

MIB-S-200

Fast Micro-Bolometer for temperature measurement

Ref: MIB-S-200-73-70-4-####

SN: I#####

SW version: v#.##

Texys sensors are designed for data recording. If the user wants to include this sensor in a close loop system or active control, he must assume all responsibility.

Target temperature measurement		
Range	0 to +200	°C
Accuracy at FS	See accuracy table	
Response time	20	ms
Sampling frequency	100	Hz
Measurement resolution	0.1	°C
Warm-up time	2	min
Spatial resolution	70 x 4	pixels
Output resolution	70 x 1	pixels
Warm-up time	2	min
Sensitive Element	Micro-bolometer matrix	
Wave Length	8 to 14	µm
Calibrator	<input type="checkbox"/> Fluke 4181 <input checked="" type="checkbox"/> ECN 100 N12	
Horizontal field of view	65.84	°
Vertical field of view	4.23	°
Lens protection	PEHD	

Internal temperature measurement		
Accuracy	±0.3	°C
Resolution	0.1	°C

Common		
CAN bus	2.0A or B	
Output Data	Calibrated temperature and Ambient temperature: 12 bits per channel	
Parameters	CAN type / Baud rate / Frequency / Identifiers	
Baud rate	500kbps or 1Mbps	
Frequency	1Hz to 100Hz, request mode	
Supply Voltage	6 to 30	V
Supply Current (at 12V)	45	mA
Dimensions	40x30.5x18.5	mm
Material	Aluminium	
Weight (without cable)	35	g
Protection	IP64	
Vibration test	20Gpp 5'	
Shock	500	G
Operating Temp	-20 to +85	°C
Storage Temp	-40 to +125	°C

Software setup	
CAN type	2.0A
Baudrate	1Mbps
Frequency	10Hz
Rx trig ID	0x7F0
Tx1 ID	0x5F0
Tx2 ID	0x3F0

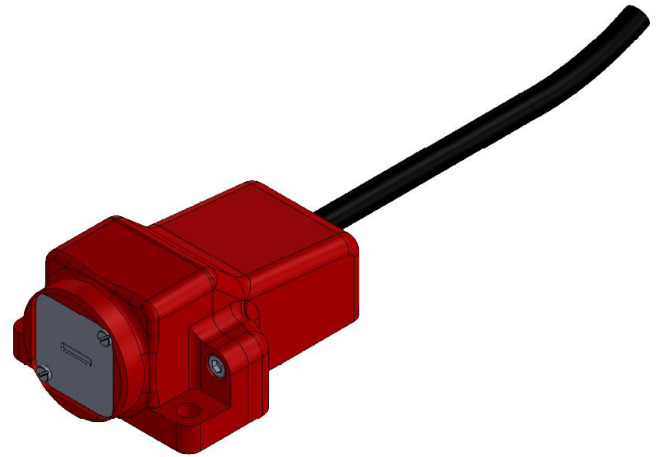
Hardware setup	
CAN termination resistor	Not connected

Sensor readings	
Target temperature	Mean of sensor readings
60°C	... °C
180°C	... °C

Cable specification:

