

SIU, VCP, PSU, VMU

Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231	Казань (843)206-01-48	Новокузнецк (3843)20-46-81	Смоленск (4812)29-41-54
Архангельск (8182)63-90-72	Калининград (4012)72-03-81	Новосибирск (383)227-86-73	Сочи (862)225-72-31
Астрахань (8512)99-46-04	Калуга (4842)92-23-67	Омск (3812)21-46-40	Ставрополь (8652)20-65-13
Барнаул (3852)73-04-60	Кемерово (3842)65-04-62	Орел (4862)44-53-42	Сургут (3462)77-98-35
Белгород (4722)40-23-64	Киров (8332)68-02-04	Оренбург (3532)37-68-04	Тверь (4822)63-31-35
Брянск (4832)59-03-52	Краснодар (861)203-40-90	Пенза (8412)22-31-16	Томск (3822)98-41-53
Владивосток (423)249-28-31	Красноярск (391)204-63-61	Пермь (342)205-81-47	Тула (4872)74-02-29
Волгоград (844)278-03-48	Курск (4712)77-13-04	Ростов-на-Дону (863)308-18-15	Тюмень (3452)66-21-18
Вологда (8172)26-41-59	Липецк (4742)52-20-81	Рязань (4912)46-61-64	Ульяновск (8422)24-23-59
Воронеж (473)204-51-73	Магнитогорск (3519)55-03-13	Самара (846)206-03-16	Уфа (347)229-48-12
Екатеринбург (343)384-55-89	Москва (495)268-04-70	Санкт-Петербург (812)309-46-40	Хабаровск (4212)92-98-04
Иваново (4932)77-34-06	Мурманск (8152)59-64-93	Саратов (845)249-38-78	Челябинск (351)202-03-61
Ижевск (3412)26-03-58	Набережные Челны (8552)20-53-41	Севастополь (8692)22-31-93	Череповец (8202)49-02-64
Иркутск (395)279-98-46	Нижний Новгород (831)429-08-12	Симферополь (3652)67-13-56	Ярославль (4852)69-52-93
Россия (495)268-04-70	Киргизия (996)312-96-26-47	Казахстан (7172)727-132	

Energy Management Accessories Type SIU-PC2

CARLO GAVAZZI



- Serial communication line adapter
- RS232 to RS422 conversion with RTS/CTS support
- RS232 to 2/4-wire RS485 conversion
- Plug-in screw terminal block for easy RS422/485 wiring
- Degree of protection IP 30
- 2kV isolation between input/output (option I only)
- Power supply and communication status LED's
- Wrong-line-connection protection
- Cigarette pack size
- Wall and DIN-rail mounting

Product Description

SIU PC2 is an RS-232 to RS-422/485 converter designed for users who need an industrial grade interface conversion product to extend RS-232 transmission distance and increase networking capability. Its superior industrial applica-

tion design, which includes DIN-Rail mounting, terminal block wiring, external terminal block power, and optical isolation for system protection (option "I" only), makes SIUPC2 suitable for use in critical industrial environments.

How to order

SIU PC2 I

Model _____
Isolation _____

Type Selection

Isolation

none: not isolated

I: 2kV isolation between input/output

Supply specification

DC supply	12 to 30VDC (screw terminal block)
Power-on indication	LED, red
Power consumption	3.4W 4.68W (I option)
AC/DC power supply adapter	Not included

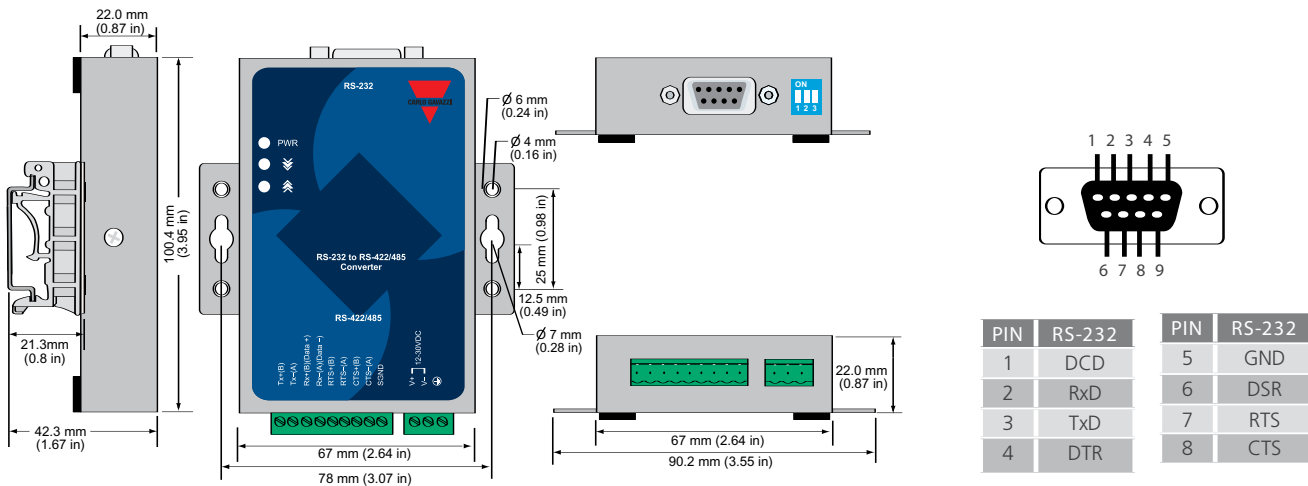
Input/Output specifications

RS232 Data-stream indication Type Connector	LED, green INPUT/OUTPUT 9-pole female	Nodes and max distance 1 unit load 1/5 unit load 1/8 unit load	up to 32 (1000m) up to 160 (1000m) up to 247 (1000m)
RS485/RS422 Data-stream indication Type Connector Working mode Line bias Line termination	LED, yellow INPUT/OUTPUT Detachable screw terminal block 4-wire RS422 (with RTS, CTS), 2-wire RS485, 4-wire RS485, DIP-switch selectable Not available on RS232 and RS485, DIP-switch selectable	Isolation Protection Reverse protection Over current protection Surge protection	2kV between power/input/output (option I only) V+ and V- reverse protection Protection for 2 signals shorted together 15kV ESD for serial signals

General specification

Operating temperature	-20°C to +60°C (-4°F to 140°F), 5 to 95% RH (non-condensing)	Protection degree	IP30
Storage temperature	-20°C to +85°C (-4°F to 185°F), 95% RH (non-condensing)	Weight	148 +/-5 g
EMC	EN61000-6-1 EN61000-6-3 FCC part 15 subpart B	Standard accessories	DIN-rail mounting kit
Standard compliance			
Safety Approvals	EN60950, UL60950 CE, FCC (class B)		
Housing Dimensions (WxHxD)	90 x 100 x 22 mm		
Material	Alluminium		

Dimension



Energy Management Accessories Type SIU-TCP

CARLO GAVAZZI



- Ethernet to RS232/485 Modbus Gateway
- Supports Modbus/TCP Master device to link Modbus/RTU slave devices (up to 31)
- Supports Modbus/RTU master device to link Modbus/TCP slave devices (up to 12)
- Easy-to-use configuration software suite
- 10/100Mbps fast Ethernet
- One software selectable RS-232/485 interface
- High speed serial communication up to 230.4 Kbps
- Cigarette pack size
- Wall and DIN-rail mounting

Product Description

Modbus protocol supports traditional RS-232/485 devices and newly developed Ethernet devices, and software. Many industrial devices, such as PLCs, DCSs, HMIs, instruments, meters, and SCADA use Modbus as their communication standard. However, the Modbus protocols running over serial and Ethernet are so different that a communication gateway is needed as a bridge for integra-

tion. SIU TCP supports one Ethernet and one software selectable RS-232/485 port that can be connected to all kinds of Modbus devices. By translating Modbus/TCP (Ethernet) and Modbus /RTU (Serial) protocols, a PLC or a SCADA with Ethernet can use the RS-232/485 interface to seamlessly communicate with other instruments.

