

Profinet TU-RS485-PNT-067602

Rev. 11/2022

English Manual

0005



CD Automation S.r.l.

Via Picasso, 34/36 - 20025 Legnano (MI)- Italy

Tel. +39 0331 577479 - Fax +39 0331 579479

E-mail: info@cdautomation.com - Web: www.cdautomation.com

Declaration of conformity

Declaration of conformity-Dichiarazione di Conformità

PRODUCT MANUFACTURER/ PRODUTTORE:



CD Automation S.R.L.

Controllers, Drives & Automation

Via Picasso, 34/36 - 20025 Legnano (MI)- Italy
P.I. 08925720156 - Tel. +39 0331 577479 - Fax +39 0331 579479
E-mail: info@cdautomation.com - Web: www.cdautomation.com

Declare that the product / Dichiara che il prodotto:

Profinet TU-RS485-PNT-067602

PRODUCT DESCRIPTION: Modbus Master - Converter

SCOPE OF APPLICATION: Protocol converter for industrial and civil use

DESCRIZIONE DEL PRODOTTO: Convertitore Modbus Master

UTILIZZO: Convertitore di protocollo per uso industriale e civile

The company declares herewith on own responsibility that the above-mentioned products are constructed in conformity with the requirements of the following EEC directives:

Con la presente l'azienda dichiara sotto la propria responsabilità che il prodotto sopracitato soddisfa per progettazione e costruzione i requisiti delle seguenti Direttive CEE:

EN 61000-6-2

EN 61000-6-4

EN 61000-4-3

EN 61000-4-4

EN 61000-4-5

EN 61000-4-6

EN 61000-4-11

ENV 50204

and they satisfies the essential requisite required by the directive **EMC 2014/30/EU** on the magnetic compatibility and the **Low Voltage directive 2014/35/EU**.

e soddisfano i requisiti essenziali richiesti dalla direttiva **EMC 2014/30/EU** sulla compatibilità magnetica e le direttive **Low Voltage 2014/35/EU**.

AND THE PRODUCTS ARE OF PREFERENTIAL ORIGIN EEC

e i prodotti SONO di origine preferenziale CEE/Italia

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Amministratore Unico e
Legale Rappresentante

Simone Brizzi

Important warnings for safety

This chapter contains important information for the safety. The non observance of these instructions may result in serious personal injury or death and can cause serious damages to the Thyristor unit and to the components system included.

The installation should be performed by qualified persons.

In the manual are used symbols to give more evidence at the notes of safety and operativity for the attention for the user:



This icon is present in all the operational procedures where the Improper operation may result in serious personal injury or death by Electrical Shock Hazard Symbol (a lightning bolt in a triangle) precedes an electric shock hazard CAUTION or WARNING safety statement.



Warning or Hazard that needs further explanation than the label on unit can provide. Consult User's Guide for further information.



Unit is compliant with European Union directives.
See Declaration of Conformity for further details on Directives and Standards used for Compliance.



If available, unit is a Listed device per Underwriters Laboratories. It has been investigated to ANSI/UL® 508 standards for Industrial Control Switches and equivalent to CSA C22.2 #14.
For more detail search for File E231578 on www.ul.com



ESD Sensitive product, use proper grounding and handling techniques when installing or servicing product.



Do not throw in trash, use proper recycling techniques or consult manufacturer for proper disposal.

A "**NOTE**" marks a short message to alert you to an important detail.

A "**CAUTION**" safety alert appears with information that is important for protecting your equipment and performance. Be especially careful to read and follow all cautions that apply to your application.

A "**WARNING**" safety alert appears with information that is important for protecting you, others and equipment from damage. Pay very close attention to all warnings that apply to your application.

Safety notes



WARNING! To avoid damage to property and equipment, injury and loss of life, adhere to applicable electrical codes and standard wiring practices when installing and operating this product. Failure to do so could result in damage, injury and death.



AVERTISSEMENT! Pour éviter d'endommager la propriété et l'équipement, les blessures et la perte de vie, respecter les codes électriques en vigueur et les pratiques de câblage standard au moment de l'installation et de l'utilisation de ce produit. Dans le cas contraire, cela peut entraîner la mort, des blessures graves ou des dommages.



WARNING! All service including inspection, installation, wiring, maintenance, troubleshooting, fuse or other user serviceable component replacement must be performed only by properly qualified

personnel. Service personnel must read this manual before proceeding with work. While service is being performed unqualified personnel should not work on the unit or be allowed in the immediate vicinity.

 **AVERTISSEMENT!** Tous les services, y compris l'inspection, l'installation, le câblage, l'entretien, le dépannage, le remplacement de fusibles ou d'autres composants pouvant être réparés par l'utilisateur, doivent être effectués uniquement par un personnel dûment qualifié. Le personnel de service doit lire ce manuel avant d'effectuer tout travail. Pendant que l'entretien est exécuté, tout personnel non qualifié ne doit effectuer de travail sur l'appareil ni se trouver à proximité.

 **WARNING!** When in use the power controller is connected to dangerous voltages. Do not remove the protective covers without first disconnecting and preventing power from being restored while servicing the unit.

 **AVERTISSEMENT!** Au moment de l'utilisation, le régulateur de puissance est connecté à des tensions dangereuses. Ne retirer aucun couvercle de protection sans d'abord débrancher l'appareil et ainsi empêcher l'alimentation d'être rétablie pendant l'entretien.

 **WARNING!** Do not use in aerospace or nuclear applications.

 **AVERTISSEMENT!** Ne pas utiliser pour les applications aérospatiales ou nucléaires.

 **WARNING!** The units are not developed to manage capacitive loads.

 **AVERTISSEMENT!** Les unités ne sont pas développées pour la conduite de charges capacitatives.

 **WARNING!** The power controller's protection rating is IP20 with all covers installed and closed. It must be installed in an enclosure that provides all the necessary additional protections appropriate for the environment and application.

 **AVERTISSEMENT!** L'indice de protection du régulateur de puissance est de IP20 lorsque les couvercles sont installés et fermés. L'appareil doit être installé dans une enceinte qui assure toute la protection supplémentaire nécessaire pour l'environnement et l'application.

 **WARNING!** Ground the power controller via the provided protective earth grounding terminal. Verify ground is within impedance specifications. This should be verified periodically.

 **AVERTISSEMENT!** Mise à la terre du régulateur de puissance par le biais de la borne de prise de terre de protection fournie. Vérifier que la prise de terre est conforme aux spécifications de l'impédance. Cela doit être vérifié périodiquement.

 **WARNING!** Electric Shock Hazard: when the power controller has been energized, after shutting off the power, wait at least one minute for internal capacitors to discharge before commencing work that brings you in to contact with power connections or internal components.

 **AVERTISSEMENT!** Risque de décharges électriques: lorsque le régulateur de puissance est mis sous tension, après avoir été éteint, attendre au moins une minute pour que les condensateurs internes se déchargent avant de commencer tout travail incluant le contact avec les connexions électriques ou les composants internes.

 **WARNING!** The installation must be protected by electromagnetic circuit breakers or by fuses. The semiconductor fuses located inside the power controller are classified for UL as supplementary protection for semiconductor devices. They are not approved for branch circuit protection.

 **AVERTISSEMENT!** L'installation doit être protégée par des disjoncteurs électromagnétiques ou des fusibles. Les fusibles pour semi-conducteurs situés à l'intérieur du régulateur de puissance sont classés UL comme protection supplémentaire pour les dispositifs pour semi-conducteurs. Ils ne sont pas approuvés pour la protection des circuits de dérivation.

 **WARNING!** When making live voltage or current measurements, use proper personal protective equipment for the voltages and arc-flash potentials involved.

 **AVERTISSEMENT!** Au moment de relever des mesures de tension ou de courant en direct, utiliser un équipement de protection individuelle approprié pour les tensions et les potentiels d'arc électrique concernés.

-  **WARNING!** Verify the voltage and current ratings of the power controller are correct for the application.
-  **AVERTISSEMENT!** Vérifier que les valeurs de tension et de courant du régulateur de puissance sont correctes pour l'application.
-  **CAUTION:** To avoid compromising the insulation, do not bend wire or other components beyond their bend radius specifications.
-  **ATTENTION:** Pour éviter de compromettre l'isolation, ne pas plier le fil ou tout autre composant au-delà de ses spécifications en matière de rayon de courbure.
-  **CAUTION:** Protect the unit from high temperature, humidity and vibrations.
-  **ATTENTION:** Protéger l'unité contre les températures élevées, l'humidité et les vibrations.
-  **CAUTION:** The unit warranty is void if the tested and approved fuses are not used.
-  **ATTENTION:** La garantie de l'unité est nulle si aucun fusible testé et approuvé n'est utilisé.
-  **CAUTION:** Only trained and authorized personnel should access and handle the internal electronics and they must follow proper electro-static prevention procedures.
-  **ATTENTION:** Seul le personnel formé et autorisé peut accéder aux composants électroniques internes et les gérer, et il doit se conformer a des procédures de prévention électrostatique appropriées.
-  **CAUTION:** Install an appropriately sized RC filter across contactor coils, relays and other inductive loads.
-  **ATTENTION:** Installer un filtre RC de dimensions appropriées sur les bobines du contacteur, les relais et autres charges par induction.
-  **CAUTION:** The thyristor units here described have been designed for use with sinusoidal networks with nominal frequency 50-60 Hz. Any application with NON-SINUSOIDAL, distorted or disturbed networks could compromise the correct operation of the unit.
-  **ATTENTION:** Les unités de thyristors décrites ici ont été conçues pour être utilisées avec des réseaux sinusoïdaux d'une fréquence nominale de 50 à 60 Hz. Toute application utilisant des réseaux NON SINUSOÏDAUX, déformés ou perturbés peut compromettre le bon fonctionnement de l'appareil.
-  **NOTE:** Provide a local disconnect to isolate the power controller for servicing.
-  **REMARQUE:** Fournir une déconnexion locale afin d'isoler le régulateur de puissance pour l'entretien.
-  **NOTE:** The nominal current is specified for ambient temperatures at or below 40°C. Ensure the application design allows for adequate cooling of each power controller. The power controller must be mounted vertically. The cooling design must prevent air heated by one power controller from causing power controllers mounted above to exceed the ambient operating temperature limit. When power controllers are mounted side by side allow a minimum spacing of 15mm between them.
-  **REMARQUE:** Le courant nominal est précisé pour des températures ambiantes égales ou inférieures a 40°C. S'assurer que la conception de l'application permette le refroidissement adéquat de chaque régulateur de puissance. Le régulateur de puissance doit être monté verticalement. La conception de refroidissement doit empêcher l'air chauffé par le régulateur de puissance de dépasser la limite de température de fonctionnement ambiante de la part des régulateurs de puissance montés au-dessus. Lorsque les régulateurs de puissance sont montés côte a côte, il faut conserver un espacement minimal de 15 mm entre les deux.
-  **NOTE:** Use only copper cables and wires rated for use at 75°C or greater.
-  **REMARQUE:** N'utiliser que des câbles et des fils en cuivre pour l'utilisation a 75°C ou plus.

Maintenance

In order to have a corrected cooling, the user must clean the heat-sink and the protective grill of the fans. The frequency of this servicing depends on environmental pollution.

Also check periodically if the screw for the power cables and safety earth are tightened correctly (See Connection Diagram).

Warranty condition

Producer gives a 12 months warranty to its products.

The warranty is limited to repairing and parts substitution in our factory and does exclude products not properly used and fuses.

Warranty does not include products with serial numbers deleted. The faulty product should be shipped to Producer at customer's cost and our Service will evaluate if product is under warranty terms.

Substituted parts remain of Producer property.



Return Material Authorization (RMA)

Customers wishing to return any items, whether they are incorrectly supplied, faulty or damaged in transit, must first complete a Return Material Authorisation (RMA) form to obtain an RMA number from the Service Department.

A full repair service is available for customers. Prior to submitting the RMA form and returning products, customers are recommended to contact the technical support team to determine whether the issue can be resolved with telephone support.

How the RMA service works

The RMA form and details are available on our website:

<https://www.cdautomation.com/rma-english-version/>

When completing the RMA form, please be as specific as possible about the problem, including any pertinent application details. The more information given, the more quickly and more thoroughly the problem can be solved. The minimum information required is:

1. The Full Model Number
2. Quantity of units being returned
3. The units Serial Number(s)
4. A description of the problem ("faulty" or "unknown" is not sufficient).



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1

General description

The gateway enables communication between CD Automation equipment. Using already saved configurations, data can be exchanged very easily.

TU-RS485-PNT-067602 is a PROFINET / Modbus Master Converter.

Main features:

- Triple isolation between Modbus - Power, Modbus - Ethernet, Power - Ethernet;
- Bidirectional information between Modbus and PROFINET bus;
- 35 mm DIN rail mountable;
- Wide input power range: 8...24 V CA o 12...35 V CC;
- Wide temperature range: -40°C / 85°C (-40°F / +185°F).

To perform the following operations, the configuration software must be present on the PC.:

- Definire Nome e indirizzi IP dello strumento sulla linea PROFINET;
- Update the device.

1.1 Order code

	1	2		3	4	5	6	7		8	9	10		11	12	13	14	15	16
ORDER CODE	T	U	-	R	S	4	8	5	-	-	-	-	-	-	-	-	-	-	
COMMUNICATION				3	4	5	6	7		8	9	10		11	12	13	14	15	16
Modbus RTU				R	S	4	8	5											
FIELDBUS, COMMUNICATION OR OTHER FUNCTION				8	9	10				11	12	13		14	15	16			
Modbus TCP Protocol Converter	-	T	C	P	-	3	5	8	0	M	B								
Modbus TCP, Modbus Slave, IO, Data Logger, Logic	-	E	T	H	-	I	O	D	L	0	0								
Profinet	-	P	N	T	-	0	6	7	6	0	2								
Ethernet IP	-	E	I	P	-	0	6	7	5	9	1								
RS232	-	2	3	2	-	3	5	8	0	2	W								

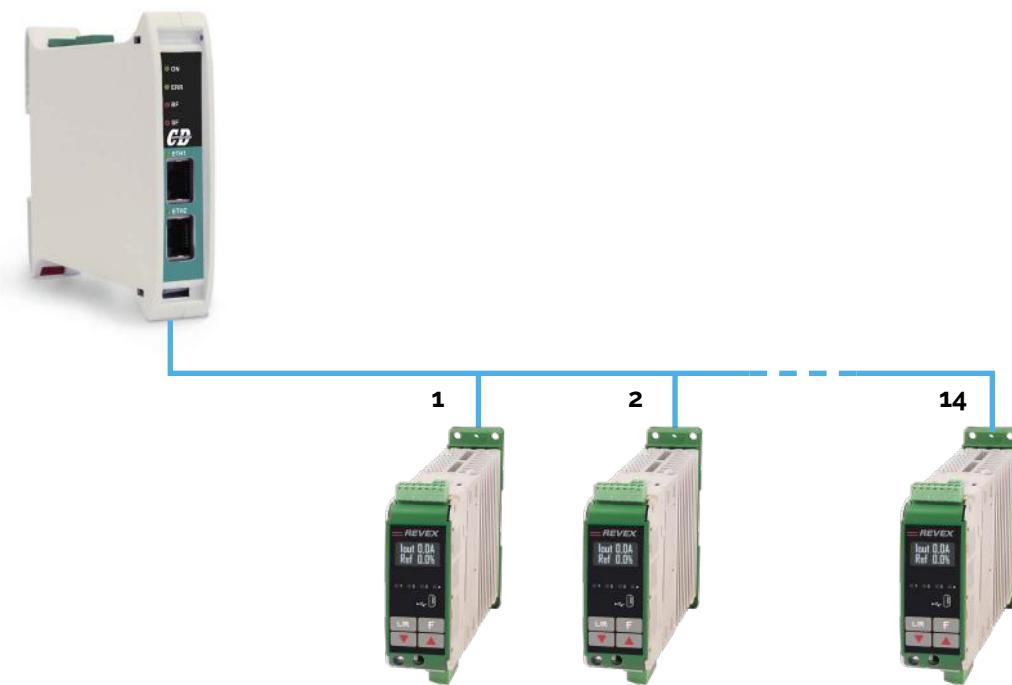
1.2 System

The system consists of connecting the instruments on the MODBUS-RTU side.

