

FEATURES

- Conversion Ethernet/RS232 (MI486) or RS485 (MI488)
- Electrical isolation
- Transmission rate up to 115.2 kbps
- Auxiliary AC supply
- Housing for rail mounting



Fig. 2: MI486 / MI488 communication interface

PURPOSE

The MI486 and MI488 communication interfaces are designed for connecting instruments with RS232 or RS485 communication to the ethernet network. They enable connection of the instruments with a PC via the ethernet network. Signals are electrically isolated. The interfaces are designed only for reading data from instruments (by means of corresponding software). They enable communication rate up to 115.2 kbps. Auxiliary AC supply enabling connection to AC voltage that is selected at order is available. It is prepared for DIN 35 x 15 mm rail mounting (in compliance with EN 50022).

DESCRIPTION

The Ethernet signal is converted directly to RS232 or RS485 (B) signal and is electrically isolated from other circuits (A). The complete circuit is supplied with a transformer (C). A LED on the instrument front side indicates supply.

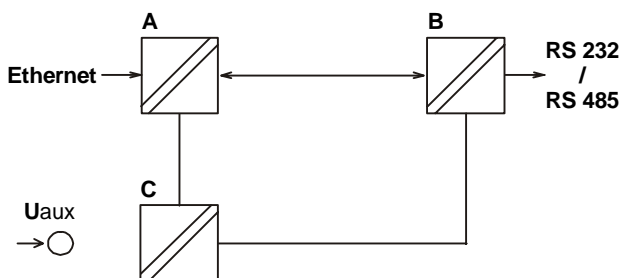


Fig. 1: Block diagram of communication interface

TECHNICAL DATA

AUXILIARY POWER SUPPLY:

Auxiliary AC voltage:

Nominal voltages (Ur)	Nominal operation range
100/√3 V	80...120 % Ur
110/√3 V	
100 V	
110 V	
230 V	
400 V	
500 V	

Table 1: Standard AC voltages for auxiliary power supply

- Frequency range: 45...65 Hz
- Consumption: < 6 VA

HOUSING:

- Housing material: Cycloy C2800 (PC/ABS)
characteristics comply with UL 94 V-0
- Protection: IP 50 (IP 20 for connection terminals)
in compliance with EN 60529, 1989
- Converter mass: < 300 g

TERMINALS:

- Max. cross-section: ≤ 4.0 mm² one conductor
2 x 2.5 mm² two conductors
- Ethernet terminal: RJ-45

SECURITY:

- Protection: protection class II
300 V eff., installation category III
pollution degree 2
- Test voltage: 3.7 kV eff.
in compliance with SIST EN 61010-1: 2002

AMBIENT CONDITIONS:

- Climatic class: 3
in compliance with EN 61268: 1995
- Operating temperature range: -10 to +65 °C
- Storing temperature range: -25 to +70 °C
- Average annual humidity: ≤ 75% r.h.

EU DIRECTIVES:

Decree on electrical equipment designed for use within certain voltage limits **URLRS 53/00**

(Low Voltage Directive **73/23/EEC**):

SIST EN 61010-1: 1999 and **EN 61010-A3**: 1995

Electrical safety testing for measurement and laboratory devices, part 1: General requirements

Electromagnetic Compatibility Regulation (EMC)

URLRS 61/00

(Electromagnetic Compatibility Directive **89/336/EEC**):

SIST EN 55024: 2000

CONNECTION

Ethernet communication

Ethernet communication enables connection between measuring instruments and a PC via a network.

MI486 / MI488	Ethernet
TD+ (1)	TD+ (1)
TD- (2)	TD- (2)
RD+ (3)	RD+ (3)
RD+ (6)	RD+ (6)

Table 2: Ethernet connection

RS232 communication

Connection of RS232 communication between MI486 and the measuring instrument with RS232 communication is described in table 3. Maximal connection length is 3 meters.

MI486	Measuring instruments
Rx (24)	Rx (24)
GND (25)	GND (25)
Tx (26)	Tx (26)

Table 3: RS232 connection

RS485 communication

Communication enables connection of up to 32 devices in a net. Maximal connection length is 1000 meters. Connection of RS485 communication is described in table 4.

MI488	RS485
A (21)	DATA +
C (22)	GND
B (23)	DATA -

Table 4: RS485 connection

More detailed description of connection and trouble shooting are described in Instructions Manual of MI48x.

DIMENSIONS

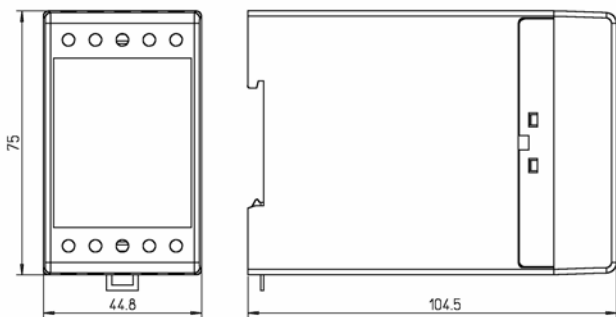


Fig. 3: Dimensions of converter housing

COMMUNICATION:

Ethernet

- Type of connection: Direct
- Signal levels: 10 / 100 BASE-T
- Max. cable length: 100 m
- Terminals: RJ-45
- Mode of transmission: asynchronous
- Protocol: IEEE 802.3
- Transmission rate: 10M / 100M bit/s

RS232

- Type of connection: Direct
- Signal levels: RS232
- Max. cable length: 3 m
- Connection terminals: bolted connection
- Isolation: 3.7 kV eff., 1 minute between terminals and other circuits
- Transmission mode: asynchronous
- Transmission rate: 1.200 to 115.200 bit/s

RS485

- Type of connection: Network (up to 32 connections per conductor)
- Signal levels: RS485
- Connection: twisted pair
- Max. cable length: 1000 m
- Connection terminals: bolted connection
- Isolation: 3.7 kV eff., 1 minute between terminals and other circuits
- Transmission mode: asynchronous
- Transmission rate: 1.200 to 115.200 bits/s

DATA FOR ORDER:

At order it is necessary to state the interface type (MI486 / MI488) and auxiliary power supply voltage.

Code for ordering:

MI48x; a + b

Description		Code	
Auxiliary power supply:			
x	Interface type	MI486	6
		MI488	8
a	Value of auxiliary power supply	100/√3 V	100/√3
		110/√3 V	110/√3
		100 V	100
		110 V	110
		230 V	230
		400 V	400
b	CD MI48x	-	CD

Table 5: Code for ordering

EXAMPLE:

Communication interface Ethernet / RS232 for 230V AC power supply voltage and CD with programs.
MI486 – 230 V + CD



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