Serie IS-Q - Generatore inverter (precedentemente conosciuto come Serie ISQ)

The IS-Q Series - Inverter Power Supply is designed to be used in combination with mechanical, pneumatical or motorised weld heads. It offers process control monitoring with MG3 and with the OP-AWS3-A Active Welding System. The OP-AWS3-A integrates the process control of all mechanical and electrical parameters, static and dynamic process monitoring, quality analysis with advanced SPC feature and datalogging.

Key features IS-Q Series - Inverter Power Supply

- Compact design for optimal system integration
- Integrated process monitoring allows for quality control
- Short cycle times thanks to high output current
- Up to 20 kHz feedback for fast reaction to fluctuations in the weld process
- Optimum feedback thanks to current, voltage and power mode controls
- Additional force control via proportional valve

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Specifications Serie IS-Q - Generatore inverter (precedentemente conosciuto come Serie ISQ) 1/2

.	IS-Q3000A	IS-Q6000A	IS-Q250A
Performance range	0,75 kA – 1,5 kA - 3 kA	6 kA	10 kA
Tipi di corrente di saldatura	Controlled DC inverter current	Controlled DC inverter current	AC or DC inverter
Caratteristiche	Inverter with integrated power on button, Performance and Control Electronics, Voltage control cable und removable Display MFT1 (optional: AWS3-Display) and additional: compact version w/integrated transformer, voltage sensor cable	Inverter with integrated power on button, Performance and Control Electronics, Voltage control cable und removable Display MFT1 (optional: AWS3-Display) and additional: Compact version w/integrated transformer, voltage sensor cable	Inverter with integrated power on button, Performance and Control Electronics, Voltage control cable und removable Display MFT1 (optional: AWS3-Display) and additional: Separate DC- or AC- transformer
Opzioni	19“ plug-in unit without main unit	19“ plug-in unit ithout main unit	19“ plug-in unit without main unit
Controllo / modalità di controllo	Current, voltage or power feedback control, independently adjustable independently for each pulse, APC (Active Part Conditioner) function and current, voltage, performance and energy limits	Current, voltage or power feedback control, independently adjustable independently for each pulse, APC (Active Part Conditioner) function and current, voltage, performance and energy limits	Current, voltage or power feedback control, independently adjustable independently for each pulse, APC (Active Part Conditioner) function and current, voltage, performance and energy limits
Programmi saldatura programmabili/selezione programma di saldatura esterno	99 at single axis; 49 per head at dual axis	99 at single axis; 49 per head at dual axis	99 at single axis; 49 per head at dual axis
N. di impulsi di saldatura	1st and/or 2nd pulse, 2nd pulse can be repeated max 10 times (decrease adjustable down to 1% of 2nd pulse)	1st and/or 2nd pulse, 2nd pulse can be repeated max 10 times (decrease adjustable down to 1% of 2nd pulse)	1st and/or 2nd pulse, 2nd pulse can be repeated max 10 times (decrease adjustable down to 1% of 2nd pulse)
Controllo impulso saldatura	Up slope, weld-time, down-slope, break time, impuls cycle	Up slope, weld-time, down-slope, break time, impuls cycle	Up slope, weld-time, down-slope, break time, impuls cycle
Misurazione corrente	Integrated toroidal coil (Rogowski coil)	Integrated toroidal coil (Rogowski coil)	external toroidal coil
Misurazione tensione	Potential free, external connection (X10 axis/head 1; X11 axis/head 2)	Potential free, external connection (X10 axis/head 1; X11 axis/head 2)	Potential free, external connection (X10 axis/head 1; X11 axis/head 2)
Limit values	Display with limit exceeding upper and lower limit, time limit, welding energy limit with sensitive components (weld to limit)	Display with limit exceeding upper and lower limit, time limit, welding energy limit with sensitive components (weld to limit)	Display with limit exceeding upper and lower limit, time limit, welding energy limit with sensitive components (weld to limit)
Out of limit error message	Text indication with limit and device errors; monitoring limits for U, I or P; + and – tolerance windows individually adjustable	Text indication with limit and device errors; monitoring limits for U, I or P; + and – tolerance windows individually adjustable	Text indication with limit and device errors; monitoring limits for U, I or P; + and – tolerance windows individually adjustable
Parts check	Test pulse for part detection (pre-weld-check)	Test pulse for part detection (pre-weld-check)	Test pulse for part detection (pre-weld-check)
Operazione	One button toggle wheel, monochrome display, Optional: coloured OP-AWS3-A Display, Profibus or Ethernet IP	One button toggle wheel, monochrome display, Optional: coloured OP-AWS3-A Display, Profibus or Ethernet IP	One button toggle wheel, monochrome display, Optional: coloured OP-AWS3-A Display, Profibus or Ethernet IP

