

WAVESERIES WAS5 OLP

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Do not use product for new
developments



When used for industrial monitoring applications, sensors can record ambience conditions. Sensor signals are used within the process to continually track changes to the area being monitored. Both digital and analogue signals can occur.

Normally an electrical voltage or current value is produced which corresponds proportionally to the physical variables that are being monitored. Analogue signal processing is required when automation processes have to constantly maintain or reach defined conditions. This is particularly significant for process automation applications. Standardised electrical signals are typically used for process engineering. Analogue standardised currents / voltage 0(4)...20 mA/ 0...10 V have established themselves as physical measurement and control variables.

Weidmüller meets the ever increasing challenges of automation and offers a product portfolio tailored to the requirements of handling sensor signals in analogue signal processing

The analogue signal processing products can be used universally in combination with other Weidmüller products and in combination among each other. Their

electrical and mechanical design is such that they require only minimal wiring efforts.

Housing types and wire-connection methods matched to the respective application facilitate the universal use in process and industrial automation applications.

The product line includes the following functions:

- Isolating transformers, supply isolators and signal converters for DC standard signals
- Temperature measuring transducers for resistance thermometers and thermocouples,

General ordering data

- frequency converters,
- potentiometer-measuring transducers,
- bridge measuring transducers (strain gauges)
- trip amplifiers and modules for monitoring electrical and non-electrical process variables
- AO/DA converters
- displays
- calibration devices

The products mentioned are available as pure signal converters / isolation transducers, 2-way/3-way isolators, supply isolators, passive isolators or as trip amplifiers.

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Technical data
Dimensions and weights

| | | | |
|------------|----------|-----------------|------------|
| Length | 92.4 mm | Length (inches) | 3.638 inch |
| Width | 17.5 mm | Width (inches) | 0.689 inch |
| Depth | 112.4 mm | Depth (inches) | 4.425 inch |
| Net weight | 87.4 g | | |

Temperatures

| | | | |
|-----------------------------|--------------|-----------------------------|----------------|
| Operating temperature, max. | 55 °C | Operating temperature, min. | 0 °C |
| Storage temperature, max. | 85 °C | Storage temperature, min. | -20 °C |
| Operating temperature | 0 °C...55 °C | Storage temperature | -20 °C...85 °C |

Probability of failure

| | |
|------|-----------|
| MTTF | 366 Jahre |
|------|-----------|

Input

| | | | |
|---------------------------|-----------------------------------|---------------|---------------------|
| Number of inputs | 1 | Input voltage | 0...(5)10 V |
| Input resistance, voltage | 0...5 V: 210 kΩ; 0...10 V: 430 kΩ | Input current | 0...20 mA, 4...20mA |
| Input resistance, current | 51 Ω | | |

Output

| | | | |
|------------------------|--|---------------------------|--------------------------|
| Number of outputs | 1 | Output signal limit | Approx. 31 mA |
| Output current | 4...20 mA (current loop) | Cut-off frequency (-3 dB) | 10 Hz/ 100 Hz switchable |
| load impedance current | $R_L = (U_B - 12 \text{ V}) / 20 \text{ mA}$ z.B. 600 Ω at 24 V | Status indicator | Green LED |

General data

| | | | |
|--------------------|---|-------------------------|--|
| Accuracy | 0.2% of measuring range final value | Configuration | DIP switch |
| Galvanic isolation | Passive isolator | Input/Output | 0(4)...20 mA, 0...(5)10 V / 4...20 mA (current loop) |
| Mounting rail | TS 35 | Step response time | < 10 Hz: 80 ms; 100 Hz: 50 ms |
| Supply voltage | min. 12 V DC/ max. 30 V DC, Loop powered, via 4...20 mA input | Temperature coefficient | ≤ 150 ppm/K |

Insulation coordination

| | | | |
|--------------------------------|---------------------------|---|------------------------------|
| Clearance & creepage distances | ≥ 5.5 mm | EMC standards | EN 55011, EN 61000-6 |
| Galvanic isolation | Passive isolator | Impulse withstand voltage | 4 kV |
| Insulation voltage | 4 kV _{eff} / 5 s | Insulation voltage input or output/rail | 4 kV _{eff} / 1 min. |
| Pollution severity | 2 | Rated voltage | 300 V |
| Surge voltage category | III | | |

Connection data

| | | | |
|----------------------------------|---------------------|------------------------------------|---------------------|
| Type of connection | Screw connection | Stripping length, rated connection | 7 mm |
| Tightening torque, min. | 0.4 Nm | Tightening torque, max. | 0.5 Nm |
| Clamping range, rated connection | 2.5 mm ² | Clamping range, min. | 0.5 mm ² |
| Clamping range, max. | 2.5 mm ² | | |

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Technical data**Classifications**

| | | | |
|------------|-------------|------------|-------------|
| ETIM 4.0 | EC002653 | ETIM 5.0 | EC002653 |
| ETIM 6.0 | EC002653 | UNSPSC | 31-12-10-07 |
| eClass 5.1 | 27-21-01-20 | eClass 6.2 | 27-21-01-20 |
| eClass 7.1 | 27-21-01-20 | eClass 8.1 | 27-21-01-20 |
| eClass 9.0 | 27-21-01-20 | eClass 9.1 | 27-21-01-20 |

Product information

| | |
|------------------------------|---|
| Product information | This product will soon be replaced by a new product. Please do not use with new systems. Please contact our technical support. |
| Descriptive text accessories | Markers – refer to Accessories. |

Approvals

Approvals



| | |
|------|---------|
| ROHS | Conform |
|------|---------|

Downloads

| | |
|---|---|
| Approval/Certificate/Document of Conformity | Declaration of Conformity |
| Brochure/Catalogue | CAT 4.1 ELECTR 16/17 EN |
| Engineering Data | EPLAN, WSCAD |
| User Documentation | Instruction sheet |

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Drawings

Connection diagram

