Baaske Medical

Baaske network isolator

MED MI 1005

10/100/1000 MBit/s

MI 1005

EN 60601-1 / 3.1

| **2 MOPP** MEANS OF PROTECTION | **5** YEARS WARRANTY | **5**kV AC **10**kV DC | RoHS COMPLIANT | c ꟼU us | CE | TÜV SÜD |

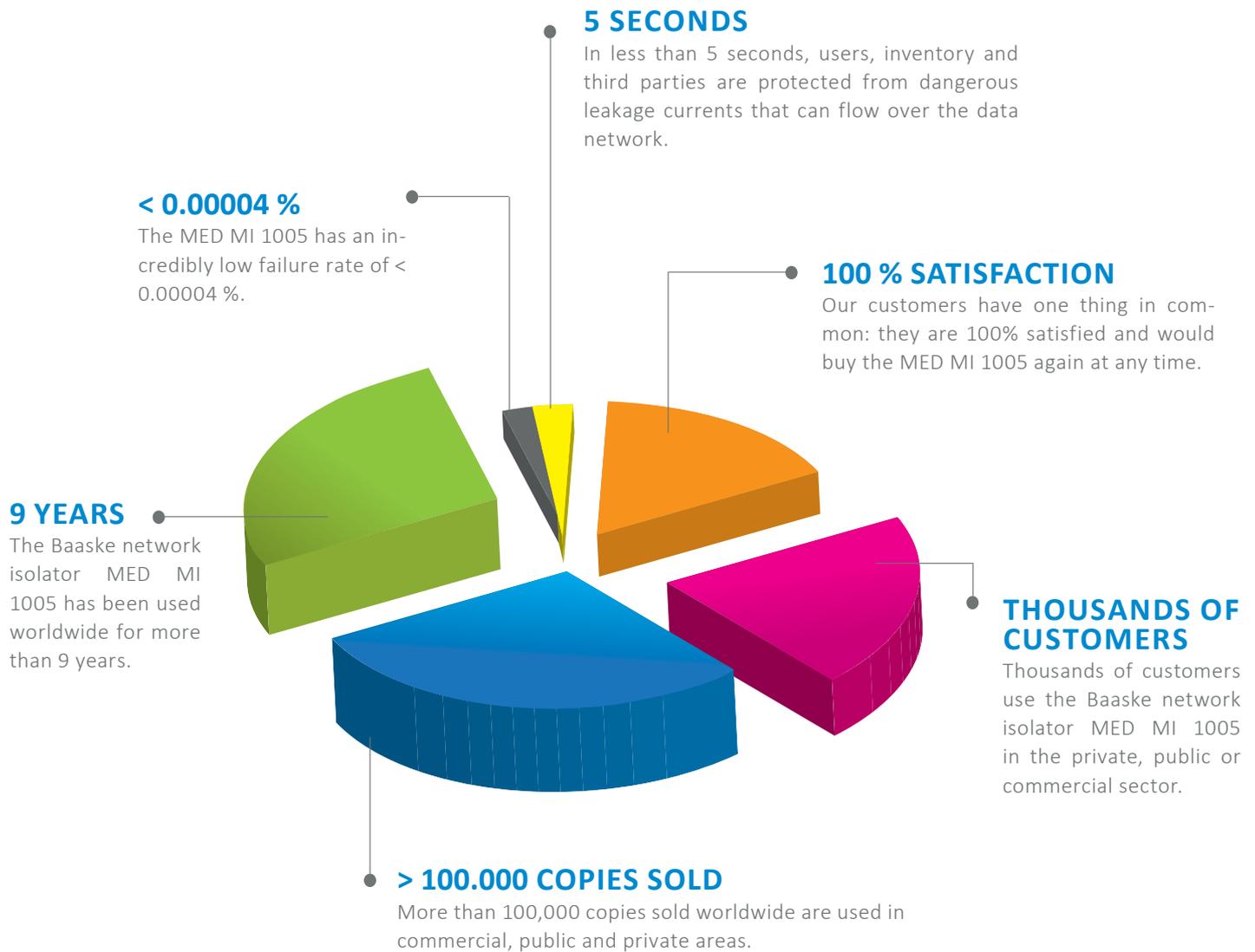## Gigabit network isolator for the galvanic isolation of electrical devices.

With the network isolator MED MI 1005 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 Med MI 1005 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 loss-free 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 MI1005 protects the network interface by two independent protective measures (2 MOPP) to the patient and the network connection is safely galvanically isolated.