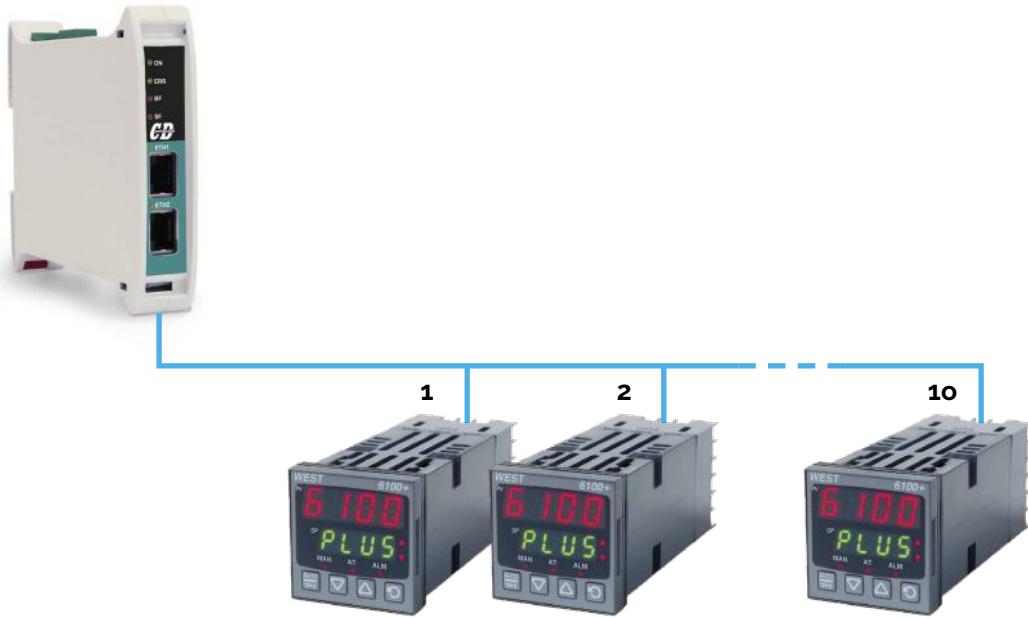
The possible configurations are:

1.2.1 REVEX (up to 14)

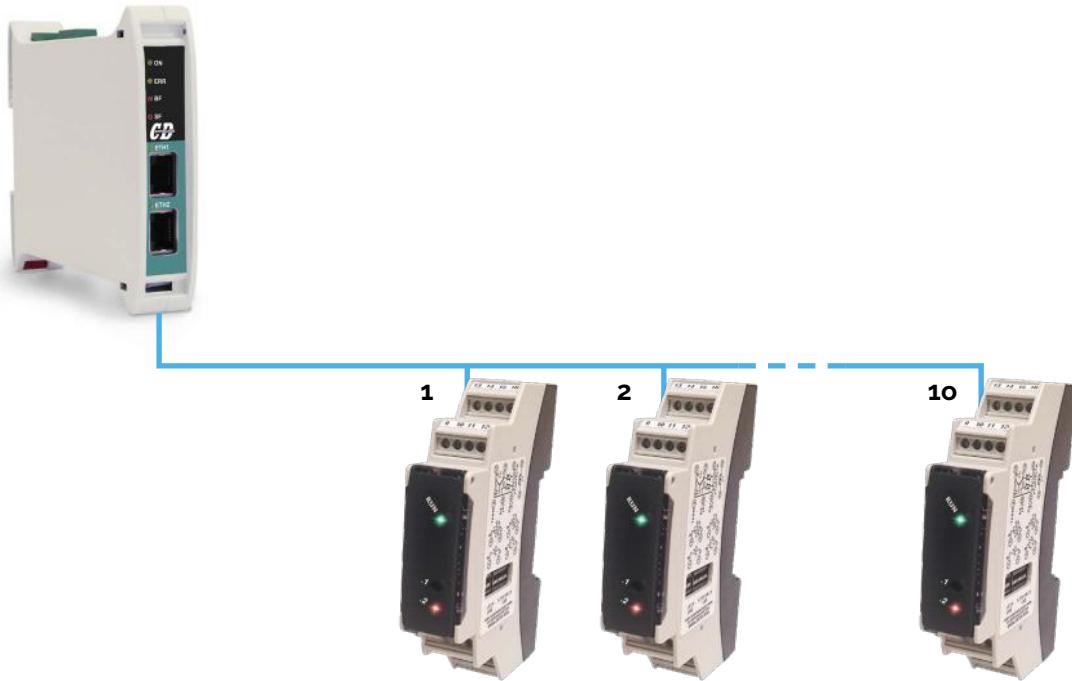
1.2.2 REVO C with Modbus RTU (up to 14)



Communication setting					
TU-RS485-PNT-067602		Instrument	Instrument	...	Instrument
Modbus Master		Modbus Slave	Modbus Slave	...	Modbus Slave
Baud 115200		Baud 115200	Baud 115200	...	Baud 115200
Bit data 8		Bit data 8	Bit data 8	...	Bit data 8
Bit stop 1		Bit stop 1	Bit stop 1	...	Bit stop 1
Parity None		Parity None	Parity None	...	Parity None
		Address 1	Address 2	...	Address 14

1.2.3 P6100 (Up to 10)

Communication setting				
TU-RS485-PNT-067602	Instrument	Instrument	...	Instrument
Modbus Master	Modbus Slave	Modbus Slave	...	Modbus Slave
Baud 19200	Baud 19200	Baud 19200	...	Baud 19200
Bit data 8	Bit data 8	Bit data 8	...	Bit data 8
Bit stop 1	Bit stop 1	Bit stop 1	...	Bit stop 1
Parity None	Parity None	Parity None	...	Parity None
	Address 1	Address 2	...	Address 10

1.2.4 COMPACT (Up to 10)

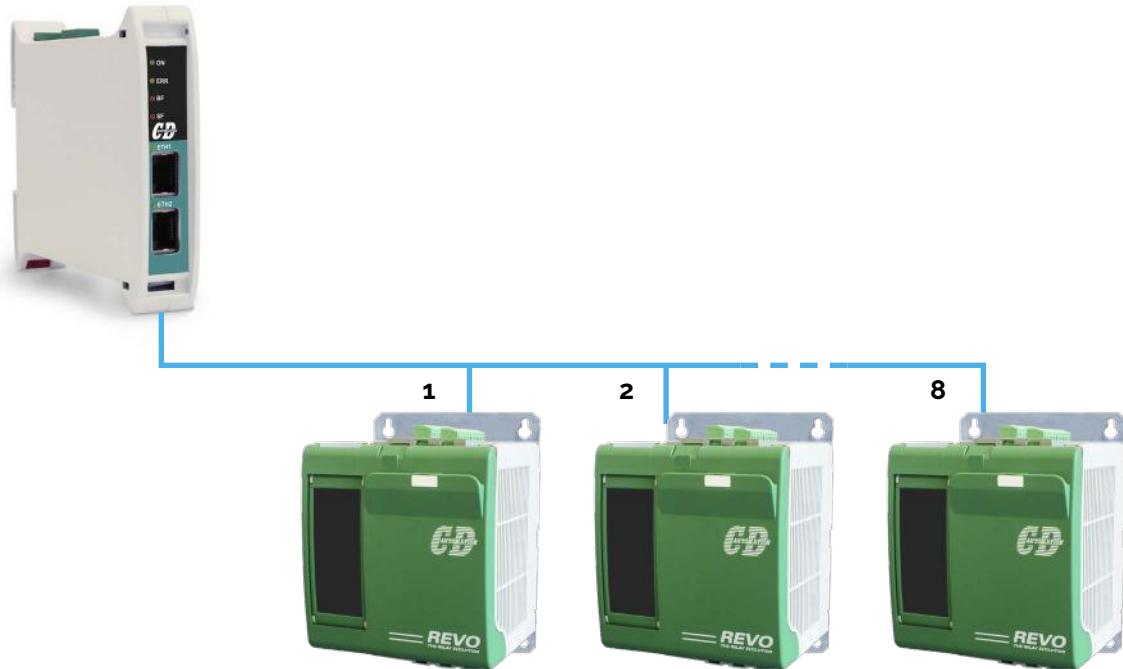
Communication setting				
TU-RS485-PNT-067602	Instrument	Instrument	...	Instrument
Modbus Master	Modbus Slave	Modbus Slave	...	Modbus Slave
Baud 115200	Baud 115200	Baud 115200	...	Baud 115200
Bit data 8	Bit data 8	Bit data 8	...	Bit data 8
Bit stop 1	Bit stop 1	Bit stop 1	...	Bit stop 1
Parity None	Parity None	Parity None	...	Parity None
	Address 1	Address 2	...	Address 10

1.2.5 REVO RT



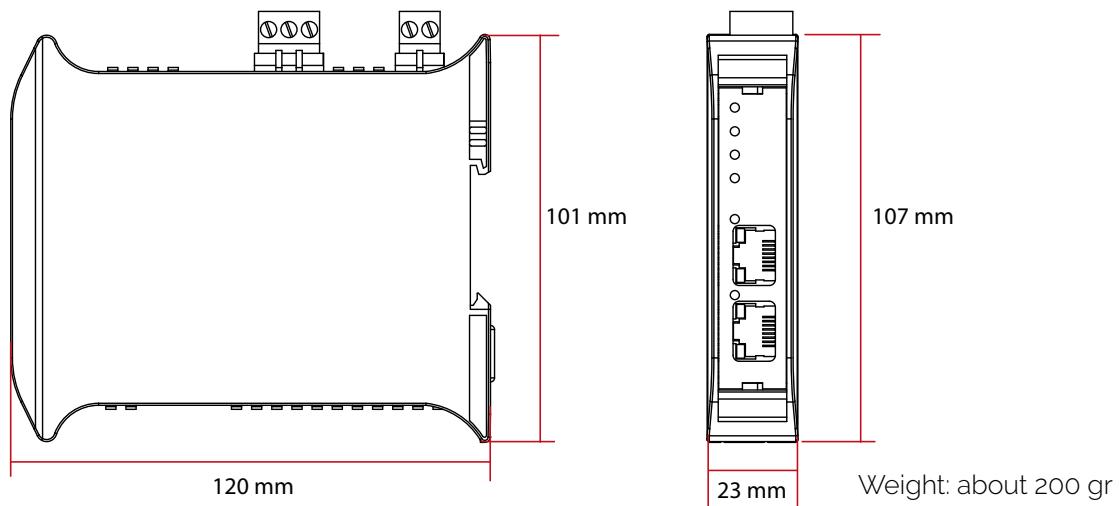
Communication setting					
TU-RS485-PNT-067602		Instrument	Instrument	...	Instrument
Modbus Master		Modbus Slave	Modbus Slave	...	Modbus Slave
Baud 115200		Baud 115200	Baud 115200	...	Baud 115200
Bit data 8		Bit data 8	Bit data 8	...	Bit data 8
Bit stop 1		Bit stop 1	Bit stop 1	...	Bit stop 1
Parity None		Parity None	Parity None	...	Parity None
		Address 1	Address 2	...	Address 8

1.2.6 REVO RTL-R



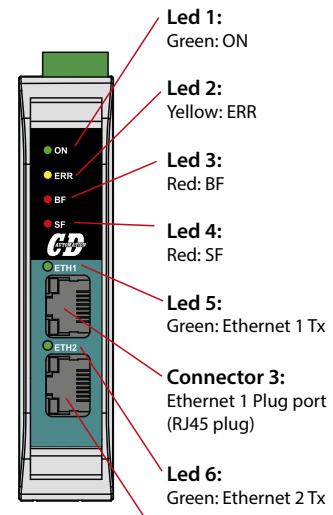
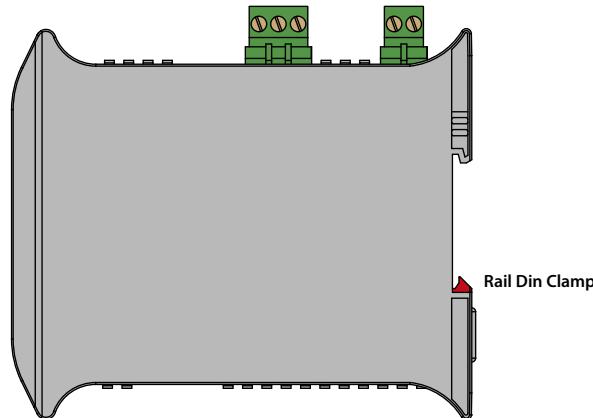
Communication setting					
TU-RS485-PNT-067602		Instrument	Instrument	...	Instrument
Modbus Master		Modbus Slave	Modbus Slave	...	Modbus Slave
Baud 115200		Baud 115200	Baud 115200	...	Baud 115200
Bit data 8		Bit data 8	Bit data 8	...	Bit data 8
Bit stop 1		Bit stop 1	Bit stop 1	...	Bit stop 1
Parity None		Parity None	Parity None	...	Parity None
		Address 1-3	Address 4-6	...	Address 7-8

1.3 Dimensions

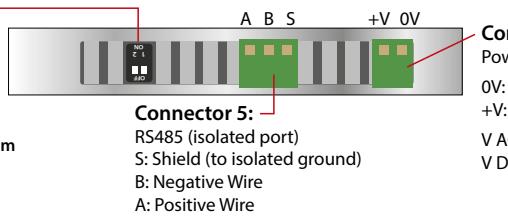


1.4 Connections

Dip Switch A:
 Dip 1 - deve essere su ON
 Dip 2 - modalità di funzionamento



Dip Switch B:
 Dip 1 - RS485 Termination Resistor
 Dip 1 = Open Dip 2 = 220 Ohm
 Dip 2 - non usato



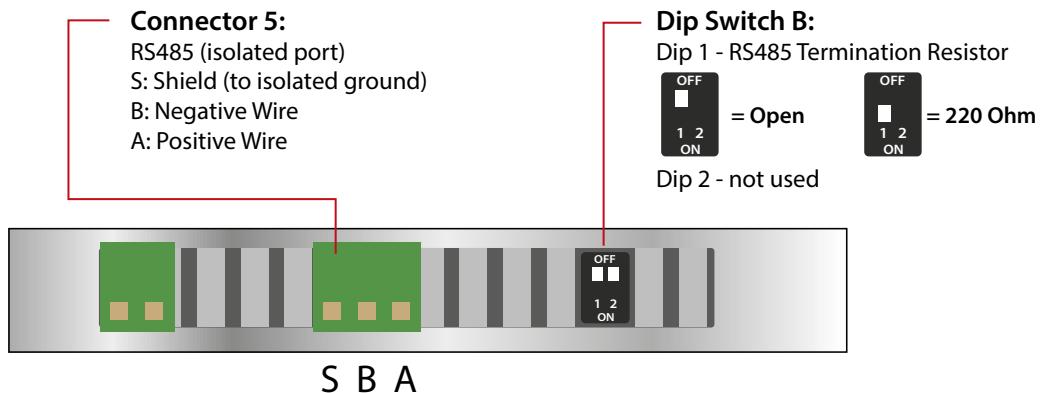
Connector 1:
 Power Supply port
 0V: Ground
 +V: Positive wire
 V AC: min 8V; max 24V
 V DC: min 12V; max 35V

1.4.1. Profinet

The PROFINET connection must be made using Connector3 and/or Connector4 of HD67602-xxx-A1 with at least a Category 5E cable. The maximum length of the cable should not exceed 100m. The cable has to conform to the T568 norms relative to connections in cat.5 up to 100 Mbps. To connect the device to an Hub/Switch is recommended the use of a straight cable, to connect the device to a PC/PLC/other is recommended the use of a cross cable.

