SCD 3201

Stud Welding Unit (with wide range power supply)
for CD stud welding and short-cycle drawn-arc stud welding
according to DIN EN ISO 14555

Technical Data

Gas/automation	Series/series	
Welding range	**CD welding:** M3 to M10, dia. 2 to 10 mm	**Short Cycle:** M3 to M8, dia. 3 to 6 mm
Welding material	Mild steel, stainless steel (aluminum and brass)	Mild steel, stainless steel
Welding rate	**CD welding:** up to 40 studs/min depending on application and stud dia.	**Short cycle:** 8 up to 15 studs/min depending on application and stud dia.
Capacitance	**CD welding:** 132.000 µF/66.000 µF*	
Welding current		**Short Cylce:** 900 to 3.000 A, stepless (over charging voltage)
Welding time	**CD welding:** 1 to 3 msec	**Short cycle:** 5, 10, 15 msec
Energy	3.200 Ws/1.600 Ws*	
Charging voltage	50 to 220 V (stepless voltage regulation)	
Primary power	85 to 265 V ~ wide range selection 50/60 Hz, 10 AT	
Power source	Capacitor	
Insulation class	IP 21	
Dimension L x W x H	600 x 240 x 280 mm (without handle)	
Weight	29 kg	
	* with change over of capacitors	
Order No:	**91-10-2321**	

General Information

Application

- Especially suitable for thin sheets (at least 0.6 mm), only for CD welding
- Capacitor discharge and short-cycle drawn arc stud welding possible with one power unit
  Capacitor discharge – especially suitable for dia. 10 mm (collar stud) welding elements and problematic surfaces (e.g. galvanised sheets)
  Short-cycle drawn arc stud welding – requires only single-phase 85 to 265 V wide range power supply (no 400 V 3-phase current); for welding short cycle welding elements; best reproducibility of welds through storage of welding energy in capacitor battery prior to each weld;

Process variants

- **Contact welding**
- **Gap welding**
- **Short-cycle drawn-arc welding**

Special equipment

- **Welding with shielding gas** (series)
- **Automation** (series)

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SCD 3201 Technical Data Sheet

Advantages

Features

- **Microcontroller** – for precise process times, optimal functional reliability and maximum operating convenience
- **Function monitoring** – automatic function test following power-up; monitoring of all internal system functions
- **Display of error codes** – on LCD display
- **Lift test** – for gap welding guns and welding heads
- **Library function** – 8 programs (charging voltages) can be stored; library with stored welding parameters; additional customer-specific entries possible; user interface available in various languages; display of charging voltage in volts
- **Process monitoring** – recording and analysis of factors affecting the welding process by means of the process-analysis factor (PAF); after each weld, the reference PAF value is compared with the actual value; display of the actual and reference values; switchable automatic welding stop, if limits are exceeded; limits selectable in increments; manual entry of PAF value possible (only for CD welding)
- **RS232 interface** – for data output; data and time of day are stored; Welding parameters of each weld are logged (only for CD welding)

Structure

- **Extremely easy to operate**
- **Compact**
- **Robust** – metal housing withstands rough treatment in shop and on site
- **230 V mains connection** (instead of 400 V 3-phase current connection) – optimal for construction sites since 3-phase current is not universally available (85-265 V)

Safety

- With integrated **mains filter** (protection against voltage peaks)
- **Optimal for construction sites with large mains voltage fluctuations** – safe to operate with mains voltages ranging between 85 to 265 V wide range power supply); use even with critical voltage supply
- **EMC test**
- **High-voltage test with log**
- **Retriggering lock-out** – prevents welding on a welding element that has already been set
- **Thermal monitoring of transformer and internal temperature of power unit**– automatic shutdown in case of overheating
- **Temperature-regulated ventilator** – reduces noise and dust in the power unit (greater system reliability)
- **Control unit galvanically separated from welding lines** – high degree of functional safety
- **Optimal protection against external interferences**

Welding

- **Display** – infinitely adjustable power setting (charge reversal via set-point switch); easy monitoring of all functions via LCD display; user-friendly operation via large LCD display
- **Powerful** – built-in power reserves
- **Electronic regulation of charging** – allows high clock rates
- **Trouble-free changing** – of welding voltage polarity possible by reconnecting welding current and ground cables
- **Use of special capacitors** (developed for stud welding)
- **Welding current setting** – infinitely adjustable from 900 to 3000 A (via charging voltage)
- **Capacitance switching** – 66.000 µF or 132.000 µF
- **2 in 1** – switchable from capacitor discharge to short-cycle welding

Suitable stud welding guns

- **C 08**
- **CA 08**

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(Technical data may change)

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