Certificazione EU	CE Compliant	CE Compliant	CE Compliant
Continuous sound pressure level	The equivalent continuous sound pressure level rated A is below 70 dB. Sound pressure levels may vary depending on the welding material and the environmental conditions. If necessary consult an acoustic specialist.	The equivalent continuous sound pressure level rated A is below 70 dB. Sound pressure levels may vary depending on the welding material and the environmental conditions. If necessary consult an acoustic specialist.	The equivalent continuous sound pressure level rated A is below 70 dB. Sound pressure levels may vary depending on the welding material and the environmental conditions. If necessary consult an acoustic specialist.
Electrical data			
Tensione alimentazione	3x 400 VAC, ± 10%, PE; 3x 230 V (optional), ISQ20-MFC 19 ± 10%, PE : non-heating, 3 pole connector	3x 400 VAC, ± 10%, PE; 3x 230 V (optional), ± 10%, PE ISQ20-MFC 19": non-heating, 3 pole connector	3x 400 VAC, ± 10%, PE
Frequenza di rete	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Fusione	with 400 V: 3x 16 A, delayed; with 230 V (optional): 3x 32A, delayed	with 400 V: 3x 16 A, delayed; with 230 V (optional): 3x 32A, delayed	3 x 32A, delayed
Cavo di collegamento	with 400 V: 4 x 2.5 mm², with 230 V (optional): 4 x 4 mm²	with 400 V: 4 x 2.5 mm², with 230 V (optional): 4 x 4 mm²	4 x 6 mm²
Classe di protezione	IP30 ISQ20-MFC 19": depending on housing	IP30 ISQ20-MFC 19": depending on housing	IP30 ISQ20-MFC 19": depending on housing
Welding transformer	internal for 3 kA	internal for 6 kA	External DC: IT-60X AC: TRM3 14-9 V MT40X-530
Power data	IS-Q3000A	IS-Q6000A	IS-Q250A
Connected load	11 kVA	11 kVA	22 kVA
Switching frequency	max. 20 kHz	max. 14 kHz	1 – 10 kHz (AC) 1 – 5 kHz (DC) depending on primary current
Frequenza uscita	40 kHz	26 kHz	1 – 10 kHz (AC) 2 – 10 kHz (DC)
Fundamental frequency AC	---	---	AC: 50 – 250 Hz
Rated power	12 kVA	24 kVA	40 kVA (DC)
Corrente di saldatura max	3 kA with 5% d.r.	6 kA with 5% d.r.	10 kA with 8% d.r. DC only
Max. weld period	320 ms/pulse	320 ms/pulse	640 ms/pulse
Min. weld period	0.7 ms	0.7 ms	DC: 0,7 ms AC: 0,5 x impuls frequency
Rated output current	2 kA 11% d.r.	3 kA 20% d.r.	depending on transformer
Min. terminal voltage	4 V with 3 kA	4 V with 6 kA	DC: 4 V with 10 kA AC: dep on transformer
Max. open-circuit voltage	10 V	10 V	DC: 10 V AC: dep on transformer
Interfaccia			
Secondary connections	CU-rails, 2 x M8 internal thread	CU-rails, 2 x M8 internal thread	Depending on transformer
Ingresso analogico	Pressure sensor for proportional valve	Pressure sensor for proportional valve	Pressure sensor for proportional valve
Uscita analogica	Proportional valve control	Proportional valve control	Proportional valve control
Interfacce digitali	via D-Sub-9 socket; welding data output in ASCII-compatible printing format	via D-Sub-9 socket; welding data output in ASCII-compatible printing format	via D-Sub-9 socket; welding data output in ASCII-compatible printing format
Ingresso interfaccia binaria	Start, quick stop, pressure switch, proximity switches, pressure sensor	Start, quick stop, pressure switch, proximity switches, pressure sensor	Start, quick stop, pressure switch, proximity switches, pressure sensor

