

8 Input Module User Manual



**ADDRESS: Ikitelli OSB Mah. Cevre
14. Blok Sok. Telas Blok Dis Kapi
No: 1 Kat: 1-2 Basaksehir/Istanbul**

**Phone: +90 212 438 80 24
Fax: +90 212 438 80 25**

info@gruparge.com

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PROPER USE AND SAFETY REQUIREMENTS



Cut all the power when connecting and disconnecting the device to a panel.



Do not clean the device with a solvent or similar material. Only use a dry cloth.



Please do not intervene to 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 the 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 or 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.

1. INTRODUCTION

1.1. General Features

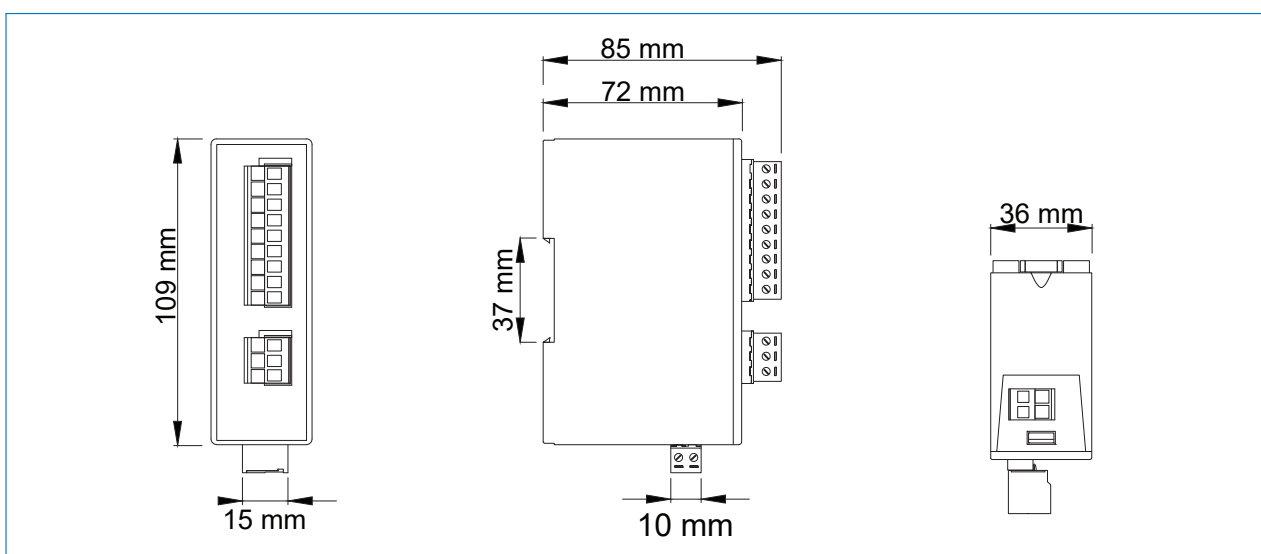
Developed to enable the status of 8 dry contact inputs to be monitored remotely via Standard Modbus RTU.

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

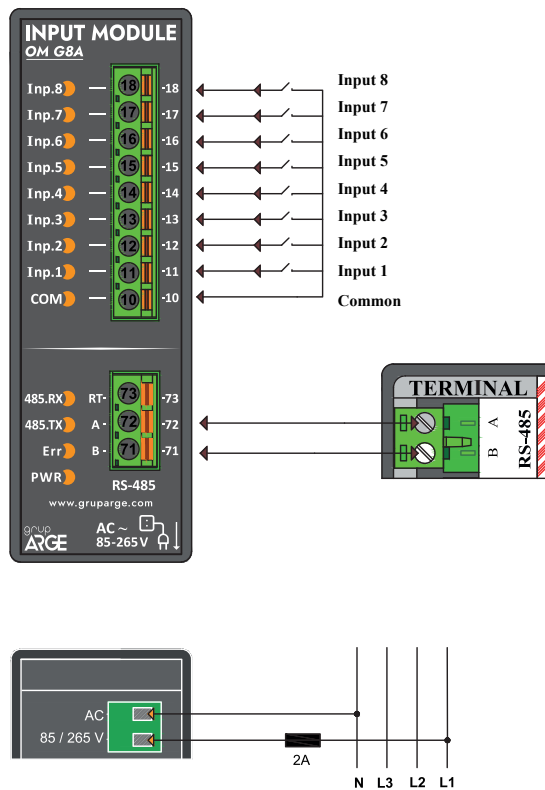
- Microprocessor based.
- OM C8D operates with 10-30 V DC supply.
- OM C8A operates with 85-265 V AC supply.
- Supports RS-485 Standard Modbus RTU protocol.
- There are 8 dry contact inputs.
- It has POWER, ERROR, RS-485 (Communication) LEDs...
- Operating ambient temperature of the device is between -10 °C and +55 °C
- Supply consumption power is less than 1 VA.
- It has IP40 protection class.

