iSN-811C-MTCP/iSN-812-MTCP
iSN-812-MRTU/iSN-813-MTCP

IR temperature sensing module

▣ Features

- Non-contact temperature measurement
- Support Modbus RTU protocol for iSN-81x-MRTU series.
- Support Modbus TCP, RESTful and MQTT protocols for iSN-81x-MTCP series.
- Web-based configuration and monitoring interface (iSN-81x-MTCP series)
- Temperature threshold detection function
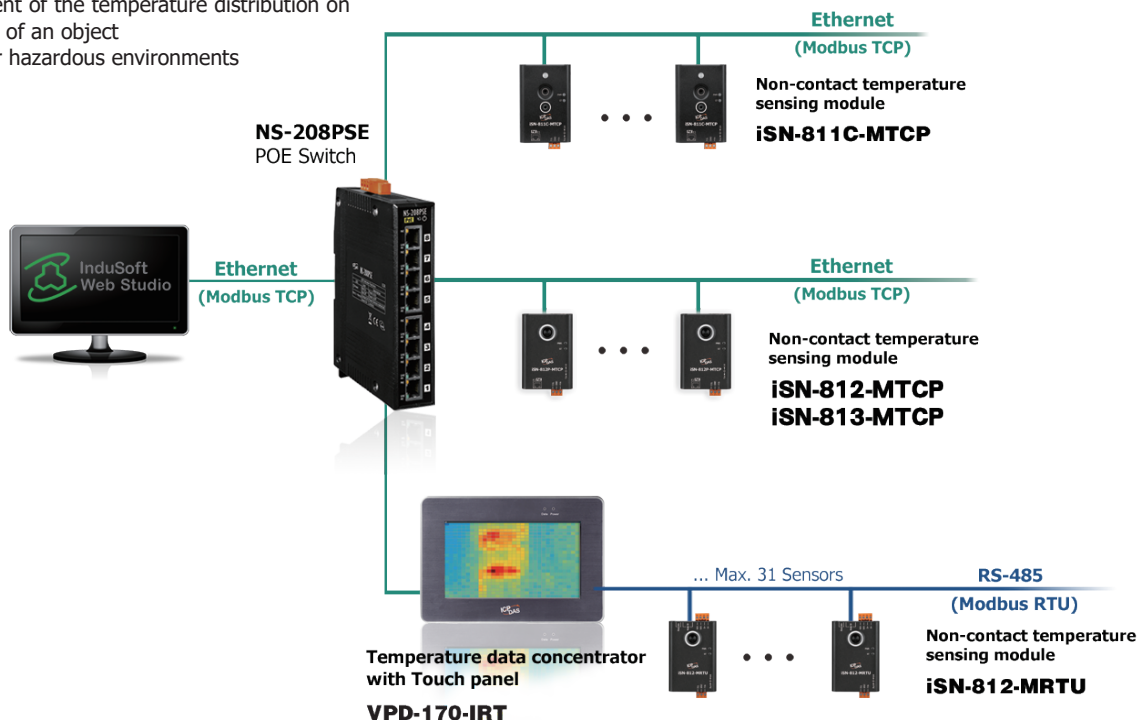- Integrated thermal imaging and field image

▣ Introduction

The iSN-81x series is a temperature measurement module developed for non-contact temperature measurement. Its diverse temperature pixels and temperature threshold detection functionality can meet various temperature measurement requirements. The iSN-81x series communicates through the Modbus RTU/TCP protocol, allowing for easy integration into SCADA systems and providing real-time temperature measurements of objects.