1.4.2. RS485

For terminate the RS485 line with a 220Ω resistor it is necessary to put ON dip 1, like in figure.



The maximum length of the cable should be 1200m (4000 feet).

1.4.3. Power Supply

The devices can be powered by 8...24Vac or 12...35Vdc
Consumption at 24Vdc is 3.5Vdc

1.5 Led status



LED	Normal Mode	Boot Mode
1: ON (green) supply voltage	● ON : Device powered ● OFF : Device not powered	● ON : Device powered ● OFF : Device not powered
2: ERR (yellow) error RS485	● ON : Error on RS485 network ● OFF : RS485 network ok	● Blinks quickly : Boot state ● Blinks very slowly (~0.5Hz) : update in progress
3: BF (red) Bus fault	● ON : The Ethernet connection is defective; the IP address exists several times in the network; the own NameOfStation exists several times in the network; no IP address has been set ● Blinks : Incorrect data length ● OFF : No errors are present	● Blinks quickly : Boot state ● Blinks very slowly (~0.5Hz) : update in progress
4: SF (red) Group error	● ON : Incorrect data length ● OFF : No errors are present	● Blinks quickly : Boot state ● Blinks very slowly (~0.5Hz) : update in progress
5: ETH1 (green) ethernet 1	● Blinks : Dato trasmesso sulla rete ethernet ● OFF : Device not powered	● Blinks quickly : Boot state ● Blinks very slowly (~0.5Hz) : update in progress
6: ETH2 (green) ethernet 2	● Blinks : Dato trasmesso sulla rete ethernet ● OFF : Device not powered	● Blinks quickly : Boot state ● Blinks very slowly (~0.5Hz) : update in progress

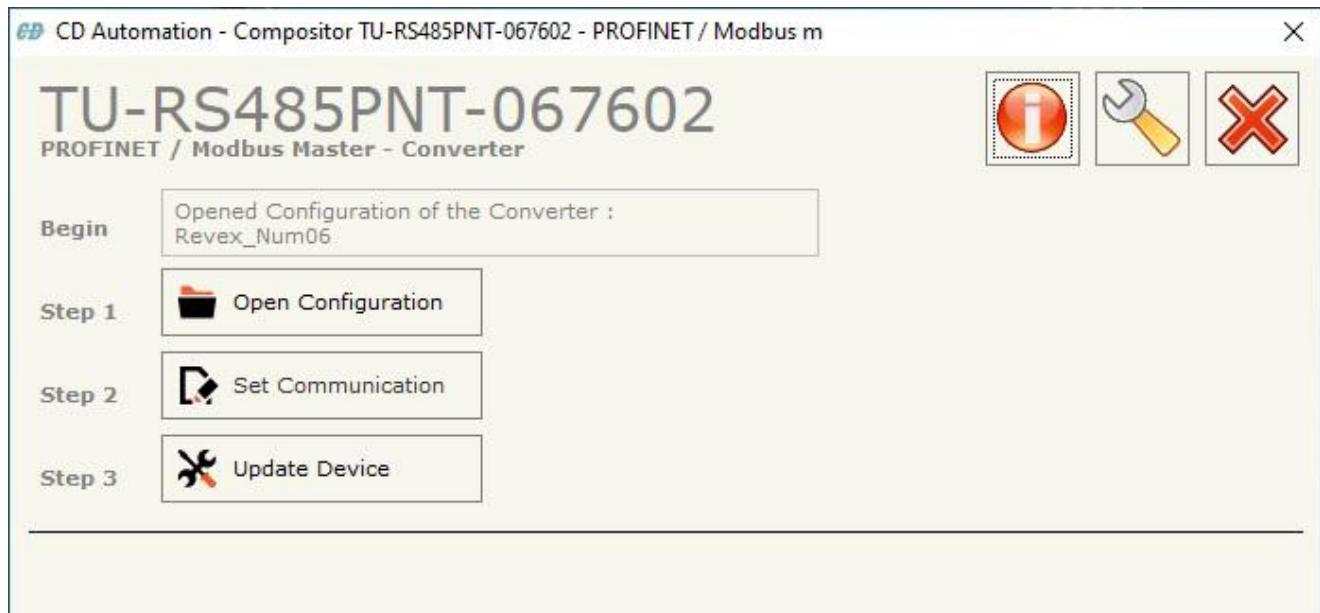
2

Configuration

To configure the TU-RS485PNT-067602 use the configuration software available on our website www.cdautomation.com

When launching the Software, the window below appears:

i Note: It is necessary to have installed .Net Framework 4.



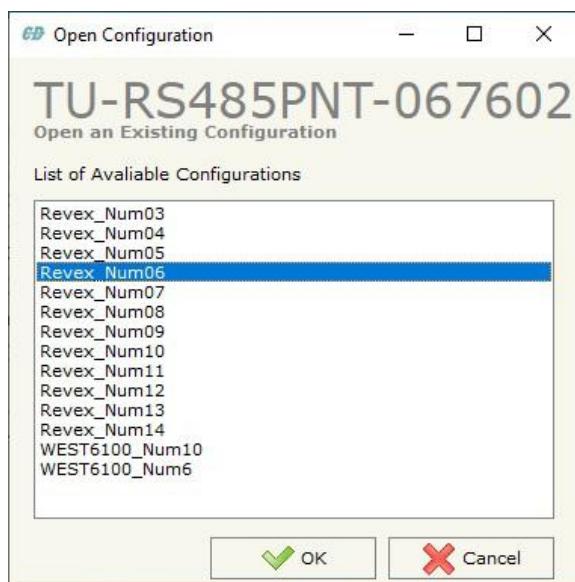
Open Configuration: opens the list of available configurations

Set Communication: Set PROFINET communication parameters

Update Device: sends the configuration to the device

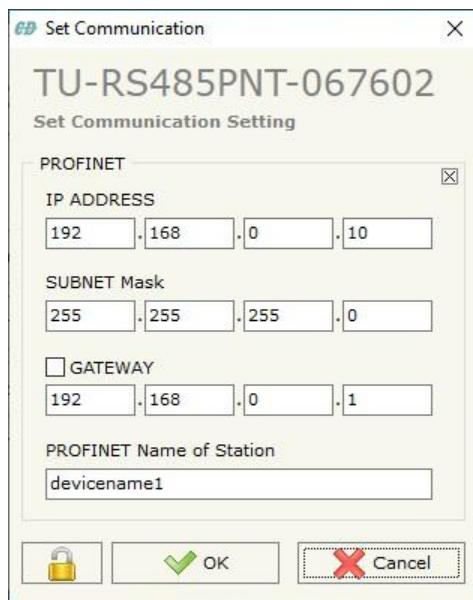
2.1 Open an existing configuration

The software can be used with CD Automation devices. The devices and combinations that can be connected will be listed in the window that appears when clicking on the “**Open Configuration**” button.



2.2 Set name and IP address

Once the configuration is open, the desired station name and IP addresses must be set. To do this, click on the “**Set Communication**” button.



The meaning of the fields is:

IP ADDRESS: converter IP address

SUBNET Mask: Network Subnet Mask

GATEWAY: Network gateway address

PROFINET Name of Station: Name of the device configured in the PLC.

2.3 Sending Settings

Clicking on “**Update Device**” opens the window for sending the configuration to the instrument. There can be 2 cases:

1. The IP address of TU-RS485-PNT-0670602 is known
2. The IP address of TU-RS485-PNT-0670602 is unknown

For each of these 2 situations there is a specific procedure

2.3.1 The IP address of the device is known

i Nota: Default IP address is 192.168.100.191

If you know the actual IP address of the device you have to use this procedure:

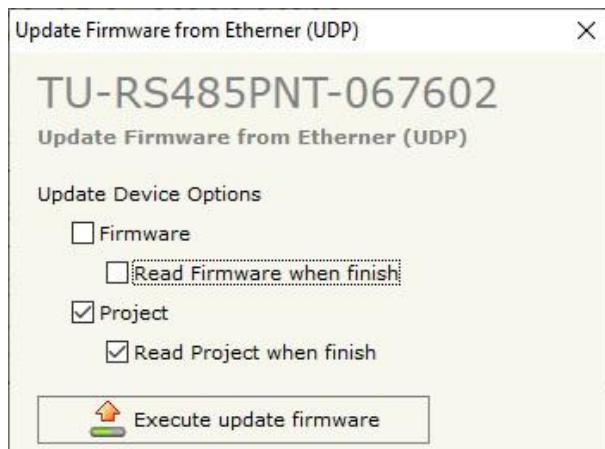
1. Turn on the Device with the Ethernet cable inserted;
2. Insert the actual IP of the Converter;



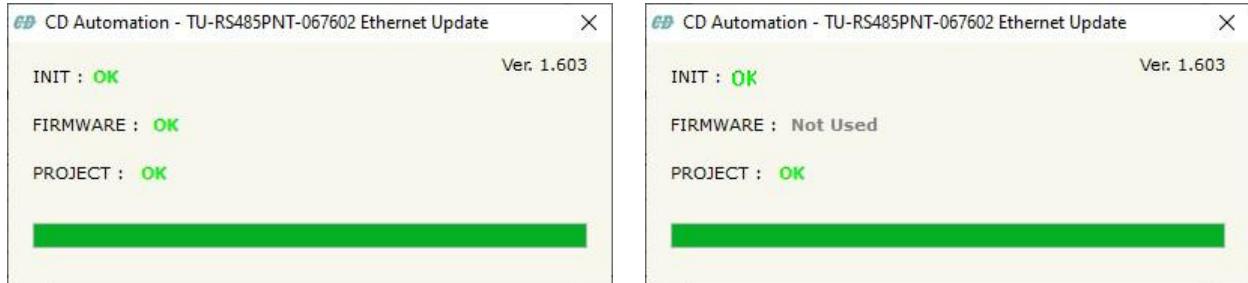
3. Press the "Ping" button, must appear "Device Found!";



4. Press the "Next" button;
5. Select which operations you want to do;



- Note:** When downloading for the first time with a new instrument, it is recommended to also download the firmware
6. Press the "Execute update firmware" button to start the upload;
 7. When all the operations are "OK" the device automatically goes at Normal Mode.

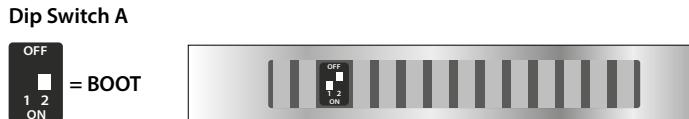


8. The device is correctly update.

2.3.2 The IP address of the device is unknown

If you don't know the actual IP address of the device you have to use this procedure:

1. Turn off the Device;
2. Put Dip2 of 'Dip-Switch A' at ON position;



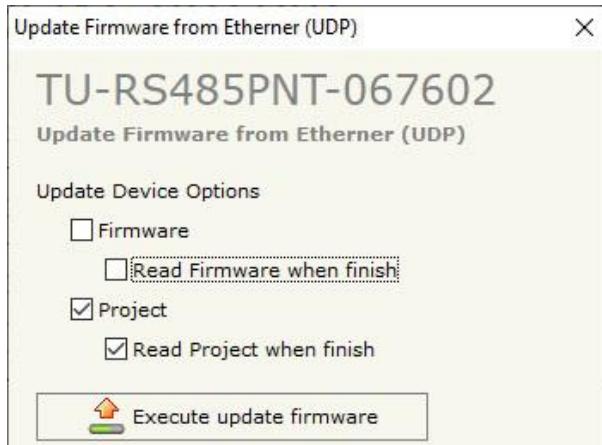
3. Turn on the device;
4. Connect the Ethernet cable;
5. Insert the IP "192.168.2.205";



6. Configure the PC port to the same address class "192.168.2.xxx"
7. Press the "Ping" button, must appear "Device Found!";

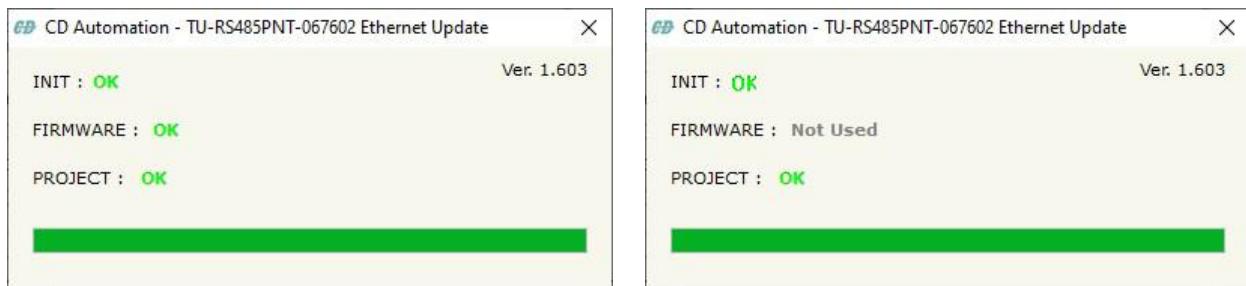


8. Press the "Next" button;
9. Select which operations you want to do;



Note: When downloading for the first time with a new instrument, it is recommended to also download the firmware

10. Press the "Execute update firmware" button to start the upload;



11. When all the operations are "OK" the configuration was sent successfully.
12. Close the download window
13. Turn off the Device;



14. Put Dip2 of 'Dip-Switch A' at OFF position;
14. Turn on the device.
15. The device is configured.

3

Profinet Communication

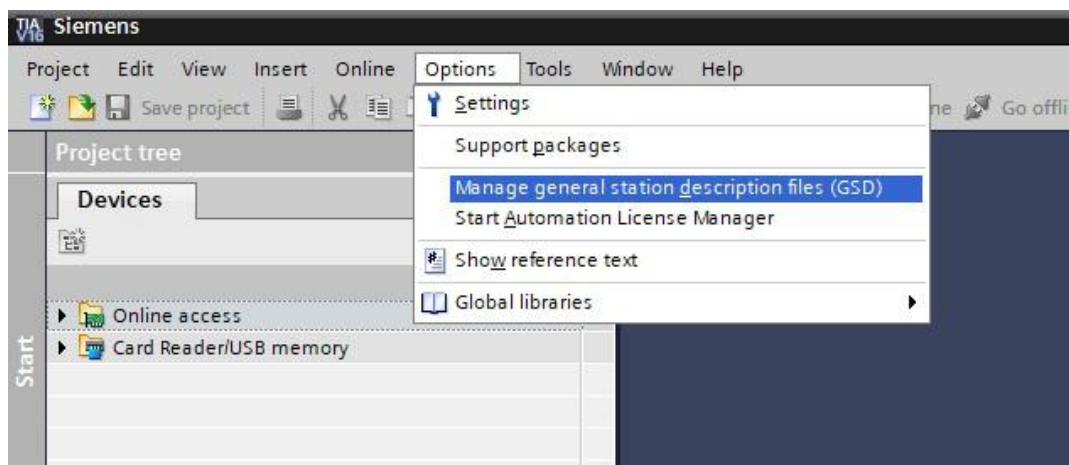
3.1 PLC Configuration

With the PROFINET connection, values and parameters can be read and written.

