

## Highlights

- Multiple sensor design (up to 8 sensing heads for 1 box)
- Plug & Play (automatic head detection)
- Rugged IP rated metal box or fast mountable DIN rail box
- All boxes support all MI3 spectral models
- Failsafe functions (internal temp., break of head cable)
- Isolated alarm relay output
- User configurable inputs for remote sensor configuration
- Analog outputs with galvanic isolation
- USB 2.0 interface as standard
- Optional serial RS485 communication interface with the protocols: ASCII, Profibus, Modbus®
- Optional Ethernet communication interface with the protocols: ASCII, http, Profinet IO
- Intuitive user interface with high resolution LCD display
- Advanced on-board signal processing like: peak & valley hold, intelligent averaging (flicker)
- DataTemp® Multidrop Software for remote monitoring

## Measurement Specifications

### Accuracy

mA / V output	±1°C
Thermocouple output	±1.5°C

### Temperature Resolution

mA/V output	±0.1°C (±0.2°F) <sup>1</sup> / 12 bit (metal box, MI3COMM)
mA/V output	±0.02°C (±0.04°F) / 16 bit (analog DIN rail box)

### Temperature Coefficient

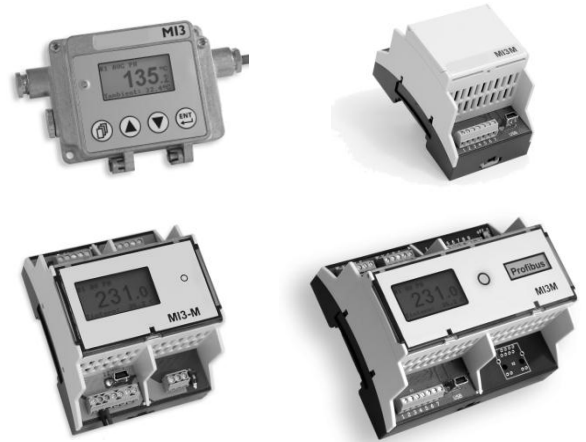
mA/V output	± 0.02 K / K
Thermocouple output	± 0.05 K / K

<sup>1</sup> for a zoomed temperature span of < 500°C (932°F)

## Interfaces

<b>Outputs</b>	4 – 20 mA, 0 – 20 mA, 0 – 5 V, or 0 – 10 V J, K, R, or S thermocouple, 0 – 5 V head ambient signal
<b>Thermocouple</b>	J: -40 to 600°C (-40 to 1112°F) K: -40 to 800°C (-40 to 1472°F) R/S: 250 to 1800°C (482 to 3272°F)
<b>Relay</b>	48 V / 300 mA (solid-state relay, potential-free)
<b>Inputs (1 - 3)</b>	1. Emissivity ε setting (analog, 0 - 5 V <sub>DC</sub> ) 2. Background radiation compensation (analog, 0 - 5 V <sub>DC</sub> ) 3. Trigger/hold or laser switching (digital, high/low) or digital emissivity control via inputs 1 to 3
<b>Communications</b>	USB 2.0 RS485 Profibus DP-V0 Profinet IO Ethernet TCP/IP, http and 64 MB data logger Modbus RTU

## MI3 Box Datasheet



## General Specifications

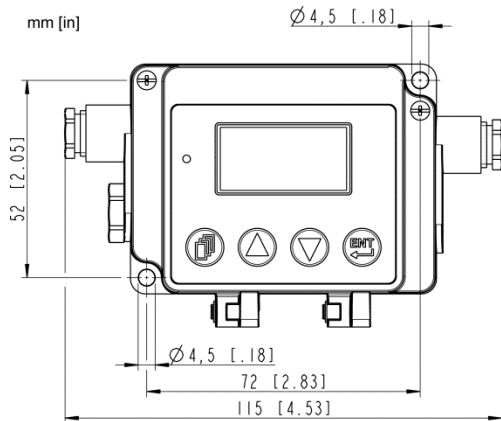
<b>Power Supply</b>	8 to 32 VDC, 5 W
<b>Ambient Temperature</b>	-10 to 65°C (14 to 149°F)
<b>Storage Temperature</b>	-20 to 85°C (-4 to 185°F)
<b>Environmental</b>	IP65 / NEMA-4 (MI3COMM only)
<b>EMC</b>	EN 61326-1:2006
<b>Material</b>	die cast zinc (MI3COMM) molded plastic (all other boxes)