For Modbus protocol conversions, it is necessary to

How to order

SIU TCP

define a Master and Slave device, but unlike other Modbus Gateways, SIU TCP allows users to configure Master/Slave for both the Ethernet and serial sides. Extra address mapping and exception parameters are supplied to ensure that most situations can be handled. SIU TCP is powerful yet very

easy to use. An intuitive Windows utility automatically searches for all available SIU TCP units on the LAN. Traffic monitoring within the utility helps you troubleshoot any Modbus communication problem, such as connection status check, or address translation error check.

Supply specification

DC supply 9 to 30VDC

Power-on indication LED, red

Power consumption 300mA @ 12V (max)

AC/DC power supply adapter Included: 100-240 VAC power adapter (US, Euro plugs included, 12 V, 400 mA)

Input/Output specifications

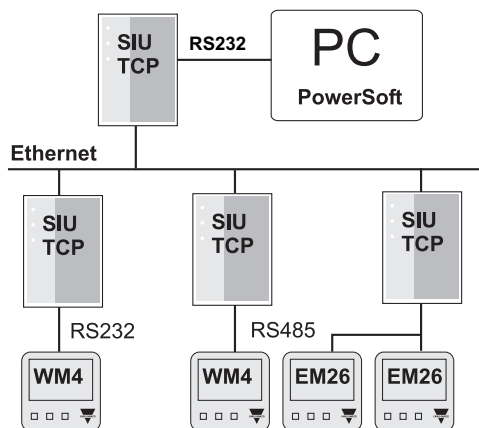
LAN			
Ethernet Connector	10/100 Mbps RJ45	RS485 (2-wire) signals Protection	Data+, Data-, GND 15kV ESD for all signals
"Link" indication	LED, yellow	Serial communication parameter	Parity: None, even, odd, space, mark Data Bits: 7, 8 Stop Bits: 1, 2 Flow control: RTS/CTS, XON/XOFF Speed: 1200bps to 230.4kbps
Protection	Built-in 1.5kV magnetic isolation	Nodes and max distance	1 unit load: up to 32 (1000m) 1/5 unit load: up to 160 (1000m) 1/8 unit load: up to 247 (1000m)
Ports	TCP port 4900 (Firmware updating) TCP port 502 (Modbus) TCP port 800 (Monitor) UDP port 4800 (broadcast, monitor, current settings)	Protocols	DHCP, Boot P, TCP, VDP, ICMP, ARP
Serial		Windows compatibility	Windows 95/98/ME/NT/2000/XP/2003
Interface	Software selectable among RS232 and RS485 (2-wire)	Configuration	Windows utility via Ethernet.
Connector	Female DB9		
"Ready" indication	LED, green (100Mbps), orange (10Mbps)		
RS232 signals	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND		



General specifications

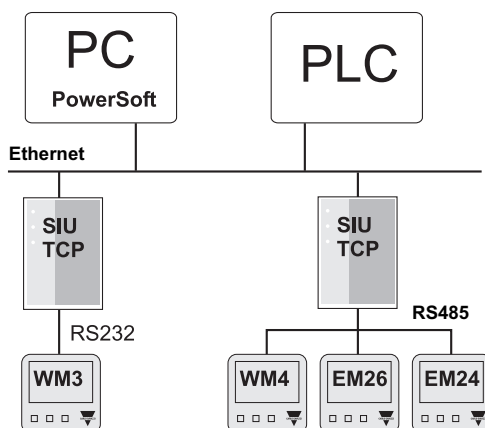
Operating temperature	0°C to +55°C (32°F to 131°F) 5 to 95% RH (non-condensing)	Housing	Dimensions (WxHxD) Material	90 x 100 x 22 mm Aluminium sheet metal (1mm)
Storage temperature	-20°C to +85°C (-4°F to 185°F) 95% RH (non-condensing)	Protection degree		IP30
EMC	EN61000-6-1 EN61000-6-3 FCC part 15 subpart B	Weight		Approx. 500 g (packing included)
Standard compliance		Standard accessories		DIN-rail mounting kit. 9-pole serial cable. Configuration software. Hardware and software manuals. Quick installation guide.
Safety	EN60950, UL60950			
Approvals	CE, cULus, TÜV			

Typical Application



Let traditional Modbus serial devices talk over Ethernet.

Many traditional serial Modbus devices can talk over RS-485, but the RS-485 network limits the maximum number of Modbus (see “nodes and max distance”). By using Modbus Gateway, all serial Modbus devices can be linked over an Ethernet network. Up to 12 Modbus Gateways can be installed on the same control network, extending the coverage of a single Modbus network as far as a TCP/IP network can reach.



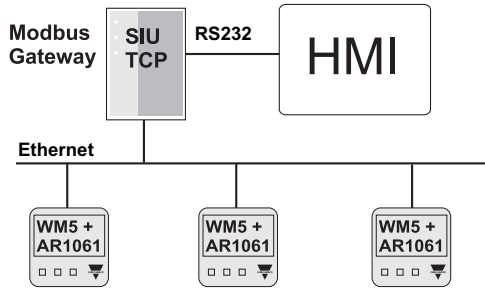
Connect all Modbus devices over Ethernet network.

Most host computers and newly developed PLCs support the Ethernet interface and run Modbus/TCP. SIU-TCP Modbus Gateway is needed to link discrete serial Modbus devices for data collection and control.

Each SIU-TCP supports Modbus/TCP over Ethernet, which allows up to 7 connections. The software configurable serial interface supports either RS-232 or RS-485 (2W).

In RS-232 mode, SIU-TCP can connect 1 serial device. One SIU-TCP supports up to 247 serial devices (see “nodes and max distance”) under RS-485 mode, which is the most popular serial interface used in the factories.

Typical Application (cont.)



Link the serial master devices with Ethernet slave devices.

Many HMI (Human Machine Interface) or other systems use a serial port and are required to access a discrete DCS. These days, however, more and more devices support Ethernet and run under Modbus/TCP slave mode (e.g. WM5-96 with AR1061 Ethernet module). In this case, SIU-TCP Modbus Gateway is the ideal solution to link the HMI (or a PC) to WM5's units distributed over an Ethernet network. Up to 12 Modbus/TCP slave devices are supported for each SIU-TCP.

Configuration

Configure Modbus Gateway anywhere on the LAN

Once SIU-TCP is connected to an Ethernet network, any Windows host computer running Modbus Gateway Configurator can automatically search for all installed Modbus Gateways, and then proceed with the configuration. DHCP (Automatic IP settings) and Manual IP settings are both supported. Manual IP is suggested when PowerSoft is used.



Online Traffic Monitoring and Error Log Display

Modbus communication troubleshooting is both fast and easy. SIU-TCP utility monitors the online configuration and connection status from anywhere on the network without interfering with the operation. Meanwhile, the system log can be stored as an installation or service record.



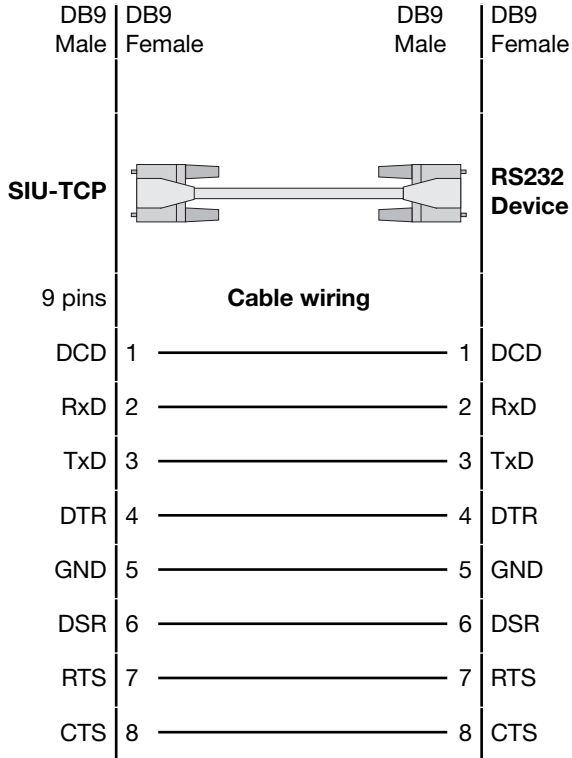
Comprehensive and Powerful Modbus Parameter Settings

In addition to working with most Modbus devices, SIU-TCP provides both basic and advanced communication parameters. For example, in addition to general configurations, Remote Modbus/TCP device ID, Initial Delay Time Adjustment, and Character/Message Timeouts are adjustable right in the Windows utility.



