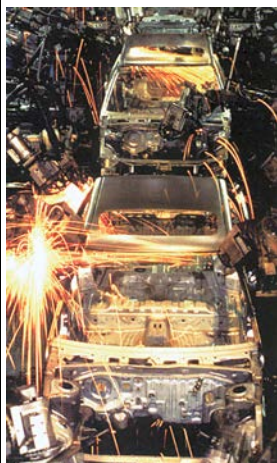


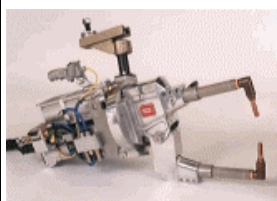


## typical applications

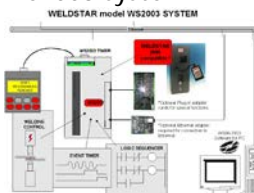
### automotive



### manual stations



### WS2003 system



### WS2003 automotive derivatives



# WS2003 welding control

## data sheet



## Proven features and flexibility

The WS2003 is a direct plug-in replacement for the popular WS2000. The timer unit will fit into existing cabinets and uses the existing power supply and P1/2/3/4 connections. The WS2003 has a new programming pendant with a larger display and simplified keypad. A host of additional features, such as a 250-statement logic sequencer, Ethernet and fieldbus cards are available for new installations. With options covering both AC and MF welding, WS2003 is a truly universal system.

Features	Benefits
single/dual gun	flexible
64 welding programs + linking	versatile
dual-interval welding sequence	suitable for coated materials
constant current or phase angle control modes	quality welding
machine sequencer	reduce additional hardware
programmable digital i/o	easy to interface with other equipment
network or local programming	for large or small installations
analogue pressure control	can be used with proportional valves
retract/high-lift control	suitable for most types of gun operation
extensive monitoring and diagnostics	pinpoint most welding problems

## options

- WS98-2003 PC software for programming and monitoring
- Fieldbus adapters (Profibus, Interbus, DeviceNet etc)
- 10/100Base-T Ethernet adapter
- 3-phase adapter
- Medium Frequency adapter
- Isolation contactor
- Earth-leakage detector
- Two-hand start

## configurations

SCRs up to 9000 A • MF Inverters up to 5000A • Circuit-breakers up to 600 A

# WS2003 welding control

## data sheet

<b>Welding programs</b> x 64 with linking 2-interval weld sequence with phase angle/constant current control spot/repeat/roll-spot/seam dual heat/seam pre-heat single/dual gun pulsation, upslope, downslope analogue pressure control, 0..10 V or 4..20 mA balance control for seam welding		<b>SCR options</b>	
		SCR type	Rating
		PM100	100 kVA
		PM150A	150 kVA
		PM150W	150 kVA
		PM300W	300 kVA
		PM500W	500 kVA
<b>Monitoring programs</b> x 64 low/pre/high current limits for each weld interval pre-limit counter monitoring on/off		<b>MF Inverter options</b>	
		Type	Rating
		MF-PAK 360AA	360A
		MF-PAK 600AA	600A
		MF-PAK 1000AW	1000A
<b>I/O control</b> 4 events per program synchronised to the weld sequence full-feature 250 statement logic sequencer 14 programmable inputs 12 programmable outputs		<b>Circuit-breakers</b>	
		type	Rating      Breaking capacity
		63AS	63 A      25 kA
		63AH	63 A      45 kA
		125AS	125 A      25 kA
		125AH	125 A      45 kA
		250AS	250 A      25 kA
		250AH	250 A      45 kA
		400AS	400 A      25 kA
		400AH	400 A      45 kA
		600AS	600 A      25 kA
		600AH	600 A      45 kA
		All circuit breakers are available with optional earth-leakage detector	
<b>Counters</b> x 2 optional stop at end of count optional output at end of count reset via input/programmer/WS98		<b>Environmental</b>	
		temperature	
		- operating	-23° to +140° F
		- storage	-13° to +158° F
		humidity	
		- operating	up to 90% (relative)
		- storage	up to 90%
<b>Other features</b> retract/hi-lift control for each gun low-force approach contactor timer heat/current steppers Edit disable (via keyswitch) toroid test Weld history log		<b>Power/synchronisation requirements</b>	
		voltage	50VA @ 380/400/420/440 V ac
		line frequency	50/60 Hz ±1Hz
<b>I/O ratings</b> 4 outputs      1 A @ 24 V dc or 110 V ac each 8 outputs      500 mA @ 24 V dc or 110 V ac each 14 inputs      10 mA @ 24 V dc each (max)		<b>Dimensions (standard AC version)</b> 30.9 h x 11.4 w x 8.0 d in	
<b>Programming pendant</b> 4-line LCD with backlight data backup/restore function RS-232 communications			

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