



Allen-Bradley

Plastic Enclosure for DOL and Reversing Starters with Motor Protection Circuit Breaker

Application Instruction

ATTENTION:

To prevent electrical shock, disconnect from power source before installing or servicing. To be commissioned and maintained only by qualified personnel; pay attention to the operating instructions!

The opening of the branch circuit protective device may be an indication that a fault current has been interrupted. To reduce the risk of fire or electric shock, current-carrying parts and other components of the starter should be examined and replaced if damaged.

When wired for 2-wire control, a motor connected to the circuit may start automatically when the overload relay is in the automatic reset position.

When wired for 2-wire control, a motor connected to the circuit may start when a person actuates the RESET push button.

198E-C0C4R

IEC / EN 62208

IEC / EN 60947-4-1

UL 508

CSA 22.2, No. 14

Kunststoffgehäuse für DOL- und Wendestarter mit Motorschutz-Leistungscalter

Anwendungsanweisung

ACHTUNG:

Vor Installations- oder Servicearbeiten Stromversorgung unterbrechen, um Unfälle zu vermeiden.

Inbetriebsetzung und Wartung nur durch Fachpersonal; Betriebsanleitung beachten!

Das Ansprechen eines Schutzgeräts kann auf einen aufgetretenen Kurzschluss hinweisen. Um Risiken wie Feuer oder Stromschlag zu vermeiden sollten die Starterkomponenten überprüft und gegebenenfalls ersetzt werden.

Bei Startern mit Dauerkontaktsteuerung kann ein Motor automatisch starten, wenn das Motorschutzrelais auf automatische Rückstellung eingestellt ist.

Bei Startern mit Dauerkontaktsteuerung kann ein Motor automatisch starten, wenn nach einer Auslösung des Motorschutzrelais die Rückstelltaste betätigt wird.



Boîtier plastique pour démarreur direct et inverseur avec disjoncteur de protection de moteur

Notice d'application

ATTENTION:

Avant le montage et la mise en service, couper l'alimentation secteur afin d'éviter tout accident. Mise en service et entretien: seulement par du personnel spécialisé; respecter les instructions d'exploitation!

Le déclenchement d'un dispositif de protection peut indiquer qu'un court-circuit s'est produit. Pour éviter des risques tels qu'un incendie ou un choc électrique, les éléments du démarreur devraient être contrôlés et remplacés si nécessaire.

Si la commande de démarrage est réalisée avec un contact permanent, le moteur peut démarrer automatiquement lorsque le relais de surcharge est en mode de réarmement automatique.

Si la commande de démarrage est réalisée avec un contact permanent, le moteur peut démarrer lorsque, après déclenchement du relais de surcharge, le bouton de réinitialisation est actionné.

Custodie plasitce per avviatore diretto e invertitore con interruttore automatico

Istruzione d'applicazione

ATTENZIONE:

Per prevenire infortuni, togliere tensione prima dell'installazione o manutenzione. Messa in servizio e manutenzione devono essere effettuate solo da personale specializzato; attenersi alle istruzioni per l'esercizio!

L'intervento di un dispositivo di protezione può indicare che si è verificato un corto circuito. Per evitare rischi, quali incendi o scosse elettriche, i componenti dell'avviatore dovrebbero essere controllati e sostituiti se necessario.

Quando collegato con controllo a due fili, il motore connesso al circuito può avviarsi automaticamente se il relè è impostato su reset automatico.

Quando collegato con controllo a due fili, il motore connesso al circuito può avviarsi automaticamente se il pulsante di RESET del relè di sovraccarico viene premuto.

Cofre en plástico para arrancador directo e inversor con interruptor automático

Instrucciones de montaje

ATENCIÓN:

Desconectar la alimentación eléctrica antes de realizar el montaje, con el objeto de evitar accidentes. La puesta en servicio y el mantenimiento ha de realizarse exclusivamente por personal especializado; prestar atención a las instrucciones de montaje y puesta en marcha!