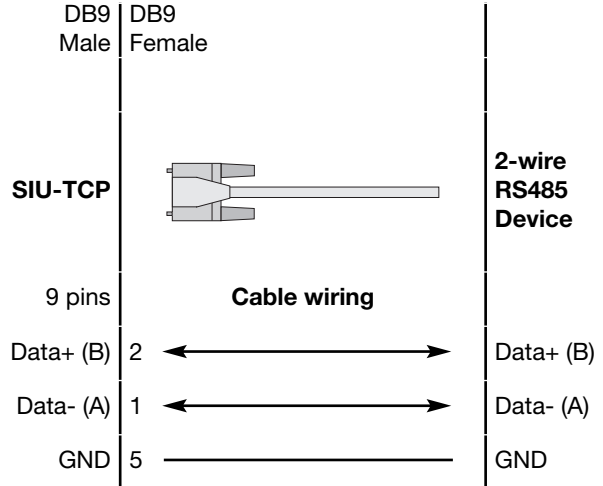
Wiring diagrams

RS232 Wiring



Note: a standard serial cable is to be used (no null-modem adapter is needed).

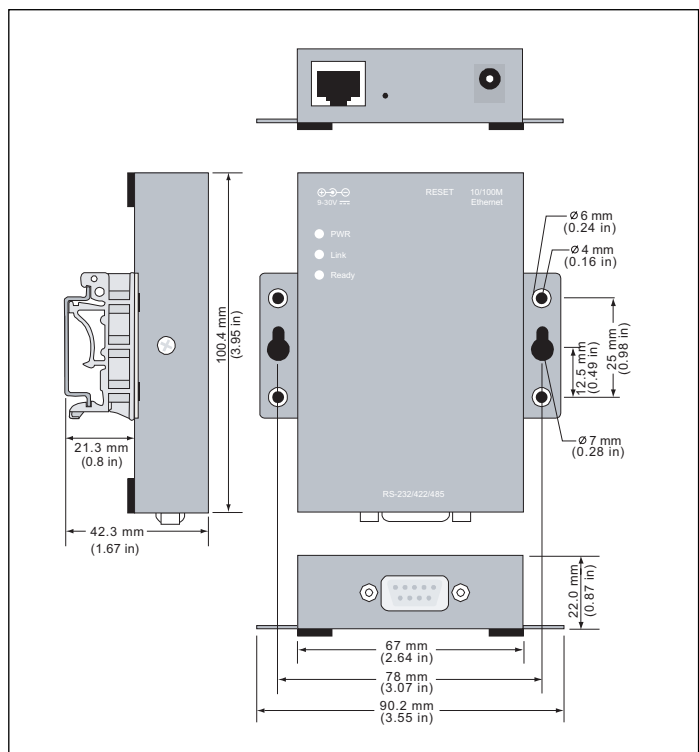
2-wire RS485 wiring



Pin Assignment

PIN	RS232	RS485 (2W)
1	DCD	Data- (A)
2	Rx	Data+ (B)
3	Tx	----
4	DTR	----
5	GND	GND
6	DSR	----
7	RTS	----
8	CTS	----
9	----	----

Dimensions



Energy Management Accessories Type SIU TCP 2

CARLO GAVAZZI



- Virtual COM port serial device server (Serial Manager)
- RS485 (2 wires) and RS232 serial port available
- Auto detecting 10/100 Mbps Ethernet interface
- Virtual COM software for Windows
- Easy-to-use configuration software suite
- Cigarette pack size
- Wall and DIN-rail mounting
- Built-in default key to restore factory default settings
- Redundant dual DC power inputs for non stop operation

Product Description

The SIUTCP2 is a gateway between Ethernet (TCP/IP) and RS485 or RS232 serial communications. Data coming from the Ethernet (TCP/IP) is sent to the designated RS485 or RS232 port and data being received from RS485 or RS232 port is sent to the Ethernet (TCP/IP) transparently. By encapsulating serial data and transporting it over ethernet,

SIUTCP2 offers full-duplex and bidirectional data. The SIUTCP2 allows to communicate with a remote device both in the Intranet and Internet environment so the communication distance is increased. SIU TCP2 supports TCP server/client, UDP and VIRTUAL COM. SIU TCP2 is supplied with an utility program (Serial Manager), a simple step-by-

How to order **SIU TCP 2**

Model

step installation software which allows to configure the network parameters of SIUTCP2. The serial manager software provides existing Windows based application to access serial device by mapping the Virtual Com port to a remote serial server via Ethernet. Anyway the configuration can be also carried out through: the web-serv-

er page, the Telnet Console. SIUTCP2 provides two power supply inputs which can be used simultaneously. If any of the power supplies fails, the other one powers the converter automatically. In this way an extra assurance of non stop operation is granted.

Supply specification

DC supply	9 to 30VDC, DC 5V	AC/DC power supply adapter	Not Included
Power-on indication	LED	AD5V1A (US): American adapter	on request 5V @ 1.25A
Power consumption	300mA @ 9V (max) 1,5 Watt max	AD5V1A (EU): European adapter	on request 5V @ 1.25A

Input/Output specifications

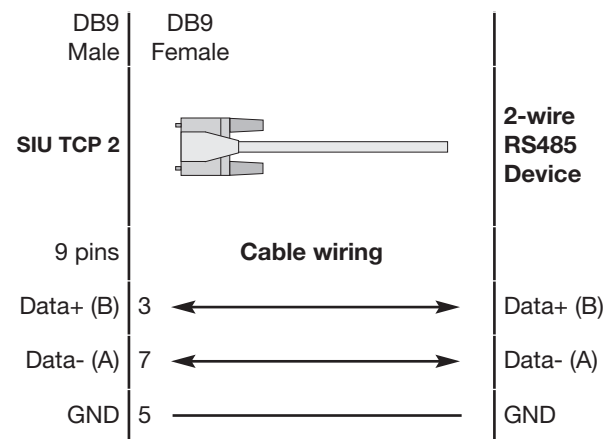
LAN	10/100 Mbps RJ45 LED Ethernet disconnected Data is transmitting on Ethernet for 100Mbps Data is transmitting on Ethernet for 10Mbps Built-in 1.5kV magnetic isolation	RS485 (2 wires) signals Protection	ting on COM port. Data+, Data-, GND 15kV ESD for all signals
Ethernet Connector		Serial communication parameter	
"Link" indication		Parity	None, even, odd, space, mark
Off:		Data Bits	7, 8
Blinking with green:		Stop Bits	1, 2
Blinking with Orange:		Flow control	RTS/CTS, XON/XOFF, NONE, DTR/DSR
Protection		Baud rate	1200bps to 230kbps
Ports	TCP port 23 (Telnet) TCP port 4000 (firmware updating) TCP ports 950 and 966 (hostbased/driver mode) UDP port 1029 (broadcast, monitor)	Protection	15kV ESD
Virtual Serial COM		Nodes and max distance	up to 32 (1000m)
Connector	Male DB9	Protocols	TCP/IP, UDP, SNMP, HTTP, Telnet, ARP, BOOTP, DHCP, ICMP
"Ready" indication	LED, green Off: no data is transmitting on COM port, Blinking: data is transmit-	Windows compatibility	Windows XP, Vista, 7, server 2003
		Run LED	Red LED Blinking (rate 0.5 sec) firmware is running normally