Uscita interfaccia binaria	a.o. stepping contact, counter, set point deviation, closing stroke, welding pressure, air valves	a.o. stepping contact, counter, set point deviation, closing stroke, welding pressure, air valves	a.o. stepping contact, counter, set point deviation, closing stroke, welding pressure, air valves
Operazione			
Raffreddamento	Forced air ventilation, temperature controlled	Forced air ventilation, temperature controlled	Transformer water cooled
Moisture	40 - 70 %, not condensating	40 - 70 %, not condensating	40 - 70 %, not condensating
Ambient Temperature	0 - 40°C	0 - 40°C	0 - 40°C
.	IS-Q3000A	IS-Q6000A	IS-Q250A
Weight inverter	approx 33 kg	approx 43 kg	approx 20 kg (without transforner)
Dimensions inverter (BxHxW)	216 x 420 x 480 mm 216 x 420 x 550 mm (including projection) ISQ20-MFC-19": 482 x 174 x 315 mm	216 x 420 x 480 mm 216 x 420 x 550 mm (including projection) ISQ20-MFC-19": 482 x 174 x 315 mm	216 x 420 x 480 mm 216 x 420 x 550 mm (including projection) ISQ20-MFC-19": 482 x 174 x 315 mm
Weight transformer	---	---	IT-60X: approx 16 kg TRM3: approx 45 kg MT-40X-530: approx 63 kg
Dimensions transformer (BxHxW) in mm	---	---	TRM3: 360 x 150 x 185 IT-60X: 284 x 110 x 170 MT-40X-530: 732 x 92 x235

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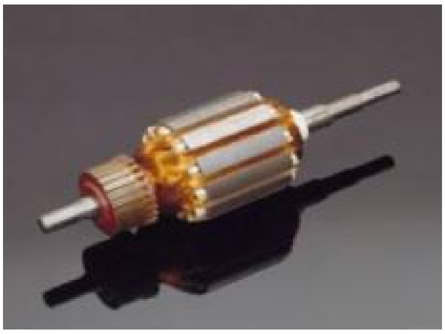
Specifications Serie IS-Q - Generatore inverter (precedentemente conosciuto come Serie ISQ) 2/2

.	IS-Q500A
Performance range	20 kA
Tipi di corrente di saldatura	
Caratteristiche	Inverter with integrated power on button, Performance and Control Electronics, Voltage control cable und removable Display MFT1 (optional: AWS3-Display) and additional: Separate DC- or AC- transformer, external main fuse and net filter
Opzioni	19“ plug-in unit without main unit
Controllo / modalità di controllo	Current, voltage or power feedback control, independently adjustable independently for each pulse, APC (Active Part Conditioner) function and current, voltage, performance and energy limits
Programmi saldatura programmabili/selezione programma di saldatura esterno	99 at single axis; 49 per head at dual axis
N. di impulsi di saldatura	1st and/or 2nd pulse, 2nd pulse can be repeated max 10 times (decrease adjustable down to 1% of 2nd pulse)
Controllo impulso saldatura	Up slope, weld-time, down-slope, break time, impuls cycle
Misurazione corrente	external toroidal coil
Misurazione tensione	Potential free, external connection (X10 axis/head 1; X11 axis/head 2)
Limit values	Display with limit exceeding upper and lower limit, time limit, welding energy limit with sensitive components (weld to limit)
Out of limit error message	Text indication with limit and device errors; monitoring limits for U, I or P; + and – tolerance windows individually adjustable
Parts check	Test pulse for part detection (pre-weld-check)
Operazione	One button toggle wheel, monochrome display, Optional: coloured OP-AWS3-A Display, Profibus or Ethernet IP
Certificazione EU	CE Compliant
Continuous sound pressure level	The equivalent continuous sound pressure level rated A is below 70 dB. Sound pressure levels may vary depending on the welding material and the environmental conditions. If necessary consult an acoustic specialist.
Electrical data	
Tensione alimentazione	3x 400 VAC, ± 10%, PE
Frequenza di rete	50 - 60 Hz
Fusione	3 x 125A, delayed (external)
Cavo di collegamento	4 x 50 mm² shielded
Classe di protezione	IP30 ISQ20-MFC 19“: depending on housing
Welding transformer	External: DC: IT-113 AC: upon request
Power data	IS-Q500A
Connected load	85 kVA
Switching frequency	1 – 10 kHz (AC) 1 – 5 kHz (DC) depending on primary current
Frequenza uscita	1 – 10 kHz (AC) 2 – 10 kHz (DC)
Fundamental frequency AC	AC: 50 – 250 Hz
Rated power	25 kVA (AC), DC with IT 113: 75 kVA; dep on transformer

