Measuring transducers

E 400 Analog/puls transducers for e.g. energy

E 400 convert a DC-signal to a proportional pulse frequency. It is used e.g. with a power transducer for making energy pulses.

The transducers have transistor and/or relay output that can be connected to a pulse counter, energy collecting system or other measuring equipments. There are two types of transistor outputs available. Type 01 internally powered is not galvanicly separated 24 V level. Type 02 potential free via opto coupler galvanicly separated for external power.

The transducers in plastic case are mounted directly on profiled bar 35EN50022. Connection to selfopening clamps for max 6 mm^2 wires. Transducers for mounting in 19" racks can be delivered in different application types (see special leaflet). The rack modules are 8 TE wide and in a 19" rack is place for 10 modules.

The transducers are manufactured according to IEC 688.

Order facts:

Enclosed for mounting on profiled bar 35 EN 50022	*19" rack modul (wide 8 TE)*	
Typ	**Typ**	*Output*
E 400L-01	**E 400R-01**	Internally powered transistor
E 400L-02	**E 400R-02**	Externally powered transistor
E 400L-03	**E 400R-03**	Relay + internally powered transistor
E 400L-04	**E 400R-04**	Relay + externally powered transistor

Order form:

Measuring transducer E 400L-03

Input 0-20 mA

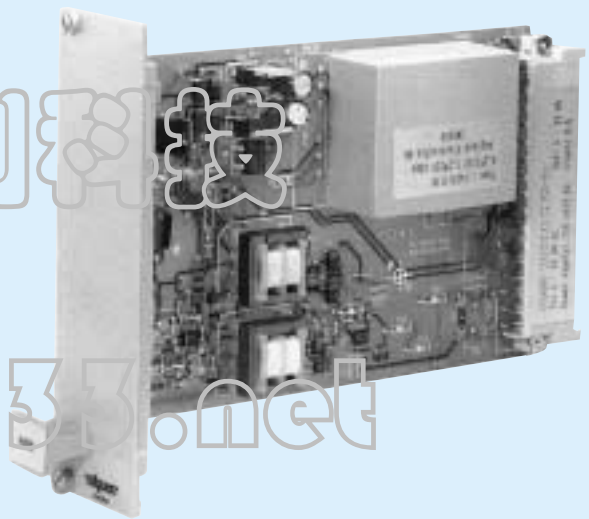
Output relay
+ internally powered transistor 0-1200 imp/h

Power supply 110 VAC

Enclosed for mounting on profiled bar 35 EN 50022

E400-FA

E400-FB



Technical data

Input

Input current	0-5, 0-10, 0-20, 4-20 mA
Load	approx. 1 V
Input voltage	0-10 V
Load	approx. 100 µA

Output

Output possibilities see table above

Pulse frequency any value between	0-10 imp/h and 0-54000 imp/h with relay max. 3600 imp/h
Pulse duration	min 100 ms
Relay type -03, -04	potential free closing contact 4 A, 250 VAC 0,4 A, 110 VDC
Transistor type -01, -03	open collector, active high internally powered not galvanicly separated voltage level 24 V max current 100 mA
Transistor type -02, -04	opto isolated open collector for external powering max 60 V, 50mA

General data

Accuracy	± 0,2%
Linearity error	< 0,1%
Temperature influence	< 0,1% / 10°C
Temperature range	–25...+60 °C operation –40...+70 °C storage
Test voltage	3,7 kV, 50 Hz, 1 min
Power supply	24, 110, 230 VAC ±15%, 47-70 Hz, ca 2 VA 24-130 VDC ± 20%, ca 2,5 W
Weight	0,4 kg

Options on request

Standards

General standards for measuring transducers EN 60688, IEC 688

EMC	emission EN 50081-2 immunity EN 50082-2 *
Safety	EN 61010-1, IEC 1010-1
Inputs	overvoltage cat III
Outputs	overvoltage cat II
Pollution degree	2

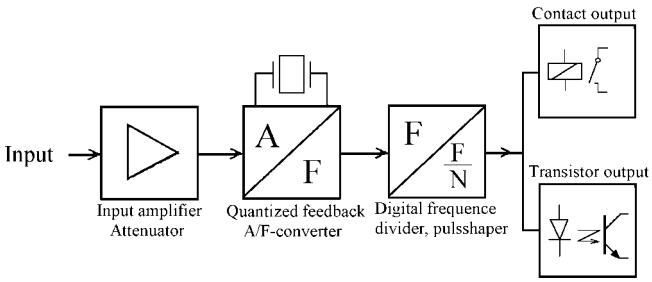
*) At certain frequences can minor deviations from class accuracy occur during the disturbance

Design

The input signal is adapted to a suitable level in the input amplifier. This signal is converted to a proportional frequency in the analog/ frequency converter. The converter is quartz stabilized and gives a very accurate value. In the frequency devider the signal is devided to a suitable frequency and is led to the output which either is a potential free relay or a transistor output.

The AC power supply comes from a transformer that gives a galvanic separation. Those parts that need separate power get it via a rectifying stage. The DC power comes from a switched unit that gives galvanic separation and covers the span from 24 to 130 VDC.