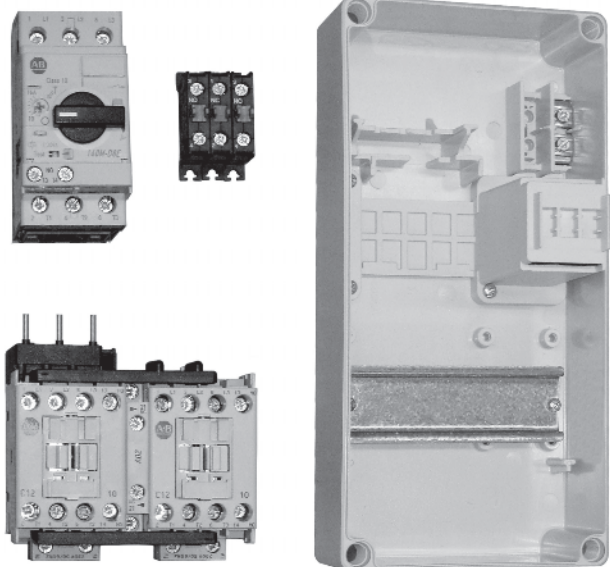
El disparo de un dispositivo de protección puede indicar que se ha producido un cortocircuito. Para evitar riesgos como incendio o descargas eléctricas, los componentes del arrancador deben ser examinados y reemplazados si fuera necesario.

Cuando el sistema de control es por contacto permanente, el motor se puede conectar automáticamente si el relé de sobrecarga tiene ajustado el rearme en posición de automático.

Cuando el sistema de control es por contacto permanente, después del disparo del relé térmico, el motor se puede conectar cuando se presiona el pulsador de RESET (rearme).

Assembly of Reversing Starters

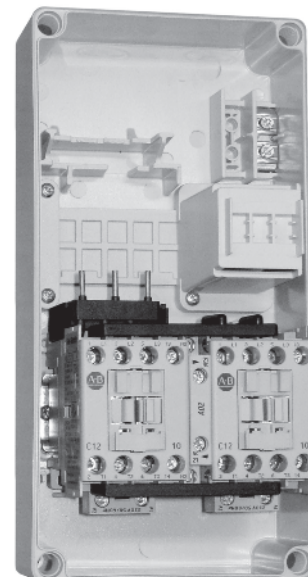
1



2



3



Assemble the reversing contactor:

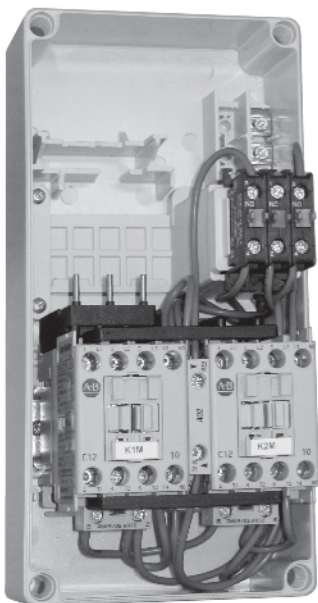
- Turn the coil terminals to the load side according the contactors instruction sheet.
- Place the mechanical interlock between contactors
- Insert the dovetail connector from rear side
- Attach the reversing connection on load side
- Attach the parallel connection and the Eco connection module on line side

The enclosure fits for both, the 140M-C and the 140M-D MPCB.

For the 140M-D, shorten the support by breaking off the 2 tabs.

Snap the reversing contactor onto the metal hat rail

4



5

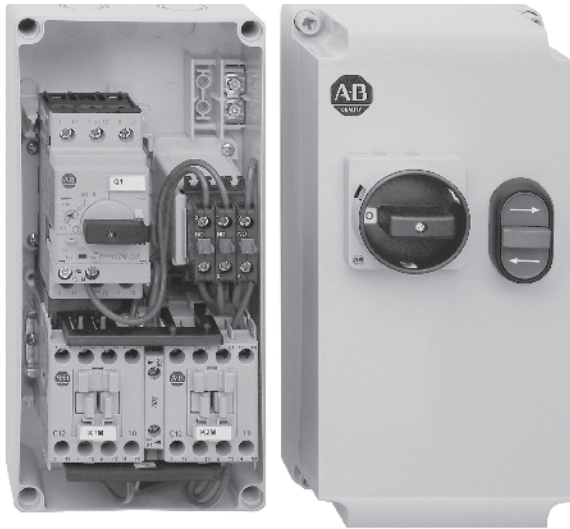


Snap the 800F contact blocks onto the device support:

- Pos. 2 (center): N.C. contact
 - Pos. 3 (left): N.O. contact
- Do the control wiring according the wiring diagram/wire table.

Prepare the MPCB by replacing the knob and adding the auxiliary:

- Remove original knob
- Remove front cover
- Add auxiliary and lockable twist knob



Attach the MPCB and complete the control wiring.
Mount the 800F push button operator and the MPCB rotary handle into the cover.