1.3. Technical Drawing



1.4. Connection Diagram

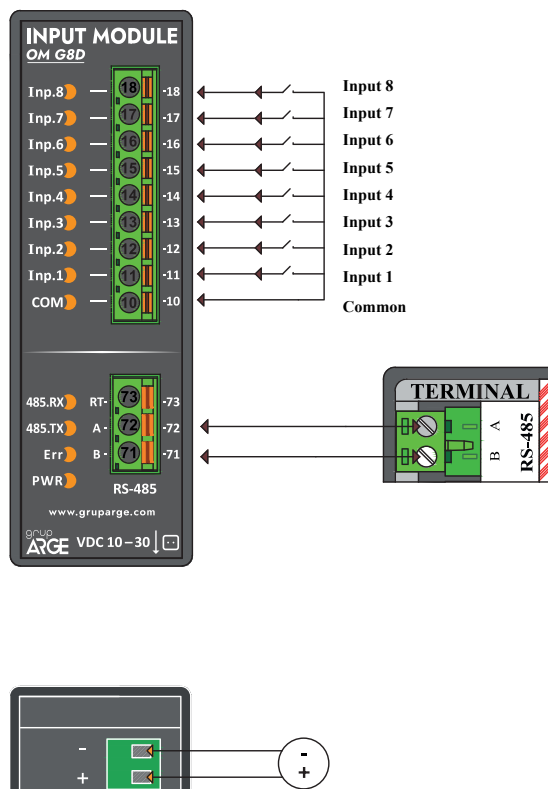
Input Module AC



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

The terminating resistor is connected between RT and A terminals.

Input Module DC



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

The terminating resistor is connected between RT and A terminals.

It is recommended to select the cable for RS-485 communications according to the table below.

Cable Distance	Recommended Cable	Alternative Recommendation
Up to 30 m	3*0,22 Shielded and Twisted Signal Cable	CAT-5 Ethernet Cable
Over 30 m	3*0,50 Shielded and Twisted Signal Cable	CAT-6 Ethernet Cable

2. MODBUS MAP

2.1. Communication Parameters

Baudrate	9600 bps
Data Bits	8
Parity	None
Stop Bits	1

NOTE: The default Modbus address is the number obtained by adding 100 to the last two digits of the serial number of the device. For example, suppose the serial number is 185247. Since it ends with 47, Modbus address becomes 147.

2.2. Modbus Speed

Modbus speed is determined by indexes between 0-4. The table below contains Modbus speeds according to the indexes. By adjusting the Bus Speed part of the Modbus map, the desired speed can be obtained from the table below.

Index	0	1	2	3	4
Modbus Speed (Bps)	1200	2400	4800	9600	19200

2.3. 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) + Hardware Vers. (Main, Sub)		104
Parameter Vers. + System Vers. (Main, Sub)		106
Parameters		
Parameter Version		200
Working Hours		201
Modbus Address		206
Bus Speed		207
Read Protection Bit		208
Write Protection Bit		209
Read Password Confirm		210
Write Password Confirm		211
Device Specific Commands		
Device Restart		1900
Factory Reset		1901

2.4. Reading Input States

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

Answer				
Device Modbus Address	Function Code	Byte Count	Input Status	CRC
1 Byte	1 Byte (02)	1 Byte (01)	1 Byte	2 Byte

Informations

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

- 1.Input → 00
- 2.Input → 01
- 3.Input → 02
- 4.Input → 03
- 5.Input → 04
- 6.Input → 05
- 7.Input → 06
- 8.Input → 07

0 is read when a sign is applied to an output 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

Example Reading the 4th Input of the Device with Address 01

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 01 00 00 00 08 xx xx

Answer: 01 02 01 6C xx xx

Note: "xx xx" in the examples is a 2 byte CRC