The iSN-81x-MTCP series supports RESTful and MQTT communication protocols. The iSN-81x-MTCP series sends measurement data to a remote database server using the RESTful method. When operating as an MQTT client, the iSN-81x-MTCP series sends measurement data to a Broker, enabling SCADA systems, management platforms, and IoT systems to easily subscribe to topics and access measurement data. The iSN-81x series is your reliable partner for equipment monitoring, data analysis, and anomaly detection in an industrial environment. Management personnel can assess whether the equipment monitored by the iSN-81x series is experiencing anomalies through measurement data. This helps with early warning and rapid response, reducing production losses caused by sudden anomalies. The long-term storage of historical data can also be used for automated decision-making or artificial intelligence training to determine whether components of monitoring equipment need replacement, achieving the goal of predictive maintenance. Whether you require real-time monitoring or long-term data analysis, the iSN-81x series can meet your needs.
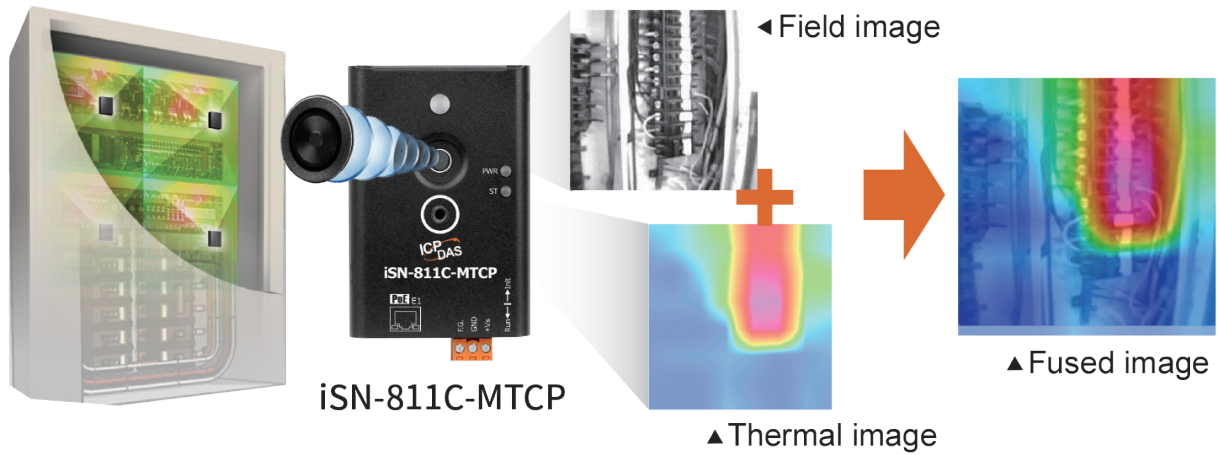
▣ Applications

- Temperature monitoring
- Measuring the temperature of moving objects
- Measurement of the temperature distribution on the surface of an object
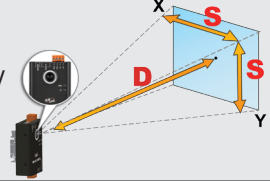- Suitable for hazardous environments

■ **Integrated thermal imaging and field imaging for instant determination of field abnormal conditions**

The iSN-811C-MTCP is the primary tool for dealing with electrical anomalies, mechanical overheating, equipment inspections and other troubleshooting issues. It uses a thermal sensor and camera to provide fused dual image information for faster problem identification.
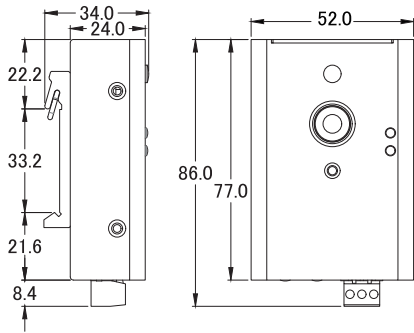

◄ Field image

iSN-811C-MTCP

▲ Thermal image

▲ Fused image

■ System Specifications

Model	iSN-812-MRTU	iSN-811C-MTCP	iSN-812-MTCP	iSN-813-MTCP
COM Ports				
Ports	RS-485	Ethernet, IEEE 802.3af,Class 1		
Protocol	Modbus RTU	Modbus TCP / MQTT / RESTful		
Temperature Measurement				
Range	-40° C ~ 300° C	-20° C ~ 250° C	-40° C ~ 300° C	-20° ~ 300° C
Accuracy	±5°C Max.			
Resolution	0.1°C			
Pixels	768 (32 x 24)	64 (8 x 8)	768 (32 x 24)	4800 (60 x 80)
Recommended Distance	2M	1M	2M	6M
FOV	**X:** 110° / D : S =1 : 2.86 **Y:**75° / D : S =1 : 1.53	**X:** 60° / D : S =1 : 1.15 **Y:** 60° / D : S =1 : 1.15	**X:** 110° / D : S =1 : 2.86 **Y:** 75° / D : S =1 : 1.53	**X:** 90° / D : S =1 : 2 **Y:** 67° / D : S =1 : 1.32
Motion picture (camera)				
Pixels	-	QVGA (320 x 240)	-	-
Fill light	-	Yes	-	-
Power				
Input Range	+10 ~ +30 VDC			
Consumption	0.9W	1.2W	0.6W	1W
Mechanical				
Installation	Din-rail or magnetic(Optional), universal joint(Optional)			
Dimensions (mm)	52 x 94 x 34 (W x H x D)	52 x 86 x 34 (W x H x D)		
Environment				
Operating Temperature	-10 ~ +70°C			
Storage Temperature	-20 ~ +80°C			
Humidity	10% ~ 95% RH, Non-condensing			