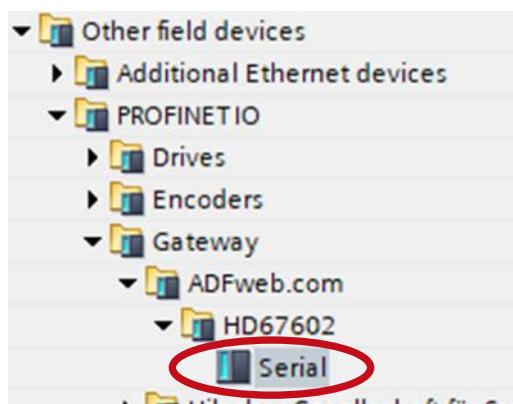
This is done by using the PLC's GSDML configuration file, which describes the product in the PLC configuration software environment.

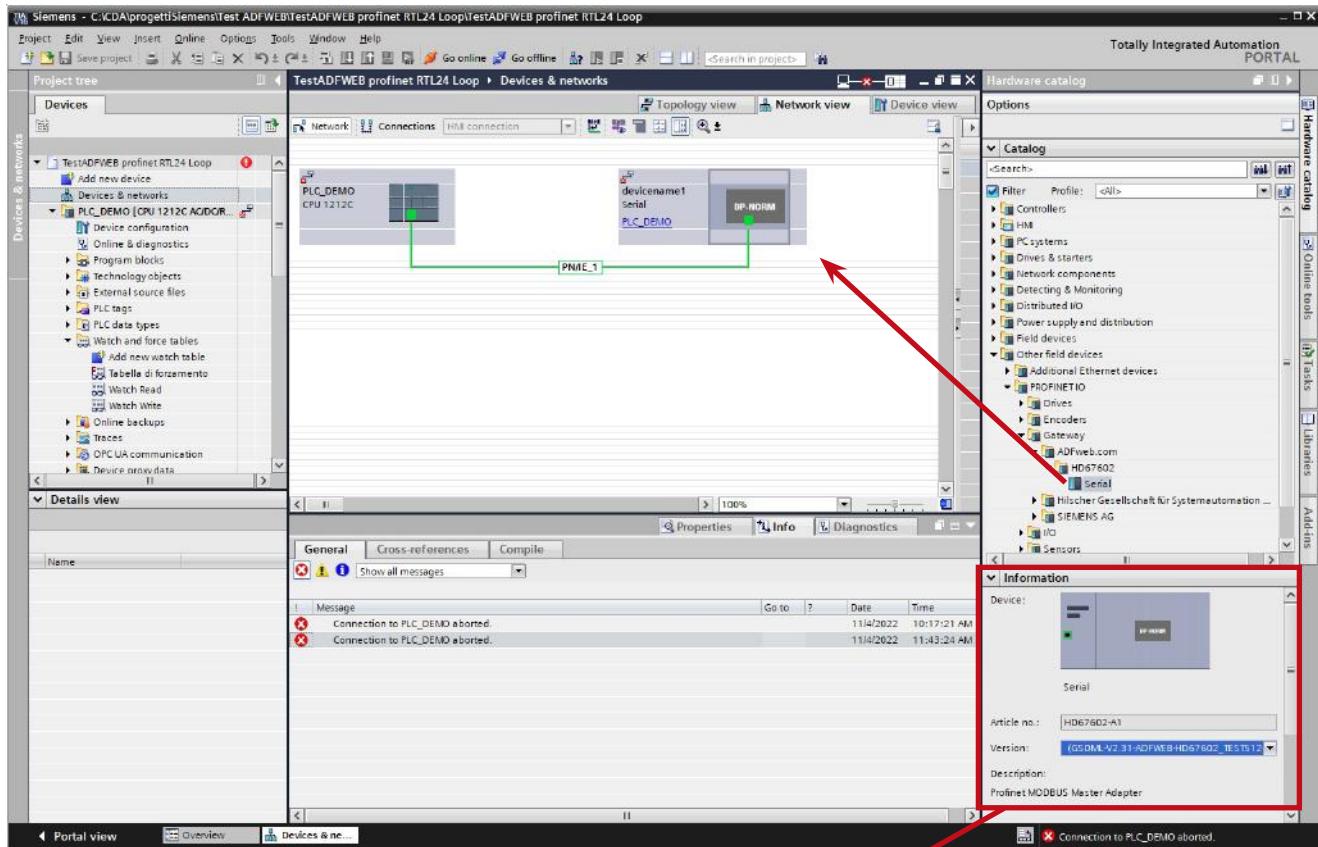
If the GSDML file is not installed, install it as shown below.

Select the correct GSDML file depending on the instrument to be connected (See relevant Model paragraph).



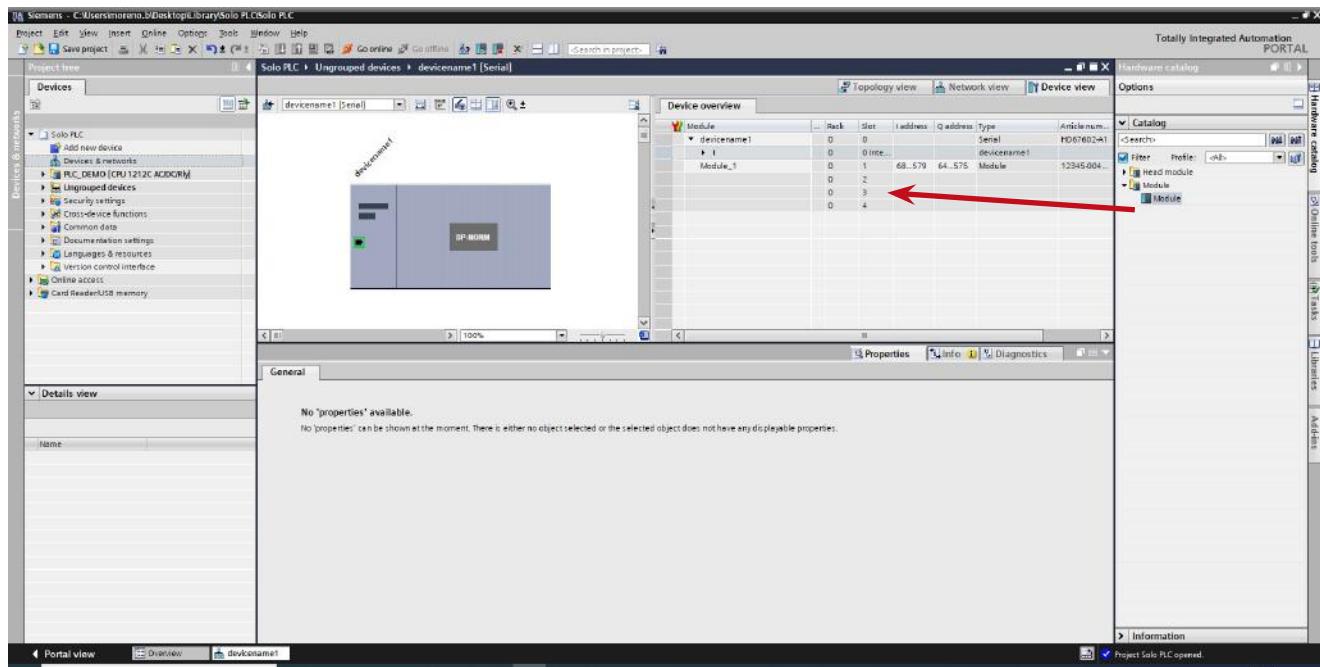
If the GSD File is installed, or after installation, the tool HD67602 will appear.





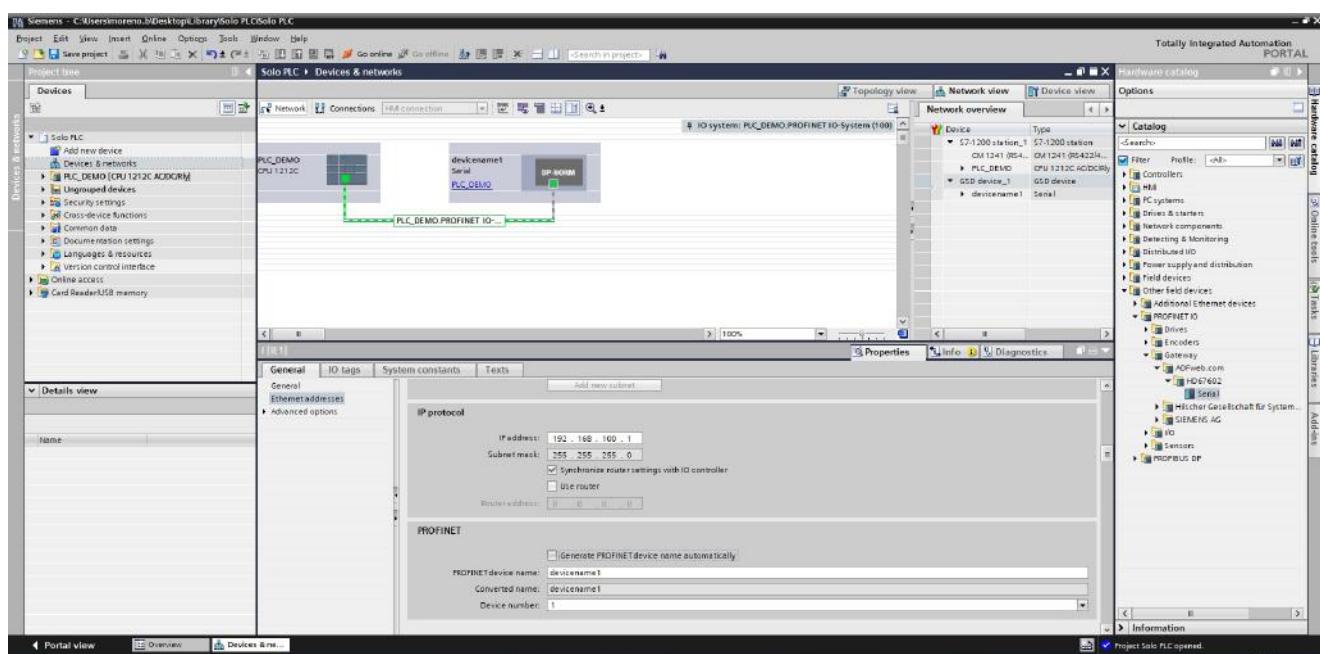
Note: in the case of several GSD files installed, select the correct file in the "Information" section

Set up the I/O module via drag and drop



Note: The module must be in first position

Set the correct IP address and Name



4

Device connections

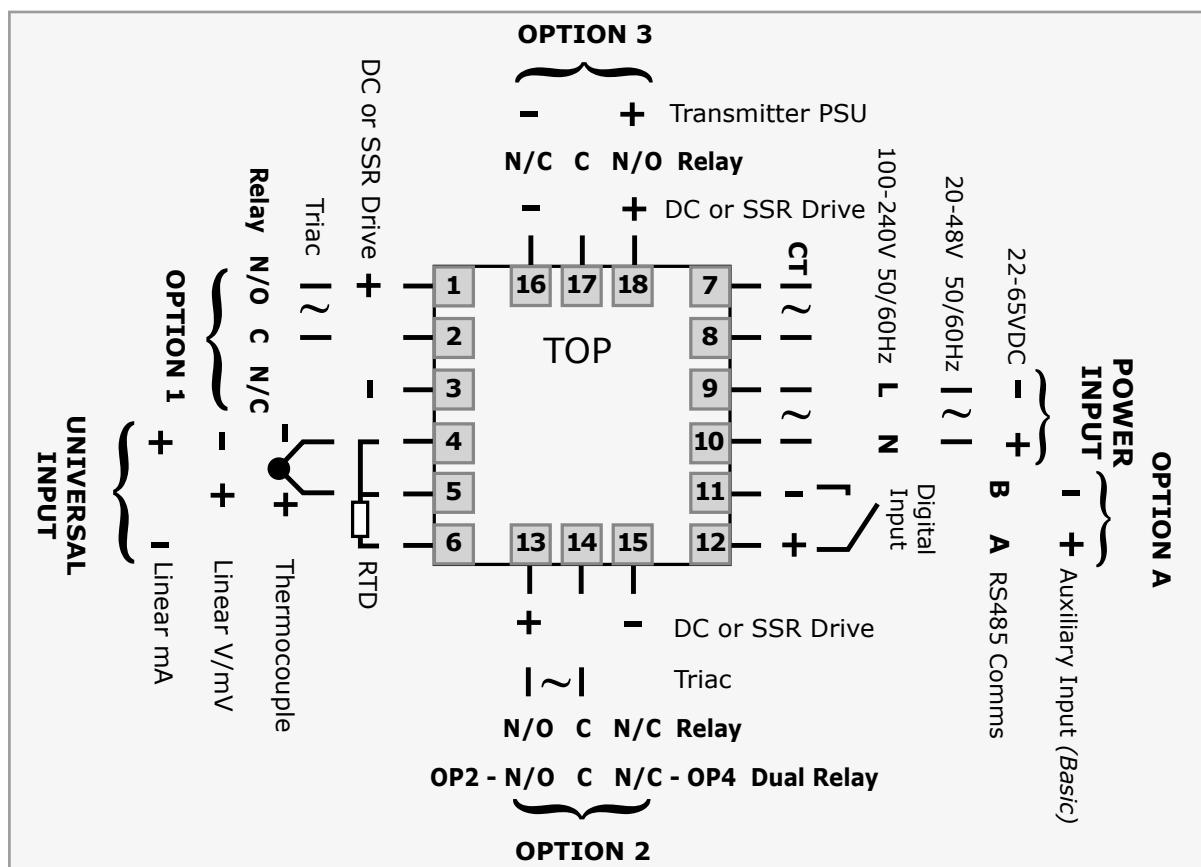
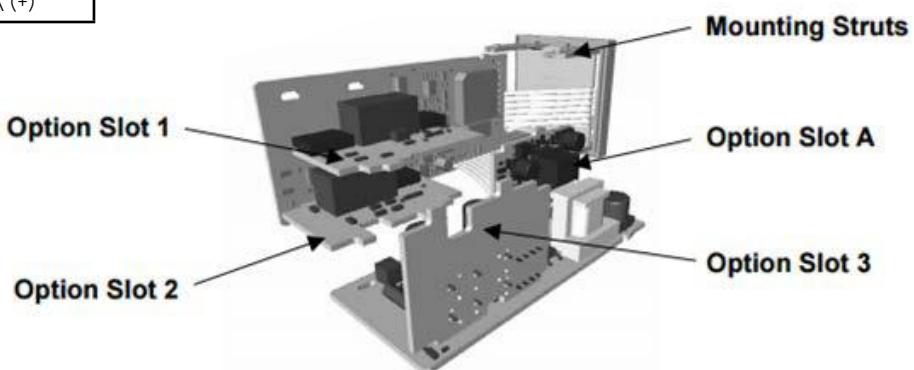
4.1 WEST P6100/P4100/P8100

GSDML files to be used: "GSDML-V2.31-ADFweb-HD67602_CDAutomation-20220322.xml" available on this web page <https://www.cdautomation.com/product/tu-rs485-pnt-067602-profinet-terminal-unit/> in "Software" section.

