analogue signal transmitters
1-channel
IMS-AI-Di-Di/24VDC

Standard, active voltage or current signals are galvanically isolated and transmitted via the 1-channel analog data transmitter IMS-AI-Di-Di/24VDC.

The device features one input circuit 0/4…20 mA and one short-circuit protected output circuit 0/4…20 mA. Input circuit, output circuit and supply voltage are each galvanically isolated.

The input signals are transmitted 1:1 to the output.
A green LED indicates operational readiness.

Das Gerät bietet bei einer Baubreite von 6,2 mm eine galvanische Trennung bis zu 1,5 kV.

- analogue signal transmitters
- 6.2 mm width
- 1-channel analogue signal transmitter
- Input circuit 0…20mA
- Output signal 0…20mA
- 3-way galvanic isolation
- Linearity <0,1% of full scale
- Accuracy <0,1% of full scale
- Galvanic isolation of input circuits, output circuits and supply voltage
# Analogue Signal Transmitters

## 1-Channel

**IMS-AI-Di-Di/24VDC**

## Type

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>IMS-AI-Di-Di/24VDC</td>
</tr>
<tr>
<td>Ident-No.</td>
<td>7504004</td>
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## Nominal Voltage

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Operational voltage range:</td>
<td>19 ... 29 VDC</td>
</tr>
<tr>
<td>Power consumption</td>
<td>≤ 0.312 W</td>
</tr>
<tr>
<td>Residual ripple</td>
<td>≤ 5 mV &lt;sub&gt;ss&lt;/sub&gt;</td>
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</table>

## Input Circuits

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current input</td>
<td>0-20 mA</td>
</tr>
<tr>
<td>Input resistance</td>
<td>100 Ω</td>
</tr>
</tbody>
</table>

## Output Circuits

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output current</td>
<td>0...20 mA</td>
</tr>
<tr>
<td>Load resistance current output</td>
<td>≤ 0.4 kΩ</td>
</tr>
</tbody>
</table>

## Limit Frequency

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Limit frequency</td>
<td>&lt; 30 Hz</td>
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<tr>
<td>Rise time (10-90%)</td>
<td>10 ms</td>
</tr>
<tr>
<td>Dropout time (90...10%)</td>
<td>10 ms</td>
</tr>
<tr>
<td>Measuring accuracy</td>
<td>≤ 0.1 % of full scale</td>
</tr>
<tr>
<td>Linearity deviation</td>
<td>≤ 0.1 % of full scale</td>
</tr>
<tr>
<td>Temperature drift</td>
<td>≤ 0.00015 % / K</td>
</tr>
</tbody>
</table>

## Test Voltage

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test voltage</td>
<td>1.5 kV</td>
</tr>
<tr>
<td>Constant voltage supply</td>
<td>50 V</td>
</tr>
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</table>

## Indication

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational readiness</td>
<td>green</td>
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</table>

## Mechanical Data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of protection</td>
<td>IP20</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-20 ... + 60 °C</td>
</tr>
<tr>
<td>Housing length</td>
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</tr>
<tr>
<td>Housing width</td>
<td>6.2 mm</td>
</tr>
<tr>
<td>Housing height</td>
<td>90 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>59 g</td>
</tr>
<tr>
<td>Mounting instruction</td>
<td>mounting on a DIN rail</td>
</tr>
<tr>
<td>Housing material</td>
<td>polycarbonate/ABS</td>
</tr>
<tr>
<td>Electrical connection</td>
<td>screw terminals</td>
</tr>
<tr>
<td>Terminal cross-section</td>
<td>2.5 mm&lt;sup&gt;2&lt;/sup&gt;</td>
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</tbody>
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analogue signal transmitters
1-channel
IMS-AI-Di-DU/24VDC

Standard, active voltage signals are galvanically isolated, transmitted and converted to standard current signals via the 1-channel analog data transmitter IMS-AI-Di-DU/24VDC.

The device features one input circuit 0/4…20 mA and one short-circuit protected output circuit 0/2…10 V. Input circuit, output circuit and supply voltage are each galvanically isolated.

The input signals are linear converted and transmitted to the output.

A green LED indicates operational readiness.

Das Gerät bietet bei einer Baubreite von 6,2 mm eine galvanische Trennung bis zu 1,5 kV.

- analogue signal transmitters
- 6.2 mm width
- 1-channel analogue signal transmitter
- Input circuit 0…20mA
- Output signal 0…10V
- Linearity <0,1% of full scale
- Accuracy <0,1% of full scale
- Galvanic isolation of input circuits, output circuits and supply voltage
analogue signal transmitters
1-channel
IMS-AI-Di-DU/24VDC

<table>
<thead>
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<tbody>
<tr>
<td>Ident-No.</td>
<td>7504003</td>
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</table>

**Nominal voltage**
- Operational voltage range: 19 ... 29 VDC
- Power consumption: ≤ 0.312 W
- Residual ripple: ≤ 5 mVss

**Input circuits**
- Current input: 0-20 mA
- Input resistance: 100 Ω

**Output circuits**
- Output voltage: 0...10 VDC
- Load resistance current output: ≤ 0.055 kΩ

**Limit frequency**
- Limit frequency: < 30 Hz
- Rise time (10-90%) : 10 ms
- Dropout time (90...10%) : 10 ms
- Measuring accuracy: ≤ 0.1 % of full scale
- Linearity deviation: ≤ 0.1 % of full scale
- Temperature drift: ≤ 0.00015 % / K

