ATEX Optocoupler for Intrinsically Safe Circuits

Our optocoupler series are tested and certified for extreme/harsh environments such as potentially explosive atmospheres so they will not become an ignition point when subjected to short circuits or adjacent component failures.

Markets including but not limited to: Oil & Gas Production, Refinery, Fracking, Bio Energy, Mining, Geothermal, Medical, Test and Measurement, and others.

Standex-Meder specializes in customizing designs to specific customer needs. Contact us to provide the optimal solution for your application(s).

Features:
- Galvanic separation between input and output circuits
- Analog & digital signal transfer is possible
- Marginal coupling capacities between input and output
- Minor output delay times compared to relays
- Long life due to non abrasive mechanical wear
- Isolation resistance between input & output up to 10^13 Ω
- Magnetic fields do not impact operation
- A photodiode makes for very short cycle times (nanoseconds) with more than 10MHz possible
- Input and output differences of up to 20 KV
- Able to invert the output signal during transfer
- Lifetime factor increased by a factor of 10, if the LED is used with less than 50% of the nominal current
- Resistant against voltage drop

Applications:
- Control Technology / Network Engineering
- Test & Measurement
- Automation Technology
- Electronics for Mining
- Communication Systems
- Measurement and data acquisition systems
- Control and Connection Equipment
- Heating Technology
- Counting Systems
- Rotation Measurement
- Speed Indication
- Position Detection
- Seismic Instrumentation
- Temperature Monitoring and Measurement
- Medical ESD Protection

Contact Information:
Standex-Meder Electronics
World Headquarters
4538 Camberwell Road
Cincinnati, OH 45209 USA

Standex Americas (OH)
+1.866.STANDEX
(+1.866.782.6339)
info@standexelectronics.com

Meder Americas (MA)
+1.800.870.5385
salesusa@standexmeder.com

Standex-Meder Asia (Shanghai)
+86.21.37820625
salesasia@standexmeder.com

Standex-Meder Europe (Germany)
+49.7731.8399.0
info@standexmeder.com

ATEX: 11ATEX 0086, gem. EN 60079

www.standexmeder.com
**Mechanical Dimensions – Optocoupler**

**Example Optocoupler 525-03-0-i**

**Test circuit**

![Test circuit diagram](image)

**Layout**

*Top view Draufsicht*

![Layout diagram](image)

**Technical Specifications – Optocoupler**

<table>
<thead>
<tr>
<th>Specification</th>
<th>From</th>
<th>Up to</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolation Voltage</td>
<td>4000</td>
<td>22000</td>
<td>VDC</td>
</tr>
<tr>
<td>Current Transfer Ratio lc/lf (lf = 10 mA)</td>
<td>0.3</td>
<td>7</td>
<td>mA</td>
</tr>
<tr>
<td>Switching Time</td>
<td>9,7,0,5</td>
<td>9,7</td>
<td>μsec</td>
</tr>
<tr>
<td>Creeping Distance Air Path Input/Output</td>
<td>14</td>
<td>42</td>
<td>mm</td>
</tr>
<tr>
<td>Working Temperature</td>
<td>-40</td>
<td>+85</td>
<td>°C</td>
</tr>
<tr>
<td>Cut-Off</td>
<td>50</td>
<td>500</td>
<td>kHz</td>
</tr>
</tbody>
</table>

**Technical Ratings – Optocoupler**

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