

## Baaske network isolator

# MI 2005

## up to 2,5 GBit/s – IEEE802.3bz



### 2.5GBase-T network isolator for the galvanic isolation of electrical devices.

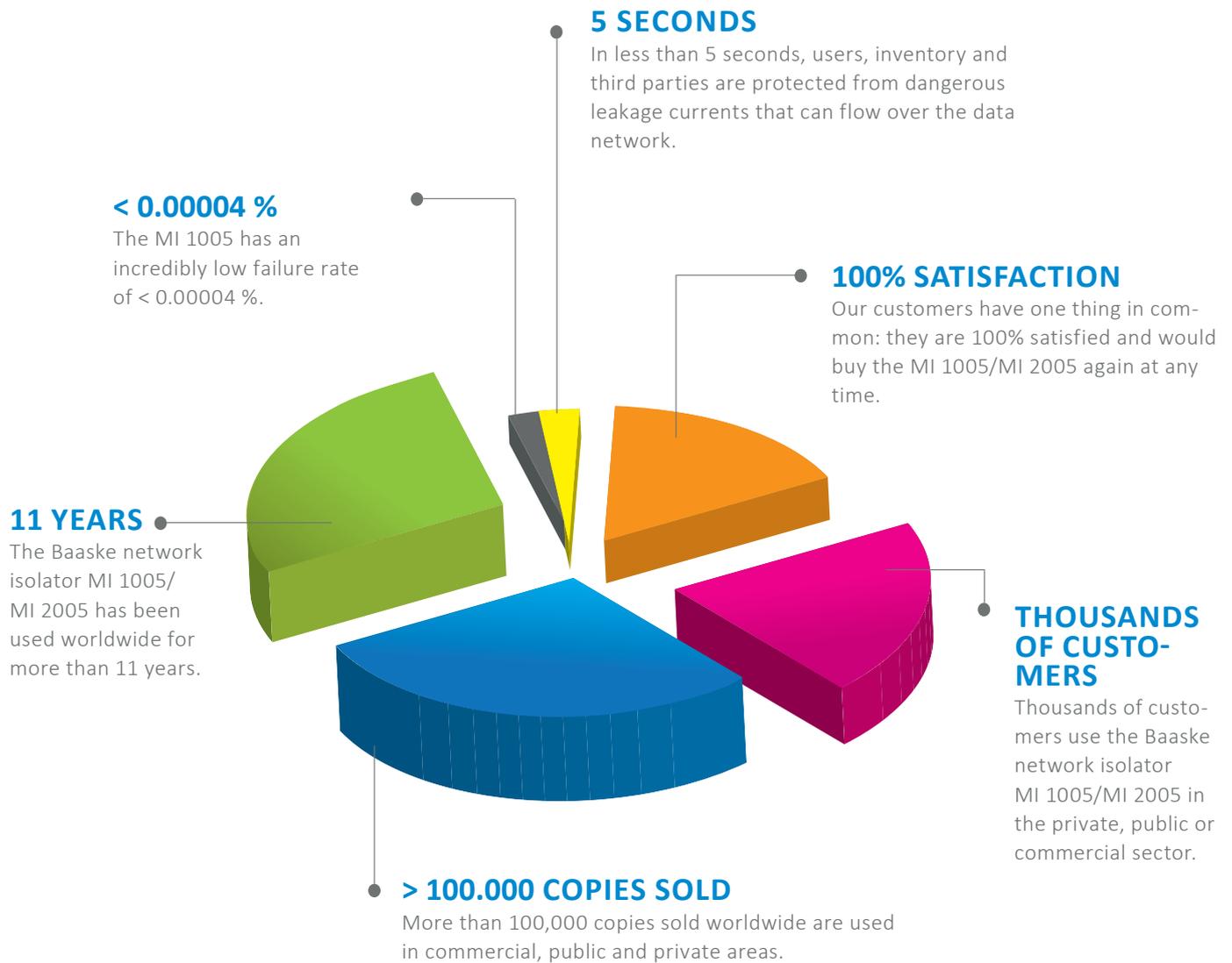
With the network isolator MI 2005 a flexible and simple possibility is available to galvanically isolate the network interface between devices immediately. In less than 5 seconds, users, inventory and third parties are protected from dangerous leakage currents that can flow over the data network. The network isolator MI 2005 reliably prevents potential equalization currents and protects against overvoltages that can occur due to installation errors, environmental influences such as lightning or humidity, inrush currents or electrostatic discharges. In addition, the 5 kV RJ-45 network isolator offers outstanding attenuation and operates almost lossfree in the data network over a distance of 100 m.

**Use in medical technology:** In accordance with the IEC EN 60601-1 standard for medical electrical devices and systems, the MI 2005 protects the network interface by two independent protective measures (2 MOPP) to the patient and the network connection is safely galvanically isolated.

