	630	65	**IZM91H3-V06CW**	90000019100046	IZM91H4-V06CW	**90000019100106**
	800	65	**IZM91H3-V08CW**	90000019100047	IZM91H4-V08CW	**90000019100107**
	1000	65	**IZM91H3-V10CW**	90000019100048	IZM91H4-V10CW	**90000019100108**
	1250	65	**IZM91H3-V12CW**	90000019100049	IZM91H4-V12CW	**90000019100109**
IZM97	1600	65	**IZM91H3-V16CW**	90000019100050	IZM91H4-V16CW	**90000019100110**
	800	65	**IZM97B3-V08CW**	90000019100335	IZM97B4-V08CW	**90000019200433**
	1000	65	**IZM97B3-V10CW**	90000019300336	IZM97B4-V10CW	**90000019200434**
	1250	65	**IZM97B3-V12CW**	90000019300337	IZM97B4-V12CW	**90000019200435**
	1600	65	**IZM97B3-V16CW**	90000019300338	IZM97B4-V16CW	**90000019200436**
	2000	65	**IZM97B3-V20CW**	90000019300339	IZM97B4-V20CW	**90000019200437**
	2500	65	**IZM97B3-V25CW**	90000019300340	IZM97B4-V25CW	**90000019200438**
	3200	65	**IZM97B3-V32CW**	90000019300341	IZM97B4-V32CW	**90000019200439**
	4000	65	**IZM97B3-V40CW**	90000019300714	IZM97B4-V40CW	**90000019200725**
	800	85	**IZM97N3-V08CW**	90000019300370	IZM97N4-V08CW	**90000019200468**
	1000	85	**IZM97N3-V10CW**	90000019300371	IZM97N4-V10CW	**90000019200469**
	1250	85	**IZM97N3-V12CW**	90000019300372	IZM97N4-V12CW	**90000019200470**
	1600	85	**IZM97N3-V16CW**	90000019300373	IZM97N4-V16CW	**90000019200471**
	2000	85	**IZM97N3-V20CW**	90000019300374	IZM97N4-V20CW	**90000019200472**
	2500	85	**IZM97N3-V25CW**	90000019300375	IZM97N4-V25CW	**90000019200473**
	3200	85	**IZM97N3-V32CW**	90000019300376	IZM97N4-V32CW	**90000019200474**
	4000	85	**IZM97N3-V40CW**	90000019300718	IZM97N4-V40CW	**90000019200729**
	800	100	**IZM97H3-V08CW**	90000019300405	IZM97H4-V08CW	**90000019200503**
	1000	100	**IZM97H3-V10CW**	90000019300406	IZM97H4-V10CW	**90000019200504**
	1250	100	**IZM97H3-V12CW**	90000019300407	IZM97H4-V12CW	**90000019200505**
	1600	100	**IZM97H3-V16CW**	90000019300408	IZM97H4-V16CW	**90000019200506**
	2000	100	**IZM97H3-V20CW**	90000019300409	IZM97H4-V20CW	**90000019200507**
	2500	100	**IZM97H3-V25CW**	90000019300410	IZM97H4-V25CW	**90000019200508**
	3200	100	**IZM97H3-V32CW**	90000019300411	IZM97H4-V32CW	**90000019200509**
IZM99	4000	100	**IZM97H3-V40CW**	90000019300722	IZM97H4-V40CW	**90000019200733**
	4000	85	**IZM99N3-V40CW**	90000019300738	IZM99N4-V40CW	**90000019200762**
	5000	85	**IZM99N3-V50CW**	90000019300739	IZM99N4-V50CW	**90000019200763**
	6300	85	**IZM99N3-V63CW**	90000019300740	IZM99N4-V63CW	**90000019200764**
	4000	100	**IZM99H3-V40CW**	90000019300750	IZM99H4-V40CW	**90000019200774**
	5000	100	**IZM99H3-V50CW**	90000019300751	IZM99H4-V50CW	**90000019200775**
	6300	100	**IZM99H3-V63CW**	90000019300752	IZM99H4 -V63CW	**90000019200776**

