

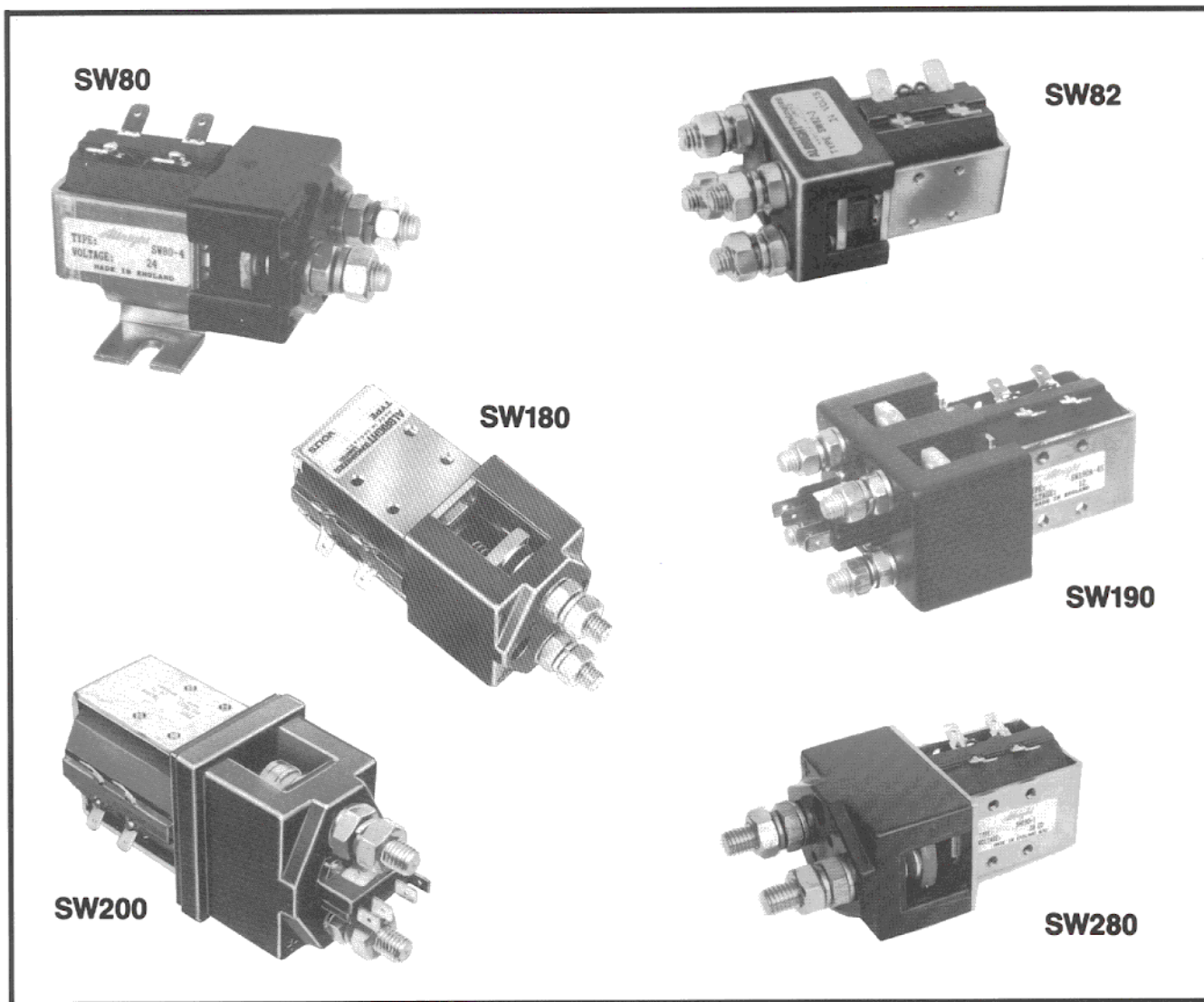


ALBRIGHT INTERNATIONAL LTD

ALBRIGHT (Engineers) LTD

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	-
SW200	S.P. On/Off	400	E165921
SW280	S.P. On/Off	350	-

