90 AM

GWD6820

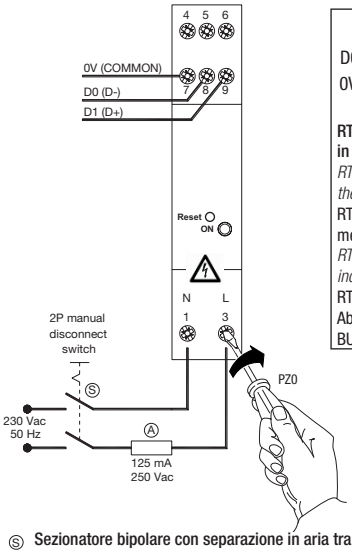
Togliere tensione prima di intervenire sull'apparecchio.
When working on the instrument, switch off the mains voltage!
Couper la tension avant d'intervenir sur l'appareil.
Antes de intervenir en el equipo hay que cortar la tensión.
Bei Arbeiten am Meßgerät, Netzspannung abschalten!

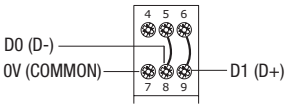
Il dispositivo deve essere installato e manutenuto unicamente da persone debitamente autorizzate ed esperte
The device must be installed and operated ONLY by duly authorized skilled persons.
Le dispositif ne doit être installé et soumis à des interventions d'entretien que par des personnes dûment autorisées et expertes
La instalación y el mantenimiento del dispositivo deben ser efectuados únicamente por personal adecuadamente autorizado y experto
Die Vorrichtung darf ausschließlich von entsprechend autorisiertem Fachpersonal installiert und gewartet werden

PERICOLO: presenza di tensioni pericolose.
DANGER: presence of dangerous voltage.
DANGER : Présence de tensions dangereuses.
PELIGRO: presencia de tensiones peligrosas.
GEFAHR: Gefährliche Spannungen vorhanden.

Leggere attentamente questo manuale istruzioni prima di proceder con la installazione.
Carefully read this instruction manual before proceeding with the installation.
Lire attentivement ce manuel d'instructions avant de procéder à l'installation.
Leer detenidamente este manual de instrucciones antes de emprender la instalación.
Vor der Installation diese Betriebsanleitung sorgfältig lesen.

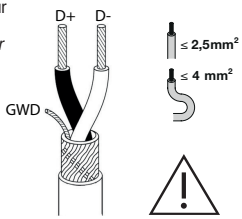
Simbolo di attenzione presente sullo strumento, che segnala di riferirsi a questo manuale per maggiori dettagli.
Caution: symbol present of the device. Refer to this manual for further info.
Symbole d'attention figurant sur l'instrument, qui indique de se référer à ce manuel pour plus de détails.
Símbolo de atención, presente en el instrumento, que recomienda consultar este manual para obtener más detalles.
Hinweis-Symbol am Gerät, das für weitere Details auf diese Anleitung verweist.



