

Hubbell Industrial Controls, Inc.

DC Magnetic Contactor

Crane and Mill Duty

5210

Catalog & Price List 5210 • April 2013, Replaces Aug. 2012

Application

The Type 5210 DC contactor is used for heavy duty DC industrial applications such as DC cranes, steel mills, magnet controllers, starters, mill auxiliary controllers, manual-magnetic disconnect switches and as line contactors or dynamic braking contactors for solid state drives.

Description

Available in NEMA size 1-8, normally open and normally closed. Rugged Euclid™ contactors feature many unique design and engineering advancements that greatly simplify applications, installations and servicing over 75 years of experience in design as well as manufacturing has been incorporated into these highly reliable units.

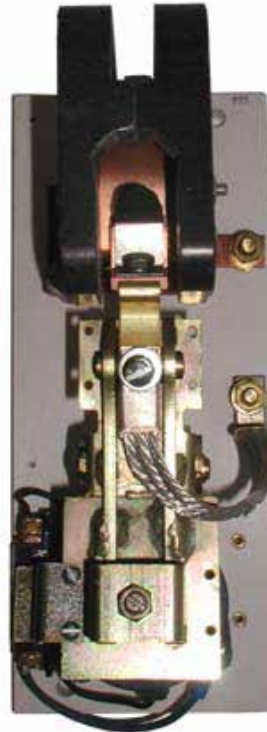
Features

The Contactor line uses the latest technology in molded plastic materials for those parts requiring insulating qualities and strength.

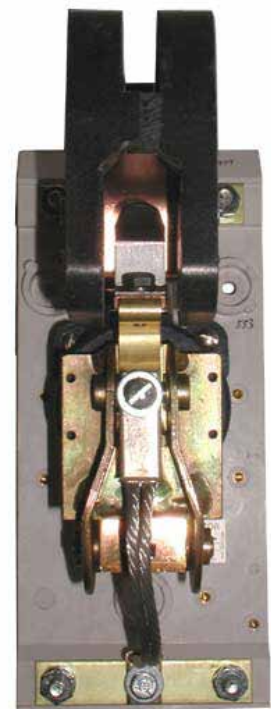
- Convenient DIRECT-WIRING for Right or Left Hand Power Connections, Rugged Terminals on both sides for all power connections.
- Completely front-connected, front removable "deadback" base design eliminates all nuts and bolts as well as live parts on the back of the base. There is easy access to every part of the contactor.
- Encapsulated Magnet Coil. Operating coils are designed in accordance with NEMA standards to withstand 110% of rated voltage continuously and to operate the contactor successfully at 80% of rated voltage. Standard coil voltages are 115 VDC and 230 VDC. For other coil voltages consult the factory.
- Corrosion resistant, durable, welded steel construction armature assembly incorporates stainless steel spring as well as stainless steel hinge pin providing long mechanical life.
- Hinged Arc-Shield for easy inspection and replacement of contactor tips. Power contact tips.
- Copper contact tips are standard. Silver-faced tips are available and are recommended for applications where the contactors remain closed for extended periods of time, such as manual magnetic disconnect switches. Silver/tungsten/carbide tips are available for hard service applications.