Equipment supplied as standard includes: breaking/closing releases(220VAC), motor operator (220VAC)， trip indication auxiliary contact (2a2b), auxiliary contract (4a4b), sealed door escutcheon, terminals, cassette, shutter protection, arcflash chamber cover, handler

Withdrawable

	Rated operational current I_n (A)	Switching capacity I_{cu}(kA)	3P Type No.	3P Article No.	U Type No.	4P Article No.
IZM97	630	42				
	800	42				
	1000	42				
	1250	42				
	1600	42				
	630	50				
	800	50				
	1000	50				
	1250	50				
	1600	50				
	630	65				
	800	65				
	1000	65				
	1250	65				
	1600	65				
IZM97	800	65	**IZM97B3-P08CW**	90000019200342	**IZM97B4-P08CW**	90000019200440
	1000	65	**IZM97B3-P10CW**	90000019200343	**IZM97B4-P10CW**	90000019200441
	1250	65	**IZM97B3-P12CW**	90000019200344	**IZM97B4-P12CW**	90000019200442
	1600	65	**IZM97B3-P16CW**	90000019200345	**IZM97B4-P16CW**	90000019200443
	2000	65	**IZM97B3-P20CW**	90000019200346	**IZM97B4-P20CW**	90000019200444
	2500	65	**IZM97B3-P25CW**	90000019200347	**IZM97B4-P25CW**	90000019200445
	3200	65	**IZM97B3-P32CW**	90000019200348	**IZM97B4-P32CW**	90000019200446
	4000	65	**IZM97B3-P40CW**	90000019200715	**IZM97B4-P40CW**	90000019200726
	800	85	**IZM97N3-P08CW**	90000019200377	**IZM97N4-P08CW**	90000019200475
	1000	85	**IZM97N3-P10CW**	90000019200378	**IZM97N4-P10CW**	90000019200476
	1250	85	**IZM97N3-P12CW**	90000019200379	**IZM97N4-P12CW**	90000019200477
	1600	85	**IZM97N3-P16CW**	90000019200380	**IZM97N4-P16CW**	90000019200478
	2000	85	**IZM97N3-P20CW**	90000019200381	**IZM97N4-P20CW**	90000019200479
	2500	85	**IZM97N3-P25CW**	90000019200382	**IZM97N4-P25CW**	90000019200480
	3200	85	**IZM97N3-P32CW**	90000019200383	**IZM97N4-P32CW**	90000019200481
	4000	85	**IZM97B3-P40CW**	90000019200719	**IZM97B4-P40CW**	90000019200730
	800	100	**IZM97H3-P08CW**	90000019200412	**IZM97H4-P08CW**	90000019200510
	1000	100	**IZM97H3-P10CW**	90000019200413	**IZM97H4-P10CW**	90000019200511
	1250	100	**IZM97H3-P12CW**	90000019200414	**IZM97H4-P12CW**	90000019200512
	1600	100	**IZM97H3-P16CW**	90000019200415	**IZM97H4-P16CW**	90000019200513
	2000	100	**IZM97H3-P20CW**	90000019200416	**IZM97H4-P20CW**	90000019200514
	2500	100	**IZM97H3-P25CW**	90000019200417	**IZM97H4-P25CW**	90000019200515
	3200	100	**IZM97H3-P32CW**	90000019200418	**IZM97H4-P32CW**	90000019200516
	4000	100	**IZM97B3-P40CW**	90000019200723	**IZM97B4-P40CW**	90000019200734
IZM99	4000	85	**IZM97B3-P40CW**	90000019200741	**IZM97B4-P40CW**	90000019200765
	5000	85	**IZM97B3-P50CW**	90000019200742	**IZM97B4-P50CW**	90000019200766
	6300	85	**IZM97B3-P63CW**	90000019200743	**IZM97B4-P63CW**	90000019200767
	4000	100	**IZM97B3-P40CW**	90000019200753	**IZM97B4-P40CW**	90000019200777
	5000	100	**IZM97B3-P50CW**	90000019200754	**IZM97B4-P50CW**	90000019200778
	6300	100	**IZM97B3-P63CW**	90000019200755	**IZM97B4-P63CW**	90000019200779

