

MST Digital Soft Starter



Baldor continues a proud tradition of offering the very latest in motor control technology by introducing the MST digital soft starter with six SCR three phase voltage control. Advanced protections for the motor, the soft starter and the load ensure trouble-free operation. Pre-warnings detect problems before the motor

needs to be stopped, which avoids unnecessary downtime. The torque control function was developed and tested in collaboration with pump manufacturers to ensure the best possible stop without water hammer and pressure surges.

Features

Three Phase Power Range: 7.5 Hp – 1000 Hp (30A – 1040A); 208V – 575V; 50/60 Hz

Open Starters: with two inputs and three form C outputs, all programmable

Enclosed Combination Starters: include NEMA 12/4 enclosure, bypass contactor, door mounted disconnect, input circuit breaker, 2-wire switch for hand/off/auto, and indicator lights

Programmable Torque Control: current sensing provides true torque control. During start, gives a more linear acceleration, reducing wear and tear. During stop, eliminates pump water hammer

Torque Limit: can be enabled to minimize stress and wear on motors and equipment

Integrated By-pass Contactor: units over 300 amps have integrated contactors, reducing power loss during run by 90% or more

Integrated Advanced Motor Protection with Current Sensing: provides overload protection, high current, underload, phase imbalance, phase reversal, and by-pass monitor

Programmable Signal Relays: three signal relays can be programmed for run, top of ramp, protections, faults and warnings

Programmable Analog Output: can be programmed for motor current, mains voltage, active power, motor temperature plus others

Keypad Interface: standard; external keypad – optional

Baldor ProSoft for PC: to precisely select the optimal starter for your needs

Soft Starter Simulator for PC: to simulate keypad operation on you PC

Typical Applications

Normal Starting Class 10:

- Bow Thruster
- Compressor
- Elevator
- Centrifugal pump
- Conveyor belt (short)
- Escalator

Heavy Duty Starting Class 30:

- Centrifugal fan
- Crusher
- Mill
- Conveyor belt (long)
- Mixer
- Stirrer

Open Starter

Motor Application Horsepower										Soft Starter		
Normal Starting					Heavy Starting					IEC Amps	Catalog Number	Approximate Dimensions (Inch) HxWxD
Class 10 - 400% torque for 30 seconds					Class 30 - 350% torque for 60 seconds							
208V	230V	460V	575V	UL Amps	208V	230V	460V	575V	UL Amps			
7.5	10	20	25	28	—	—	—	—	—	30	MST-030-CA	10 x 6 x 8
10	10	25	30	34	7.5	10	20	25	28	37	MST-037-CA	10 x 6 x 8
10	15	30	40	42	10	10	25	30	34	44	MST-044-CA	10 x 6 x 8
15	20	40	50	54	10	15	30	40	42	50	MST-050-CA	10 x 6 x 8
20	25	50	60	68	15	20	40	50	54	72	MST-072-CA	10 x 6 x 8
25	30	60	75	80	20	25	50	60	68	85	MST-085-CA	15 x 7 x 11
30	40	75	100	104	25	30	60	75	80	105	MST-105-CA	15 x 7 x 11
40	50	100	125	130	30	40	75	100	104	142	MST-142-CA	15 x 7 x 11
50	60	125	150	156	40	50	100	125	130	175	MST-175-CA	17 x 14 x 11
60	75	150	200	192	50	60	125	150	156	210	MST-210-CA	17 x 14 x 11
75	100	200	250	248	60	75	150	200	192	250	MST-250-CA	17 x 14 x 11
100	100	250	300	302	75	100	200	250	248	300	MST-300-CA	17 x 14 x 11
125	150	300	350	361	100	100	250	300	302	370	MST-370-CA	18 x 14 x 14
150	200	400	500	480	125	150	300	350	361	470	MST-470-CA	18 x 14 x 14
200	250	500	600	590	150	200	400	500	480	570	MST-570-CA	20 x 17 x 15
250	300	600	700	720	200	250	500	600	590	720	MST-720-CA	20 x 17 x 15
300	350	700	800	840	250	300	600	700	720	840	MST-840-CA	20 x 17 x 15
400	450	900	1000	1062	300	350	700	800	840	1050	MST-1050-CA	20 x 17 x 15

- MST-030-CA through MST-050-CA have IP10 degree of protection, other open starters have IP00 degree of protection
- MST-370-CA through MST-1050-CA include built-in bypass (end-of-ramp) contactor

Enclosed NEMA Type 12/4 Combination Starter with Circuit Breaker

Motor Application Horsepower										Soft Starter		
Normal Starting					Heavy Starting					IEC Amps	Catalog Number	Approximate Enclosure Size (Inch) HxWxD
Class 10 - 400% torque for 30 seconds					Class 30 - 350% torque for 60 seconds							
208V	230V	460V	575V	UL Amps	208V	230V	460V	575V	UL Amps			
15	20	40	50	54	—	—	—	—	—	50	MST-050-GD	20 x 20 x 13
20	25	50	60	68	15	20	40	50	54	72	MST-072-GD	20 x 20 x 13
25	30	60	75	80	—	—	—	—	—	85	MST-085-GD	24 x 24 x 13
30	40	75	100	104	25	30	60	75	80	105	MST-105-GD	24 x 24 x 13
40	50	100	125	130	30	40	75	100	104	142	MST-142-GD	24 x 24 x 13
50	60	125	150	156	40	50	100	125	130	175	MST-175-GD	36 x 36 x 13
60	75	150	200	192	50	60	125	150	156	210	MST-210-GD	36 x 36 x 13
75	100	200	250	248	60	75	150	200	192	250	MST-250-GD	36 x 36 x 13
100	100	250	300	302	75	100	200	250	248	300	MST-300-GD	36 x 36 x 13
125	150	300	350	361	100	100	250	300	302	370	MST-370-GD	60 x 36 x 18
150	200	400	500	480	—	—	—	—	—	470	MST-470-GD	60 x 36 x 18

Severe Duty Enclosed NEMA Type 4 Combination Starter with Circuit Breaker

Motor Application Horsepower						Soft Starter		
Heavy Starting						IEC Amps	Catalog Number	Approximate Enclosure Size (Inch) HxWxD
Class 30 - 350% torque for 60 seconds								
208V	230V	460V	575V	UL Amps				
40	50	100	125	130		175	MST-175-GS	36 x 36 x 13
50	60	125	150	156		210	MST-210-GS	36 x 36 x 13
60	75	150	200	192		250	MST-250-GS	36 x 36 x 13
75	100	200	250	248		300	MST-300-GS	36 x 36 x 13
100	100	250	300	302		370	MST-370-GS	60 x 36 x 18
125	150	300	350	361		470	MST-470-GS	60 x 36 x 18
150	200	400	500	480		570	MST-570-GS	72 x 37 x 27
200	250	500	—	590		720	MST-720-GS	72 x 37 x 27
250	300	600	—	720		840	MST-840-GS	72 x 37 x 27

- When more than 10 starts per hour, select one size larger than the standard selection
- Severe duty combination starters include AC-3 rated direct on-line starting emergency contactor and redundant class 30 overload relay
- All combination starters include bypass contactor, circuit breaker with door-mounted disconnect, 2-wire control circuit, hand/auto/off selector switch and indicator lights



P.O. Box 2400 • Fort Smith, AR 72902-2400 U.S.A.

Phone (479) 646-4711 • Fax (479) 648-5792 • International Fax (479) 648-5895 • www.baldor.com