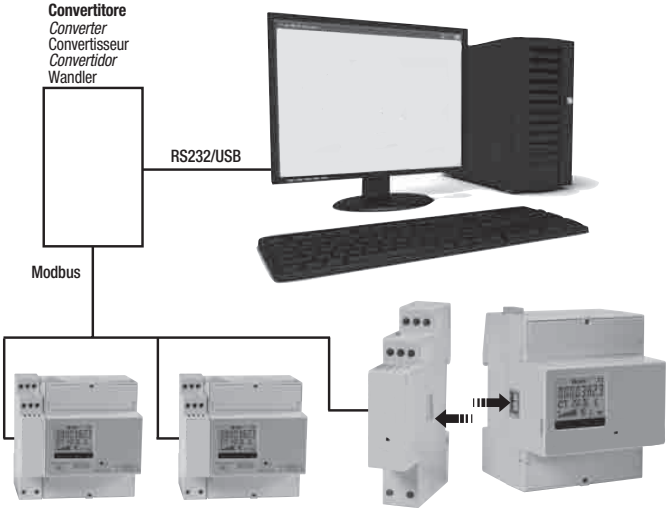


RT+/RT- : resistenza di terminazione del BUS RS485. Collegare i morsetti 5-8 e 6-9 come in figura solo se l'interfaccia è il primo o l'ultimo nodo del BUS.
RT+/RT- : termination resistance on the BUS RS485. Connect terminals 5-8 and 6-9 as shown in the figure, only if the interface is the first or last BUS node.
RT+ / RT- : résistance de terminaison du BUS RS485. Raccorder les bornes 5-8 et 6-9 comme indiqué sur la figure uniquement si l'interface est le premier ou le dernier noeud du BUS.
RT+/RT- : resistencia de terminación del BUS RS485. Conectar los bornes 5-8 y 6-9 como se indica en la figura sólo si la interfaz es el primer o último nodo del BUS.
RT+/RT- : Abschlusswiderstand für BUS RS485. Die Klemmen 5-8 und 6-9 wie in der Abbildung ersichtlich nur dann anschließen, wenn die Schnittstelle der erste oder letzte BUS-Knoten ist.

La barra DIN sulla quale il contatore è montato deve essere collegata a terra.
The DIN rail on which the meter is mounted must be earthed.
La barre DIN sur laquelle est monté le contacteur doit être raccordée à la terre.
La barra DIN en la que está montado el contador debe estar conectada a tierra.
Die DIN-Schiene, auf der der Zähler montiert ist, muss geerdet werden.



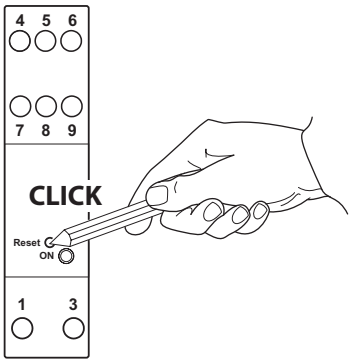
Ⓢ **Sezionatore bipolare con separazione in aria tra i contatti di almeno 3 mm.**
Two poles disconnect device with a contact separation of at least 3 mm.
Sectionneur bipolaire avec un espace de séparation entre les contacts de 3 mm au moins.
Seccionador bipolar con separación aérea de al menos 3 mm entre los contactos.
Zweipoliger Lasttrennschalter mit Mindestabstand in der Luft von 3 mm zwischen den Kontakten.



L'interfaccia Bus sta comunicando con il contatore di energia
The BUS interface is communicating with the energy meter
L'interface BUS communique avec le compteur d'énergie
La interfaz Bus transmite datos con el contador de energía
Die Bus-Schnittstelle kommuniziert gerade mit dem Energiezähler

L'interfaccia Bus non sta comunicando con il contatore di energia
The BUS interface is not communicating with the energy meter
L'interface BUS ne communique pas avec le compteur d'énergie
La interfaz Bus no transmite datos con el contador de energía
Die Bus-Schnittstelle kommuniziert derzeit nicht mit dem Energiezähler

RESET



Ritorno alle impostazioni di default
Return to the default settings
Retour aux réglages par défaut
Regreso a las configuraciones por defecto
Zurück zu den Standardeinstellungen

(ref. EN 62368-1:2018, EN 55032 CISPR 32, EN 61000-4)

Modbus Interface	Hardware connection	3 wires RS-485 (EIA/TIA-485)
	SW protocol	Modbus RTU, from 1200 to 57600 baud
DIN-rail mounting (acc. to DIN 43380 and EN60715)	Housing	1 module (18 mm)
	DIN-rail	35 mm
	Module depth	70 mm
Power supply	Operating Voltage	230 V~ +/- 20%
	Power consumption	< 1.5 W
	Operating Frequency	45-65 Hz
Wiring Connection	screw head Z +/-	POZIDRIV PZ0
	Solid wire min (max) section	0.15 (2.5) mm2
	Stranded wire min (max) section	0.15 (4) mm2

Wires acc. to IEC 60332-1-2 if section>= 0.5 mm2, acc. to IEC 60332-2-2 for smaller sections

EMC Disturbances
Compliant with Conducted emissions and Radio interferences
EN 55032 CISPR 32 Class B

EMC Immunity
EN 61000-4-2 - Electrostatic discharge immunity 8kV
EN 61000-4-3 - Immunity to radiated RF electromagnetic field
EN 61000-4-4 - Electrical fast transient/burst immunity – 4 kV on mains circuit – 2kV (capacitive clamped) on Modbus RS/485 circuit
EN 61000-4-5 – Immunity to surges – 4 kV surge pulses

