

grup ARGE

8 Input Module User Manual



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CORRECT USE AND SAFETY CONDITION



Cut all the power when the device connecting and disconnecting the device to a panel Do not clean the device with solvent or similar material. only use a dry cloth !



Please do not intervene the device , when a technical problem is encountered and get in contact with a technical service within the shortest time .



If the warnings are not taken into account , our company or authorized dealer shall not be held responsible for the negative consequences.



Do not dispose in the trash , the device must be delivered to the collection centers (electronic device recycling centers).It should be recycled and disposed of without harming human health and environment .



The installation , assembly , activation and operation of the device should be done and used by only expert professionals and in accordance with safety regulations and instructions .



The device operates with current transformers . Do not strictly leave current transformer tips unattached . dangerous high voltage can occur.

INTRODUCTION

1.1. General Features

Input Module: Developed to enable the status of 8 dry contact inputs to be monitored remotely via Standard MODBUS RTU.

It can be monitored remotely with SmartPower terminals or integrated into other systems. One end of the dry contact to be monitored is connected to the COM terminal and the other end is connected to any of the inputs I1-I8. In case of open contact, the related LED is off, while in case of closed contact, the related LED is on. The device can be mounted on the rail inside the panel.

1.2. Technical Features

- Microprocessor based.
- OM G8D operates with 10-30 V DC supply.
- OM G8A operates with 85-265 V AC supply.
- Supports RS-485 Standard MODBUS RTU protocol.
- There are 8 dry contact inputs.
- It has POWER (Power), ERROR (Error), RS-485 (Communication) LEDs.
- Operating ambient temperature of the device is between -10 °C and +55 °C.
- Supply consumption power is less than 1 VA.
- It has IP40 protection class.

