

ISS with SMARTSTART™

INDUSTRIAL START/STOP WITH SMARTSTART MOTOR PROTECTION
3Ø, 200~600VAC, 1-40A, AUTOMATION SYSTEM READY

Designed for ease of integration with automation systems

- Comprehensive inputs/outputs for building management systems
- Reduces installation costs
- Increased energy savings
- High reliability

SMARTSTART™ (patent pending) for superior motor protection

- Electronic protection including locked rotor, cycle fault and maximum time to start (due to mis-sized motor or overload)
- FLA out of calibration indication--ensures installer sets overload correctly based on calculated motor size

Advanced control inputs eliminate interposing relays

- Three dry inputs for remote and two external pilot devices*
- Two wet inputs (12-250VAC) for remote start and shutdown command

Fault logging retains critical information

- Last 10 start conditions, including FLA setting, max inrush, run current, time to start, and safety start mode.
- Factory retrievable

Universal application

- Wide-range electronic overload eliminates call backs due to mis-sized heaters
- Accepts up to 600V

UL Type 1, 4, and 3R enclosures

- Lockable enclosure
- 3R features lockable keypad cover

Start/Stop/Remote keypad with LED status indicators

- Intuitive operation and control with start (manual run), Stop, and Remote run modes
- Type 4 enclosed starters feature a 3 position switch for Start/Stop/Remote, and a Run Pilot Light

Combination versions include disconnect

- Motor circuit protection disconnect provides short circuit protection
- High interrupting ratings for maximum electrical system compatibility
- No fuses required
- Lockable handle for safety



NEMA Sized



*dry inputs for external pilot devices not available with Type 4 enclosures

Specifications

Starter Type

ISS - Industrial Start/Stop with SmartStart

Across the line or Full Voltage Non-Reversing

NEMA 1, 3R, OR 4 enclosed

Voltage range: 3Ø, 200-600 VAC

Amperage range: 1-40A

User Interface

Start/Stop/Remote keypad with mode LEDs (N1 & 3R), Start/Stop/Remote switch & Run Pilot light (N4)

Standard Control Operations

Inputs	12-250V Remote	Apply 12- 250VAC/DC to energize
	Dry Remote	N.O. Dry Contact
	Shutdown	Apply 12- 250VAC/DC to energize
	Limit Switch	N.O. Dry Contact
	Internal Pilot Device	N.O. Dry Contact (N1 & 3R only)
	External Pilot Device	N.O. Dry Contact (N1 & 3R only)
Outputs	Proof of flow current status	N.O. Relay Contact Ratings: 110VDC, 0.3A Resistive, 125VDC, 0.5A GP
	Starter Fault	30VDC, 2.0A Resistive
		120VAC 50/60Hz, 0.5A Resistive
		125VAC 50/60Hz, 1.0A GP
		240VAC 50/60Hz, 0.25A Resistive
Damper/Actuator	24 VDC, 1A maximum	
Operational	Power fail modes	Restart last mode, no delay (default)
		Restart with 10 second delay
		Restart Off - LED flashes last mode

Environmental

Ambient Operating Temp	-5° to 140° F (-20° to 60° C)
Ambient Storage Temp	-5° to 185° F (-20° to 85° C)
Relative Humidity	5% to 95% non-condensing (Nema 1)

Motor Protection

	Adjustment / Description	Default Setting
Overload Current Setting Range	1-40A	Per FLA
Overload Trip Class	Adjustable: Class 10 or 20, Trip current = 115% of FLA setting	Class 10
Cycle Fault	Trip if cycle rate exceeds 20 starts/minute	Always On
Stall	Trips within 0.5 seconds (disabled during startup)	Always On

SMARTSTART[®] Protection

	Adjustment / Description	Default Setting
Current Phase Unbalance	Trips within 3 sec @ 25% current unbalance. *Trip threshold changes to 80% unbalance when switched to Off	On
Locked Rotor	Trips within 0.5 seconds	
Out of Calibration	Trips after 10 seconds if the FLA dial setting is incorrect (set above calculated FLA range), ie. Start current is outside of an acceptable range (fla setting * 5 < inrush < fla setting * 14).	
Max Time to Start	Regardless of FLA or I ² t curve, always trip at start if starting current is outside of an acceptable range (inrush / 5) and still decreasing after 10 seconds.	