**Test voltage**
- Test voltage: 1.5 kV
- Constant voltage supply: 50 V

**Indication**
- Operational readiness: green

**Mechanical Data**
- Degree of protection: IP20
- Ambient temperature: -20 ... + 60 °C
- Housing length: 92.5 mm
- Housing width: 6.2 mm
- Housing height: 90 mm
- Weight: 59 g
- Mounting instruction: mounting on a DIN rail
- Housing material: polycarbonate/ABS
- Electrical connection: screw terminals
- Terminal cross-section: 2.5 mm²
analogue signal transmitters
1-channel
IMS-AI-Di-Li/24VDC

Standard, active voltage signals are galvanically isolated, transmitted and converted to standard current signals via the 1-channel analog data transmitter IMS-AI-Di-Li/24VDC.

The device features one input circuit 0…20 mA and one short-circuit protected output circuit 4…20 mA. Input circuit, output circuit and supply voltage are each galvanically isolated.

The input signals are linear converted from a dead-zero signal to a life-zero signal and transmitted to the output.

A green LED indicates operational readiness.

Das Gerät bietet bei einer Baubreite von 6,2 mm eine galvanische Trennung bis zu 1,5 kV.
analogue signal transmitters
1-channel
IMS-AI-Di-Li/24VDC

<table>
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<td>Power consumption</td>
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</tr>
<tr>
<td>Residual ripple</td>
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<tr>
<td><strong>Input circuits</strong></td>
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</tr>
<tr>
<td>Current input</td>
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</tr>
<tr>
<td>Current input</td>
<td>0-20 mA</td>
</tr>
<tr>
<td>Input resistance</td>
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<tr>
<td><strong>Output circuits</strong></td>
<td></td>
</tr>
<tr>
<td>Output current</td>
<td>4...20 mA</td>
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<tr>
<td>Load resistance current output</td>
<td>≤ 0.4 kΩ</td>
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<tr>
<td><strong>Limit frequency</strong></td>
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</tr>
<tr>
<td>Rise time (10-90%)</td>
<td>10 ms</td>
</tr>
<tr>
<td>Dropout time (90...10%)</td>
<td>10 ms</td>
</tr>
<tr>
<td>Measuring accuracy</td>
<td>≤ 0.1 % of full scale</td>
</tr>
<tr>
<td>Linearity deviation</td>
<td>≤ 0.1 % of full scale</td>
</tr>
<tr>
<td>Temperature drift</td>
<td>≤ 0.00015 % / K</td>
</tr>
<tr>
<td><strong>Test voltage</strong></td>
<td></td>
</tr>
<tr>
<td>Constant voltage supply</td>
<td>50 V</td>
</tr>
<tr>
<td><strong>Indication</strong></td>
<td></td>
</tr>
<tr>
<td>Operational readiness</td>
<td>green</td>
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<tr>
<td><strong>Mechanical Data</strong></td>
<td></td>
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<td>Degree of protection</td>
<td>IP20</td>
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<tr>
<td>Ambient temperature</td>
<td>-20 ... + 60 °C</td>
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<tr>
<td>Housing width</td>
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<tr>
<td>Housing height</td>
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<td>Weight</td>
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<tr>
<td>Mounting instruction</td>
<td>mounting on a DIN rail</td>
</tr>
<tr>
<td>Housing material</td>
<td>polycarbonate/ABS</td>
</tr>
<tr>
<td>Electrical connection</td>
<td>screw terminals</td>
</tr>
<tr>
<td>Terminal cross-section</td>
<td>2.5 mm²</td>
</tr>
</tbody>
</table>
analogue signal transmitters
2-channel
IMS-AI-DLi-22-DLi/L

Standard, isolated active voltage signals are galvanically isolated and transmitted via the 2-channel analog data transmitter IMS-AI-DLi-22-DLi/L.

The device features two input circuits 0/4...20 V mA and two short-circuit protected output circuits 0/4...20mA. Input circuits and output circuits are galvanically isolated. Moreover, each input circuit and each output circuit is galvanically isolated.

The device is loop powered, transmission starts with 250 µA. Required minimum voltage 2.8 V + (20 mA x Rload).

The input signals are transmitted 1:1 to the output. The device is loop-powered. Separate power supply is not necessary.

- analogue signal transmitters
- 6.2 mm width
- 2-channel analogue signal transmitter
- Input circuit 0/4...20mA
- Output signal 0/4...20mA
- Linearity <0,1% of full scale
- Accuracy <0,1% of full scale
- Loop-powered
- Galvanic isolation between input circuits and output circuits
analogue signal transmitters
2-channel
IMS-AI-DLi-22-DLi/L

<table>
<thead>
<tr>
<th>Type</th>
<th>IMS-AI-DLi-22-DLi/L</th>
</tr>
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<tbody>
<tr>
<td>Ident-No.</td>
<td>7504011</td>
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</tbody>
</table>

