

Part number:

**015-10001**

**HYDROMA**

HYDRAULICKÉ SYSTÉMY

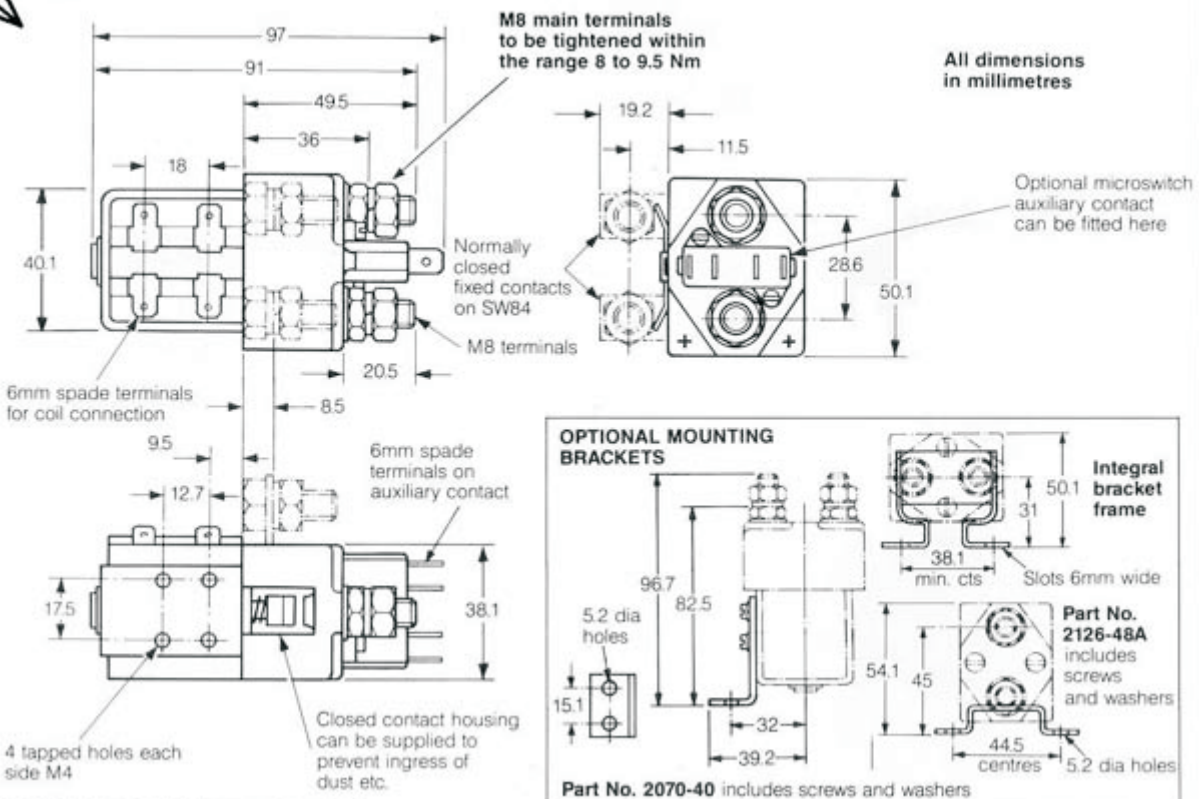
**HIDROMA  
SISTEMS**

UKŁADY HYDRAULICZNE

**HYDROMA**

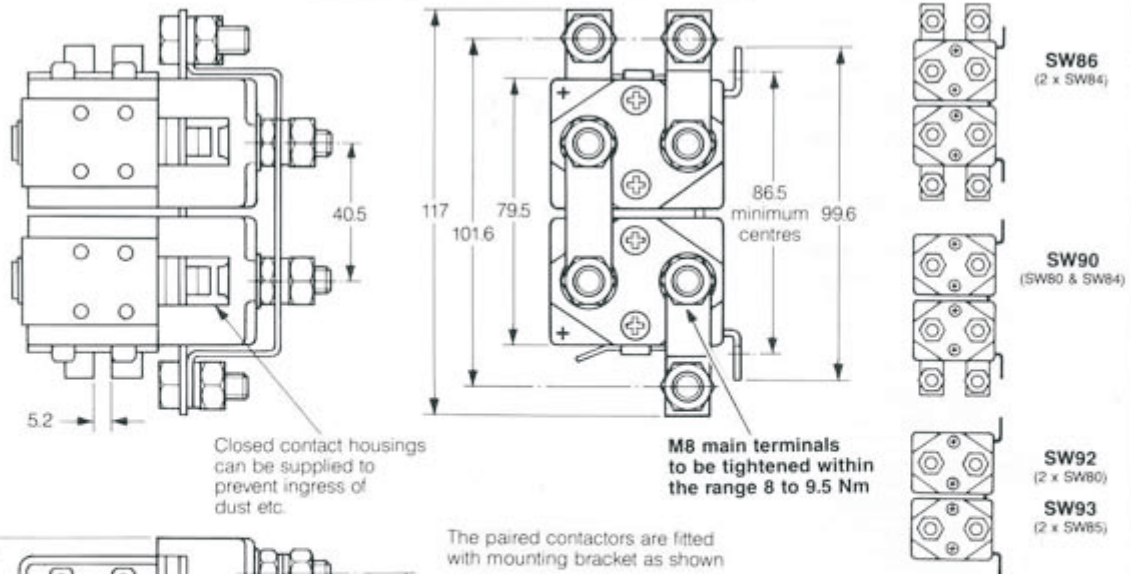
ГИДРАВЛИЧЕСКИЕ СИСТЕМЫ

**DIMENSION DRAWINGS**



**SW80, 84 AND 85**

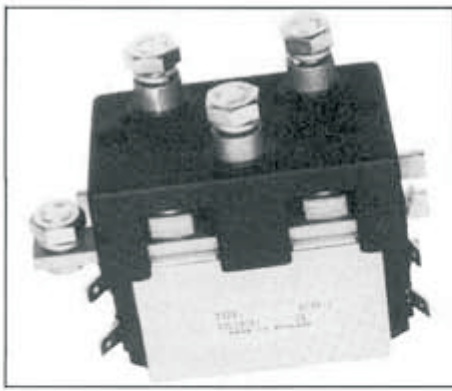
The contactors can be mounted either horizontally or vertically. If mounted vertically the contact studs must point upwards with the exception of the SW85 and its derivatives which should be mounted with the contact studs pointing downwards.



**SW86, 88, 90, 92 AND 93**

**PLEASE NOTE**  
The Normally Closed contacts of the SW84 and SW88 are not designed to make and break current.

**All dimensions in millimetres**



direct panel mounting. (3) Separate brackets for mounting the contactor at 90° to a panel (see page 5).

The DC88 is physically and electrically interchangeable with the SW88 reversing contactor.

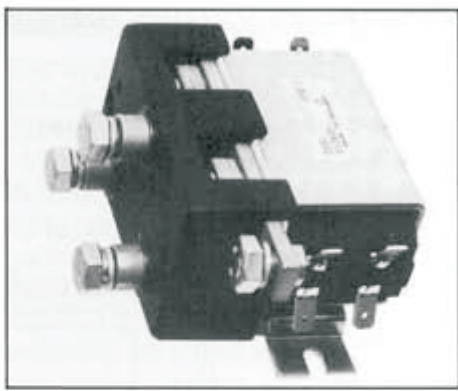
### DC88E AND DC92E ECONOMY CONTACTORS

The DC88E is a version of the DC88 Direction Contactor and has a reduced specification compared with the standard DC88.

It has been designed for use with smaller pedestrian and rider electric trucks, particularly those equipped with electronic controls. It is also intended for use with small electric winches, cranes, etc.

Thermal current rating is nominally 80A and coil power has been reduced to within the range of 10-15 watts compared with the 15-20 watts of the standard version.

This reduced specification results in a lower price which can compare



favourably with the price of automotive canned solenoids together with their associated wiring and mounting costs.

Similarly the DC92E Economy Version of the DC92 paired on/off contactor is also available.

Most of the additional features which can be specified on the standard DC88 and DC92, such as magnetic blowouts, auxiliary contacts, dust shields, etc., can also be specified for the DC88E and DC92E. Similarly, overall dimensions, footprint and terminal sizes are unchanged.

Similarly all the optional extras listed apply:

- Magnetic blowouts (suffix B)
- Auxiliary contacts (suffix A)
- Large contact tips (suffix L)

A variety of methods for mounting the contactor are available:

- (1) An integral bracket.
- (2) Tapped holes in the contactor frame for

A paired single pole on/off contactor can also be supplied. This is the type DC92 and this contactor can also have integral links for the main poles if required.