Comm Box	MI3COMM...	MI3COMM... DIN 3TE	MI3COMM... DIN 4TE	MI3COMM... DIN 6TE
<b>Firmware</b>	8 heads	8 heads	8 heads	8 heads
<b>Wiring</b>	1 head	4 heads	4 heads	4 heads
<b>Display, Button</b>	✓	–	✓	✓
<b>Outputs:</b>				
mA / V	✓	–	–	4x (optional)
TC	✓	–	–	–
Relay	✓	✓	✓	✓
<b>Inputs:</b>				
ε – analog	✓	–	–	–
ε – digital	✓	–	–	–
T <sub>Background</sub>	✓	–	–	–
Trigger/Hold	✓	✓	✓	✓
Laser Switch	✓	✓	✓	✓
<b>Interfaces:</b>				
USB	standard	standard	standard	standard
RS485	optional	–	standard	–
Profibus	optional	–	–	optional
Profinet	optional	–	–	optional
Ethernet	optional	–	–	optional
Modbus	optional	–	–	optional

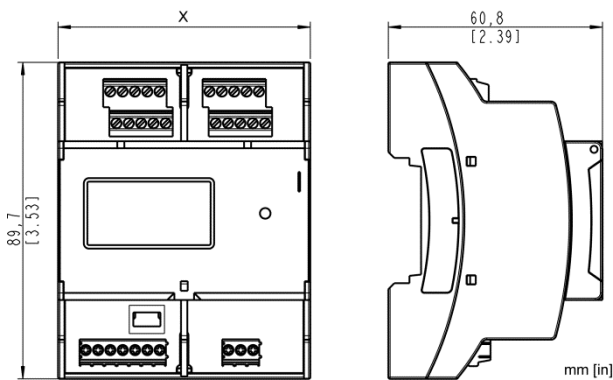
## Dimensions

### Metal Box (MI3COMM)

Height: 31.5 (1.2)



### DIN Rail Box (MI3COMM...)



Width	MI3COMMN	MI3COMM	MI3COMM...
X	DIN 3TE: 53.6 mm (2.1 in)	DIN 4TE: 71.6 mm (2.8 in)	DIN 6TE: 107.6 mm (4.2 in)

## Options

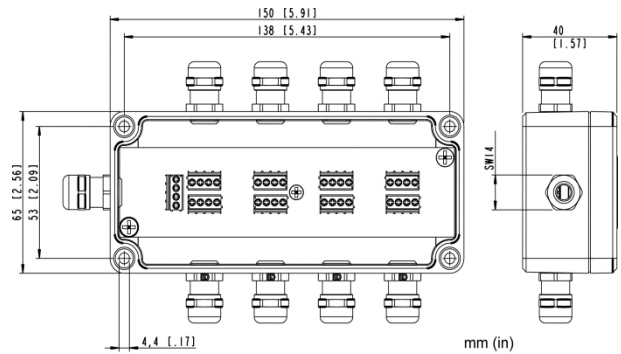
Options must be specified at time of order.

- Fieldbuses for Comm Box:  
RS485, Profibus, Profinet, Ethernet, Modbus
- 4 analog output channels for Comm Box, DIN 6TE:  
mA or V, all channels electrically isolated

## Accessories

Accessories include items that may be ordered at any time and added on-site:

- Multi-Channel Box to support up to 8 sensing heads in a network (XXXMICONNBOX)
- USB/RS485 Adapter for boxes with RS485 interface (XXXUSB485)



Multi-Channel Box (XXXMI3CONNBOX)

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