



AS6

Digital Solid State Automation Starter

The AS6 digital reduced voltage automation starter has been designed to provide all of the features required in today's demanding industrial environment. It contains standard features allowing for custom starting optimization with monitoring and diagnostic functions that can view system performance at a glance. The AS6 provides the user with features normally reserved for products costing much more, allowing the AS6 to be price competitive with the products offering much less. All of these benefits, and with the industrial-proven reliability offered only by Emerson-Saftronics.



Soft Starters

- **Universal Input Voltage (200 to 690VAC, 50/60Hz)**
- **7.5 to 1000 hp**
- **Multiple Starting/Stopping Modes**
- **Modbus, LonWorks, DeviceNet, FIPIO, Profibus-DP Options**
- **NEMA-3R, NEMA-4X, NEMA-4, NEMA-12, NEMA-1 and chassis versions**
- **Voltage/Torque/Current Ramp Starts**
- **Remote Operator Option**
- **Bypass Contactor Option**

The AS6 series starters are available in Panel Mount, NEMA 1, NEMA 3R, NEMA 4, NEMA 12 enclosures. Ratings & order codes are shown for NEMA 1 & NEMA 12 only. For other configurations consult factory.

AS6 Crusher Duty

The AS6 Crusher Duty Soft Starter is a pre-engineered enclosed solution based on the AS6 Soft Starter. The Saftronics AS6 Crusher Duty line of reduced voltage motor starters, marries the field proven reliability of our mature power platforms with the versatility expected from a manufacturer with over 30 years of experience in the aggregate market.



In addition to the rugged durability of the power components, the crusher duty package includes the following standard features:

- **NEMA 12 (TENV) Enclosure**
- **Circuit Breaker with Door Operator**
- **Full Horsepower Rated Bypass Contactor**
- **Emergency Start Switch (Located on the Panel to Select Soft Start or Across the-line starting Method)**
- **120VAC Control Power Supply**
- **Class 20 Thermal Overload for the Emergency Bypass Starting**
- **Highest PIV Rated SCR's in the Industry with MOV Surge Protection**
- **Start/Stop Push-buttons on the Enclosure Door**
- **Run Pilot Light on the Door**
- **Terminal Strip Mounted on Panel for Remote Connections**
- **Overload Capacity 500% for 30 sec.**
- **Universal Source Matching**
- **Torque Control**
- **Serial Communication (Optional)**
- **0-10V or 4-20mA Process Output**





AS6 (NORMAL DUTY RATINGS & ORDER GUIDE)

Normal Duty HP						Module Only	NEMA 1 Fan & Filtered Packages	NEMA 12 Packages	
Voltage Code						Order Code	with C/B Order Code (34Nvhhh11)*	with Bypass Order Code (34Nvhhh20)*	with C/B & Bypass Order Code (34Nvhhh21)*
1 208V	2 230V	4 460V	5 575V	ND Amps	Model Number				
5	7.5	15	20	17	AS6-0017	870-1200	34N401511	34N401520	34N401521
10	10	25	30	30	AS6-0030	870-1201	34N402511	34N402520	34N402521
20	25	50	60	60	AS6-0060	870-1203	34N405011	34N405020	34N405021
25	30	60	75	85	AS6-0085	870-1205	34N406011	34N406020	34N406021
40	50	100	125	110	AS6-0110	870-1206	34N410011	34N410020	34N410021
50	60	125	150	145	AS6-0145	870-1207	34N412511	34N412520	34N412521
60	75	150	200	170	AS6-0170	870-1208	34N415011	34N415020	34N415021
75	100	200	250	210	AS6-0210	870-1209	34N420011	34N420020	34N420021
125	150	300	300	240	AS6-0240	870-1021	34N430011	34N430020	34N430021
200	200	400	500	360	AS6-0360	870-1022	34N440011	34N440020	34N440021
250	300	600	700	500	AS6-0500	870-1023	34N460011	34N460020	34N460021

ND = Normal Duty (Fan/Pump Application)

With bypass contactor = 300% / 10 sec., 350 Sec., between starts.