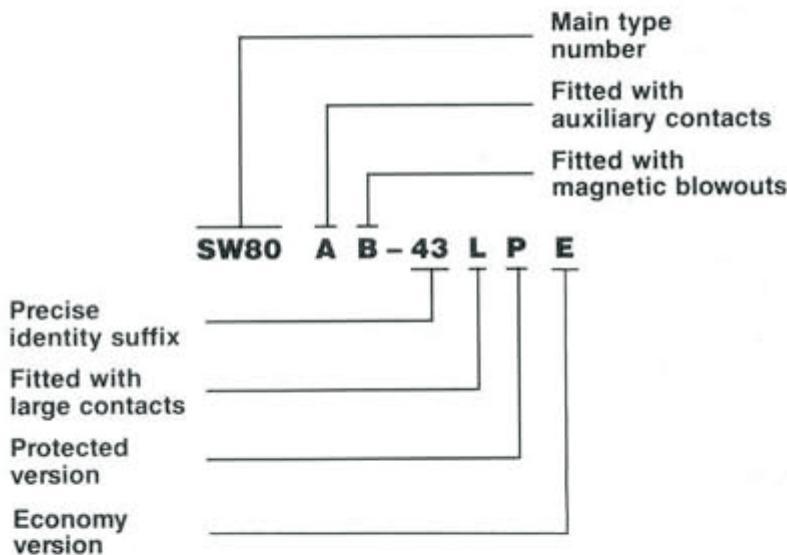
### CONTACTOR WEIGHTS

Add 20 gms for each auxiliary contact

Add 50 gms for each set of blowout magnets.

SW80	350 gms	SW822	920 gms	SW85P	395 gms	DC88E	930 gms	DC92	770 gms
SW80P	390 gms	SW822P	960 gms	SW86	890 gms	DC88P	990 gms	DC92E	750 gms
SW82	430 gms	SW84	430 gms	SW88	910 gms	SW90	810 gms	SW93	750 gms
SW82P	450 gms	SW85	360 gms	DC88	950 gms	SW92	730 gms	DC92P	810 gms

### EXPLANATION OF CONTACTOR TYPE NUMBERS



	Auxiliary Contacts	Magnetic Blowouts	Mounting Brackets	Large Contact Tips	Closed Contact Housing	Environmentally Protected
SW80	O	O	O	O	O	O
SW82	N	N	O	O	O	O
SW822	N	N	S	O	O	O
SW84	O	O	O	O	O	N
SW85	O	O	O	O	O	O
SW86	O	O	S	O	O	N
DC88	O	O	S	O	O	N
DC88E	O	O	S	N	O	N
DC88P	N	N	S	O	S	S
SW88	O	O	S	O	O	N
SW90	O	O	S	O	O	N
DC92	O	O	S	O	O	N
DC92E	O	O	S	N	O	N
DC92P	N	N	S	O	S	S
SW92	O	O	S	O	O	O
SW93	O	O	S	O	O	O

O = Optional Extra, S = Standard Feature, N = Not Available

### COIL RESISTANCES FOR POPULAR VOLTAGES

	12V DC	24V DC	36V DC	48V DC	60V DC	72V DC	80V DC
Intermittently rated coils (ohms)	9	29	73	120	212	305	365
Continuously rated coils (ohms)	14	52	120	212	305	458	600





## PERFORMANCE DATA

### SW80, SW80B, SW82, SW84B, SW85, SW85B, SW88, SW88B, DC88, DC88B and SW822

Thermal current rating (100%): 100 Amperes

Intermittent current rating:

30% duty	180 Amperes
40% duty	160 Amperes
50% duty	150 Amperes
60% duty	130 Amperes
70% duty	120 Amperes

Typical fault currents which can be ruptured (5ms time constant):

→ SW80 and SW85 800 Amperes at 48V D.C.  
SW80B and SW85B

800 Amperes at 80V D.C.
SW84*, SW88* and DC88*
800 Amperes at 48V D.C.
SW84B*, SW88B* and DC88B*
600 Amperes at 80V D.C.
SW82 and SW822 800 Amperes at 80V D.C.

\* Normally open contacts, not normally closed contacts.

Maximum recommended contact voltages:

→ SW80(P) and SW85(P)	48V D.C.
SW80B	96V D.C.
SW84, SW88 and DC88(P)	48V D.C.
SW84B, SW88B and DC88B	96V D.C.
SW82(P) and SW822(P)	96V D.C.

Typical voltage drop across contacts per 100 Amperes:

→ SW80(P) and SW85(P)	40mV
SW82(P) and SW822(P) (per pole)	50mV
SW84, SW88 and DC88 (P)	40mV
(normally open contacts)	
SW84, SW88 and DC88 (P)	50mV
(normally closed contacts)	

Mechanical life: > 5 x 10<sup>6</sup>

Coil power dissipation:  
Intermittently rated types 15-20 Watts  
Continuously rated types 7-13 Watts

Maximum pull-in voltage (coil at 20°C):  
Intermittently rated types 60%V  
Continuously rated types 66%V

