PSE – The efficient range
Technical data

Softstarter type		PSE18 ... PSE370
Rated insulation voltage U_i		600 V
Rated operational voltage U_e		208...600 V +10%/-15%
Rated control supply voltage U_s		100...250 V +10%/-15%, 50/60 Hz ±5 %
Rated control circuit voltage U_c		Internal 24 V DC
Starting capacity at I_e		4 x I_e for 10 sec.
Number of starts per hour		10[1]
Overload capability	Overload class	10
Ambient temperature	During operation	-25...+60 °C (-13...+140 F)[2]
	During storage	-40...+70 °C (-40...+158 F)
Maximum altitude		4000 m (13123 ft)[3]
Degree of protection	Main circuit	IP00
	Supply and control circuit	IP20
Main circuit	Built-in bypass	Yes
	Cooling system — fan cooled (thermostat controlled)	Yes
HMI for settings	Display	4 7-segments and icons. Illuminated
	Keypad	2 selection keys and 2 navigation keys
Main settings	Setting current	Size dependent
	Ramp time during start	1...30 sec
	Ramp time during stop	0...30 sec
	Initial/end voltage	30...70%
	Current limit	1.5...7 x I_e
	Torque control for start	Yes / No
	Torque control for stop	Yes / No
	Kick start	Off, 30...100%
Signal relays	Number of signal relays	3
	K2	Run signal
	K3	TOR (bypass) signal
	K1	Event signal
	Rated operational voltage U_e	250 V AC/24 V DC[4]
	Rated thermal current I_{th}	3 A
	Rated operational current I_e at AC-15 (U_e = 250 V)	1.5 A
Analog output	Output signal reference	4...20 mA
	Type of output signal	I Amp
	Scaling	Fixed at 1.2 x I_e
Control circuit	Number of inputs	3 (start, stop, reset of faults)
Signal indication LED	On / Ready	Green flashing / steady
	Run / TOR	Green flashing / steady
	Protection	Yellow
	Fault	Red
Protections	Electronic overload	Yes (Class 10A, 10, 20, 30)
	Locked rotor protection	Yes
	Underload protection	Yes
Fieldbus connection	Connection for ABB FieldBusPlug	Yes (option)
External keypad	Display	LCD type
	Ambient temperature	
	During operation	-25...+60 ºC (-13...+140 F)
	During storage	-40...+70 ºC (-40...+158 F)
	Degree of protection	IP66

[1] Valid for 50% on time and 50% off time. If other data is required, contact your local ABB office.

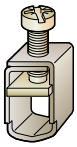
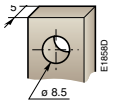
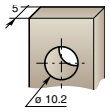
[2] Above 40 ºC (104 ºF) up to max. 60 ºC (140 ºF) reduce the rated current with 0.6% per ºC (0.33% per ºF).

[3] When used at high altitudes, above 1000 meters (3281 ft) up to 4000 meters (13123 ft), de-rate the rated current using the following formula. [% of Ie = 100 - $\frac{x - 1000}{150}$] x = actual altitude of the softstarter in meters. [% of Ie = 100 - $\frac{y - 3280}{480}$] y = actual altitude of the softstarter in feet.

For derating of voltage, contact your local ABB office.

[4] A common voltage needs to be used for all 3 signal relays.

PSE – The efficient range
Technical data

Main terminals				PSE18 … PSE105	PSE142 … PSE170	PSE210 … PSE370
						
	Cu cable - Flexible		1 x mm²	2.5…70 mm²	6…120 mm²	16…300 mm²
		Clamp type		Included	1SDA066917R1	1SDA055016R1
		Tightening torque		8 Nm	14 Nm	25 Nm
	Cu cable - Flexible		2 x mm²	2.5…70 mm²	50…120 mm²	-
		Clamp type		Included	1SFN074709R1000	-
		Tightening torque		8 Nm	16 NM	-
	Cu cable - Stranded		1 x mm²	2.5…70 mm²	6…120 mm²	16…300 mm²
		Clamp type		Included	1SDA066917R1	1SDA055016R1
		Tightening torque		8 Nm	14 Nm	25 Nm
	Cu cable - Stranded		2 x mm²	2.5…70 mm²	50…120 mm²	-
		Clamp type		Included	1SFN074709R1000	-
		Tightening torque		8 Nm	16 NM	-
	Al cable - Stranded		1 x mm²	-	95…185 mm²	185…240
		Clamp type		-	1SDA054988R1	1SDA055020R1
		Tightening torque		-	31 Nm	43 Nm
	Lugs		Width	22 mm (0.866 in)	24 mm (0.945 in)	30 mm (1.181 in)
			Diameter>=	6.5 mm (0.256 in)	8.5 mm (0.335 in)	10.2 mm (0.402 in)
		Tightening torque		9 Nm (80 in lb)	18 Nm (159 in lb)	28 Nm (248 in lb)
Connection capacity acc to UL / CSA 1 x AWG / kcmil				6...2/0	6...300 kcmil	4...400 kcmil
		Clamp type		Included	ATK185	ATK300
		Tightening torque		71 in lb	300 in lb	375 in lb
Connection capacity acc to UL / CSA 2 x AWG / kcmil				-	-	4...500 kcmil
		Clamp type		-	-	ATK300/2
		Tightening torque		-	-	375 in lb
Supply and control circuit		Cu cable - Stranded	1 x mm²		0.75…2.5 mm² (19…14 AWG)	
		Cu cable - Stranded	2 x mm²		0.75…1.5 mm² (19…16 AWG)	
		Tightening torque			0.5 Nm (4.4 in lb)	

Fuse ratings and power losses

For softstarter	Current range	Max power loss at rated I_e	Max fuse rating - main circuit [1]			Power requirements supply circuit Holding (VA) / Pull-in (VA)
			Bussmann fuses, DIN43 620 (Knife)			
Type	A	W	A	Type	Size	
PSE18	5.4…18.0	0.2	40	170M1563	000	16/19.9
PSE25	7.5…25.0	0.4	50	170M1564	000	16/19.9
PSE30	9.0…30.0	0.5	80	170M1566	000	16/19.9
PSE37	11.1…37.0	0.8	100	170M1567	000	16/19.9
PSE45	13.5…45.0	1.2	125	170M1568	000	16/19.9
PSE60	18.0…60.0	2.2	160	170M1569	000	16/19.9
PSE72	21.6…72.0	3.1	250	170M1571	000	16/19.9
PSE85	25.5…85.0	4.3	315	170M1572	000	16/19.9
PSE105	31.8…106.0	6.6	400	170M3819	1*	16/19.9
PSE142	42.9…143.0	12.1	450	170M5809	2	16/31
PSE170	51.3…171.0	17.6	500	170M5810	2	16/31
PSE210	63.0…210.0	8.8	630	170M5812	2	30/700
PSE250	75.0…250.0	12.5	700	170M5813	2	30/700
PSE300	90.6…302.0	18.0	800	170M6812	3	30/700
PSE370	111.0…370.0	27.4	900	170M6813	3	30/700

[1] For the supply circuit 6 A delayed, for MCB use C characteristics.