

The SW688P is a miniature series single pole, free standing, compact contactor which is sealed to IP66. The SW688P has been designed for Motor Reversing applications with direct current loads, particularly motors as used on small traction motors, hydraulic power packs and small electric winch motors. Developed for both interrupted and uninterrupted loads, the SW688P is suitable for switching Resistive, Capacitive and Inductive loads.

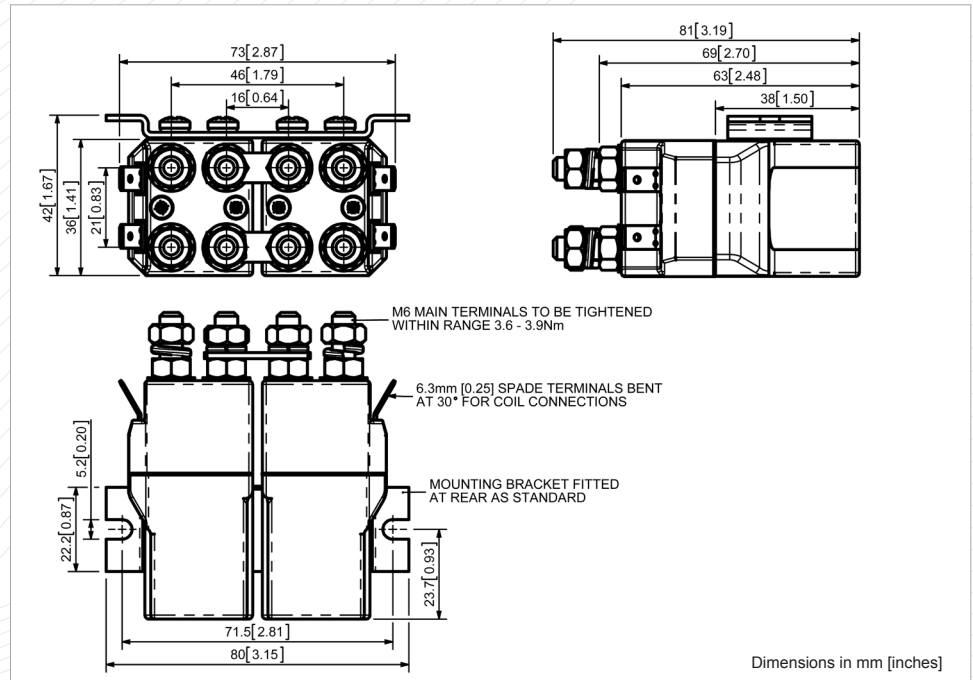


SW688P

Application	Interrupted	Uninterrupted
Thermal Current Rating (I <sub>th</sub> )	▶	80A
Intermittent Current Rating:		
30% Duty	▶	145A
40% Duty	▶	125A
50% Duty	▶	115A
60% Duty	▶	105A
70% Duty	▶	95A
Rated Fault Current Breaking Capacity (I <sub>cn</sub> ) 5ms Time Constant: (in accordance with UL583*)	▶	400A at 48V
Rated Fault Current Breaking Capacity (I <sub>cn</sub> ) Resistive Load: (in accordance with UL508*)	▶	120A at 60V D.C.
Maximum Recommended Contact Voltages (U <sub>0</sub> ):		
SW688P	▶	96V D.C.
Typical Voltage Drop per pole across New Contacts at 100A	▶	<40mV
Mechanical M.T.B.F	▶	>3 x 10 <sup>6</sup>
Coil Voltage Available (U <sub>c</sub> ) (Rectifier board required for A.C.)	▶	From 6 to 130V D.C.
Coil Power Dissipation:		
Highly Intermittent Rated Types	▶	14 - 21 Watts
Intermittently Rated types	▶	10 - 14 Watts
Prolonged Rated Types	▶	7 - 10 Watts
Continuously Rated Types	▶	5 - 7 Watts
Maximum Pull-In Voltage (Coil at 20° C) Guideline:		
Highly Intermittent Rated types (Max 25% Duty Cycle)	▶	60% U <sub>s</sub>
Intermittently Rated types (Max 70% Duty Cycle)	▶	60% U <sub>s</sub>
Prolonged Operation (Max 90% Duty Cycle)	▶	60% U <sub>s</sub>
Continuously Rated Types (100% Duty Cycle)	▶	66% U <sub>s</sub>
Drop-Out Voltage Range	▶	10 - 25% U <sub>s</sub>
Typical Pull-In Time (N/O contacts to close)	▶	15ms
Typical Drop-Out Time (N/O Contacts to Open) †:		
Without Suppression	▶	6ms
With Diode Suppression	▶	35ms
With Diode and Resistor (Subject to resistance value)	▶	8 - 20ms
Typical Contact Bounce Period	▶	3ms
Operating Ambient Temperature	▶	- 40°C to + 60°C
Guideline Contactor Weight:		
SW688P	▶	465 gms