Serial communication is plugged into option A of the instrument, via an optional board (PA1-W06). The connection is as shown below. Carefully observe the polarity of connections A (+) and B (-)

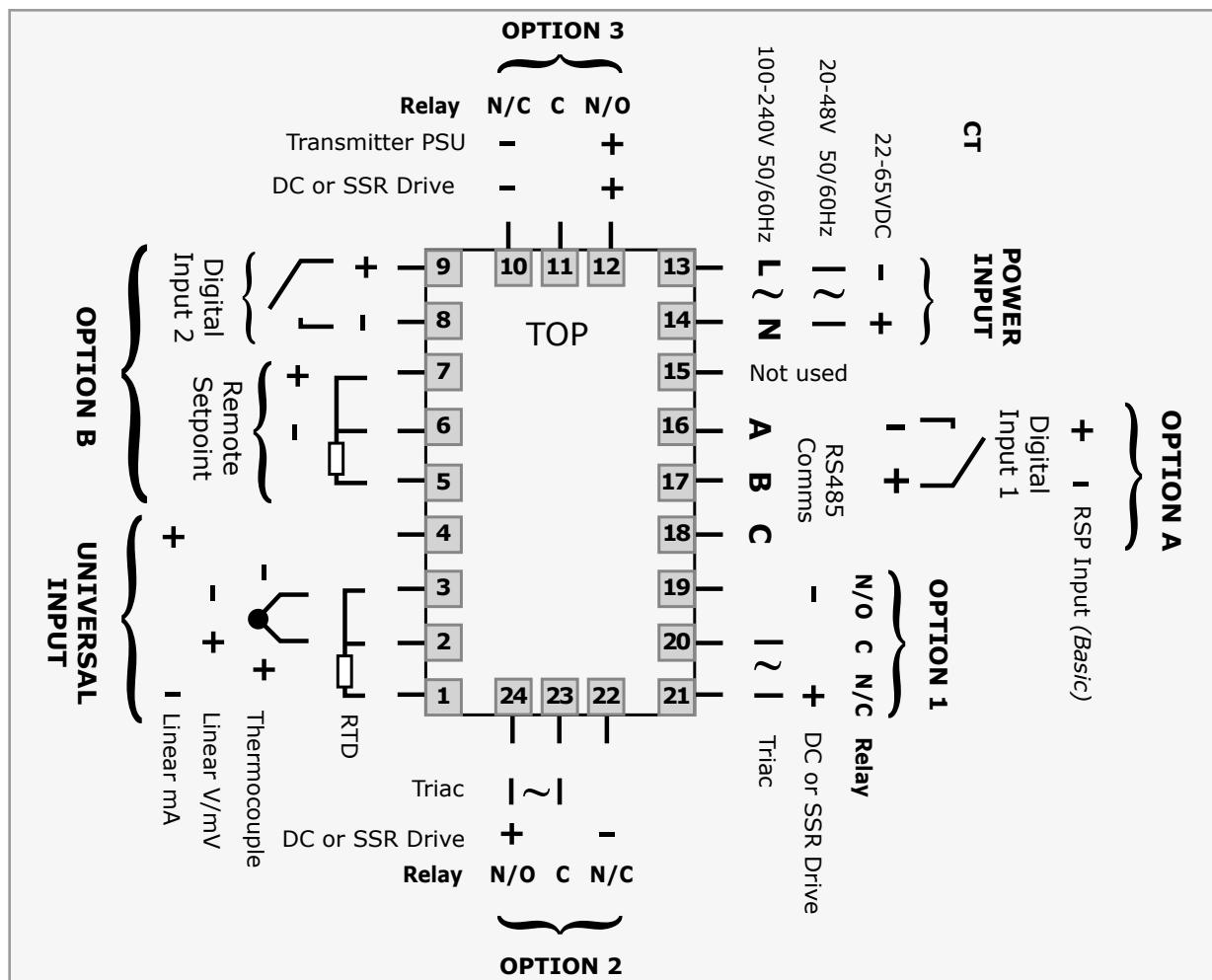
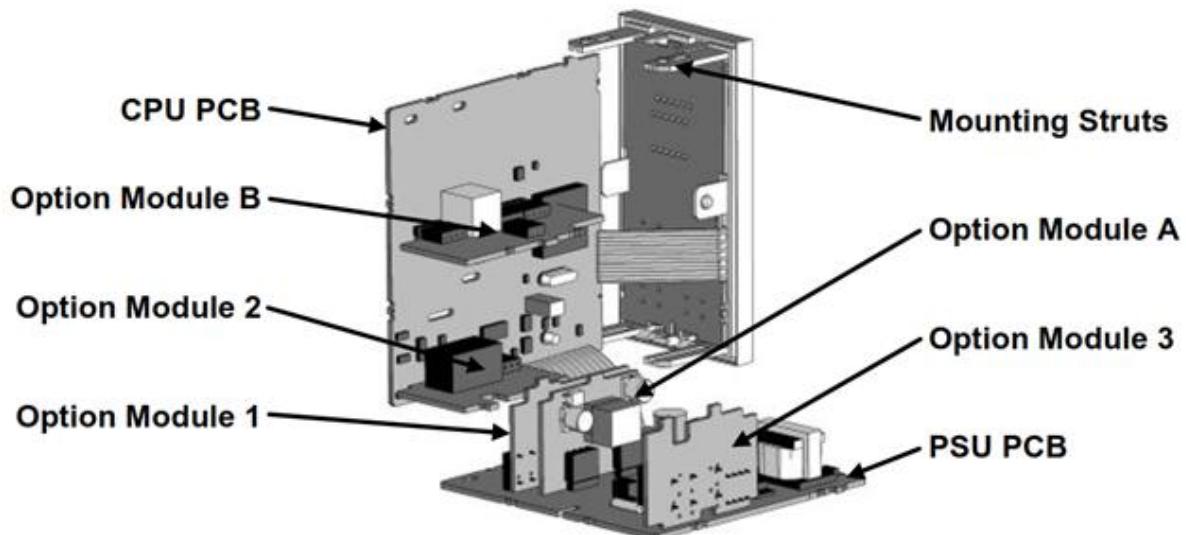
4.1.1 WEST P6100

Terminal	Description
11	RS485 B (-)
12	RS485 A (+)



4.1.2 WEST P4100 / P8100

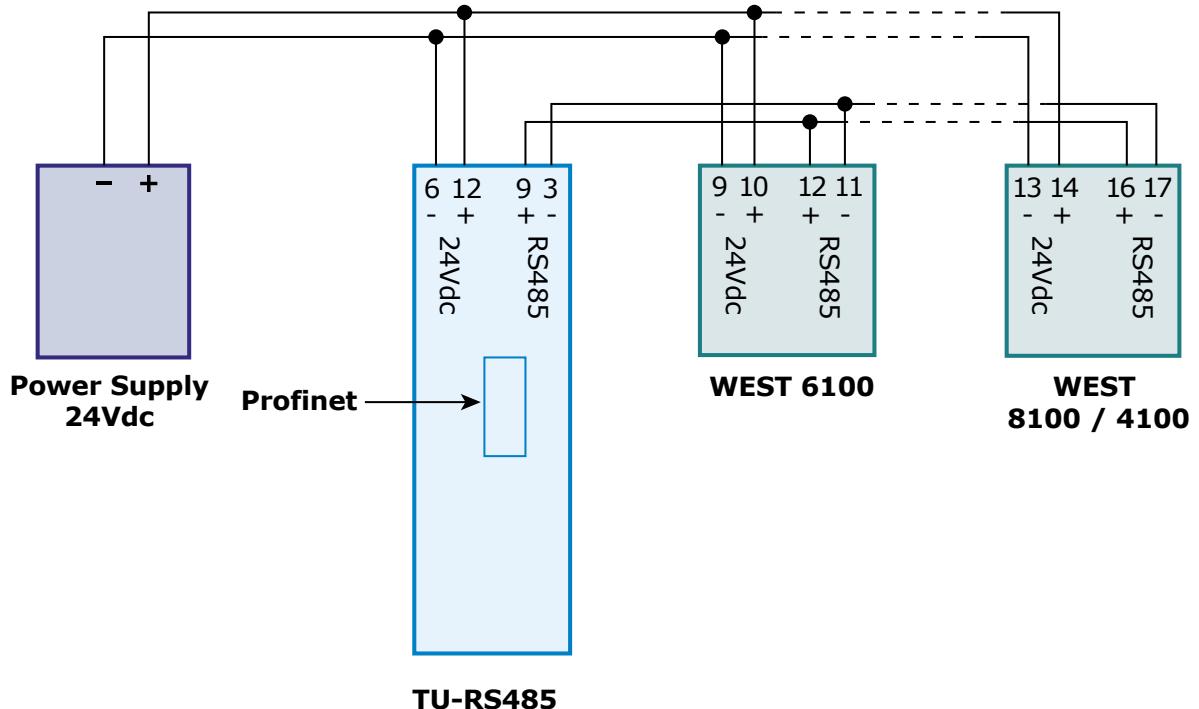
Terminal	Description
17	RS485 B (-)
16	RS485 A (+)



4.1.3 System Connections

TU-RS485 + P4100 e/o P6100 e/o P8100

POWER SUPPLY: **TU = 24Vdc**
WEST = 24Vdc



4.1.4 Data table

Offset Byte	The number of bytes from the "0" address to the parameter start address
Offset Word	The number of "Words" offset from the "0" address
PG	The Modbus parameter number of single device
Instrument number	Device address
Description	Parameter description
UM	Unit of measurement

4.1.5 Area di Lettura

Offset Byte	Offset Word	PG	Instrument Number	Description	UM
0	0			Comm status table Bit 0 → Address 9 Bit 1 → Address 10 Bit 2 → Not used Bit 3 → Not used Bit 4 → Not used Bit 5 → Not used Bit 6 → Not used Bit 7 → Not used Bit 8 → Address 1 Bit 9 → Address 2 Bit 10 → Address 3 Bit 11 → Address 4 Bit 12 → Address 5 Bit 13 → Address 6 Bit 14 → Address 7 Bit 15 → Address 8 0= ok / 1= in error	
2	1			Not used	
4	2			Not used	
6	3			Not used	
8	4			Not used	
10	5	1	1	Measure	°C
12	6	2		Set Point	°C
14	7	3		Power %	%
16	8	4		Deviation	
18	9	5		Status Table	See status table
20	10			Not used	
22	11	1		Measure	°C
24	12	2	2	Set Point	°C
26	13	3		Power %	%
28	14	4		Deviation	
30	15	5		Status Table	See status table
32	16			Not used	
34	17	1	3	Measure	°C
36	18	2		Set Point	°C
38	19	3		Power %	%
40	20	4		Deviation	
42	21	5		Status Table	See status table
44	22			Not used	

Offset Byte	Offset Word	PG	Instrument Number	Description	UM
46	23	1	4	Measure	°C
48	24	2		Set Point	°C
50	25	3		Power %	%
52	26	4		Deviation	
54	27	5		Status Table	See status table
56	28			Not used	
58	29	1	5	Measure	°C
60	30	2		Set Point	°C
62	31	3		Power %	%
64	32	4		Deviation	
66	33	5		Status Table	See status table
68	34			Not used	
70	35	1	6	Measure	°C
72	36	2		Set Point	°C
74	37	3		Power %	%
76	38	4		Deviation	
78	39	5		Status Table	See status table
80	40			Not used	
82	41	1	7	Measure	°C
84	42	2		Set Point	°C
86	43	3		Power %	%
88	44	4		Deviation	
90	45	5		Status Table	See status table
92	46			Not used	
94	47	1	8	Measure	°C
96	48	2		Set Point	°C
98	49	3		% Potenza	%
100	50	4		Deviation	
102	51	5		Status Table	See status table
104	52			Not used	
106	53	1	9	Measure	°C
108	54	2		Set Point	°C
110	55	3		Power %	%
112	56	4		Deviation	
114	57	5		Status Table	See status table
116	58			Not used	

Offset Byte	Offset Word	PG	Instrument Number	Description	UM
118	59	1	10	Measure	°C
120	60	2		Set Point	°C
122	61	3		Power %	%
124	62	4		Deviation	
126	63	5		Status Table	See status table
128	64			Not used	
130	65			Not used	
132	66			Not used	
134	67			Not used	
136	68			Not used	
138	69			Not used	
140	70			Not used	
142	71			Not used	
144	72			Not used	
146	73			Not used	
148	74			Not used	
150	75			Not used	
152	76			Not used	
154	77			Not used	
156	78			Not used	
158	79			Not used	
160	80			Not used	
162	81			Not used	
164	82			Not used	
166	83			Not used	
168	84			Not used	
170	85			Not used	
172	86			Not used	
174	87			Not used	
176	88			Not used	
178	89			Not used	
180	90			Not used	
182	91			Not used	
184	92			Not used	
186	93			Not used	
188	94			Not used	
190	95			Not used	

Offset Byte	Offset Word	PG	Instrument Number	Description	UM
192	96			Not used	
194	97			Not used	
196	98			Not used	
198	99			Not used	
200	100			Not used	
202	101			Not used	
204	102			Not used	
206	103			Not used	
208	104			Not used	
210	105			Not used	
212	106			Not used	
214	107			Not used	
216	108			Not used	
218	109			Not used	
220	110			Not used	
222	111			Not used	