Accessories

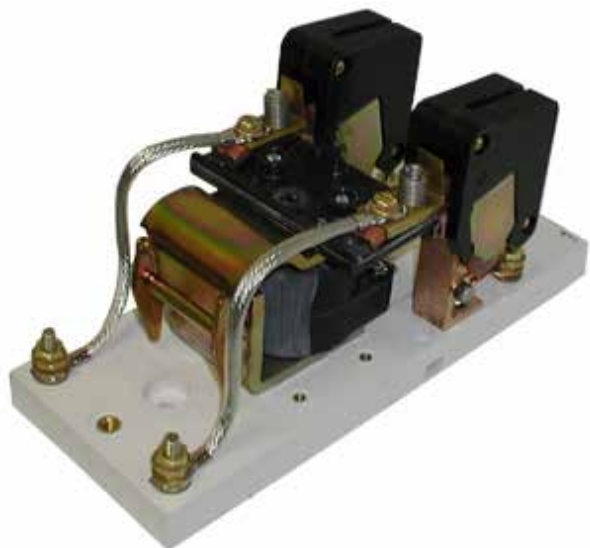
- Auxiliary Electrical Contact Blocks can be mounted on either the right or left hand side of the main contactor. Contacts are bridge-type, double-breaking, silver-cadmium oxide. Units can be "stacked" two deep, for multi-circuit arrangements. Auxiliary Electrical Contacts can be supplied in a kit form consisting of one contact block housing one (1) normally open and one (1) normally closed set of contacts in a common assembly, one knocker, plus the necessary mounting hardware.
- Multi-pole contactors. The size 1 and 2 normally open contactors are available with one, two or three poles. Two pole, normally open size 3-8 contactors can be built by ordering two single pole normally open contactors with half-voltage operating coils and one tie bar kit. The two coils must be wired in series.
- Reversing contactors. Reversing contactors (two single pole or two double pole) contactors can be built by adding a horizontal mechanical interlock between the two single pole normally open or double pole tied normally open contactors mounted side by side.



*NEMA Size 3
Normally Closed*



*NEMA Size 3
Normally Open*



NEMA Size 1 2-Pole Normally Open



Contactor Ratings Maximum 600 VDC 65°C Ambient			Standard 115 VDC & 230/250 VDC †			
NEMA Size	8 Hour Open DC Amperes	Intermittent Duty Rating DC Amperes	Operating Voltage	Number Of Main Poles	Part Number	List Price Discount Code EU
1	25	33	115 VDC	1 N.O.	HC59311-104	\$870
				2 N.O.	HC59312-104	\$1,357
				3 N.O.	HC59313-104	\$1,984
			230 VDC	1 N.O.	HC59311-108	\$870
				2 N.O.	HC59312-108	\$1,357
				3 N.O.	HC59313-108	\$1,984
2	50	67	115 VDC	1 N.C.	HC58870-016	\$1,705
				1 N.O.	HC59321-102	\$1,079
				2 N.O.	HC59322-102	\$1,844
			230 VDC	3 N.O.	HC59323-102	\$2,749
				1 N.O.	HC59321-104	\$1,079
				2 N.O.	HC59322-104	\$1,844
3 §	100	133	115 VDC	3 N.O.	HC59323-104	\$2,749
				1 N.C.	HC58871-010	\$1,810
				1 N.O.	HC59364-003	\$1,810
			230 VDC	1 N.C.	HC58867-111	\$2,436
				1 N.O.	HC59364-001	\$1,810
				1 N.C.	HC58867-112	\$2,436
4 §	150	200	115 VDC	1 N.O.	HC59345-003	\$2,192
				1 N.C.	HC58868-011	\$3,028
				1 N.O.	HC59345-001	\$2,192
			230 VDC	1 N.C.	HC58868-012	\$3,028
				1 N.O.	HC59495-002	\$2,993
				1 N.C.	HC58900-702	\$4,524
5 §	300	400	230 VDC	1 N.O.	HC59656-002	\$4,037
				1 N.C.	HC59501-702	\$6,090
5A* §	400	530	230 VDC	1 N.O.	HC59600-121	\$5,603
				1 N.C.	HC59600-994	\$8,317
6	600	800	230 VDC	1 N.O.	HC59700-131	\$9,918
				1 N.C.	HC59700-994	\$14,720
7	900	1200	230 VDC	1 N.O.	HC59800-111	\$11,240
				1 N.C.	HC59800-990	\$16,704
8	1350	1800	230 VDC	1 N.O.		
				1 N.C.		

* Hubbell rating

† Add \$175 List for non-standard Operating Voltages. Consult factory for panel numbers.

§ Size 3, 4, 5*, 5A N.O. contactors provided with steel mounting pan. Consult Factory for contactors without mounting pan.



