

# Softstarters

## Type PSR Overview



### PSR3 ... PSR16

### PSR25 ... PSR30

### PSR37 ... PSR45

#### Softstarter, Type

Normal start:

In Line connected

(400 V) kW  
IEC, Max. A  
  
(440-480 V) hp  
UL, Max. A

PSR3	PSR6	PSR9	PSR12	PSR16	PSR25	PSR30	PSR37	PSR45
1.5	3	4	5.5	7.5	11	15	18.5	22
3.9	6.8	9	12	16	25	30	37	45
2	3	5	7.5	10	15	20	25	30
3.4	6.1	9	11	15.2	24.2	28	34	46.2

400V, 40 °C

#### Manual motor starter, Type

If using manual motor starters type 1 coordination will be achieved.

MS116	MS116	MS116	MS116	MS116	MS132	MS132	MS450	MS450
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#### Fuse protection 400 V, 50 kA, gG Fuse

Using gG fuses type 1 coordination will be achieved.

10 A	16 A	25 A	32 A	32 A	50 A	63 A	100 A	125 A
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#### Switch fuse, Type

Suitable switch fuse for the above gG fuses.

OS32GD	OS32GD	OS32GD	OS32GD	OS32GD	OS32GD	OS32GD	OS63GD	OS125GD
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#### Line contactor, Type

The line contactor is not required for the softstarter itself but often used to open if OL trips.

A9	A9	A9	A12	A16	A26	A30	A40	A50
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#### Thermal overload relay, Type

The overload relay is always required to protect the motor.

TA25DU	TA25DU	TA25DU	TA25DU	TA25DU	TA25DU	TA25DU	TA42DU	TA75DU
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#### By-pass contacts

Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in
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## Number of starts per hour using PSR softstarters

Motor-current I<sub>o</sub>

#### Starts/hour without auxiliary fan

	10	20	30	40	50	60	80	100
3 A	PSR3							PSR6
6 A	PSR6			PSR9				
9 A	PSR9		PSR12			PSR16	PSR25	
12 A	PSR12		PSR16	PSR25		PSR30		
16 A	PSR16	PSR25		PSR30	PSR37			
25 A	PSR25	PSR30	PSR37		PSR45		PSR60	
30 A	PSR30	PSR37		PSR45	PSR60		PSR72	
37 A	PSR37	PSR45		PSR60	PSR72	PSR85	PSR105	
45 A	PSR45		PSR60	PSR72	PSR85	PSR105	-	
60 A	PSR60		PSR72	PSR85	PSR105	-	-	
72 A	PSR72	PSR85	PSR105		-	-	-	
85 A	PSR85	PSR105		-	-	-	-	
105 A	PSR105	-	-	-	-	-	-	

#### Starts/hour with auxiliary fan

	10	20	30	40	50	60	80	100
3 A	PSR3							PSR6
6 A	PSR6			PSR9				
9 A	PSR9		PSR12			PSR16	PSR25	
12 A	PSR12		PSR16	PSR25		PSR30		
16 A	PSR16	PSR25		PSR30	PSR37			
25 A	PSR25	PSR30	PSR37		PSR45		PSR60	
30 A	PSR30	PSR37		PSR45	PSR60		PSR72	
37 A	PSR37	PSR45		PSR60	PSR72	PSR85	PSR105	
45 A	PSR45		PSR60	PSR72	PSR85	PSR105	-	
60 A	PSR60		PSR72	PSR85	PSR105	-	-	
72 A	PSR72	PSR85	PSR105		-	-	-	
85 A	PSR85	PSR105		-	-	-	-	
105 A	PSR105	-	-	-	-	-	-	

Data based on an ambient temperature of 40°, starting current of 4 × I<sub>o</sub> and ramp time 6 seconds.