1.3. Technical Drawing

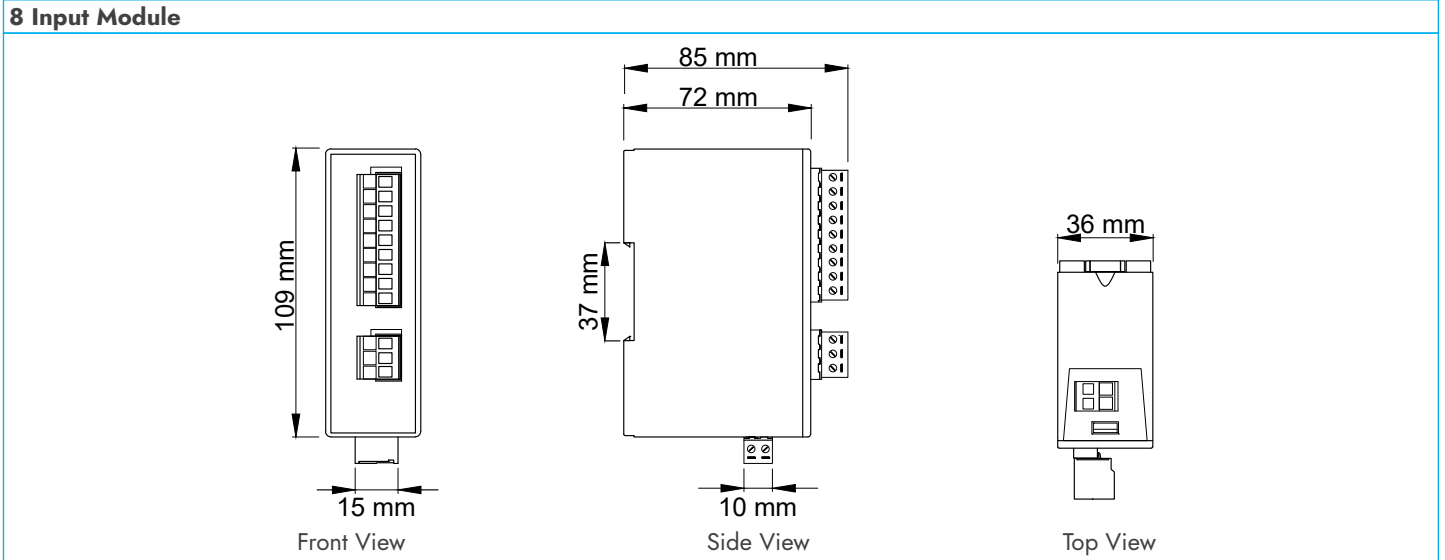
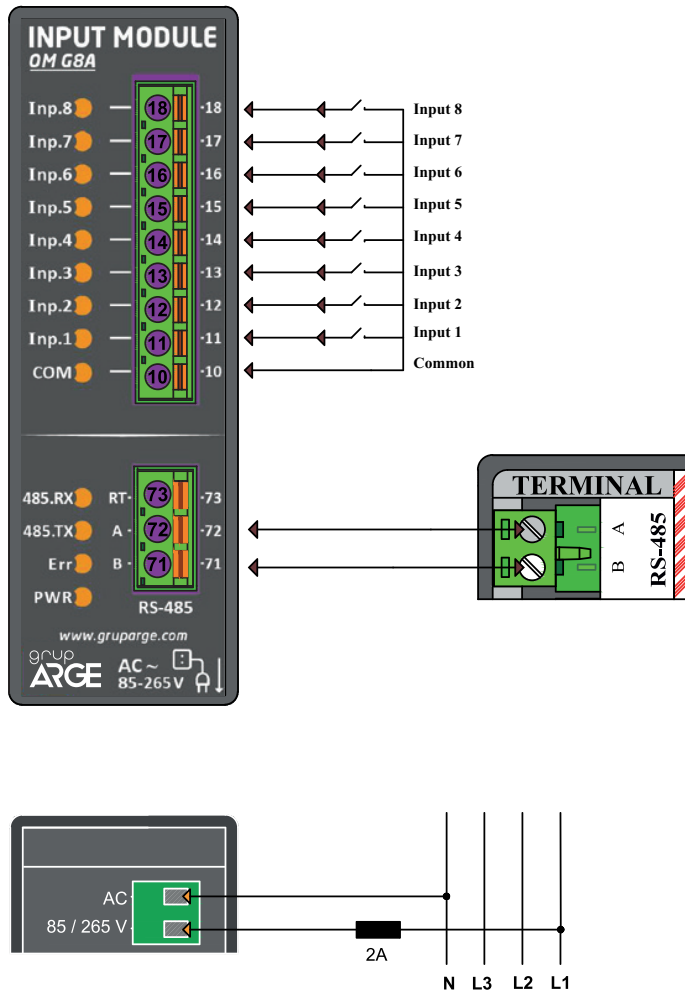