**Nominal voltage**
- Type: Loop-powered
- Power consumption: ≤ 0.312 W
- Residual ripple: ≤ 5 mVss

**Input circuits**
- Voltage input: max. 29 VDC
- Current input: 0/4...20 mA
- Input resistance: 100 Ω

**Output circuits**
- Output current: 0/4...20 mA
- Load resistance current output: ≤ 0.4 kΩ

**Limit frequency**
- Rise time (10-90%): 10 ms
- Dropout time (90...10%): 10 ms
- Measuring accuracy: ≤ 0.1 % of full scale
- Linearity deviation: ≤ 0.1 % of full scale
- Temperature drift: ≤ 0.00015 % / K

**Test voltage**
- 1.5 kV
- Constant voltage supply: 50 V

**Mechanical Data**
- Degree of protection: IP20
- Ambient temperature: -20 …+ 60 °C
- Housing length: 92.5 mm
- Housing width: 6.2 mm
- Housing height: 90 mm
- Weight: 60 g
- Mounting instruction: mounting on a DIN rail
- Housing material: polycarbonate/ABS
- Electrical connection: screw terminals
- Terminal cross-section: 2.5 mm²
analogue signal transmitters
1-channel
IMS-AI-DLi-DLi/L

Standard, isolated active voltage or current signals are galvanically isolated and transmitted via the 1-channel analog data transmitter IMS-Ai-DLi-DLi/L.

The device features one input circuit 0/4…20 V mA and one short-circuit protected output circuit 0/4…20mA. Input circuit, output circuit and supply voltage are each galvanically isolated.

The device is loop powered, transmission starts with 250 µA. Required minimum voltage 2.8 V + (20 mA x Rload).

The input signals are transmitted 1:1 to the output.

The device is loop-powered. Separate power supply is not necessary.

- analogue signal transmitters
- 6.2 mm width
- 1-channel analogue signal transmitter
- Input circuit 0/4…20mA
- Output signal 0/4…20mA
- Linearity <0,1% of full scale
- Accuracy <0,1% of full scale
- Loop-powered
- Galvanic isolation between input circuits and output circuits
# Analogue Signal Transmitters

1-channel

**IMS-AI-DLi-DLi/L**

<table>
<thead>
<tr>
<th>Type</th>
<th>IMS-AI-DLi-DLi/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ident-No.</td>
<td>7504010</td>
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</tbody>
</table>

## Nominal Voltage

- Loop-powered
- Power consumption: \( \leq 0.312 \, \text{W} \)  
- Residual ripple: \( \leq 5 \, \text{mV}_{\text{ss}} \)

## Input Circuits

- **Voltage input**: max. 29 VDC
- **Current input**: 0/4…20 mA
- **Input resistance**: 100 \( \Omega \)

## Output Circuits

- **Output current**: 0/4…20 mA  
- **Load resistance current output**: \( \leq 0.4 \, \text{k}\Omega \)

## Limit Frequency

- **Rise time (10-90%)**: 10 ms
- **Dropout time (90…10%)**: 10 ms
- **Measuring accuracy**: \( \leq 0.1 \% \) of full scale
- **Linearity deviation**: \( \leq 0.1 \% \) of full scale
- **Temperature drift**: \( \leq 0.00015 \% / \text{K} \)

## Test Voltage

- **Test voltage**: 1.5 kV
- **Constant voltage supply**: 50 V

## Mechanical Data

- **Degree of protection**: IP20
- **Ambient temperature**: \(-20 \ldots + 60 \, ^\circ\text{C}\)
- **Housing length**: 92.5 mm
- **Housing width**: 6.2 mm
- **Housing height**: 90 mm
- **Weight**: 57 g
- **Mounting instruction**: mounting on a DIN rail
- **Housing material**: polycarbonate/ABS
- **Electrical connection**: screw terminals
- **Terminal cross-section**: 2.5 mm²
analogue signal transmitters
1-channel
IMS-AI-DU-Di/24VDC

Standard, active voltage signals are galvani-
cally isolated, transmitted and converted to
standard current signals via the 1-channel
analog data transmitter IMS-AI-DU-Di/
24VDC.

The device features one input circuit 0/
2…10 V mA and one short-circuit protected
output circuit 0/4…20mA. Input circuit,
output circuit and supply voltage are each
galvanically isolated.

The input signals are linear converted and
transmitted to the output.

A green LED indicates operational readi-
ness.

Das Gerät bietet bei einer Baubreite von 6,2
mm eine galvanische Trennung bis zu 1,5
kV.

● analogue signal transmitters
● 6.2 mm width
● 1-channel analogue signal transmit-
ter
● Input circuit 4…10V
● Output signal 0…20mA
● Linearity <0,1% of full scale
● Accuracy <0,1% of full scale
● Galvanic isolation of input circuits,
output circuits and supply voltage
analogue signal transmitters
1-channel
IMS-AI-DU-Di/24VDC

<table>
<thead>
<tr>
<th>Type</th>
<th>IMS-AI-DU-Di/24VDC</th>
</tr>
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<tbody>
<tr>
<td>Ident-No.</td>
<td>7504001</td>
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</tbody>
</table>

Nominal voltage
- Operational voltage range: 19 ... 29 VDC
- Power consumption: ≤ 0.312 W
- Residual ripple: ≤ 5 mVss

Input circuits
- Voltage input
  - Voltage: 0...10 VDC
  - Input resistance: 330 kΩ

Output circuits
- Output current: 0...20 mA
- Load resistance current output: ≤ 0.4 kΩ