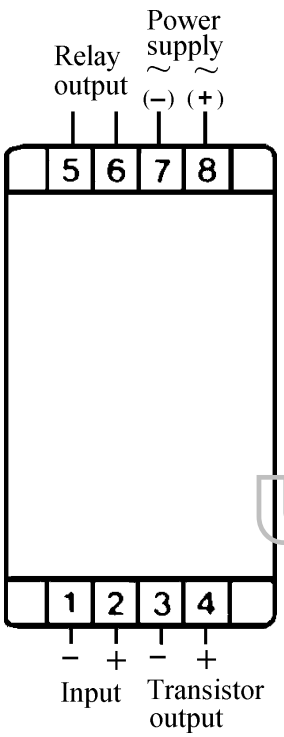
E400BE



Connecting diagrams

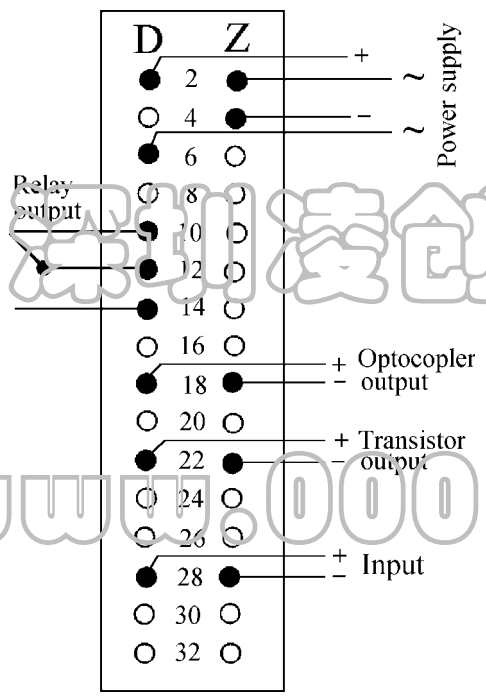
E 400L

E400LE



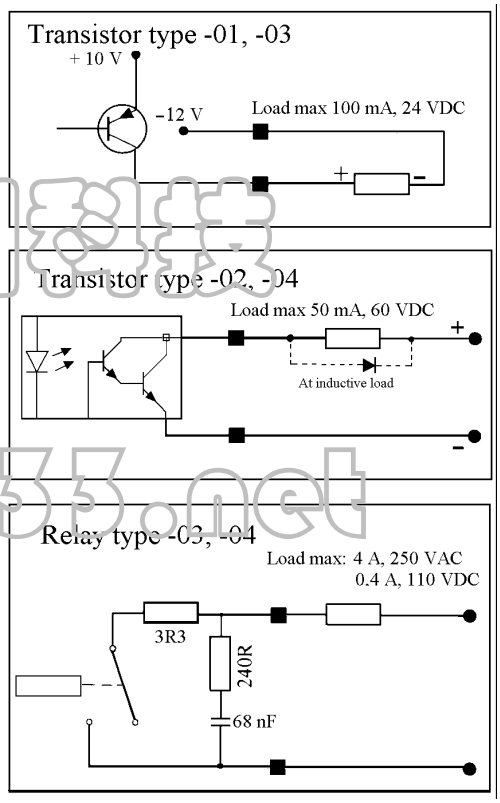
E 400R

E400RE



E 400 outputs

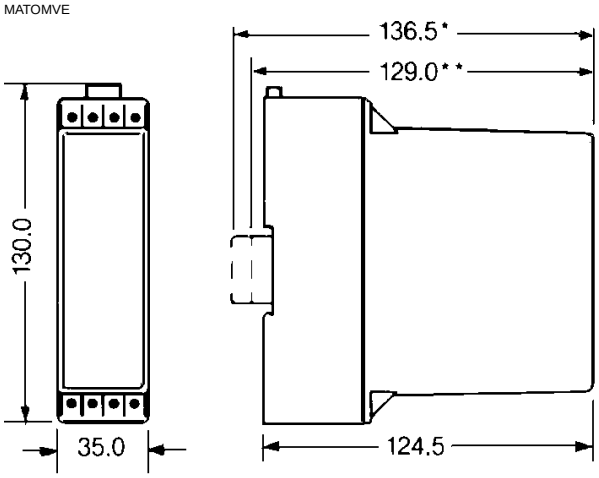
E400RKE



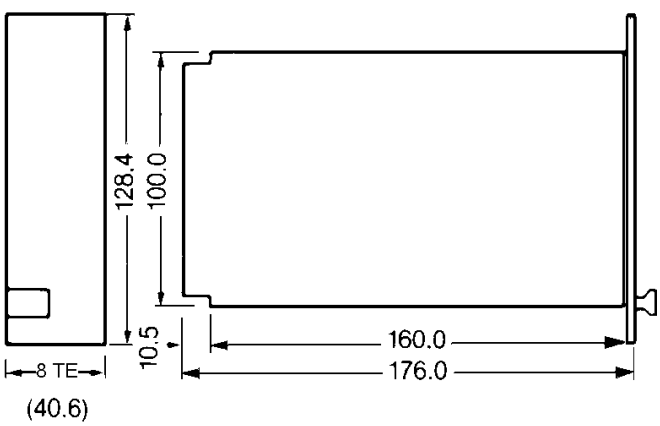
Dimensions (mm)

E 400L

MATOMVE



E 400R



*) Profile bar 35 EN 50022, hight 15 mm
**) Profile bar 35 EN 50022, hight 7,5 mm