Benefits

› 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 use
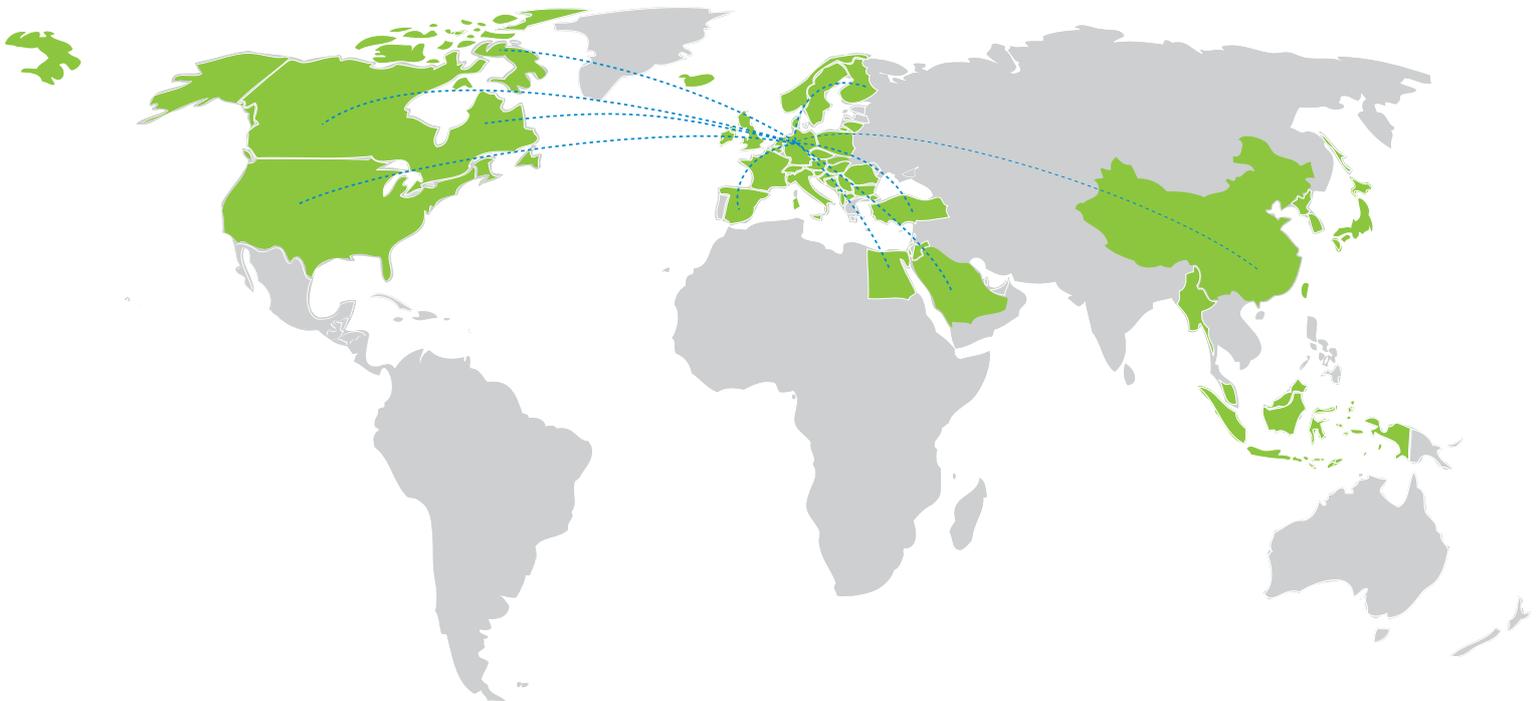› Operation - power supply is not require

Datas and facts.

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5 SECONDS
In less than 5 seconds, users, inventory and third parties are protected from dangerous leakage currents that can flow over the data network.

< 0.00004 %
The MED MI 1005 has an incredibly low failure rate of < 0.00004 %.

100 % SATISFACTION
Our customers have one thing in common: they are 100% satisfied and would buy the MED MI 1005 again at any time.

9 YEARS
The Baaske network isolator MED MI 1005 has been used worldwide for more than 9 years.

THOUSANDS OF CUSTOMERS
Thousands of customers use the Baaske network isolator MED MI 1005 in the private, public or commercial sector.

> 100.000 COPIES SOLD
More than 100,000 copies sold worldwide are used in commercial, public and private areas.

Standards and certificates

Description	
UL Recognized Component	✓
IEC 60601-1	:2005 + A1:2012 Ed. 3.1 (gutted section 17 - EMV)
IEC 60601-1-2	:2014 Ed. 4
EN 60601-1	:2006 + A1:2013 Ed. 3.1 (gutted section 17 - EMV)
EN 60601-1-2	:2015 Ed. 4
Low-voltage directive	2014/35/EU
EMC directive	14/30/EU
RoHS	✓
SVHC / REACH	✓
Lead-free	✓

We will gladly send you the corresponding EU declarations of conformity on request.

