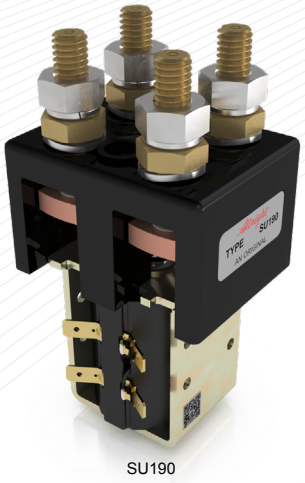
Albright International

250A/350A

SU190 Double Pole Single Throw Normally Open
(Part of the SU Series)

The SU190 is an up-rated variant of the SW190 Series of contactor primarily designed to switch heavy duty D.C. loads, however it is also capable of switching A.C. loads. The SU190 is suitable for switching Resistive, Capacitive and Inductive loads. Typical applications include electric motors, hydraulic power packs, winches, speed controllers and Power Distribution Systems.



SU190

Application	Interrupted	Uninterrupted
Thermal Current Rating ($I^{}th$)	250A	350A
Intermittent Current Rating:		
30% Duty	450A	635A
40% Duty	390A	550A
50% Duty	360A	495A
60% Duty	320A	450A
70% Duty	300A	415A
Rated Fault Current Breaking Capacity ($I^{}cn$) 5ms Time Constant: *(in accordance with UL583*)*		
SU190	1500A at 48V D.C.	
SU190B	1500A at 96V D.C.	
Rated Fault Current Breaking Capacity ($I^{}cn$) Resistive Load: *(in accordance with UL508*)*		
SU190	525A at 60V D.C.	
SU190B	525A at 96V D.C.	
Maximum Recommended Contact Voltages (U_e): *(Both Poles in same circuit)*		
SU190	96V D.C.	
SU190B	250V D.C.	
Typical Voltage Drop per pole across New Contacts at 100A	40mV	
Mechanical Durability	>3 x 10^6 Cycles	
Coil Voltage Available (Us) *(Rectifier board required for A.C.)*	From 6 to 240V A.C./D.C.	
Coil Power Dissipation:		
Highly Intermittent Rated Types	40 - 50 Watts	
Intermittently Rated types	30 - 40 Watts	
Prolonged Rated Types	15 - 30 Watts	
Continuously Rated Types	10 - 15 Watts	
Maximum Pull-In Voltage (Coil at 20˚ C) Guideline:		
Highly Intermittent Rated types (Max 25% Duty Cycle)	60% U_s	
Intermittently Rated types (Max 70% Duty Cycle)	60% U_s	
Prolonged Operation (Max 90% Duty Cycle)	60% U_s	
Continuously Rated Types (100% Duty Cycle)	66% U_s	
Drop-Out Voltage Range	10 - 25% U_s	
Typical Pull-In Time	30ms	
Typical Drop-Out Time (N/O Contacts to Open):		
Without Suppression	8ms	
With Diode Suppression	60ms	
With Diode and Resistor *(Subject to resistance value)*	25ms	
Typical Contact Bounce Period	3ms	
Operating Ambient Temperature	- 40˚C to + 60˚C	
Guideline Contactor Weight:		
SU190	760 gms	
With Blowouts	+ 50 gms	

Advised Connection Sizes for Maximum Continuous Current		
Copper busbar	161mm² [0.25inch²]	225mm² [0.35inch²]
Cable	Rated suitable for Application	

