

PSRC Softstarter for scroll compressor applications



PSRC is a unique softstarter designed specifically for scroll compressors, that is very easy to use and install. The PSRC softstarter was designed with a short starting time whilst maintaining a low starting current thus increasing the life span of the compressor. As the settings cannot be changed, reliability is guaranteed.

Product description

- Wide rated operational voltage 208 – 600 V AC
- Rated control supply voltage 100 – 240 V AC
- Rated operational current 3 – 105 A
- Built-in by-pass on all sizes, saving energy and reducing installation time
- Fixed settings optimized for scroll compressors
- Short starting time
- Run signal relay on all devices
- TOR signal relay on PSRC25 ... PSRC105
- Optional fieldbus communication using Profibus, Modbus, Devicenet or CANopen
- DIN rail mounting on PSRC3 ... PSRC45, screw mounting on all sizes
- Connection kits for easy connection with ABB manual motor starters
- Sophisticated algorithm eliminating the DC-component and thereby providing excellent starting performance

The PSRC is based on the PSR softstarter, which has been on the market for several years. PSRC, with built-in by-pass, is equally compact as the PSR and therefore just as easy to install and to fit into most installations.

Ordering details PSRC3 ... PSRC105

Rated operational voltage U_o , 208-600 V AC

Rated control supply voltage, U_c , 100 - 240 V AC

IEC data		UL/CSA data				Part number / Type code	Order code
kW at 400 V	I_r rated current	hp at 208 V	hp at 480 V	hp at 600 V	FLA		
1.5	3.9	0.5	2	2	3.4	PSRC3-600-70	1SFA896203R7000
3	6.8	1	3	5	6.1	PSRC6-600-70	1SFA896204R7000
4	9	2	5	7.5	9	PSRC9-600-70	1SFA896205R7000
5.5	12	3	7.5	10	11	PSRC12-600-70	1SFA896206R7000
7.5	16	3	10	10	15	PSRC16-600-70	1SFA896207R7000
11	25	7.5	15	20	14	PSRC25-600-70	1SFA896208R7000
15	30	7.5	20	25	28	PSRC30-600-70	1SFA896209R7000
18.5	37	10	25	30	34	PSRC37-600-70	1SFA896210R7000
22	45	15	30	40	46.2	PSRC45-600-70	1SFA896211R7000
30	60	20	40	50	59.4	PSRC60-600-70	1SFA896212R7000
37	72	20	50	60	68	PSRC72-600-70	1SFA896213R7000
45	85	25	60	75	80	PSRC85-600-70	1SFA896214R7000
55	105	30	75	100	104	PSRC105-600-70	1SFA896215R7000

PSRC

Technical data

Softstarter, type

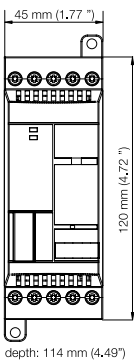
Normal start In-line connected	PSRC3	PSRC6	PSRC9	PSRC12	PSRC16	PSRC25	PSRC30	PSRC37	PSRC45	PSRC60	PSRC72	PSRC85	PSRC105
IEC data													
(400 V) kW	1.5	3	4	5.5	7.5	11	15	18.5	22	30	37	45	55
I_e rated current	3.9	6.8	9	12	16	25	30	37	45	60	72	85	105
UL/CSA data													
(208 V) hp	0.5	1	2	3	3	7.5	7.5	10	15	20	20	25	30
(440-480 V) hp	2	3	5	7.5	10	15	20	25	30	40	50	60	75
(600 V) hp	2	5	7.5	10	10	20	25	30	40	50	60	75	100
FLA	3.4	6.1	9	11	15.2	24.2	28	34	46.2	59.4	68	80	104
Degree of protection													
main circuit	IP20						IP10						
control circuit	IP20												
Connectable cable area													
main circuit	1 x 0.75 - 2.5 mm ² 2 x 0.75 - 2.5 mm ² 1 x 14 AWG				1 x 2.5 - 10 mm ² 2 x 2.5 - 10 mm ² 1 x 12 - 8 AWG			1 x 6 - 35 mm ² 2 x 6 - 16 mm ² 1 x 8 - 4 AWG		1 x 10 - 95 mm ² 2 x 6 - 35 mm ² 1 x 6 - 2/0 AWG			
control circuit	1 x 0.75 - 2.5 mm ² 1 x 0.75 - 2.5 mm ² 1 x 16 - 14 AWG / 2 x 16 AWG							1 x 0.75 - 2.5 mm ² 2 x 0.75 - 1.5 mm ² 1 x 16 - 14 AWG / 2 x 16 AWG					
Signal relays for Run signal													
Resistive load	240 V AC, 3 A / 24 V DC, 3 A						240 V AC, 3 A / 24 V DC, 3 A						
AC-15 (Contactor)	240 V AC, 0.5 A / 24 V DC 0.5 A						240 V AC, 0.5 A / 24 V DC, 0.5 A						
for Top ramp signal													
Resistive load							240 V AC, 3 A / 24 V DC, 3 A						
AC-15 (Contactor)							240 V AC, 0.5 A / 24 V DC, 0.5 A						
Rated insulation voltage U_i	600 V												
Rated operational voltage U_e	208...600 V AC +10 %/-15 %, 50/60 Hz ±5 %												
Rated control supply voltage U_s	100...240 V AC, 50/60Hz ±5 %												
Ambient temperature													
during operation	-25 °C to + 60 °C (-13 to + 140 °F) ¹⁾												
during storage	-40 °C to + 70 °C (-40 to +158 °F)												
Maximum altitude	4000 m (13123 ft) ²⁾												

¹⁾ Above 40 °C (104 °F) up to max. 60 °C (140 °F) reduce the rated current with 0.8 % per °C (0.44 % per °F).

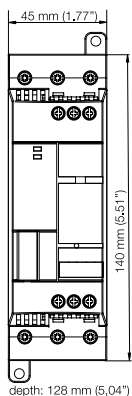
²⁾ When used at high altitudes above 1000 meters (3281 ft) up to 4000 meters (13123 ft) you need to derate the rated current using one of the following formulas. [% of I_e = 100 - (x-1000)/150] x = actual altitude for the softstarter in meters. [% of I_e = 100 - (x-3280)/497] x = actual altitude for the softstarter in feet.

Dimensions

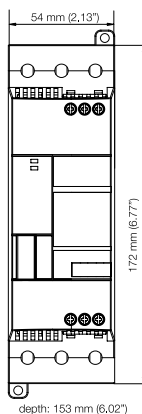
PSRC3 ... PSRC16



PSRC25 ... PSRC30



PSRC37... PSRC45



PSRC60... PSRC105

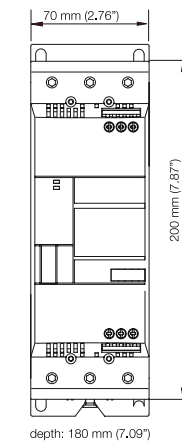


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For more information about PSRC

please see PSRC catalog 1SFC132006C0201

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