IRN4C-F1

4 (from 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	4 channels in line	
Accuracy at FS	+/- 1%	FS
Response time	260 at FS (= 400 ms on raw input)	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, Compensation	
Baud rate	125k to 1Mbps	
Frequency	1Hz, 10Hz, on request	
Supply Voltage	6 to 16	V
Supply Current	17	mA
Sensitive Element	Thermopile with Silicon Lens	
Wave Length	8 to 14	µm
Calibrator	Land P550P	
Field of view (90% radiation)	6.5 :1 at 200mm	
	3.3 : 1 at 50mm	
Mean Angle between channels	9° channel1 to3 & 6 to 8	
	13°5 channel 3 to 6	
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

Ordering ref ex : IRN4C-F1-200
IRN4C- F1 – Range

200 (200°C)
140 (140°C)

Sensor Readings		
Channel	..... °C	..... °C
1		
3		
6		
8		
Calibration Distance		mm

Identifiers (Hexa)	
Rx	
Tx1	
Parameters	

Dynamic compensation : .....

Cable :

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

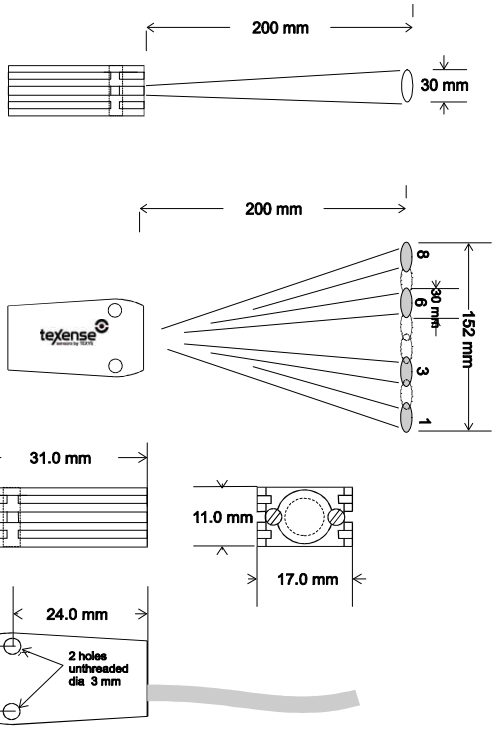
☐ EPD116760A

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

Connector: .....

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

Distance	Ø target per channel	Total width
50 mm	15 mm	40 mm
100 mm	19 mm	75 mm
150 mm	24 mm	112 mm
200 mm	30 mm	152 mm
300 mm	45 mm	228 mm
400 mm	60 mm	304 mm



Data output
Frame #1 **(default Tx1 Frame ID: 0x3F0)**

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x3F0	Channel1 MSB	Channel1 LSB	Channel3 MSB	Channel3 LSB	Channel6 MSB	Channel6 LSB	Channel8 MSB	Channel8 LSB
	Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit	

Parameters table

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	0 to 0x07	MSB of triggering frame ID	Default 7F0
0x03		0 to 0xF0	0 to 0xF0	LSB of triggering frame ID	
0x04	Tx1 frame ID	0 to 0x07	0 to 0x07	MSB of data frame 1 ID	Default 3F0
0x05		0 to 0xF0	0 to 0xF0	LSB of data frame 1 ID	
0x06	Tx2 frame ID				
0x07					

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	MSB	Default 1000
0x0A				LSB	
0x0B	Response time	100 to 10000 0: disable	ms	MSB	Default 400
0x0C				LSB	
0x0D	Dynamic compensation	0	Off	Compensation for quick changes in ambient (sensor) Temperature	
		1	On		

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