



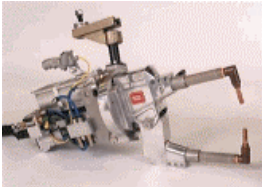
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typical applications

projection welders



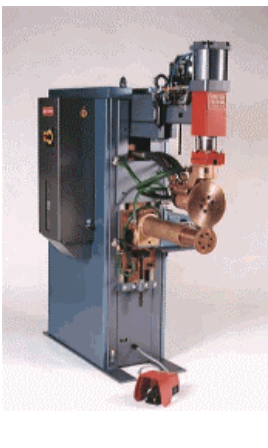
manual stations



multiwelders



seam welders



WS500 welding control

data sheet



Reliability from simplicity

The WS500 is a compact, robust unit providing basic control for resistance welding. The membrane front panel has a water-resistant finish and incorporates four push buttons and an LCD for simple programming and monitoring. Connections are via a plug-in connector block and four studs are provided for mounting. Alternatively, the WS500 can be supplied in a wide range of housings incorporating circuit breaker and thyristor units.

| features | benefits |
|---|---|
| single/repeat/half-cycle/roll-spot/seam modes | versatile |
| dual heat weld + pulsation | can be used for coated materials |
| integral programmer | always available |
| 50/60 Hz operation | international |
| up to 8 user-defined programs | store settings for different material and thicknesses |
| retract control | suitable for most types of gun operation |
| counter with optional lock-out | can be used for electrode maintenance |
| 24 V dc supply | simple installation |
| cross-interlock | safety and load-sharing |

options

- ELR/1 earth-leakage relay
- 2-hand start unit
- 3PA/2 3-phase adapter
- dual gun adapter (does not include retract function)

configurations

W6, Monopak, Unipak housings

WS500 welding control

data sheet

| welding parameters x 8 | | configuration (continued) |
|--|--|--|
| mode | single/repeat | retract none, simple, high-lift +/- |
| heat1 | 0..99% | frequency 50/60 Hz |
| heat2 | 0..99% | interlock on/off |
| presqueeze | 0..99 cycles | heat range high/low |
| squeeze | 0..99 cycles | cross-interlock external/ring |
| weld1 | 0..99 cycles | |
| cool1 | 0..99 cycles | environmental |
| weld2 | 0..99 cycles | temperature |
| cool2 | 0..99 cycles | - operating 0° to +50°C |
| pulses | 1..9 | - storage -25° to +70°C |
| hold | 0..99 cycles | humidity |
| balance | 0..60% (seam mode only) | - operating up to 80% (relative) |
| off | 0..99 cycles | - storage 10% to 90% |
| counter (configuration types 3,5,6,7 and 10 only) | | dimensions |
| actual count | 0..9999 | height 160 mm |
| end count | 0..9999 | width 122 mm |
| at end of count | stop/continue | depth 35 mm + 15 mm for connector |
| | | weight 0.62 kg |
| configuration | | programs |
| type | | |
| - 00 spot/repeat | simple spot welding with no other functions | 8 |
| - 01 spot/repeat with cross-interlock | spot welding with an output that can be used to prevent other machines from welding | 4 |
| - 02 spot/repeat with retract | spot welding with an input and output for controlling the gun position | 4 |
| - 03 spot/repeat with counter | spot welding with an output that activates when the count is reached | 4 |
| - 04 spot/repeat with cross-interlock and retract | a combination of types 01 and 02 | 2 |
| - 05 spot/repeat with counter and retract | a combination of types 02 and 03 | 2 |
| - 06 spot/repeat with counter and cross-interlock | a combination of types 01 and 03 | 2 |
| - 07 spot/repeat with counter, cross-interlock and retract | a combination of types 01, 02 and 03 | 1 |
| - 08 half cycle | spot welding using only one half-cycle weld duration | 8 |
| - 09 half cycle with cross interlock | a combination of types 08 and 01 | 4 |
| - 10 half cycle with counter | a combination of types 08 and 03 | 4 |
| - 11 roll-spot | spot welding with an output to operate motor-driven welding wheels during the OFF time between sequences | 8 |
| - 12 seam | uses seam wheels, a motor drive and continuous or modulated current to provide a seam weld | 8 |
| | | power requirements |
| | | voltage 24 V dc |
| | | sync. frequency 50/60 Hz |
| | | current < 500 mA (all outputs off) |
| | | i/o ratings |
| | | inputs < 10 mA @ 24 V dc |
| | | outputs < 500 mA @ 24 V dc |
| | | SCR drive 5 kHz; 1:10 mark/space; first pulse 24 V; subsequent pulses > 15 V |

Information in the document is subject to change without notice.
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