4.1.6. Status Table

	Bit	1	0
0	Com sts	R/W	R
1	Auto/Man	Manual	Auto
2	Sef/Tune	Active	Not Active
3	PreTune	Active	Not Active
4	Alm1	Active	Not Active
5	Alm2	Active	Not Active
6	Sp/Ramping	Enabled	Disabled
7	Not used		
8	Not used		
9	Loop alarm sts	Active	Not Active
10	Loop alarm abil	Enabled	Disabled
11	Dl2 sts (Option B)		
12	Not used		
13	Not used		
14	Not used		
15	Not used		

4.1.7 Write Area

Offset Byte	Offset Word	PG	Instrument Number	Description	UM
0	0			Disable instruments Bit 0 → Address 9 Bit 1 → Address 10 Bit 2 → Not used Bit 3 → Not used Bit 4 → Not used Bit 5 → Not used Bit 6 → Not used Bit 7 → Not used Bit 8 → Address 1 Bit 9 → Address 2 Bit 10 → Address 3 Bit 11 → Address 4 Bit 12 → Address 5 Bit 13 → Address 6 Bit 14 → Address 7 Bit 15 → Address 8 0= enabled / 1= disabled	
2	1			Not used	
4	2			Not used	
6	3			Not used	
8	4			Not used	
10	5			Not used	
12	6	1	1	SP	
14	7	2		Pw	
16	8	3		Command	See "command" table
18	9	1	2	SP	
20	10	2		Pw	
22	11	3		Command	See "command" table
24	12	1	3	SP	
26	13	2		Pw	
28	14	3		Command	See "command" table
30	15	1	4	SP	
32	16	2		Pw	
34	17	3		Command	See "command" table
36	18	1	5	SP	
38	19	2		Pw	
40	20	3		Command	See "command" table
42	21	1	6	SP	
44	22	2		Pw	
46	23	3		Command	See "command" table

Offset Byte	Offset Word	PG	Instrument Number	Description	UM
48	24	1	7	SP	
50	25	2		Pw	
52	26	3		Command	See "command" table
54	27	1	8	SP	
56	28	2		Pw	
58	29	3		Command	See "command" table
60	30	1	9	SP	
62	31	2		Pw	
64	32	3		Command	See "command" table
66	33	1	10	SP	
68	34	2		Pw	
70	35	3		Command	See "command" table
72	36			Not used	
74	37			Not used	
76	38			Not used	
78	39			Not used	
80	40			Not used	
82	41			Not used	
84	42			Not used	
86	43			Not used	
88	44			Not used	
90	45			Not used	
92	46			Not used	
94	47			Not used	
96	48			Not used	
98	49			Not used	
100	50			Not used	
102	51			Not used	
104	52			Not used	
106	53			Not used	
108	54			Not used	
110	55			Not used	
112	56			Not used	
114	57			Not used	
116	58			Not used	
118	59			Not used	

Offset Byte	Offset Word	PG	Instrument Number	Description	UM
120	60			Not used	
122	61			Not used	
124	62			Not used	
126	63			Not used	

4.1.8 "Command" table

Bit	Bit		1	0
	0	1	Manual	Auto
0	Auto/Manual		Manual	Auto
1	Pre Tune		Active	Not Active
2	Not used			
3	Not used			
4	Not used			
5	Not used			
6	Not used			
7	Not used			
8	Not used			
9	Not used			
10	Not used			
11	Not used			
12	Not used			
13	Not used			
14	Not used			
15	Not used			

4.2 REVEX / REVO C

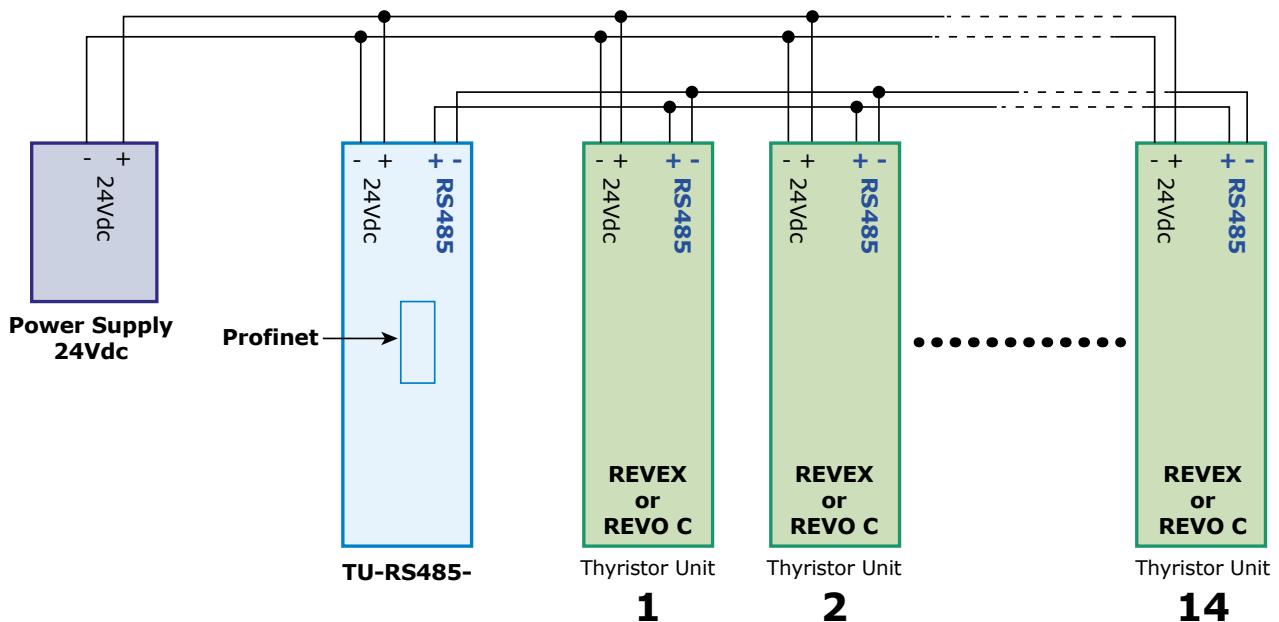
GSDML files to be used: "GSDML-V2.31-ADFweb-HD67602_CDAutomation-20220322.xml" available on this web page <https://www.cdautomation.com/product/tu-rs485-pnt-067602-profinet-terminal-unit/> in "Software" section.

RS485 serial communication port is available on the thyristor unit

(i) Note: Please refer to the unit manual for the exact position of the terminals



4.2.1 System connections



4.2.2 Data table

Offset Byte	The number of bytes from the "0" address to the parameter start address
Offset Word	The number of "Words" offset from the "0" address
PG	The Modbus parameter number of singleunit (REVEX or REVO C)
RX n°	REVEX or REVO C address
Description	Parameter description
MIN	The minimum actual value of the parameter.
MAX	The maximum actual value of the parameter
MIN UM	The minimum value translated to its unit of measurement
MAX UM	The maximum value translated to its unit of measurement
UM	Unit of measurement

4.2.3 Read Area

Offset Byte	Offset Word	PG	RX n°	Description	MIN	MAX	MIN UM	MAX UM	UM
0	0			Comm status table Bit 0 and 1 → Address 5 Bit 2 and 3 → Address 6 Bit 4 and 5 → Address 7 Bit 6 and 7 → Address 8 Bit 8 and 9 → Address 1 Bit 10 and 11 → Address 2 Bit 12 and 13 → Address 3 Bit 14 and 15 → Address 4 0= ok / 1= in error					
2	1			Comm status table Bit 0 and 1 → Address 13 Bit 2 and 3 → Address 14 Bit 4 and 5 → non usato Bit 6 and 7 → non usato Bit 8 and 9 → Address 9 Bit 10 and 11 → Address 10 Bit 12 and 13 → Address 11 Bit 14 and 15 → Address 12 0= ok / 1= in error					
4	2			Not used					
6	3			Not used					
8	4			Not used					
10	5	10	1	Voltage Output	0	1023	0	1023	V
12	6	11		Current Output	0	1023	0,0	1023	A
14	7	12		Power Output	0	1023	0	1023	%
16	8	13		Status Table	See Status table				
18	9	14		Command Table	See Command table				
20	10	15		Digital SP	0	1023	0	1023	%
22	11	131		kW real Time (kVA*cosφ)	0	65535	0	655,35	kW

Offset Byte	Offset Word	PG	RX n°	Description	MIN	MAX	MIN UM	MAX UM	UM
24	12	10	2	Voltage Output	0	1023	0	1023	V
26	13	11		Current Output	0	1023	0,0	1023	A
28	14	12		Power Output	0	1023	0	1023	%
30	15	13		Status Table	See Status table				
32	16	14		Command Table	See Command table				
34	17	15		Digital SP	0	1023	0	1023	%
36	18	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW
38	19	10	3	Voltage Output	0	1023	0	1023	V
40	20	11		Current Output	0	1023	0,0	1023	A
42	21	12		Power Output	0	1023	0	1023	%
44	22	13		Status Table	See Status table				
46	23	14		Command Table	See Command table				
48	24	15		Digital SP	0	1023	0	1023	%
50	25	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW
52	26	10	4	Voltage Output	0	1023	0	1023	V
54	27	11		Current Output	0	1023	0,0	1023	A
56	28	12		Power Output	0	1023	0	1023	%
58	29	13		Status Table	See Status table				
60	30	14		Command Table	See Command table				
62	31	15		Digital SP	0	1023	0	1023	%
64	32	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW
66	33	10	5	Voltage Output	0	1023	0	1023	V
68	34	11		Current Output	0	1023	0,0	1023	A
70	35	12		Power Output	0	1023	0	1023	%
72	36	13		Status Table	See Status table				
74	37	14		Command Table	See Command table				
76	38	15		Digital SP	0	1023	0	1023	%
78	39	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW
80	40	10	6	Voltage Output	0	1023	0	1023	V
82	41	11		Current Output	0	1023	0,0	1023	A
84	42	12		Power Output	0	1023	0	1023	%
86	43	13		Status Table	See Status table				
88	44	14		Command Table	See Command table				
90	45	15		Digital SP	0	1023	0	1023	%
92	46	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW

Offset Byte	Offset Word	PG	RX n°	Description	MIN	MAX	MIN UM	MAX UM	UM
94	47	10	7	Voltage Output	0	1023	0	1023	V
96	48	11		Current Output	0	1023	0,0	1023	A
98	49	12		Power Output	0	1023	0	1023	%
100	50	13		Status Table	See Status table				
102	51	14		Command Table	See Command table				
104	52	15		Digital SP	0	1023	0	1023	%
106	53	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW
108	54	10	8	Voltage Output	0	1023	0	1023	V
110	55	11		Current Output	0	1023	0,0	1023	A
112	56	12		Power Output	0	1023	0	1023	%
114	57	13		Status Table	See Status table				
116	58	14		Command Table	See Command table				
118	59	15		Digital SP	0	1023	0	1023	%
120	60	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW
122	61	10	9	Voltage Output	0	1023	0	1023	V
124	62	11		Current Output	0	1023	0,0	1023	A
126	63	12		Power Output	0	1023	0	1023	%
128	64	13		Status Table	See Status table				
130	65	14		Command Table	See Command table				
132	66	15		Digital SP	0	1023	0	1023	%
134	67	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW
136	68	10	10	Voltage Output	0	1023	0	1023	V
138	69	11		Current Output	0	1023	0,0	1023	A
140	70	12		Power Output	0	1023	0	1023	%
142	71	13		Status Table	See Status table				
144	72	14		Command Table	See Command table				
146	73	15		Digital SP	0	1023	0	1023	%
148	74	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW
150	75	10	11	Voltage Output	0	1023	0	1023	V
152	76	11		Current Output	0	1023	0,0	1023	A
154	77	12		Power Output	0	1023	0	1023	%
156	78	13		Status Table	See Status table				
158	79	14		Command Table	See Command table				
160	80	15		Digital SP	0	1023	0	1023	%
162	81	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW

Offset Byte	Offset Word	PG	RX n°	Description	MIN	MAX	MIN UM	MAX UM	UM
164	82	10	12	Voltage Output	0	1023	0	1023	V
166	83	11		Current Output	0	1023	0,0	1023	A
168	84	12		Power Output	0	1023	0	1023	%
170	85	13		Status Table	See Status table				
172	86	14		Command Table	See Command table				
174	87	15		Digital SP	0	1023	0	1023	%
176	88	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW
178	89	10	13	Voltage Output	0	1023	0	1023	V
180	90	11		Current Output	0	1023	0,0	1023	A
182	91	12		Power Output	0	1023	0	1023	%
184	92	13		Status Table	See Status table				
186	93	14		Command Table	See Command table				
188	94	15		Digital SP	0	1023	0	1023	%
190	95	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW
192	96	10	14	Voltage Output	0	1023	0	1023	V
194	97	11		Current Output	0	1023	0,0	1023	A
196	98	12		Power Output	0	1023	0	1023	%
198	99	13		Status Table	See Status table				
200	100	14		Command Table	See Command table				
202	101	15		Digital SP	0	1023	0	1023	%
204	102	131		kW real Time (kVA*cosφ)	0	65535	0	655.35	kW
206	103			Not used					
208	104			Not used					
210	105			Not used					
212	106			Not used					
214	107			Not used					
216	108			Not used					
218	109			Not used					
220	110			Not used					
222	111			Not used					

4.2.4. Status table

Bit	Value and notes	
0	= 1 →	Short circuit on SCR
	= 0 →	NO Short circuit on SCR
1	= 1 →	Load Failure (HB Alarm)
	= 0 →	NO Load Failure (HB Alarm)
2	= 1 →	Output signal ON
	= 0 →	Output signal Off
3	Not used	
4	= 1 →	Current Limit Active
	= 0 →	Current Limit Not Active
5	= 1 →	Heat sink over temperature
	= 0 →	NO Heat sink over temperature
6	= 1 →	Communication Alarm (WD) Active
	= 0 →	Communication Alarm (WD) Not Active
7	Not used	
8	= 1 →	Digital Input 1
	= 0 →	Digital Input 1
9	= 1 →	Digital Input 2
	= 0 →	Digital Input 2
10	= 1 →	Phase unbalance alarm Active
	= 0 →	Phase unbalance alarm Not Active
11	Not used	
12	Not used	
13	Not used	
14	= 1 →	Bakeout Function Active
	= 0 →	Bakeout Function Not Active
15	= 1 →	Thermal Alarm Active
	= 0 →	Thermal Alarm Not Active

4.2.5 Write Area

Offset Byte	Offset Word	PG	RX n°	Description	MIN	MAX	MIN UM	MAX UM	UM
0	0			Disable instruments Bit 0 and 1 → Address 5 Bit 2 and 3 → Address 6 Bit 4 and 5 → Address 7 Bit 6 and 7 → Address 8 Bit 8 and 9 → Address 1 Bit 10 and 11 → Address 2 Bit 12 and 13 → Address 3 Bit 14 and 15 → Address 4 0= enabled / 1= disabled					
2	1			Disable instruments Bit 0 and 1 → Address 13 Bit 2 and 3 → Address 14 Bit 4 and 5 → non usato Bit 6 and 7 → non usato Bit 8 and 9 → Address 9 Bit 10 and 11 → Address 10 Bit 12 and 13 → Address 11 Bit 14 and 15 → Address 12 0= enabled / 1= disabled					
4	2			Not used					
6	3			Not used					
8	4			Not used					
10	5			Not used					
12	6	14	1	Command Table	See Command table				
14	7	15		Digital Set Point	0	1023	0	100,0	%
16	8	14	2	Command Table	See Command table				
18	9	15		Digital Set Point	0	1023	0	100,0	%
20	10	14	3	Command Table	See Command table				
22	11	15		Digital Set Point	0	1023	0	100,0	%
24	12	14	4	Command Table	See Command table				
26	13	15		Digital Set Point	0	1023	0	100,0	%
28	14	14	5	Command Table	See Command table				
30	15	15		Digital Set Point	0	1023	0	100,0	%
32	16	14	6	Command Table	See Command table				
34	17	15		Digital Set Point	0	1023	0	100,0	%
36	18	14	7	Command Table	See Command table				
38	19	15		Digital Set Point	0	1023	0	100,0	%
40	20	14	8	Command Table	See Command table				
42	21	15		Digital Set Point	0	1023	0	100,0	%

