

SPATZM300 Medium Frequency Inverter Power Source

The **SPATZM300** 1,000 Hz medium-frequency inverter power source must be used in combination with external medium-frequency transformers as a high-performance, cost-effective DC power supply within a welding current range of 2 kA to 20 kA.

Each welding operation is feedback controlled during the procedure. The control process takes place very quickly based on the 1 kHz inverter frequency. Actual values are compared with target values every 0.5 ms. The output power is adapted during the welding process if targets are not being met. Constant Current Control (CCC), Constant Power Control (CPC), Constant Voltage Control (CVC) and the adaptive **MASTER** mode can all be used. At the end of each weld, the **SPATZM300** checks if the actual welding parameters are keeping within the limits set.

The **SPATZM300's** timer and medium-frequency inverter are housed in a compact IP54-protected housing, which weighs a total of 27 kg / 59.5 lb. While the external medium-frequency transformer needs to be installed close to the welding site, the **SPATZM300** can be installed within the vicinity of the machine.

The **SPATZBG-02** operating device is used for operating the functions and adjusting the welding parameter settings. The curve characteristics of the process signals and the measured values of the last 10,000 welds can read by the **SPATZBG-02** at any time.

The **SPATZM300** medium-frequency inverter is deliverable for the mains input voltages from 3~400 V to 500 V.



Technical Data

No. of programs	63
Welding impulses / program	16
Control modes	CCC, CPC, CVC
MASTER	yes
Weld parameter monitoring	yes
Stepper function	for CCC, CPC, CVC
Force schedule	yes
Slope up / slope down	yes
Signal inputs	current, voltage, force, penetration
Output for proportional valve	yes
Mains voltage U_1	3~400 V - 500 V 50/60 Hz
max. power S_{max}	150 kVA with 400 V
Nominal power S_N	90 kVA with 50 % duty cycle, 400 V
Output voltage U_{2N}	500 V / 1,000 Hz
Output current I_{2max}	300 A
Interfaces	BG-02 , RS232, MASDAT
Digital inputs	13
Digital outputs	8
Cooling water	4 l/min at 20 °C 1.1 gal(US)/min at 68 °F
Type of protection	IP54
Dimensions (H x W x D)	380 x 380 x 210 mm 15.0 x 15.0 x 8.3 in
Weight	27 kg / 59.5 lb
Color	light grey / RAL7035
Included in delivery	- Documentation - SPATZBG-02 connecting cable 3 m / 118.1 in - SPATZBG-02 connecting cable holder



SPATZTI Transformers

Welding transformers for 1,000 Hz

Technical Data

Type	TI-60R	TI-120R
U ₁	1~1,000 Hz	1~1,000 Hz
U _{1N}	500 V	500 V
S _N (50 % DC)	60 kVA	120 kVA
U ₂₀	6.4 V DC	9.3 V DC
in steps	1	1
I _{2N} (20 % DC)	9.4 kA	14.5 kA
I _{2N} (50 % DC)	7.0 kA	9.0 kA
I _{max}	18 kA	26.5 kA
Cooling	6 l/min at 20 °C - 25 °C 1.6 gal(US)/min at 68 °F - 77 °F	8 l/min at 20 °C - 25 °C 2.1 gal(US)/min at 68 °F - 77 °F
Isol. class	F	F
Dimensions (H x W)	390 x 160 mm 15.4 x 6.3 in	405 x 190 mm 15.9 x 7.5 in
Depth	125 mm / 4.9 in	125 mm / 4.9 in
Weight	16 kg / 35.3 lb	25 kg / 55.1 lb



Other models are available on request.