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

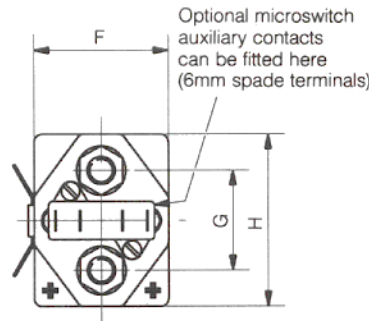
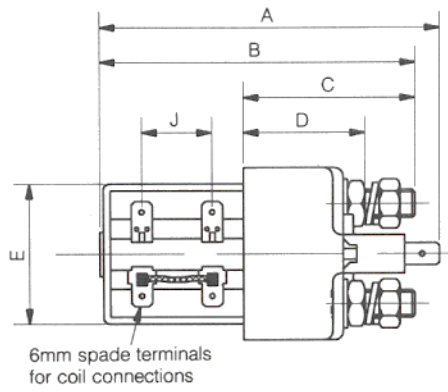
- 1 The mechanical life of the contactors is normally greater than one million operations.
- 2 The typical contact bounce period of time is 3ms.
- 3 The auxiliary contact thermal rating is 5 amperes.
- 4 The auxiliary contact switching capacities (resistive load) are as follows:
5 amperes at 24v D.C.
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	Auxiliary Contacts	Magnetic Blowouts	Closed Contact Housing	Contactors Weights (Grams)
SW80	O	O	O	350
SW82	N	N	O	430
SW180	O	O	O	640
SW190	O	O	N	760
SW200	O	S	O	1350
SW280	O	O	O	790

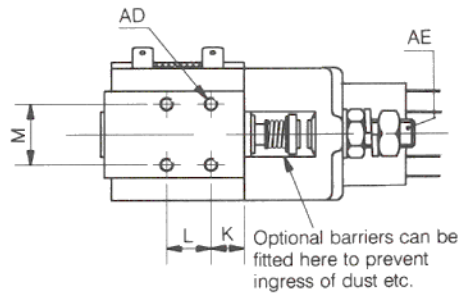
'O' denotes optional extra 'N' denotes not available 'S' denotes standard feature
Regarding the above weights, add 20 grams for auxiliary contacts and 50 grams for magnetic blowouts

SW80, SW180, SW200 AND SW280 DIMENSIONED DRAWINGS

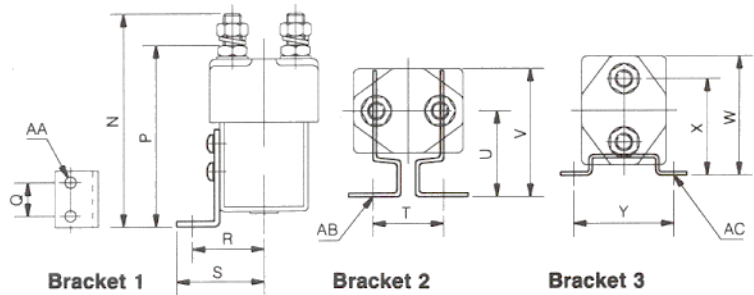


Note: The contactors can be mounted horizontally or vertically. If mounted vertically the main terminals should point upwards.

Note: The minimum copper busbar sizes for the maximum continuous current ratings are:
 SW80 82mm²
 SW180 130mm²
 SW200 260mm²
 SW280 228mm²