UL TYPE 1 INDOOR ENCLOSURE

STANDARD MOTOR STARTER - 3 Phase, 200~600 VAC

Three Phase HP				Contactor NEMA Size	ISS Part Number
200V	230V	460V	600V		
1	1.5	3	7.5	00	ISS1-9/P-40
3	5	10	15	0	ISS1-18/P-40
7.5	10	20	25	1	ISS1-32/P-40
10	10	30	30	1P	ISS1-40/P40

UL TYPE 1 INDOOR ENCLOSURE

COMBINATION MOTOR STARTER - 3 Phase, 200~600 VAC

Three Phase HP				Contactor NEMA Size	ISS Part Number
200V	230V	460V	600V		
-	-	3/4	3/4	00	ISS1-9/P-G1.6-40
1/2	1/2	1	1.5		ISS1-9/P-G2.5-40
3/4	3/4	2	3		ISS1-9/P-G4-40
1	1.5	3	3		ISS1-9/P-G6-40
2	2	5	5		ISS1-9/P-G8-40
2	3	5	7.5	0	ISS1-18/P-G10-40
3	3	7.5	10		ISS1-18/P-G13-40
3	5	10	15		ISS1-18/P-G17-40
5	7.5	15	20	1	ISS1-32/P-G22-40
7.5	7.5	15	20		ISS1-32/P-G26-40
7.5	10	20	25		ISS1-32/P-G32-40
10	10	30	30	1P	ISS1-40/P-G40-40

UL TYPE 3R OUTDOOR ENCLOSURE

STANDARD MOTOR STARTER - 3 Phase, 200~600 VAC

Three Phase HP				Contactor NEMA Size	ISS Part Number
200V	230V	460V	600V		
1	1.5	3	7.5	00	ISS3R-9/P-40
3	5	10	15	0	ISS3R-18/P-40
7.5	10	20	25	1	ISS3R-32/P-40
10	10	30	30	1P	ISS3R-40/P-40

UL TYPE 3R OUTDOOR ENCLOSURE

COMBINATION MOTOR STARTER - 3 Phase, 200~600 VAC

Three Phase HP				Contactor NEMA Size	ISS Part Number
200V	230V	460V	600V		
-	-	3/4	3/4	00	ISS3R-9/P-G1.6-40
1/2	1/2	1	1.5		ISS3R-9/P-G2.5-40
3/4	3/4	2	3		ISS3R-9/P-G4-40
1	1.5	3	3		ISS3R-9/P-G6-40
2	2	5	5		ISS3R-9/P-G8-40
2	3	5	7.5	0	ISS3R-18/P-G10-40
3	3	7.5	10		ISS3R-18/P-G13-40
3	5	10	15		ISS3R-18/P-G17-40
5	7.5	15	20	1	ISS3R-32/P-G22-40
7.5	7.5	15	20		ISS3R-32/P-G26-40
7.5	10	20	30		ISS3R-32/P-G32-40
10	10	30	30	1P	ISS3R-40/P-G40-40

UL TYPE 4 INDOOR/OUTDOOR ENCLOSURE

STANDARD MOTOR STARTER - 3 Phase, 200~600 VAC

Three Phase HP				Contactor NEMA Size	ISS Part Number
200V	230V	460V	600V		
1	1.5	3	7.5	00	ISS4-9/P-40
3	5	10	15	0	ISS4-18/P-40
7.5	10	20	25	1	ISS4-32/P-40
10	10	30	30	1P	ISS4-40/P40

UL TYPE 4 OUTDOOR ENCLOSURE

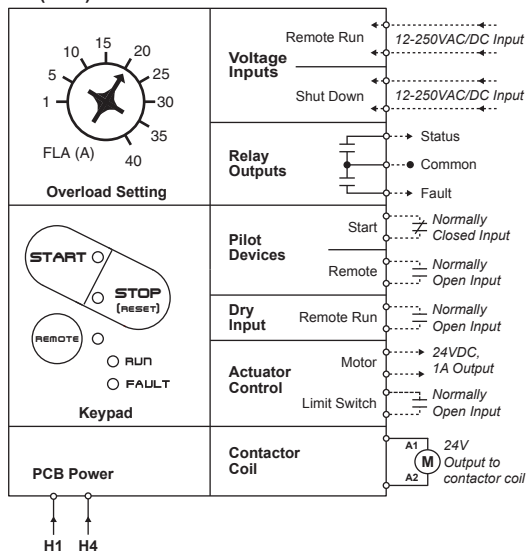
COMBINATION MOTOR STARTER - 3 Phase, 200~600 VAC

Three Phase HP				Contactor NEMA Size	ISS Part Number
200V	230V	460V	600V		
-	-	3/4	3/4	00	ISS4-9/P-G1.6-40
1/2	1/2	1	1.5		ISS4-9/P-G2.5-40
3/4	3/4	2	3		ISS4-9/P-G4-40
1	1.5	3	3		ISS4-9/P-G6-40
2	2	5	5		ISS4-18/P-G8-40
2	3	5	7.5	0	ISS4-18/P-G10-40
3	3	7.5	10		ISS4-18/P-G13-40
3	5	10	15		ISS4-18/P-G17-40
5	7.5	15	20	1	ISS4-32/P-G22-40
7.5	7.5	15	20		ISS4-32/P-G26-40
7.5	10	20	30		ISS4-32/P-G32-40
10	10	30	30	1P	ISS4-40/P-G40-40

