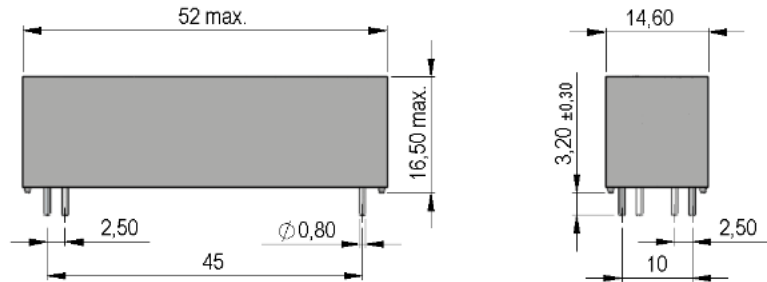


528 Series Optocouplers



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

Part Description: **528-00-0**

Customer Options		Unit
Coupler Characteristics		
Isolation Voltage Input / Output (min.)	10,000	VDC
Current Transfer Ratio (min.) <small>I_c/I_f CTR (I_f = 10mA)</small>	0.9	
Turn On Time (typ.) <small>T_{on}</small>	5.5	µsec
Turn-Off Time (typ.) <small>T_{off}</small>	4.2	µsec
Collector-Emitter Voltage (max.)	70	VDC
Collector Current I _c (max.)	50	mA
Creeping Distance (min.)	42.0	mm
Air Path Input / Output (min.)	42.0	mm
Insulation Distance Emitter-Detecto (min.)	5	mm
Insulation Resistance Input / Output (min.)	10 ¹²	Ohm
Transmission Frequencies (typ.)	50	kHz

Housing and Material Specifications	
Housing Material	Plastic
Case Color	Grey
Sealing Compound	Polyurethan
Connection Pins	Cu-Alloy, Tinned
Washability	Fully Sealed

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

Handling Instructions	
➤	It is advised that normal static precautions be taken in handling and assembly of this component to prevent damage and/or degradation which may be induced by ESC.



Test Circuit and Layout

Test Circuit

The test circuit diagram shows an LED connected to a 10 kHz square wave source through a 50 Ohm resistor (labeled 'Osz. Kon. 1'). The LED current is denoted as I_F . The phototransistor is connected to a 5V supply through a 100 Ohm resistor (labeled 'Osz. Kon. 2'). The collector current is denoted as $I_C = 5 \text{ mA}$. The supply voltage is $U = 5 \text{ V}$.

Layout

The layout diagram shows the physical arrangement of the LED and phototransistor on a PCB, with arrows indicating the direction of light coupling between them.