RESISTANCE WELD CONTROLLER
AC OR MEDIUM FREQUENCY DC INVERTER

SERRATRON-100

- **INTEGRATED PLC FUNCTIONS**

- **ETHERNET NETWORKING FOR CENTRALIZED PROGRAMMING**

- **OPTIONAL FIELD BUSES**

  ProfiBus-DP™   InterBus™   DeviceNet™

Full control and connectivity in small format

S6 SERRA

RESISTANCE WELD CONTROLLER

Optional Field Buses:

- 100net DeviceNet™
- 100ib InterBus™
- 100dp ProfiBus-DP™

Ethernet
IOEX (RS-485)
SerraCard
V24 (RS-232)
InterBus-S
DeviceNet
ProfiBus-DP

Rx Tx
Eth

P1 Proportional Valve

P2 SCR Syncronization Primary Signals

P3 Power supplies Weld Current Sensor

P4 20 x 24Vdc Inputs

P5 16 x 24Vdc / 700mA - Outputs

- **Operating modes:**
  - **MUX:** *One thyristor group (AC single phase welding). Up to 3 thyristor groups with external module MUX-3.*
  - **MFI:** *Medium Frequency Inverter (Three-Phase network, DC welding).*
- **127 weld programs**
  - *3 welding times sequence + pulsations + up / down slope.*
  - *Operation in phase shifting, Current Monitoring or Constant Current Mode.*
  - *Voltage changes compensation function.*
  - *1/2 wave welding function.*
- **Electrode Wear Compensation**
  - *Predefined curves (can be edited).*
  - *Easy tunning, few parameters to be adjusted.*
- **Tip Dressing Function**
- **Field Bus for robot applications**
  - *InterBus-S™ (SERRATRON 100ib).*
  - *DeviceNet™ (SERRATRON 100net).*
  - *ProfiBus-DP™ (SERRATRON 100dp).*
- **Programming network interface**
  - *Ethernet 10BaseT (Standard).*
  - *Ethernet 10BaseFL (Optical Fiber) (Under request).*
  - *TPC/IP Protocol.*
- **V24/RS-232 Serial Programming Port**
 - *For programming unit TP-10 or lap-top with software CPC-100©.*
- **Built-in PLC for full automation in welding applications**
  - *20 Inputs - 16 Outputs 0,7 A (short circuit protected).*
  - *Up to 516 I/O using expansion modules MES 32 (Bus IOEX).*
  - *General purpose: counters, marks, flip-flops, timers…*
  - *Embedded welding functions.*
  - *User interface TP-10: messages and commands managed by PLC program.*
  - *Ladder mode programming (up to 990 equations).*
- **Analogue Output for Proportional Valve**
  - *0 - 10 V/4 - 20 mA / 0 - 20 mA.*
- **Interface for electrically operated welding guns.**
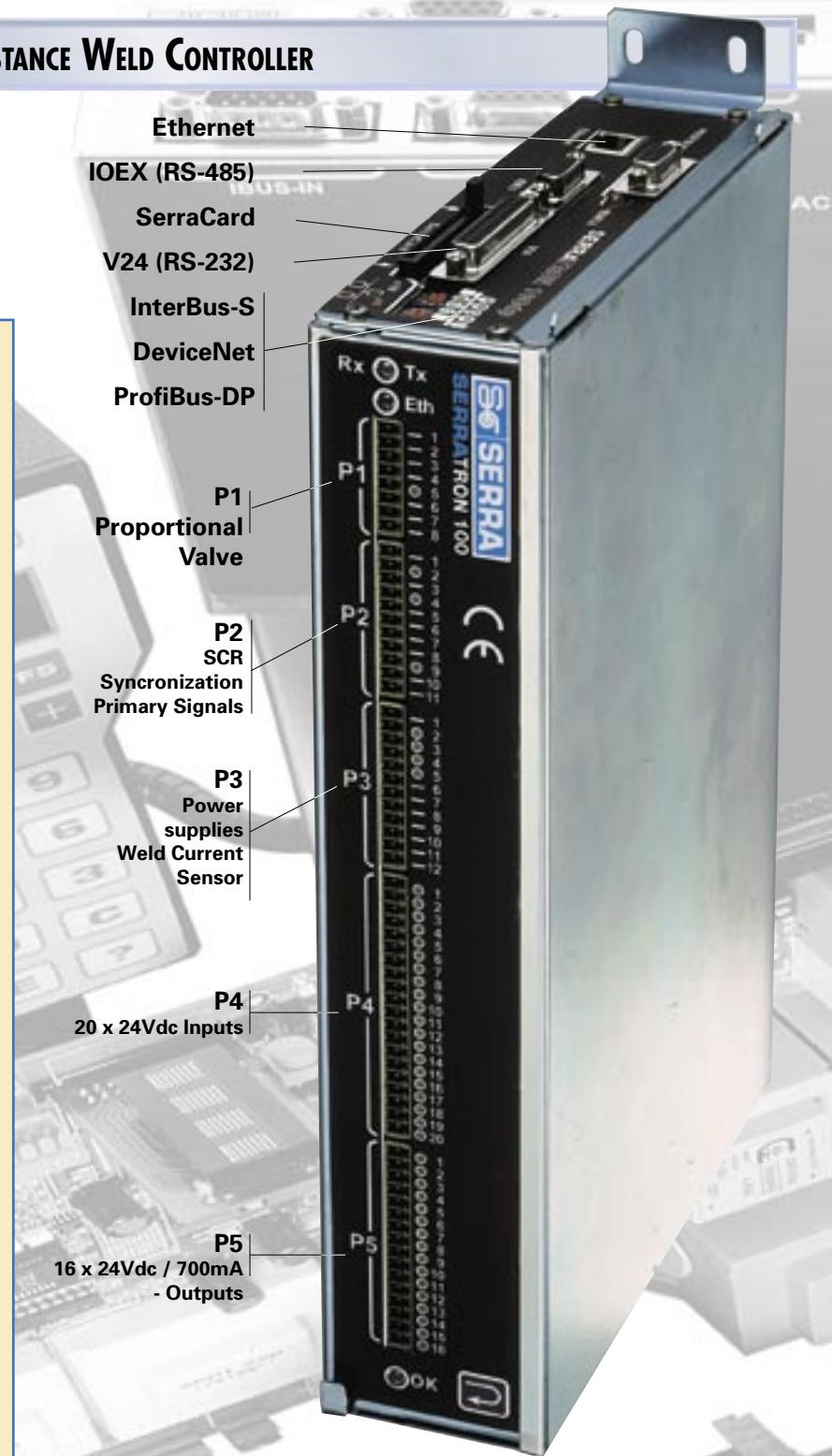
Dimensions: 295 x 182 x 62 mm
Weight: 2,0 kg

