IRN3-100-20

Infrared temperature sensor dedicated to track temperature measurement

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		-40…+100	°C
Accuracy		See accuracy table	
Sensitivity	3V version	21	mV/°C
	5V version	35	
Output frequency		20	Hz
Sensitive Element		Thermopile (with protecting window)	
Wave Length		5.5 to 14	µm
Field Of View (90% radiation)		20	°
Calibrators		FLUKE 4181	
Emissivity (factory tuning)		95	%
Electrical features			
Supply Voltage		5.5 to 16	V
Supply Current		3	mA
Output Voltage	3V version	0…3	V
	5V version	0…5	
Output Impedance		47	Ω
Mechanical features			
Dimension		M12 x 40	mm
Material		Aluminium	
Weight (without cable)		15	g
Environment			
Protection		IP65	
Operating Temp		-40… +85	°C
Absolute max operating temp		-40… +125	°C
Storage Temp		-40… +125	°C

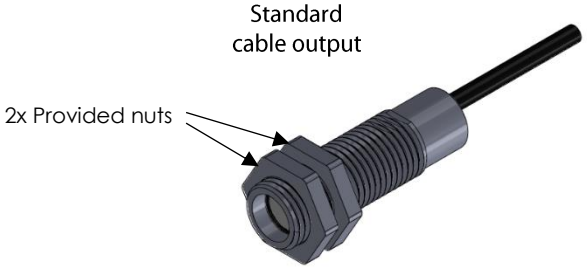
Date		Operator	
Customer			
Order			
Product Ref	IRN3-100-20-##		
SW version	V#.##		

Sensor readings	
Calibrator temperature (°C)	Signal output value (V)
25°C	…V
80°C	…V
Calibration distance	…mm

Cable		
4x26 AWG FEP tinned copper braided cable 250V 200°C Length: 1000mm±10% Tubing: 50mm Connector: on request		
Color	Function	Pin
Red	Supply input	-
Black	0V	-
White	Analog signal	-
Green	Do not connect and isolate	
Braid		

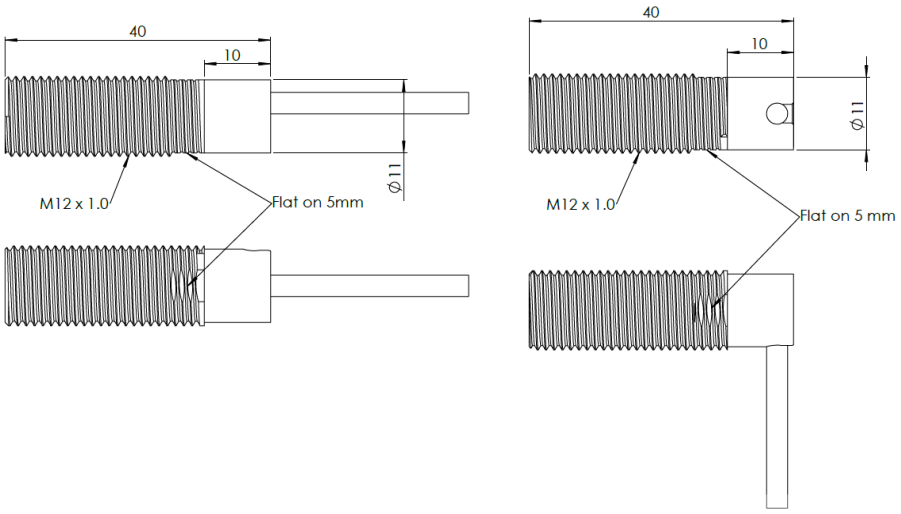
Accuracy table (%FS)			
Ambient (°C) / Target (°C)	30	80	120 (not guaranteed)
30	1.5	1.5	< 5
90	1.5	2	< 5

Standard cable output



Right angle cable output

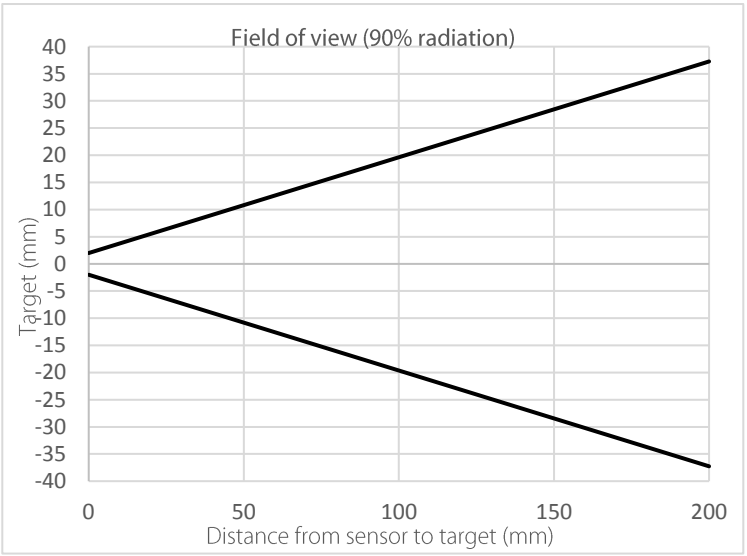
Mechanical drawing

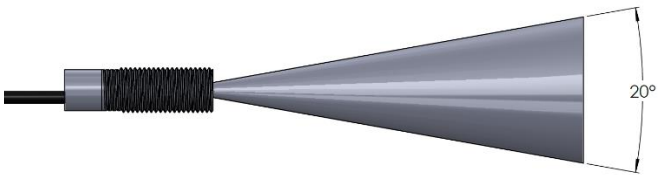


Calibration table

Output version	0-3V output (V)	0-5V output (V)
Sensitivity	21 mV/°C	35 mV/°C
Target (°C)	Output (V)	Output (V)
-40	0.060	0.100
-20	0.480	0.800
0	0.900	1.500
10	1.110	1.850
20	1.320	2.200
30	1.530	2.550
40	1.740	2.900
50	1.950	3.250
60	2.160	3.600
70	2.370	3.950
80	2.580	4.300
90	2.790	4.650
100	3.000	5.000

FOV





Ordering information

Ordering ref:

IRN3-100-20 – *Output voltage* – *RA(option)*

3V: 0…3V output
5V: 0…5V output

RA: Right angle output

ex: IRN3-100-20-5V