Auxiliary Electrical Contact Kits **Discount Code EW**

NEMA Size (of main contactor)	Optional Auxiliary Contacts	Part Number	List Price Per Kit	Max. Number of Aux. Contact Blocks	
				Customer Install	Left
1 & 2 N.O.	1 N.O./N.C.	HC68011-003	\$348	1	1
3 & 4 N.O.	1 N.O./N.C.	HC68011-001	\$348	1	1
	2 N.O./N.C.	HC68011-002	\$696	1	1
5 & 5A N.O.	1 N.O./N.C.	HC68011-008	\$348	1	1
	2 N.O./N.C.	HC68011-009	\$696	1	1
6, 7 & 8 N.O.	1 N.O./N.C. (LH)	HC59620-006	\$406	1	0
	2 N.O./N.C. (LH)	HC59620-066	\$812	1	0
	1 N.O./N.C. (RH)	HC59620-106	\$406	0	1
	2 N.O./N.C. (RH)	HC59620-166	\$812	0	1
1 & 2 N.C.	1 N.O./N.C.	HC68011-003	\$348	1	1
3 & 4 N.C.	1 N.O./N.C.	HC68011-004	\$348	0	1
	2 N.O./N.C.	HC68011-005	\$696	0	1
5 & 5A N.C.	1 N.O./N.C.	HC68011-006	\$348	1	1
	2 N.O./N.C.	HC68011-007	\$696	1	1
6, 7 & 8 N.C.*	1 N.O./N.C.	HC59620-706*	\$406	1	0
	2 N.O./N.C.	HC59620-766*	\$812	1	0

* Size 3, 4, 5, 5A, 6, 7 & 8 N.C. contactors are supplied with one coil switching auxiliary contact block as standard.

Auxiliary Electrical Contacts are supplied in a kit form consisting of one normally open and one normally closed set of contacts in a common assembly, one striker, plus the necessary mounting hardware.

Mechanical Interlock Kits **Discount Code EW**

NEMA Size (of main contactor)	Number of Poles	Part Number	List Price Per Kit
			Customer Install
1 & 2	Single	HC68041-001	\$319
1 & 2	Multiple	HC68041-002	\$319
3 & 4	Single or Multiple	HC68041-003	\$391
5 & 5A	Single or Multiple	HC68041-016	\$461
6	Single or Multiple	HC59625-006	\$568
7 & 8	Single or Multiple	HC59625-008	\$615

Only one auxiliary contact block can be mounted when using a mechanical interlock.

Tie-Bar Kits for Multi-Pole N.O. Contactors **Disc. Code EW**

NEMA Size (of main contactor)	Description	Part Number	List Price Per Kit For Customer Installation
3 & 4	Multi-pole	HC59400-004	\$106
5 & 5A	Multi-pole	HC59400-005	\$142
6	Multi-pole	HC59400-126	\$213
7 & 8	Multi-pole	HC59400-128	\$249

How to Order:

- A) Select proper Operating Voltage for contactor coil.
- B) Refer to NEMA Size & Number of Main Poles required for contactor listed in chart.
- C) Order by Part Number.

For Accessories: Select the appropriate part number above

Auxiliary Electrical Contact Ratings

Electrical Contacts are rated in accordance with NEMA Standard ICS-2-125 (B600 and P600) Table Ratings

AC	Max. Cont. Amps	Maximum Make and Break Current-Amperes							
		120V		240V		480V		600V	
		Make	Break	Make	Break	Make	Break	Make	Break
B-600	5	30	3	15	1.5	7.5	0.75	6	0.6
DC	Max. Cont. Amps	125V		250V		600V			
		Make	Break	Make	Break	Make	Break		
P-600	5	1.1	1.1	0.55	0.55	0.2	0.2		



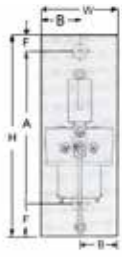


Fig. A

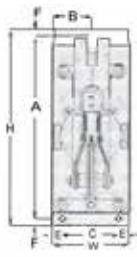


Fig. B

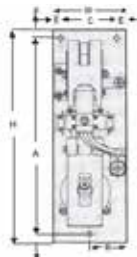


Fig. C

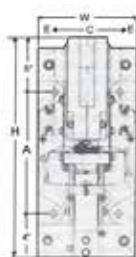


Fig. D



Fig. E



Typical Side View

CONTACTOR RATINGS
Maximum 600 VDC 40° C Ambient

NEMA Size	8 Hour Ratings		Intermittent Duty Rating DC Amperes
	Open DC Amperes	Enclosed DC Amperes	
1	25	23	33
2	50	45	67
3	100	90	133
4	150	135	200
5	300	270	400
5A*	400	360	530
6	600	540	800
7	900	810	1200
8	1200	1215	1800