Equipment supplied as standard includes: breaking/closing releases(220VAC), motor operator (220VAC) , trip indication auxiliary contact (2a2b), auxiliary contract (4a4b), sealed door escutcheon, terminals, power supply (only for U and P type releases), P type release with INCOM communication protocol, cassette, shutter protection, arcflash chamber cover, handler

1 Fixed

	Rated operational current I_n (A)	Switching capacity I_{cu}(kA)	U 3P Type No.	3P Article No.	U 4P Type No.	4P Article No.
	Overview: With 97-99, if converting from INCOM protocol to MODBUS protocol, protocol converter IZM-DTUP –MOD is needed. One protocol converter can connect up to 32 circuit breakers.					
IZM91	630	42	**IZM91B3-U06CF-COM**	90000019300031	**IZM91B4-U06CF-COM**	90000019300046
	800	42	**IZM91B3-U08CF-COM**	90000019300032	**IZM91B4-U08CF-COM**	90000019300047
	1000	42	**IZM91B3-U10CF-COM**	90000019300033	**IZM91B4-U10CF-COM**	90000019300048
	1250	42	**IZM91B3-U12CF-COM**	90000019300034	**IZM91B4-U12CF-COM**	90000019300049
	1600	42	**IZM91B3-U16CF-COM**	90000019300035	**IZM91B4-U16CF-COM**	90000019300050
	630	50	**IZM91N3-U06CF-COM**	90000019300036	**IZM91N4-U06CF-COM**	90000019300051
	800	50	**IZM91N3-U08CF-COM**	90000019300037	**IZM91N4-U08CF-COM**	90000019300052
	1000	50	**IZM91N3-U10CF-COM**	90000019300038	**IZM91N4-U10CF-COM**	90000019300053
	1250	50	**IZM91N3-U12CF-COM**	90000019300039	**IZM91N4-U12CF-COM**	90000019300054
	1600	50	**IZM91N3-U16CF-COM**	90000019300040	**IZM91N4-U16CF-COM**	90000019300055
	630	65	**IZM91H3-U06CF-COM**	90000019300041	**IZM91H4-U06CF-COM**	90000019300056
	800	65	**IZM91H3-U08CF-COM**	90000019300042	**IZM91H4-U08CF-COM**	90000019300057
	1000	65	**IZM91H3-U10CF-COM**	90000019300043	**IZM91H4-U10CF-COM**	90000019300058
	1250	65	**IZM91H3-U12CF-COM**	90000019300044	**IZM91H4-U12CF-COM**	90000019300059
IZM97	1600	65	**IZM91H3-U16CF-COM**	90000019300045	**IZM91H4-U16CF-COM**	90000019300060
	800	65	**IZM91B3-U08CF-COM**	90000019300143	**IZM91B4-U08CF-COM**	90000019300164
	1000	65	**IZM91B3-U10CF-COM**	90000019300144	**IZM91B4-U10CF-COM**	90000019300165
	1250	65	**IZM91B3-U12CF-COM**	90000019300145	**IZM91B4-U12CF-COM**	90000019300166
	1600	65	**IZM91B3-U16CF-COM**	90000019300146	**IZM91B4-U16CF-COM**	90000019300167
	2000	65	**IZM91B3-U20CF-COM**	90000019300147	**IZM91B4-U20CF-COM**	90000019300168
	2500	65	**IZM97B3-U25CF-COM**	90000019300148	**IZM91B4-U25CF-COM**	90000019300169
	3200	65	**IZM97B3-U32CF-COM**	90000019300149	**IZM91B4-U32CF-COM**	90000019300170
	4000	65				
	800	85	**IZM97N3-U08CF-COM**	90000019300150	**IZM91N4-U08CF-COM**	90000019300171
	1000	85	**IZM97N3-U10CF-COM**	90000019300151	**IZM91N4-U10CF-COM**	90000019300172
	1250	85	**IZM97N3-U12CF-COM**	90000019300152	**IZM91N4-U12CF-COM**	90000019300173
	1600	85	**IZM97N3-U16CF-COM**	90000019300153	**IZM91N4-U16CF-COM**	90000019300174
	2000	85	**IZM97N3-U20CF-COM**	90000019300154	**IZM91N4-U20CF-COM**	90000019300175
	2500	85	**IZM97N3-U25CF-COM**	90000019300155	**IZM91N4-U25CF-COM**	90000019300176
	3200	85	**IZM97N3-U32CF-COM**	90000019300156	**IZM91N4-U32CF-COM**	90000019300177
	4000	85				
	800	100	**IZM97H3-U08CF-COM**	90000019300157	**IZM91H4-U08CF-COM**	90000019300178
	1000	100	**IZM97H3-U10CF-COM**	90000019300158	**IZM91H4-U10CF-COM**	90000019300179
	1250	100	**IZM97H3-U12CF-COM**	90000019300159	**IZM91H4-U12CF-COM**	90000019300180
	1600	100	**IZM97H3-U16CF-COM**	90000019300160	**IZM91H4-U16CF-COM**	90000019300181
	2000	100	**IZM97H3-U20CF-COM**	90000019300161	**IZM91H4-U20CF-COM**	90000019300182
	2500	100	**IZM97H3-U25CF-COM**	90000019300162	**IZM91H4-U25CF-COM**	90000019300183
	3200	100	**IZM97H3-U32CF-COM**	90000019300163	**IZM91H4-U32CF-COM**	90000019300184
IZM97	4000	100				
	4000	85	**IZM99N3-U40CF-COM**	90000019300203	**IZM91N4-U40CF-COM**	90000019300209
	5000	85	**IZM99N3-U50CF-COM**	90000019300204	**IZM91N4-U50CF-COM**	90000019300210
	6300	85	**IZM99N3-U63CF-COM**	90000019300205	**IZM91N4-U63CF-COM**	90000019300211
	4000	100	**IZM99H3-U40CF-COM**	90000019300206	**IZM91H4-U40CF-COM**	90000019300212
	5000	100	**IZM99H3-U50CF-COM**	90000019300207	**IZM91H4-U50CF-COM**	90000019300213
	6300	100	**IZM99H3-U63CF-COM**	90000019300208	**IZM91H4-U63CF-COM**	90000019300214

