



SmartGen
ideas for power

CMM366A-WIFI

CLOUD MONITORING COMMUNICATION MODULE

USER MANUAL



SMARTGEN (ZHENGZHOU) TECHNOLOGY CO., LTD.



Chinese trademark

SmartGen English trademark

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Table 1 - Software Version

Date	Version	Note
2017-12-20	1.0	Original release.



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1 OVERVIEW

CMM366A-WIFI Cloud Monitoring Communication Module is WIFI wireless network communication protocol switch module which can achieve genset (with SCI) connect to Internet. After logging into cloud server, module will receive corresponding genset controller communication protocol from cloud server. And module gains genset data via RS485 port, USB port, LINK port or RS232 port then send the data to corresponding cloud server through WIFI wireless network for achieving user's real-time monitoring to running status and searching of running records via APP (IOS or Android) and PC terminal devices.

CMM366A-WIFI module not only can achieve genset monitoring but also can insert some digital alarm input/output signal to achieve monitoring of generator room entrance guard, guard against theft and fire facilities.

2 PERFORMANCE AND CHARACTERISTICS

- Connect to cloud server via WIFI wireless network, one to one monitoring;
- Multiple ports for communication with genset control module: RS485, RS232, LINK and USB (Host); can monitor great majority genset control modules of international first-class brands;
- Widely power supply: DC (8~35)V, can direct use genset build-in battery;
- With ARM-based 32-bit SCM, high integration of hardware and strong programming ability;
- Include with GPS locate function to achieve location information and locate genset;
- Take JSON network data communication protocol, upload real-time data variation and take compression algorithm to vastly reduce network flow at the same time;
- Users can upload monitoring data to the server for analyzing based on the user-defined "history data upload interval";
- When alarm occurs it can upload data to server immediately;
- 2 auxiliary digital input ports which can receive external alarm signal;
- 1 auxiliary relay output ports which can output various of alarm signal;
- Perpetual calendar and clock functions;
- Power and multiple communication status indicators on front panel that working status is clear at a glance;
- Lamp test function;
- Parameter adjust function: users can adjust parameters via USB port;
- Take standard π -type 35mm guide-rail installation or screw-fixed installation that the module can be installed in the genset control box;
- Modular design, self extinguishing ABS plastic shell, light weight, compact structure with easy installation.

3 SPECIFICATION

Table 2 – Technical Data

Items	Contents
Operating Voltage	DC 8.0V~35.0V, continuous power supply
Overall Power Consumption	Standby: ≤2W Working: ≤5W
Auxiliary Input	Volts free digital Input
Auxiliary Output	1A DC30V Volts free output
USB Host	A-type USB female port
RS485	Isolated type
RS232	General type
LINK	SmartGen exclusive port
USB Device	B-type USB female port
WIFI	IPX Antenna Support 802.11b/g/n standard
Case Dimensions	72.5mmx105mmx34mm
Working Conditions	Temperature: (-25~+70)°C Humidity: (20~93)%RH
Storage Condition	Temperature: (-25~+70)°C
Weight	0.15kg

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4 PANEL AND TERMINAL DESCRIPTION

