The SW688 is a miniature series double pole, free standing, compact contactor. It is 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 uninterupted loads, the SW688 is suitable for switching Resistive, Capacitive and Inductive loads.

- **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 SW688 features double pole double breaking main contacts with silver alloy tips, which are weld resistant, hard wearing and have excellent conductivity. The SW688 has M6 stud main terminals and 6.3mm spade coil connections. Mounted using supplied brackets, mounting can be horizontal or vertical, when vertical the M6 contact studs should point upwards. If the requirement is for downwards orientation we can adjust the contactor to compensate for this.

### Contact Performance Key

- 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 dependent upon the size of conductor being used.
- For further technical advice email: technical@albrightinternational.com
- Albright reserve the right to change data without prior notice

### Connection Diagram

- **Interrupted and Uninterrupted Current**

### SW688 Contact Performance

- **Rated Fault Current Breaking Capacity (\(I_{cn}\)) 5ms Time Constant:**
  - SW688: 400A at 48V
  - Rated Fault Current Breaking Capacity (\(I_{cn}\)) Resistive Load: (in accordance with UL508P)
- **Maximum Pull-In Voltage (Coil at 20°C):**
  - SW688: 96V D.C.
- **Typical Voltage Drop per pole across New Contacts at 80A:**
  - 40mV
- **Mechanical Durability:**
  - >3 x 10^6 Cycles
- **Coil Voltage Available (\(U_{d}\)):** (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% \(U_{d}\)
  - Intermittently Rated types (Max 70% Duty Cycle): 60% \(U_{d}\)
  - Prolonged Operation (Max 80% Duty Cycle): 60% \(U_{d}\)
  - Continuously Rated Types (100% Duty Cycle): 66% \(U_{d}\)
  - Drop-Out Voltage Range: 10 - 25% \(U_{d}\)
  - Typical Pull-In Time (N/O contacts to close): 15ms
  - Typical Drop-Out Time (N/O Contacts to Open): 1

### Advised Connection Sizes for Maximum Continuous Current

- **Copper busbar:** 52mm² (0.081inch²)
- **Cable:** Suitable for application

### General

- **Auxiliary Contacts**
- **Magnetic Blowsouts**
- **Magnetic Blowsouts - High Powered**
- **Armature Cap**
- **Mounting Brackets**
- **Magnetic Latching** (Not fail safe)
- **Closed Contact Housing**
- **Environmentally Protected IP66** (see SW688P Catalogue sheet)
- **EE Type (Steel Shroud)**

### Contacts

- **Large Tips**
- **Textured Tips**
- **Silver Plating**

### Coil

- **AC Rectifier Board (Fitted)**
- **Coil Suppression**
- **Flying Leads**
- **Manual Override Operation**
- **M4 Stud Terminals**
- **M5 Terminal Board**
- **Vacuum Impregnation**

**Key:**
- **●** Not Available
- **√** Standard
- **○** Basic

**Suffix:**
- **X**

**Guideline Contactor Weight:** 460 gms

**Dimensions in mm [inches]:**

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**Notes:**
- 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).

- Figures are for guideline purposes only.

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