

Crane Control Class 6140

Catalog

17



CRANE CONTROL
CLASS 6140

CONTENTS

Description	Page
Pricing and Ordering Information	74
Application Data	75
Wiring Diagram	76



The Electric Controller and
Manufacturing Company, LLC

Crane Control Class 6140

Frontline® Manual-Magnetic Disconnect Switches for DC Cranes



**Class 6140 Type MHS11
Manual and Magnetic
Disconnect Switch**

PRICING AND ORDERING INFORMATION

The manual-magnetic disconnect switch is used for protecting electrical crane circuits except lifting magnet circuits. It meets OSHA requirements for a crane disconnect switch.

- Contactors operated remotely or by handle on the enclosure
- Flange mounted operator permits operation only with door closed

The standard disconnect switch consists of:

- 2 Class 7004 Type M, Form Y781 (with silver-faced power contact tips), SPNO contactors. The contactors are mechanically tied. One normally open and one normally closed electrical interlocks are included for indicating lights.
- 1 Two pole, fused, control circuit knife switch.
- 1 Class 9999 Type AI-1 arc suppressor.
- 1 Set of incoming and outgoing power lugs.
- 1 Class 7001 relay only on NEMA Sizes 6, 8, and on 1600 and 2700 A devices.

VDC	Contactors NEMA Size	Continuous Ampere Rating	General Purpose Enclosure NEMA Type 1 Gasketed		Industrial Enclosure NEMA Type 12 Outdoor Enclosure NEMA Type 3R	
			Type		Type	
230	4	150	MFS11		MFA11	
	5	300	MGS11		MGA11	
	5A★	400	MGAS11		MGAA11	
	6	600	MHS11		MHA11	
	6A★	800	MHAS11		MHAA11	
	8	1350	MKS11		MKA11	
	...	1600	▲		▲	
	...	2700	▲		▲	

- ▲ Consult factory for price and delivery.
- ★ Not a NEMA size/rating.

Controller Modifications

Form	Description	Price				
		Continuous Ampere Rating				
		150	300	400	600	1350
F30 ■	2 Main-line, DC-rated power fuses	X	X	X	X	X
A3	"On-Off" pushbutton	X	X	X	X	X
P1	Red "On" pilot light	X	X	X	X	X
P2	Green "Off" pilot light	X	X	X	X	X

- Customer must specify fuse rating in amperes. If not specified, fuse will be sized for maximum current rating of switch.

Pilot Devices

For separately mounted pilot devices refer to Class 9001.

Ordering Information Required:

1. Class
2. Type
3. Controller Modifications: Specify Form Numbers

**Class 6440 Manual-Magnetic Disconnect Switches for AC cranes are also available.
Consult factory.**

SCH	A
-----	---



Crane Control Class 6140

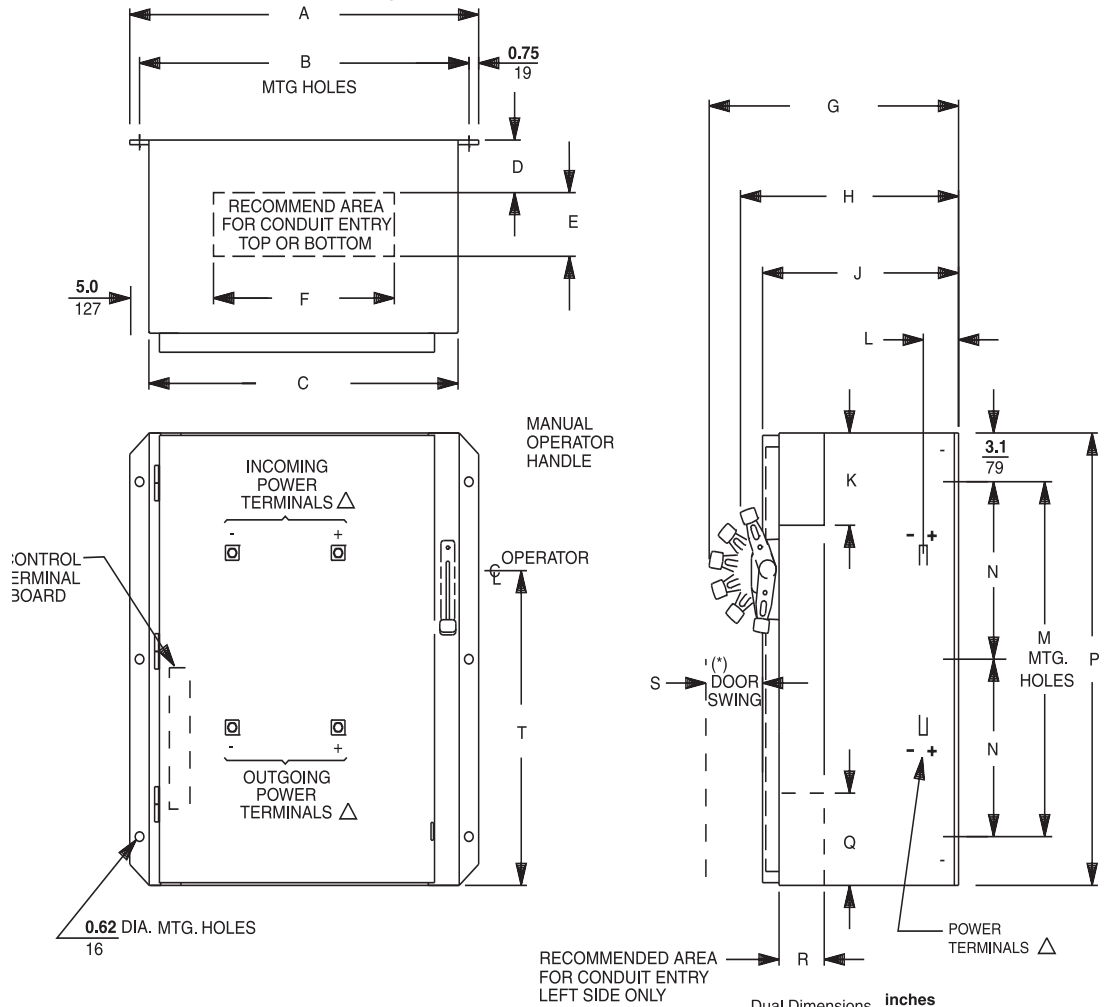
Frontline® Manual-Magnetic Disconnect Switches for DC Cranes

