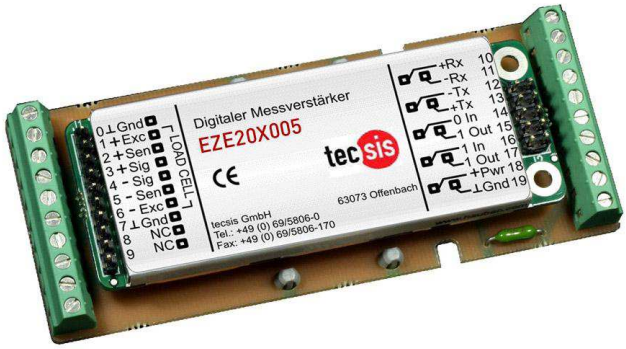
Digital amplifier

EZE20X005



Description

Digital measuring amplifiers condition the output signal of strain gauge force transducers for a connected control system. The serial RS-422/485-interface enables direct signal processing in the SPS control system and the operation of up to 32 measuring amplifiers in one bus.

The high accuracy and speed of this digital measuring amplifier make it equally suited for force measurements and force monitoring on machines. ASCII commands are available for the free programming of the measuring amplifier. With a communications programme, as for example Terminal, it is easy and quick to set up the communication with a PC and parameterise the device. A Windows software programme with an oscilloscope function is also available as an optional extra. The assembly can be done by means of pillar plugs on a printed circuit board or in the control cubicle on top hat rails (as specified in DIN EN 50 022), by an optional adapter board with Phoenix-screw terminals. Any strain gauge force transducer which is driven by direct current can be connected. Interference signals can be reduced by the comprehensive filter setting possibilities.

The supply voltage of more than 12 up to 24 Volt guarantees a direct connection to an SPS control system since this generally has a 24 Volt supply voltage.

Features

- RS-422/485-port
- Baud rate from 9.6 to 57.6 kBaud
- Internally 105 digitisations per second
- Very simple and logical ASCII-command syntax
- Fully bi-directional electronic control system over the port
- 6-wire technology with sense-system

Applications

- Industrial weighing technology
- Force measurement in automation systems
- Force monitoring on machines

Specific information

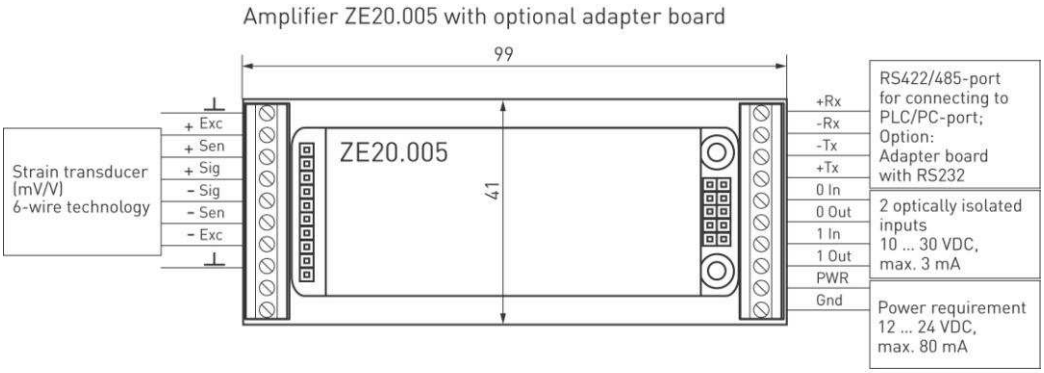
- 2 optically isolated logical inputs, 10…30 V, max. 3 mA; Status can be queried by software
- Optional: Adapter board with RS422<>RS232-converter

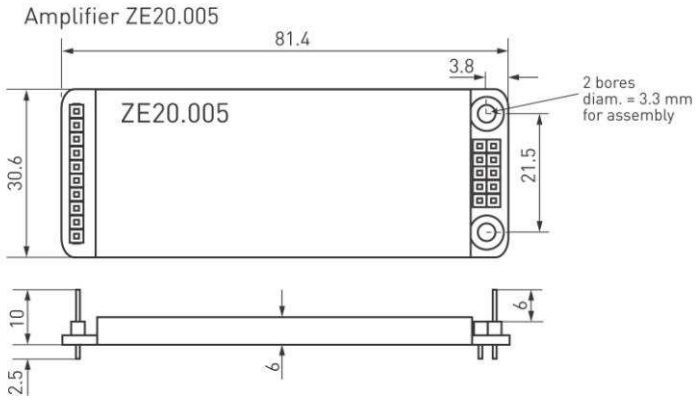
Model: EZE20X005

Technical data

Model	EZE20X005
Output	
- Signal	RS-485 or RS-422, full duplex, 9600…57600 Baud, Bus-capable up to 32 units
- Option	RS-232-port via adapter board
- Accuracy	0.005%
Input	
- Signal	± 2.2 … ± 11 mV; 6-wire
- Sensor supply	5 VDC, max. 15 mA
- Resolution	up to 65.000 d, 16-Bit-A/D-converter, output max. +/- 99.999 D up to 105 measurements/sec. internal
- Limit frequency	digital filter 0.1 … 5 Hz, adjustable in 8 stages
Setting	via software using ASCII-commands; gross, tare, net, filter, calibration, tara, zero-setting, resolution etc.
Power requirement	12 … 24 VDC +/-10 %, <40 mA, not electrolytically isolated
Nominal temperature range	-10°C … +40°C
Service temperature range	-10°C … +40°C
Storage temperature range	-20°C … +50°C
Temperature effect	
- Zero point	0.05% /10 K; Stromausgang 0.04% /10 K
- Measuring span	0.02% /10 K; Stromausgang 0.04% /10 K
Noise emission	acc. to EN 61326
Noise immunity	acc. to EN 61326
Protection type (acc. to EN 60529/IEC 529)	IP 40 (additional housing IP 65 upon request)
Electrical connection	Terminal block, screw terminals (adapter board)
Housing	for top hat rails acc. to DIN EN 50 022
- Material	Tin-plated metal
- Dimensions (W x H x D)	81.3 x 30.6 x 5.6 mm with adapter board 99 x 41 x 12 mm
Weight	approx. 30 g, with adapter board approx. 50 g
EMC / Certification	CE 73/23/EEC; 93/98/EEC and 89/336/EEC

Dimensional drawing





Subject of technical changes