

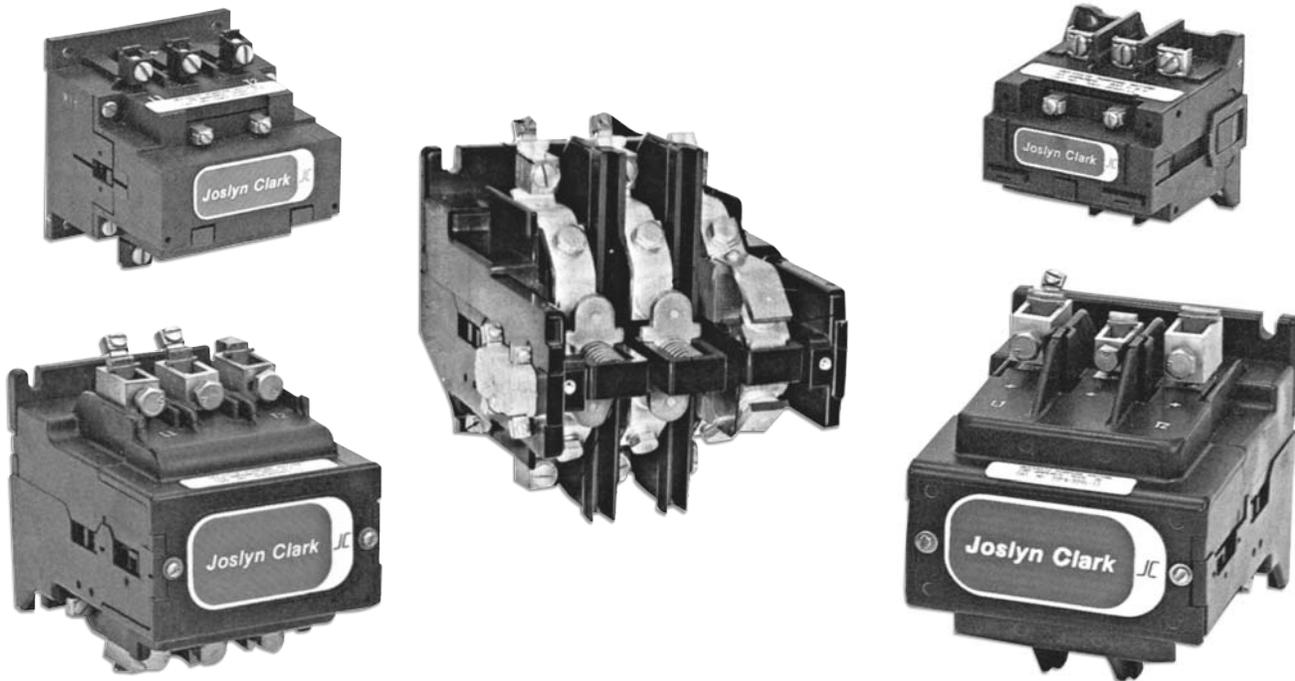


5DP Definite Purpose Contactors are designed for DC adjustable speed drive circuits using silicon controlled rectifier switching and other controls where a combination of normally open and normally closed power contacts are required. In all applications, reduced panel space for contactor mounting is made possible through a compact design and the built-in N.C. dynamic brake power contact feature.

In silicon controlled rectifier switching circuits, the SCR is normally phased back prior to contactor opening. Therefore, the N.O. contacts are not required to interrupt any appreciable current. Under abnormal conditions such as failure of the SCR or the control circuit, the contactor may be required to interrupt up to 200% current. The N.O. contacts are equipped with permanent magnet blowouts to meet this requirement.

The dynamic brake N.C. contact is required to insert the dynamic brake resistor and therefore must make up to 200% of rated current each time the contactor is de energized.

Jogging is accomplished at low voltage and current. Therefore, the dynamic brake contact is rated at 1/3 of rated voltage and dynamic brake current. The permanent magnet blowouts provide this interrupting ability.