INTEGRADED PLC
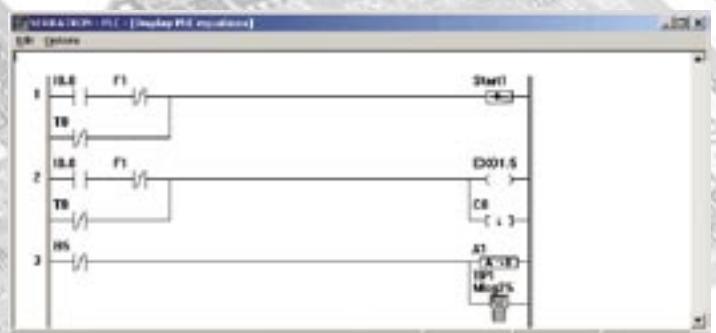
IOEX FIELD BUS FOR I/O EXPANSION

· Up to 15 I/O modules · Up to 4 MF inverters · Up to 4 weld guns

Ethernet network

Weld Controller
· Programming / Configuration
· Weld data logging
· Fault diagnose

PC

**10 baseT
(10 baseFL)**

SERRATRON 100

IOEX

Software CPC-100

Field Bus

IOEX

I/O Module *[from 1]*

I/O Module *[up to 15]*

UMF *[from 1]*

UMF *[up to 4]*

Electrical weld gun *[from 1]*

Electrical weld gun *[up to 4]*

CONTROL CABINET

**AS-6/100-UTP
AC Current**

**AS-6/100-UMF
Medium Frequency**
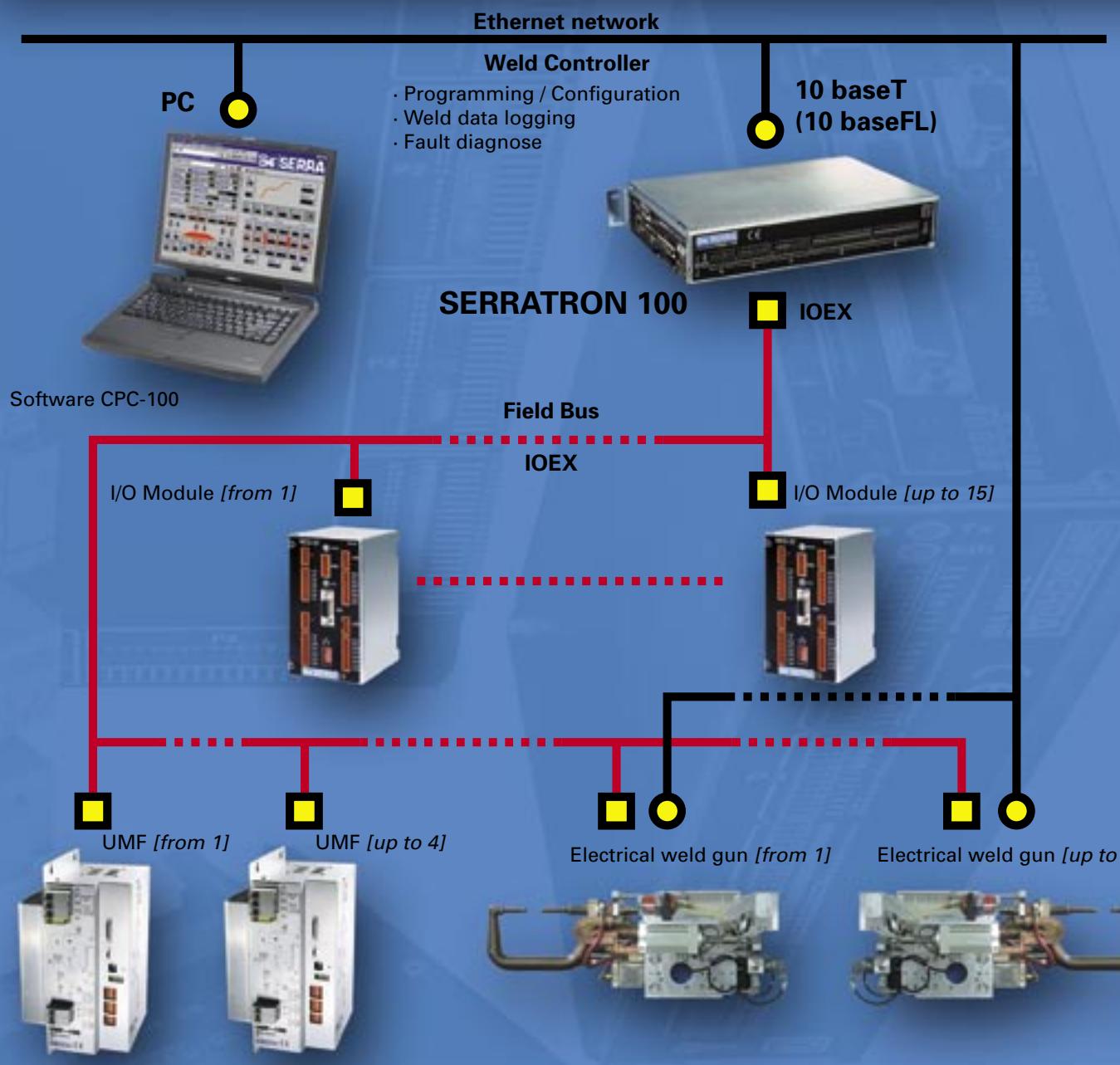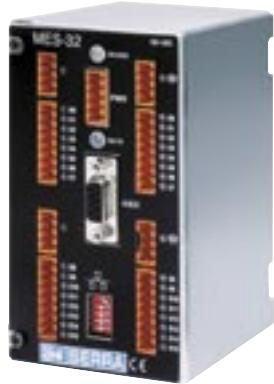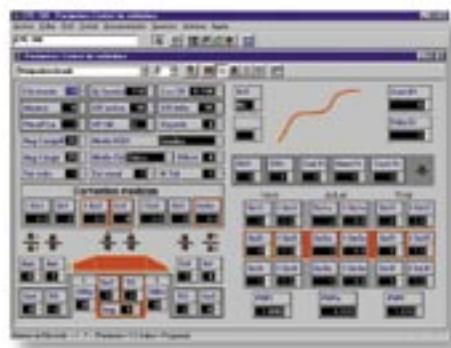
PROGRAMMING TERMINAL TP-10 AND UPF-8α

· Portable TP-10.
· Fixed UPF-8a.

SOFTWARE CPC-100

Quick, complete and friendly programming and monitoring under Windows®. Can be used in a lap-top via port V24 or in a PC connected to an Ethernet network.

SERRA CARD

Compact, high capacity and easy to use memory card, Serra Card is the perfect storage media for a quick loading and unloading of programmable welding parameters, as well as for acces restriction to only authorized users.

SEPI-1

Air valve safety relays module for suspended machines