General specifications

Operating temperature	0°C to +60°C (32°F to 140°F) 5 to 95% RH (non-condensing)	Housing	Dimensions (LxWxH) Material	65 x 78 x 28mm Varnished over iron
Storage temperature	-40°C to 85°C (-40°F to 185°F) 5% to 95% RH (non-condensing)	Protection degree	IP30	
EMC Immunity emissions	EN61000-6-1 EN61000-6-4	Weight	Approx. 363 g (packing included)	
Standard compliance Safety Medical	EN60950 EN55022, class A	Standard accessories	WALL mounting kit 9-pole serial cable Configuration software Hardware and software manuals. Quick installation guide	
Approvals	CE, FCC			

Wiring diagrams



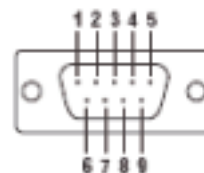
2-wire RS485 wiring

Fig. 1

Pin Assignment

PIN	RS232 (*)	RS485 (2W)
1	DCD	-----
2	RxD	-----
3	TxD	Data+ (B)
4	DTR	-----
5	GND	GND
6	DSR	-----
7	RTS	Data- (A)
8	CTS	-----
9	-----	-----

Note: the table is referred to the SIU TCP2 side of the 9-pole connector.



(*) available from 17/01/2012.

Energy Management Accessories

Type VCP-DIN

CARLO GAVAZZI



- Virtual COM port serial device server
- RS232, RS485 (2 wire) serial port available
- Auto detecting 10/100 Mbps Ethernet interface
- Real COM drivers for Windows
- Easy-to-use configuration software suite
- Cigarette pack size
- Wall and DIN-rail mounting

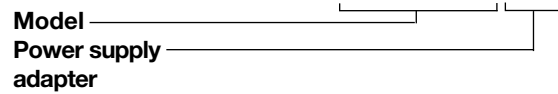
Product Description

VCP DIN provides a data communication solution for connecting Windows hosts (as PowerSoft) to the Carlo Gavazzi energy meters and power analysers over a TCP/IP Ethernet network (LAN, Internet). VCP DIN works like an add-on single-port serial board to the PC server, but with the major advantage of exploiting the TCP/IP network. Although it connects through the virtual link of the Ethernet, the port

on VCP DIN is recognized as a real COM port by Windows. VCP DIN provides both the basic transmit/receive data functions, as well as RTS, CTS, DTR, DSR, and DCD control signals. VCP DIN is supplied with a utility program providing a simple step-by-step installation procedure and a maintenance wizard that allows an easy access to the instruments.

How to order

VCP DIN UK



Type Selection

Power supply adapter

none: 230VAC to 12VDC power supply adapter, EU plug
UK: 230VAC to 12VDC power supply adapter, UK plug
US: 120VAC to 12VDC power supply adapter, US plug

Supply specification

DC supply	9 to 30VDC
Power-on indication	LED, red
Power consumption	300mA @ 9V (max)
AC/DC power supply adapter	Included (see type selection)

Input/Output specifications

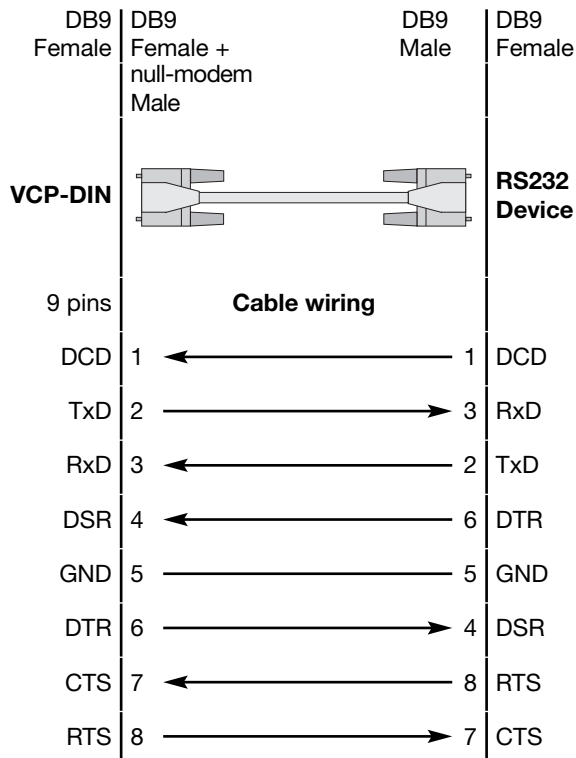
LAN Ethernet Connector "Link" indication Protection Ports	10/100 Mbps RJ45 LED, yellow Built-in 1.5kV magnetic isolation TCP port 23 (Telnet) TCP port 4000 (firmware updating) TCP ports 950 and 966 (hostbased/driver mode) UDP port 1029 (broadcast, monitor, real COM installer)	RS232 signals RS485 (2-wire) signals Protection Serial communication parameter Parity Data Bits Stop Bits Flow control Speed	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND Data+, Data-, GND 15kV ESD for all signals None, even, odd, space, mark 5, 6, 7, 8 1, 1.5, 2 RTS/CTS, XON/XOFF 50bps to 230.4kbps
Serial Interface Connector "Ready" indication	DIP-switch selectable among RS232 and RS485 (2 wire) Female DB9 LED, green (100Mbps), orange (10Mbps)	Nodes and max distance 1 unit load 1/5 unit load 1/8 unit load Protocols Windows compatibility	up to 32 (1000m) up to 160 (1000m) up to 247 (1000m) DHCP, Boot P, Telnet, TCP, VDP, IP, ICMP, ARP Windows 95/98/ME/NT/2000/XP/2003



General specifications

Operating temperature	0°C to +55°C (32°F to 131°F) 5 to 95% RH (non-condensing)	Weight	Approx. 880 g (packing included)
Storage temperature	-20°C to +85°C (-4°F to 185°F) 95% RH (non-condensing)		
EMC	EN61000-6-1 EN61000-6-3 FCC part 15 subpart B	Standard accessories	DIN-rail mounting kit 9-pole serial cable 9-pole null-modem adapter Configuration software Hardware and software manuals. Quick installation guide
Standard compliance Safety Medical	EN60950, UL60950 EN60601-1-2 class B, EN55011		
Approvals	CE, cULus, FCC, TÜV, GS		
Housing Dimensions (WxHxD) Material	90 x 100 x 22 mm SECC sheet metal (1mm)		
Protection degree	IP30		

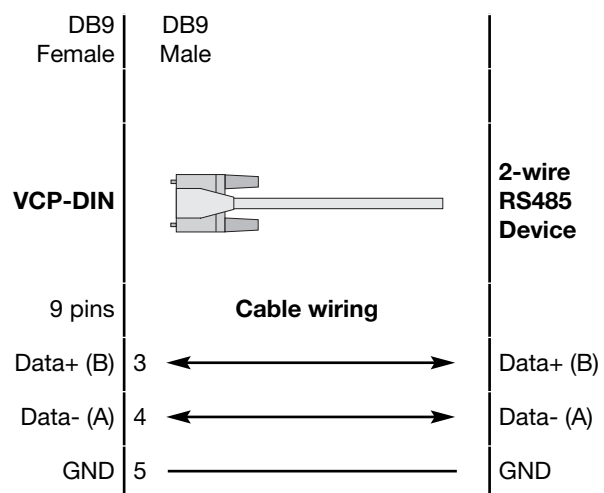
Wiring diagrams



Note: the serial cable and the null-modem adapter are to be used

RS232 Wiring (dip-switch RS232)

Fig. 1



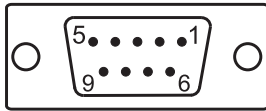
2-wire RS485 wiring (dip-switch RS485)

