

grup ARGE

8 InputModule User Manual



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Version19-2

CONTENTS

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.

General Features

Introduction

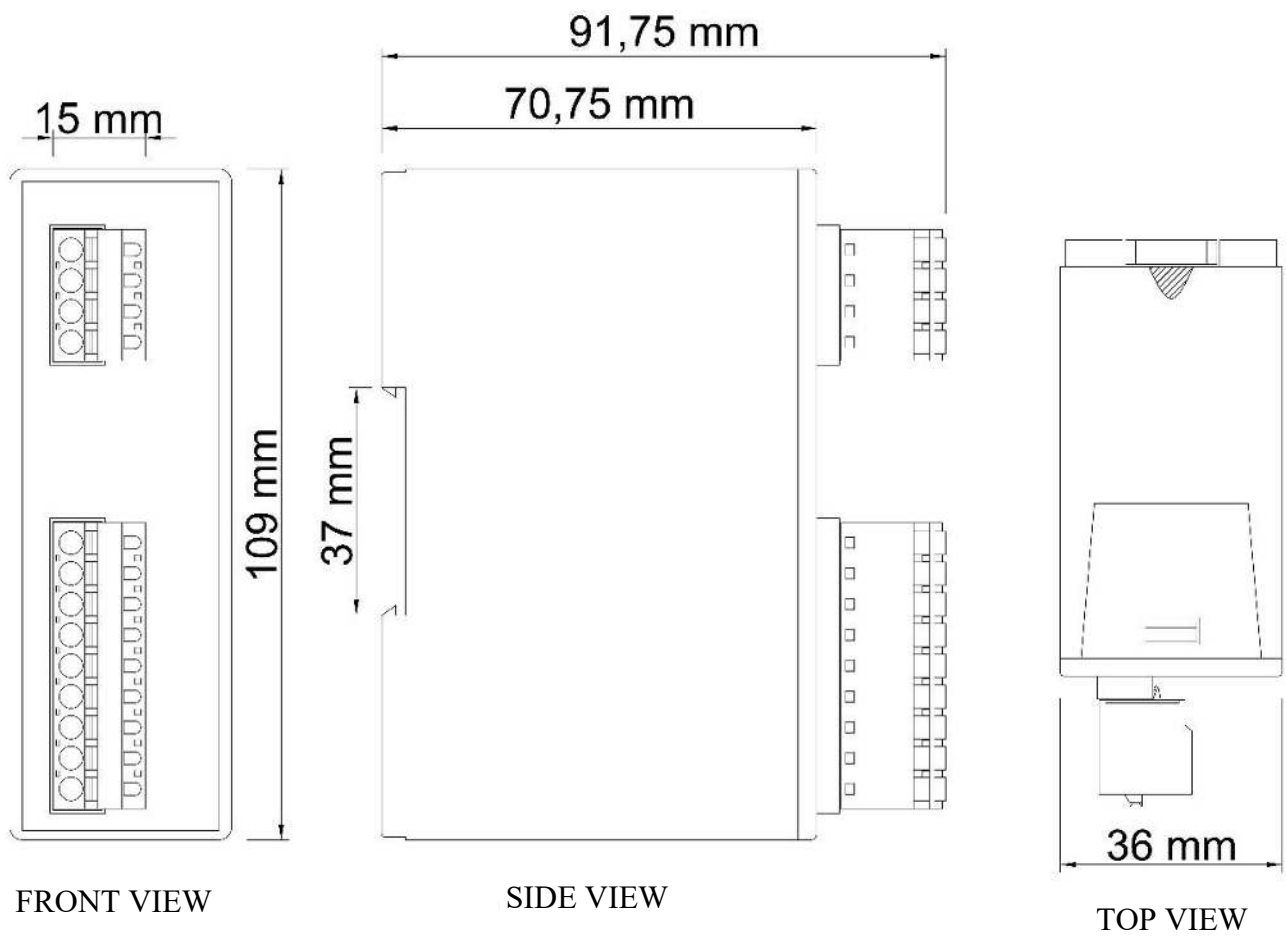
Input Module: Developed to enable the status of 8 dry contact inputs to be monitored remotely via Standard MODBUS RTU.

It can be monitored remotely with SmartPower terminals and can also be 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.

