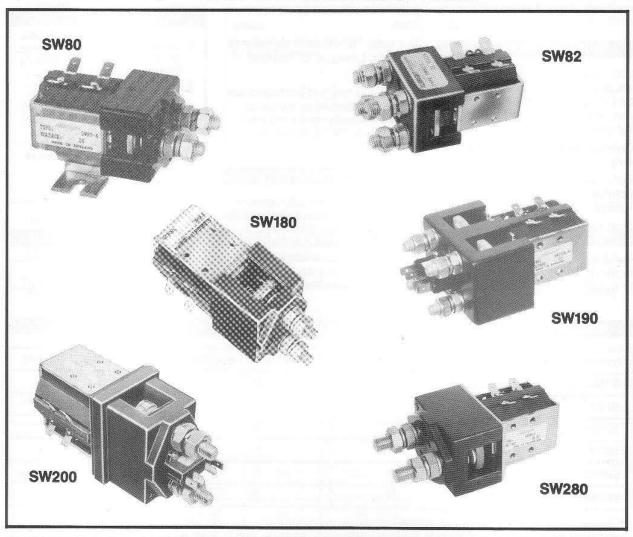


# HEAVY DUTY D.C. CONTACTORS FOR USE IN POWER DISTRIBUTION CENTRES FOR COMMUNICATIONS EQUIPMENT SW80, SW82, SW180, SW190, SW200 AND SW280 SERIES OF CONTACTORS



Type No.	Description	Max. continuous thermal current rating (amperes)	U.L. File No.
SW80	S.P. On/Off	125	E165921
SW82	D.P. On/Off	100	E165921
SW180	S.P. On/Off	200	E165921
SW190	D.P. On/Off	200	3-0
SW200	S.P. On/Off	400	E165921
SW280	S.P. On/Off	350	7.

### UNIQUE RANGE

These contactors have been designed for direct current loads but can also be used for alternating currents.

The contact tips are silver alloy which is weld resistant, hard wearing and has very good conductivity.

### COMPACT SIZE

The contactors are compact in size and are fully serviceable, with a complete range of spare parts available.

### **OPERATING COILS**

Coil voltages ranging from 6 to 240 are available and these are wound for D.C. operation; however, coils can be fitted with a bridge rectifier for use from A.C. supplies.

Coils are wound for continuous duty.

Pull-in voltages (coil at 20°C) are approximately 66% of the rated voltage.

Drop-out voltage is nominally greater than 10% of rated voltage.

Variations from these pull-in and drop-out figures can be engineered to suit particular applications.

Coil connections are by means of 6mm spades.

### **MAGNETIC BLOWOUTS**

Contactors can be fitted with magnetic blowouts except for SW82 (see optional extras chart below). These are to allow the contactors to switch D.C. voltages up to 250. The fitting of blowouts makes the contacts polarity sensitive thus the positive markings on the top cover of the contactor must be observed.

The double pole type, SW190, is not polarity sensitive when blowouts are fitted.

The suffix "B" denotes the fitting of magnetic blowouts, for example SW180B.

The SW200 range of contactors are fitted with blowouts as standard. Should blowouts not be required then a suffix "N" is added, for example SW200N.

### **AUXILIARY CONTACTS**

A double circuit normally open, normally closed microswitch can be fitted to all types except SW82 (see optional extras chart below). They have a D.C. resistive rating of 5 amperes at 24 volts. The suffix "A" should be added to the type

number when auxiliary contacts are needed, for example SW200A.

### EASY INSTALLATION

Mounting is by means of tapped holes in the switch frame together with a range of mounting brackets complete with screws and washers,

### **CHANGEOVER TYPES**

This brochure shows on/off contactors but changeover versions are available if required.