Equipment supplied as standard includes: breaking/closing releases(220VAC), motor operator (220VAC)， trip indication auxiliary contact (2a2b), auxiliary contract (4a4b), sealed door escutcheon, terminals, power supply (only for U and P type releases), 91 with MODBUS communication function, 97-99 with INCOM communication functions, handler

Withdrawable

	Rated operational current I_n (A)	Switching capacity I_{cu}(kA)	U 3P Type No.	3P Article No.	U 4P Type No.	4P Article No.
	Overview: With 97-99, if converting from INCOM protocol to MODBUS protocol, protocol converter IZM-DTUP –MOD is needed. One protocol converter can connect up to 32 circuit breakers					
IZM97	630	42	**IZM91B3-U06CW-COM**	90000019300001	**IZM91B4-U06CW-COM**	90000019300016
	800	42	**IZM91B3-U08CW-COM**	90000019300002	**IZM91B4-U08CW-COM**	90000019300017
	1000	42	**IZM91B3-U10CW-COM**	90000019300003	**IZM91B4-U10CW-COM**	90000019300018
	1250	42	**IZM91B3-U12CW-COM**	90000019300004	**IZM91B4-U12CW-COM**	90000019300019
	1600	42	**IZM91B3-U16CW-COM**	90000019300005	**IZM91B4-U16CW-COM**	90000019300020
	630	50	**IZM91N3-U06CW-COM**	90000019300006	**IZM91N4-U06CW-COM**	90000019300021
	800	50	**IZM91N3-U08CW-COM**	90000019300007	**IZM91N4-U08CW-COM**	90000019300022
	1000	50	**IZM91N3-U10CW-COM**	90000019300008	**IZM91N4-U10CW-COM**	90000019300023
	1250	50	**IZM91N3-U12CW-COM**	90000019300009	**IZM91N4-U12CW-COM**	90000019300024
	1600	50	**IZM91N3-U16CW-COM**	90000019300010	**IZM91N4-U16CW-COM**	90000019300025
	630	65	**IZM91H3-U06CW-COM**	90000019300011	**IZM91H4-U06CW-COM**	90000019300026
	800	65	**IZM91H3-U08CW-COM**	90000019300012	**IZM91H4-U08CW-COM**	90000019300027
	1000	65	**IZM91H3-U10CW-COM**	90000019300013	**IZM91H4-U10CW-COM**	90000019300028
IZM97	1250	65	**IZM91H3-U12CW-COM**	90000019300014	**IZM91H4-U12CW-COM**	90000019300029
	1600	65	**IZM91H3-U16CW-COM**	90000019300015	**IZM91H4-U16CW-COM**	90000019300030
	800	65	**IZM91B3-U08CW-COM**	90000019300101	**IZM91B4-U08CW-COM**	90000019300122
	1000	65	**IZM91B3-U10CW-COM**	90000019300102	**IZM91B4-U10CW-COM**	90000019300123
	1250	65	**IZM91B3-U12CW-COM**	90000019300103	**IZM91B4-U12CW-COM**	90000019300124
	1600	65	**IZM91B3-U16CW-COM**	90000019300104	**IZM91B3-U16CW-COM**	90000019300125