- **Technical Features**

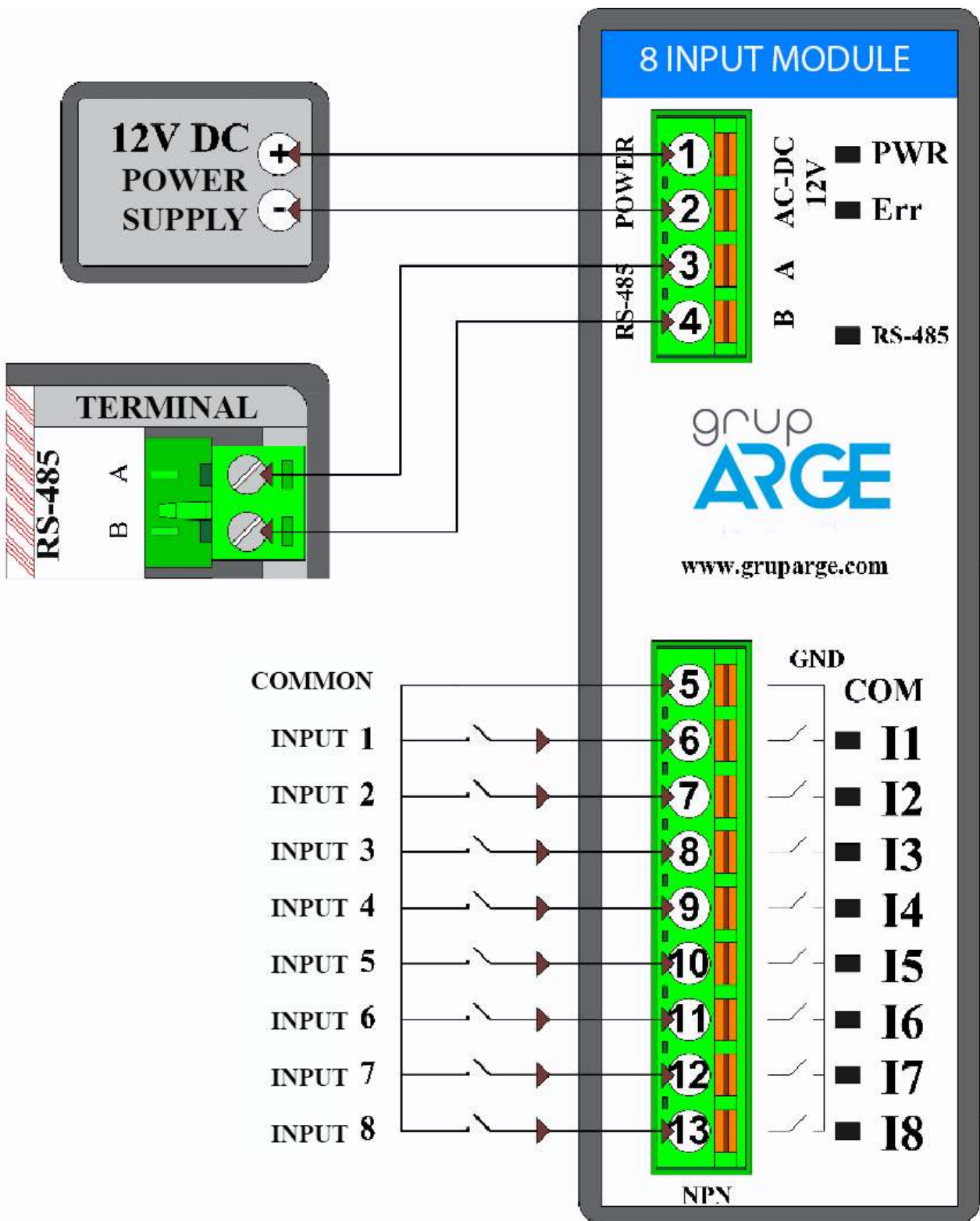
- It is Microprocessor based
- It works with 12 V DC supply .
- Supports RS-485 standard MODBUS RTU protocol .
- There are 8 dry contact inputs.
- It has POWER, ERROR, RS-485 (Communication) LEDs.
- The operating ambient temperature of the device is between -10 °C and +55 °C.
- The power consumption is less than 1 VA.
- It has IP40 protection class .

- **Device Dimentions**



Shape 1.1

- **CONNECTION DIAGRAM**



Shape 2.1

- **MODBUS MAP**

- **Communication Parameters**

Baudrate	9600 bps
Data bits	8
Parity	None
Stop bits	1

NOTE: To obtain the factory outlet MODBUS address of the device, 100 is added to the 2 numbers at the end of the serial number. For example, suppose the serial number is 185247. Since it ends with 47, the MODBUS address becomes 147.

- **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
Parametre Vers. + System Vers. (Main, Sub)		106
Parametres		
Parametre 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
Factory Reset		1901

- **Reading Output States**

Question (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	Byte 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:

- Login → 00
- Login → 01
- Login → 02
- Login → 03
- Login → 04
- Login → 05
- Login → 06
- Login → 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)

Question: 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)

Question: 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