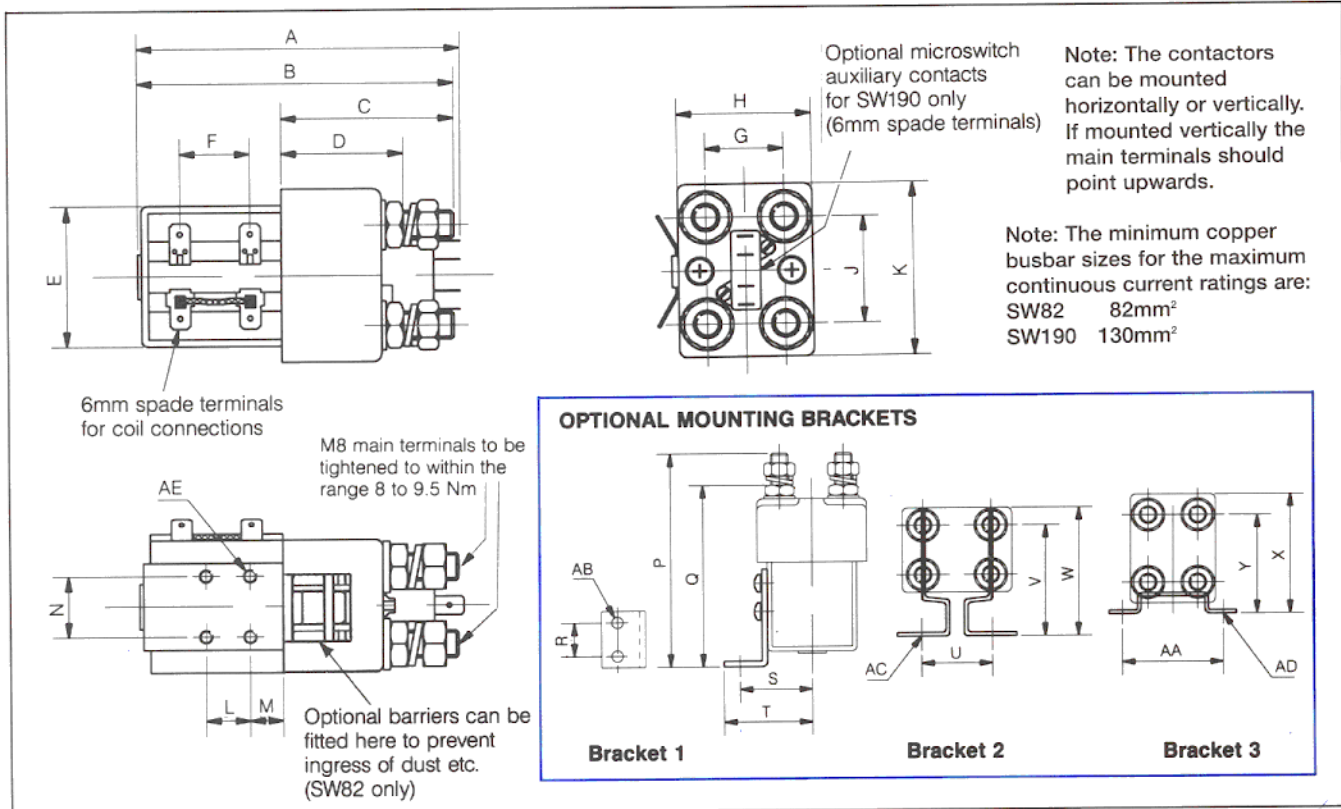


OPTIONAL MOUNTING BRACKETS



	SW80		SW180		SW200		SW280	
	mm	inches	mm	inches	mm	inches	mm	inches
A	97	3.82	127	5.00	152	5.98	132.5	5.22
B	91	3.58	121.5	4.78	152	5.98	132.5	5.22
C	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
H	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
M	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
P	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	2.25
Y	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 crs
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 holes
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 holes
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 wide
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		M8 main terminals to be tightened to within the range 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. 2155-165 includes screws and washers		Part No. 2155-165 includes screws and washers		Part No. 2155-165 includes screws and washers	
Bracket 2	Integral bracket frame		Double bracket Part No. 2065-167A includes screws and washers		Double bracket Part No. 2065-167A includes screws and washers		Double bracket Part No. 2065-167A includes screws and washers	
Bracket 3	Part No. 2126-48A includes screws and washers		Part No. 2159-47 includes screws and washers		Part No. 2028-551A includes screws and washers		Part No. 2159-47 includes screws and washers	

