

# Ultrasonic Generators Type DN 35 M/MD and DN 20 M/MD

## Generator modules for individual machine concepts



The DN 35 M/MD and DN 20 M/MD ultrasonic generators in the power range from 400 to 4000 W are designed for the more stringent requirements of high-performance ultrasonic applications. The generators transform energy from the electrical supply network into a high-frequency sinusoidal oscillation of 35 or 20 kHz. Optimum regulating processes generate optimum ultrasonic oscillations. The design of our 19" generator modules (4HE) and our different versions of generator housings enables us to incorporate our generators in practically any machine design.

### Applications:

- Generation of ultrasonic frequency for various technologies such as:
  - Welding (thermoplastics, strands, contacts, metals)
  - Punching (thermoplastics, textiles)
  - Cutting (textiles, foods, foils, rubber)
  - Drilling (jewels, drawing dies)
  - Eroding (gems, cameos (glass, stones, jewels))
  - Cleaning, emulsifying, dispersing (in liquids)

### Characteristics and advantages:

- Fully automatic ultrasonic generator
- Outstanding performance

- Gentle oscillation build-up of the ultrasonic units by an automatic frequency fine tuning whilst maintaining a constant amplitude
- Automatic frequency tuning
- Amplitude adjustment from 50 % to 100 % on the front panel
  - Binary in 16 steps
  - Analogue with a voltage of 5 to 10 V
- Constant working process as a result of extensive electronic control, monitoring and analysis systems
- Electronic fuses to protect the ultrasonic components against undefined operating conditions
- Operating state diagnosis system:
  - Display of error messages on the front panel, if the machine is not operating within the permitted operating range, e.g. as a result of undervoltage, overload operation, excess temperature or short circuit
  - Simultaneous forwarding of the operating conditions to the 25-pole Sub-D socket on the rear of the generator, for external detection
- Power display of the current generator output
- Analogue outputs at the Sub-D socket:
  - Amplitude output
  - Active power (0-10 V)
- Power control:
  - Continuous control of the output power of the generator with immediate system shutdown if the set power limit is exceeded
- Energy:
  - Energy monitoring: energy monitoring according to a pre-defined range for quality control
  - Energy shutdown: generator shutdown once a pre-defined energy value is reached
- RS485 Serial interface:
  - Transfer of all default input parameters to the generator and retrieving the actual values from the generator
- Profibus (DP):
  - Complete remote control via profibus
  - Transfer of all default input parameters to the generator and retrieving the actual values from the generator
  - Adjustable address range from 1 to 126, automatic baud rate recognition up to 12 MBaud
  - Facility to change the amplitude even during ultrasound emission

### Warning:

This is a class A device and determined for industrial use. It may cause radio interference in a living area.

### Options:

The MD version with LCD display can also be fitted with the following options:

- Timer:
  - A timer incorporated into the generator for defined system-switch off



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