

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.

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.

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

Ordering details PSRC3 ... PSRC105

Rated operational voltage U_n , 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_n 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

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PSRC Technical data

Softstarter, type

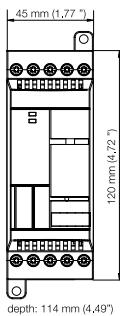
Normal start In-line connected	PSRC3	PSRC6	PSRC9	PSRC12	PSRC16	PSRC25	PSRC30	PSRC37	PSRC45	PSRC60	PSRC72	PSRC85	PSRC105
IEC data													
(400 V) kW	1.5	3	4	5.5	7.5	11	15	18.5	22	30	37	45	55
rated current	3.9	6.8	9	12	16	25	30	37	45	60	72	85	105
UL/CSA data													
(208 V) hp	0.5	1	2	3	3	7.5	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 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			
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_s	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).

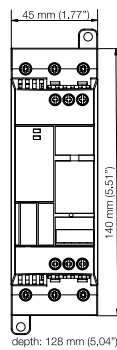
²⁾ When used at high altitudes above 1000 meters (3281 ft) up to 4000 meters (13123 ft) you need to derate the rated current using one of the following formulas. [% of I_e = 100 - (x-1000)/150] x = actual altitude for the softstarter in meters. [% of I_e = 100 - (x-3280)/497] x = actual altitude for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

Dimensions

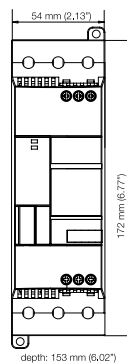
PSRC3 ... PSRC16



PSRC25 ... PSRC30



PSRC37... PSRC45



PSRC60... PSRC105

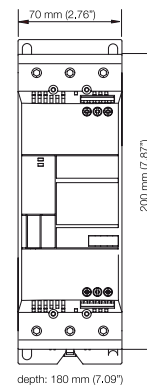


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For more information about PSRC

please see PSRC catalog 1SFC132006C0201

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