



AB	Allen-Bradley
	by ROCKWELL AUTOMATION

Catalog #: 150-F60NBD Preferred Availability

Smart Motor Controller, 60 A 10-40 Hp at 460V AC, 480V AC 50/60 Hz Three-Phase, Open, 100...240V AC, None

Lifecycle status: ACTIVE

Technical Specifications

Electrical

With display	Yes
Voltage type for actuating	AC
Rated operating voltage Ue	200 V
Rated control supply voltage at AC 50 Hz	100 V
Rated control supply voltage at AC 60 Hz	100 V
Overload current for line connected devices	12 A
Overload current for delta connected devices	20.8 A
Controller type	Soft starter
Control options	None
Trip classes	10, 15, 20 and 30
Trip current rating	117% of motor FLC
Transformer control module	75VA @ 100240V AC (-15%, +10%)
Heatsink fan rating	20VA @ 110/120V AC or 220/240V AC
DV/DT protection	RC snubber network for power circuit
Repetitive peak inverse voltage rating	1400V per UL/CSA/NEMA for power circuit
Operating frequency	50/60 Hz for power circuit
Line connected motor power, max	50 Hp @ 575V AC, 60 Hz, 3-phase
Delta connected motor power, max	75 Hp @ 460V AC, 60 Hz, 3-phase
Rated impulse voltage	6000V per IEC for power circuit
Dielectric withstand	2500V per IEC for power circuit

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Line connected motor current	1260 A @ 500/575V AC, 3-phase
Delta connected motor current	20.8104 A @ 500/575V AC, 3-phase
Transient protection	Metal oxide varistors: 220 Joules (optional) for power circuit
Insulation voltage	Rated 500V per IEC for power circuit
Rated operational voltage	200480V AC (-15%, +10%) per UL/CSA/NEMA for power circuit
Input OFF-state current	<10 mA AC, <3 mA DC for control circuit @ input OFF-state voltage
Short-circuit protection device list	Standard fuse, circuit breaker and high capacity time delay class CC/J/L
Number of contacts	1 for auxiliary contacts
High capacity available fault current, max	70 kA @ 600V, maximum current 200 A time delay Class J or Class L fuse for inside delta connected motors
Type of current	AC for auxiliary contacts
Conventional thermal current (Ith)	AC/DC: 5 A for auxiliary contacts
Type of control circuit	Electromagnetic relay for auxiliary contacts
Type of contacts	Programmable NO/NC for auxiliary contacts
Utilization category	MG1per UL/CSA/NEMA for power circuit
Standard controller feature	Status indication: stopped, starting, stopping, at speed, alarm and fault
Standard available fault current, max	10 kA @ 200600V, maximum standard fuse 400 A for delta device operational current rating
Optional controller feature	SMB smart motor braking control: provides motor braking without additional equipment for applications that require the motor to stop quickly, braking current is adjustable from 0400% of the motor's full-load current rating
Integrated motor overload protection	Yes
Short circuit protection device performance (SCPD) type	Туре 1
Number of sensors, max	6 for PTC input ratings
Inrush current control module	5 A @ 24V DC (-15%, +10%)
Voltage at PTC terminals (RPTC = open), max	30V for PTC input ratings
Transient watts control module	60 W @ 24V DC (-15%, +10%)
Steady state watts control module	24 W @ 24V DC (-15%, +10%)
Voltage at PTC terminals (RPTC = 4 k Ω), max	<7.5 for PTC input ratings
Response time	800 ms for PTC input ratings
Inrush time control module	250 ms @ 24V DC (-15%, +10%)

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Transient time control module	500 ms @ 24V DC (-15%, +10%)
Cold resistance of PTC sensor chain, max	1500 Ohm for PTC input ratings
Tachometer input	05V DC, 4.5V DC = 100% Speed
Allen bradley power supply control module, min	1606-XLP50E @ 24V DC (-15%, +10%)
Short circuit trip resistance	25 Ohm ± 10 Ohm for PTC input ratings
Response resistance	3400 Ohm ± 150 Ohm for PTC input ratings
Reset resistance	1600 Ohm ± 100 Ohm for PTC input ratings
Input OFF-state voltage, max	50V AC, 10V DC/12V AC for control circuit
Input ON-state voltage, min	85V AC, 19.2V DC/20.4V AC for control circuit
Lower line side cable size	0.82.5 mm2(1814 AWG) for power terminals
Lower load side cable size	0.82.5 mm2(1814 AWG) for power terminals
Upper load side cable size	2.550 mm2 (141 AWG) for load power terminals
Upper line side cable size	2.595 mm2 (143/0 AWG) for line power terminals
Rated operational current	3 A @ 120V AC, 1.5 A @ 240V AC for auxiliary contacts
Input ON-state current	20 mA @ 120V AC/40mA @ 240V AC, 7.6 mA @ 24V AC/DC for control circuit
Contact type	auxiliary contacts 19/20 (Aux #1), 29/30 (Aux #2), 31/32 (Aux #3) and 33/34 (Aux #4)

Environmental

Steady state heat dissipation with control and fan power	97 W
Storage and transportation temperature	-20 °C
Humidity	595% (noncondensing)
Operating temperature	Open: -5 to 50 °C (23 to 122 °F)
Protection against electrical shock	IP20 per IEC for power circuit
EMC emission levels	Radiated emission: Class A
EMC immunity levels	Surge transient: per EN/IEC 60947-4-2
Altitude	2000 m
Pollution degree	2

Mechanical

Weight	5.7 kg
Shock	Operational: 15 G
Width	150 mm (5.90 inch)

Depth	203 mm (8 inch)
Height	321 mm (12.60 inch)
Power pole construction	Heatsink thyristor modular design
Vibration	Operational: 1.0 G peak, 0.15 mm (0.006 inch) displacement
Make	3600VA for auxiliary contacts
Break	360VA for auxiliary contacts
Tightening torque	14.7 Nm (130 lb.inch) for power terminals
Internal bypass	Yes
Function	Single direction
Power terminal markings	NEMA, CENELEC EN50 012
Control terminals	Clamping yoke connection, M3 screw clamp
Wire strip length	1820 mm (0.220.34 inch) for power terminals
Number of poles	3
Enclosure	Open type
Control modules construction	Thermoset and thermoplastic moldings
Metal parts construction	Plated brass, copper or painted steel

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Certifications @ []][🙆

Construction

• China CCC

- Eurasion Economic Community
- Australian RCM

This product was certified with the above certifications as of 2023-11-09. Products sold before or after this date might carry different certifications. Please review the product label to check for the certifications your specific product carries.



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