Applications

The Baaske network isolator MED MI 1005 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:
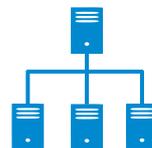
Application areas

In medicine: The MED MI 1005 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.
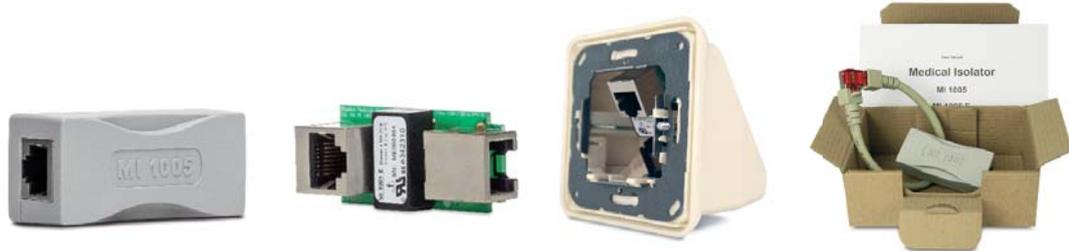
Server systems / building services engineering: To avoid failures or potential equalization currents, network insulators protect server systems that are connected over long distances using copper cabling.
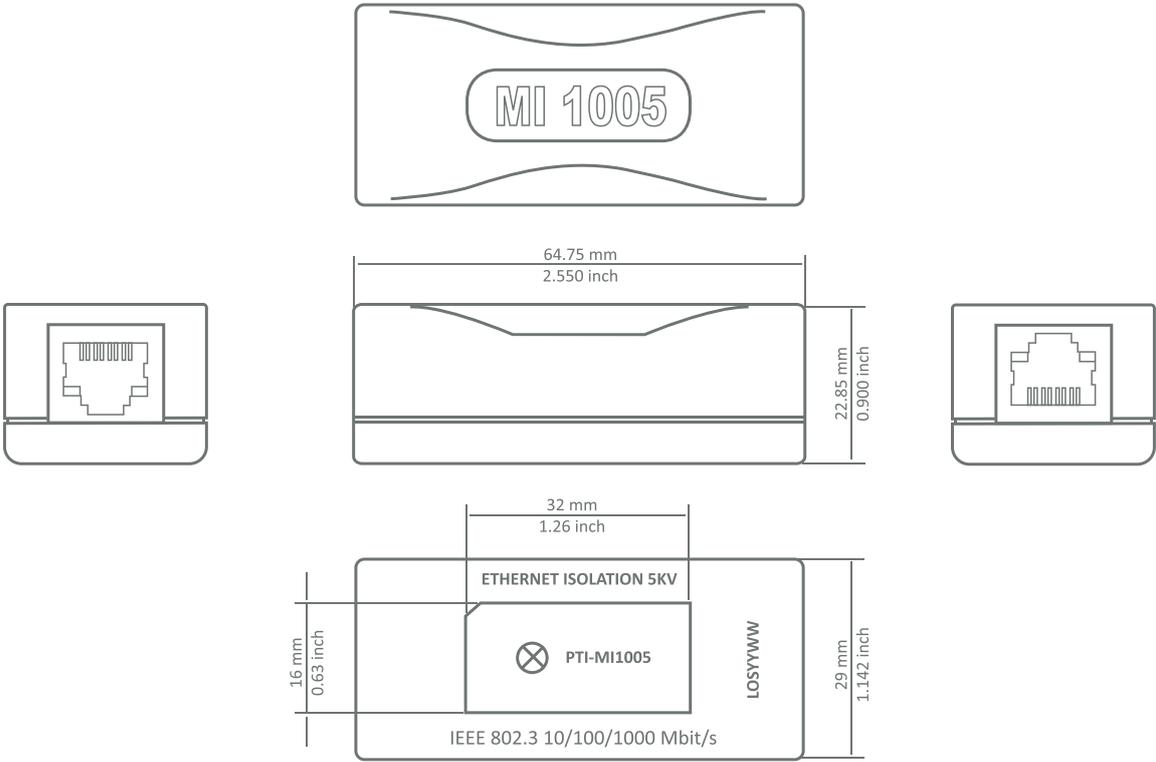
Audio applications: Network insulators reliably protect against overvoltages, low-frequency alternating voltages (mains hum) and eliminate noise in the sound.
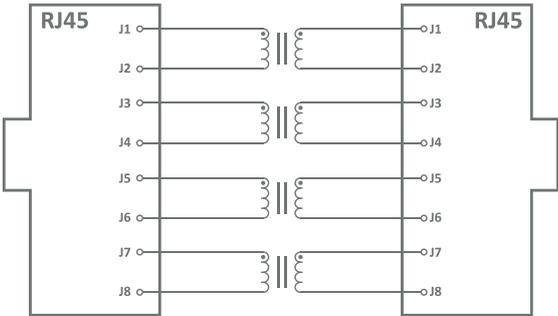
Types of construction and technical details