Limit frequency
- Rise time (10-90%): 10 ms
- Dropout time (90...10%): 10 ms
- Measuring accuracy: ≤ 0.1 % of full scale
- Linearity deviation: ≤ 0.1 % of full scale
- Temperature drift: ≤ 0.00015 % / K

Test voltage
- 1.5 kV
- Constant voltage supply: 50 V

Indication
- Operational readiness: green

Mechanical Data
- Degree of protection: IP20
- Ambient temperature: -20 ... + 60 °C
- Housing length: 92.5 mm
- Housing width: 6.2 mm
- Housing height: 90 mm
- Weight: 60 g
- Mounting instruction: mounting on a DIN rail
- Housing material: polycarbonate/ABS
- Electrical connection: screw terminals
- Terminal cross-section: 2.5 mm²

Dimensions
analogue signal transmitters
1-channel
IMS-AI-DU-DU/24VDC

Standard, isolated active voltage signals are transmitted via the 1-channel analog data transmitter IMS-AI-DU-DU/24VDC.

The device features one input circuit 0/2…10 V and one short-circuit protected output circuit 0/2…10 V. Input circuit, output circuit and supply voltage are each galvanically isolated.

The input signals are transmitted 1:1 to the output.

A green LED indicates operational readiness.

Das Gerät bietet bei einer Baubreite von 6,2 mm eine galvanische Trennung bis zu 1,5 kV.

- analogue signal transmitters
- 6.2 mm width
- 1-channel analogue signal transmitter
- Input circuit 0…10V
- Output signal 0…10V
- Linearity <0.1% of full scale
- Accuracy <0.1% of full scale
- Galvanic isolation of input circuits, output circuits and supply voltage
### analogue signal transmitters

1-channel

**IMS-AI-DU-DU/24VDC**

<table>
<thead>
<tr>
<th>Type</th>
<th>IMS-AI-DU-DU/24VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ident-No.</td>
<td>7504000</td>
</tr>
</tbody>
</table>

#### Nominal voltage
- Operational voltage range: 19 ... 29 VDC
- Power consumption: $\leq 0.312 \, \text{W}$
- Residual ripple: $\leq 5 \, \text{mV}_{\text{ss}}$

#### Input circuits
- Voltage input
  - Voltage: 0...10 VDC
  - Input resistance: 330 kΩ

#### Output circuits
- Output voltage: 0...10 VDC
- Load resistance current output: $\leq 0.055 \, \text{kΩ}$

#### Limit frequency
- Rise time (10-90%): 10 ms
- Dropout time (90...10%): 10 ms
- Measuring accuracy: $\leq 0.1 \, \% \text{ of full scale}$
- Linearity deviation: $\leq 0.1 \, \% \text{ of full scale}$
- Temperature drift: $\leq 0.00015 \, \% / \, \text{K}$

#### Test voltage
- 1.5 kV
- Constant voltage supply: 50 V

#### Indication
- Operational readiness: green

#### Mechanical Data
- Degree of protection: IP20
- Ambient temperature: -20 ... + 60 °C
- Housing length: 92.5 mm
- Housing width: 6.2 mm
- Housing height: 90 mm
- Weight: 60 g
- Mounting instruction: mounting on a DIN rail
- Housing material: polycarbonate/ABS
- Electrical connection: screw terminals
- Terminal cross-section: 2.5 mm²
analogue signal transmitters
1-channel
IMS-AI-DU-Li/24VDC

Standard, active voltage signals are galvanically isolated, transmitted and converted to standard current signals via the 1-channel analog data transmitter IMS-AI-DU-Li/24VDC.

The input signals are linear converted from a dead-zero signal to a life-zero signal and transmitted to the output.

A green LED indicates operational readiness.

Das Gerät bietet bei einer Baubreite von 6,2 mm eine galvanische Trennung bis zu 1,5 kV.

- analogue signal transmitters
- 6.2 mm width
- 1-channel analogue signal transmitter
- Input circuit 0...10V
- Output signal 4...20mA
- Linearity <0,1% of full scale
- Accuracy <0,1% of full scale
- Galvanic isolation of input circuits, output circuits and supply voltage
analogue signal transmitters
1-channel
IMS-AI-DU-Li/24VDC

<table>
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<tr>
<td>Power consumption</td>
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<tr>
<td>Residual ripple</td>
<td>≤ 5 mVss</td>
</tr>
<tr>
<td>Input circuits</td>
<td></td>
</tr>
<tr>
<td>Voltage input</td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>0...10 VDC</td>
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<tr>
<td>Input resistance</td>
<td>330 kΩ</td>
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<tr>
<td>Output circuits</td>
<td></td>
</tr>
<tr>
<td>Output current</td>
<td>4...20 mA</td>
</tr>
<tr>
<td>Load resistance current output</td>
<td>≤ 0.4 kΩ</td>
</tr>
<tr>
<td>Limit frequency</td>
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</tr>
<tr>
<td>Rise time (10-90%)</td>
<td>10 ms</td>
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<tr>
<td>Dropout time (90...10%)</td>
<td>10 ms</td>
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<tr>
<td>Measuring accuracy</td>
<td>≤ 0.1 % of full scale</td>
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<tr>
<td>Linearity deviation</td>
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<tr>
<td>Temperature drift</td>
<td>≤ 0.00015 % / K</td>
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<tr>
<td>Test voltage</td>
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<td>Constant voltage supply</td>
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<td>Indication</td>
<td>Operational readiness green</td>
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<tr>
<td>Mounting instruction</td>
<td>mounting on a DIN rail</td>
</tr>
<tr>
<td>Housing material</td>
<td>polycarbonate/ABS</td>
</tr>
<tr>
<td>Electrical connection</td>
<td>screw terminals</td>
</tr>
<tr>
<td>Terminal cross-section</td>
<td>2.5 mm²</td>
</tr>
</tbody>
</table>