Component Selection for DOL and Reversing Starters

With Motor Protection Circuit Breaker 140M-C / -D

Setting Range [A]	IEC60947-4-1							COMB. MTR. CNTRL., UL 508 (TYPE F)						Components	
	400/415V AC			500V AC		690V AC		200V	230V	460V	575V	480Y/ 277V	600Y/ 347V		
	AC-3 [kW]	Type 1 Iq [kA]	Type 2 Iq [kA]	AC-3 [kW]	Type 1 Iq [kA]	AC-3 [kW]	Type 1 Iq [kA]	[HP]	[HP]	[HP]	[HP]	Iq [kA]	Iq [kA]	MPCB	Contactors *
0.1 - 0.16	-	65	65	0.06	65	0.06	50	-	-	-	-	65	47	140M-C2E-A16	100-C09 10
0.16 - 0.25	0.06	65	65	0.06	65	0.12	50	-	-	-	-	65	47	140M-C2E-A25	100-C09 10
0.25 - 0.4	0.09	65	65	0.12	65	0.18	50	-	-	-	-	65	47	140M-C2E-A40	100-C09 10
0.4 - 0.63	0.18	65	65	0.18	65	0.37	50	-	-	-	-	65	47	140M-C2E-A63	100-C09 10
0.63 - 1.0	0.25	65	65	0.37	65	0.55	50	-	-	-	1/2	65	47	140M-C2E-B10	100-C09 10
1.0 - 1.6	0.55	65	65	0.75	65	1.1	50	-	-	3/4	3/4	65	47	140M-C2E-B16	100-C09 10
1.6 - 2.5	0.75	65	50	1.1	50	1.8	8	1/2	1/2	1	1 1/2	65	30	140M-C2E-B25	100-C09 10
2.5 - 4.0	1.5	50	50	2.2	50	3	8	3/4	3/4	2	3	65	30	140M-C2E-B40	100-C09 10
2.5 - 4.0	1.5	65	65	2.2	50	3	10	3/4	3/4	2	3	65	30	140M-D8E-B40	100-C09 10
4.0 - 6.3	2.2	50	50	3	50	4	4	1	1 1/2	3	-	65	-	140M-C2E-B63	100-C09 10
4.0 - 6.3	2.2	65	65	3	50	4	50	1	1 1/2	3	5	65	30	140M-D8E-B63	100-C09 10
6.3 - 10	4	65	50	4	50	-	-	2	3	5	-	65	-	140M-C2E-C10	100-C09 10
6.3 - 10	4	65	65	4	50	-	-	2	3	5	7 1/2	65	30	140M-D8E-C10	100-C09 10
6.3 - 10	4	65	50	5.5	50	5.5	4	2	3	5	-	65	-	140M-C2E-C10	100-C12 10
6.3 - 10	4	65	65	5.5	65	5.5	50	2	3	5	7 1/2	65	30	140M-D8E-C10	100-C12 10
6.3 - 10	4	65	50	5.5	50	7.5	4	2	3	5	-	65	-	140M-C2E-C10	100-C16 10
6.3 - 10	4	65	65	5.5	65	7.5	50	2	3	5	7 1/2	65	30	140M-D8E-C10	100-C16 10
10 - 16	5.5	50	50	-	-	-	-	3	3	7 1/2	-	30	-	140M-C2E-C16	100-C12 10
10 - 16	5.5	65	65	-	-	-	-	3	3	7 1/2	10	65	30	140M-D8E-C16	100-C12 10
10 - 16	7.5	50	-	10	10	-	3	3	5	10	-	30	-	140M-C2E-C16	100-C16 10
10 - 16	7.5	65	-	10	50	-	6	3	5	10	10	65	30	140M-D8E-C16	100-C16 10

* To complete the cat. no., please replace with a coil voltage code.

Additional components

Description	Required	Quantity	Cat. No.
Mechanical / Electrical Interlock		1	100-MCA02
Power Wiring Kit for Reversing Starters		1	105-PW23
ECO Starter Connecting Module		1	140M-C-PEC23A
Actuator type G, Black/Grey, 90°		1	198-SHB
Lockable Twist Knob		1	140M-C-KN1
UL 508 Type E Spacing Module	¥	1	140M-C-TE1
Neutral Terminal	¥	1	198E-PNT

Control Components required for Impulse Control

Front-Mounted Auxiliary Contact for MPCB		1	140M-C-AFA10
Multi-Function Push Button Operator, 3 Functions, without Markings	‡	1	800FP-U3F3F34
Base Mounted Contact Block 1 N.C.		1	800F-BX01
Base Mounted Contact Block 1 N.O.		2	800F-BX10