#### NOTES

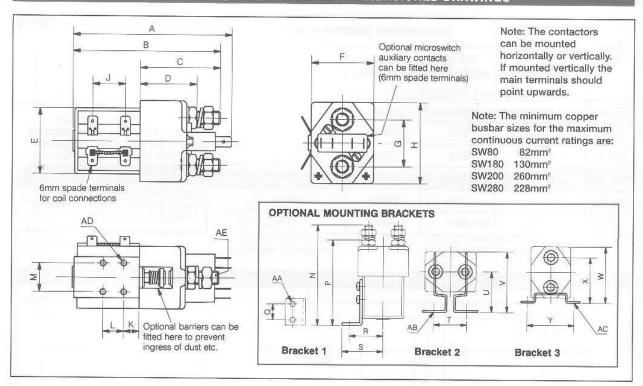
- The mechanical life of the contactors is normally greater than one million operations.
- 2 The typical contact bounce period of time is 3ms.
- 3 The auxiliary contact thermal rating is 5 amperes.
- 4 The auxiliary contact switching capacities (resistive load) are as follows:
  - 5 amperes at 24v D.C. 2 amperes at 48v D.C. 0.5 amperes at 240v D.C.
- 5 All performance data shown in this literature should be used as a guide only. Alternative ratings may be considered according to applications.

### **OPTIONAL EXTRAS**

Type No	<b>Auxiliary Contacts</b>	Magnetic Blowouts	Closed Contact Housing	Contactor Weights (Grams)
SW80	0	0	0	350
SW82	N	N	0	430
SW180	0	0	0	640
SW190	0	0	N	760
SW200	0	S	0	1350
SW280	0	0	0	790

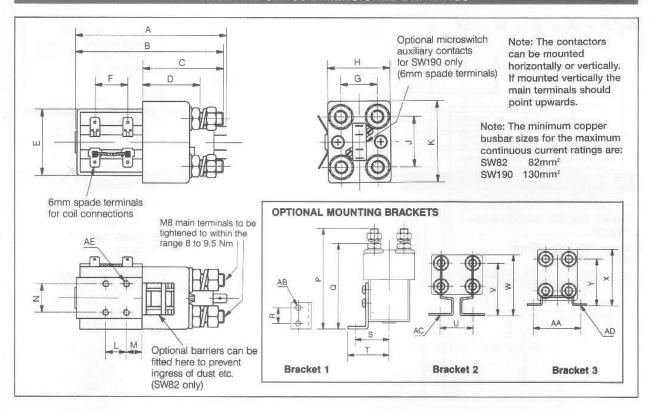
'O' denotes optional extra 'N' denotes not available 'S' denotes standard feature Regarding the above weights, add 20 grams for auxiliary contacts and 50 grams for magnetic blowouts