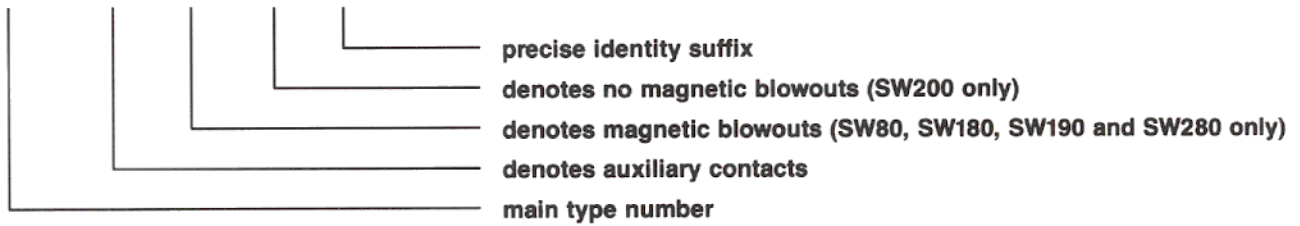
SW82 AND SW190 DIMENSIONED DRAWINGS



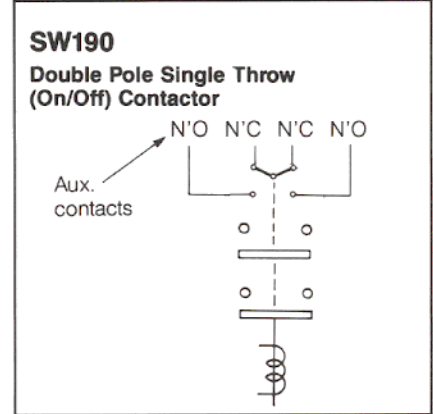
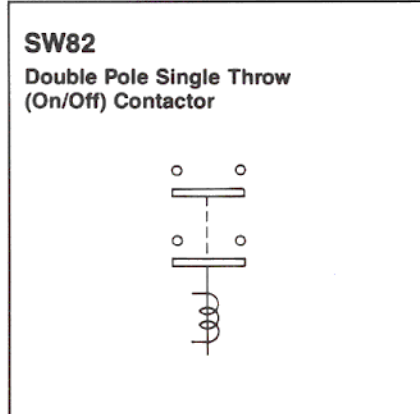
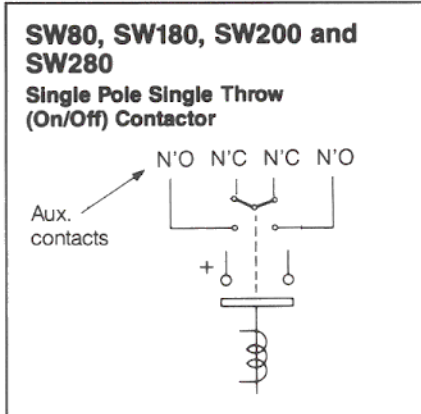
	SW82		SW190	
	mm	inches	mm	inches
A	—	—	127	5.00
B	91	3.58	121.5	4.78
C	49.5	1.95	65.5	2.58
D	36	1.42	50.5	1.99
E	40	1.58	45	1.77
F	18	0.71	18	0.71
G	22.2	0.87	29	1.14
H	38	1.50	49	1.93
J	30.4	1.20	34	1.34
K	50.1	1.97	74.5	2.93
L	12.7	0.50	16	0.63
M	9.5	0.37	12.7	0.50
N	17.5	0.69	25.4	1.00
P	96.7	3.81	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
X	54	2.13	75	2.95
Y	44	1.73	55	2.17
AA	44.5	1.75	62	2.44
AB	∅5.2 holes	0.21 dia holes	∅5.5 holes	0.22 dia holes
AC	slots 6 wide	slots 0.24 wide	slots 6.5 wide	slots 0.26 wide
AD	∅5.2 holes	0.21 dia holes	∅6.5 holes	0.26 dia holes
AE	M4 fixing holes (4-off each side)		M5 fixing holes (4-off each side)	
Bracket 1	Part No. 2070-40 includes screws and washers		Part No. 2155-165 includes screws and washers	
Bracket 2	Integral bracket frame		Double bracket Part No. 2065-167A includes screws and washers	
Bracket 3	Part No. 2126-48A includes screws 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 per 100 amps (per pole)	Coil power dissipation (watts)
	Without blowouts	With blowouts	Without blowouts	With blowouts		
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