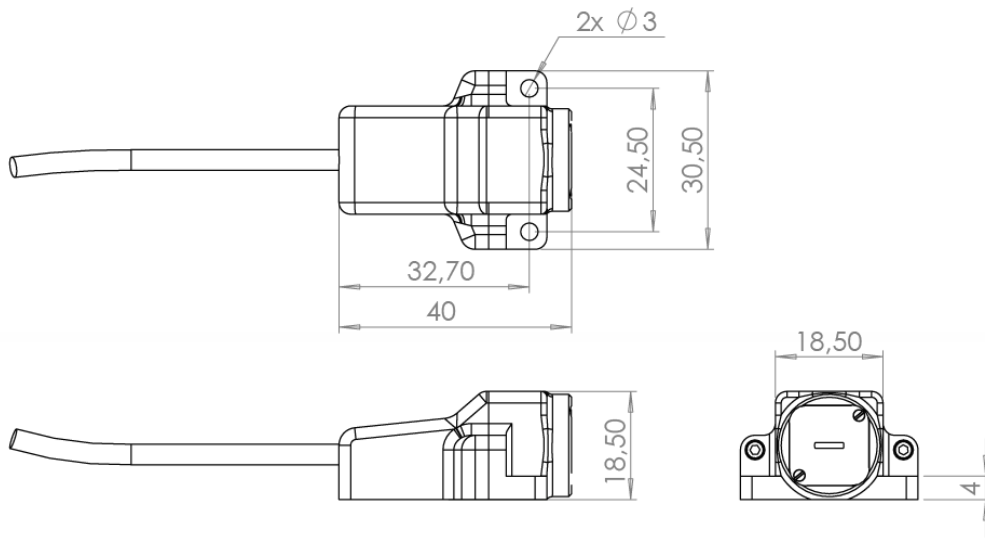
- Cable: 6x26AWG FEP tinned copper braided cable 250V 200°C
- Length: 1000 mm ±10%
- Connector: N/A

Colour	Function	Pin
Red	Supply	
Black	0V	
Green	CAN High	
White	CAN Low	
Blue	Do not connect and isolate	
Yellow	Do not connect and isolate	
Braid		

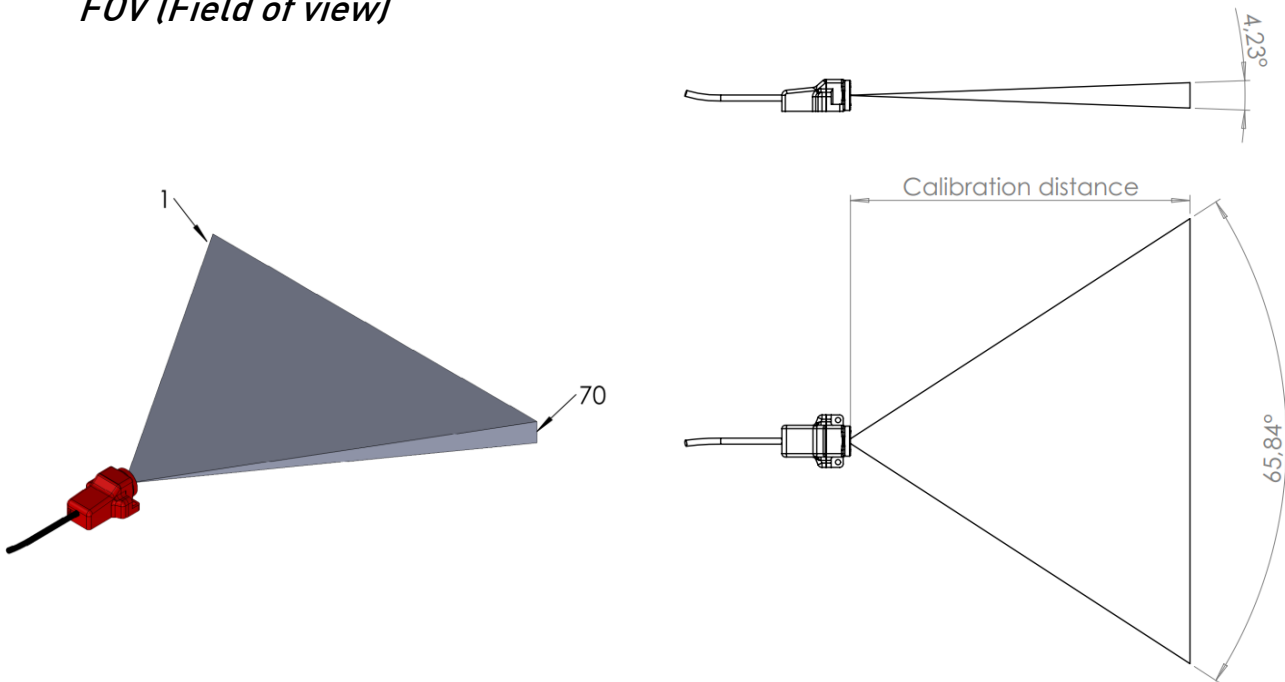


Ordering ref:
MIB-S-200-73-70-4- Distance
Calibration distance in mm
ex: MIB-S-200-73-70-4-610