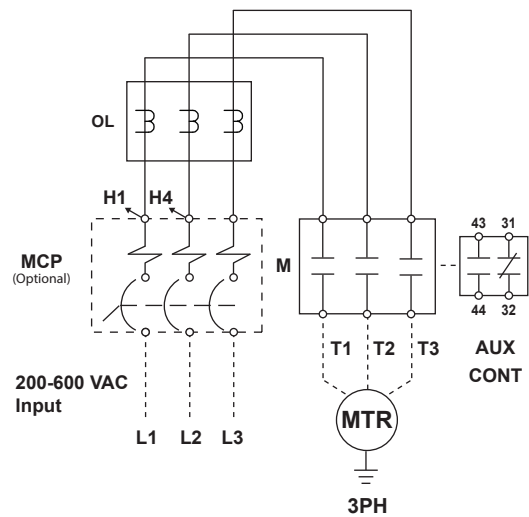
*Consult factory for NEMA 4X enclosure options

ISS (1/3R) WIRING SCHEMATICS

ISS(1/3R) CONTROL WIRING

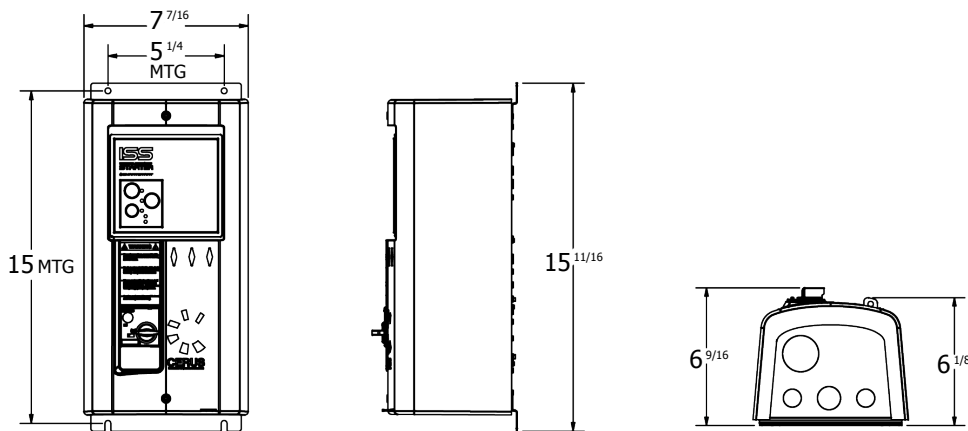


ISS STARTER POWER WIRING



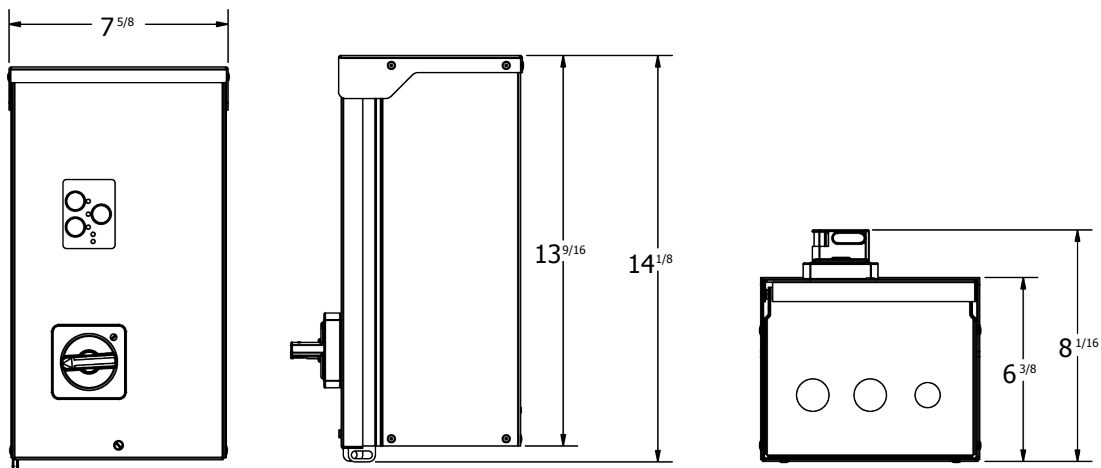
UL TYPE 1 DIMENSIONS

All dimensions are in inches



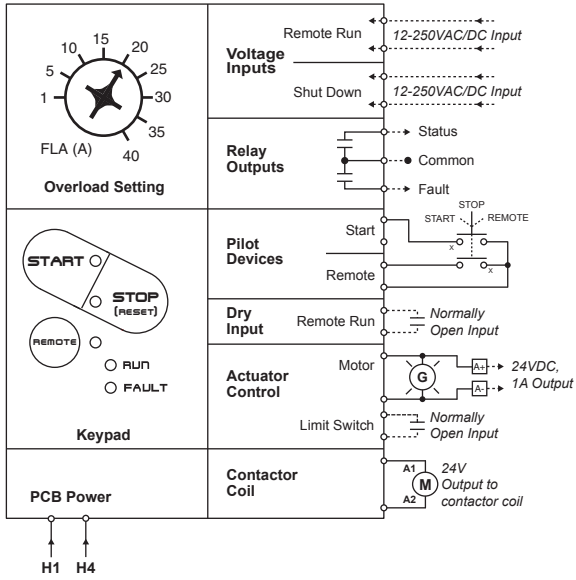
UL TYPE 3R DIMENSIONS

All dimensions are in inches

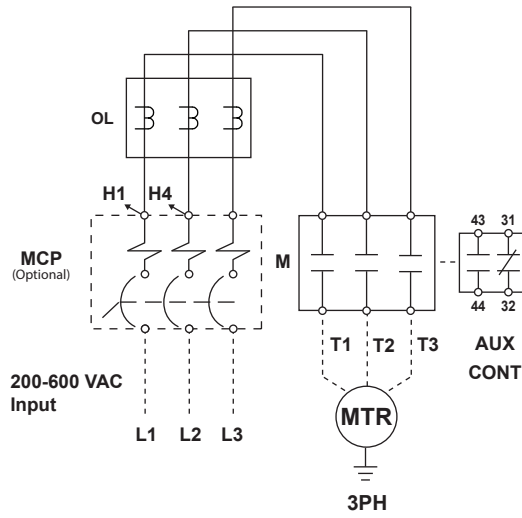


ISS4 Wiring Schematics

ISS4 CONTROL WIRING



