



Plastic Enclosures for DOL-Starters - Application Instruction
Kunststoffgehäuse für DOL-Starter - Anwendungsanweisung
Boîtiers plastiques pour démarreurs direct - Notice d'application
Custodie plasitce per avviatori diretto - Istruzione d'applicazione
Cofres em plástico para arrancadores directo - Instrucción d'applicazione

198E-A0S..
198E-C0S..



WARNING: 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!



WARNUNG: Vor Installations- oder Servicearbeiten Stromversorgung unterbrechen, um Unfälle zu vermeiden. Inbetriebsetzung und Wartung nur durch Fachpersonal; Betriebsanleitung beachten!



AVERTISSEMENT: 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!



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



ADVERTENCIA: Desconectar la alimentación eléctrica antes de realizar el montaje y la puesta en servicio, con el objeto de evitar accidentes. Puesta en servicio y mantenimiento exclusivamente por personal especializado; respetar las instrucciones de puesta en servicio y mantenimiento!

198E-A0S..

EN / IEC 62208
 EN / IEC 60947-4-1



198E-C0S..

EN / IEC 62208
 EN / IEC 60947-4-1
 UL 50
 UL 508
 CSA 22.2, No. 14



**START / STOP
 Push Buttons**



RESET Push Button

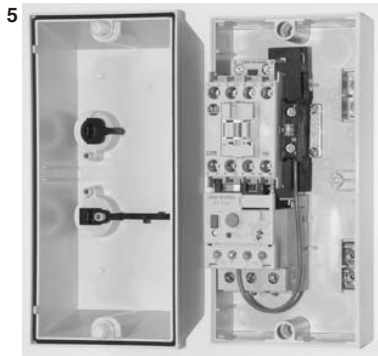
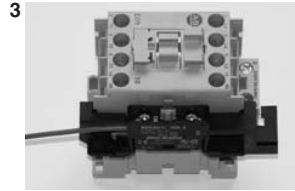
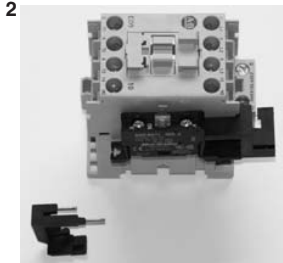
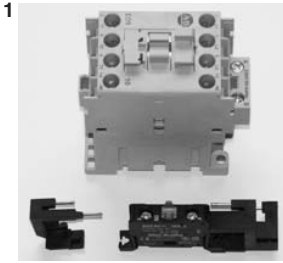


Options

Pilot Light (Run)
 Green

Pilot Light (Failure)
 red

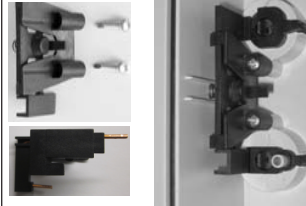
198E-A0S4 / -C0S4 with START / STOP Push Buttons



198E-A0S1 / -C0S1 with RESET Push Button



Accessories



198E-PLA

- Push button latch for maintained control
- Drucktasten-Verklankung fur Dauerkontakt-Steuerung
- Accrochage des bouton-poussoirs pour commande de contact permanent
- Ritenuta di pulsante per comando a contatto permanente
- Retenci3n de pulsador para mando a contacto permanente

198E-PNT

- Neutral Terminal
- Neutralleiterklemme
- Borne de neutre
- Morsetto di neutro
- Borna de neutro



USA + Canada: Use 800F Pilot Lights only

800FD-P...