Mechanical definition



FOV (Field of view)



Output pattern



Accuracy table

Accuracy table % FS			
Target temperature	Sensor ambient temperature		
	25°C	60°C	80°C
≤20°	2	2	
30°	1	2	2
80°	1	1	1
100°	1	1	1
200°	1	1	1

CAN data output

Pixel and ambient temperatures are coded as follow:

- Unsigned integer 12bits
- MSB first
- Resolution: 0.1°C/bit

Frame #1 (default Tx1 Frame ID: 0x5F0)

Output rate: 10Hz

ID	Byte 0	Byte 1
0x05F0	Ambient temperature	Status bits ⁽¹⁾

(1): Status bits definition:

Bit	3	2	1	0
Name	Not used	Not used	Warm-up	Reset
Description	-	-	Set to 1 during 130 seconds after power up	Set to 1 during 2 seconds after power up

Frame #2 (default Tx2 Frame ID: 0x3F0) Output rate: 1 to 100Hz

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x3F0	Pixel 1 temp.	Pixel 2 temp.	Pixel 3 temp.	Pixel 4 temp.	Pixel 5 temp.	-	-	-

Frame #3

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x3F1	Pixel 6 temp.	Pixel 7 temp.	Pixel 8 temp.	Pixel 9 temp.	Pixel 10 temp.	-	-	-

...

Frame #15

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x3FD	Pixel 66 temp.	Pixel 67 temp.	Pixel 68 temp.	Pixel 69 temp.	Pixel 70 temp.	-	-	-

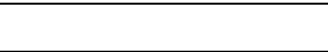
Changing parameters

Must be setup according to Texense's CAN protocol, or by using the Texense Android Smart Tool (tAST®) with your android device. Contact us at info@texense.com

N°	Parameter	Raw values	values	Comments
0x00	CAN type	0x00	CAN 2.0A (std. 11bits)	default
		0x01	CAN 2.0B (ext. 29bits)	
0x01	Baudrate	0x00	1000 Kbps	default
		0x01	500 Kbps	
0x02	Emission frequency	0x00	Rx frame trig	On request - 10Hz max.
		0x01	1 Hz	Integration time = 1s Noise* ≤ 0.1°C
		0x02	5 Hz	Int. Time = 200ms Noise* ≤ 0.1°C
		0x03	10 Hz	Int. Time = 100ms Noise* ≤ 0.1°C (Default)
		0x04	50 Hz	Int. Time = 20ms Noise* ≤ 0.15°C
0x05	100 Hz	Int. Time = 10ms Noise* ≤ 0.15°C		
0x03	Rx frame ID	if CAN2.0A: 0x1 to 0x7FF		MSB
0x04		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB
				Default 0x07F0
0x05	Tx1 frame ID	if CAN2.0A: 0x1 to 0x7FF		MSB
0x06		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB
				Default 0x05F0
0x07	Tx2 frame ID	if CAN2.0A: 0x1 to 0x7FF		MSB
0x08		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB
				Default 0x03F0

For complete information, contact us at info@texense.com

*Noise is calculated as the standard deviation (one sigma).



MIB-S-200

Fast Micro-Bolometer for temperature measurement

Ref: MIB-S-200-90-70-4-###

SN: I#####

SW version: v#.##

Texys sensors are designed for data recording. If the user wants to include this sensor in a close loop system or active control, he must assume all responsibility.