AS6 (HEAVY DUTY RATINGS & ORDER GUIDE)

Heavy Duty HP						Module Only	NEMA 1 Fan & Filtered Packages	NEMA 12 Packages		A6 Crusher Duty
Voltage Code						Order Code	with C/B Order Code (34Nvhhh11)*	with Bypass Order Code (34Nvhhh20)*	with C/B & Bypass Order Code (34Nvhhh21)*	with C/B & Bypass Order Code (34814hhhCD)*
1 208V	2 230V	4 460V	5 575V	HD Amps	Model Number					
		10	15	17	AS6-0017	870-1200	34N401011	34N401020	34N401021	
7.5	10	20	25	30	AS6-0030	870-1201	34N402011	34N402020	34N402021	
10	15	30	40	45	AS6-0045	870-1202	34N403011	34N403020	34N403021	
15	20	40	50	60	AS6-0060	870-1203	34N404011	34N404020	34N404021	
20	25	50	60	75	AS6-0075	870-1204	34N405011	34N405020	34N405021	34841-60CD
25	30	60	75	85	AS6-0085	870-1205	34N406011	34N406020	34N406021	
30	40	75	100	110	AS6-0110	870-1206	34N407511	34N407520	34N407521	
50	50	100	150	145	AS6-0145	870-1207	34N410011	34N410020	34N410021	
60	60	125	170	170	AS6-0170	870-1208	34N412511	34N412520	34N412521	34841-150CD
	75	150	200	210	AS6-0210	870-1209	34N415011	34N415020	34N415021	34841-185CD
75	100	200	250	250	AS6-0250	870-1210	34N420011	34N420020	34N420021	34841-250CD
125	150	300	300	360	AS6-0360	870-1022	34N430011	34N430020	34N430021	34841-370CD
200	200	400	500	500	AS6-0500	870-1023	34N440011	34N440020	34N440021	34841-480CD

HD = Heavy Duty (Conveyor Application)

With bypass contactor = 500% / 30 sec., 350 Sec., between starts.

* Choose appropriate voltage code "v" when ordering packaged starters. Most order codes shown are for 460V units. Choices are (1=208V, 2=230V, 4=460V, 5=575V). Code hhh=horsepower.

AS6 WEIGHTS & DIMENSIONS (Module, NEMA 1 & NEMA 12)

Model	Module Only		NEMA 1 Fan & Filtered Packages		NEMA 12 Packages			
	Dimension H x W X D (inches)	Weights (lbs)	Dimension H x W X D (inches)	Weights (lbs)	Bypass Contactor Only		Circuit Breaker & Bypass Contactor	
					Dimension H x W X D (inches)	Weights (lbs)	Dimension H x W X D (inches)	Weights (lbs)
AS6-0017 AS6-0030 AS6-0045	12.6 x 5.0 x 10.3	20	20x16x12	80	24x20x12	110	30x24x12	120
AS6-0060	12.6 x 5.0 x 10.3	20	20x16x12	80	24x20x12	110	24x20x12	120
AS6-0075 AS6-0085	12.6 x 5.0 x 10.3	20	24x20x12	80	24x20x12	110	30x24x12	120
AS6-0110 AS6-0145	15.8 x 7.0 x 10.3	32	24x20x12	100	30x24x12	160	36x30x16	180
AS6-0170 AS6-0210 AS6-0250	19.7 x 10.3 x 10.3	52	30x24x12	180	36x30x16	200	36x30x16	220
AS6-0240	45 x 33 x 11.25	125	48x36x16	275	48x36x16	500	48x36x16	550
AS6-0360	45 x 33 x 11.25	125	48x36x16	275	60x36x16	650	60x36x16	800
AS6-0500	57 x 33 x 13	150	60x36x16	450	60x36x16	800	60x36x16	860
AS6-0800	57 x 33 x 16	160	60x36x16	600	72x36x18	870	90x36x20	1020

