



# IS Series

## Mid-Frequency Inverter Resistance Welding Control

- 300, 800, and, 1400 Amp primary output current **resistance weld control**
- Six feedback modes for optimum feedback based on process and expected variability
- Built-in current, voltage, power, time and pulse monitor for precise process control
- Triple pulse weld profile: W1, W2, W3, up to 19 pulsations per weld segment
- Displacement and force monitoring Initial, Final and "Weld to" displacement
- Cascade option: 5 and 7 way cascade IS-800CA only
- RS232, RS485, EtherNet/IP™ communications

### KEY FEATURES

#### Wide Current Range

The IS Series weld controls provide a wide range of current (.050 kA - 80 kA) to meet all your application needs. See specifications of individual controls on back. Higher current up to 320 kA available upon request.

#### Displacement Limits & Force Monitoring

Dial-in the weld process by utilizing the IS Series' displacement and force features including initial part thickness, weld-displacement, and final displacement limits. Monitor the force of each segment of the weld pulse.

#### Six Weld Control Modes

Six different weld control modes allow the user to select the best mode for the application: primary limit, primary and secondary RMS, power RMS, voltage control, or pulse percent.

#### Triple Pulse Weld Capability

Provides flexible weld profiles with up to three pulses in each weld cycle. Each weld segment can be programmed with upslope and downslope and may have up to 19 pulsations per segment. Users may change the control mode for each weld segment.

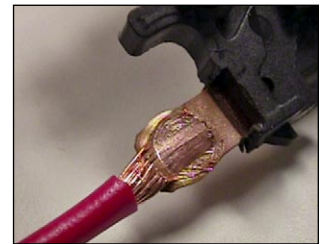
#### Factory Automation with Ethernet IP

Ethernet IP factory communications comes optional IS Series for integration into automation environments. It comes with built in Panel View screens for easy control of IS unit.

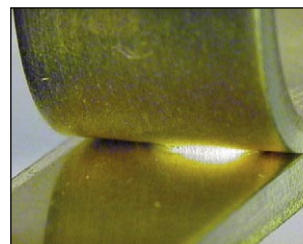
### TYPICAL APPLICATIONS



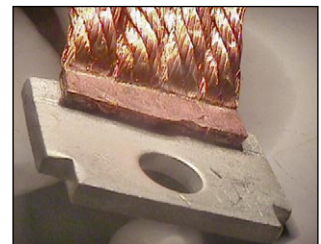
*Commutator fusing*



*Wire termination*



*Sheet metal welding*



*Braided cable termination*

## TECHNICAL SPECIFICATIONS

	IS-300CA	IS-800CA	IS-1400CA	IS-2200CA*
<b>Maximum primary output current*</b>	300 amps @ 4.4%	800 amps @ 3%	1400 amps @ 3%	2200 amps @ 12%
<b>Settings</b> – Constant current	0.05 - 20.00 kA	0.05 - 40.0 kA	0.05 - 80.0 kA	2.00 - 160 kA
– Constant power	0.05 - 20.0 kW	0.05 - 60.0 kW	0.05 - 120 kW	2.00 - 240 kW
– Constant voltage	0.20 - 9.99 V	0.20 - 9.99 V	0.20 - 9.99 V	0.20 - 9.99 V
– Fixed pulse	10.0 - 99.9%	10.0 - 99.9%	10.0 - 99.9%	10.0 - 99.9%
<b>Weld monitors</b> – Current	0.0 - 99.9 kA	0.0 - 99.9 kA	0.0 - 99.9 kA	0.0 - 999.9 kA
– Power	000.0 - 999.9 kW	000.0 - 999.9 kW	000.0 - 999.9 kW	000.0 - 999.9 kW
– Voltage	0.00 - 9.99 V	0.00 - 9.99 V	0.00 - 9.99 V	0.00 - 9.99 V
– Pulse %	10.0 - 100%	10.0 - 100.0%	10.0 - 100.0%	10.0 - 100.0%
<b>Power source</b>	380 - 480 VAC, Three Phase, 50/60 Hz, ±10%			
<b>Output frequency**</b>	600 - 3000 Hz	600 - 3000 Hz	600-3000 Hz	600-3000 Hz
<b>Control modes</b>	Primary constant current control Primary limit control Secondary RMS control Power RMS control Voltage control Pulse % control			
<b>Number of schedules</b>	255 (Selectable by pendant or external I/O)			
<b>Time settings</b>	Squeeze delay 0000 - 9999 (ms) / 0000 - 9999 (CYC) Squeeze 0000 - 9999 (ms) / 0000 - 9999 (CYC) Upslope 1, 2, 3 000 - 999 (ms) / 00 - 50 (CYC) Weld 1, 2, 3 000 - 999 (ms) / 00 - 50 (CYC) Cool 1, 2 0000 - 9999 (ms) / 0000 - 0999 (CYC) Down slope 1, 2, 3 000 - 999 (ms) / 00 - 50 (CYC) Hold 00000 - 20000 (ms) / 00000 - 00999 (CYC) Off time 0 or 0010 - 9990 (ms) / 0000 - 0099 (CYC) Pulsation setting 01 - 19 (settable for WELD 1 to WELD 3, respectively)			
<b>Transformer turns ratio</b>	1.0 - 199.9			
<b>Valve setting</b>	Up to 6 valves	Up to 6 valves	Up to 6 valves	Up to 6 valves
<b>Control gain (GAIN)</b>	1 - 9			
<b>Step-up/-down (STEPPER COUNT)</b>	STEP Up (down) ratio (RATIO) Counter setting (COUNT)		1 - 9 (9 steps) 50 - 200% 0000 - 9999	
<b>Weld count monitor (PRESET COUNT)</b>	0000 - 9999			
<b>External communication</b>	RS-232 or RS-485 (single or bidirectional), EtherNet/IP			
<b>Program protect</b>	Programming protected when active			

\*2200 A, 2-160 kA secondary and 4500 A primary, 32-320 kA secondary settable range - available upon request.

Contact factory for more details on the 4500 A model.

\*\*Model dependent

## WEIGHT &amp; DIMENSIONS

	IS-300CA	IS-800CA	IS-1400CA	IS-2200CA
<b>Dimensions</b>	11 in x 7 in x 23 in	30 in x 13 in x 39 in	31 in x 13 in x 52 in	31 in x 15 in x 55 in
<b>W x D x H</b>	(172 mm x 269 mm x 573 mm)	(772 mm x 330 mm x 991 mm)	(796 mm x 330 mm x 1321 mm)	787 mm x 380 mm x 1396 mm
<b>Weight</b>	36 lb (16.5 kg)	240 lb (109 kg)	350 lb (159 kg)	320 lb (145 kg)

<b>Options &amp; accessories</b>	EtherNet/IP, RS-485 communications (RS-232 standard) CE Filter Isolation contactors Programming pendant MA-660A	24 VDC valve option(115 VAC standard) • 2 amp • 5 amp 250 VA valve transformer (150 VA standard)
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