- Pilot Lights
- Meldeleuchten
- Voyants lumineux
- Lampade spia
- Lamparas de sealizi3n



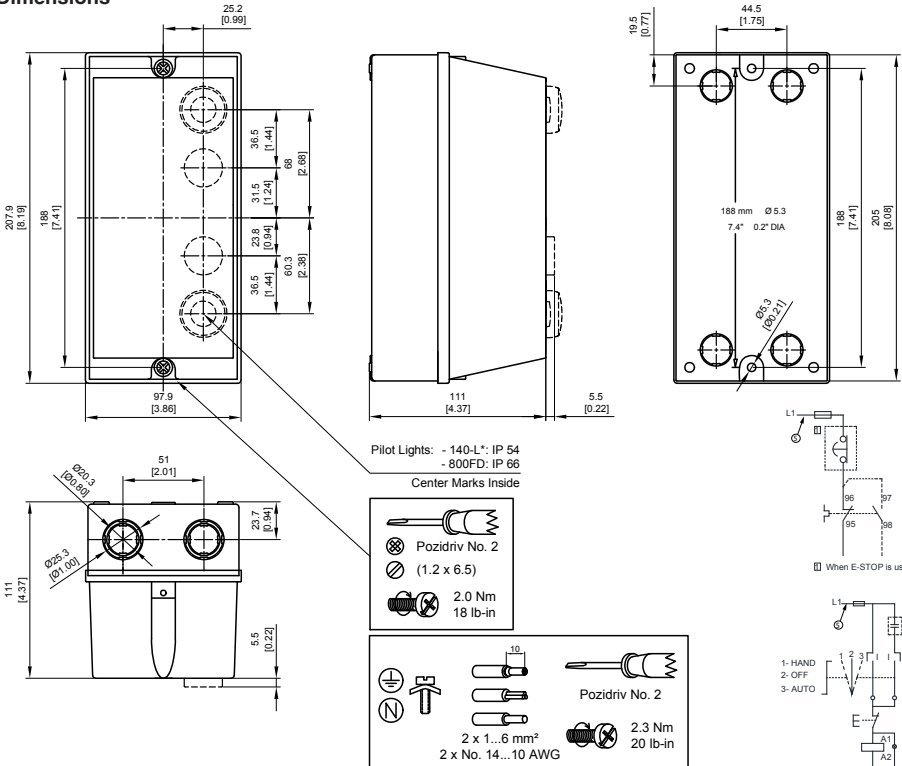
140-L...

(Not for UL or CSA applications)

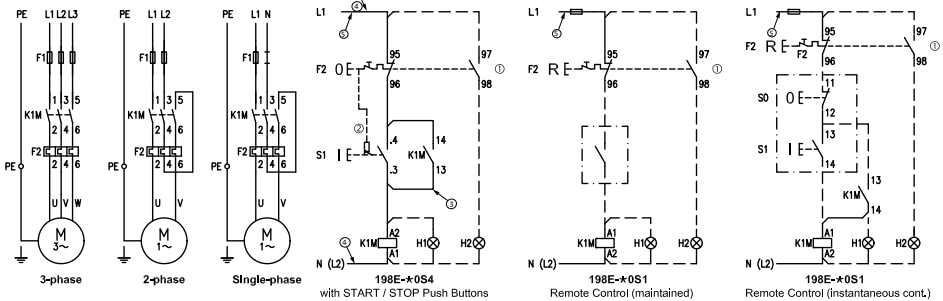
- Pilot Lights
- Meldeleuchten
- Voyants lumineux
- Lampade spia
- Lamparas de sealizi3n



Dimensions



Wiring Diagrams



198E-C0S..

cUL-US Listed Type 12K / 4 / 4X Enclosure

LISTED A191
IND. CONT. E.O.



WARNING: Bonding between metallic conduits must be provided.

AVERTISSEMENT: Une liaison électrique doit être assurée entre les conduits métalliques.

SUPPLY CONDUCTOR SIZE (AWG)	BONDING CONDUCTOR QTY.	SIZE
14	1	14
12	1	12
10	2	12

FOR USE WITH ALLEN-BRADLEY GROUNDING
ADAPTER KIT, CAT. NO. 198-GR1

SEE APPLICABLE CODES AND LAW
FOR GROUNDING REQUIREMENTS



WARNING: 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 controller should be examined and replaced if damaged.

WARNING: With the mechanical latch (Ⓜ) installed or 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.