4.1 PANEL INDICATOR AND BUTTONS

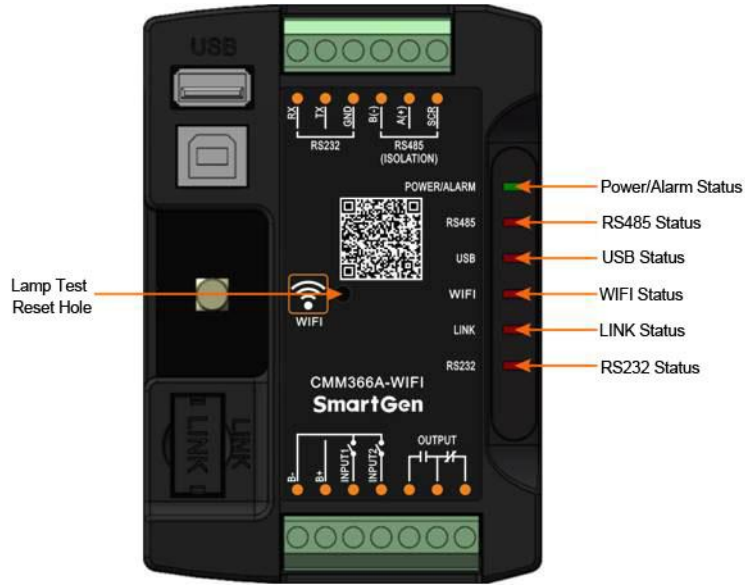


Fig.1 - Panel Indicators

Table 3 – Indicators Description

Icon	Note
POWER/ALARM	GreenLED Light: Power supply normal; connect with cloud server success; RedLED Light: Common alarm indicator.
RS485(Red)	Normally Extinguish: RS485 disabled; Normally Light: Communication fail; Blink: Communication normal.
USB(Red)	Normally Extinguish: USB(Host) disabled; Normally Light: Communication fail; Blink: Communication normal.
WIFI(Red)	Extinguish: CMM366A-WIFI login with server unsuccessfully; Normally Light: Communication fail; Blink: Communication normal.
LINK(Red)	Normally Extinguish: Disabled; Normally Light: Communication fail; Blink: Communication normal.
RS232(Red)	Normally Extinguish: RS232 disabled; Normally Light: Communication fail; Blink: Communication normal.

Lamp test/Reset:

Press this button for 1s, all the LEDs are illuminated; press for 10s, reset the module to default and all the LEDs blink for 3 times.

▲ NOTE: After reset the module, parameters need to re-configured via PC software . Please operate cautiously.

4.2 WIFI ANTENNA INTERFACE

Connect WIFI antenna with module antenna, which is showing as below,

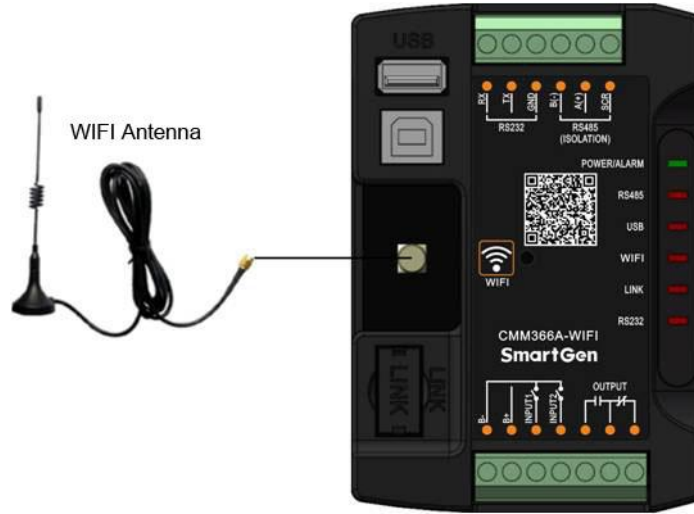


Fig.2 – WIFI Antenna Connection Diagram

4.3 RS485

Connect RS485 port with genset control module RS485 port to achieve genset data information.

If communication fails, recommend adding a 120 Ω terminal resistor. One end of shielding wire connects with SCR, the other end hangs in the air.