## SW80, SW180, SW200 AND SW280 DIMENSIONED DRAWINGS



	SW80		SW180		SW200		SW280	
	mm	inches	mm	inches	mm	inches	mm	inches
Α	97	3.82	127	5.00	152	5.98	132.5	5.22
В	91	3.58	121.5	4.78	152	5.98	132.5	5.22
С	49.5	1.95	65.5	2.58	87	3.43	75.5	2.97
D	36	1.42	50.5	1.99	66	2.60	54	2.13
E	40	1.58	45	1.77	58.4	2.30	45	1.77
F	38	1.50	44.6	1.76	54	2.13	48	1.89
G	28.6	1.13	35	1.38	40	1.58	40	1.58
Н	50	1.97	60.7	2.39	70 -	2.76	66	2.60
J	18	0.71	18	0.71	18	0.71	18	0.71
K	9.5	0.37	12.7	0.50	12.5	0.49	12.7	0.50
L	12.7	0.50	16	0.63	18	0.71	16	0.63
М	17.5	0.69	25.4	1.00	25.4	1.00	25.4	1.00
N	96.7	3.81	130	5.12	159	6.26	139.1	5.48
Р	82.5	3.25	114.5	4.51	138	5.43	117.6	4.63
Q	15.1	0.60	22.5	0.89	22.5	0.89	22.5	0.89
R	32	1.26	35.5	1.40	42	1.65	35.5	1.40
S	39	1.54	42.5	1.67	49	1.93	42.5	1.67
T	38 min crs	1.50 min crs	47	1.85	60	2.36	47	1.85
U	31	1.22	39.5	1.56	39	1.54	39.5	1.56
V	50	1.97	62	2.44	66	2.60	63.5	2,50
W	54	2.13	68	2.68	82	3.23	70.2	2.76
X	45	1.77	55	2.17	67.5	2.66	57.2	2.76
Υ	44.5	1.75	62 min crs	2.44 min crs	76.2 min crs	3.00 min crs	76.2 min crs	3.00 min cr
AA	Ø5.2 holes	0.21 dia holes	Ø5.5 holes	0.22 dia holes	Ø5.5 holes	0.22 dia holes	Ø5.5 holes	0.22 dia hole
AB	slots 6 wide	slots 0.24 wide	Ø6.5 holes	0.26 dia holes	Ø6.5 holes	0.26 dia holes	Ø6.5 holes	0.26 dia hole
AC	Ø5.2 holes	0.21 dia holes	slots 6.5 wide	slots 0.26 wide	slots 7.1 wide	slots 0.28 wide	slots 6.5 wide	slots 0.26 wid
AD	M4 fixing holes	(4-off each side)	M5 fixing holes (4-off each side)		M5 fixing holes (4-off each side)		M5 fixing holes (4-off each side)	
AE	M8 main terminals to be tightened to within the range 8 to 9.5 Nm			als to be tightened nge 8 to 9.5 Nm	M10 main terminals to be tightened to within the range 13.4 to 14.6 Nm		M10 main terminals to be tightened to within the range 13.4 to 14.6 Nm	
Bracket 1	Part No. 2070-40 includes screws and washers		Part No. includes screw	2155-165 Part No. 2155-165 s and washers includes screws and wa			Part No. 2155-165 includes screws and washers	
Bracket 2	Integral bracket frame			art No. 2065-167A vs and washers	Double bracket Part No. 2065-167A Double bracket Parincludes screws and washers includes screws			
Bracket 3	Part No. 2126-48A includes screws and washers			2159-47 vs and washers	Part No. 2028-551A Part No. 2159-4 includes screws and washers includes screws and w			

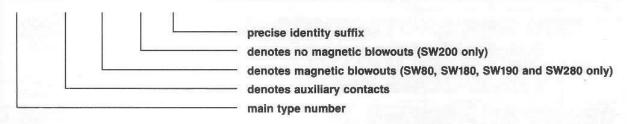
### **SW82 AND SW190 DIMENSIONED DRAWINGS**



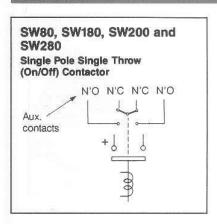
	SI	N82	SW190		
	mm	inches	mm	inches	
A		n <u>w</u>	127	5.00	
В	91	3.58	121.5	4.78	
С	49.5	1.95	65.5	2.58	
D	36	1.42	50.5	1.99	
E	40	1.58	45	1.77	
F	18	0.71	18	0.71	
G	22.2	0.87	29	1.14	
Н	38	1.50	49	1.93	
J	30.4	1.20	34	1.34	
K	50.1	1.97	74.5	2.93	
L	12.7	0.50	16	0.63	
M	9.5	0.37	12.7	0.50	
N	17.5	0.69	25.4	1.00	
P	96.7	3.81	130	5.12	
Q	82.5	3.25	114.5	4.51	
R	15.1	0.60	22.5	0.89	
S	32	1.26	35.5	1.40	
T	39	1.54	42.5	1.67	
U	38 min crs	1.50 min crs	47 min crs	1.85 min crs	
V	42	1.65	55	2.17	
W	50	1.97	66	2.60	
Χ .	54	2.13	75	2.95	
Y	44	1.73	55	2.17	
AA	44.5	1.75	62	2.44	
AB	Ø5.2 holes	0.21 dia holes	Ø5.5 holes	0.22 dia holes	
AC	slots 6 wide	slots 0.24 wide	slots 6.5 wide	slots 0.26 wide	
AD	Ø5.2 holes	0.21 dia holes	Ø6.5 holes	0.26 dia holes	
AE	M4 fixing holes	M4 fixing holes (4-off each side)		M5 fixing holes (4-off each side)	
Bracket 1		. 2070-40 ws and washers	Part No. 2155-165 includes screws and washers		
Bracket 2	Integral br	Integral bracket frame		Double bracket Part No. 2065-167A includes screws and washers	
Bracket 3		2126-48A ws and washers	Part No. 2159-47 includes screws and washers		