Component Selection for Enclosed Starters

3-phase Motors

Components		Current Range		230V 50Hz	400V 50Hz	500V 50Hz	690V 50Hz	200V 60Hz	230V 60Hz	460V 60Hz	575V 60Hz	100kA, 690V	100kA, 600V
Contactor ¹⁾	Overload Relay ²⁾	Min A	Max A	kW	kW	kW	kW	HP	HP	HP	HP	DIN Fuses Type gL/gG	Max. Fuse Class CC, J
100-C09*10	193-ED1AB	0.10	0.50	0.06...0.09	0.06...0.12	0.06...0.12	0.06...0.18	--	--	--	--	2	3
100-C09*10	193-ED1BB	0.20	1.0	0.12	0.18...0.25	0.18...0.37	0.25...0.55	--	--	1/4...1/3	1/4...1/2	4	4
100-C09*10	193-ED1CB	1.0	5.0	0.18...1.1	0.37...1.5	0.55...2.2	0.75...3	1/4...3/4	1/4...1	1/2...2	3/4...3	16	10
100-C09*10	193-ED1DB	3.2	16	1.5...3	2.2...4	3.0...4	4	1...2	1 1/2...2	3...5	5...7 1/2	20	15
100-C12*10	193-ED1DB	3.2	16	4	5.5	5.5	5.5	3	3	7 1/2	10	25	20
100-C16*10	193-ED1DB	3.2	16		7.5	7.5	7.5	3	3	7 1/2	10	32	30
100-C16*10	193-ED1EB	5.7	27	5.5				5	5	10	15	35	45
100-C23*10	193-ED1EB	5.7	27	7.5	10...11	10...13	10	5	7 1/2	15	15	40	45
100-C09*10	193-T1AA16	0.10	0.16				0.06	--	--	--	--	2	1
100-C09*10	193-T1AA25	0.16	0.25		0.06	0.06	0.09	--	--	--	--	2	1
100-C09*10	193-T1AA40	0.25	0.40		0.09	0.09...0.12	0.12...0.18	--	--	--	--	2	1
100-C09*10	193-T1AA50	0.35	0.50	0.06	0.12			--	--	--	--	4	2
100-C09*10	193-T1AA63	0.45	0.63	0.09		0.18	0.25	--	--	--	1/4	4	3
100-C09*10	193-T1AA80	0.55	0.80	0.12	0.18	0.25	0.37	--	--	1/4...1/3	1/3	4	3
100-C09*10	193-T1AB10	0.75	1.00		0.25	0.37	0.55	--	--	1/3	1/2	6	4
100-C09*10	193-T1AB13	0.90	1.30	0.18	0.37		0.75	--	--	1/2		6	4
100-C09*10	193-T1AB16	1.10	1.6	0.25		0.55		1/4	1/3	3/4	3/4	6	4
100-C09*10	193-T1AB20	1.40	2.0		0.75	0.75	1.1	1/3	1/3	3/4...1	1	6	4
100-C09*10	193-T1AB25	1.80	2.5	0.37		1.1	1.5		1/2		1 1/2	10	6
100-C09*10	193-T1AB32	2.3	3.2	0.55	1.1	1.5	2.2	1/2	3/4	1 1/2	2	10	6
100-C09*10	193-T1AB40	2.9	4.0	0.75	1.5			3/4	3/4	2	3	10	10
100-C09*10	193-T1AB48	3.5	4.8			2.2	3	1	1	3	3	10	10
100-C09*10	193-T1AB63	4.5	6.3	1.1	2.2	3	4	1 1/2	1 1/2		5	16	12
100-C09*10	193-T1AB75	5.5	7.5	1.5	3	4		1 1/2...2	2	5	5	16	15
100-C09*10	193-T1AC10	7.2	10.0	2.2	4			2			7 1/2	20	20
100-C09*10	193-T1AC12	9.00	12.5	3								25	20
100-C12*10	193-T1AB75	5.5	7.5				5.5					16	15
100-C12*10	193-T1AC10	7.2	10.0			5.5						20	20
100-C12*10	193-T1AC12	9.00	12.5		5.5							25	20
100-C16*10	193-T1AC10	7.2	10.0				7.5					20	20
100-C16*10	193-T1AC12	9.00	12.5			7.5						25	20
100-C16*10	193-T1AC16	11.3	16.0	4	7.5	7.5				5	10	32	30
100-C16*10	193-T1AC20	15.0	20.0					5			15	32	30
100-C23*10	193-T1AC16	11.3	16.0				10					32	30
100-C23*10	193-T1AC20	15.0	20.0			11						40	35
100-C23*10	193-T1AC21	17.50	21.5	5.5		13				15		40	35
100-C23*10	193-T1AC25	21.00	25.0		11				7 1/2			40	40