Typical drop-out voltage: 10-25%V

Pull-in time (n/o contacts to close): 20ms

Drop-out time (n/o contacts to open):  
Without suppression 5ms  
With diode suppression 50ms  
With diode and resistor 8-20ms  
(depending on value)

Main contact changeover time (SW84, SW88 and DC88)

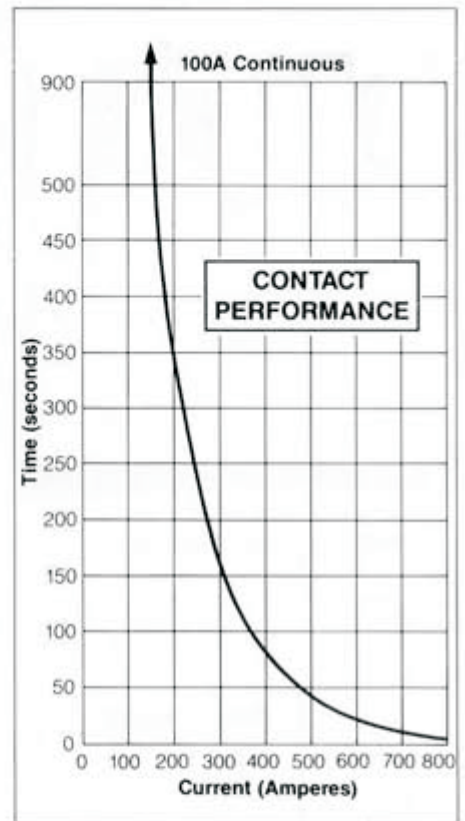
Normally closed to normally open 7ms  
Normally open to normally closed 4ms

Typical contact bounce period: 3ms

Auxiliary contact thermal current rating: 5 Amperes

Auxiliary contact switching capacities (resistive load):

5A at 24V D.C.
2A at 48V D.C.
0.5A at 240V D.C.



### DC88E

Thermal current rating (100%): 80 Amperes

Intermittent current rating:

30% duty	150 Amperes
40% duty	130 Amperes
50% duty	120 Amperes
60% duty	105 Amperes
70% duty	95 Amperes

Typical fault currents which can be ruptured (5ms time constant):

DC88E*	800 Amperes at 48V D.C.
DC88BE*	600 Amperes at 80V D.C.

\* Normally open contacts, not normally closed contacts.

Maximum recommended contact voltages:

DC88E	48V D.C.
DC88BE	96V D.C.

Typical voltage drop across contacts per 100 Amperes:

Normally open contacts	40mV
Normally closed contacts	50mV

Mechanical life: > 5 x 10<sup>6</sup>

Coil power dissipation: 10-15 Watts

Maximum pull-in voltage (coil at 20°C): 60%V

Typical drop-out voltage: 10-25%V

Pull-in time (n/o contacts to close): 20ms

Drop-out time (n/o contacts to open):  
Without suppression 5ms  
With diode suppression 50ms  
With diode and resistor 8-20ms  
(depending on value)

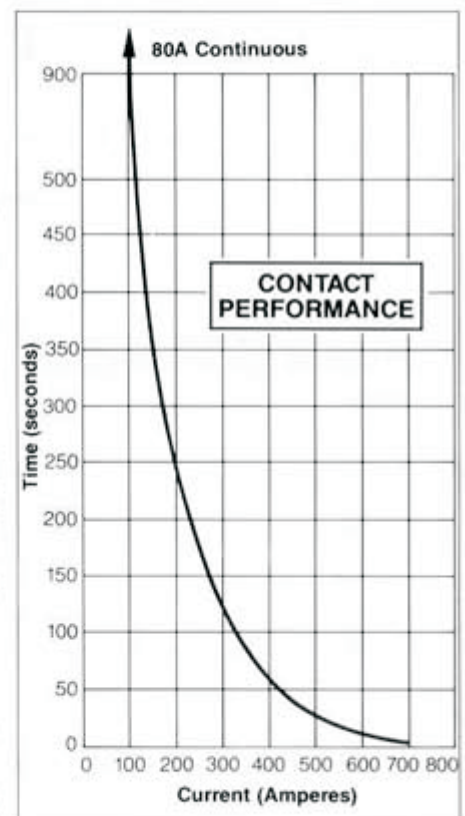
Main contact changeover time:  
Normally closed to normally open 7ms  
Normally open to normally closed 4ms

Typical contact bounce period: 3ms

Auxiliary contact thermal current rating: 5 Amperes

Auxiliary contact switching capacities (resistive load):

5A at 24V D.C.
2A at 48V D.C.
0.5A at 240V D.C.



All the above figures should be used as a guide only.  
Alternative ratings may be considered according to applications.