Fig. 2

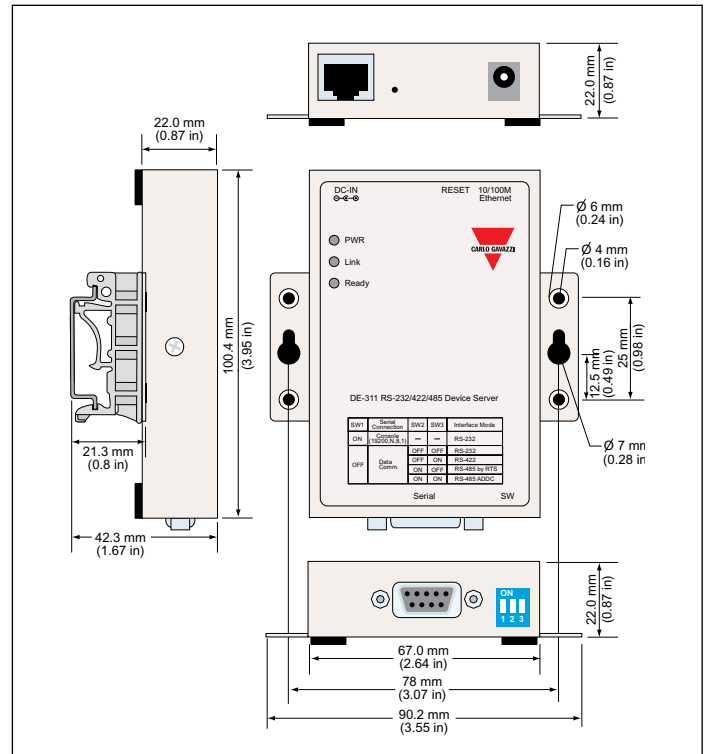
Pin Assignment

PIN	RS232	RS485 (2W)
1	DCD	----
2	TxD	----
3	RxD	Data+ (B)
4	DSR	Data- (A)
5	GND	GND
6	DTR	----
7	CTS	----
8	RTS	----
9	----	----

Note: the table is referred to the VCP side of the 9-pole connector.



Dimensions



Accessories

Power Supply Unit, DC/AC

Type PSU-DIN



- Power supply unit for general purpose
- DC input
- Stabilized AC voltage output
- For DIN-rail mounting
- Degree of protection: IP 40

Product Description

Power supply unit for general purpose with DC inputs and stabilized AC voltage outputs. The housing is for DIN-rail mounting and ensures a degree of protection of IP 40.

Type Selection

Power supply

- E:** Input: 9 to 16 VDC
Output: 24 VAC¹⁾
- F:** Input: 18 to 60 VDC
Output: 48 VAC¹⁾
- G:** Input: 80 to 240 VDC
Output: 115 VAC (std) ^{1) On request}

Output Specifications

Rated voltages (AC)	115 VAC stabilized, min. 8 mA, max. 50 mA 48 VAC stabilized, min. 20 mA, max. 125 mA 24 VAC stabilized, min. 40 mA, max. 250 mA The output is available only if a minimum load is connected. (See minimum currents above)
Stability	≤ 4% Un @ max. current
Protection	By fuses (5 x 20 mm): 115 VAC: 160 mA T 48 VAC: 315 mA T 24 VAC: 1 A T
Waveform	Square
No. of equipment powered	2 x CVT-DIN, 1 x SPT-DIN, 1 x DI3-DIN, 1 x DI3-72, 1 x LDI3, 1 x SIU-PC 85, 1 x SIU-DIN 8585 1 x SIU-DIN RLY

Ordering Key

PSU-DIN G

Model _____
Power supply _____

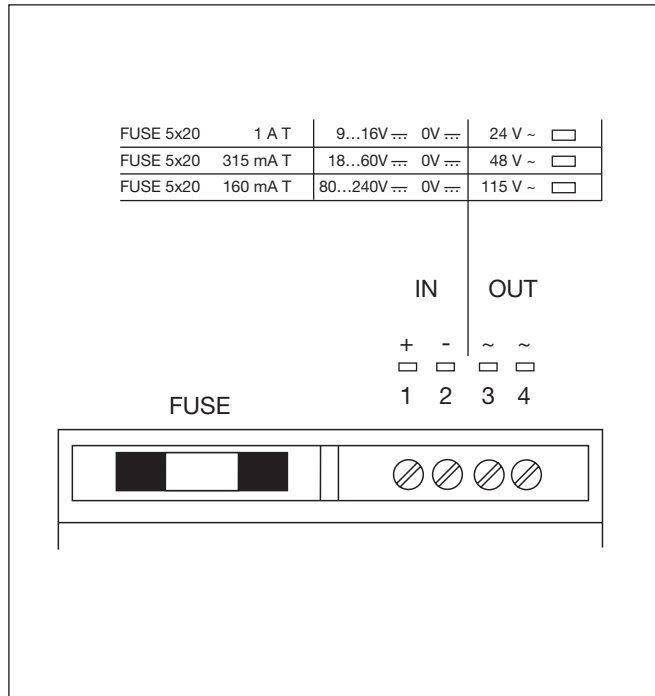
Input Specifications

Rated input	80 to 240 VDC 18 to 60 VDC 9 to 16 VDC
Power consumption	9 W

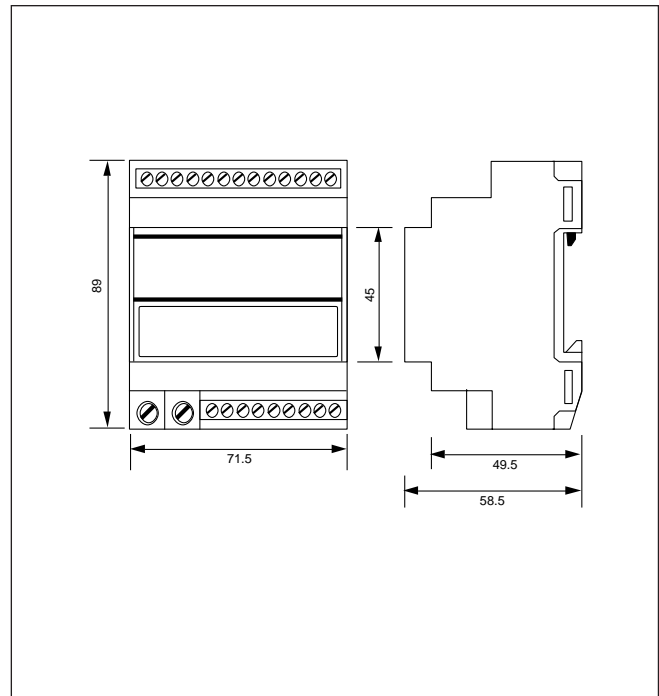
General Specifications

Operating temperature	0 to 50°C (32 to 122°F) (R.H. < 90% non-condensing)
Storage temperature	-10 to 60°C (14 to 140°F) (R.H. < 90% non-condensing)
Insulation reference voltage	300 V _{rms} to ground
Insulation	Not insulated between input and output; the insulation is achieved by means of the power supply (transformer) input of the connected load
Dielectric strength	4000 V _{rms} for 1 minute
EMC	EN 50081-1, EN 50082-1
Safety standards	IEC 61010-1, EN 61010-1
Connector	Screw-type
Housing	
Dimensions	4-DIN modules, 89 x 71.5 x 58.5 mm
Material	ABS, self-extinguishing: UL 94 V-0
Degree of protection	IP 40
Weight	Approx 190 g (packing included)

Terminal Board



Dimensions (mm)



Energy Management Accessories Type SIU-PC3

CARLO GAVAZZI



- Serial communication line adapter
- RS485 to USB conversion
- USB2.0 compatible
- Plug-in screw to mini DB9 female terminal block for easy RS422/485 wiring
- USB and communication status LED's
- Drivers for Windows (up to Windows 10), WInCE and Linux available

Product Description

SIU-PC3 is the perfect accessory for laptop computers and PCs not equipped with a serial port. The SIU-PC3 converts from USB to RS485, it is compatible with new and legacy serial devices, and can be used with any Carlo Gavazzi power analysers, energy meter or digital panel meter.