■ Dimensions (Units: mm)
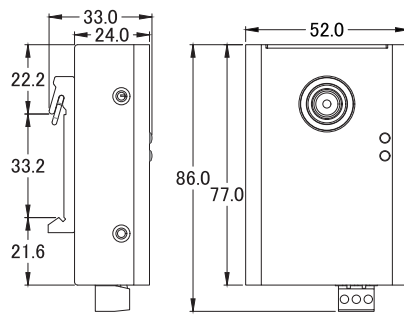
- iSN-811C-MTCP
- iSN-812-MTCP/iSN-813-MTCP
- iSN-812-MRTU
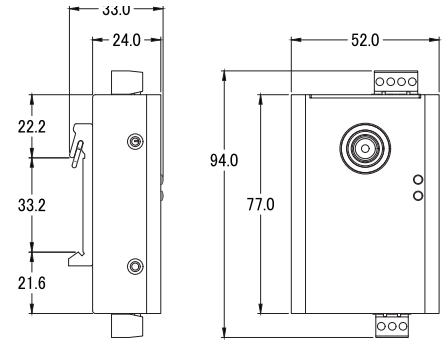
| Left View | Front View | Left View | Front View | Left View | Front View |

■ Pin Assignments

Din-rail:
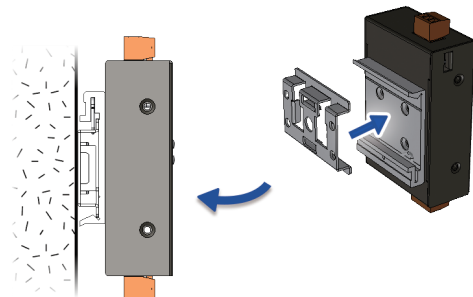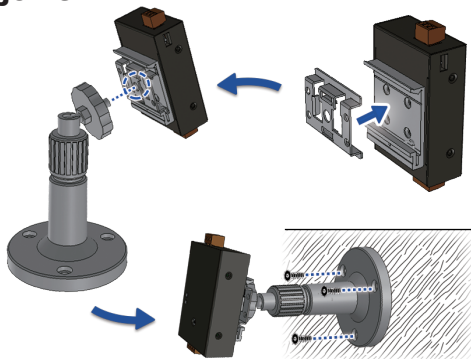

Magnetic mounting:

Din-rail Mounting Plate
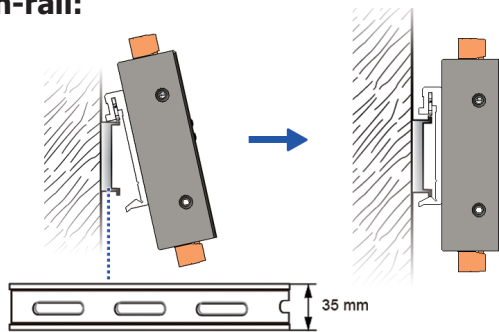
Magnet
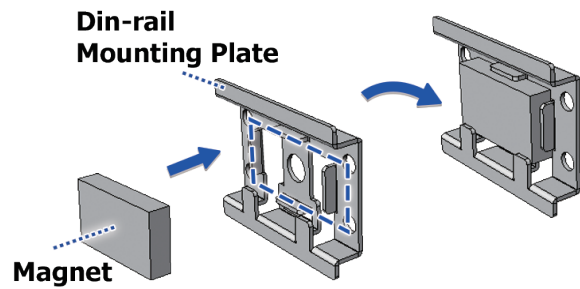
Universal joint:

■ Ordering Information

iSN-811C-MTCP CR	Modbus TCP; IR temperature sensing module with camera; 64 Pixels (RoHS)
iSN-812-MTCP CR	Modbus TCP; IR temperature sensing module; 768 Pixels (RoHS)
iSN-812-MRTU CR	Modbus RTU; IR temperature sensing module; 768 Pixels (RoHS)
iSN-813-MTCP CR	Modbus TCP; IR temperature sensing module; 4800 Pixels (RoHS)

■ Accessories

ASO-0054 CR	Universal Joint Bracket (RoHS)
ASO-0060 CR	Magnetic Base Universal Joint Bracket (RoHS)
WM01-M CR	44 mm Magnetic Mounting Kit (RoHS)