Please Consult the Factory for special AS6 CustomPak Soft Starter Solutions

Soft Starters



AS6 MODULE SPECIFICATIONS:

Operating Conditions	
Horsepower	7.5 thru 1000 hp
Current range	12A-1574A (nominal)
Line Voltage	3 hp, 200 - 575VAC
Supply Frequency	50/ 60Hz
Control Voltage	110 VAC (+10% / -15%) or 230 VAC (+10% / -15%)
Enclosure	IP00 (360-1200A), Open Chassis IP20 (17-250A), NEMA 1
Ambient Temperature	0 – 50°C (32°F - 122°F) (Operating)
Altitude	1000m (3,300 ft)
Relative Humidity	5% to 95% Non-condensing
Overload Capacity	See Ratings Table

Outputs

Relay Outputs Two Form A and One Form C
8A @ 250VAC

Approvals & Listings

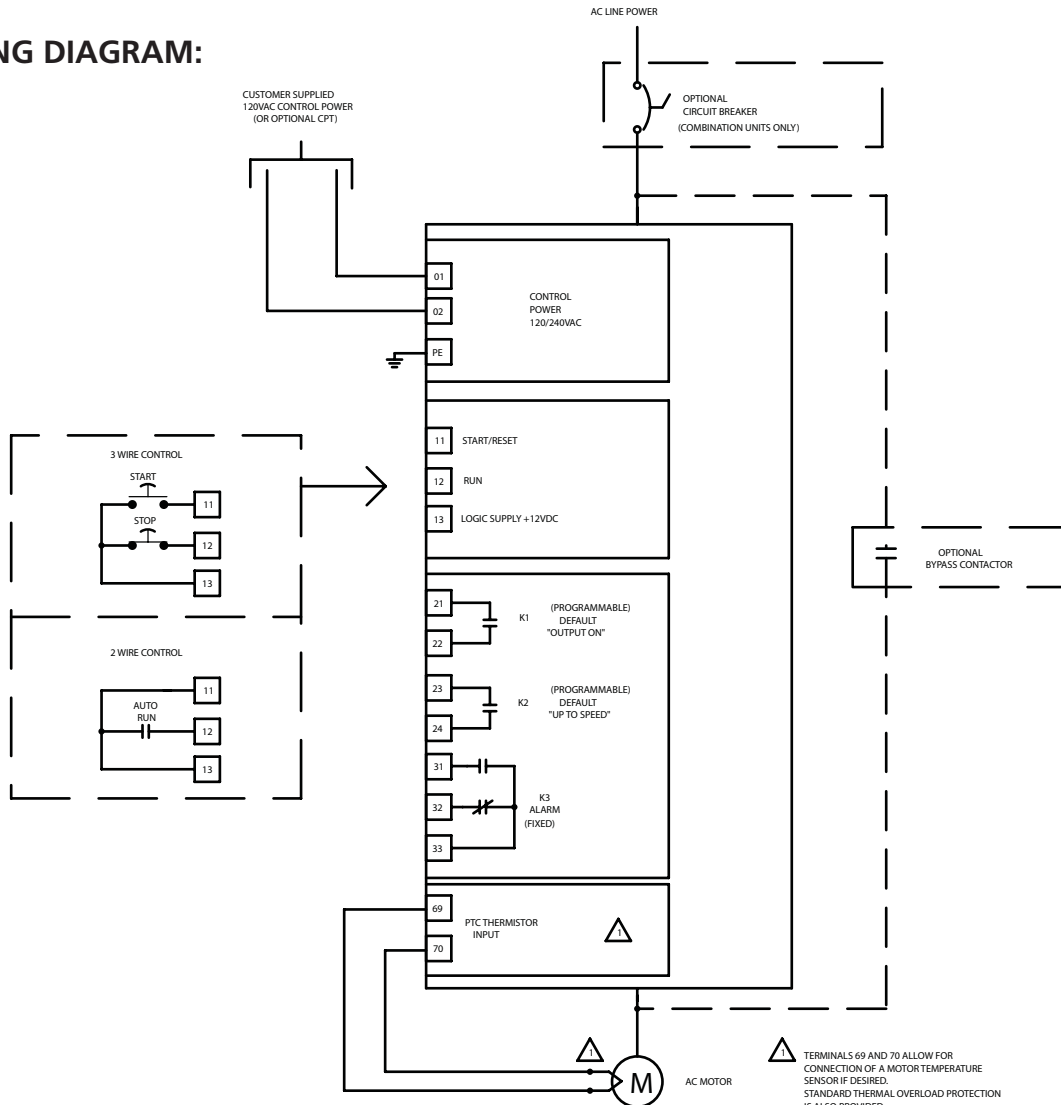
UL 508A (size dependant)