How to order

SIU PC3

Model

Supply specification

DC supply 5VDC (by USB port)
Power-on indication LED, red

Power consumption 60mA @ 5VDC

Input/Output specifications

USB
Compliance USB1.0/1.1
USB2.0 compatible
Speed 12Mbps (full speed USB)
Connector USB type A

RS422/RS485
Data-stream indication LED, Tx: green; Rx: yellow
Type INPUT/OUTPUT
Connector DB9 male; detachable screw terminal block
Baud rate 50bps to 921.6 kbps
Working mode 2-wire RS485

Line bias Not available
Line termination Not available

Protection
Surge protection 15kV ESD for serial signals

Drivers
Operating system Windows 98 to Windows 7 /8/8.1/10 (x86/x64), Win CE 5.0/6.0
Linux 2.4
Linux 2.6 x86/x69

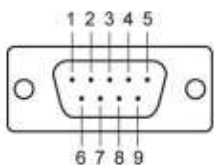


General specification

Operating temperature	-0°C to +55°C (32°F to 131°F), 5 to 95% RH (non-condensing)	Standard compliance Approvals	CE
Storage temperature	-20°C to +70°C (-4°F to 158°F), 5 to 95% RH (non-condensing)	Housing Dimensions (WxHxD)	39 x 20 x 60 mm
EMC	EN55022 class B (emissions), EN55024 (immunity) FCC part 15B class B FCC part 15 Class B	Material	ABS+PC
		Weight	65 g (packaged 200g)
		Standard accessories	1 screw terminal block to mini DB9 female adaptor 1 drivers CD

Connection Options

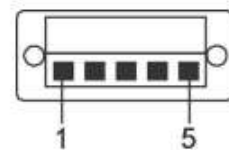
DB9 (male)



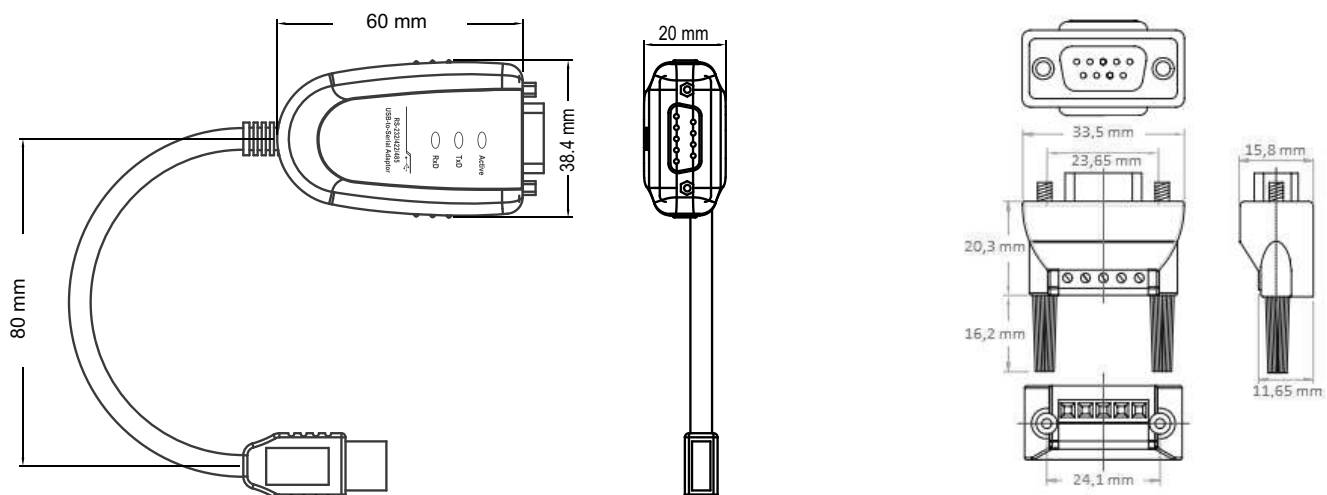
Pin	RS-485 (2 wires)
1	-
2	-
3	Data+(B)
4	Data-(A)
5	GND
6	-
7	-
8	-

Pin	RS-485 (2 wires)
1	-
2	-
3	Data+(B)
4	Data-(A)
5	GND

Screw terminal block



Dimensions



Energy Management Accessories Type SIU TCP 3

CARLO GAVAZZI



- Ease-of-use in Modbus protocol conversion included RTU and TCP
- RS485 (2 wires) and RS232 serial port available
- Auto detecting 10/100 Mbps Ethernet interface
- Configurable via Built-in Web-Server Serial console or Telnet
- Easy-to-use configuration software suite
- Cigarette pack size
- Wall and DIN-rail mounting
- Built-in default key to restore factory default settings
- Redundant dual DC power inputs for non stop operation; the converter can be connected simultaneously to live DC Power sources.

Product description

SIUTCP3 is a Modbus Gateway which provides an interface between Modbus serial slave devices and hosts running Modbus/TCP on Ethernet networks.

It supports the two most commonly used serial communication interfaces: RS-232 and RS485.

These protocols are commonly used by hardware equipments in the industry such as PLC, power meters and measurement devices.

How to order **SIU TCP 3**

Model _____

Supply specification

DC supply	9 to 30VDC, DC 5V	AC/DC power supply adapter	Not included
Power-on indication	LED	AD5V1A (US): American adapter	on request 5V @ 1.25A
Power consumption	2.7 Watt max	AD5V1A (EU): European adapter	on request 5V @ 1.25A

Input/Output specifications

Lan	<p>Ethernet Connector "Link" indication Off: Blinking with green: Blinking with Orange: Ports</p>	<p>10/100 Mbps RJ45 LED (LAN) Ethernet disconnected Data is transmitting on Ethernet for 100Mbps Data is transmitting on Ethernet for 10Mbps TCP port 23 (Telnet) TCP port 4000 (firmware updating) TCP ports 950 and 966 (hostbased/driver mode) UDP port 1029 (broadcast, monitor)</p>	Serial communication parameter	<p>Parity Data Bits Stop Bits Flow control Baud rate Protection</p>	<p>None, even, odd, space, mark 7, 8 1, 2 RTS/CTS, XON/XOFF, NONE 1200bps to 230kbps 15kV ESD</p>
Serial interface	<p>Connector "Ready" indication</p>	<p>Male DB9 (COM) LED, green Off: no data is transmitting on COM port, Blinking: data is transmitting on COM port.</p>	Nodes and max distance	<p>1 unit load</p>	<p>up to 32 (1000m)</p>
RS485 (2 wires) signals	<p>Data+, Data-, GND</p>		Protocols	<p>MODBUS TCP/ASC/RTU/SNMP/HTTP</p>	
			Windows compatibility	<p>Windows XP, Vista, 7, Windows 10, server 2003</p>	
			Run LED	<p>Red LED (RUN) Blinking (rate 0.5 sec) firmware is running normally</p>	

General specifications

Operating temperature	0°C to +60°C (32°F to 140°F) 5 to 95% RH (non-condensing)	Housing	Dimensions (LxWxH) Material	65 x 78 x 28mm Varnished over iron
Storage temperature	-20°C to 85°C (-4°F to 185°F) 5% to 95% RH (non-condensing)	Protection degree		IP30
EMC Immunity emissions	EN61000-3-2, Class A EN61000-3-3	Weight		Approx. 363 g (packing included)
Standard compliance Safety Medical	EN60950 EN55022, class A	Standard accessories		WALL mounting kit 9-pole serial cable Configuration software (Devicevw) Hardware and software manuals. Quick installation guide
Approvals	CE, FCC			

Hardware structure

SIUTCP3 supports the standard Modbus protocol and is capable of converting the Modbus protocols RTU into Modbus TCP.