Offset Byte	Offset Word	PG	RX n°	Description	MIN	MAX	MIN UM	MAX UM	UM
44	22	14	9	Command Table	See Command table				
46	23	15		Digital Set Point	0	1023	0	100,0	%
48	24	14	10	Command Table	See Command table				
50	25	15		Digital Set Point	0	1023	0	100,0	%
52	26	14	11	Command Table	See Command table				
54	27	15		Digital Set Point	0	1023	0	100,0	%
56	28	14	12	Command Table	See Command table				
58	29	15		Digital Set Point	0	1023	0	100,0	%
60	30	14	13	Command Table	See Command table				
62	31	15		Digital Set Point	0	1023	0	100,0	%
64	32	14	14	Command Table	See Command table				
66	33	15		Digital Set Point	0	1023	0	100,0	%
68	34			Not used					
70	35			Not used					
72	36			Not used					
74	37			Not used					
76	38			Not used					
78	39			Not used					
80	40			Not used					
82	41			Not used					
84	42			Not used					
86	43			Not used					
88	44			Not used					
90	45			Not used					
92	46			Not used					
94	47			Not used					
96	48			Not used					
98	49			Not used					
100	50			Not used					
102	51			Not used					
104	52			Not used					
106	53			Not used					
108	54			Not used					
110	55			Not used					
112	56			Not used					
114	57			Not used					

Offset Byte	Offset Word	PG	RX n°	Description	MIN	MAX	MIN UM	MAX UM	UM
116	58			Not used					
118	59			Not used					
120	60			Not used					
122	61			Not used					
124	62			Not used					
126	63			Not used					

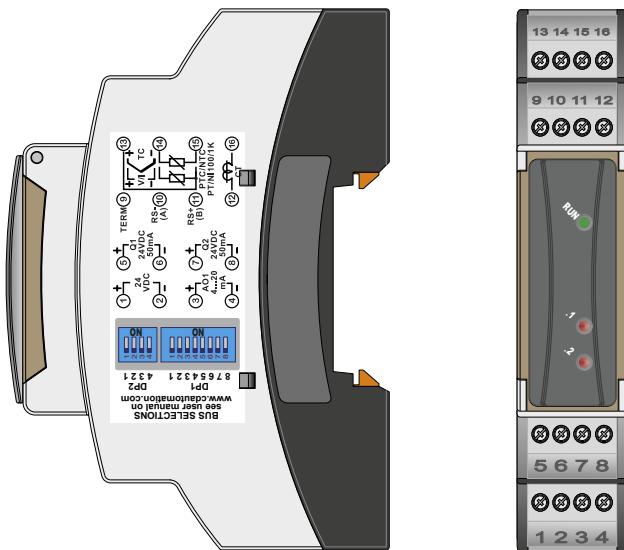
4.2.6 "Command" Table

Bit	Value and Notes
0	Not used
1	= 1 → (L/R) SP from serial link
	= 0 → (L/R) SP from Terminal
2	= 1 → Enabled
	= 0 → Disabled
3	Not used
4	= 1 → Current limit from serial link
	= 0 → Current limit from Terminal
5	Not used
6	Internal use
7	Internal use
8	Not used
9	Not used
10	Not used
11	Not used
12	Not used
13	Not used
14	Not used
15	Not used

4.3 COMPACT as current monitor

GSDML files to be used: "GSDML-V2.31-ADFweb-HD67602_COMPACT-CUR_MONITOR-20220711.xml" available on this web page <https://www.cdautomation.com/product/tu-rs485-pnt-067602-profinet-terminal-unit/> in "Software" section.

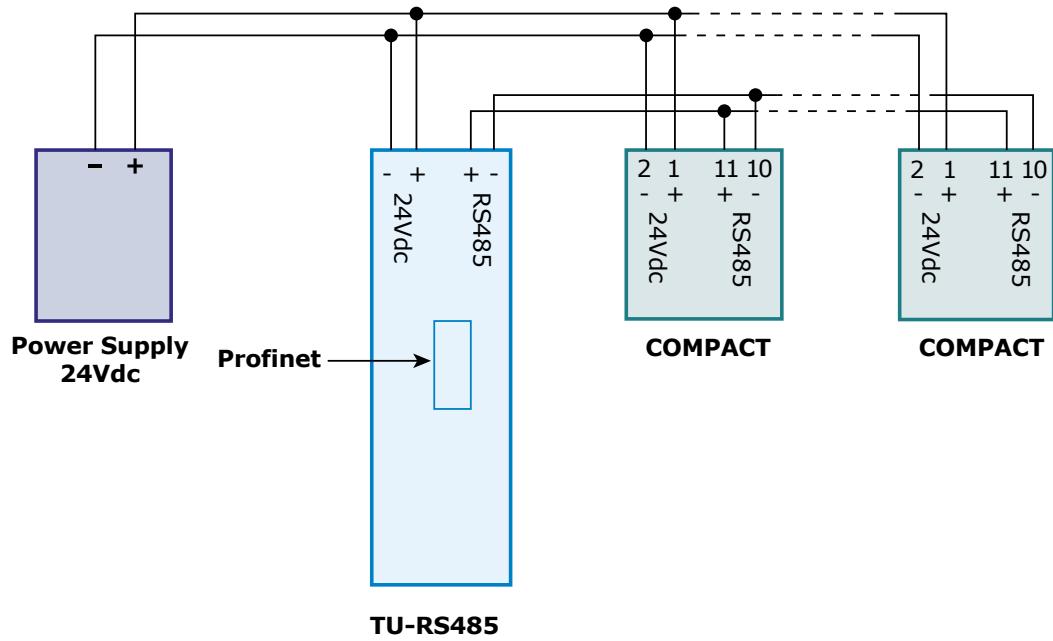
Serial communication is standard on the COMPACT and a maximum of 10 COMPACTs can be connected to a single interface.



<p>24 VDC</p> <p>Power supply 24 VDC ±15% – 3 VA</p>
<p>TERM 120Ω 9</p> <p>(A) – Shield – 10</p> <p>RS485</p> <p>(B) + 11</p> <p>Communication RS485 Modbus RTU Slave galvanically insulated from the sensor</p> <p>Short circuit pins 9 and 10 to connect a 120Ω bus termination resistance.</p>
<p>12 16</p> <p>Input for CT 50mA. Sampling time 100 µs. Current measure true RMS for Heater Break Alarm and overcurrent alarm functions.</p>

4.3.1 Connections

POWER SUPPLY: **TU = 24Vdc**
 COMPACT = 24Vdc



4.3.2 Read Area



**NOTE: In PLC configuration use the file:
GSDML-V2.31-ADFweb-HD67602_COMPACT-CUR_MONITOR-20220711.xml**

Offset Byte	Offset Word	PG	ID	Description	MIN	MAX	MIN UM	MAX UM	UM
0	0			Comm status table Bit 0, 1 → Address 5 Bit 2, 3 → Address 6 Bit 4, 5 → Address 7 Bit 6, 7 → Address 8 Bit 8, 9 → Address 1 Bit 10,11 → Address 2 Bit 12, 13 → Address 3 Bit 14, 15 → Address 4 0= ok / 1= in error					
2	1			Comm status table Bit 0, 1, 2, 3, 4, 5, 6, 7 → Not used Bit 8, 9 → Address 9 Bit 10, 11 → Address 10 Bit 12, 13, 14, 15 → Not used 0= ok / 1= in error					
4	2			Not used					
6	3			Not used					
8	4			Not used					
10	5			Not used					
12	6			Not used					
14	7			Not used					
16	8	1222	1	Real-time Current	0	2000	0	200,0	A
18	9	1223		Average Current	0	2000	0	200,0	A
20	10	1214		Not used					
22	11	1222	2	Real-time Current	0	2000	0	200,0	A
24	12	1223		Average Current	0	2000	0	200,0	A
26	13	1214		Not used					
28	14	1222	3	Real-time Current	0	2000	0	200,0	A
30	15	1223		Average Current	0	2000	0	200,0	A
32	16	1214		Not used					
34	17	1222	4	Real-time Current	0	2000	0	200,0	A
36	18	1223		Average Current	0	2000	0	200,0	A
38	19	1214		Not used					
40	20	1222	5	Real-time Current	0	2000	0	200,0	A
42	21	1223		Average Current	0	2000	0	200,0	A
44	22	1214		Not used					

Offset Byte	Offset Word	PG	ID	Description	MIN	MAX	MIN UM	MAX UM	UM
46	23	1222	6	Real-time Current	0	2000	0	200,0	A
48	24	1223		Average Current	0	2000	0	200,0	A
50	25	1214		Not used					
52	26	1222	7	Real-time Current	0	2000	0	200,0	A
54	27	1223		Average Current	0	2000	0	200,0	A
56	28	1214		Not used					
58	29	1222	8	Real-time Current	0	2000	0	200,0	A
60	30	1223		Average Current	0	2000	0	200,0	A
62	31	1214		Not used					
64	32	1222	9	Real-time Current	0	2000	0	200,0	A
66	33	1223		Average Current	0	2000	0	200,0	A
68	34	1214		Not used					
70	35	1222	10	Real-time Current	0	2000	0	200,0	A
72	36	1223		Average Current	0	2000	0	200,0	A
74	37	1214		Not used					
76	38			Not used					
78	39			Not used					
80	40			Not used					

4.3.3 Write Area

Offset Byte	Offset Word	PG	ID	Description	MIN	MAX	MIN UM	MAX UM	UM
0	0			Disable instruments communication Bit 0, 1 → Address 5 Bit 2, 3 → Address 6 Bit 4, 5 → Address 7 Bit 6, 7 → Address 8 Bit 8, 9 → Address 1 Bit 10, 11 → Address 2 Bit 12, 13 → Address 3 Bit 14, 15 → Address 4 0= ok / 1= disabled					
2	1			Disable instruments communication Bit 0, 1, 2, 3, 4, 5, 6, 7 → Not used Bit 8, 9 → Address 9 Bit 10, 11 → Address 10 Bit 12, 13, 14, 15 → Not used 0= ok / 1= disabled					
4	2			Not used					
6	3			Not used					
8	4			Not used					
10	5			Not used					
12	6			Not used					
14	7			Not used					

4.4 RT / RT Loop

GSDML files to be used:

"GSDML-V2.31-ADFweb-HD67602_RTL12-20221102.xml" from 1 to 4 boards (from 3 to 12 Loop)

"GSDML-V2.31-ADFweb-HD67602_RTL24-20221102.xml" from 5 to 8 boards (from 13 to 24 Loop)

the .zip file with both GSDML files is available on this web page : <https://www.cdautomation.com/it/product/tu-rs485-pnt-067602-unita-di-terminazione-profinet/> in "Software" section.

RS485 serial communication is standard on REVO RT or REVO RTL, and a maximum of 8 cards can be connected to a single fieldbus interface.

i **Nota:** Fare riferimento al manuale dell'unità per la posizione esatta dei morsetti

—REVO RT

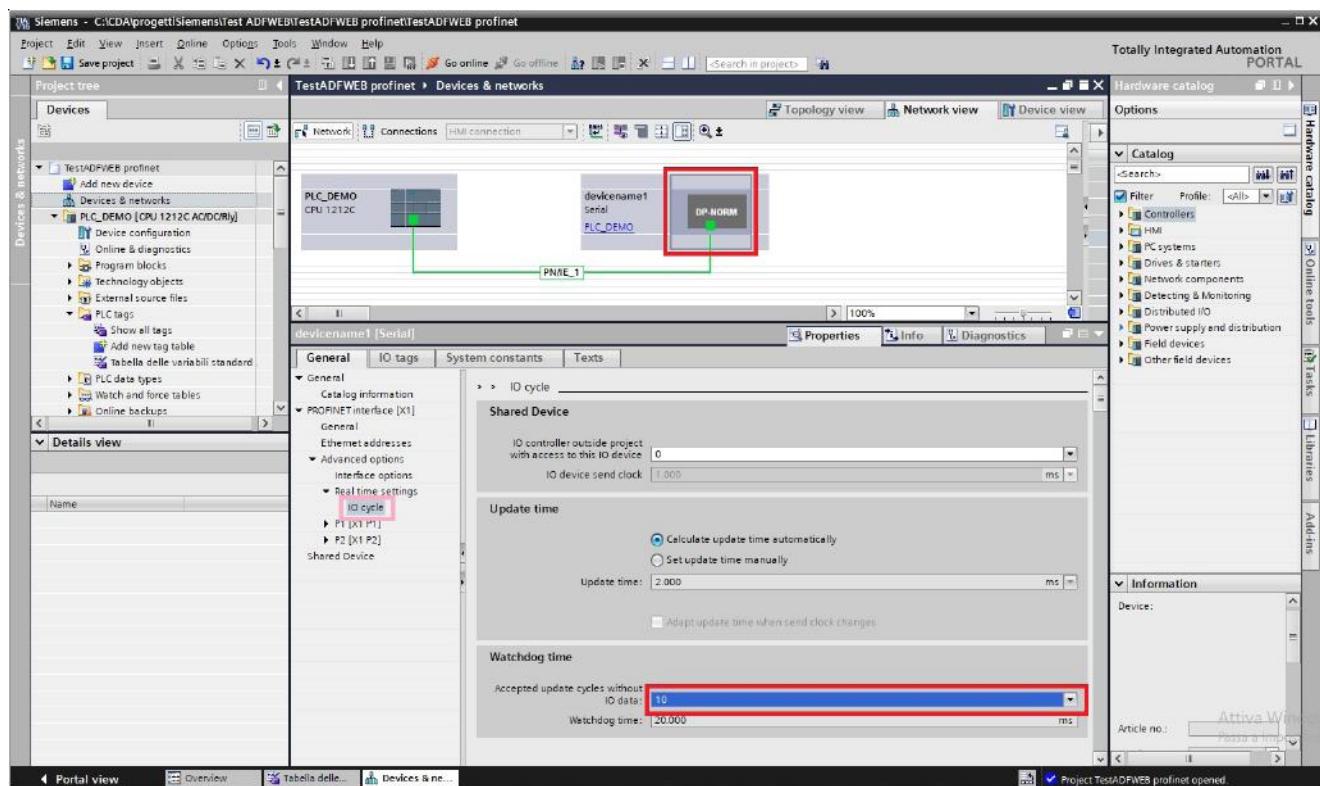


—REVO RTL



4.4.1 Additional PLC configuration

For REVO RT and RT Loop, modify a parameter in PLC configuration; in "device & networks" Properties, "IO cycle" section, "Watchdog time" section, "Accepted update cycle without IO data" parameter = 10.