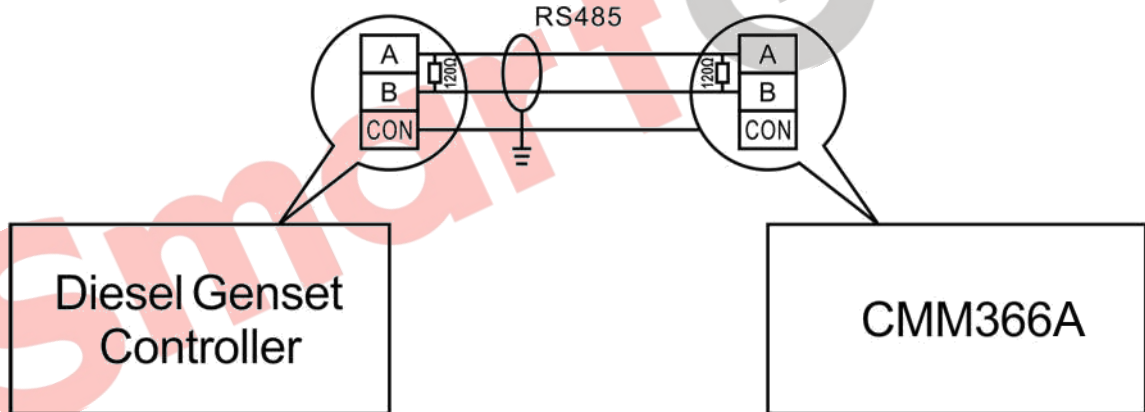


Fig.3 – RS485 Connection Diagram

4.4 RS232

Connect RS232 port with genset control module RS232 port to achieve genset data information.

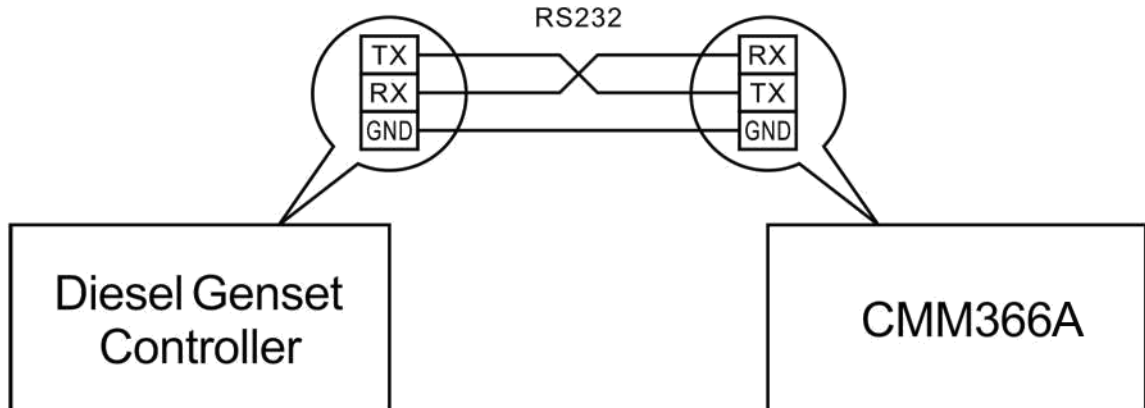


Fig.4 – RS232 Connection Diagram

4.5 LINK

Connect LINK port with genset control module LINK port to achieve genset data information.

