

grup ARGE

Pulse Counter User Manual



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PROPER USE AND SAFETY REGULATIONS



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

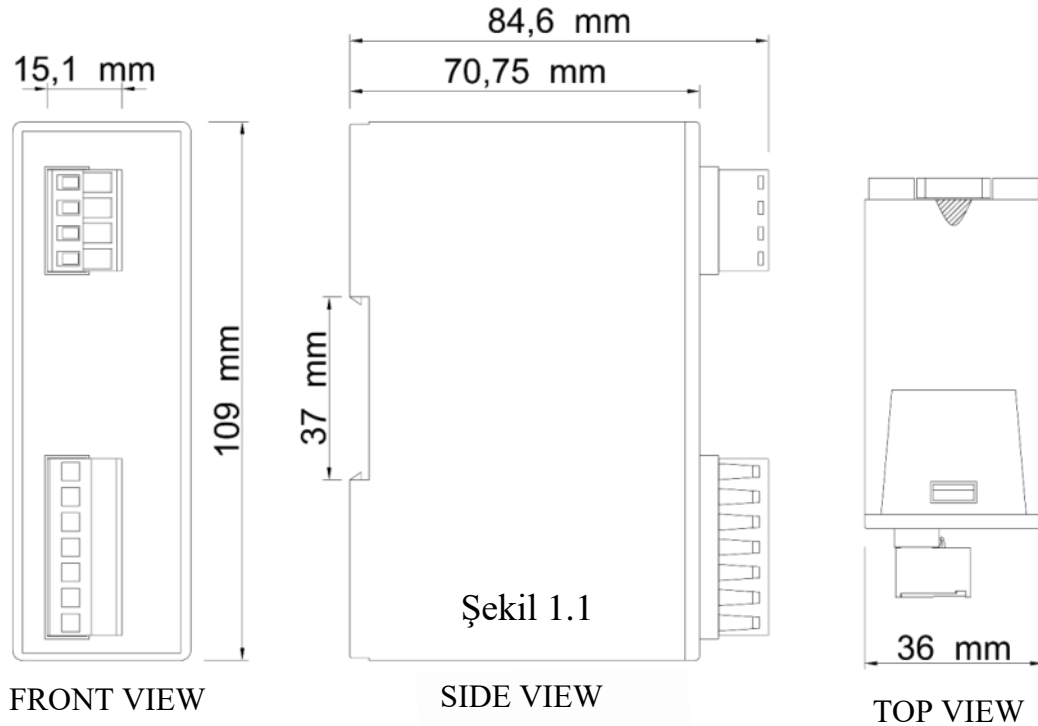
1.1 GENERAL FEATURES

The pulse counter, with its 6 counter inputs, counts and records the pulse output counters simultaneously and individually. Data can be read and edited over the standard MODBUS RTU protocol using the RS-485 communication channel.