- 1. Normally Closed Double Break Power Contacts** - made of silver cadmium oxide furnish "anti-weld" protection under overload conditions. Generous size contacts are long lasting, and maintenance-free. All N.C. power contacts supplied with permanent magnet blowouts to lengthen contact life.
- 2. Normally Open Double Break Power Contacts** - incorporate the same design features as the normally closed power poles. Permanent magnet blowouts are also furnished on d.c. load applications.
- 3. Permanent Magnet Blowouts** - mounted to surround the power contacts, function to quickly quench the arc when breaking loads, thereby increasing contact life and assuring positive load circuit interruption. All normally closed poles are furnished with permanent magnet blowouts. Normally open poles can be supplied with or without blowouts as indicated in the circuit symbols shown on page J6.
- 4. Stainless Steel Springs** - maintain exact contact pressure and assure fast contact break (N.O.) and make (N.C.).
- 5. Molded Housing** - constructed of hot-molded, high impact, high arc resistant insulating material. This design totally encloses the contacts and operating magnet in separate compartments and functions to eliminate internal phase-to-phase short circuits.
- 6. Molded Coil** - is layer wound, designed for continuous duty service. Coil construction resists moisture; thermal and mechanical stress. Coil connections are made to pressure type terminals.
- 7. Free-Floating Armature-Magnet Frame** - provide quiet, low vibration, low friction operation. Precision ground pole faces achieve an absolute air gap which prevents "hanging-up". Magnet frame is sized for fast, powerful operation and self-seating extends operational life.
- 8. Auxiliary Contacts** - for 10/40 amp. contactors are available with with either the front mounted snap action type with quick connect terminals or the side mounted type with pressure terminals. Contacts for larger sizes in standard or special make-before-break contact combinations feature either standard double break silver-to-silver contacts or low power gold alloy contacts.
- 9. Pressure Type Terminals** - accessible, up-front location permits modern straight-thru wiring. Terminals accept stripped, un-lugged wires.

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DC CONTROL

5DP Contactors

SCR Drive Contactors - N.O. or N.C. Power Poles

Drive Contactors Preferred Style 500 VDC Max

Type & Rating	Poles			Open Type Catalog No.
	N.O.	N.C.	Fig.No.	
7001 40 amp.	0	1	7A	7001-5150- **
	0	2	9	7001-5230- **
	1	0	1	7001-6050- **
	2	0	3	7001-7030- **
	2	1	10	7001-7140- **
5DP7 75 amp.	0	1	7A	5DP7-5150- **
	0	2	9	5DP7-5230- **
	1	0	1	5DP7-6050- **
	2	0	3	5DP7-7030- **
	2	1	10	5DP7-7140- **
5DP3A 110 amp.	0	1	8	5DP3A4001- **
	0	2	9	5DP3A3071- **
	1	0	1	5DP3A4011- **
	2	0	3	5DP3A5021- **
	2	1	15	5DP3A5091- **
5DP4 180 amp.	0	1	8	5DP4-4001- **
	0	2	9	5DP4-3071- **
	1	0	1	5DP4-4011- **
	2	0	3	5DP4-5021- **
	2	1	15	5DP4-5091- **
5DP9 260 amp.	0	1	8	5DP9-4001- **
	0	2	9	5DP9-3071- **
	1	0	1	5DP9-4011- **
	2	0	3	5DP9-5021- **
	2	1	15	5DP9-5091- **
5DP5 360 amp.	0	1	8	5DP5-4001- **
	0	2	9	5DP5-3071- **
	1	0	1	5DP5-4011- **
	2	0	3	5DP5-5021- **
	2	1	15	5DP5-5091- **
5DP8 535 amp.	0	1	8	5DP8-4001- **
	0	2	9	5DP8-3071- **
	1	0	1	5DP8-4011- **
	2	0	3	5DP8-5021- **
	2	1	15	5DP8-5091- **

* Coil Table #1 Replace * with appropriate coil voltage digit.