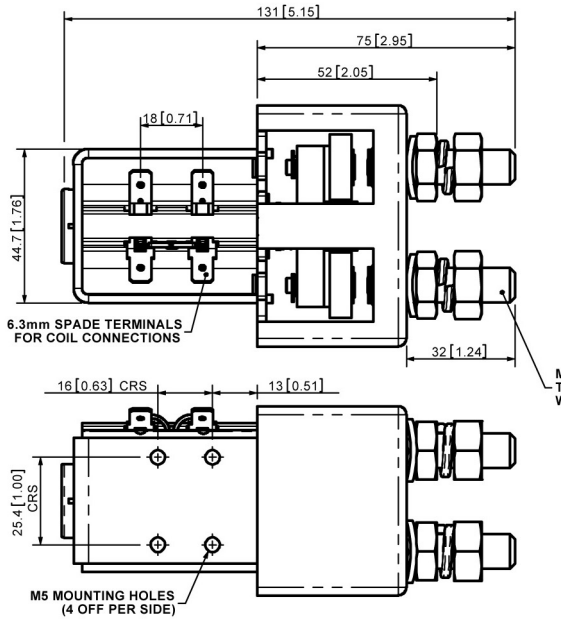
Key: = *Interrupted* = *Uninterrupted*

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

* *Please check our web site for product UL status*

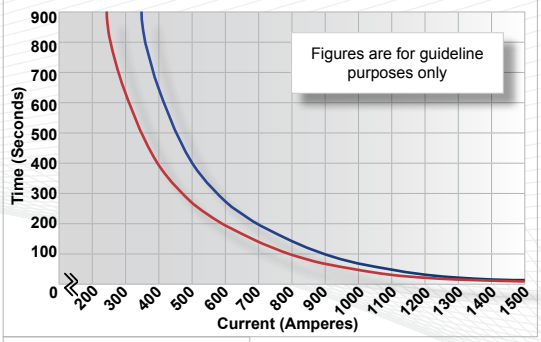
- **Interrupted** current - opening and closing on load with frequent switching (results in increased contact resistance).
- **Uninterrupted** current - no or infrequent load switching requirements (maintains a lower contact resistance).

The contactors feature double pole, double breaking main contacts with silver alloy tips, which are weld resistant, hard wearing and have excellent conductivity. The SU190 is easy to install, with M5 tapped holes in the switch frame or a variety of optional brackets available. Electrical connections follow industry standards, with M10 main terminal studs and an option for either 6.3mm standard spade terminals or flying leads on the coil assembly. Mounting can be vertical or horizontal, when vertical the M10 contact studs should point upwards. If the requirement is for downwards orientation we can adjust the contactor to compensate for this.



Dimensions in mm [inches]

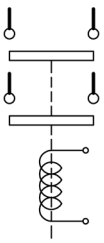
SU190 Contactor Performance



Contact Performance Key:

- Interrupted Current
- Uninterrupted Current

Connection Diagram



SU190 Available Options		
General		**Suffix**
Auxiliary Contacts	X	
Auxiliary Contacts - V3	X	
Magnetic Blowouts†	X	
Magnetic Blowouts - High Powered†	○	B
Armature Cap	●	
Mounting Brackets (see SW180 Series Catalogue)	○	
Magnetic Latching (Not fail safe)†	○	M
Closed Contact Housing	X	
Environmentally Protected IP66	X	
EE Type (Steel Shroud)	○	EE
Contacts		
Large Tips	X	
Textured Tips	○	T
Silver Plating	X	
Coil		
AC Rectifier Board (Fitted)	○	
Coil Suppression†	○	
Flying Leads	○	F
Manual Override Operation	X	
M4 Stud Terminals	X	
M5 Terminal Board	○	
Vacuum Impregnation	○	

Key: Optional ○ Standard ● Not Available X

† *Connections become polarity sensitive*

- **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**
- **Albright reserve the right to change data without prior notice**

Albright International Ltd, Evingar Trading Estate, Ardglen Road, Whitchurch, Hampshire, RG28 7BB, UK
Tel: +44 (0)1256 893060, Fax: +44 (0)1256 893562, Dedicated Sales Tel: +44 (0)1256 890030, Fax: +44 (0)1256 890043
E-mail: sales@albrightinternational.com or technical@albrightinternational.com Web Site: www.albrightinternational.com