Single-phase Motors

Components		Current Range		230V 50Hz	115V 60Hz	200V 60Hz	230V 60Hz	100kA, 690V	100kA, 600V
Contactor ¹⁾	Overload Relay ²⁾	Min A	Max A	kW	HP	HP	HP	DIN Fuses Type gL/gG	Max. Fuse Class CC, J
100-C09*10	193S-EEPB	1.0	5.0	0.12...0.55	1/10...1/6	1/6...1/3	1/6...1/3	16	10
100-C09*10	193S-EERB	3.2	16	0.75...1.5	1/4...1/2	1/2...1 1/2	1/2...1 1/2	20	20
100-C12*10	193S-EERB	3.2	16	2.2	1/2	2	2	25	25
100-C16*10	193S-EERB	3.2	16	2.2	3/4	2	2	32	25
100-C16*10	193S-EESB	5.4	27	3.0	1	2	3	35	30
100-C23*10	193S-EESB	5.4	27	4.0	1 1/2...2	3	3	40	40
100-C09*10	193-T1AA16	0.10	0.16	--	--	--	--	2	1
100-C09*10	193-T1AA25	0.16	0.25	--	--	--	--	2	1
100-C09*10	193-T1AA40	0.25	0.40	--	--	--	--	2	1
100-C09*10	193-T1AA50	0.35	0.50	--	--	--	--	4	2
100-C09*10	193-T1AA63	0.45	0.63	--	--	--	--	4	3
100-C09*10	193-T1AA80	0.55	0.80	0.06	--	--	--	4	3
100-C09*10	193-T1AB10	0.75	1.0	0.09	--	--	--	6	4
100-C09*10	193-T1AB13	0.90	1.3	0.12	--	--	--	6	4
100-C09*10	193-T1AB16	1.1	1.6	0.12	--	--	--	6	6
100-C09*10	193-T1AB20	1.4	2.0	0.18	--	--	--	6	6
100-C09*10	193-T1AB25	1.8	2.5	0.25	--	--	1/6	10	10
100-C09*10	193-T1AB32	2.3	3.2	0.37	1/10	1/6	1/4	10	10
100-C09*10	193-T1AB40	2.9	4.0	0.37	1/8	1/4	1/3	10	10
100-C09*10	193-T1AB48	3.5	4.8	0.55	1/6	1/3	1/3	10	10
100-C09*10	193-T1AB63	4.5	6.3	0.75	1/4	1/2	1/2	16	15
100-C09*10	193-T1AB75	5.5	7.5	1.1	1/3	3/4	3/4	16	15
100-C09*10	193-T1AC10	7.2	10.0	1.1	1/3	3/4...1	1	20	20
100-C09*10	193-T1AC12	9.0	12.5	1.5	1/2	1 1/2	1 1/2	25	20
100-C16*10	193-T1AC16	11.3	16.0	2.2	3/4	2	2	32	30
100-C16*10	193-T1AC20	15.0	20.0	3	1		3	32	30
100-C23*10	193-T1AC21	17.5	21.5	3	1 1/2	3		40	35
100-C23*10	193-T1AC25	21.0	25.0		2			40	35

¹⁾ Contactors
To complete the Catalog No., replace * by the coil voltage code

²⁾ Overload Relays
193-ED1*: Electronic overload relays (193-EE* can be used as well).
193S-EE*: Electronic overload relays specially for single-phase motors
Max. environmental temperature 40 °C (outside the enclosure)

193-T1*: Thermal overload relays.
Max. environmental temperature 40 °C (outside the enclosure)