# Softstarters

## Type PSR

### Overview and description



#### PSR60 ... PSR105

##### Softstarter, Type

PSR60	PSR72	PSR85	PSR105
30	37	45	55
60	72	85	105
40	50	60	75
59.4	68	80	104

400V, 40 °C

##### Manual motor starter, Type

MS495	MS495	MS495	—
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##### Fuse protection 400 V, 50 kA, gG Fuse

125 A	200 A	200 A	250 A
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##### Switch fuse, Type

OS125GD	OS250GD	OS250GD	OS250GD
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##### Line contactor, Type

A63	A75	A95	A110
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##### Thermal overload relay, Type

TA75DU	TA75DU	TA110DU	TA110DU
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##### By-pass contacts

Built-in	Built-in	Built-in	Built-in
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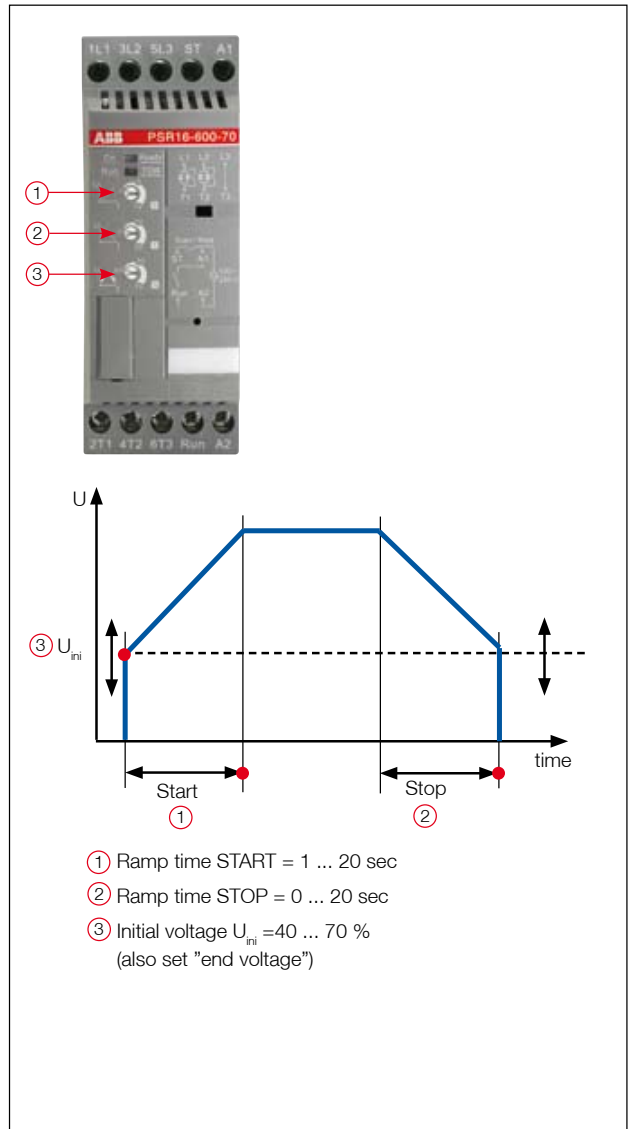
## Description

**PSR - Compact range**, covers motor currents from 3 to 105 A. It is the latest addition to the softstarter family and has an attractive, compact design. Further, the system concept includes MMS and the softstarters are available for remote control connection using the FieldBusPlug as an accessory. All sizes include a Run signal relay, while from sizes 25 A the PSR Softstarters are also provided with an output signal for TOR (Top Of Ramp), i.e. full voltage. With standard performance the PSR Softstarters handle ten starts per hour. When an auxiliary cooling fan is added, the starting capacity is increased to 20 starts per hour or more.

- Current ratings 3.9 – 105 A (1.5 - 55 kW), at 400 V
- Motor voltage 208 – 600 V
- Supply voltage 24 V DC or 100-240 V AC
- Easy to install and adjust
- DIN rail or screw mounting
- Integrated by-pass contacts

With their compact design, the PSR Softstarters are ideal for installation in places where space is limited and where there is a demand for easy installation.