MES 32 EXTENSION MODULE

Up to 32 Inputs / Outputs monitored by PLC software. Any choice of 4 groups of 8 Inputs or 8 Outputs.

PRODUCT REFERENCES TO BE USED FOR ORDERING

Please use the references listed below when ordering. It helps us to process your order correctly and quickly.

PRODUCT	REFERENCE	DESCRIPTION
SERRATRON 100	CSP-100	Weld controller. Without Field Bus
SERRATRON 100dp	CSP-100dp	Weld controller. Field Bus Profibus DP
SERRATRON 100net	CSP-100net	Weld controller. Field Bus DeviceNet
SERRATRON 100ib	CSP-100ib	Weld controller. Field Bus InterBus
CPC-100	SOFT CPC-100	Programming Software package V24/RS-232 or Ethernet + TPC/IP
MES 32	MES-32	External extension module (Standard module 16 I + 16 O)
TP-10	TP-10	Portable programming terminal
UPF-8a	UPF-8a	Fixed programming terminal
MUX-3	MUX-3	Thyristor multiplexer module for 3 thyristors group
SEPI-1	SEPI-1	Air valve safety relays module for suspended machines
SERRA CARD	SERRA CARD	Memory Card

SERRA

SERRA SOLDADURA, S.A.

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CERTIFIED ISO 9001

QUALITY MANAGEMENT
Certificate
Voluntary participation in regular monitoring according to ISO 9001

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