APPLICATION DATA

Disconnect Switch Selection

When applied to cranes, the continuous ampere rating of the disconnect switch shall not be less than 50% of the combined short time ampere rating of all motors on the crane, nor less than 75% of the short time ampere rating of the motors applied for any single crane motion.

Approximate Dimension and Weights



NEMA SIZE	CONTINUOUS AMPERE RATING	A	B	C	D	E	F	G	H	J	K	L	M	N	P	P•	Q	R	S	T	Weight lbs (kg)
4	150	27 686	25.5 648	24 610	3.5 89	4.5 114	10 254	20.8 528	17 432	15 381	3 76	4.5 114	26 660	▲	32.2 818	38 965	3 76	3.5 89	19 483	20.5 521	165 (75)
5	300	30 762	28.5 724	27 686	3.5 89	4.5 114	14 356	20.8 528	17 432	15 381	3 76	5.5 140	36 914	▲	42.2 1072	50 1270	3 76	3.5 89	22 559	26.7 678	235 (106.8)
5A★	400																				
6	600	33 838	31.5 800	30 762	5 127	8 203	18 457	25.8 655	22 559	20 508	14 356	7.2 183	42 1067	▲	48.2 1224	60 1524	14 356	7 178	25 635	24.5 622	405 (184.9)
6A★	800	45 1143	43.5 1105	42 1067	5 127	8 203	18 457	32 813	23.2 589	20 508	14 356	7.2 183	42 1067	▲	48.2 1224	60 1524	14 356	3.5 89	19 483	28 711	480 (217.7)
8	1350	39 991	37.5 953	36 914	5 127	9 229	19 483	29.8 757	26 660	24 610	16 406	7.8 198	54 1372	27 686	60.2 1529	69 1753	16 406	10 254	20 508	31 787	740 (336.4)

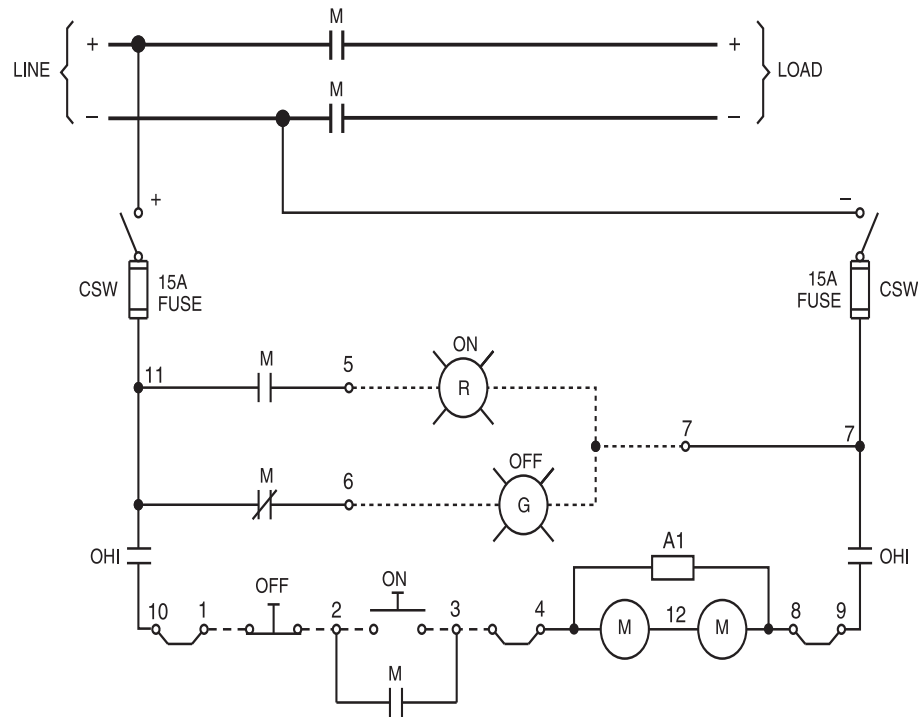
- ▲ Center mounting holes not supplied.
- Height with fuses (Form F30)
- ★ Not a NEMA size/rating.

For dimensions of 1600 and 2700 A disconnect switches, consult factory.



Crane Control Class 6140
Frontline® Manual-Magnetic Disconnect Switches for DC Cranes

ELEMENTARY WIRING DIAGRAM



Pilot Device Selection

The pilot device should be selected so the current rating is adequate for controlling the disconnect switch. For coil operating currents refer to Class 9998 Coil Data catalog sheet.

Contactor coils for NEMA Sizes 4 and 5 disconnect switches are controlled directly by the pilot device. An arc suppressor is supplied as standard.

An interposing relay is standard on NEMA Sizes 6, 7 and 8 disconnect switches. An arc suppressor may be required depending upon the rating of the pilot device.

Contactor coils on the 1600 and 2700 A disconnect switches are controlled by interposing relays. An arc suppressor may be required depending upon the rating of the pilot device.