**Features**

- 1-channel isolated barrier
- 24 V AC/DC supply voltage
- Input Pt100, 2-, 3- and 4-wire, potentiometer (up to 600 Ω), thermocouple, mA, mV
- Output 0/4 mA ... 20 mA or 0/2 V ... 10 V, 2 trip amplifiers
- Configurable via PC

**Function**

The signal converter accepts input signals from RTDs (Resistance Temperature Detector) or transmitting potentiometers from a hazardous area and converts them to an isolated analog current signal and a switch signal in the safe area.

The signal converter can be configured via PC. Via the test sockets on the front side the output signal can be tested.

The trimmers for span and zero point are used only for the first adjustment and sealed afterwards.

The intrinsically safe input is per EN 50020 safely isolated from the output and the power supply.

**Assembly**

**Connection**

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## Technical data EU137A

### Supply
- **Connection**: dz2+, dz4-, dz6 (PE)
- **Rated voltage**: 20.4 ... 30 V DC  
  20.4 ... 26.4 V AC, 48 ... 62 Hz
- **Power consumption**: < 5 VA (AC)  
  < 2.4 W (DC)

### Input
- **Connection**: dz22, dz24, dz26, dz28, dz30, dz32
- **Input voltage**: max. 10 V
- **RTD**: Pt100, Ni100
  - **Types of measuring**: 2-, 3-, 4-wire technology
  - **Measurement range**:  
    -200 ... 850 °C (-328 ... 1562 °F) (Pt100) (Default setting: 0 ... 100 °C)  
    -60 ... 250 °C (-76 ... 482 °F) (Ni100)
- **Thermocouples**: Typ B, E, J, K, L, N, R, S, T, U, Pallaplat, min. span 3 mV
- **Input current**: max. 20 mA
- **Slide-wire sensor**
  - **Types of measuring**: 2-, 3-, 4-wire technology
  - **Transmission range**: within rated sensor limits
  - **Hysteresis**: 0 ... 100 %, within rated sensor limits
  - **Compensation (reference junction CJC)**
    - intern/extern
  - **mV input**: -10 ... 80 mV min. span 3 mV

### Output
- **Connection**
  - Output I: d8, d10, d12
  - Output II: z8, z10, z12
  - Output III: dz14+, dz16-
- **Response time**: 0.42 ... 0.7 s
- **Output I, II**: relay
  - **Contact loading**: 50 V AC/DC; 30 W resistive load
- **Output III**: Analog current output (Voltage input can be activated via soldered jumper)
  - **Current range**: 0/4 ... 20 mA
  - **Voltage range**: 0/2 ... 10 V
  - **Load**: 750 Ω (mA), > 22 kΩ (V)
  - **Fault signal**: 0 mA/V, 0%, 108%, freezing measurement value, variable default value (effectless with I and U input)

### Transfer characteristics
- **Influence of temperature**: < 0.1 %/10 K
- **Influence of supply voltage**: 0.05 %
- **Linearity**: < 0.1 %

### Electrical isolation
- **Input/Output**: 1.5 kV (test voltage)
- **Input/power supply**: 1.5 kV (test voltage)
- **Output/power supply**: 1.5 kV (test voltage)

### Indicators/settings
- **Display elements**: LED POWER (power supply), one green LED
  - LED STATUS (output status), one yellow LED per channel
  - LED BURN OUT (fault signal), one red LED

### Controls
- **trimmers at the front side for**:
  - ZERO (factory adjustment zero)
  - SPAN (factory adjustment span)
  - test socket TEST - , +

### Configuration
- via RS 485 interface at the front side

### Directive conformity
- **Electromagnetic compatibility**
  - Directive 2004/108/EC
  - The device has been used for the same applications for several years. It therefore features an appropriate electromagnetic field immunity. The device must not be used in new plants.

### Conformity
- **Electrical isolation**: EN 61010
- **Protection degree**: IEC 60529

### Ambient conditions
- **Ambient temperature**: -10 ... 60 °C (14 ... 140 °F)
- **Storage temperature**: -25 ... 80 °C (-13 ... 176 °F)
- **Relative humidity**: max. 90 % non-condensing up to 35 °C (95 °F)

### Mechanical specifications
- **Protection degree**: IP20 (installed in 19" rack)
- **Connection**: plug connector acc. to DIN 41612, 32-pin, type F, rows d and z provided
- **Mass**: approx. 200 g
### Dimensions
- 22 x 143 x 193 mm (0.9 x 5.6 x 7.6 in)

### Construction type
- Eurocard 100 x 160 mm (3.9 x 6.3 in) acc. to DIN 41494, front panel 4TE, 3HE, mountable in 19" rack

### Coding
- 01/02/07 (see "Notes")

### Technical data

<table>
<thead>
<tr>
<th>Data for application in connection with Ex-areas</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EC-Type Examination Certificate</strong></td>
<td>TÜV 02 ATEX 1945 X , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a></td>
</tr>
<tr>
<td><strong>Group, category, type of protection</strong></td>
<td>II (1/2)GD [EEx ia/ib] IIC/IIB (-10 °C ≤ Tamb ≤ 60 °C)</td>
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<table>
<thead>
<tr>
<th>Input</th>
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<tbody>
<tr>
<td><strong>Voltage</strong></td>
<td>U₀</td>
</tr>
<tr>
<td><strong>Current</strong></td>
<td>I₀</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>P₀</td>
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<tr>
<td><strong>Internal capacitance</strong></td>
<td>Cᵢ</td>
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<tr>
<td><strong>Supply</strong></td>
<td></td>
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<tr>
<td><strong>Maximum safe voltage</strong></td>
<td>Uₘ</td>
</tr>
</tbody>
</table>

### Voltage
- 6 V

### Current
- 12 mA

### Power
- 47 mW (trapezoid characteristic curve)

### Internal capacitance
- 150 nF

### Supply
- 250 V eff (Attention! Uₘ is no rated voltage.)

### Electrical isolation
- Safe galvanical isolation acc. to EN50020:2002, voltage peak value 375 V

### Directive conformity

### General information
- Supplementary information EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

### Notes

### Accessories

<table>
<thead>
<tr>
<th>Type</th>
<th>Model number</th>
</tr>
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<tbody>
<tr>
<td>Programming cable</td>
<td>GHG 139 0006 C 0000</td>
</tr>
<tr>
<td>Reference junction module for mounting on female multipoint connector or clamp for EU137A</td>
<td>GHG 139 0010 C 0000</td>
</tr>
</tbody>
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