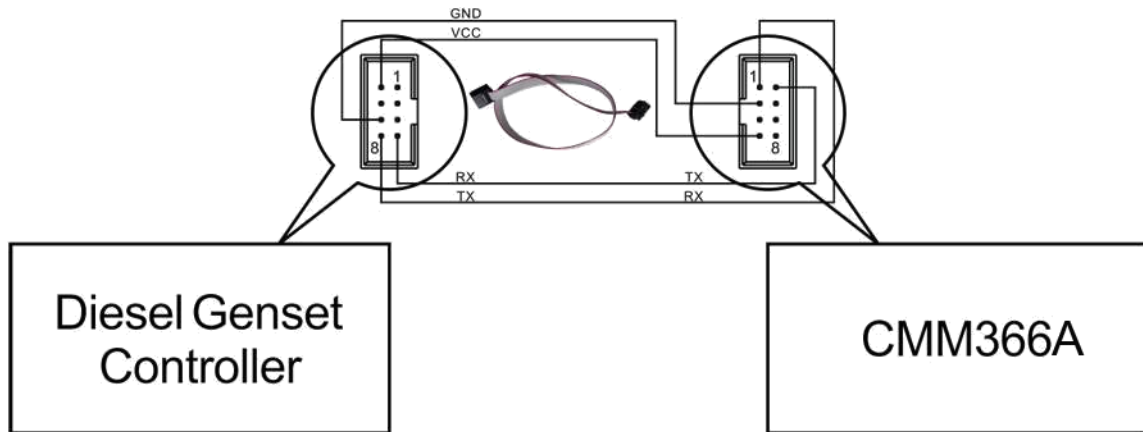


Fig.6 – LINK Connection Diagram

4.6 USB HOST

Connect A-type USB port with genset control module USB port to achieve genset data information.

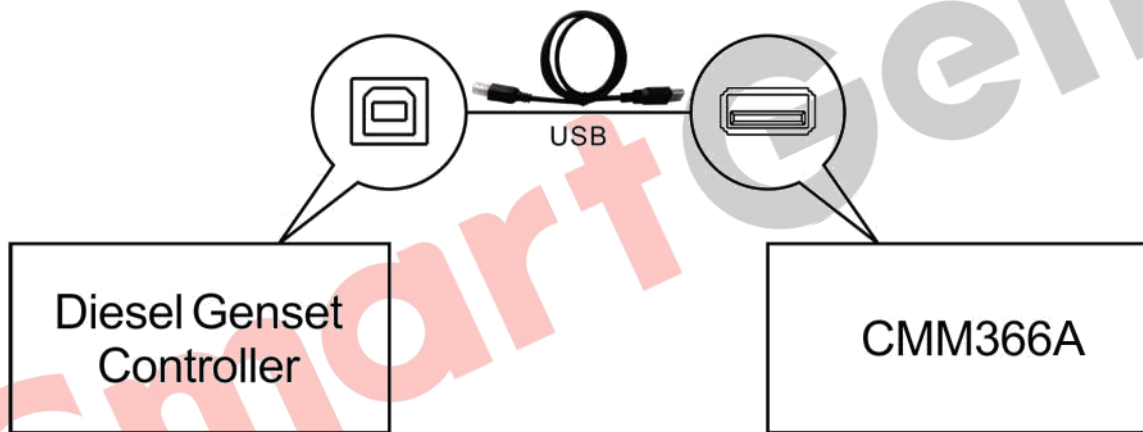


Fig. 6 - USB HOST Connection Diagram

4.7 USB DEVICE

All the parameters can be configured and view CMM366A-WIFI ID&Login password by connecting USB port with USB disk of PC software.



Fig. 7 – USB Connect PC Device

4.8 TERMINAL

Table 4 – Terminals Description

No.	Function	Cable Size	Note
1	B-	1.0mm ²	Connected with negative of starter battery.
2	B+	1.0mm ²	Connected with positive of starter battery. 3A fuse is recommended.
3	Aux. Input 1	1.0mm ²	Active when connect to B-.
4	Aux. Input 2	1.0mm ²	Active when connect to B-.
5	Aux. Output	Normally Open	Normally open output 1A DC30V
6		Common	
7		Normally Close	
8	RS485 B(-)	0.5mm ²	Impedance-120Ω shielding wire is recommended, its single-end earthed.
9	RS485 A(+)	0.5mm ²	
10	SCR	0.5mm ²	
11	RS232 RX	0.5mm ²	RS232
12	RS232 TX	0.5mm ²	
13	RS232 GND	0.5mm ²	