Target temperature measurement		
Range	0 to +200	°C
Accuracy at FS	See accuracy table	
Response time	20	ms
Sampling frequency	100	Hz
Measurement resolution	0.1	°C
Spatial resolution	70 x 4	pixels
Output resolution	70 x 1	pixels
Warm-up time	2	min
Sensitive Element	Micro-bolometer matrix	
Wave Length	8 to 14	µm
Calibrator	<input type="checkbox"/> Fluke 4181 <input checked="" type="checkbox"/> ECN 100 N12	
Horizontal field of view	83.07	°
Vertical field of view	5.80	°
Lens protection	PEHD	

Internal temperature measurement		
Accuracy	±0.3	°C
Resolution	0.1	°C

Common		
CAN bus	2.0A or B	
Output Data	Calibrated temperature and Ambient temperature: 12 bits per channel	
Parameters	CAN type / Baud rate / Frequency / Identifiers	
Baud rate	500kbps or 1Mbps	
Frequency	1Hz to 100Hz, request mode	
Supply Voltage	6 to 30	V
Supply Current (at 12V)	45	mA
Dimensions	40x30.5x18.5	mm
Material	Aluminium	
Weight (without cable)	35	g
Protection	IP64	
Vibration test	20Gpp 5'	
Shock	500	G
Operating Temp	-20 to +85	°C
Storage Temp	-40 to +125	°C

Software setup	
CAN type	2.0A
Baudrate	1Mbps
Frequency	10Hz
Rx trig ID	0x7F0
Tx1 ID	0x5F0
Tx2 ID	0x3F0

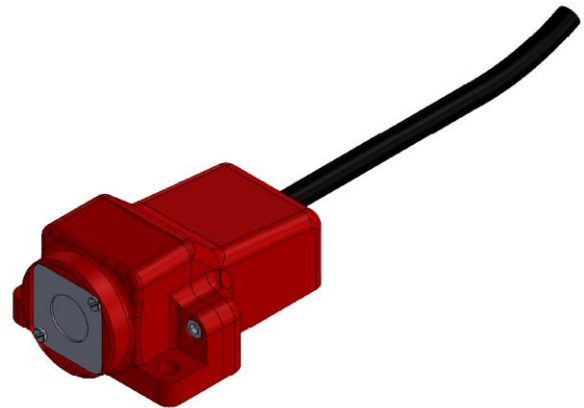
Hardware setup	
CAN termination resistor	Not connected

Sensor readings	
Target temperature	Mean of sensor readings
60°C	...°C
180°C	...°C

Cable specification:

- Cable: 6x26AWG FEP tinned copper braided cable 250V 200°C
- Length: 1000 mm ±10%
- Connector: N/A

Colour	Function	Pin
Red	Supply	
Black	0V	
Green	CAN High	
White	CAN Low	
Blue	Do not connect and isolate	
Yellow	Do not connect and isolate	
Braid		

