

Data Sheet | Item Number: 857-450

Loop-powered isolation amplifier; Bipolar current and voltage input signal; Current output signal; Configuration via DIP switch; Power supply via output; 6 mm module width; 2,50 mm²

<https://www.wago.com/857-450>



Short description:

WAGO's loop-powered isolator converts, amplifies, filters and electrically isolates standard unipolar/bipolar analog signals. **Features:**

- No additional supply voltage required
- Zero/span adjustment
- Standard unipolar/bipolar analog signals at input
- Calibrated measurement range switching
- Switchable limit frequency
- 3-way electrical isolation with 2.5 kV test voltage

Technical data

Configuration

| | |
|-----------------------|------------|
| Configuration options | DIP switch |
|-----------------------|------------|

Input

| Input signal type | Voltage Current |
|----------------------------------|--|
| Input signal (voltage) | ±1 V 0 ... 1 V ±2 V 0 ... 2 V ±5 V 0 ... 5 V 1 ... 5 V ±10 V 0 ... 10 V 2 ... 10 V ±20 V 0 ... 20 V |
| Input signal (current) | ±5 mA 0 ... 5 mA ±10 mA 0 ... 10 mA 2 ... 10 mA ±20 mA 0 ... 20 mA 4 ... 20 mA |
| Input resistance (current input) | ≤ 50 Ω |
| Input resistance (voltage input) | ≥ 1 MΩ |
| Input current (max.) | 50 mA |
| Input voltage (max.) | 30 V |
| Zero/span adjustment | ± 5 % of upper-range value |

Output (analog)

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|---------------------------------|-------------|
| Output signal type | Current |
| Output signal (current) | 4 ... 20 mA |
| Load impedance (current output) | ≤ 600 Ω |

Signal processing

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|----------------------|--|
| Limit frequency | 100 Hz / 30 Hz (configurable via DIP switch) |
| Step response (typ.) | 3.5 ms |

Measurement error

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|---------------------------|------------------------------|
| Transmission error (typ.) | ≤ 0.1 % of upper-range value |
| Temperature coefficient | ≤ 0.01 %/K |

Power supply

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|-------------------|---|
| Power supply type | Loop-powered (via output) |
| Supply voltage | DC 8 ... 30 V (Power is derived from the output circuit.) |

Safety and protection

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|-----------------|------|------------------------------------|-------------------------|
| Protection type | IP20 | Test voltage | |
| | | Test voltage (input/output/supply) | AC 2.5 kV; 50 Hz; 1 min |

Connection data

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|-------------------------|--|
| Connection technology | Push-in CAGE CLAMP® |
| Solid conductor | 0.08 ... 2.5 mm ² / 28 ... 14 AWG |
| Fine-stranded conductor | 0.34 ... 2.5 mm ² / 22 ... 14 AWG |
| Strip length | 9 ... 10 mm / 0.35 ... 0.39 inches |

Physical data

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|-----------------------------------|-----------------------|
| Width | 6 mm / 0.236 inches |
| Height | 94 mm / 3.701 inches |
| Depth from upper-edge of DIN-rail | 97.8 mm / 3.85 inches |

Mechanical data

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|---------------|-------------|
| Mounting type | DIN-35 rail |
|---------------|-------------|

Material data

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|------------------------------------|------------------|
| Insulation material (main housing) | Polyamide (PA66) |
| Flammability class per UL94 | V0 |
| Fire load | 0.363 MJ |
| Weight | 37.9 g |

Environmental requirements

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|---------------------------------|--|
| Ambient temperature (operation) | -25 ... +70 °C |
| Ambient temperature (storage) | -40 ... +85 °C |
| Relative humidity | 5 ... 95 % (no condensation permissible) |
| Operating altitude (max.) | 2000 m |

Standards and specifications

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|------------------------------|--------------|
| Conformity marking | CE |
| EMC immunity to interference | EN 61000-6-2 |
| EMC emission of interference | EN 61000-6-3 |

Commercial data

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|-----------------------|--------------------------|
| Product Group | 6 (INTERFACE ELECTRONIC) |
| eCl@ss 10.0 | 27-21-01-20 |
| eCl@ss 9.0 | 27-21-01-20 |
| ETIM 9.0 | EC002653 |
| ETIM 8.0 | EC002653 |
| PU (SPU) | 1 pcs |
| Packaging type | Bag |
| Country of origin | DE |
| GTIN | 4045454828479 |
| Customs tariff number | 85437090300 |

Environmental Product Compliance

| | |
|---|---|
| CAS-No. | 7439-92-1 1303-86-2 1317-36-8 |
| REACH Candidate List Substance | Diboron trioxide Lead Lead monoxide |
| RoHS Compliance Status | Compliant,With Exemption |
| RoHS Exemption | 6(c) 7(a) 7(c)-I 7(c)-II |
| SCIP notification number (Austria) | e16f64f5-6ced-40e1-83dc-3485ebbaa281 |
| SCIP notification number (Belgium) | fdb208e6-e00a-417a-9b1e-23385c79c3e7 |
| SCIP notification number (Bulgaria) | 71c2721c-96ec-483c-8d59-3298d2cadbe4 |
| SCIP notification number (Czech Republic) | 5c16d30b-bcb6-4c91-bbd3-2673166dad86 |
| SCIP notification number (Denmark) | 2231a6fe-a693-4d2b-a733-142cc7198e54 |
| SCIP notification number (Finland) | 371ca545-e559-439b-b2dd-4f01fa577e55 |
| SCIP notification number (France) | fccbb7f1-dfa2-4b72-b77d-1a08dd836ab4 |
| SCIP notification number (Germany) | 29c84369-2afb-4dbd-9b11-2d5004b8865a |
| SCIP notification number (Hungary) | 8a5d8371-ae0-49ae-8bce-d4531298978b |
| SCIP notification number (Italy) | 1559b561-ca2e-4be9-a1ce-809f6fe13e83 |
| SCIP notification number (Netherlands) | 2d6da5de-e5f0-4b55-b880-8a97605296d3 |
| SCIP notification number (Poland) | e605d2da-b4f1-4136-8fee-0882afb24ea4 |
| SCIP notification number (Romania) | a6879cf5-7e37-44c6-86a2-fe89bbdf8182 |
| SCIP notification number (Sweden) | 45198689-2995-41e0-a972-5410394c26c8 |