Dimensions

- Dimensions

- Illustration
analogue signal transmitters
1-channel
IMS-AI-Li-Di/24VDC

Standard, active voltage signals are galvani-
cally isolated, transmitted and converted to
standard current signals via the 1-channel
analog data transmitter IMS-AI-Li-Di/
24VDC.

The device features one input circuit 0…20 mA and one short-circuit protected output
circuit 4…20 mA. Input circuit, output circuit
and supply voltage are each galvanically
isolated.

The input signals are linear converted from
a dead-zero signal to a life-zero signal and
transmitted to the output.

A green LED indicates operational readi-
ness.

Das Gerät bietet bei einer Baubreite von 6,2
mm eine galvanische Trennung bis zu 1,5
kV.

- analogue signal transmitters
- 6.2 mm width
- 1-channel analogue signal transmit-
ter
- Input circuit 0…20mA
- Output signal 4…20mA
- Linearity <0,1% of full scale
- Accuracy <0,1% of full scale
- Galvanic isolation of input circuits, output
circuits and supply voltage
analogue signal transmitters
1-channel
IMS-AI-Li-Di/24VDC

<table>
<thead>
<tr>
<th>Type</th>
<th>IMS-AI-Li-Di/24VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ident-No.</td>
<td>7504007</td>
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</tbody>
</table>

**Nominal voltage**
- Operational voltage range: 19 ... 29 VDC
- Power consumption: \( \leq 0.312 \text{ W} \)
- Residual ripple: \( \leq 5 \text{ mV}_{ss} \)

**Input circuits**
- Current input
  - Current input: 4-20 mA
  - Input resistance: 100 Ω

**Output circuits**
- Output current: 0...20 mA
- Load resistance current output: \( \leq 0.4 \text{ kΩ} \)

**Limit frequency**
- Rise time (10-90%): 10 ms
- Dropout time (90...10%): 10 ms
- Measuring accuracy: \( \leq 0.1 \text{ % of full scale} \)
- Linearity deviation: \( \leq 0.1 \text{ % of full scale} \)
- Temperature drift: \( \leq 0.00015 \text{ % / K} \)

**Test voltage**
- Test voltage: 1.5 kV
- Constant voltage supply: 50 V

**Indication**
- Operational readiness: green

**Mechanical Data**
- Degree of protection: IP20
- Ambient temperature: -20 ...+ 60 °C
- Housing length: 92.5 mm
- Housing width: 6.2 mm
- Housing height: 90 mm
- Weight: 60 g
- Mounting instruction: mounting on a DIN rail
- Housing material: polycarbonate/ABS
- Electrical connection: screw terminals
- Terminal cross-section: 2.5 mm²

**Dimensions**
- Dimensions: MT57/MT48/MT57/MT50/MT44/MT53/MT54/MT44/MT50
analogue signal transmitters
1-channel
IMS-AI-Li-DU/24VDC

Standard, active current signals are galvanically isolated, transmitted and converted to standard voltage signals via the 1-channel analog data transmitter IMS-AI-LI-DI/24VDC.

The device features one input circuit 4…20 mA and one short-circuit protected output circuit 0…10 V. Input circuit, output circuit and supply voltage are each galvanically isolated.

The input signals are linear converted from a dead-zero signal to a life-zero signal and transmitted to the output.

A green LED indicates operational readiness.

Das Gerät bietet bei einer Baubreite von 6,2 mm eine galvanische Trennung bis zu 1,5 kV.

- analogue signal transmitters
- 6.2 mm width
- 1-channel analogue signal transmitter
- Input circuit 0…20mA
- Output signal 4…10V
- Linearity <0,1% of full scale
- Accuracy <0,1% of full scale
- Galvanic isolation of input circuits, output circuits and supply voltage
analogue signal transmitters
1-channel
IMS-AI-Li-DU/24VDC