Control Components required for Maintained Control

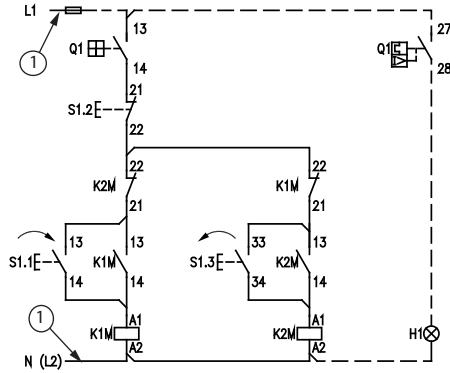
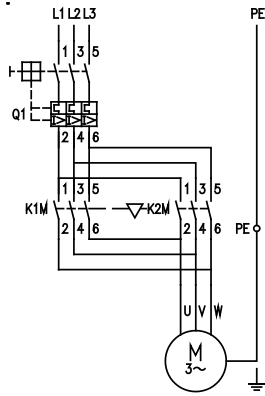
Front-Mounted Auxiliary Contact for MPCB		1	140M-C-AFA10
Selector Switch Operator, non-illuminated, 3-position	§	1	800FP-SM32
Base Mounted Contact Block 1 N.O.		2	800F-BX10

‡ For button caps with text or symbols, order the operator without cap (cat. no. 800FP-U3X). Caps are to be ordered separately.

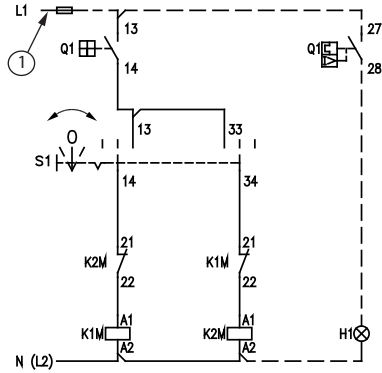
§ For legend plates and frames, please see catalog A116.

¥ For UL applications.

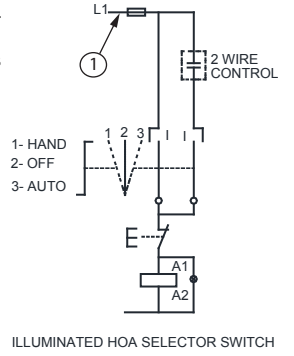
Schematic Diagram



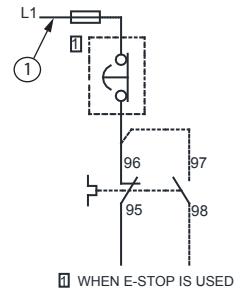
Impulse Control, Multi Function Push Button
 ① L1 control voltage supplied from external source.



Maintained Control, Selector Switch < O >



ILLUMINATED HOA SELECTOR SWITCH



CAUTION: BONDING BETWEEN METALLIC CONDUITS MUST BE PROVIDED. ATTENTION: UNE LIAISON ÉLECTRIQUE DOIT ÊTRE ASSURÉE ENTRE LES CONDUITS MÉTALLIQUES	SUPPLY CONDUCTOR SIZE (AWG) 14 12 10	BONDING CONDUCTOR QTY. 1 1 2	BONDING CONDUCTOR SIZE 14 12 12
	FOR USE WITH ALLEN-BRADLEY GROUNDING ADAPTER KIT, CAT. NO. 198-GR1		
	SEE APPLICABLE CODES AND LAW FOR GROUNDING REQUIREMENTS		
	PE		

Wiring Tables Impulse Control

From	To	Length mm
K1M - A2	K2M - A2	100
K1M - A1	K1M - 14	100
	S1 - 14	300
K2M - A1	K2M - 14	100
	S1 - 34	280
K2M - 22	K1M - 22	300
	S1 - 22	140
K2M - 21	K1M - 13	100
	S1 - 13	140
K2M - 13	K1M - 21	300
	S1 - 33	140
Q1 - 14	S1 - 21	180

Do this wiring before attaching the MPCB

Wiring Tables Maintained Control

From	To	Length mm
K1M - A2	K2M - A2	100
K1M - A1	K2M - 22	300
	K1M - 22	100
K1M - 21	S1 - 34	300
	S1 - 14	100
S1 - 13	S1 - 33	100
	Q1 - 14	180

Do this wiring before attaching the MPCB

Dimensions