4.4.2 TData table

Offset Byte	The number of bytes from the "0" address to the parameter start address
Offset Word	The number of "Words" offset from the "0" address
PG	The Modbus parameter number of single unit (REVO RT or REVO RTL)
Board n°	Board address RT or RTL
Description	Parameter description
MIN	The minimum actual value of the parameter
MAX	The maximum actual value of the parameter
MIN UM	The minimum value translated to its unit of measurement
MAX UM	The maximum value translated to its unit of measurement
UM	Unit of measurement

4.4.3 Area di Lettura

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM
0	0			Comm status table Bit 0,1,2,3,4,5,6,7 → Non usati Bit 8 → Address 1 Bit 9 → Address 2 Bit 10 → Address 3 Bit 11 → Address 4 Bit 12 → Address 5 Bit 13 → Address 6 Bit 14 → Address 7 Bit 15 → Address 8 0= ok / 1= in error					
2	1			Not used					
4	2			Not used					
6	3			Not used					
8	4			Not used					
10	5			Not used					
12	6			Not used					

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM
14	7	1000	1	PV1	Depends on configuration				
16	8	1001		PV2					
18	9	1002		PV3					
20	10	1230		Out L1	0	100	0	100	%
22	11	1239		Out L2	0	100	0	100	%
24	12	1248		Out L3	0	100	0	100	%
26	13	1051		Cur L1	0	2000	0	200.0	A
28	14	1055		Cur L2	0	2000	0	200.0	A
30	15	1059		Cur L3	0	2000	0	200.0	A
32	16	1216		Pretune Loop 1 0 = Off 1 = On					
34	17	1217		Pretune Loop 2 0 = Off 1 = On					
36	18	1218		Pretune Loop 3 0 = Off 1 = On					
38	19	1016		Status table (See table)					
40	20	1214		Start Stop Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
42	21	1215		Auto/Manual Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
44	22	1003		SP1	Depends on configuration				
46	23	1004		SP2					
48	24	1005		SP3					

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM			
50	25	1000	2	PV1								
52	26	1001		PV2	Depends on configuration							
54	27	1002		PV3	Depends on configuration							
56	28	1230		Out L1	0	100	0	100	%			
58	29	1239		Out L2	0	100	0	100	%			
60	30	1248		Out L3	0	100	0	100	%			
62	31	1051		Cur L1	0	2000	0	200.0	A			
64	32	1055		Cur L2	0	2000	0	200.0	A			
66	33	1059		Cur L3	0	2000	0	200.0	A			
68	34	1216		Pretune Loop 1 0 = Off 1 = On								
70	35	1217		Pretune Loop 2 0 = Off 1 = On								
72	36	1218		Pretune Loop 3 0 = Off 1 = On								
74	37	1016		Status table (See table)								
76	38	1214		Start Stop Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start								
78	39	1215		Auto/Manual Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual								
80	40	1003		SP1	Depends on configuration							
82	41	1004		SP2	Depends on configuration							
84	42	1005		SP3	Depends on configuration							

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM
86	43	1000	3	PV1					
88	44	1001		PV2	Depends on configuration				
90	45	1002		PV3					
92	46	1230		Out L1	0	100	0	100	%
94	47	1239		Out L2	0	100	0	100	%
96	48	1248		Out L3	0	100	0	100	%
98	49	1051		Cur L1	0	2000	0	200.0	A
100	50	1055		Cur L2	0	2000	0	200.0	A
102	51	1059		Cur L3	0	2000	0	200.0	A
104	52	1216		Pretune Loop 1 0 = Off 1 = On					
106	53	1217		Pretune Loop 2 0 = Off 1 = On					
108	54	1218		Pretune Loop 3 0 = Off 1 = On					
110	55	1016		Status table (See table)					
112	56	1214	3	Start Stop Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
114	57	1215		Auto/Manual Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
116	58	1003		SP1	Depends on configuration				
118	59	1004		SP2	Depends on configuration				
120	60	1005		SP3					

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM
122	61	1000	4	PV1					
124	62	1001		PV2	Depends on configuration				
126	63	1002		PV3					
128	64	1230		Out L1	0	100	0	100	%
130	65	1239		Out L2	0	100	0	100	%
132	66	1248		Out L3	0	100	0	100	%
134	67	1051		Cur L1	0	2000	0	200.0	A
136	68	1055		Cur L2	0	2000	0	200.0	A
138	69	1059		Cur L3	0	2000	0	200.0	A
140	70	1216		Pretune Loop 1 0 = Off 1 = On					
142	71	1217		Pretune Loop 2 0 = Off 1 = On					
144	72	1218		Pretune Loop 3 0 = Off 1 = On					
146	73	1016		Status table (See table)					
148	74	1214		Start Stop Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
150	75	1215		Auto/Manual Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
152	76	1003		SP1	Depends on configuration				
154	77	1004		SP2	Depends on configuration				
156	78	1005		SP3					

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM
158	79	1000	5	PV1					
160	80	1001		PV2	Depends on configuration				
162	81	1002		PV3	Depends on configuration				
164	82	1230		Out L1	0	100	0	100	%
166	83	1239		Out L2	0	100	0	100	%
168	84	1248		Out L3	0	100	0	100	%
170	85	1051		Cur L1	0	2000	0	200.0	A
172	86	1055		Cur L2	0	2000	0	200.0	A
174	87	1059		Cur L3	0	2000	0	200.0	A
176	88	1216		Pretune Loop 1 0 = Off 1 = On					
178	89	1217		Pretune Loop 2 0 = Off 1 = On					
180	90	1218		Pretune Loop 3 0 = Off 1 = On					
182	91	1016		Status table (See table)					
184	92	1214		Start Stop Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
186	93	1215		Auto/Manual Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
188	94	1003		SP1	Depends on configuration				
190	95	1004		SP2	Depends on configuration				
192	96	1005		SP3	Depends on configuration				

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM				
194	97	1000	6	PV1									
196	98	1001		PV2	Depends on configuration								
198	99	1002		PV3	Depends on configuration								
200	100	1230		Out L1	0	100	0	100	%				
202	101	1239		Out L2	0	100	0	100	%				
204	102	1248		Out L3	0	100	0	100	%				
206	103	1051		Cur L1	0	2000	0	200.0	A				
208	104	1055		Cur L2	0	2000	0	200.0	A				
210	105	1059		Cur L3	0	2000	0	200.0	A				
212	106	1216		Pretune Loop 1 0 = Off 1 = On									
214	107	1217		Pretune Loop 2 0 = Off 1 = On									
216	108	1218		Pretune Loop 3 0 = Off 1 = On									
218	109	1016		Status table (See table)									
220	110	1214		Start Stop Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start									
222	111	1215		Auto/Manual Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual									
224	112	1003		SP1	Depends on configuration								
226	113	1004		SP2	Depends on configuration								
228	114	1005		SP3	Depends on configuration								

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM				
230	115	1000	7	PV1									
232	116	1001		PV2	Depends on configuration								
234	117	1002		PV3	Depends on configuration								
236	118	1230		Out L1	0	100	0	100	%				
238	119	1239		Out L2	0	100	0	100	%				
240	120	1248		Out L3	0	100	0	100	%				
242	121	1051		Cur L1	0	2000	0	200.0	A				
244	122	1055		Cur L2	0	2000	0	200.0	A				
246	123	1059		Cur L3	0	2000	0	200.0	A				
248	124	1216		Pretune Loop 1 0 = Off 1 = On									
250	125	1217		Pretune Loop 2 0 = Off 1 = On									
252	126	1218		Pretune Loop 3 0 = Off 1 = On									
254	127	1016		Status table (See table)									
256	128	1214		Start Stop Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start									
258	129	1215		Auto/Manual Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual									
260	130	1003		SP1	Depends on configuration								
262	131	1004		SP2	Depends on configuration								
264	132	1005		SP3	Depends on configuration								

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM
266	133	1000	8	PV1					
268	134	1001		PV2	Depends on configuration				
270	135	1002		PV3	Depends on configuration				
272	136	1230		Out L1	0	100	0	100	%
274	137	1239		Out L2	0	100	0	100	%
276	138	1248		Out L3	0	100	0	100	%
278	139	1051		Cur L1	0	2000	0	200.0	A
280	140	1055		Cur L2	0	2000	0	200.0	A
282	141	1059		Cur L3	0	2000	0	200.0	A
284	142	1216		Pretune Loop 1 0 = Off 1 = On					
286	143	1217		Pretune Loop 2 0 = Off 1 = On					
288	144	1218		Pretune Loop 3 0 = Off 1 = On					
290	145	1016		Status table (See table)					
292	146	1214		Start Stop Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
294	147	1215		Auto/Manual Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
296	148	1003		SP1	Depends on configuration				
298	149	1004		SP2	Depends on configuration				
300	150	1005		SP3	Depends on configuration				

4.4.4. Status Table

Bit	Value and Notes	
0	= 1	→ Alarm 1 ON
	= 0	→ Alarm 1 OFF
1	= 1	→ Alarm 2 ON
	= 0	→ Alarm 2 OFF
2	= 1	→ Alarm 3 ON
	= 0	→ Alarm 3 OFF
3	= 1	→ Alarm 4 ON
	= 0	→ Alarm 4 OFF
4	= 1	→ Loop 1 H.B. alarm Active
	= 0	→ Loop 1 H.B. alarm Not Active
5	= 1	→ Loop 2 H.B. alarm Active
	= 0	→ Loop 2 H.B. alarm Not Active
6	= 1	→ Loop 3 H.B. alarm Active
	= 0	→ Loop 3 H.B. alarm Not Active
7	= 1	→ Loop 1 Short Circuit alarm Active
	= 0	→ Loop 1 Short Circuit alarm Not Active
8	= 1	→ Loop 2 Short Circuit alarm Active
	= 0	→ Loop 2 Short Circuit alarm Not Active
9	= 1	→ Loop 3 Short Circuit alarm Active
	= 0	→ Loop 3 Short Circuit alarm Not Active
10	= 1	→ AI1 probe error
	= 0	→ AI1 probe Ok
11	= 1	→ AI2 probe error
	= 0	→ AI2 probe Ok
12	= 1	→ AI2 probe error AI3
	= 0	→ AI3 probe Ok
13	= 1	→ DI Closed
	= 0	→ DI Open
14	Not used	
15	Not used	

4.4.5 Write Area

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM
0	0			Disable instruments Bit 0,1,2,3,4,5,6,7 → Not used Bit 8 → Address 1 Bit 9 → Address 2 Bit 10 → Address 3 Bit 11 → Address 4 Bit 12 → Address 5 Bit 13 → Address 6 Bit 14 → Address 7 Bit 15 → Address 8 0= enabled / 1= disabled					
2	1			Not used					
4	2			Not used					
6	3			Not used					
8	4			Not used					
10	5			Not used					
12	6			Not used					
14	7	1214	1	Start /Stop L1/L2/L3 Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
16	8	1200		SP1					
18	9	1201		SP2					
20	10	1202		SP3					
22	11	1216		Pretune L1					
24	12	1217		Pretune L2					
26	13	1218		Pretune L3					
28	14	1215		Auto/Manual L1/L2/L3 Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
30	15	1230		Man Val L1					
32	16	1239		Man Val L2					
34	17	1248		Man Val L3					

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM
36	18	1214	2	Start /Stop L1/L2/L3 Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
38	19	1200		SP1					
40	20	1201		SP2					
42	21	1202		SP3					
44	22	1216		Pretune L1					
46	23	1217		Pretune L2					
48	24	1218		Pretune L3					
50	25	1215		Auto/Manual L1/L2/L3 Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
52	26	1230		Man Val L1					
54	27	1239		Man Val L2					
56	28	1248		Man Val L3					
58	29	1214	3	Start /Stop L1/L2/L3 Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
60	30	1200		SP1					
62	31	1201		SP2					
64	32	1202		SP3					
66	33	1216		Pretune L1					
68	34	1217		Pretune L2					
70	35	1218		Pretune L3					
72	36	1215		Auto/Manual L1/L2/L3 Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
74	37	1230		Man Val L1					
76	38	1239		Man Val L2					
78	39	1248		Man Val L3					

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM
80	40	1214	4	Start /Stop L1/L2/L3 Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
82	41	1200		SP1					
84	42	1201		SP2					
86	43	1202		SP3					
88	44	1216		Pretune L1					
90	45	1217		Pretune L2					
92	46	1218		Pretune L3					
94	47	1215		Auto/Manual L1/L2/L3 Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
96	48	1230		Man Val L1					
98	49	1239		Man Val L2					
100	50	1248		Man Val L3					
102	51	1214	5	Start /Stop L1/L2/L3 Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
104	52	1200		SP1					
106	53	1201		SP2					
108	54	1202		SP3					
110	55	1216		Pretune L1					
112	56	1217		Pretune L2					
114	57	1218		Pretune L3					
116	58	1215		Auto/Manual L1/L2/L3 Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
118	59	1230		Man Val L1					
120	60	1239		Man Val L2					
122	61	1248		Man Val L3					

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM
124	62	1214	6	Start /Stop L1/L2/L3 Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
126	63	1200		SP1					
128	64	1201		SP2					
130	65	1202		SP3					
132	66	1216		Pretune L1					
134	67	1217		Pretune L2					
136	68	1218		Pretune L3					
138	69	1215		Auto/Manual L1/L2/L3 Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
140	70	1230		Man Val L1					
142	71	1239		Man Val L2					
144	72	1248		Man Val L3					
146	73	1214	7	Start /Stop L1/L2/L3 Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
148	74	1200		SP1					
150	75	1201		SP2					
152	76	1202		SP3					
154	77	1216		Pretune L1					
156	78	1217		Pretune L2					
158	79	1218		Pretune L3					
160	80	1215		Auto/Manual L1/L2/L3 Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
162	81	1230		Man Val L1					
164	82	1239		Man Val L2					
166	61	1248		Man Val L3					

Offset Byte	Offset Word	PG	Board n°	Description	MIN	MAX	MIN UM	MAX UM	UM
168	62	1214	8	Start /Stop L1/L2/L3 Bit 0 = 0: Stop = 1: Start Bit 1 = 0: Stop = 1: Start Bit 2 = 0: Stop = 1: Start					
170	63	1200		SP1					
172	64	1201		SP2					
174	65	1202		SP3					
176	66	1216		Pretune L1					
178	67	1217		Pretune L2					
180	68	1218		Pretune L3					
182	69	1215		Auto/Manual L1/L2/L3 Bit 0 = 0: Auto = 1: Manual Bit 1 = 0: Auto = 1: Manual Bit 2 = 0: Auto = 1: Manual					
184	70	1230		Man Val L1					
186	71	1239		Man Val L2					
188	94	1248		Man Val L3					



CD Automation S.r.l.

Via Picasso, 34/36 - 20025 Legnano (MI)- Italy

Tel. +39 0331 577479 - Fax +39 0331 579479

E-mail: info@cdautomation.com - Web: www.cdautomation.com