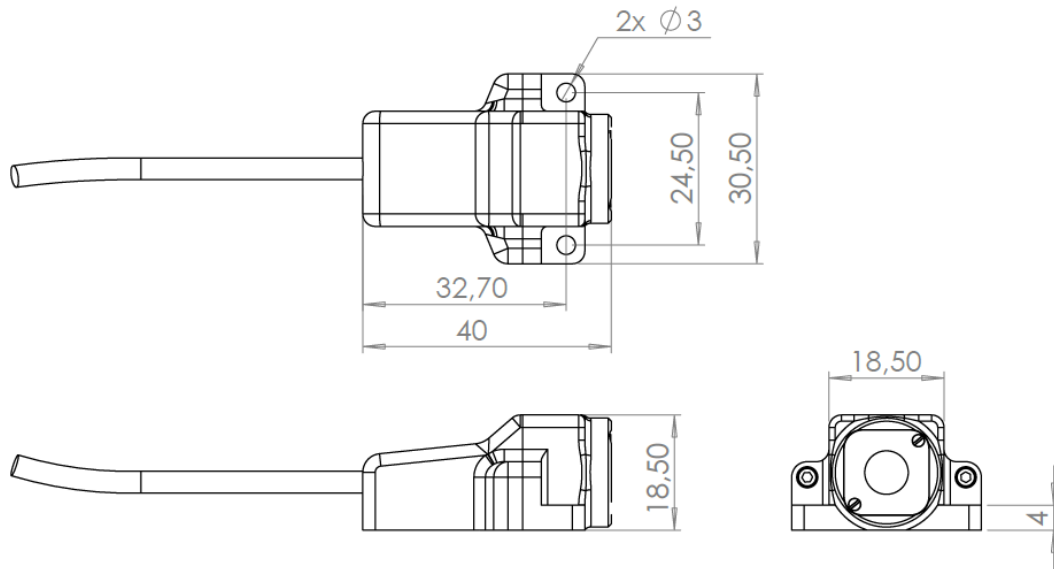


Ordering ref:
MIB-S-200-90-70-4-Distance

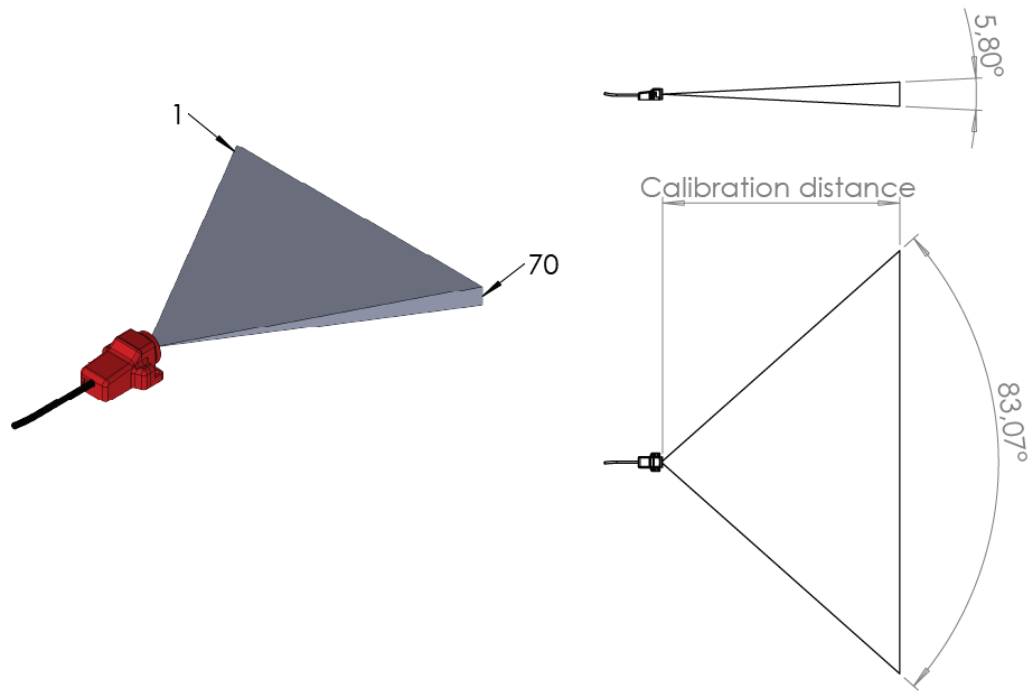
Calibration distance in mm

ex: MIB-S-200-90-70-4-240

Mechanical definition



FOV (Field of view)



Output pattern



Accuracy table

Accuracy table % FS			
Target temperature	Sensor ambient temperature		
	25°C	60°C	80°C
≤20°	2	2	
30°	1	2	2
80°	1	1	1
100°	1	1	1
200°	1	1	1

CAN data output

Pixel and ambient temperatures are coded as follow:

- Unsigned integer 12bits
- MSB first
- Resolution: 0.1°C/bit

Frame #1 (default Tx1 Frame ID: 0x5F0)

Output rate: 10Hz

ID	Byte 0	Byte 1
0x05F0	Ambient temperature	Status bits ⁽¹⁾

(1): Status bits definition:

Bit	3	2	1	0
Name	Not used	Not used	Warm-up	Reset
Description	-	-	Set to 1 during 130 seconds after power up	Set to 1 during 2 seconds after power up

Frame #2 (default Tx2 Frame ID: 0x3F0)

Output rate: 1 to 100Hz

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x3F0	Pixel 1 temp.	Pixel 2 temp.	Pixel 3 temp.	Pixel 4 temp.	Pixel 5 temp.	-		

Frame #3

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x3F1	Pixel 6 temp.	Pixel 7 temp.	Pixel 8 temp.	Pixel 9 temp.	Pixel 10 temp.	-		

...