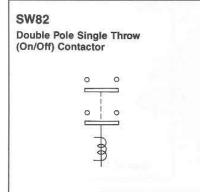
### **EXPLANATION OF CONTACTOR PART NUMBERS**

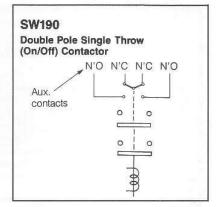
### SW80 - A - B - N - 57



### **CONNECTION DIAGRAMS**







### PERFORMANCE DATA

Type No.	Overload currents that can be ruptured (resistive load) in accordance with UL 508		Maximum recommended contact voltages (D.C.)		Typical voltage drop across contacts	Coil power dissipation (watts)
	Without blowouts	With blowouts	Without blowouts	With blowouts	per 100 amps (per pole)	
SW80	190 amps at 60v D.C.	190 amps at 96v D.C.	60	250	40mV	7 to 13
SW82	150 amps at 96v D.C.	N.A.	96	N.A.	50mV	7 to 13
SW180	300 amps at 60v D.C.	300 amps at 96v D.C.	60	250	40mV	10 to 15
SW190	200 amps at 96v D.C.	300 amps at 120v D.C.	96	250	40mV	10 to 15
SW200	600 amps at 60v D.C.	600 amps at 96v D.C.	60	250	30mV	13 to 25
SW280	525 amps at 60v D.C.	525 amps at 96v D.C.	60	250	40mV	10 to 15

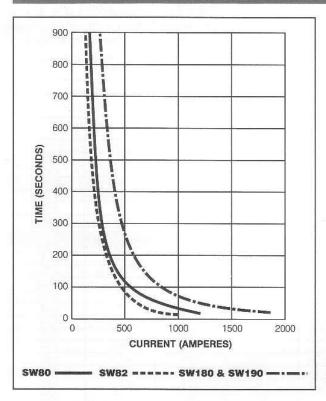
N.A. denotes not applicable

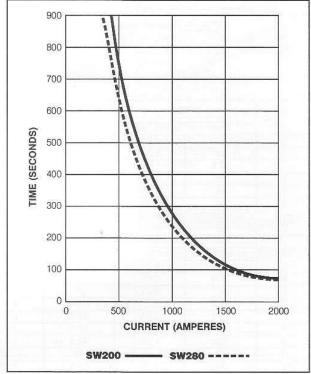
### **PERFORMANCE DATA (cont)**

Type No.	Pull-in time (contacts to close)	Drop-out time (contacts to open)				
		Without suppression	With diode suppression	With diode and resistor (depending on value)		
SW80	20ms	5ms	50ms	8 to 20ms		
SW82	20ms	5ms	50ms	8 to 20ms		
SW180	30ms	8ms	60ms	25ms		
SW190	30ms	8ms	60ms	25ms		
SW200	40ms	10ms	100ms	30ms		
SW280	30ms	8ms	60ms	25ms		

NOTE: The thermal current ratings stated for the contactors in this brochure are dependent upon the correct size of busbar being used for the required duty. For maximum continuous ratings the busbars should not be less than the sizes shown on pages 3 and 4.

### **CONTACT PERFORMANCE (Intermittent ratings)**







ALBRIGHT INTERNATIONAL LTD ALBRIGHT (Engineers) Ltd 125 RED LION ROAD - SURBITON SURREY KT6 7QS - ENGLAND TELEPHONE: 44 (0)20 8390 5357 FACSIMILE: 44 (0)20 8390 1927 WEBSITE: www.albright.co.uk



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