<table>
<thead>
<tr>
<th>Type</th>
<th>IMS-AI-Li-DU/24VDC</th>
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<tbody>
<tr>
<td>Ident-No.</td>
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<tr>
<td>Nominal voltage</td>
<td>24 VDC</td>
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<tr>
<td>Operational voltage range:</td>
<td>19 ... 29 VDC</td>
</tr>
<tr>
<td>Power consumption</td>
<td>≤ 0.312 W</td>
</tr>
<tr>
<td>Residual ripple</td>
<td>≤ 5 mVss</td>
</tr>
<tr>
<td>Input circuits</td>
<td></td>
</tr>
<tr>
<td>Current input</td>
<td></td>
</tr>
<tr>
<td>Current input</td>
<td>4-20 mA</td>
</tr>
<tr>
<td>Input resistance</td>
<td>100 Ω</td>
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<tr>
<td>Output circuits</td>
<td></td>
</tr>
<tr>
<td>Output voltage</td>
<td>0...10 VDC</td>
</tr>
<tr>
<td>Load resistance current output</td>
<td>≤ 0.055 kΩ</td>
</tr>
<tr>
<td>Limit frequency</td>
<td>&lt; 30 Hz</td>
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<tr>
<td>Rise time (10-90%)</td>
<td>10 ms</td>
</tr>
<tr>
<td>Dropout time (90...10%)</td>
<td>10 ms</td>
</tr>
<tr>
<td>Measuring accuracy</td>
<td>≤ 0.1 % of full scale</td>
</tr>
<tr>
<td>Linearity deviation</td>
<td>≤ 0.1 % of full scale</td>
</tr>
<tr>
<td>Temperature drift</td>
<td>≤ 0.00015 % / K</td>
</tr>
<tr>
<td>Test voltage</td>
<td>1.5 kV</td>
</tr>
<tr>
<td>Constant voltage supply</td>
<td>50 V</td>
</tr>
<tr>
<td>Indication</td>
<td></td>
</tr>
<tr>
<td>Operational readiness</td>
<td>green</td>
</tr>
<tr>
<td>Mechanical Data</td>
<td></td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP20</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-20 ... + 60 °C</td>
</tr>
<tr>
<td>Housing length</td>
<td>92.5 mm</td>
</tr>
<tr>
<td>Housing width</td>
<td>6.2 mm</td>
</tr>
<tr>
<td>Housing height</td>
<td>90 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>60 g</td>
</tr>
<tr>
<td>Mounting instruction</td>
<td>mounting on a DIN rail</td>
</tr>
<tr>
<td>Housing material</td>
<td>polycarbonate/ABS</td>
</tr>
<tr>
<td>Electrical connection</td>
<td>screw terminals</td>
</tr>
<tr>
<td>Terminal cross-section</td>
<td>2.5 mm²</td>
</tr>
</tbody>
</table>
analogue signal transmitters
1-channel
IMS-AI-Li-Li/24VDC

Standard, active voltage signals are galvani-
cally isolated, transmitted and converted to
standard current signals via the 1-channel
analog data transmitter IMS-AI-LI-DI/
24VDC.

The device features one input circuit 4…20 mA and one short-circuit protected output
circuit 4…20 mA. Input circuit, output circuit
and supply voltage are each galvanically
isolated.

The input signals are transmitted 1:1 to the
output.

A green LED indicates operational readi-
ness.

Das Gerät bietet bei einer Baubreite von 6,2
mm eine galvanische Trennung bis zu 1,5
kV.

● analogue signal transmitters
● 6.2 mm width
● 1-channel analogue signal transmit-
ter
● Input circuit 4…20mA
● Output signal 4…20mA
● Linearity <0,1% of full scale
● Accuracy <0,1% of full scale
● Galvanic isolation of input circuits, output circuits and supply voltage
analogue signal transmitters
1-channel
IMS-AI-Li-Li/24VDC

<table>
<thead>
<tr>
<th>Type</th>
<th>IMS-AI-Li-Li/24VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ident-No.</td>
<td>7504008</td>
</tr>
</tbody>
</table>

**Nominal voltage**
- Operational voltage range: 19 ... 29 VDC
- Power consumption: ≤ 0.312 W
- Residual ripple: ≤ 5 mVss

**Input circuits**
- Current input: 4-20 mA
- Input resistance: 100 Ω

**Output circuits**
- Output current: 4...20 mA
- Load resistance current output: ≤ 0.4 kΩ

**Limit frequency**
- Rise time (10-90%): 10 ms
- Dropout time (90...10%): 10 ms
- Measuring accuracy: ≤ 0.1 % of full scale
- Linearity deviation: ≤ 0.1 % of full scale
- Temperature drift: ≤ 0.00015 % / K

**Test voltage**
- Constant voltage supply: 50 V

**Indication**
- Operational readiness: green

**Mechanical Data**
- Degree of protection: IP20
- Ambient temperature: -20 ... + 60 °C
- Housing length: 92.5 mm
- Housing width: 6.2 mm
- Housing height: 90 mm
- Weight: 58 g
- Mounting instruction: mounting on a DIN rail
- Housing material: polycarbonate/ABS
- Electrical connection: screw terminals
- Terminal cross-section: 2.5 mm²
The 1-channel temperature measuring amplifier IMS-TI-PT100/24V is designed to evaluate the temperature-dependent variations of Pt100 resistance temperature detectors, to isolate them galvanically and to output them as temperature-linear voltage or current signals of 0…10 V, 0…20 mA or 4…20 mA.

Connection mode and measuring range are adjusted via DIP switches.

Resistance thermo detectors Ni100/Pt100 in 2, 3 or 4-wire-technology can be operated alternatively at the input circuit of the measuring amplifier. The settings are adjusted via a DIP switch. The output signal type is also selected via DIP switch.

Wire-break and short-circuit are detected. In the event of error 12 V or 22 mA are provided at the output and the error is additionally signalled by the flashing power LED.

The measuring range is adjusted with two switches. The following three measuring ranges are available for the standard device:
- -50 ... +150 °C
- 0 ... +100 °C
- 0 ... +200 °C

TURCK offers the IM34 series for other measuring ranges and temperature sensors.

