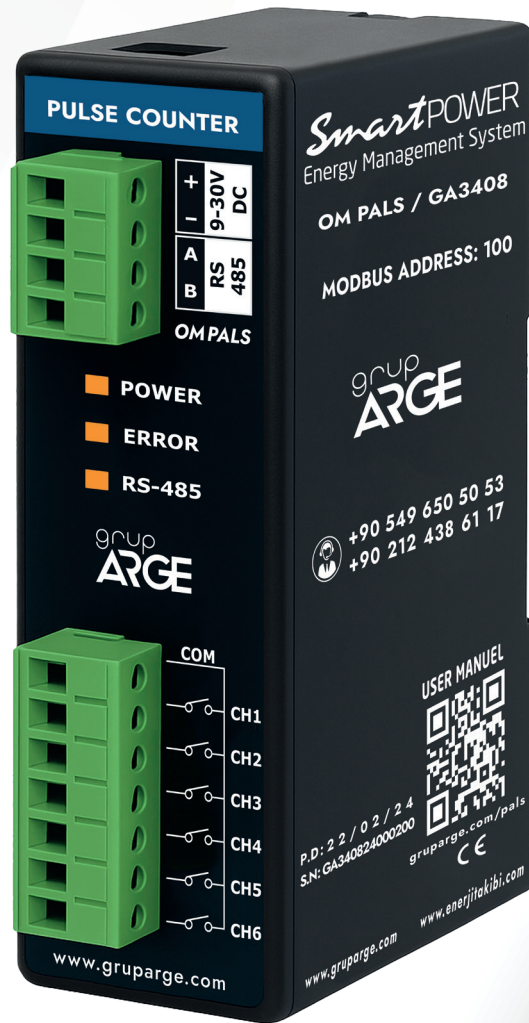


Pulse Counter Datasheet



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

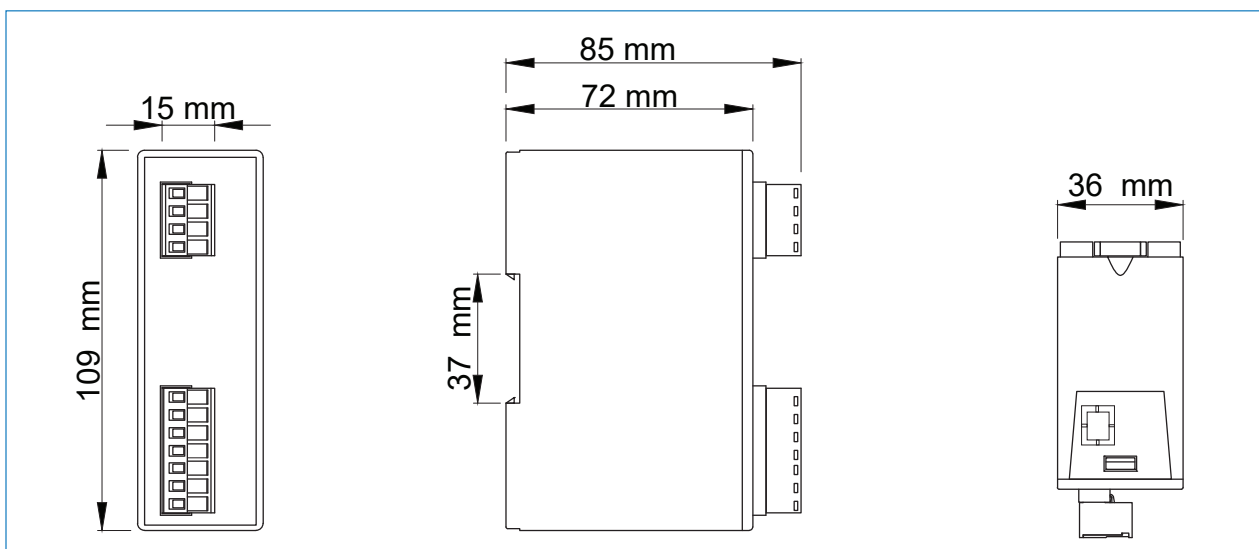
1.1. General Features

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.

