DC Control

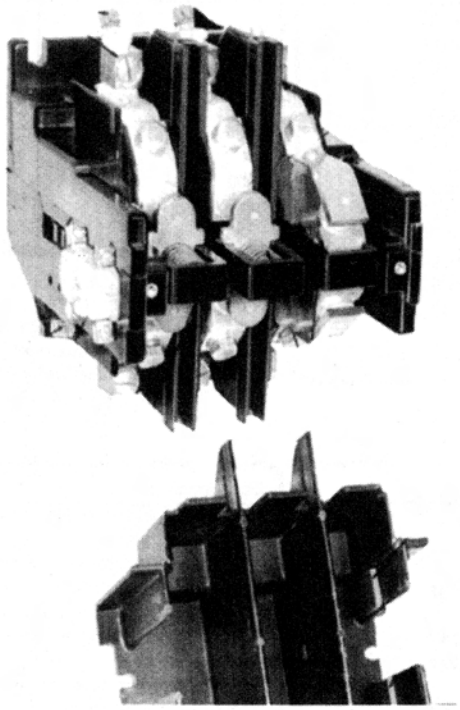
5DP Contactors

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 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 deenergized.

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 wearing, and maintenance-free. All N.C. power contacts supplied with permanent magnet blowouts to lengthen contact life. See Permanent Magnet Blowouts paragraph.
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. See Permanent Magnet Blowout paragraph for combinations available.
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 interrupton. All normally closed poles are furnished with permanent magnet blowouts. Normally open poles can be supplied with or without blowouts
4. **Stainless Steel Springs** - maintain exact contact pressure and assure fast contact break (N.O.) and make (N.C.).
5. **Molded Carrier** - for movable contacts and armature is molded from high impact, high arc resistant insulating material.
6. **Molded Housing** - constructed of hot-molded, high impact, high arc resistant insulating material. This design totally encloses the contacts and operating magnet in separate comparments and functions to eliminate internal phase-to-phase short circuits.
7. **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.
8. **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 principle extends operational life.
9. **Auxiliary Interlocks (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. Interlocks 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.
10. **Pressure Type Terminals** - accessible, up-front location permits modern straight-thru wiring. Terminals take stripped, unlugged wires.

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