60 Hz/Voltage	(*)	DC/Voltage	(*)
120	1	115	8
240	2	230	9

** Coil Table #2 Replace ** with appropriate coil voltage suffix

60 Hz/Voltage	Suffix	DC/Voltage	Suffix
120	11	12	72
208/240	21	24	82
208	90	48	32
240	21	120	12
480	41	240	22
600	51		

Drive Contactors - Old Style

For New Installations Use Preferred Style

Type & Rating	Poles			Open Type Catalog No.
	N.O.	N.C.	Fig.No.	
7000 10/40 amp.	0	1	7A	7000-5150- **
	2	0	3	7000-7030- **
	2	1	10	7000-7140- **
5DP1 30 amp.	0	1	8	5DP1-01()00 *
	0	2	9	5DP1-02()00 *
	1	0	1	5DP1-10()00 *
	1	1	5	5DP1-11()00 *
	2	0	2	5DP1-20()00 *
	2	1	6	5DP1-21()00 *
	2	0	3	5DP1-5021- **
5DP2 56 amp.	2	1	7	5DP1-5051- **
	0	1	8	5DP2-01()00 *
	0	2	9	5DP2-02()00 *
	1	0	1	5DP2-10()00 *
	1	1	5	5DP2-11()00 *
	2	0	2	5DP2-20()00 *
	2	1	6	5DP2-21()00 *
5DP3 110 amp.	2	0	3	5DP2-5021- **
	2	1	7	5DP2-5051- **
	0	1	8	5DP3-01()00 *
	0	2	9	5DP3-02()00 *
	1	0	1	5DP3-10()00 *
	1	1	5	5DP3-11()00 *
	2	0	2	5DP3-20()00 *
5DP4 180 amp.	2	1	6	5DP3-21()00 *
	2	0	3	5DP3-5021- **
	2	1	7	5DP3-5051- **
	0	1	8	5DP4-01()00 *
	0	2	9	5DP4-02()00 *
	1	0	1	5DP4-10()00 *
	1	1	5	5DP4-11()00 *
5DP9 260 amp.	2	0	2	5DP4-20()00 *
	2	1	6	5DP4-21()00 *
	2	1	7	5DP4-5051- **
	0	1	8	5DP9-01()00 *
	0	2	9	5DP9-02()00 *
	1	0	1	5DP9-10()00 *
	1	1	5	5DP9-11()00 *
5DP5 360 amp.	2	0	2	5DP9-20()00 *
	2	1	6	5DP9-21()00 *
	2	1	7	5DP9-5051- **
	0	1	8	5DP5-01()00 *
	0	2	9	5DP5-02()00 *
	1	0	1	5DP5-10()00 *
	1	1	5	5DP5-11()00 *
5DP8 535 amp.	2	0	2	5DP5-20()00 *
	2	1	6	5DP5-21()00 *
	2	1	7	5DP5-5051- **
	0	1	8	5DP8-01()00 *
	0	2	9	5DP8-02()00 *
	1	1	5	5DP8-11()00 *
	2	0	2	5DP8-20()00 *
5DP8 535 amp.	2	1	6	5DP8-21()00 *
	2	1	7	5DP8-5051- **

The N.C. contact is short time rated for Dynamic Braking applications. Refer to table on page J7 for N.C. contact ratings.

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Auxiliary Contact Blocks

Field Installation Kit	Kit No.
Front mtd. aux. 10/40 amp. Old Style & 40A.	
N.O. - N.C. right hand front mtg.	5999-3504
N.O. - N.C. left hand front mtg.	5999-3604
N.O. - N.C. for multiple front mtg.	5999-3704 ¹
For 10/40 amp. Old Style & 40-535 Amp.	
N.O.	5M63
N.C.	5M64
N.O. & N.C.	5M65
N.O. low power.	5M63L
N.C. low power.	5M64L
N.O. & N.C. low power.	5M65L
N.O. Standard & N.C. low power.	5M66
N.O. low power & N.C. standard.	5M65L0
N.C. late break.	5M64E
N.O. & N.C. late break.	5M68 ⁴
N.C. lower power late break.	5M64LE
N.O. & N.C. low power late break.	5M67 ⁴
N.O. low power & N.C. low power late break.	5M69 ⁴
Tandem mounting auxiliary. **	5M60DA