Wiring diagrams

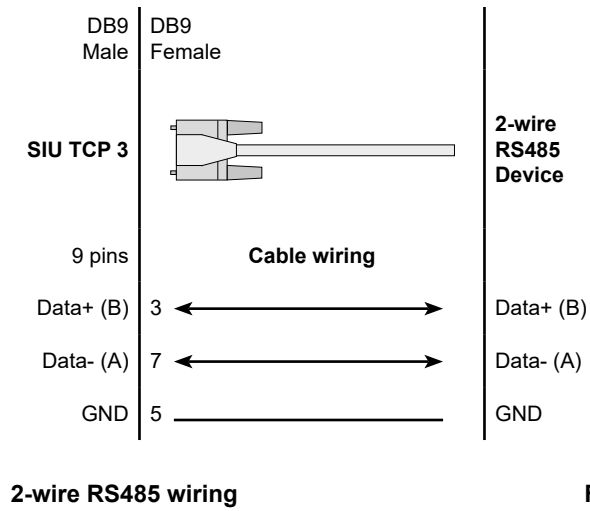
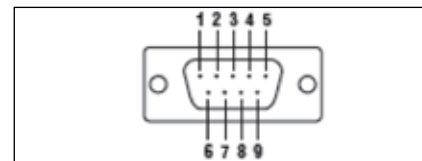


Fig. 1

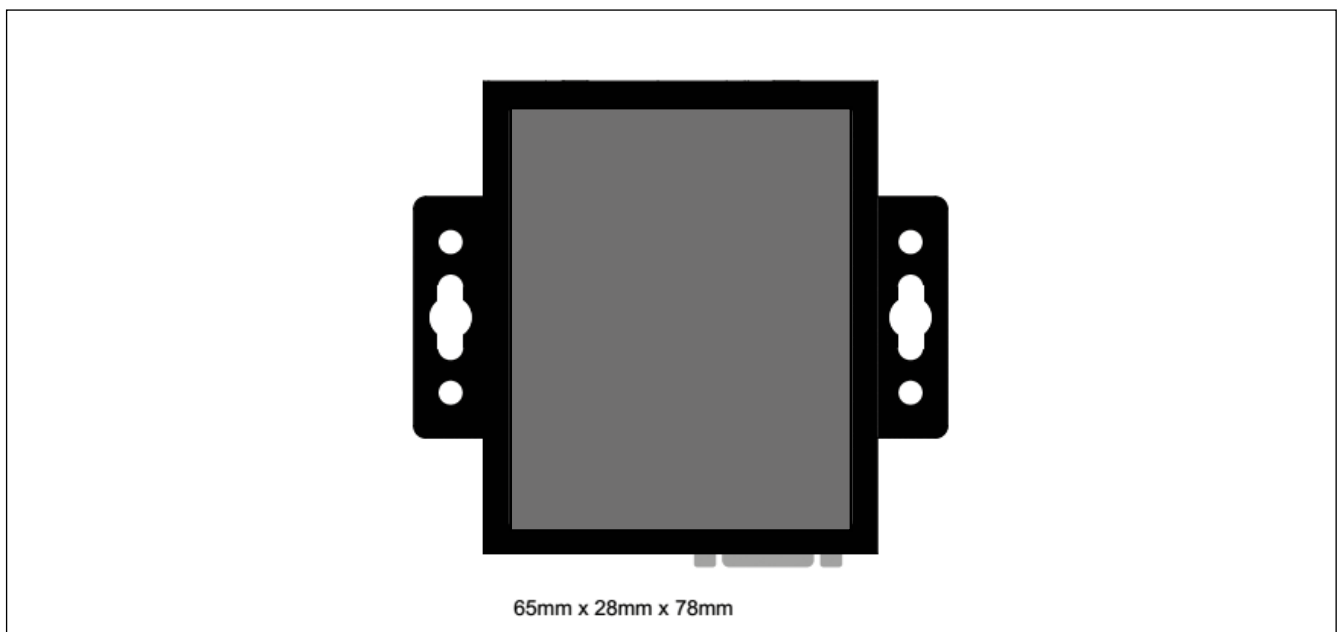
Pin assignment

PIN	RS232 (*)	RS485 (2W)
1	DCD	----
2	RxD	----
3	TxD	Data+ (B)
4	DTR	----
5	GND	GND
6	DSR	----
7	RTS	Data- (A)
8	CTS	----
9	----	----

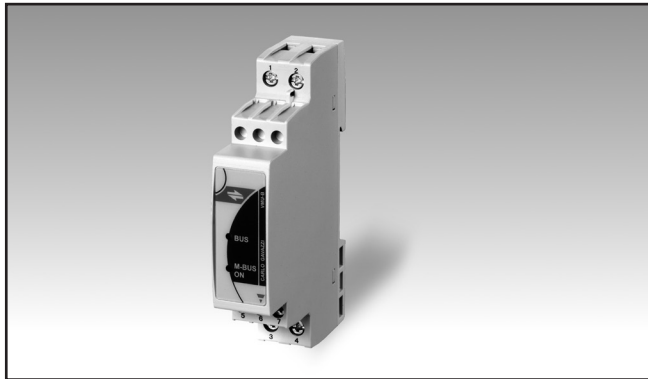
Note: the table is referred to the SIU TCP3 side of the 9-pole connector



Dimension



Energy Management BUS Adapter Type VMU-B M2



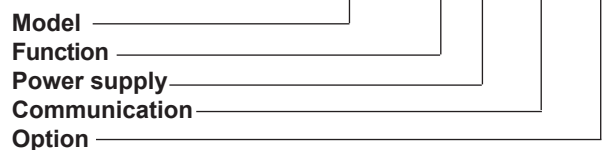
- RS485 Modbus to M-Bus communication adapter
- EM210, EM26 self recognition (option A)
- EM270, EM271 and EM280 self recognition (option B)
- WM15 self recognition (option C)
- Front diagnostic LED's
- Universal 18 to 260 VAC/DC power supply
- Dimensions: 1-DIN module
- Protection degree (front): IP40

Product Description

RS485 Modbus to M-Bus compact adapter. The module is provided with universal power supply and is able to recognize and auto-set the variable format and mapping according to the connected Carlo Gavazzi instrument. Housing for DIN-rail mounting, IP40 (front) protection degree.

How to order

VMU-B M2 U S1B1 B



Type Selection

Function	Power supply	Communication	Option
M2: M-Bus port according EN13757-3:2013	U: From 18 to 260VAC/DC	S1B1: RS485 Modbus to M-Bus	A: EM210, EM26 compatible B: EM270, EM271, EM280 compatible C: WM15 compatible

Communication

LED 1	Amber. ON steady light: working communication on RS485 bus; Blinking light: not working communication on RS485 bus.		light: M-bus communication with the unit. Both AMBER and GREEN LED OFF light: the module is not power supplied.
LED 2	Green. When M-Bus communication is not available (during the instrument starting) the LED blinks according to the set baudrate: 300 bps: blinking, pause; 2400 bps: blinking, blinking, pause; 9600 bps: blinking, blinking, blinking, pause. ON steady light: NO M-bus communication with the VMU-B unit. ON blinking	RS485 Function Type Connections Addresses Protocol Boud-rate Data format	Master function One-drop, bidirectional 3-wire The wires are already screwed on the three screw terminals (wire length: 10 cm). Max. distance 1000 m 247, set automatically by the connected instrument downstream the bus. MODBUS/JBUS (RTU) According to the communication speed set in the connected meter. According to the connected instrument.



Communication (cont.)