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5 PROGRAMMABLE PARAMETERS

5.1 CONTENTS AND SCOPES OF PARAMETERS

Table 5 – Parameter Content & Scope

No.	Items	Parameters	Defaults	Description
WIFI				
1	DHCP Enable	(0-1)	1	0:Disabled; 1:Enabled, auto obtain IP address.
2	IP Address	(0-255)	192.168.0.101	All changes of Ethernet (like IP address, Subnet address) are active after module rebooting.
3	Subnet Mask	(0-255)	255.255.255.0	
4	Default Gateway	(0-255)	192.168.0.2	
5	DNS Address	(0-255)	211.138.24.66	
6	MAC Address	(0-255)	E.g. 00.08.DC.01.02.03	
7	SSID	(0-65535)	32 characters	
8	Password	(0-65535)	64 characters	
Gateway				
1	Site Name	(0-65535)		20 Chinese characters, letters or numbers
2	Server URL	(0-65535)	www.monitoryun.com	40 characters
3	Server Port	(0-65535)	91	
4	Security Code	(0-65535)	123456	16 characters
GPS				
1	Location Info	(0-1)	0	0: Disabled 1: Manually Input
2	Longitude	((-180)-180)°	0.000000	GPS location, altitude information
3	Latitude	((-90)-90)°	0.000000	
4	Altitude	((-9999.9)-9999.9)m	100.0	
Input Port				
Input 1				
1	Setting	(0-9)	0	Default: Not used
2	Type	(0-1)	0	0: Close to Activate 1: Open to Activate See: <u>Table 6 – Digital Input Ports Content</u>
3	Delay	(0-20.0)	0.0	Action delay
Input 2				
1	Setting	(0-9)	1	Default: Lamp test
2	Type	(0-1)	0	0: Close to Activate 1: Open to Activate See: <u>Table 6 – Digital Input Ports Content</u>
3	Delay	(0-20.0)	0.0	Action delay
Output				
1	Setting	(0-14)	0	Default: Not used See: <u>Table 7 – Relay Output</u>



No.	Items	Parameters	Defaults	Description
				<i>Ports Content</i>

▲ NOTE: Configuration of monitoring genset controller model, communication port, communication baud rate, and communication ID need to be set on the (www.smartgencloud.com) platform, and monitoring module need to reboot after all parameters been set.

Table 6 – Digital Input Ports Content

No.	Item	Description
0	Not Used	Not used.
1	Lamp Test	All the indicators are illuminated when input is active.
2	Remote Control Inhibited	Cloud start/stop control is prohibited when input is active.
3	Access Alarm Input	Access alarm is uploaded to server when input is active.
4	Fire Alarm Input	Fire alarm is uploaded to server when input is active.
5	Alarm Input	External alarm is uploaded to server when input is active.
6	Reserved	
7	Reserved	
8	Reserved	
9	Factory Test Mode	It is only used for factory hardware port test when active.

Table 7 – Relay Output Ports Content

No.	Item	Description
0	Not used	Output port won't output when this item is selected.
1	Digital Input 1 Active	Output when auxiliary input 1 is active.
2	Digital Input 2 Active	Output when auxiliary input 2 is active.
3	RS485 Communication Failure	Output when RS485 communication fails.
4	Network Communication Failure	Output when Network communication fails.
5	LINK Communication Failure	Output when LINK communication fails.
6	RS232 Communication Failure	Output when RS232 communication fails.
7	Common Alarm	Output when there is an alarm.
8	Remote Control Output	Send remote control commands via cloud platform with fixed output delay 20s.
9	Reserved	
10	Reserved	
11	Reserved	
12	Reserved	
13	Reserved	
14	Reserved	

5.2 PC CONFIGURATION INTERFACE

Connecting the USB port of CMM366A-WIFI communication module with PC USB port to configure the parameters.