- 6.2 mm width
- 1-channel temperature measuring amplifier
- Temperature probe PT100
- Output signal 0/4...20mA
- Output signal 0...10V
- 3-way galvanic isolation
- Linearity <0.1% of full scale
- Accuracy <0.1% of full scale
- Galvanic isolation of input circuits, output circuits and supply voltage
# Temperature Measuring Amplifier

## 1-Channel

**IMS-TI-PT100/24VDC**

<table>
<thead>
<tr>
<th><strong>Type</strong></th>
<th>IMS-TI-PT100/24VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ident-No.</strong></td>
<td>7504012</td>
</tr>
</tbody>
</table>

### Nominal Voltage
- **Operational voltage range:** 19 ... 29 VDC
- **Power consumption:** ≤ 3.2 W
- **Residual ripple:** ≤ 5 mV

### Input Circuits
- **Pt100:** -50...150°C; 0...100°C; 0...200°C
- **Input resistance:** 1000 kΩ

### Output Circuits
- **Output current:** 0/4...20 mA
- **Output voltage:** 0...10 VDC
- **Load resistance voltage output:** ≥ 0.055 kΩ
- **Load resistance current output:** ≤ 0.4 kΩ

### Limit Frequency
- **Rise time (10-90%)** | 30 ms
- **Dropout time (90...10%)**: 30 ms
- **Measuring accuracy**: ≤ 0.1 % of full scale
- **Linearity deviation**: ≤ 0.1 % of full scale
- **Temperature drift**: ≤ 0.00015 % / K

### Test Voltage
- **1.5 kV**
- **Constant voltage supply**: 50 V

### Indication
- **Operational readiness**: green

### Mechanical Data
- **Degree of protection**: IP20
- **Ambient temperature**: -20 ... + 60 °C
- **Housing length**: 92.5 mm
- **Housing width**: 6.2 mm
- **Housing height**: 90 mm
- **Weight**: 60 g
- **Mounting instruction**: mounting on a DIN rail
- **Housing material**: polycarbonate/ABS
- **Electrical connection**: screw terminals
- **Terminal cross-section**: 2.5 mm²
The 1-channel temperature measuring amplifier IMS-TI-J/24V is designed to evaluate the temperature-dependent variations of thermoelements type J, to isolate them galvanically and to output them as temperature-linear voltage or current signals of 0...10 V, 0...20 mA or 4...20 mA.

The measuring range is adjusted via lateral DIP switches.

Thermoelements type J can be operated at the input circuit of the temperature measuring amplifier.

Wire-break is detected. In the event of error 12 V or 22 mA are provided at the output and the error is additionally signalled by the flashing power LED.

The measuring range is adjusted with two switches. The following three measuring ranges are available for the standard device:
- -50 ... +200 °C
- 0 ... +400 °C
- 0 ... +600 °C

TURCK offers the IM34 series for other measuring ranges and temperature sensors.

- 6.2 mm width
- 1-channel temperature measuring amplifier
- Thermoelement type J
- Output signal 0/4...20mA
- Output signal 0...10V
- Linearity <0.1% of full scale
- Accuracy <0.1% of full scale
- Galvanic isolation of input circuits, output circuits and supply voltage
## Temperature Measuring Amplifier
### IMS-TI-J/24V

<table>
<thead>
<tr>
<th><strong>Type</strong></th>
<th>IMS-TI-J/24V</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ident-No.</strong></td>
<td>7504014</td>
</tr>
</tbody>
</table>

**Nominal Voltage**
- Operational voltage range: 19...29 VDC
- Power consumption: ≤ 3.2 W
- Residual ripple: ≤ 5 mV

**Input Circuits**
- Thermocouples: -50...200°C; 0...400°C; 0...600°C

**Output Circuits**
- Output current: 0/4...20 mA
- Output voltage: 0...10 VDC
- Load resistance voltage output: ≥ 0.055 kΩ
- Load resistance current output: ≤ 0.4 kΩ

**Limit Frequency**
- Rise time (10-90%): 30 ms
- Dropout time (90...10%): 30 ms
- Measuring accuracy: ≤ 0.1 % of full scale
- Linearity deviation: ≤ 0.1 % of full scale
- Temperature drift: ≤ 0.00015 % / K

**Test Voltage**
- 1.5 kV
- Constant voltage supply: 50 V

**Indication**
- Operational readiness: green

**Mechanical Data**
- Degree of protection: IP20
- Ambient temperature: -20...+60 °C
- Housing length: 92.5 mm
- Housing width: 6.2 mm
- Housing height: 90 mm
- Weight: 60 g
- Mounting instruction: mounting on a DIN rail
- Housing material: polycarbonate/ABS
- Electrical connection: screw terminals
- Terminal cross-section: 2.5 mm²

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**Dimensions**

![Diagram](image-url)
temperature measuring amplifier
1-channel
IMS-TI-K/24V

The 1-channel temperature measuring amplifier IMS-TI-K/24VDC is designed to evaluate the temperature-dependent variations of thermoelements type K, to isolate them galvanically and to output them as temperature-linear voltage or current signals of 0…10 V, 0…20 mA or 4…20 mA.

The measuring range is adjusted via DIP switches.

Thermoelements type K can be operated at the input circuit of the temperature measuring amplifier.

Wire-break is detected. In the event of error 12 V or 22 mA are provided at the output and the error is additionally signalled by the flashing power LED.