Corrente di saldatura max	20 kA with 15% d.r. DC only
Max. weld period	320 ms/pulse
Min. weld period	DC: 0,7 ms AC: 0,5 x impuls frequency
Rated output current	depending on transformer
Min. terminal voltage	DC with IT 113: 3 V at 25 kA; AC: dep on transformer
Max. open-circuit voltage	DC: 11 V AC: dep on transformer
Interfaccia	
Secondary connections	Depending on transformer
Ingresso analogico	Pressure sensor for proportional valve
Uscita analogica	Proportional valve control
Interfacce digitali	via D-Sub-9 socket; welding data output in ASCII-compatible printing format
Ingresso interfaccia binaria	Start, quick stop, pressure switch, proximity switches, pressure sensor
Uscita interfaccia binaria	a.o. stepping contact, counter, set point deviation, closing stroke, welding pressure, air valves
Operazione	
Raffreddamento	Inverter and transformer water cooled
Moisture	40 - 70 %, not condensating
Ambient Temperature	0 - 40°C
.	IS-Q500A
Weight inverter	approx 31 kg (without transforner etc)
Dimensions inverter (BxHxW)	216 x 420 x 480 mm 216 x 420 x 550 mm (including projection) ISQ20-MFC-19": 482 x 174 x 315 mm
Weight transformer	IT-113: approx 25,5 kg
Dimensions transformer (BxHxW) in mm	IT-113: 420 x 125 x 230

Product applications Serie IS-Q - Generatore inverter (precedentemente conosciuto come Serie ISQ)


Stranded wire to Coil


Motor Fusing

Stranded wire to terminal

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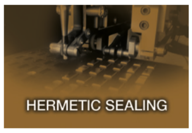
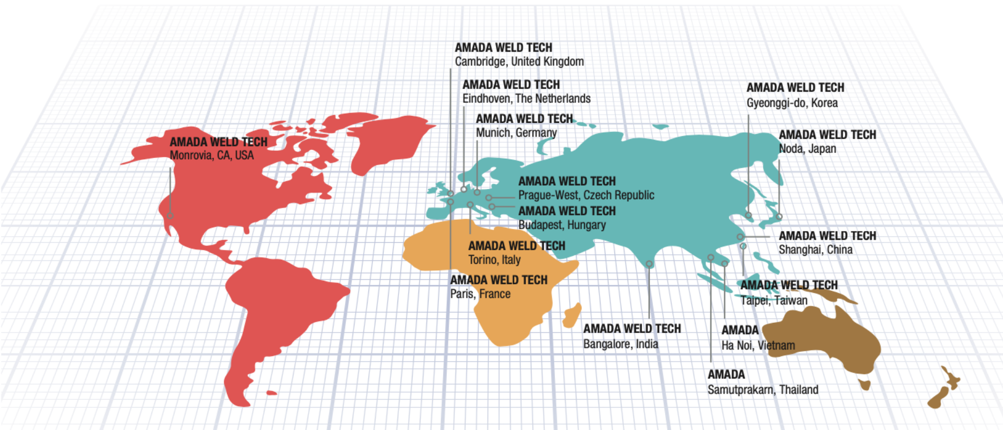
OUR TECHNOLOGIES



OUR SALES OFFICES



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