## Settings



# Softstarters

Type PSR3 ... PSR105

Ordering details



Motor power				IEC	Type	Order code	Weight kg 1 piece
230 V $P_n$ kW	400 V $P_n$ kW	500 V $P_n$ kW	Max rated motor current, $I_n$ A				
<b>208 – 600 V AC</b>							
<b>Supply voltage, <math>U_s</math>, 100-240 V AC</b>							
0.75	1.5	2.2	3.9	PSR3-600-70	1SFA 896 103 R7000	0.45	
1.5	3	4	6.8	PSR6-600-70	1SFA 896 104 R7000	0.45	
2.2	4	4	9	PSR9-600-70	1SFA 896 105 R7000	0.45	
3	5.5	5.5	12	PSR12-600-70	1SFA 896 106 R7000	0.45	
4	7.5	7.5	16	PSR16-600-70	1SFA 896 107 R7000	0.45	
5.5	11	15	25	PSR25-600-70	1SFA 896 108 R7000	0.65	
7.5	15	18.5	30	PSR30-600-70	1SFA 896 109 R7000	0.65	
7.5	18.5	22	37	PSR37-600-70	1SFA 896 110 R7000	1.00	
11	22	30	45	PSR45-600-70	1SFA 896 111 R7000	1.00	
15	30	37	60	PSR60-600-70	1SFA 896 112 R7000	2.20	
22	37	45	72	PSR72-600-70	1SFA 896 113 R7000	2.27	
22	45	55	85	PSR85-600-70	1SFA 896 114 R7000	2.27	
30	55	55	105	PSR105-600-70	1SFA 896 115 R7000	2.27	
<b>Supply voltage, <math>U_s</math>, 24 V DC</b>							
0.75	1.5	2.2	3.9	PSR3-600-81	1SFA 896 103 R8100	0.45	
1.5	3	4	6.8	PSR6-600-81	1SFA 896 104 R8100	0.45	
2.2	4	4	9	PSR9-600-81	1SFA 896 105 R8100	0.45	
3	5.5	5.5	12	PSR12-600-81	1SFA 896 106 R8100	0.45	
4	7.5	7.5	16	PSR16-600-81	1SFA 896 107 R8100	0.45	
5.5	11	15	25	PSR25-600-81	1SFA 896 108 R8100	0.65	
7.5	15	18.5	30	PSR30-600-81	1SFA 896 109 R8100	0.65	
7.5	18.5	22	37	PSR37-600-81	1SFA 896 110 R8100	1.00	
11	22	30	45	PSR45-600-81	1SFA 896 111 R8100	1.00	
15	30	37	60	PSR60-600-81	1SFA 896 112 R8100	2.20	
22	37	45	72	PSR72-600-81	1SFA 896 113 R8100	2.27	
22	45	55	85	PSR85-600-81	1SFA 896 114 R8100	2.27	
30	55	55	105	PSR105-600-81	1SFA 896 115 R8100	2.27	

## Accessories

Description	Type	Order code	Pack <sup>ing</sup> piece	Weight kg 1 piece	
<b>Fieldbus Plug Connection Accessory</b>					
The same accessory for all sizes	PSR-FBPA	1SFA 896 312 R1001	1	0.06	
<b>Connection kit for PSR3...16 with MS116 or MS132</b>	PSR16-MS116	1SFA 896 211 R1001	1	0.03	
<b>Connection kit for PSR25...30 and MS132-12 ... MS132-32</b>	PSR30-MS132	1SFA 896 212 R1001	1	0.03	
<b>Connection kit for PSR37...45 and MS450</b>	PSR45-MS450	1SFA 896 213 R1001	1	0.03	
<b>Connection kit for PSR60...105 and MS495</b>	PSR105-MS495	1SAM 501 903 R1001	1	0.05	
<b>Fan</b>	PSR-FAN3-45A	1SFA 896 311 R1001	1	0.01	
<b>Fan</b>	PSR-FAN60-105A	1SFA 896 313 R1001	1	0.013	
<b>Terminal enlargements for PSR60...105</b>					
Wire range mm <sup>2</sup>	1x10...50, 2x10...25	PSLW-72	1SFA 899 002 R1072	1	0.15

### ABB Field Bus Plug

Suitable for all sizes. See page 32 - 34.