AS6 COMMUNICATIONS OPTIONS

Description	Order Code
DeviceNet Interface Module	870-1100
Profibus Interface Module	870-1101
FIPIO Interface	870-1102
LonWorks Interface	870-1103
Modbus Interface Module	870-1104
Door Mounted Keypad Kit (3m cable)	870-1110
Saflink Software, w/Modbus interface	046-7019

Note: Series Communications Modules to be ordered as a separate line item and is shipped loose.

AS6 WIRING DIAGRAM:



COMMON ADDITIONAL OPTIONS FOR PACKAGED SOFT STARTERS (CSX, CSXi, IMS2, AS6)

Option	Description	Order Code		
Control Transformer	Control transformer with primary & secondary fusing. Required via option or customer supplied	A		
Operator Devices Door mounted devices for N1, N3R, N4 & N12 packages	Start / Stop Lighted Pushbutton with Run Indication	B		
	"Run" Pilot Light	C		
	"Power On" Pilot Light	D		
	Emergency Stop (E-Stop) Pushbutton (Pull to Release)	E		
	"Fault" Pilot Light	F		
	3 Position Selector Switch (Hand / Off / Auto)	G		
	AC Voltmeter with Fusing (Door mounted Voltmeter mounted on NEMA 1 & N12 only)	H		
	AC Ammeter including Current Transformers (Door mounted Ammeter mounted on NEMA 1 & N12 only)	I		
	Elapsed Time Meter	J		
Door Mounted Keypad	Mounting of keypad on the door of NEMA 1 or NEMA 12 enclosure	K		
Viewing Window	Viewing Window is for the N4 or N3R packages where the keypad can not be door mounted	L		
Space Heater with Thermostat	Provides 60 Watt space heater and thermostat to protect against condensation in low temperature non-ventilated applications	M		
C/B Shunt Trip	Shunt trip is interlocked with starter fault contact & overload to automatically trip C/B and remove power from starter in event of a fault. This option only available with starter with C/B	N		
Secondary Surge Absorber	Connected to starter inputs to provide a degree of protection against line side transients	O		
Contactor Reversing	Provides in-line reversing contactors with mechanical and electrical interlocking. For use with Fwd / Off / Reverse Selector Switch (not provided) Not available on CSX series, select the IMS2 series for this option	Contactor FLA	13.8	P
			32	
			48	
			68	
			77	
			96	
			140	
			156	
	192			
	302			
Inline Contactor	Contactor is interlocked with starter to completely isolate starter and motor from line voltage each time the stop circuit is activated. This provides the best protection against line side voltage transients	Q		
Enclosure Feet	To add 12 inches to the height of the enclosure	R		
Emergency Bypass Circuit	Allows a full voltage (across the line) starting in the event of soft starter failure. Starter package must include the bypass contactor. Includes class 20 overload	EE		

Soft Starters

Options are factory installed on NEMA 12 Packages or supplied loose with chassis only units.

Note: Include the **Order Codes** for the additional options you choose at the end of the selected starter module or package.

Example Order Code: 30F460021-A-H