IP

Obtain an IP address automatically

Use the following IP address

IP Address	<input type="text" value="192 . 168 . 24 . 141"/>	<input type="button" value="Ping"/>
Subnet Mask	<input type="text" value="255 . 255 . 255 . 0"/>	
Default Gateway	<input type="text" value="192 . 168 . 24 . 1"/>	
DNS Address	<input type="text" value="172 . 24 . 79 . 1"/>	
MAC Address	<input type="text" value="00 - 08 - DC - 9D - C5 - B8"/>	

WiFi

zsywifi	📶
CMCC	📶
.	📶
STAR8800_13121201	📶
smartgen	📶
smartgen	📶
zzcwf	📶
smartgen	📶

WiFi

Password

Fig. 8 - WIFI Configuration

Gateway

Site Name	<input type="text"/>
Server Url	<input type="text" value="www.monitoryun.com"/>
Server Port	<input type="text" value="91"/> (0-65535)
Security Code	<input type="text" value="123456"/>

Fig. 9 – Gateway Configuration



Monitoring

Longitude	0.000000	Altitude	0
Latitude	0.000000	Hardware Ver.	V 1.2
Input 1		Software Ver.	V 1.0
Input 2		Issue Date	2017-12-20
Output 1		Module Time	2018-03-06(2) 16:52:52
Module ID	<input type="text" value="383033313334510900560037"/>	<input type="button" value="Print"/>	<input type="button" value="Print Setup"/>
	<input type="text"/>		

Fig.10 Module Monitoring Screen



6 SYSTEM DIAGRAM

One CMM366A-WIFI module connects with one genset monitor module. It can be connected via RS485 port, LINK port, RS232 port or USB port.

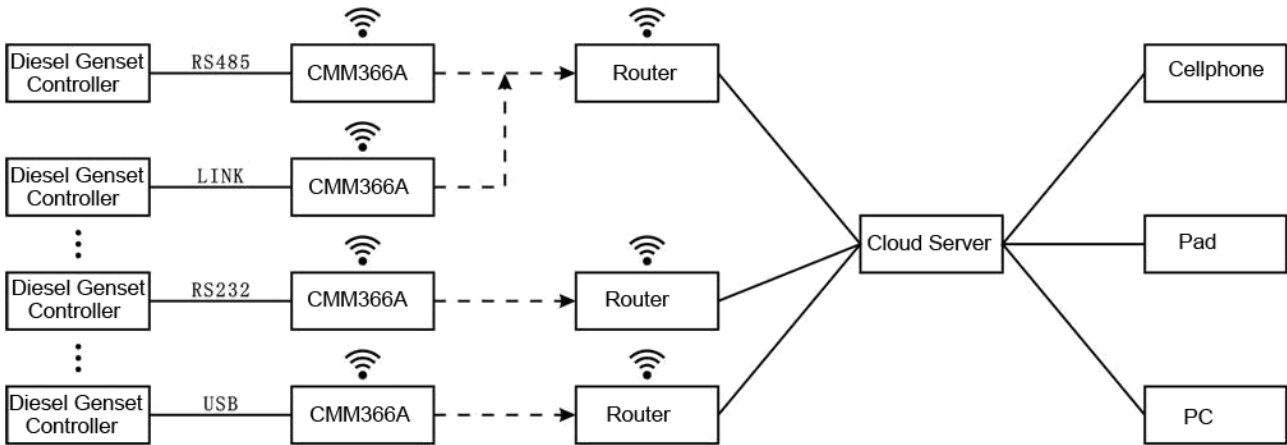


Figure 11 - CMM366A-WIFI System Application Diagram

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7 CASE DIMENSION AND INSTALLATION

2 ways for installation: 35mm guide rail in box or screw (M4) installation as below:

