

High performance welding monitor

QC-450

"Visualize" the welding process and improve joining quality



- **Simultaneous measurement and judgment of up to 10 items**
Current (RMS / PEAK), voltage (RMS / PEAK), weld time, displacement, pressure, conduction angle, external analog x 2
- **2 analog inputs**
Analog signal input such as temperature sensor can be utilized
- **2 divisional measurement**
2-stage welding is also measured and judged respectively
- **Maximum sampling frequency 50kHz**
Weld time resolution 0.02ms. It also supports transistor type welding power supply
- **Process control output function**
Hi, Lo setting and alarm output can be performed for up to 6 types of sensor input signals.
- **Displacement and pressure can be measured at the same time. Signal output is available based on set threshold.**
- **Ethernet communication function is equipped as standard**

Item		QC-450
Current	Measuring Range	Troidal coil x1 (COIL13):0.50-20.00kA/1.00-100.00kA Troidal coil x10 (COIL12):0.050-2.000kA Current sensor 10kA: 0.10-10.00kA, Current sensor 20kA: 0.50-20.00kA
	Measuring Item	Effective value / Peak value
Voltage	Measuring Range	0.01-10.00/0.20-20.00V
	Measuring Item	Effective value / Peak value
Displacement	Measuring Range	0.1-3000μm, 0.5-15000μm, 1-30000μm, 10-300000μm *Maximum measurement range varies by the resolution
	Measuring Item	Before welding, after welding
Pressure	Measuring Range	0.00-10.00N (TJ/TJS-1A), 0.0-196.1N (TJ/TJS-20A/R), 0.0-980.7N (TJ/TJS-100A/R), 0-4903N (TJ/TJS-500A/R), 0-9806N (TJ/TJS-1000A)
	Measuring Item	Before welding, after welding
External Analog Input		±10V (Dual system: Scaling, unit setting available)
Range of Measuring Time		0.00-3000.00ms, 0.0-150.0CYC
Weld Angle		0-180°
Pulse Width		0.00-100.00%
Other Monitoring Items		Power: 00.00-999.9kW, Resistance: 00.00-999.9mΩ
Display, Operation		5.7 color LCD touch panel
Number of Conditions		255
Counter		0-9999999 (Dual system: Up count setting, Notice setting)
Interface	I/O	Applicable to DC24V NPN, PNP, external power source Judgement output: 10 system, process control output: 6 systems
	Analog Output	Current, voltage, displacement, pressure, analog input 1, analog input 2
	Communication	Ethernet
	Memory Card	CF card
Power Source		1φ AC100-240V±10% 50/60Hz
Dimensions (mm)		W170×D338×H265 (Excluding protrusions)
Weight		≈5.6kg

Option



Toroidal coil (x1)

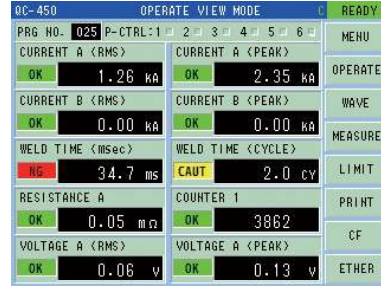
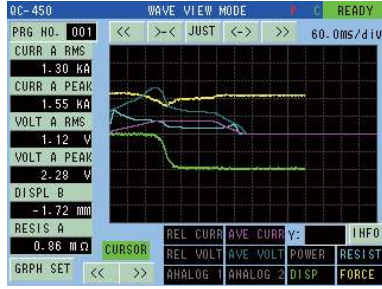


Toroidal coil (x10)

Versatile monitor functions

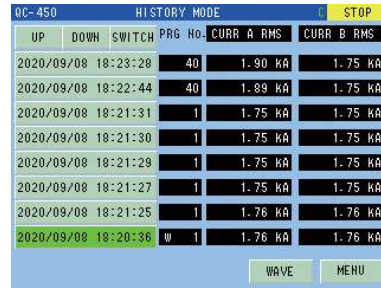
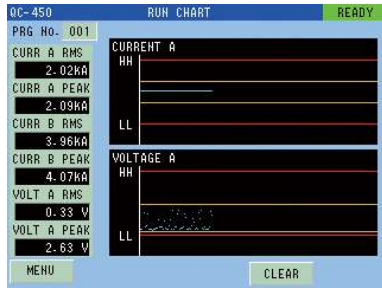
Visualization of welding process

- **WAVE VIEW Mode**
Measurement results (waveforms) of up to 10 items such as current, voltage, power, resistance, displacement, and pressurization are displayed.



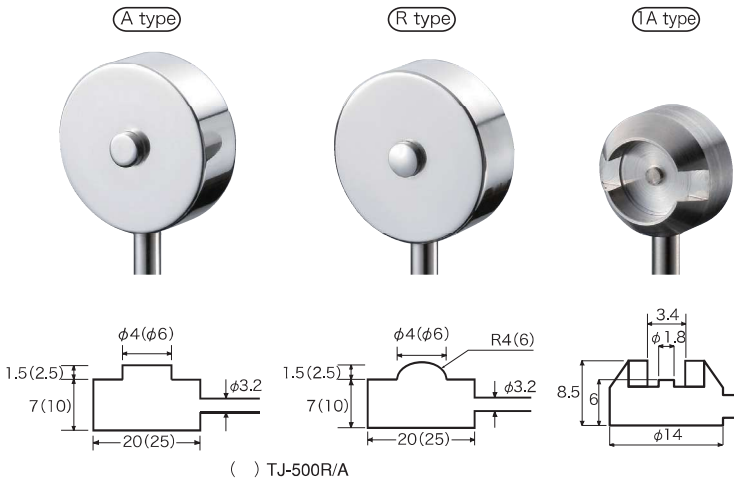
- **OPERATE VIEW Mode**
Measurement results (numerical values) of up to 10 items such as measured values, judgment results, and calculated values are displayed.

- **RUN CHART Mode**
2 items from the measurement data are selected and displayed 200 RBI continuous graphs (dots).



- **HISTORY Mode**
History is displayed up to the latest 100.

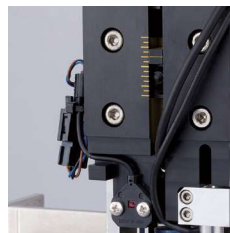
Sensor tip shape



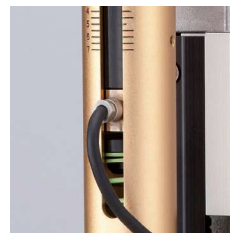
Pressure sensor TJ series

Pressure sensor for incorporation into the system head

Example of integration



NA-125, NA-126



NA-12X series,
NA-13X series,
NA-14X series



Item	TJS-1R	TJS-20R	TJS-100R	TJS-100A-NA124	TJS-500A-NA126
Measuring Range	0 - 10N	0 - 196N	0 - 980N	0 - 980N	0 - 4900N
Critical Load	20N	294N	1470N	1470N	7350N
Accuracy	±3% (Range full scale)				
Applicable System Head	NA-121, 122, 123, 124, 131, 132, 141, 142			NA-124, NA-125, NA-143	NA-126

* A separate pusher is required to install in the system head.