NORMALLY OPEN (N.O.)
APPROXIMATE DIMENSIONS (IN INCHES)

NEMA SIZE	H HEIGHT	W WIDTH	D DEPTH	A	B	C	E	F	MTG HOLE	FIG.
1	10.25	4.00	4.80	7.81	2.00	---	---	1.625	.265	A
2	10.25	4.00	4.80	7.81	2.00	---	---	1.625	.265	A
3	12.00	4.50	7.00	11.00	2.25	3.25	0.63	.50	.38	B
4	12.00	4.50	7.00	11.00	2.25	3.25	0.63	.50	.38	B
5	15.50	6.13	9.50	14.50	3.06	4.00	1.05	.50	.44	B
5A*	15.50	6.13	9.50	14.50	3.06	4.00	1.05	.50	.44	B
6, 7, 8	20.25	9.00	15.00	11.25	---	5.00	1.50	4.00	.52	D

** When two "F" Dim. are given, the first is for the top, the second is for the bottom mounting hole

MINIMUM 250v DC ARCING CLEARANCES †

NEMA SIZE	FRONT OF ARC SHIELD	ABOVE ARC SHIELD §
1	0.75	1.00
2	0.75	1.00
3	2.00	1.50
4	2.00	1.50
5	2.50	3.00
5A*	2.50	3.00
6	3.00	3.00
7	3.50	3.50
8	4.00	4.00

NORMALLY CLOSED (N.C.)
APPROXIMATE DIMENSIONS (IN INCHES)

NEMA SIZE	H HEIGHT	W WIDTH	D DEPTH	A	B	C	E	F	MTG HOLE	FIG.
1	12.00	4.00	5.00	10.75	2.00	---	---	0.62	0.31	A
2	12.00	4.00	5.00	10.75	2.00	---	---	0.62	0.31	A
3	12.00	5.00	6.90	11.00	4.00	---	---	0.50	0.38	A
4	12.00	5.00	6.90	11.00	4.00	---	---	0.50	0.38	A
5	12.00	6.25	9.50	16.50	3.12	4.75	0.75	0.75	0.44	C
5A*	18.00	6.25	9.50	16.50	3.12	4.75	0.75	0.75	0.44	C
6, 7, 8	22.26	10.69	15.80	11.25	---	6.00	1.50	5.00	0.56	E

* Euclid Rating

† Consult factory for higher voltage applications.

§ Additional contacts may be required for maintenance.

Renewal Contact Kits:

Discount Code EW

Size:	Copper		Silver		Silver Tungsten Carbide	
	Part Number:	List Price	Part Number:	List Price	Part Number:	List Price
1	HC59672-001	\$107	HC59672-002	\$760	N/A	
2	HC59672-003	\$124	HC59672-004	\$859	HC59672-023	\$1,074
3 or 4	HC59672-007	\$162	HC59672-008	\$1,355	HC59672-018	\$1,983
5 & 5A N.O.	HC59672-024	\$179	HC59672-025	\$1,520	HC59672-026	\$2,462
5 & 5A N.C.	HC59672-021	\$179	N/A		HC59672-022	\$2,462
6, 7, or 8	HC59672-139	\$466	HC59672-142	\$2,181	HC59672-145	\$3,123
25 A. PWR AUX	HC59672-014	\$107				
50 A. PWR AUX	HC59672-015	\$				

Contact Kits include: (1) movable contact, (1) stationary contact, spring and hardware. An arc horn is included on all kits except Size 1 and also Sizes, 6, 7 & 8).

Arc Shield Kits:

Discount Code EW

Size:	Part Number:	List Price
1	HC42855-001	\$165
2	HC42856-001	\$232
3	HC59673-001	\$312
4	HC59673-002	\$312
5 & 5A	HC59673-003	\$461
6, 7 & 8 DC NO	HC59662-806	\$1370
6, 7 & 8 DC NC	HC59662-807	\$1730

Prices Subject to Change without Notice



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