

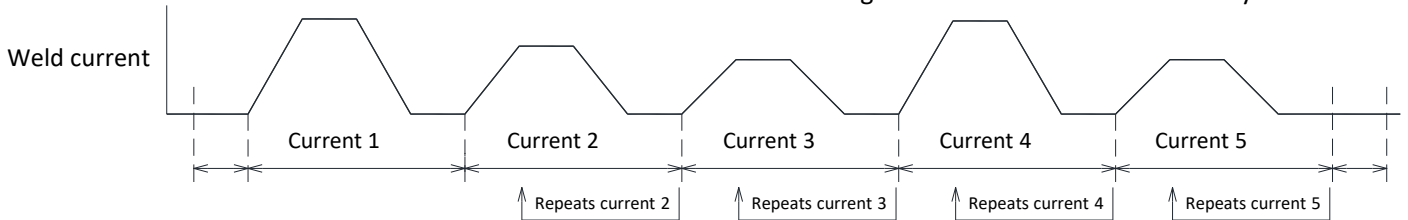
MFDC Type Weld Controller 1000 Series

Monitoring Timer of DENGENSHA

Useful functions added to the conventional functions

① 5-stage energization and slope control to each current

The welding pattern expands infinitely by the welding sequence configuration with high extendibility.
The unit for the setting can also be switched between cycle or ms.



② Electrode tip dressing judgment function

The quality of the tip dressing can be checked by the resistance between electrodes and the time to the peak of the resistance. This feature enables improvement of weld quality.

④ Monitoring electrode force

Measures the output data (Voltage [V]) of the pressure sensor for NDZ and calculates the electrode force monitor value.
The electrode force essential for the welding quality can be monitored while synchronizing with the energization.

③ Monitoring welding duty cycle

(Prevents overheating of welding transformer diodes)

Monitors the energization duty cycle of each weld point. Taking advantage of the know-how that can only be provided by a comprehensive welding machine manufacturer, the settings according to the characteristics of the welding transformer prevent damage on the inverter transformer.

⑤ Weld results and tip voltage

Weld results data can be saved by using a dedicated software on PC. Addition of a detection line also enables acquisition of the voltage waveform between tips of each weld point. This data can be used to improve welding quality and reliability.

Network functions

- Welding monitor results cumulated on PC can be utilized for traceability and trend management. (Maximum of 100 Dengensha timers can be networked with a mix of different specifications such as inverter/AC types)
- Resistance waveform monitored data between tips can be obtained for weld quality judgment.
- Setting and backup of weld parameters can be managed collectively on PC
- Displays connecting and operating status of welding machines in real time
- Two IP addresses can be assigned to one unit (Addition of an optional board)
- Wiring can be significantly reduced by connecting signals with EtherNet/IP (Conventional wiring from a terminal block or connector can be changed)

EtherNet/IP™
ODVA



Robot synchronized variable pressurization control

- Sequence synchronized variable pressurization is possible by switching the electrode force through the external signal of the servo gun electrode force profile control function installed on FANUC robots.

Full Lineup

- 300A (air-cooled), 400A (water-cooled), 1000A, and 2000A
- CE self-declared up to 1000A .
- Water-cooled housing is IP54 compliant.



Please note that the design, specifications, and exterior appearance of the product may change without a notice.

Inverter Type Resistance Welding Controller

Model	SWIE-1000	-KA30	-WS40	-WS100	-WS200
Rated	Weld supply voltage	200-380-400-415-440-460-480VAC±10%, 3-phase			
	Rated primary current	300A	400A	1000A	2000A
	Duty cycle	10%		2.2-6.5%	10%
Current control	Control method	PWM control by IGBT			
	MFDC frequency	600 - 2000Hz (Every 100Hz)			
Current detection	Primary current detection	Built-in CT			
	Secondary current detection	Toroidal coil (Option)			
Current control selection	Primary current control	Peak control of current feedback by built-in CT			
	Secondary current control	RMS control of current feedback by built-in CT and secondary toroidal coil			
	Constant pulse width control	Constant duty pulse control			
	VMC control	Feedback control of primary current and secondary resistance			
External connections	Cooling method	Air cooled	Water cooled		
	Cooling water flow rate		5ℓ/min	3ℓ/min	6ℓ/min
	Input side ELB	100A 30mA		150-250A 30mA	
	Output side circuit breaker	Electromagnetic switch		Electromagnetic switch	
Approved standards	CE self-declaration		JIS	CE self-declaration	JIS
Outer protection rating	IP43	IP54			IP2X
Outside dimensions	W470xH500xD450		W580xH940 xD400	W830xH940 xD400	W800xH950 xD500
Weight	52kg		120kg	160kg	190kg

 **DENGENSHA TOA**
<http://www.dengenshatoa.co.jp/>



Branch

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Registered company: Dengensha Toa Co., Ltd.
 Scope of registration: Design, development, manufacturing, and related service for resistance welders and related equipment (product operation and maintenance training and service/spare parts supply)
 Related facilities: [Scope of activities: Same as above]
 Headquarters, Toyama plant, and Omi plant

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