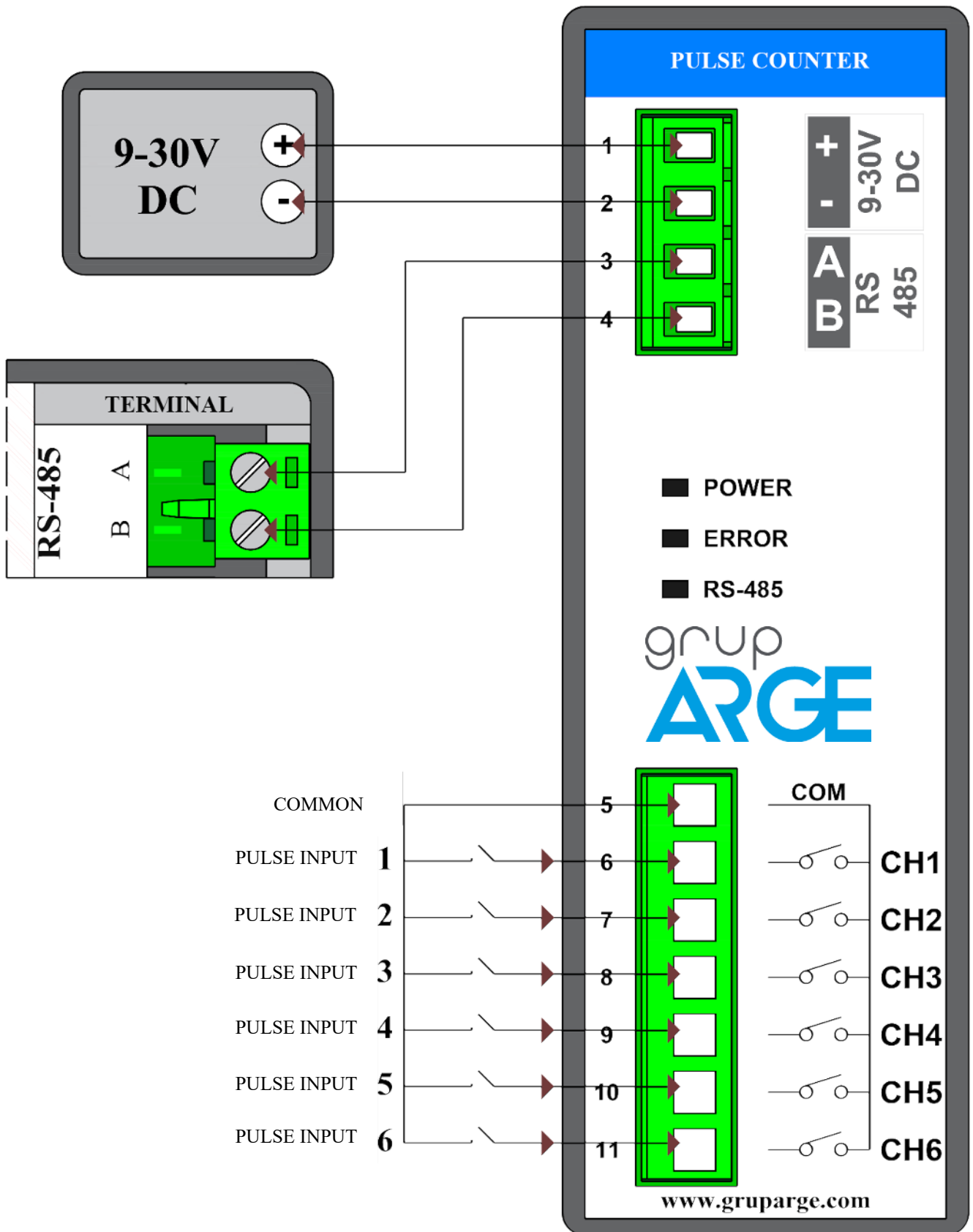
1.2 Technical Features

- Microprocessor based
- It works with 9-30 V DC supply.
- It supports RS-485 Standard Modbus RTU protocol.
- 6 pulse inputs available.
- It has POWER (Güç), ERROR (Hata) ve RS-485 (Communication) LED.
- The operating ambient temperature of the device is between -10 °C and +55 °C.
- The power consumption of measuring input is under 1 VA.
- It has IP40 protection class.

1.3 Product Dimensions



2. CONNECTION DIAGRAMS



Shape 2.1

3. MODBUS MAP

3.1 MODBUS MAP

The parameters that the user can read, write, and clear are shown in the table below. In the table in the R/W/C column;

R That the parameter can be read,

W That the parameter can be written,

C Indicates that the parameter can be cleared.

Note: A parameter can have more than one property at the same time. For example, if R/W is written in the column, it indicates that the parameter can be both read and written.

3.2 MODBUS Speed

MODBUS speed is determined by indices between 0-4. The table below shows the MODBUS speeds according to the indices. The desired speed can be obtained from the table below by setting the Bus Speed section from the Modbus map.

indices	0	1	2	3	4
MODBUS Speed (bps)	1200	2400	4800	9600	19200

3.3 Communication Parameters

You need to set the parameters according to the following table to be able to read or write from the device for the first time, .

Baud Rate[bps]	9600
Data Bits	8 bits
Parity	None
Stop Bits	1 bit
Transmission Mode	RTU

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The default MODBUS address is the number obtained by adding 100 to the last two digits of the serial number of the device.

Example: A device with serial number GA3408190098 has Modbus address 198.

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HOLDING REGISTERS					
PARAMETER NAME	ADDRESS (dec)	UNIT	multiplier	DATA TYPE	R/W/C
serial number	100		-	32 Bit Long	R
Product (Type, Sub Type)	102	-	-	16 Bit Int	R
Application Version (Main, Sub)	103	-	-	16 Bit Int	R
Hardware (0, Type)	104	-	-	16 Bit Int	R
Hardware Version (Main, Sub)	105	-	-	16 Bit Int	R
Parameter Version	106	-	-	16 Bit Int	R
System Version (Main, Sub)	107	-	-	16 Bit Int	R
Second	200	-	-	16 Bit Int	R/W
Minute	201	-	-	16 Bit Int	R/W
hour	202	-	-	16 Bit Int	R/W
day	203	-	-	16 Bit Int	R/W
month	204	-	-	16 Bit Int	R/W
year	205	-	-	16 Bit Int	R/W
Modbus Address[1:247]	206	-	-	16 Bit Int	R/W
Bus Speed [0:1200, 1:2400, 2:4800, 3:9600, 4:19200]	207	bps	-	16 Bit Int	R
1. Channel – Number of Pulses	211	-	-	32 Bit Long	R/W
2. Channel – Number of Pulses	213	-	-	32 Bit Long	R/W
3. Channel – Number of Pulses	215	-	-	32 Bit Long	R/W
4. Channel – Number of Pulses	217	-	-	32 Bit Long	R/W
5. Channel – Number of Pulses	219	-	-	32 Bit Long	R/W
6. Channel – Number of Pulses	221	-	-	32 Bit Long	R/W