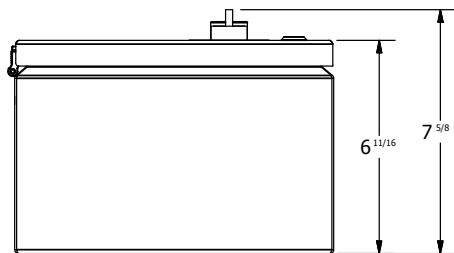
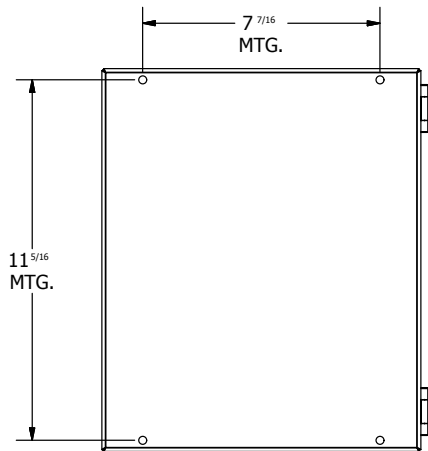
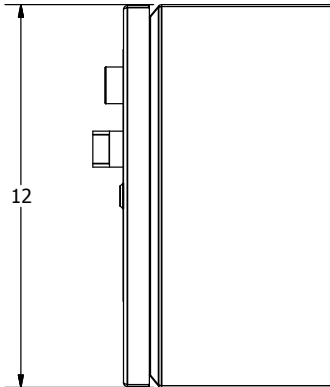
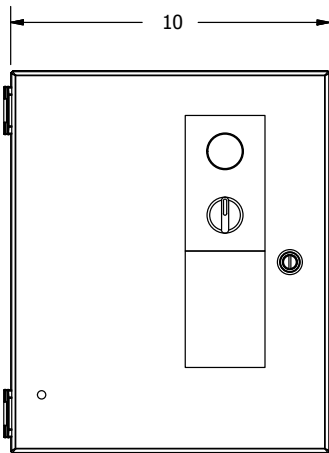
ISS STARTER POWER WIRING



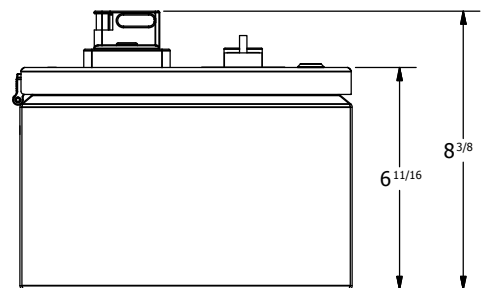
UL Type 4 Dimensions

All dimensions are in inches

Non-combination*



Combination*



*Consult factory for NEMA 4X enclosure options

*Combination dimensions are the same as non-combination dimensions except for the depth (shown above, 8 3/8").