### Benefits

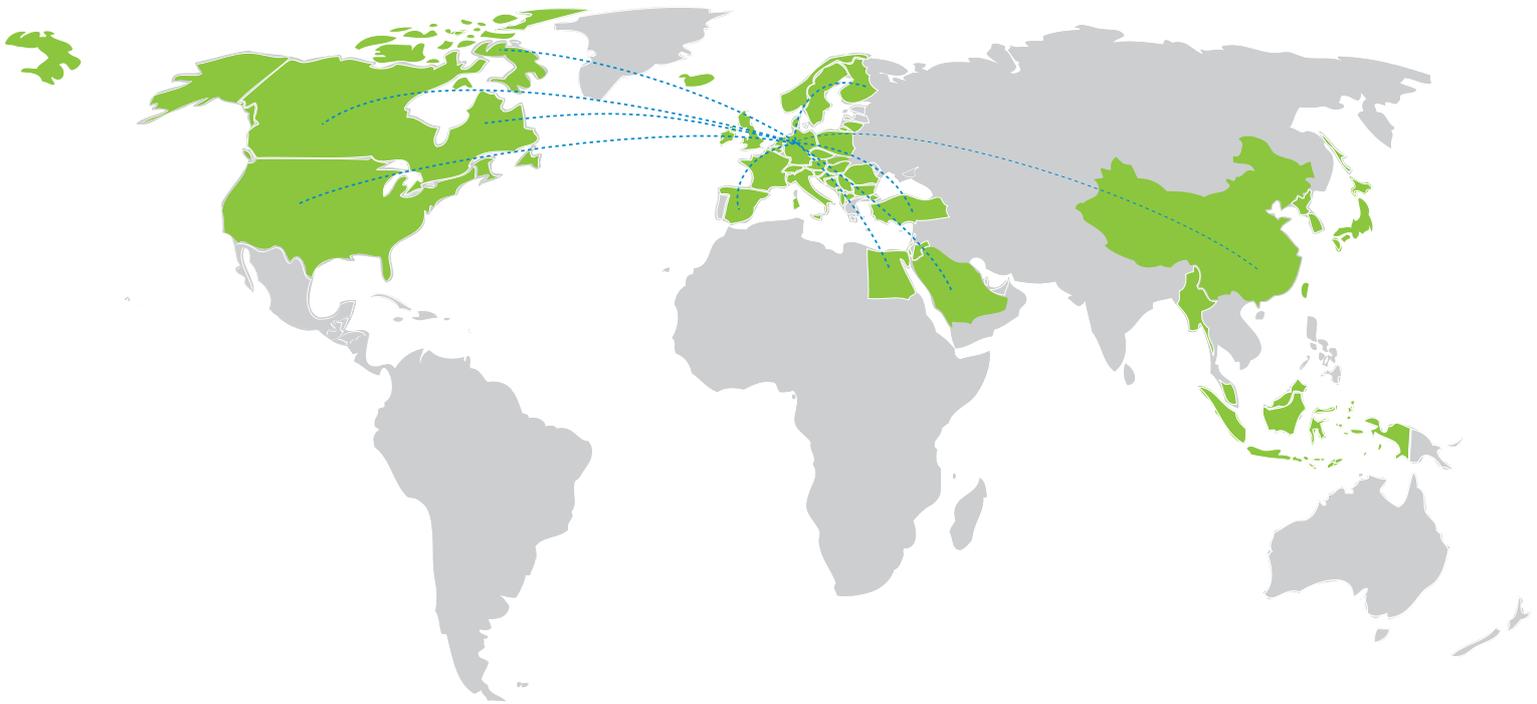
- › Fully compatible to IEEE802.3bz requirements
- › Easy handling - no installation required
- › Compact and universally applicable
- › In less than 5 seconds, the patient, user and inventory are protected from leakage currents.
- › No permanently mounted cables - defective network cables do not require a new insulator
- › Lightweight and rugged enclosure - suitable for any system with a network port
- › Affordable to purchase and efficient to operate - does not require its own power supply

# Datas and facts.



## Standards and certificates

Description	
IEC 60601-1	:2005/AMD1:2012/AMD2:2020 Edition 3.2 (guttet section 17 - EMV)
EN 60601-1-2	:2015 (Fourth Edition)
Low-voltage directive	2014/35/EU
EMC directive	14/30/EU
RoHS	✓
SVHC / REACH	✓
Lead-free	✓



The Baaske **network isolator MI 1005/MI 2005** is used in more than **30 countries** in the private, public or commercial sector. It reliably protects electrical devices against excessive voltages, ground loops and signal noise from the network cable. The usual areas of application are:

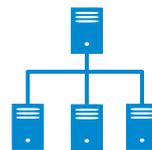
## Application areas



**In medicine:** The MI 1005/MI 2005 network isolators protect patients, medical devices and users from excessive leakage currents that can flow over the data network in accordance with standards.