	2000	65	**IZM91B3-U20CW-COM**	90000019300105	**IZM91B3-U20CW-COM**	90000019300126
	2500	65	**IZM97B3-U25CW-COM**	90000019300106	**IZM97B4-U25CW-COM**	90000019300127
	3200	65	**IZM97B3-U32CW-COM**	90000019300107	**IZM97B4-U32CW-COM**	90000019300128
	4000	65	**IZM97B3-U40CW-COM**	90000019300185	**IZM97B4-U40CW-COM**	90000019300188
	800	85	**IZM97N3-U08CW-COM**	90000019300108	**IZM97N4-U08CW-COM**	90000019300129
	1000	85	**IZM97N3-U10CW-COM**	90000019300109	**IZM97N4-U10CW-COM**	90000019300130
	1250	85	**IZM97N3-U12CW-COM**	90000019300110	**IZM97N4-U12CW-COM**	90000019300131
	1600	85	**IZM97N3-U16CW-COM**	90000019300111	**IZM97N4-U16CW-COM**	90000019300132
	2000	85	**IZM97N3-U20CW-COM**	90000019300112	**IZM97N4-U20CW-COM**	90000019300133
	2500	85	**IZM97N3-U25CW-COM**	90000019300113	**IZM97N4-U25CW-COM**	90000019300134
	3200	85	**IZM97N3-U32CW-COM**	90000019300114	**IZM97N4-U32CW-COM**	90000019300135
	4000	85	**IZM97B3-U40CW-COM**	90000019300186	**IZM97B4-U40CW-COM**	90000019300189
	800	100	**IZM97H3-U08CW-COM**	90000019300115	**IZM97H4-U08CW-COM**	90000019300136
	1000	100	**IZM97H3-U10CW-COM**	90000019300116	**IZM97H4-U10CW-COM**	90000019300137
	1250	100	**IZM97H3-U12CW-COM**	90000019300117	**IZM97H4-U12CW-COM**	90000019300138
	1600	100	**IZM97H3-U16CW-COM**	90000019300118	**IZM97H4-U16CW-COM**	90000019300139
	2000	100	**IZM97H3-U20CW-COM**	90000019300119	**IZM97H4-U20CW-COM**	90000019300140
	2500	100	**IZM97H3-U25CW-COM**	90000019300120	**IZM97H4-U25CW-COM**	90000019300141
IZM99	3200	100	**IZM97H3-U32CW-COM**	90000019300121	**IZM97H4-U32CW-COM**	90000019300142
	4000	100	**IZM97B3-U40CW-COM**	90000019300187	**IZM97H4-U40CW-COM**	90000019300190
	4000	85	**IZM99N3-U40CW-COM**	90000019300191	**IZM99N4-U40CW-COM**	90000019300197
	5000	85	**IZM99N3-U50CW-COM**	90000019300192	**IZM99N4-U50CW-COM**	90000019300198
	6300	85	**IZM99N3-U63CW-COM**	90000019300193	**IZM99N4-U63CW-COM**	90000019300199
	4000	100	**IZM99H3-U40CW-COM**	90000019300194	**IZM99H4-U40CW-COM**	90000019300200
	5000	100	**IZM99H3-U50CW-COM**	90000019300195	**IZM99H4-U50CW-COM**	90000019300201
	6300	100	**IZM99H3-U63CW-COM**	90000019300196	**IZM99H4-U63CW-COM**	90000019300202