The measuring range is adjusted with two switches. The following three measuring ranges are available for the standard device:
- -50 … +200 °C
- 0 … +400 °C
- 0 … +600 °C

TURCK offers the IM34 series for other measuring ranges and temperature sensors.

- 6.2 mm width
- 1-channel temperature measuring amplifier
- Thermoelement type K
- Output signal 0/4…20mA
- Output signal 0…10V
- Linearity <0,1% of full scale
- Accuracy <0,1% of full scale
- Galvanic isolation of input circuits, output circuits and supply voltage
## Interface Modul

**temperature measuring amplifier**

**1-channel**

**IMS-TI-K/24V**

<table>
<thead>
<tr>
<th>Type</th>
<th>IMS-TI-K/24V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ident-No.</td>
<td>7504015</td>
</tr>
</tbody>
</table>

### Nominal voltage

- Voltage range: 24 VDC
- Operational voltage range: 19 ... 29 VDC
- Power consumption: \( \leq 3.2 \text{W} \)
- Residual ripple: \( \leq 5 \text{mV}_{\text{pp}} \)

### Input circuits

- Thermoelements: -50...200°C; 0...400°C; 0...600°C

### Output circuits

- Output current: 0/4...20 mA
- Output voltage: 0...10 VDC
- Load resistance voltage output: \( \geq 0.055 \text{k} \Omega \)
- Load resistance current output: \( \leq 0.4 \text{k} \Omega \)

### Limit frequency

- Rise time (10-90%): 30 ms
- Dropout time (90...10%): 30 ms
- Measuring accuracy: \( \leq 0.1 \%\) of full scale
- Linearity deviation: \( \leq 0.1 \%\) of full scale
- Temperature drift: \( \leq 0.00015 \% / \text{K} \)

### Test voltage

- Test voltage: 1.5 kV
- Constant voltage supply: 50 V

### Indication

- Operational readiness: green

### Mechanical Data

- Degree of protection: IP20
- Ambient temperature: -20 ... + 60 °C
- Housing length: 92.5 mm
- Housing width: 6.2 mm
- Housing height: 90 mm
- Weight: 60 g
- Mounting instruction: mounting on a DIN rail
- Housing material: polycarbonate/ABS
- Electrical connection: screw terminals
- Terminal cross-section: 2.5 mm²

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analogue signal transmitters
1-channel
IMS-AI-UNI/24VDC

Standard, active voltage or current signals are galvanically isolated, transmitted and converted to other signal types via the 1-channel universal analog data transmitter IMS-AI-UNI/24VDC.

The device is equipped with a variable input circuit of 0/4...20 V or 0/2...10 mA and a variable short-circuit protected output circuit of 0/4...20 mA or 0/2...10 V. Input circuit, output circuit and supply voltage are each galvanically isolated.

Input and output signal types can be selected via a lateral DIP switch matrix. According to the setting, the input signals are transmitted to the output.

A green LED indicates operational readiness.

Das Gerät bietet bei einer Baubreite von 6,2 mm eine galvanische Trennung bis zu 1,5 kV.

Input and output signal types can be selected via a lateral DIP switch matrix. According to the setting, the input signals are transmitted to the output.

A green LED indicates operational readiness.

Das Gerät bietet bei einer Baubreite von 6,2 mm eine galvanische Trennung bis zu 1,5 kV.

- analogue signal transmitters
- 6.2 mm width
- 1-channel analogue signal transmitter, adjustable
- Input circuit 0/4...20mA
- Input circuit 0...10V
- Output signal 0/4...20mA
- Output signal 0...10V
- Linearity <0,1% of full scale
- Accuracy <0,1% of full scale
- Galvanic isolation of input circuits, output circuits and supply voltage
analogue signal transmitters
1-channel
IMS-AI-UNI/24VDC

<table>
<thead>
<tr>
<th>Type</th>
<th>IMS-AI-UNI/24VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ident-No.</td>
<td>7504009</td>
</tr>
</tbody>
</table>

**Nominal voltage**
- Operational voltage range: 19 ... 29 VDC
- Power consumption: ≤ 0.312 W
- Residual ripple: ≤ 5 mVss

**Input circuits**
- Voltage input
  - Voltage: 0/2...10 VDC
  - Input resistance: 330 kΩ
- Current input
  - Current input: 0/4...20 mA
  - Input resistance: 100 Ω

**Output circuits**
- Output current: 0/4...20 mA
- Output voltage: 0/2...10 VDC
- Load resistance voltage output: ≥ 0.055 kΩ
- Load resistance current output: ≤ 0.4 kΩ

**Limit frequency**
- Rise time (10-90%): 10 ms
- Dropout time (90...10%): 10 ms
- Measuring accuracy: ≤ 0.1 % of full scale
- Linearity deviation: ≤ 0.1 % of full scale
- Temperature drift: ≤ 0.00015 % / K

**Test voltage**
- 1.5 kV
- Constant voltage supply: 50 V

**Indication**
- Operational readiness: green

**Mechanical Data**
- Degree of protection: IP20
- Ambient temperature: -20 ...+ 60 °C
- Housing length: 92.5 mm
- Housing width: 6.2 mm
- Housing height: 90 mm
- Weight: 60 g
- Mounting instruction: mounting on a DIN rail
- Housing material: polycarbonate/ABS
- Electrical connection: screw terminals
- Terminal cross-section: 2.5 mm²