Frame format	According to the connected instrument, see table "Converted variables"	Baud-rate	300 to 9600 bits/s (set automatically by the M-Bus master)
Special functions	None	Data format	According to the connected instrument.
Insulation	By means of optocouplers, 4000 VRMS between communication port to power supply input. No insulation between RS485 port and M-Bus communication port.	Frame format	According to the connected instrument, see relevant protocol
M-Bus		Special functions	None
Function	Slave function	Insulation	By means of optocouplers, 4000 VRMS between communication port to power supply input. No insulation between RS485 port and M-Bus communication port.
Type	One-drop, bidirectional		
Connections	2-wire.		
Addresses	247, set automatically by the connected instrument downstream the bus.		
Protocol	M-Bus according to EN13757:2013		

General specifications

Operating temperature	-25°C to +55°C (-13°F to 131°F) (R.H. from 0 to 90% non-condensing @ 40°C)	Immunity to conducted disturbances	10V/m from 150KHz to 80MHz
Storage temperature	-30°C to +70°C (-22°F to 158°F) (R.H. < 90% non-condensing @ 40°C)	Surge Radio frequency suppression	2kV on power supply; According to CISPR 22
Installation category	Cat. III (IEC60664, EN60664)	Standard compliance	
Insulation (for 1 minute)	4000 VRMS between communication BUS and power supply	Safety	IEC60664, IEC61010-1 EN60664, EN61010-1
Dielectric strength	4000 VRMS for 1 minute	Approvals	CE
Noise rejection		Connections	Screw-type
CMRR	100 dB, 48 to 62 Hz	Cable cross-section area	Min. 2.5 mm ² , Max. 6 mm ² Min./Max. screws tightening torque: 0.5 Nm / 1.1 Nm Other terminals: 1.5 mm ² ; Min./Max. screws tightening torque: 0.4 Nm / 0.8 Nm
EMC	According to: EN61000-6-2 (industrial immunity) and EN61000-6-3 (light industry emission).	DIN Housing	
Electrostatic discharges	8kV air discharge;	Dimensions (WxHxD)	17.5 x 90 x 67.5 mm
Immunity to irradiated electromagnetic fields	Test with applied current: 10V/m from 80 to 2000MHz; Test without any applied current: 30V/m from 80 to 2000MHz;	Material	Nylon PA66, self-extinguishing: UL 94 V-0 DIN-rail
Burst	On current and voltage measuring input circuits: 4kV	Mounting	
		Protection degree	
		Front	IP40
		Screw terminals	IP20
		Weight	Approx. 100 g (packing included)

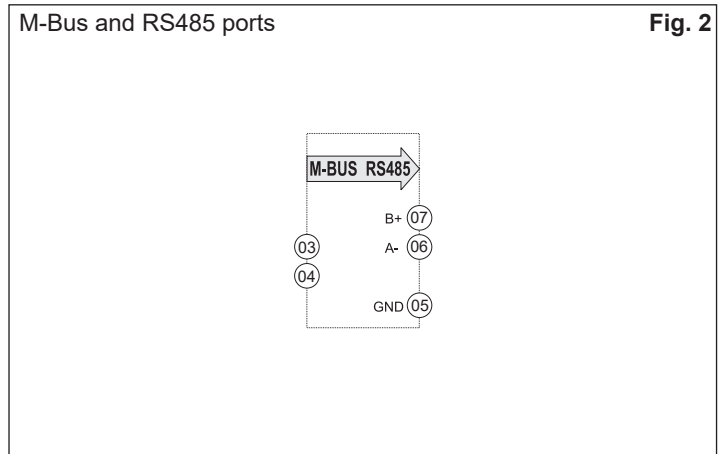
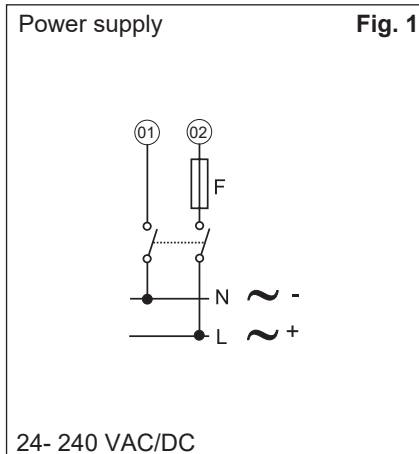
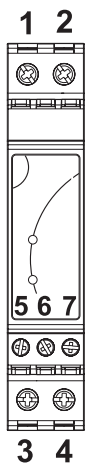
Power supply specifications

Power supply	18 to 260 VAC/DC	Power consumption	≤ 3VA
--------------	------------------	-------------------	-------

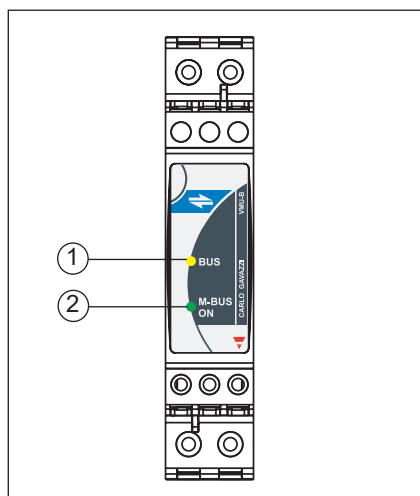
Insulation between inputs and outputs

	RS485 port	M-Bus port	Power supply
RS485 port	-	0kV	4kV
M-Bus port	0kV	-	4kV
Power supply	4kV	4kV	-

Wiring diagrams



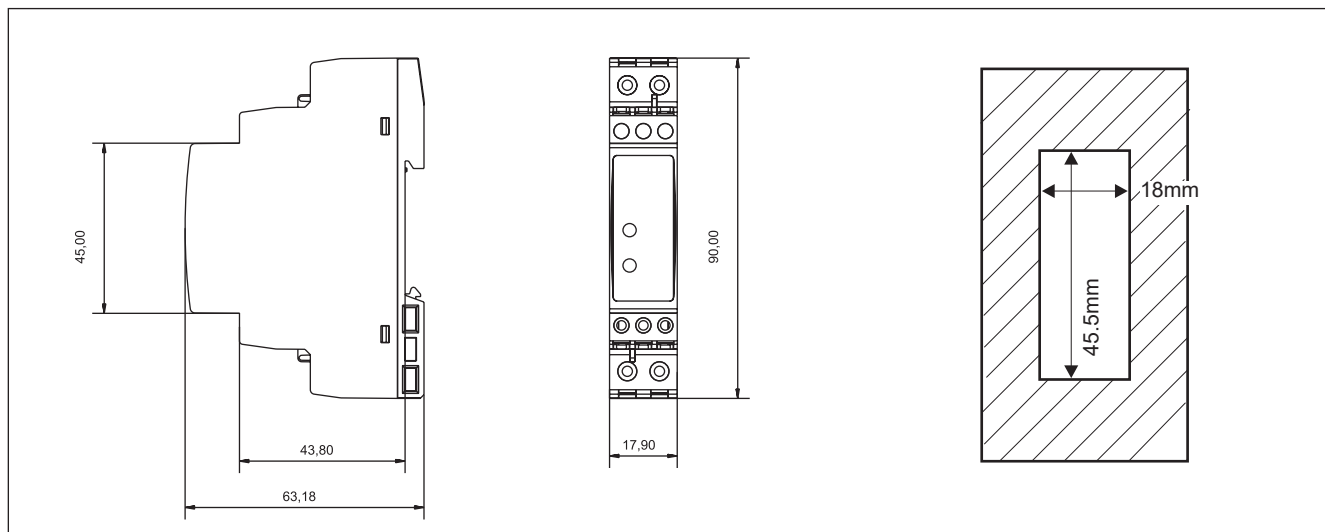
Frontal panel description



1. **Amber LED.** ON steady light: working communication on RS485 bus;
Blinking light: not working communication on RS485 bus.

2. **Green LED.** When M-Bus communication is not available (during the instrument starting) the LED blinks according to the set baudrate:
300 bps: blinking, pause;
2400 bps: blinking, blinking, pause;
9600 bps: blinking, blinking, blinking, pause.
ON steady light: NO M-bus communication with the VMU-B unit.
ON blinking light: M-bus communication with the unit.
Both AMBER and GREEN LED OFF light: the module is not power supplied.

Dimensions and panel cut-out



По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Россия (495)268-04-70

Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Киргизия (996)312-96-26-47

Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Казахстан (7172)727-132

Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93