Equipment supplied as standard includes: breaking/closing releases(220VAC), motor operator (220VAC), trip indication auxiliary contact (2a2b), auxiliary contract (4a4b), sealed door escutcheon, terminals, power supply (only for U and P type releases), 91 with MODBUS communication function, 97-99 with INCOM communication functions, cassette, shutter protection, Arcflash chamber cover, handler.

1

Example of equipment supplied as standard for IZM91

CF: Example for fixed circuit breaker IZM91B3-V16CF

Part No	Article No.	Example description
IZM91B3-V16F	128709	Fixed circuit breaker basic device (with 2a2b auxiliary contact, without horizontal traverses)
+IZMX-M16-230AD	124267	Motor operator 220-240 VAC/DC
+IZMX-ST230AD	123729	Shunt release 220-240 VAC/DC
+IZMX-SR230AD	123741	Closing release 220-240 VAC/DC
+IZMX-AS22	123880	Auxiliary contact 2a2b
+IZMX-OTS	123888	Trip signal auxiliary indication contact 2CO
IZMX-THV163	124181	Horizontal traverse

CW: Example for withdrawable circuit breaker IZM91B3-U16CW

Part No	Article No.	Example description
IZM91B3-U16W	128564	Fixed circuit breaker basic device (with 2a2b auxiliary contact, without horizontal traverses
+IZMX-M16-230AD	124267	Motor operator 220-240 VAC/DC
+IZMX-ST230AD	123729	Shunt release 220-240 VAC/DC
+IZMX-SR230AD	128741	Closing release 220-240 VAC/DC
+IZMX-AS22	123880	Auxiliary contact 2a2b
+IZMX-OTS	123888	Trip signal auxiliary indication contact 2CO
IZMX-CAS163-1600	101536	Cassette (with arc reduction shutter and handler)
+IZMX-SH163	101541	Protection shutter
+IZMX-THV163	124181	Horizontal traverse
EASY400-POW	212319	Incoming power supply module 220VAC (only for U type release)

Example of equipment supplied as standard for IZM97, 99

CF: Example for fixed circuit breaker IZM97B3-V16CF

Part No	Article No.	Example description
IZM97B3-V16F	126227	Fixed circuit breaker basic device (with 2a2b auxiliary contact, without horizontal traverses)
+IZM-M230AC	122734	Motor operator 220-250VAC
+IZM-ST230AD	122739	Shunt release 208-250 VAC/DC
+IZM-SR230AD	122747	Closing release 208-250 VAC/DC
+IZM-AS22	122758	Auxiliary contact 2a2b
+IZM-OTS	122762	Trip signal auxiliary indication contact 2CO

CW: Example for withdrawable circuit breaker IZM97B3-U16CW

Part No	Article No.	Example description
IZM97B3-U16W	126621	Fixed circuit breaker basic device (with 2a2b auxiliary contact, without horizontal traverses
+IZM-DTU-HA2	122779	High load alarming
+IZM-M230AC	122734	Motor operator 220-250VAC
+IZM-ST230AD	122739	Shunt release 208-250 VAC/DC
+IZM-SR230AD	122747	Closing release 208-250 VAC/DC
+IZMX-AS22	122758	Auxiliary contact 2a2b
+IZM-OTS	122762	Trip signal auxiliary indication contact 2CO
+IZM-CAS323-2000	122066	Cassette (with arc reduction shutter and handler)
+IZM-SH323	122722	Protection shutter
+IZM-DTU-NC	122790	Incoming power supply module 220VAC (only for U type release)

Notes:
1. If IZM97-99…-U…220VAC) is selected, then high load alarming must be ordered (+IZM-DTU-HA2)
2. If IZM97-99…-P…220VAC) is selected, then high load alarming must be ordered (+IZM-DTP2)
3. If withdrawer or cassette of circuit breaker is selected, then protection shutter must be ordered.

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