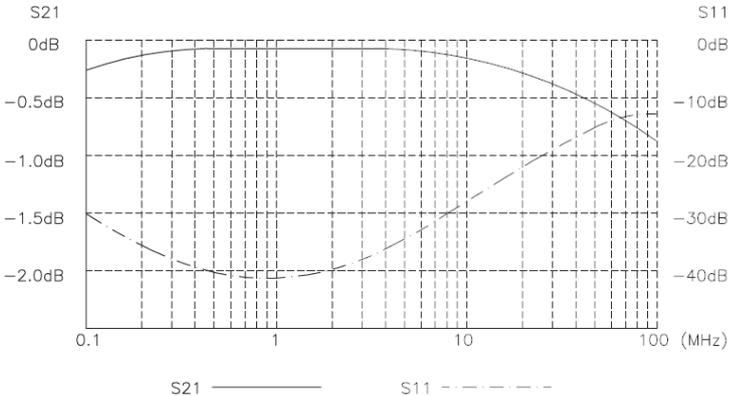| Technical Data	Flexible	Build In Isolator	Wall mounting	Complete set
Name	Netzwork Isolator MED MI 1005	MI 1005 E Medical Build In Isolator	Netzwerk Isolator MED MI 1005 MB	Network Isolator MED MI 1005 Retail
Color case	light grey	without housing	creamy	light grey
Dimensions (DWH)	65x29x23 mm	51x23,4x18.2 mm	81x81x57 mm	65x29x23 mm
Weight approx	50 g	20 g	106 g	50 g
Operating mode	continuous operation	continuous operation	continuous operation	continuous operation
Dielectric strength Signal and shielding	5000 V 50/60 Hz for 1 Min. 10000 V 50/60 Hz for 10 s.			
Data throughput	10/100/1000 MBit/s			
Ports	2x RJ45 IN/OUT			
ESD (optional)	15 kV (MI 1005+ ESD)			
DC Stress Test (10 Sec)	10 kV			
Network Specifications	IEEE 803.2 ab 10/100/1000-BaseT; Twisted-Pair; auto-conf (behaves completely transparent in the network)			
Material	UL94V-0 / RoHS conform / REACH			
Produkt Rating (UL)	passive, electronic components, insulation DI (250 V AC / 300 V DC) tested at 5 kV AC			
Operating time between failures	0,21 x 10 ^ 8 (1 failures in 21 000 000 h)			
Return loss	min. 10 dB			
Insertion loss	max. 1,1 dB			
Standards	IEC 60601-1 (3rd Edition); IEC 60601-1-2; UL 60601 (UL Listed E342310); IEEE 802.3			
Temperature	-10 °C up to +70 °C (operation/ storage/ transport)			
Relative air humidity	10 % up to 90 % (non-condensing (operation/ storage/ transport)			
Air pressure	700 hPa up to 1060 hPa (operation/ storage/ transport)			
Warranty	5 years			
Scope of delivery	Netzwork Isolator MED MI 1005	MI 1005 E Medical Build In Isolator	1x mounting plate; 1x cover; 1x frame; 1x MI 1005 E Medical Built In Isolator; 1x retaining plate; 1x Harting PushPull; 2x screws; 2x nut; 1x assembly instructions; 1x manual	Netzwork Isolator MED MI 1005 , Patch Cable 25 cm, Manual, Package and serial number
Item No.	**2005674**	**2006633**	**2007704**	**2006484**

Dimensions

MI 1005

64.75 mm
2.550 inch

22.85 mm
0.900 inch

32 mm
1.26 inch

ETHERNET ISOLATION 5KV

16 mm
0.63 inch

⊗ PTI-MI1005

LOSYYWW

29 mm
1.142 inch

IEEE 802.3 10/100/1000 Mbit/s

Circuit

RJ45

J1	J1
J2	J2
J3	J3
J4	J4
J5	J5
J6	J6
J7	J7
J8	J8

RJ45

Frequency range MED MI 1005

S21

S11

0dB

−0.5dB

−1.0dB

−1.5dB

−2.0dB

0dB

−10dB

−20dB

−30dB

−40dB

0.1   1   10   100   (MHz)

S21 ———   S11 – · – · –

Optional accessories

MI 1005 bracket incl. rail mount adapter

For mounting the MED MI 1005 on any flat surface or on a 35 mm DIN rail according to DIN EN 50022. The snap lock automatically positions the MI 1005 in the optimum holding position and prevents accidental slipping or loosening of the MED MI 1005. 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

0.25 m	Item No. 2005670
0.50 m	Item No.2006294
2.00 m	Item No. 2006296
5.00 m	Item No. 2006298

Tip:

The network isolator MED MI 1005 serves as accessory for devices without isolated network interface. In order not to impair the effect of the network isolator, make sure that the MED MI 1005 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 MED MI 1005 bracket allows the MED MI 1005 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.