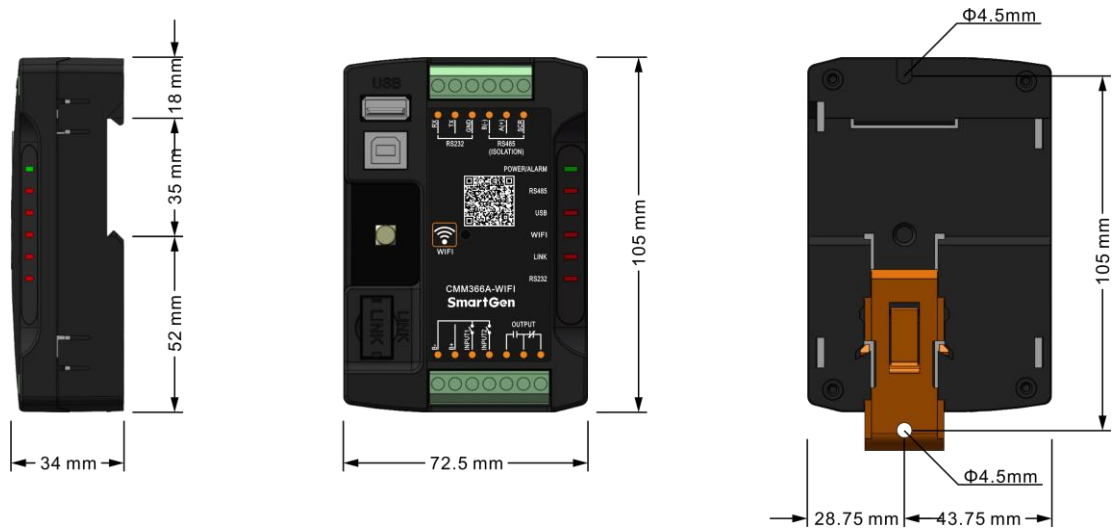


Fig. 12 - CMM366A-WIFI Case Dimension

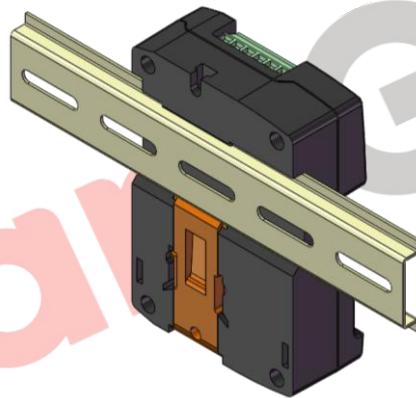


Fig. 13 - CMM366A-WIFI Guide Rail Installation

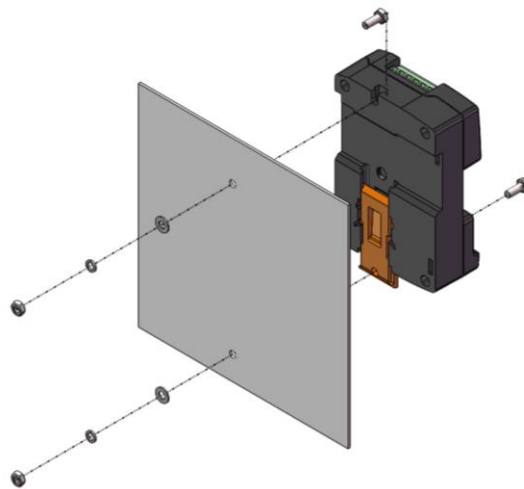


Fig. 14 - CMM366A-WIFI Screw Installation

8 TROUBLESHOOTING

Table 8 – Fault Finding

Symptoms		Possible Solutions
Controller no response with power.		Check power voltage; Check controller connection wirings.
Network Indicator Not Light		Check Ethernet parameters are correct or not; Check Network socket indicator is light or not; Check cable is normal or not.
RS485 Abnormal	Communication	Check connections; Check RS485 port is enabled or not; Check settings of genset ID and baud rate are correct or not. Check RS485's connections of A and B is reverse connect or not.
RS232 Abnormal	Communication	Check connections; Check RS232 port is enabled or not; Check settings of genset ID and baud rate are correct or not.
LINK Abnormal	Communication	Check connections; Check LINK port is enabled or not; Check settings of genset ID and baud rate are correct or not.

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9 PACKING LIST

Table 9 - Packing List

No.	Name	Quantity	Remark
1	CMM366A-WIFI	1	
2	Osculum type WIFI antenna	1	
3	120Ωmatched resistor	2	
4	Certification	1	
5	User manual	1	

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