**** NOT for 10/40A or 40A**

Reversing Kits

Description	Kit No
Mechanical interlock 30-260 amps. contactors except 75 amp.	5999-4737
Mechanical interlock 75 amp. contactors	5999-4717
Mechanical interlock 360 & 535 amp.	5999-4757
Mechanical interlock for two 3-pole 700 amp. contactors	5999-4767
Mechanical interlock for two 700 amp. contactors (1 Pole & 2-Pole)	5M96
Reversing baseplate for 30, 56 & 75 amp.	5999-8569
Reversing baseplate for 110, 180 & 260 amp. contactors	5999-8570
Reversing baseplate for 360 & 535 amp. contactors	5999-8571
Reversing baseplate for two 3-Pole 700 amp. contactors	5999-8572
Reversing baseplate for one 2-Pole 700 amp. & one 3-Pole 700 amp. contactors	5999-8573
For 2, 2 Pole 700 Amp	5999-8580

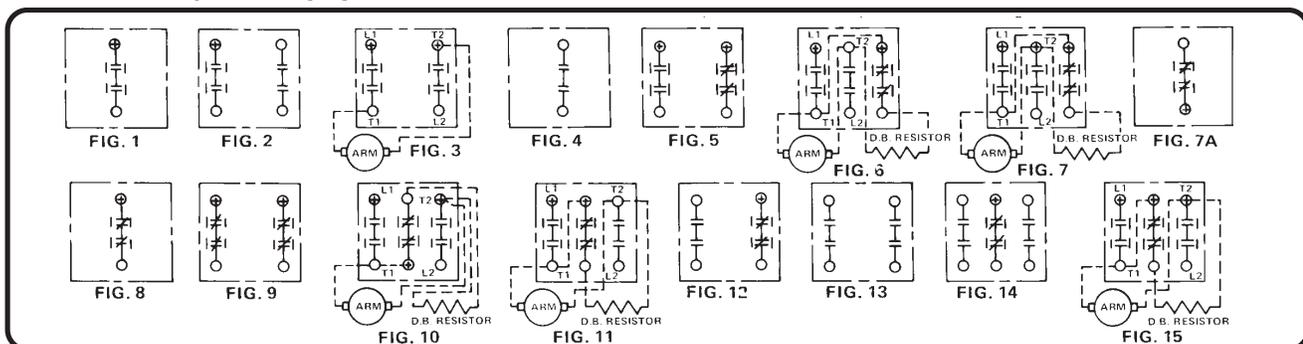
Notes:

- Kit includes one N.O. - N.C. auxiliary plus mounting hardware for installing 3rd and 4th auxiliary.
- Contains mounting hardware only. Order auxiliary separately.
- Without mounting bracket. Bracket required for mounting more than one extra auxiliary interlock.
- Not for use on 10/40, 40 & 75 Amp.
- If DC coil required then front Mtd Auxiliaries not available & contact blocks restricted to 2 & max. aux. contacts 4. 1 contact listed also used to economise coil when DC operated.

Auxiliary Contact Blocks contain 1 or 2 contacts depending on the type ordered, the table below lists max. # of contact blocks for each contactor rating.

Amps	Front Mtd		Side Mtd		Maximum Aux. Contacts	N.O.	N.C.	Amps	Front Mtd		Side Mtd		Maximum Aux. Contacts	N.O.	N.C.	
	LHS	RHS	LHS	RHS					LHS	RHS	LHS	RHS				
10/40 A	1 ⁵	1 ⁵	or	1	1	4=	2	2	180 A	0	0	2	2	8=	4	4
30 A	0	0		1	1	4=	2	2	260 A	0	0	2	2	8=	4	4
40 A	1 ⁵	1 ⁵	or	1	1	4=	2	2	360 A	0	0	2	2	8=	4	4
56 A	0	0		2	2	8=	4	4	535 A	0	0	2	2	8=	4	4
75 A	0	0		2	2	8=	4	4								
110 A	0	0		2	2	8=	4	4								

Terminal Polarity and Wiring Figures:



Symbols: \perp N.O. Contact $\perp|$ Contact with Blowout \neq N.C. Contact \oplus Positive Polarity

Contacts without blowouts do not have any interrupting rating. Contactors with 2 N.O. contacts and blowouts will interrupt 200% current under abnormal conditions.