- **Interrupted** current - opening and closing on load with frequent switching (results in increased contact resistance).
- **Uninterrupted** current - no or infrequent load switching requirements (maintains a lower contact resistance).

The SW688P features paired double pole double breaking main contacts with silver alloy tips, which are weld resistant, hard wearing and have excellent conductivity. The SW688P incorporates an enclosed top cover and offers environmental protection to IP66. The SW688P has M6 stud main terminals and 6.3mm spade coil connections. Mounted using supplied brackets, or as separate items. Mounting can be on the side or base of the contactor.



Advised Connection Sizes for Maximum Continuous Current	
Copper busbar	52mm <sup>2</sup> [0.081inch <sup>2</sup> ]
Cable	Rated suitable for Application

**Key:** ▶ = Interrupted ▲ = Uninterrupted

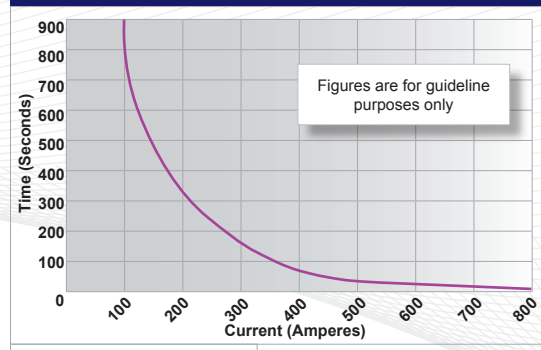
**Note:** Where applicable values shown are at 20° C

\* Please check our web site for product UL status

† The SW688 has fast drop out times and relatively slow pull-in times. Motor direction changes can be undertaken without risk of all contacts being closed at the same time. Note, some coil suppression such as diodes substantially increase drop out times and care must be taken to ensure suitable suppression is used (e.g. diode and resistor in series).

- Performance data provided should be used as a guide only. Some de-rating or variation from figures may be necessary according to application.
- Thermal current ratings stated are dependant upon the size of conductor being used
- For further technical advice email: [technical@albrightinternational.com](mailto:technical@albrightinternational.com)
- Albright reserve the right to change data without prior notice

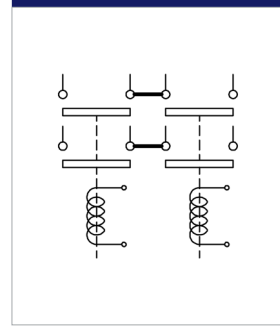
SW688P Contactor Performance



**Contact Performance Key:**

— Interrupted and Uninterrupted Current

Connection Diagram



SW688P Available Options

General		Suffix
Auxiliary Contacts	X	
Auxiliary Contacts - V3	X	
Magnetic Blowouts†	X	
Magnetic Blowouts - High Powered†	X	
Armature Cap	X	
Mounting Brackets (See Stud Contactor Range Catalogue)	●	
Magnetic Latching† (Not fail safe)	○	M
Closed Contact Housing	●	
Environmentally Protected IP66	●	P
EE Type (Steel Shroud)	X	
Contacts		
Large Tips	X	
Textured Tips	X	
Silver Plating	X	
Coil		
AC Rectifier Board (Fitted)	X	
Coil Suppression†	○	
Flying Leads	X	
Manual Override Operation	X	
M4 Stud Terminals	○	
M5 Terminal Board	X	
Vacuum Impregnation	X	

**Key:** Optional ○ Standard ● Not Available X

† Connections become polarity sensitive