

IRN-RC-M

Infrared Temperature Sensor for CAN bus Master

SN: I#####

Texense sensors are designed for data logging. Should the users want to include this sensor in a closed loop system, they must undertake total responsibility from doing so.

Measurement features		
Range	-20 to +200	°C
Measurement	3 to 8 cells	
Accuracy	±1	%FS
Response time	100	ms
Sampling frequency	50	Hz
CAN bus features		
CAN bus	2.0A	
120 Ω CAN bus termination	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Parameters	Identifiers, baudrate, frequency, degrees	
Baudrate	125k to 1M	bps
Resolution	0.1	°/bit
Output data	Calibrated temperature : 2 bytes per cell (signed int.)	
Output frequency	1 to 200 request mode	Hz
Electrical features		
Supply Voltage	6 to 16	V
Supply Current	30*	mA
Mechanical features		
Dimensions	28.2 x 13 x 10	mm
Material	Aluminum	
Weight (without cable)	15	g
Environment		
Protection	IP64	
Operating Temp	-20 to +85	°C
Storage Temp	-40 to +125	°C

*Max current with 8 cells (1.4mA per cell) and CAN at 50Hz

Ordering ref:

IRN-RC-MASTER

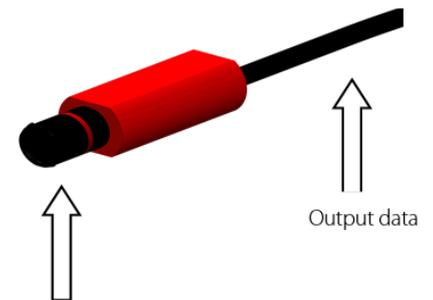
Date		Operator	
Customer			
Order			
Ref	IRN-M-200-#		

CAN Identifiers	
Rx	0x7F0
Tx1	0x3F0
Tx2	0x3F4
Tx3	-
Tx4	-
Parameters	-
Ambient temperature frame	Disabled
Degree setting	Celsius

Cable		
<input checked="" type="checkbox"/> Default 4x26AWG FEP tinned copper braided cable 250V 200°C <input type="checkbox"/> Optional EPD117723A Length: 1000 mm ±10% Tubing: None Connector: N/A		
Color	Function	Pin
Red	Supply	-
Black	0V	-
Green or Blue	CAN High	-
White	CAN Low	-
Braid		-

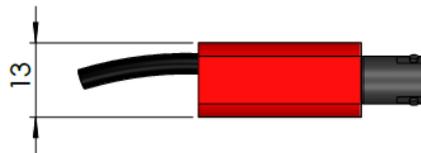
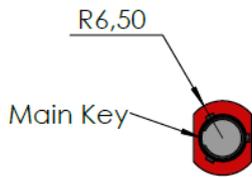
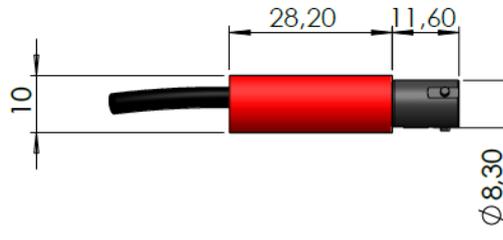
IRN-RC Master with 8STA1-02-05-S-N connector

8STA Pin out	
Pin	Color
1	Red
2	Black
3	White
4	Green
5	Braid



Connector to flex

Mechanical drawing



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	Channel 1 target temperature		Channel 2 target temperature		Channel 3 target temperature		Channel 4 target temperature	
	MSB	LSB	MSB	LSB	MSB	LSB	MSB	LSB
Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit		

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

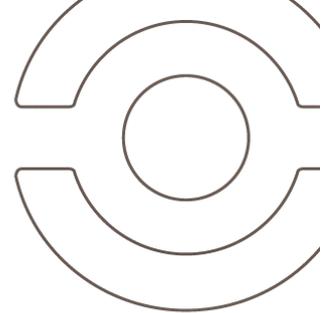
ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03F4	Channel 5 target temperature		Channel 6 target temperature		Channel 7 target temperature		Channel 8 target temperature	
	MSB	LSB	MSB	LSB	MSB	LSB	MSB	LSB
Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit		

Frame #3 (default Tx3 Frame ID: 0x03F8)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03F8	Channel 1 ambient temperature		Channel 2 ambient temperature		Channel 3 ambient temperature		Channel 4 ambient temperature	
	MSB	LSB	MSB	LSB	MSB	LSB	MSB	LSB
Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit		

Frame #4 (default Tx4 Frame ID: 0x03FC)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03FC	Channel 5 ambient temperature		Channel 6 ambient temperature		Channel 7 ambient temperature		Channel 8 ambient temperature	
	MSB	LSB	MSB	LSB	MSB	LSB	MSB	LSB
Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit		Resolution: 0.1°/bit		



Changing parameters

Must be setup according to CAN protocol, or by using the tWist® software (texense Windows software tool) with the tSIB (texense Smart Interface Box)

N°	Parameter	Raw values	values	Comments	
0x00	Baudrate	0x00	1000 Kbps	default	
		0x01	500 Kbps		
		0x02	250 Kbps		
		0x03	125 Kbps		
0x01	Emission frequency	0x00	Rx frame trig		
		0x01	1 Hz		
		0x02	5 Hz		
		0x03	10 Hz	default	
		0x04	50 Hz		
		0x05	100 Hz		
		0x06	200 Hz		
0x02	Rx frame ID	0 to 0x07	0 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	0 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	0 to 0x07F0	MSB of data frame 2 ID	Default 0x03F4
0x07		0 to 0xFF		LSB of data frame 2 ID	
0x08	Tx3 frame ID	0 to 0x07	0 to 0x07F0	MSB of data frame 3 ID	Default 0x03F8
0x09		0 to 0xFF		LSB of data frame 3 ID	
0x0A	Tx4 frame ID	0 to 0x07	0 to 0x07F0	MSB of data frame 4 ID	Default 0x03FC
0x0B		0 to 0xFF		LSB of data frame 4 ID	
0x0C	Tx3 and Tx4 enable	0 to 1	0 to 1	Enable ambient temperature frames	Default 0

Digital input parameters:

0x0D	Degree	0	Fahrenheit	1/10 Fahrenheit degree
		1	Celsius	1/10 Celsius degree (default)