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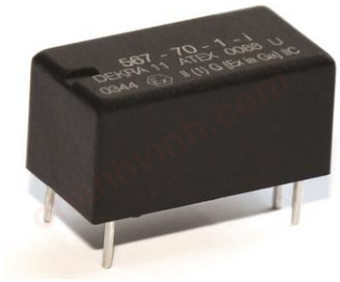
Standex MEDER ELECTRONICS

Custom Engineered Solutions for Tomorrow

**A Global Leader in the Design, Development, and Manufacture of Sensor and Magnetic Components**



# 567 Series Optocouplers




- Features: ATEX Optocoupler with Schmitt Trigger for Intrinsically Safe Circuits
- Applications: Electronics for Mining, Test & Measurement, Automation Technology
- Markets: Oil & Gas Production, Refinery, Mining, Medical and Test and Measurement

**Part Description:** **5 6 7 - 7 0 - 1 - i**

| **Electrical Optocoupler Characteristics** (at 20°C) | | **Unit** |
|---|---|---|
| **Input Threshold Current IFT (min. / max.)**<br>RL=1 kOhm, Ucc=5V, f=1 kHz | 0.6 / 3.5 | mA |
| **Turn On Time Ton (typ.)**<br>If=4 mA, Ucc=5V, RL=1kOhm | 0.5 | µsec |
| **Turn-Off Time Toff (typ.)**<br>If=4 mA, Ucc=5V, RL=1kOhm | 0.5 | µsec |
| **Cut-Off Frequency Fco (typ.)**<br>If=4 mA, Ucc=5V, RL=1kOhm | 500 | kHz |
| **Insulation Distance Emitter-Detector (min.)** | 6.0 | mm |
| **Insulation Resistance Input / Output (min.)**<br>Rh<45%, 100V Test Voltage | $10^{13}$ | Ohm |
| **Isolation Voltage Input / Output (min.)** | 4,000 | VDC |
| **Coupling Capacitance (typ.)** | 0.5 | pF |
| **Creeping Distance (min.)** | 14.0 | mm |
| **Air Clearance Input / Output (min.)** | 14.0 | mm |

| **Maximum Ratings Emitter** (at 20°C) | | **Unit** |
|---|---|---|
| **DC Forward Current If (max.)** | 45 | mA |
| **Junction Temperature Tj (max.)** | 100 | °C |
| **Reverse Voltage Ur (max.)**<br>IR = 100 µA | 3 | VDC |
| **Surge Forward Current Ifs (max.)**<br>t <= 10 ms | 1 | A |

| **Maximum Ratings Detector** (at 20°C) | | **Unit** |
|---|---|---|
| **Output Voltage Uol (max.)**<br>If = 5 mA | 0.6 | VDC |
| **Output Current Io (max.)** | 50 | mA |
| **Supply Voltage Ucc (min. / max.)** | 4.0 / 5.5 | VDC |
| **Supply Current Is (typ.)** | 4 | mA |
| **Junction Temperature Tj (max.)** | 100 | °C |
| **Collector Voltage (max.)** | 15 | VDC |
| **Power Dissipation (max.)** | 85 | mW |

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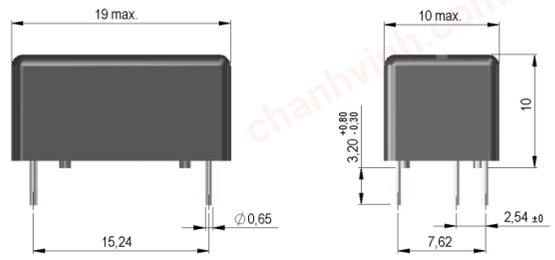
| Housing and Material Specifications | |
|---|---|
| Housing Material | P6 G |
| Case Color | Black |
| Sealing Compound | Wevopur 552 FL |
| Connection Pins | Cu-Alloy, Tinned |
| Washability | Fully Sealed |

| Environmental Data | | Unit |
|---|---|---|
| Shock Resistance (max.)<br>1/2 sine wave duration 11ms | 50 | g |
| Vibration Resistance (max.) | 20 | g |
| Operating Temperature | -20 to 85 | °C |
| Storage Temperature | -40 to 100 | °C |
| Soldering Temperature (max.)<br>5 sec. max. | 260 | °C |

## Handling Instructions

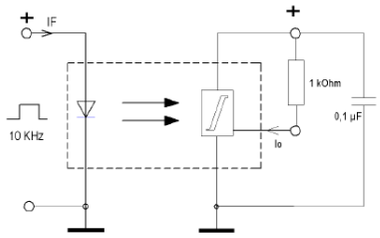
➢ It is advised that normal static precautions are to be taken in handling and assembly of this component to prevent damage and/or degradation which may be induced by ESD.

## 567 Optocoupler

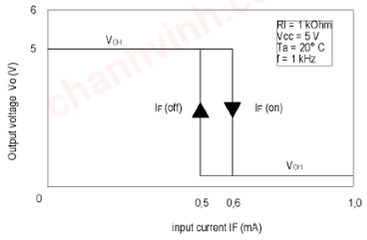



## Test Circuit and Layout

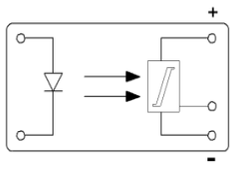
Test Circuit




Transfer Characteristics (IFT)




Layout




**Please note:** All technical specifications on this series datasheet refer to the standard product range. Modifications in the sense of technical progress are reserved. For general information only. For more specific information, please consult the product datasheet, available upon request.

This series datasheet could contain technical inaccuracies or typographical errors. Changes are periodically made to the information herein. These changes will be incorporated in future revisions.

For deviating values, latest specifications and product details, please contact your nearest sales office.