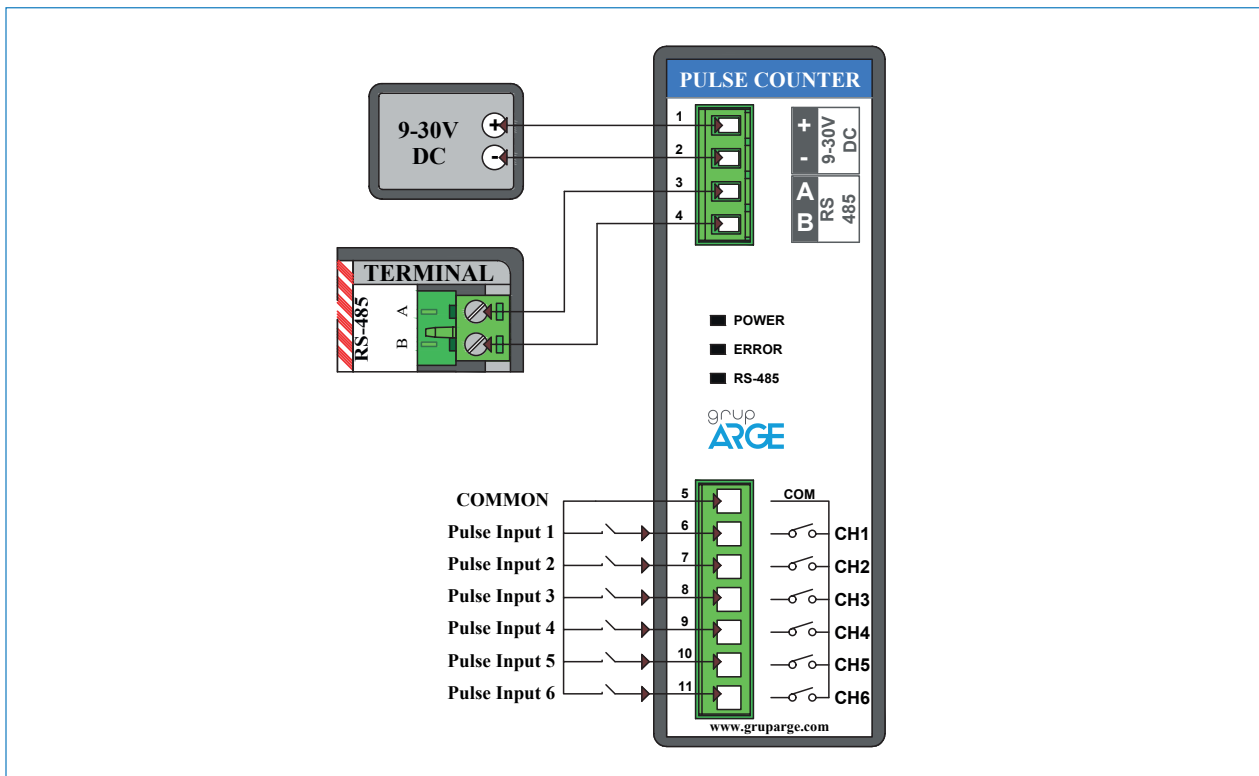
1.2. Technical Features

- Microprocessor based.
- **Supply Voltage:** 9-30 V DC.
- **Communication Protocol:** RS-485 / Modbus RTU.
- **Pulse Input:** 6 pcs
- **LED Status:** It has power, error and RS-485 communication LED
- **Ambient Temperature:** -10 °C /+55 °C.
- **Supply Consumption Power:** < 1 VA.
- **Protection Class:** IP40.

1.3. Technical Drawing



1.4. Connection Diagram



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. Modbus Map

- The parameters that the user can read, write and clear are shown in the table below. In the R/W/C column in the table;
- R → The parameter can be read,
- W → The parameter can be wrote,
- C → Indicates that the parameter can be cleared.

NOTE: A parameter can have more than one property at the same time.

E.g; R/W in column If written, it indicates that the parameter can be both read and written.

MODBUS MAP					
PULSE COUNTER					
Device Information	Address	Multiplier	Unit	Type	W/R
Input Register					
Serial Number (High)	998	1	-	uint16	R
Serial Number (Low)	999	1	-	uint16	R
Holding Register					
Serial Number (High)	100	1	-	uint16	R
Serial Number (Low)	101	1	-	uint16	R
Product (Type, Subtype)	102	1	-	uint16	R
Application Version (Main, Sub)	103	1	-	uint16	R
Hardware (0, Type)	104	1	-	uint16	R
Hardware Version (Main, Sub)	105	1	-	uint16	R
Parameter Version	106	1	-	uint16	R
System Version (Main, Sub)	107	1	-	uint16	R

Parameter	Address	W/R	Type	Unit	Min	Max	Default	Step
Second	200	W/R	Uint 16	sec	0	59	0	1
Minute	201	W/R	Uint 16	min	0	59	0	1
Hour	202	W/R	Uint 16	hour	0	24	0	1
Day	203	W/R	Uint 16	-	1	31	0	1
Month	204	W/R	Uint 16	-	1	12	0	1
Year	205	W/R	Uint 16	-	0	99	0	1
Modbus Address (Table-1)	206	W/R	Uint 16	-	1	254	1	1
Modbus Speed (Table-2)	207	W/R	Uint 16	-	0	4	3	1
Channel_1 (High)	211	W/R	Uint 16	-	0	65535	0	1
Channel_1 (Low)	212	W/R	Uint 16	-	0	65535	0	1
Channel_2 (High)	213	W/R	Uint 16	-	0	65535	0	1
Channel_2 (Low)	214	W/R	Uint 16	-	0	65535	0	1
Channel_3 (High)	215	W/R	Uint 16	-	0	65535	0	1
Channel_3 (Low)	216	W/R	Uint 16	-	0	65535	0	1
Channel_4 (High)	217	W/R	Uint 16	-	0	65535	0	1
Channel_4 (Low)	218	W/R	Uint 16	-	0	65535	0	1
Channel_5 (High)	219	W/R	Uint 16	-	0	65535	0	1
Channel_5 (Low)	220	W/R	Uint 16	-	0	65535	0	1
Channel_6 (High)	221	W/R	Uint 16	-	0	65535	0	1
Channel_6 (Low)	222	W/R	Uint 16	-	0	65535	0	1
Channel_1 Waiting Time	300	W/R	Uint 16	ms	0	65535	5	1
Channel_2 Waiting Time	301	W/R	Uint 16	ms	0	65535	5	1
Channel_3 Waiting Time	302	W/R	Uint 16	ms	0	65535	5	1
Channel_4 Waiting Time	303	W/R	Uint 16	ms	0	65535	5	1
Channel_5 Waiting Time	304	W/R	Uint 16	ms	0	65535	5	1
Channel_6 Waiting Time	305	W/R	Uint 16	ms	0	65535	5	1

Address	Command		W/R
1500	Restart Device	0xAA55	43605
1501	Back to Default Settings	0xAA55	43605

2.2. 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.

2.3. 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