Electric Safety (acc. to EN 62368-1:2018)	Pollution degree	2
	Overvoltage category	III
	Working Voltage	300 V
	Flammability (acc. to UL 94)	class V0

Insulation (acc. to IEC 61140)
II ⧈ (symbol IEC 60417-5172 (2003-02))
Reinforced Insulation between Mains supply circuit (HLV circuit) and communication circuit (SELV circuit)

- a.c. Required Transient Voltage = 4 kV peak
- Impulse withstand voltage test (1.2/50 µsec pulse) = 7.68 kV peak
- AC withstand voltage test (for 5 seconds) = 4.18 Vrms
- routine AC withstand voltage test = 3,4 kV rms on each single equipment for 1 second

Environmental conditions	Operating Temperature	-10°C — +55°C
	Storage Temperature	-10°C — +70°C
	Relative Humidity not condensing	
	yearly average	<= 75%
	on 30 days per year	<= 95%
	Installation	Indoor
	Altitude	<=2000 m.
	Degree of Protection	IP20 (*)

(*) The device must be installed inside a cabinet with IP rating IP51 or better. Any exposed parts (outside the cabinet) must have a minimum degree of protection IP51. Furthermore, the cabinet must have a Flammability degree V1 (according to UL-94) or better.

DEFAULT VALUES
Protocol = Modbus RTU
Address = 001 (To connect more than one modbus interface send a command to the 4115 address. Modbus address: #New Id Modbus#)
Baud rate = 19200 bit/s
Parity = no
Stop bits = 1
Number format: float

ADDRESS MODBUS TABLE

Register	Definition	Energy meter		Notes
		Triphase	Monoph.	
4099	Type of device (0= no communication, 1= triphase, 3= monophase,)	x	x	Reading general registers
4100	Interface FW version	x	x	
4101	Overflow allarm (0= no overflow)	x	x	
4102	Present tariff (0=Tariff1 activated, 1=Tariff2 activated)	x	x	
4104	PID (device identification) bytes 1 e 2	x	x	
4105	PID–bytes 3 e 4	x	x	
4106	PID–bytes 5 e 6	x	x	
4107	PID–bytes 7 e 8	x	x	
4108	PID–bytes 9 e 10	x	x	
4109	PID–bytes 11 e 12	x	x	
4110	PID–bytes 13 e 14	x	x	
4111	Type of protocoll (0=ModbusRTU, 1=ModbusASCII)	x	x	Writing registers
4112	Speed of transmittion (1200, 2400, 4800, 9600, 19200, 38400, 57600)	x	x	
4113	Parity (0= no, 1= even, 2= odd)	x	x	
4114	Stop bits (1= 1Bit, 2= 2Bits)	x	x	
4115	Modbus address (from 1 to 247)	x	x	

4116	Command for interface reset (0= modification memorized, 1= 4111-4115 register modification memorized)	x	x	
4117	Value format (0= floating points 32bit, 1= entire)	x	x	
4118	Command for the energy meter reset (1= reset of active energy register, 2= reset of reactive energy register, 3= reset of all the registers)	x	x	
4119 – 4122	Active energy L1, T1, imp (kWh)	x	x	**Reading value register** Concerning register 4117 - if I had float value all the data are in 2 registers - if I had entire value => 2 registers (Reg1 * 65536 + Reg2) / 10000 => 4 registers ((Reg1 * 65536 + Reg2)* 1000000000) + Reg3 * 65536 + Reg4) / 10000
4123 – 4126	Active energy L2, T1, imp (kWh)	x		
4127 – 4130	Active energy L3, T1, imp (kWh)	x		
4131 – 4134	Active energy Σ T1, imp (kWh)	x		
4135 – 4138	Active energy L1, T2, imp (kWh)	x	x	
4139 – 4142	Active energy L2, T2, imp (kWh)	x		
4143 – 4146	Active energy L3, T2, imp (kWh)	x		
4147 – 4150	Active energy Σ T2, imp (kWh)	x		
4151 – 4152	Active power L1 (kW)	x	x	
4153 – 4154	Active power L2 (kW)	x		
4155 – 4156	Active power L3 (kW)	x		
4157 – 4160	Active power Σ (kW)	x		
4161 – 4164	Active energy L1, T1, exp (kWh)	x	x	