Frame #15

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x3FD	Pixel 66 temp.	Pixel 67 temp.	Pixel 68 temp.	Pixel 69 temp.	Pixel 70 temp.	-		

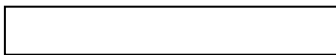
Changing parameters

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N°	Parameter	Raw values	values	Comments
0x00	CAN type	0x00	CAN 2.0A (std. 11bits)	default
		0x01	CAN 2.0B (ext. 29bits)	
0x01	Baudrate	0x00	1000 Kbps	default
		0x01	500 Kbps	
0x02	Emission frequency	0x00	Rx frame trig	On request - 10Hz max.
		0x01	1 Hz	Integration time =1s Noise* ≤ 0.1°C
		0x02	5 Hz	Int. Time = 200ms Noise* ≤ 0.1°C
		0x03	10 Hz	Int. Time = 100ms Noise* ≤ 0.1°C (Default)
		0x04	50 Hz	Int. Time = 20ms Noise* ≤ 0.15°C
		0x05	100 Hz	Int. Time = 10ms Noise* ≤ 0.15°C
0x03	Rx frame ID	if CAN2.0A: 0x1 to 0x7FF		MSB
0x04		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB
0x05	Tx1 frame ID	if CAN2.0A: 0x1 to 0x7FF		MSB
0x06		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB
0x07	Tx2 frame ID	if CAN2.0A: 0x1 to 0x7FF		MSB
0x08		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB

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*Noise is calculated as the standard deviation (one sigma).



MIB-S-200

Fast Micro-Bolometer for temperature measurement

Ref: MIB-S-200-120-70-4-###

SN: I#####

SW version: v#.##

Texys sensors are designed for data recording. If the user wants to include this sensor in a close loop system or active control, he must assume all responsibility.

Target temperature measurement		
Range	0 to +200	°C
Accuracy at FS	See accuracy table	
Response time	20	ms
Sampling frequency	100	Hz
Measurement resolution	0.1	°C
Spatial resolution	70 x 4	pixels
Output resolution	70 x 1	pixels
Warm-up time	2	min
Sensitive Element	Micro-bolometer matrix	
Wave Length	8 to 14	µm
Calibrator	<input type="checkbox"/> Fluke 4181 <input checked="" type="checkbox"/> ECN 100 N12	
Horizontal field of view	113.4	°
Vertical field of view	9.90	°
Lens protection	PEHD	

Internal temperature measurement		
Accuracy	±0.3	°C
Resolution	0.1	°C

Common		
CAN bus	2.0A or B	
Output Data	Calibrated temperature and Ambient temperature: 12 bits per channel	
Parameters	CAN type / Baud rate / Frequency / Identifiers	
Baud rate	500kbps or 1Mbps	
Frequency	1Hz to 100Hz, request mode	
Supply Voltage	6 to 30	V
Supply Current (at 12V)	45	mA
Dimensions	40x30.5x18.5	mm
Material	Aluminium	
Weight (without cable)	35	g
Protection	IP64	
Vibration test	20Gpp 5'	
Shock	500	G
Operating Temp	-20 to +85	°C
Storage Temp	-40 to +125	°C

Software setup	
CAN type	2.0A
Baudrate	1Mbps
Frequency	10Hz
Rx trig ID	0x7F0
Tx1 ID	0x5F0
Tx2 ID	0x3F0