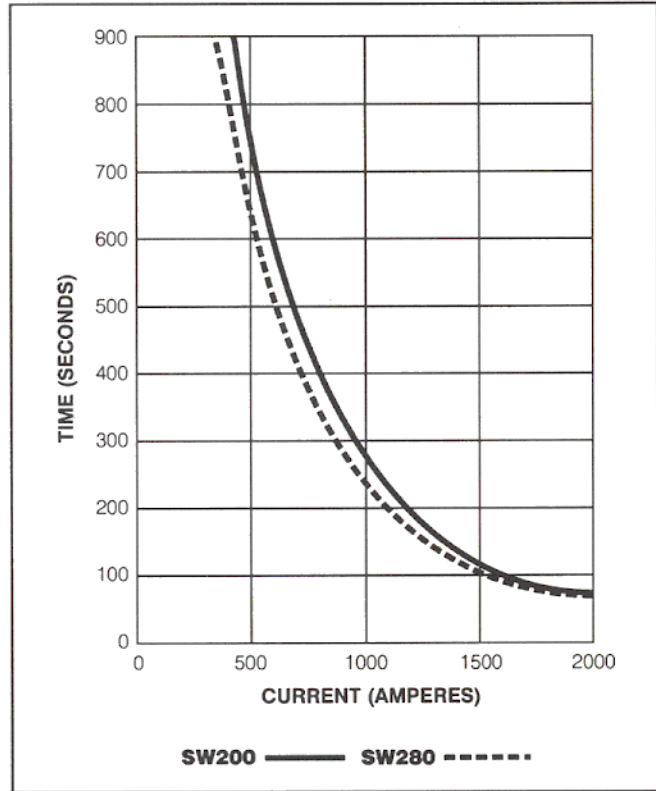
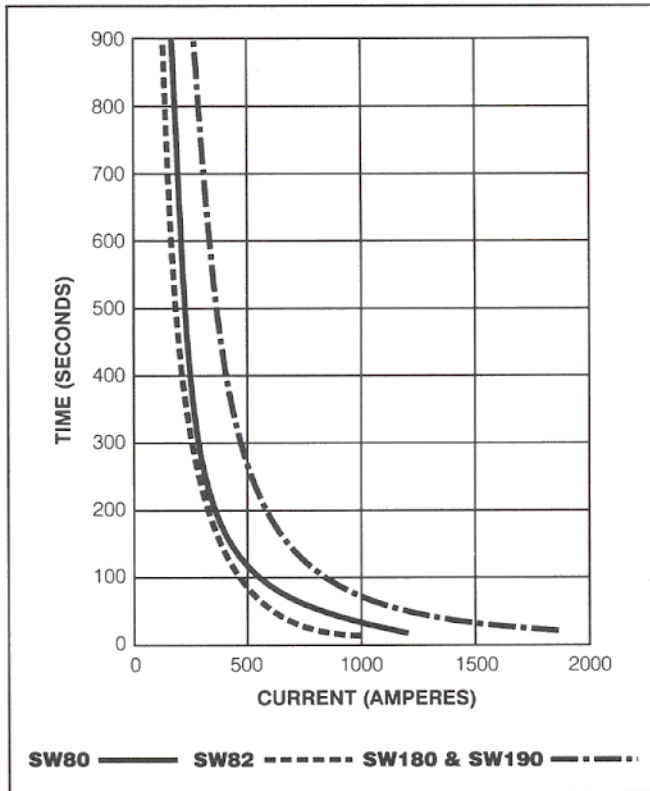
N.A. denotes not applicable

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