4165 4168	Active energy L2, T1, exp (kWh)	x		
4169 – 4172	Active energy L3, T1, exp (kWh)	x		
4173 – 4176	Active energy Σ T1, exp (kWh)	x		
4177 – 4180	Active energy L1, T2, exp (kWh)	x	x	
4181 – 4184	Active energy L2, T2, exp (kWh)	x		
4185 – 4188	Active energy L3, T2, exp (kWh)	x		
4189 – 4192	Active energy Σ T2, exp (kWh)	x		
4189 – 4192	Active energy Σ T2, exp (kWh)	x		
4193 – 4196	Reactive energy L1, T1, imp (kvarh)	x	x	
4197 – 4200	Reactive energy L2, T1, imp (kvarh)	x		
4201 – 4204	Reactive energy L3, T1, imp (kvarh)	x		
4205 – 4208	Reactive energy Σ T1, imp (kvarh)	x		
4209 – 4212	Reactive energy L1, T2, imp (kvarh)	x	x	
4213 – 4216	Reactive energy L2, T2, imp (kvarh)	x		
4217 – 4220	Reactive energy L3, T2, imp (kvarh)	x		
4221 – 4224	Reactive energy Σ T2, imp (kvarh)	x		
4225 – 4228	Reactive energy L1, T1, exp (kvarh)	x	x	
4229 – 4232	Reactive energy L2, T1, exp (kvarh)	x		
4233 – 4236	Reactive energy L3, T1, exp (kvarh)	x		
4237 – 4240	Reactive energy Σ T1, exp (kvarh)	x		
4241 – 4244	Reactive energy L1, T2, exp (kvarh)	x	x	**Reading value registers**
4245 – 4248	Reactive energy L2, T2, exp (kvarh)	x		

4249 4252	Reactive energy L2, T3, exp (kvarh)	x		
4253 – 4256	Reactive energy Σ T2, exp (kvarh)	x		
4257 – 4258	Reactive power L1 (kvar)	x	x	
4259 – 4260	Reactive power L2 (kvar)	x		
4261 – 4262	Reactive power L3 (kvar)	x		
4263 – 4266	Reactive power Σ (kvar)	x		
4267 – 4268	Voltage L1-N (V)	x	x	
4269 – 4270	Voltage L2-N (V)	x		
4271 – 4272	Voltage L3-N (V)	x		
4273 – 4274	Voltage L1-L2 (V)	x		
4275 – 4276	Voltage L2-L3 (V)	x		
4277 – 4278	Voltage L3 - (V) L1	x		
4279 – 4280	Current L1 (A)	x	x	
4281 – 4282	Current L2 (A)	x		
4283 – 4284	Current L4 (A)	x		
4285 – 4286	Apparent power L1 (kVA)	x	x	
4287 – 4288	Apparent power L2 (kVA)	x		
4289 – 4290	Apparent power L3 (kVA)	x		
4291 – 4294	Apparent power Σ (kVA)	x		
4295 – 4296	Power factor cos ϕ L1	x	x	
4297 – 4298	Power factor cos ϕ L2	x		
4299 – 4300	Power factor cos ϕ L3	x		
4301 – 4302	Power factor cos ϕ Σ	x		
4303 – 4304	Frequency (Hz)	x	x	

74332677

Punto di contatto indicato in adempimento ai fini delle direttive e regolamenti UE applicabili:
Contact details according to the relevant European Directives and Regulations:
GEWISS S.p.A. Via D.Bosatelli, 1 IT-24069 Cenate Sotto (BG) Italy tel: +39 035 946 111 E-mail: qualitymarks@gewiss.com

According to applicable UK regulations, the company responsible for placing the goods in UK market is:
GEWISS UK LTD - Unity House, Compass Point Business Park, 9 Stocks Bridge Way, ST IVES Cambridgeshire, PE27 5JL, United Kingdom tel: +44 1954 712757 E-mail: gewiss-uk@gewiss.com

+39 035 946 111
8:30 - 12:30 / 14:00 - 18:00
lunedì - venerdì / monday - friday

www.gewiss.com

ULTIMA REVISIONE 02/2024