Figure 1.1

2. CONNECTION DIAGRAM

8 Input Module AC



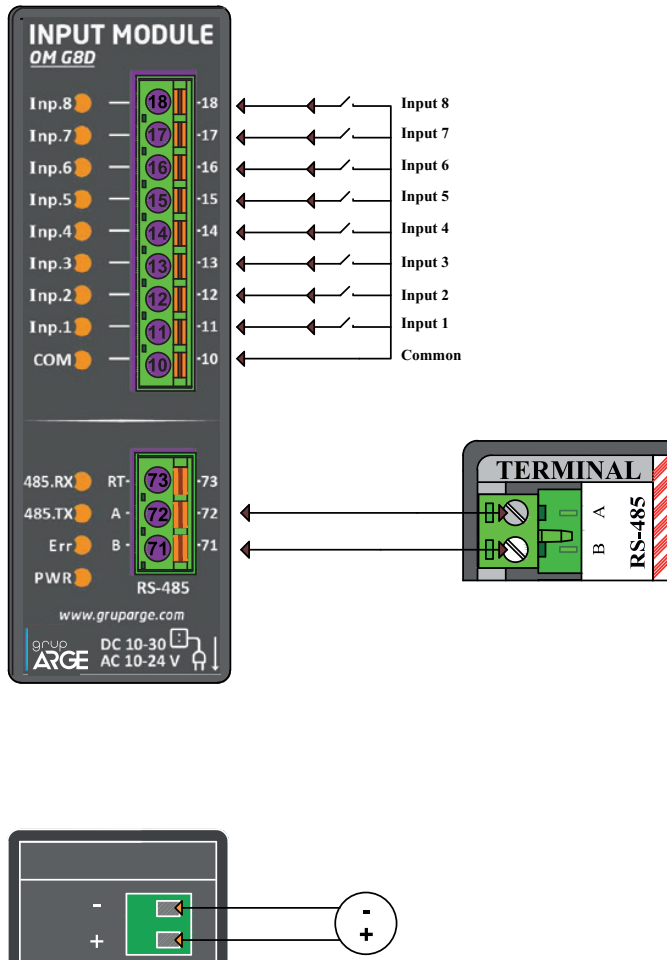
RT Terminal Block: It is used for optional activation of 120 Ω terminating resistor.

The terminating resistor is connected between RT and A terminals.

Figure 2.1

2.1. Connection Diagram

8 Input Module DC



RT Terminal Block: It is used for optional activation of 120Ω terminating resistor.

The terminating resistor is connected between RT and A terminals.

Figure 2.2

3. MODBUS MAP

3.1. Communication Parameters

Baudrate	9600 bps
Data bits	8
Parity	None
Stop bits	1

NOTE: To obtain the default MODBUS address of the device, add 100 to the 2 numbers at the end of the serial number. For example, let the serial number be 185247. Since it ends with 47, the MODBUS address becomes 147.

3.2. Modbus Map

GRUP ARGE	Version 02.00	
Input / Output Module	Multiplier	Address
Serial Number		100
Product (Type, Sub Type) + Application Vers. (Main , Sub)		102
Hardware(0, Type) + HardwareVers. (Main, Sub)		104
Parameter Vers. + System Vers. (Main, Sub)		106
Parameters		
Parameter Version		200
Working Hours		201
Modbus Address		206
Bus Speed		207
Reading Protection Bit		208
Writing Protection Bit		209
Read Password Confirm		210
Write Password Confirm		211
Device Specific Commands		
Device Restart		1900
Back to Default Settings		1901

3.3. Reading Input States

Query (Read Discrete Inputs 02)				
Device	Function Code	Starting Input	Input Quantity	CRC
MODBUS		Address		
Address				
1 Byte	1 Byte (02)	2 Byte Hi-Low	2 Byte Hi-Low	2 Byte

Answer				
Device	Function Code	Bayt Number	Input Status	CRC
MODBUS				
Address				
1 Byte	1 Byte (02)	1 Byte (01)	1 Byte	2 Byte

Informations

There are 8 inputs in the module. The addresses of these inputs are:

- Input → 00
- Input → 01
- Input → 02
- Input → 03
- Input → 04
- Input → 05
- Input → 06
- Input → 07

0 is read when a sign is applied to an input and read 1 at idle

Answer interpretation

When the 1-byte data (4th byte) giving the input status is analyzed as binary
The highest-order bit (MSB) shows the 8th input, and the lowest-order bit (LSB)
shows the 1st entry.

 **WARNING : An input with a lit LED is read as 0**

Example Reading the 4th Input of the Device with Address 01 (4th input LED is on)


Query: 01 02 00 03 00 01 xx xx

Answer: 01 02 01 F7 xx xx

Example Reading All Outputs of Device with Address 01 (1,2,5,8 LEDs are on)

Query: 01 02 00 00 00 08 xx xx

Answer: 01 02 01 6C xx xx

 **NOT** "xx xx xx" in the examples is a 2 byte CRC