IRN8C-F1-V2

8-CHANNEL INFRARED TEMPERATURE SENSOR FOR CAN BUS – In line housing

Ref :

SN: | Software version :

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.

Range	-20 to +200 -20 to +140	°C
Measurement	8 channels in line	
Accuracy at FS	+/- 1% FS	
Response time	260 at FS	ms
CAN bus2.0A	120Ω : ☐yes ☐no	
Output Data	Calibrated temperature : 2 bytes per channel (signed int)	
Resolution	0.1	°/bit
Parameters	Identifiers, Baud rate, Frequency, Degrees, Gain factor, Response time	
Baud rate	125k to 1Mbps	
Frequency	1Hz, 10Hz, request mode	
Supply Voltage	6 to 16	V
Supply Current	17	mA
Sensitive Element	Thermopile with Silicon Lens	
Wave Length	8 to 14	µm
Calibrator	☐**Fluke 4181** ☐**160x200mm heating plate + Fluke 714**	
Field of view (90% radiation)	6.5 :1 (30mm at 200mm)	
Mean Angle between channels	4.5	°
Total width	See Table (total angle 41.5°)	
Emissivity / Distance Tuning	Gain Factor by CAN 0.5 to 2	
Lens protection	Replaceable window (PEHD)	
Dimensions	31x11x17	mm
Material	Aluminum	
Weight (without cable)	15	g
Protection	IP64	
Vibration test	20Gpp 5'	
Shock	500	G
Operating Temp	-20 to +100	°C
Storage Temp	-40 to +125	°C

Distance	Øtarget per channel	Total width
200 mm	30 mm	152 mm
300 mm	45 mm	228 mm
400 mm	60 mm	304 mm
500 mm	75 mm	380 mm
600 mm	90 mm	456 mm
700 mm	105 mm	532 mm

Sensor Readings		
channel	**..... °C**	**..... °C**
1		
2		
3		
4		
5		
6		
7		
8		
Calibration Distance		mm

Identifiers (hexa)	
Rx	
Tx1	
Tx2	
Parameters	

Dynamic compensation : .....

Cable :

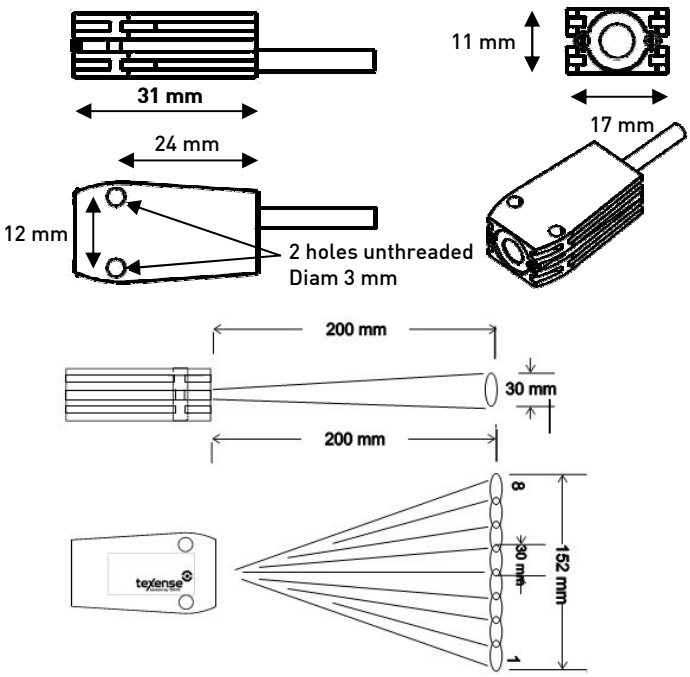
☐ 4x26AWG FEP tinned copper braided cable 250V 200°C

☐ EPD116760A

Length: ..... mm Tubing: .....

Connector: .....

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



Ordering ref ex : IRN8C-F1-200-V2

IRN8C-F1-Range–V2

200 (200°C)
140 (140°C)

Data output

Frame #1 **(default Tx1 Frame ID: 0x03F0)**

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03F0	Channel1 MSB	Channel1 LSB	Channel2 MSB	Channel2 LSB	Channel3 MSB	Channel3 LSB	Channel4 MSB	Channel4 LSB
	Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit	

Frame #2 **(default Tx2 Frame ID: 0x03F4)**

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03F4	Channel5 MSB	Channel5 LSB	Channel6 MSB	Channel6 LSB	Channel7 MSB	Channel7 LSB	Channel8 MSB	Channel8 LSB
	Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit	

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

CAN parameters:

N°	Parameter	Raw values	values	Comments	
0x00	Baudrate	0x00	1000 Kbps	default	
		0x01	500 Kbps		
		0x02	250 Kbps		
		0x03	125 Kbps		
0x01	Emission frequency	0x02	10 Hz	default	
		0x03	1 Hz		
		0x04	Rx frame trig	On request - 10Hz max.	
0x02	Rx frame ID	0 to 0x07	0x0000 to 0x07F0	MSB of triggering frame ID	Default 0x07F0
0x03		0 to 0xFF		LSB of triggering frame ID	
0x04	Tx1 frame ID	0 to 0x07	0x0000 to 0x07F0	MSB of data frame 1 ID	Default 0x03F0
0x05		0 to 0xFF		LSB of data frame 1 ID	
0x06	Tx2 frame ID	0 to 0x07	0x0000 to 0x07F0	MSB of data frame 2 ID	Default 0x03F4
0x07		0 to 0xFF		LSB of data frame 2 ID	

Sensor parameters:

0x08	Degree	0	Fahrenheit	1/10 Fahrenheit degree	
		1	Celsius	1/10 Celsius degree (default)	
0x09	Gain factor	500 to 2000	1/1000 (0.5 to 2)	MSB	Default 1000
0x0A				LSB	
0x0B	Response time	100 to 10000 0: disable	ms (0.1 to 10s)	MSB	Default 400
0x0C				LSB	
0x0D	Dynamic compensation	0	Off	Compensation for quick changes in ambient (sensor) Temperature	Default ON
		1	ON		

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