**Measuring and monitoring equipment:** Protects sensitive measuring and monitoring equipment that is connected to a control station via Ethernet interfaces from interference voltages and potential differences.



**Server systems / building services engineering:** To avoid failures or potential equalization currents, network isolators protect server systems that are connected over long distances using copper cabling.



**Audio applications:** Network isolators reliably protect against overvoltages, low-frequency alternating voltages (mains hum) and eliminate noise in the sound.

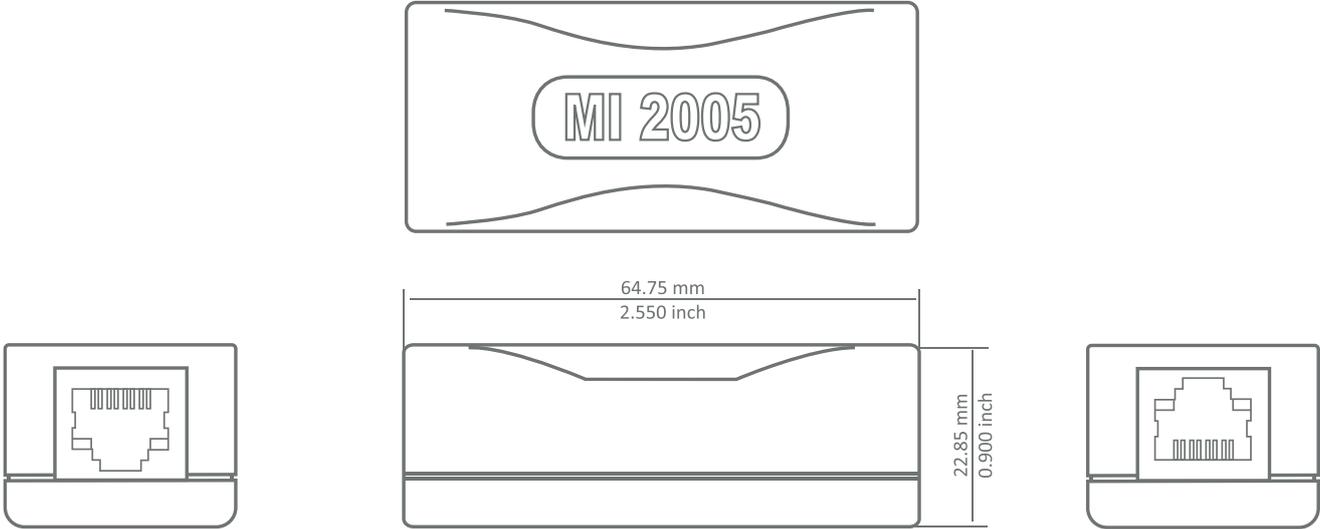
# Types of construction and technical details



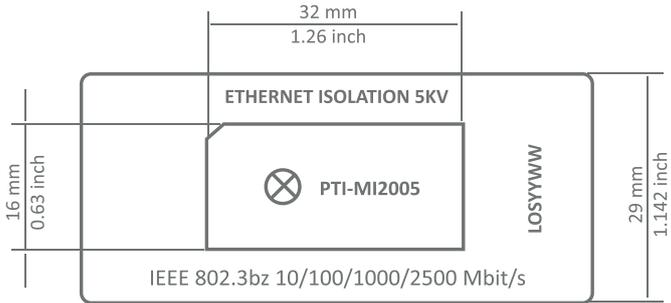
## Technical Data: Network isolator

<b>Name</b>	Network isolator MI 2005
<b>Color case</b>	light grey
<b>Dimensions (DWH)</b>	65x29x23 mm
<b>Weight approx</b>	50 g
<b>Operating mode</b>	continuous operation
<b>Dielectric strength</b>	5000 V 50/60 Hz for 1 min.
<b>Data throughput</b>	10/100/1000/2500 MBit/s
<b>Ports</b>	2x RJ45 IN/OUT
<b>Transient Surge Suppression:</b>	Air 15kV, Contact 8kV
<b>Network Specifications</b>	IEEE 802.3bz 10/100/1000/2500-BaseT; Twisted-Pair; auto-conf (behaves completely transparent in the network)
<b>Material</b>	UL94V-0 / RoHS conform / REACH
<b>Product Classification</b>	Passive ethernet isolation device, Isolation rate DI (300V AC / 400V DC) tested with 5kV AC
<b>Operating time between failures</b>	0,21 x 10 ^ 8 (1 failures in 21 000 000 Std.)
<b>Return loss</b>	min. 10 dB
<b>Insertion loss</b>	max. 1.1 dB
<b>Standards</b>	IEC 60601-1:2005/AMD1:2012/AMD2:2020 Edition 3.2; EN 60601-1-2 2015 (Fourth Edition); IEEE 802.3bz
<b>Temperature</b>	-10 °C bis +85 °C (operation/storage/transport)
<b>Relative air humidity</b>	10 % bis 90 % (non-condensing (operation/storage/transport) )
<b>Air pressure</b>	700 hPa bis 1060 hPa (operation/storage/transport)
<b>Protection grade according EN 60529</b>	IPX0
<b>Warranty</b>	5 Years
<b>Scope of delivery</b>	Network isolator MI 2005
<b>Item No.</b>	2012413