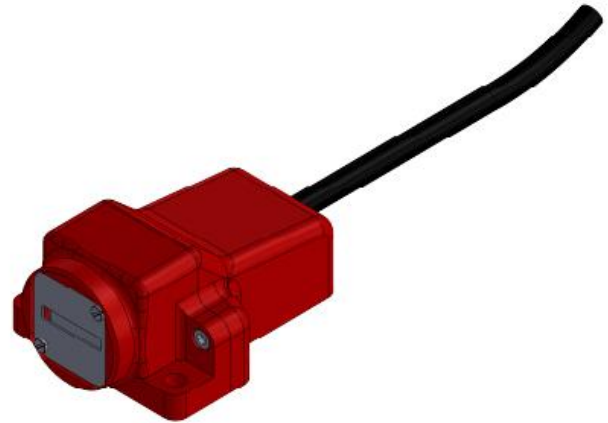
Hardware setup	
CAN termination resistor	Not connected

Sensor readings	
Target temperature	Mean of sensor readings
60°C	...°C
180°C	...°C

Cable specification:

- Cable: 4x26AWG FEP tinned copper braided cable 250V 200°C
- Length: 1000 mm ±10%
- Connector: N/A

Colour	Function	Pin
Red	Supply	
Black	0V	
Green	CAN High	
White	CAN Low	
Braid		



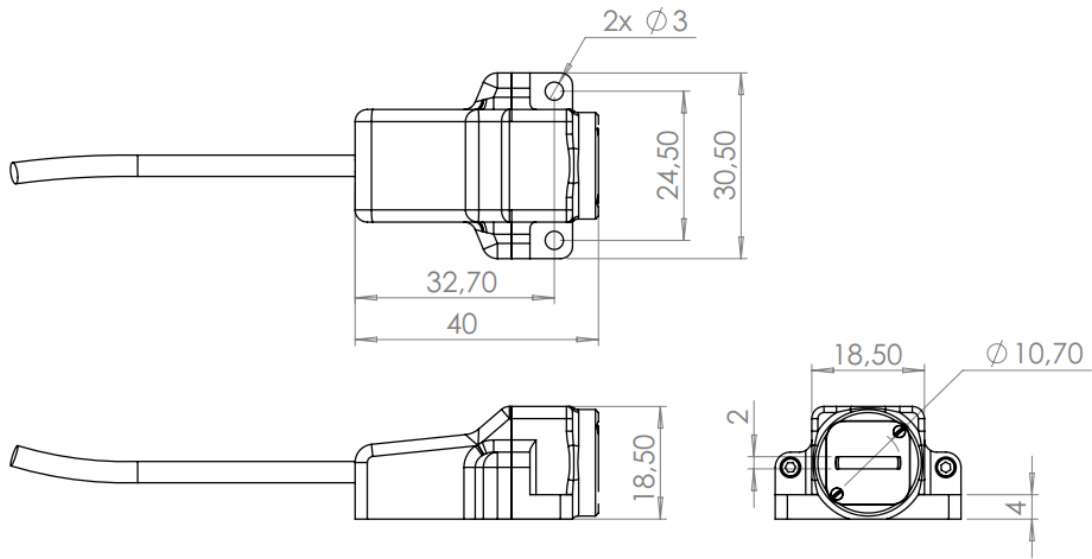
Ordering ref:

MIB-S-200-120-70-4-Distance

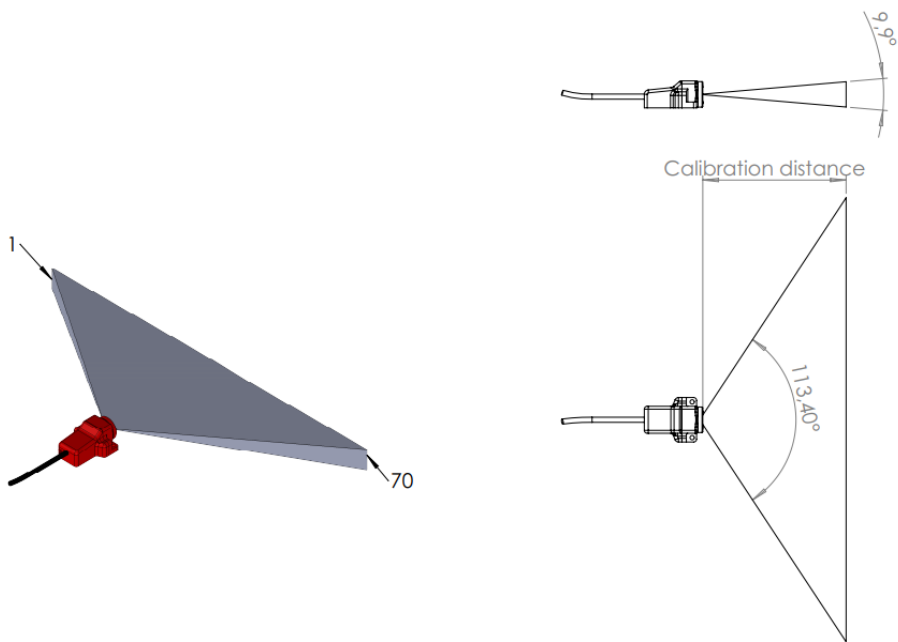
Calibration distance in mm

ex: MIB-S-200-120-70-4-240

Mechanical definition



FOV (Field of view)



Output pattern



Accuracy table

Accuracy table % FS			
Target temperature	Sensor ambient temperature		
	25°C	60°C	80°C
≤20°	2	2	
30°	1	2	2
80°	1	1	1
100°	1	1	1
200°	1	1	1

CAN data output

Pixel and ambient temperatures are coded as follow:

- Unsigned integer 12bits
- MSB first
- Resolution: 0.1°C/bit

Frame #1 (default Tx1 Frame ID: 0x5F0)

Output rate: 10Hz

ID	Byte 0	Byte 1
0x05F0	Ambient temperature	Status bits ⁽¹⁾

(1): Status bits definition:

Bit	3	2	1	0
Name	Not used	Not used	Warm-up	Reset
Description	-	-	Set to 1 during 130 seconds after power up	Set to 1 during 2 seconds after power up

Frame #2 (default Tx2 Frame ID: 0x3F0)

Output rate: 1 to 100Hz

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x3F0	Pixel 1 temp.	Pixel 2 temp.	Pixel 3 temp.	Pixel 4 temp.	Pixel 5 temp.	-	-	-

Frame #3

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x3F1	Pixel 6 temp.	Pixel 7 temp.	Pixel 8 temp.	Pixel 9 temp.	Pixel 10 temp.	-	-	-

...

Frame #15

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x3FD	Pixel 66 temp.	Pixel 67 temp.	Pixel 68 temp.	Pixel 69 temp.	Pixel 70 temp.	-	-	-

Changing parameters

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N°	Parameter	Raw values	values	Comments
0x00	CAN type	0x00	CAN 2.0A (std. 11bits)	default
		0x01	CAN 2.0B (ext. 29bits)	
0x01	Baudrate	0x00	1000 Kbps	default
		0x01	500 Kbps	
0x02	Emission frequency	0x00	Rx frame trig	On request - 10Hz max.
		0x01	1 Hz	Integration time =1s Noise* ≤ 0.1°C
		0x02	5 Hz	Int. Time = 200ms Noise* ≤ 0.1°C
		0x03	10 Hz	Int. Time = 100ms Noise* ≤ 0.1°C (Default)
		0x04	50 Hz	Int. Time = 20ms Noise* ≤ 0.15°C
		0x05	100 Hz	Int. Time = 10ms Noise* ≤ 0.15°C
0x03	Rx frame ID	if CAN2.0A: 0x1 to 0x7FF		MSB
0x04		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB
0x05	Tx1 frame ID	if CAN2.0A: 0x1 to 0x7FF		MSB
0x06		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB
0x07	Tx2 frame ID	if CAN2.0A: 0x1 to 0x7FF		MSB
0x08		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB

For complete information, contact us at info@texense.com

*Noise is calculated as the standard deviation (one sigma).