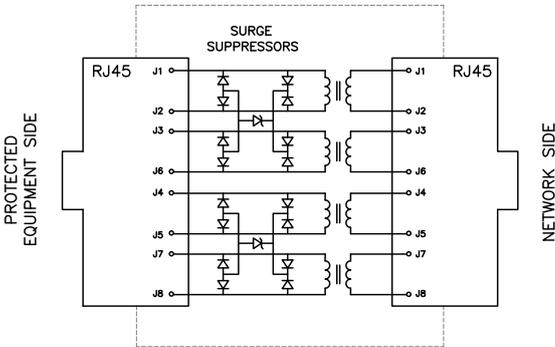
# Dimensions



Network isolator MI 2005

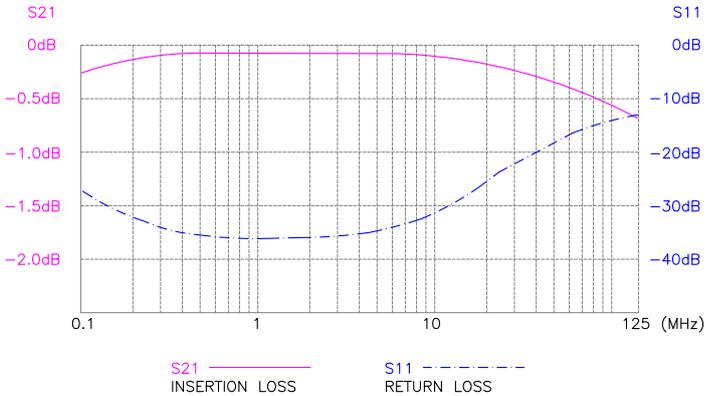


## Circuit



Network isolator MI 2005

## Frequency range MI 2005



## Optional accessories

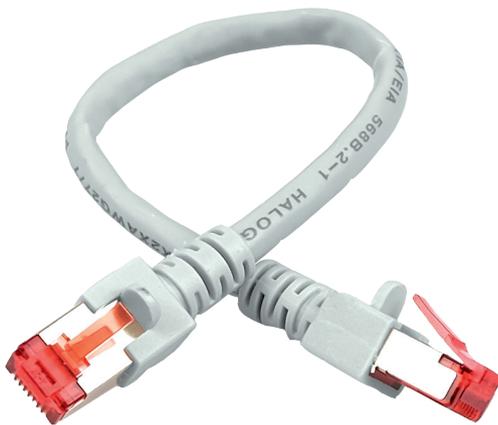
### MI 1005/MI 2005 bracket incl. rail mount adapter

For mounting the MI 1005/MI 2005 on any flat surface or on a 35 mm DIN rail according to DIN EN 50022. The snap lock automatically positions the MI 1005/MI 2005 in the optimum holding position and prevents accidental slipping or loosening of the MI 1005/MI 2005. The holder is designed in such a way that it can also be mounted on unearthed metallic surfaces. The protective effect of the network insulator is not impaired by the bracket, as the insulation distance required for 2 MOPP to the mounting surface remains intact.

**Item No. 2010656**



**2 in 1**  
DIN rail adapter / wall mounting



### CAT6 patch cable 0.25 m grey PIMF, RoHS

Category 6 S / FTP patch cable ▶ twisted foil-shielded with braided shield (UTP)  
▶ halogen-free jacket ▶ shielded, molded RJ45 connector ▶ colored, molded kink protection grommet ▶ length on sleeve ▶ protection of the snap-in nose sleeve ▶ EIA / TIA B.2-1, EN 50173 ▶ ISO / IEC 11801 Class E

**Item No. 2005670**

#### Tip:

The network isolator MI 2005 serves as accessory for devices without isolated network interface. In order not to impair the effect of the network isolator, make sure that the MI 2005 is put into operation as close as possible to the terminal device or that the patch cable leading to the terminal device cannot get near conductive parts. The use of the optional MI 1005/MI 2005 bracket allows the MI 2005 to be mounted even on conductive surfaces and prevents unintentional position changes of the isolator. The special construction allows you to attach the holder to a DIN rail or to any flat surface.