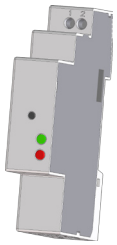
SENECA s.r.l.
Via Austria, 26 - 35127 - PADOVA - ITALY
Tel. +39.049.8705355 - 8705359 - Fax +39.049.8706287
e-mail: info@seneca.it - www.seneca.it

S500-MBU

Modulo di comunicazione M-Bus - *M-Bus communication module*

1MSNECMBU002

Soggetto a modifiche senza preavviso.
Subject to change without prior notice.



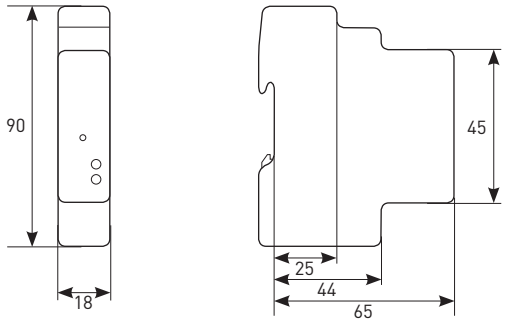
I - MANUALE D'USO

GB - USER MANUAL

⚠ ATTENZIONE!
L'installazione e l'utilizzo dello strumento devono essere effettuate esclusivamente da personale qualificato. Togliere la tensione prima di intervenire sullo strumento.

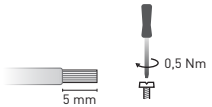
⚠ WARNING!
Device installation and use must be carried out only by qualified staff. Switch off the voltage before device installation.

DIMENSIONI (mm)
SIZE (mm)



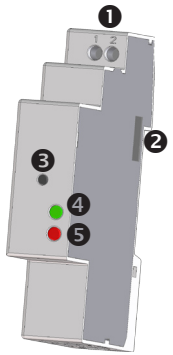
LUNGHEZZA SPELATURA DEI FILI
CABLE STRIPPING LENGTH

Collegamento morsetti
Terminals connection



Utilizzare un cacciavite a taglio 0,8x3,5 mm
Use a blade screwdriver with 0.8x3.5 mm size

PANORAMICA
OVERVIEW



I ITALIANO

1. Morsetti per collegamento M-Bus
2. Porta ottica di comunicazione
3. Tasto SET DEFAULT
4. LED di alimentazione
5. LED di comunicazione

GB ENGLISH

1. *M-Bus connection terminals*
2. *Optical COM port*
3. *SET DEFAULT key*
4. *Power supply LED*
5. *Communication LED*

FUNZIONE SET DEFAULT
SET DEFAULT FUNCTION

I ITALIANO

La funzione SET DEFAULT consente di riportare sul modulo le impostazioni di default (es. in caso l'indirizzo primario M-Bus venga dimenticato).
Per ripristinare le impostazioni di default, tenere premuto per almeno 5 s il tasto SET DEFAULT, il LED di comunicazione lampeggierà verde/rosso per 5 s. Dopo che il modulo ha effettuato la procedura di SET DEAFULT il LED di comunicazione si accenderà rosso continuo per indicare di rilasciare il tasto.

GB ENGLISH

SET DEFAULT function allows to restore on the module default settings (e.g. in case of M-Bus primary address forgotten).
To restore default settings, keep SET DEFAULT key pressed for at least 5 s, communication LED will blink green/red for 5 s. At the end of SET DEFAULT procedure, communication LED will be red continuously indicating to release the key.

IMPOSTAZIONI ***SETTINGS***	**VALORI DI DEFAULT** ***DEFAULT VALUES***
Indirizzo primario M-Bus *M-Bus primary address*	000
Indirizzo secondario M-Bus (numero ID) *M-Bus secondary address (ID number)*	Valore progressivo su 8 cifre *Progressive value on 8 digits*
Velocità di comunicazione M-Bus *M-Bus communication speed*	2400 bps
Maschera dei dati rilevati dal contatore tramite il modulo *Mask of data detected on the counter by the module*	Default

FUNZIONAMENTO DEI LED
LEDS FUNCTIONALITY

I due LED sono presenti sul pannello frontale del modulo e consentono di segnalarne lo stato di alimentazione e comunicazione.
Two LEDs are available on the module front panel to provide power supply and communication status.

I ITALIANO

COLORE LED	**SEGNALAZIONE**	**SIGNIFICATO**
LED ALIMENTAZIONE		
-	Spento	Modulo spento
VERDE	Lampeggiante	Modulo acceso
LED COMUNICAZIONE		
-	Spento	Modulo spento
VERDE	Lampeggio lento (tempo spegnimento 2 s)	Comunicazione M-Bus=OK Comunicazione con il contatore=OK
ROSSO	Lampeggio veloce (tempo spegnimento 1 s)	Comunicazione M-Bus=fallita/mancante Comunicazione con il contatore=OK
ROSSO	Sempre acceso	Comunicazione con il contatore=fallita/mancante
VERDE/ROSSO	Colori alternati per 5 s	Procedura di SET DEFAULT in corso

GB ENGLISH

LED COLOUR	***SIGNALLING***	***MEANING***
POWER SUPPLY LED		
-	*Power OFF*	*The module is OFF*
GREEN	*Blinking*	*The module is ON*
COMMUNICATION LED		
-	*Power OFF*	*The module is OFF*
GREEN	*Slow blink* *(2 s OFF time)*	*M-Bus communication=OK* *Counter communication=OK*
RED	*Fast blink* *(1 s OFF time)*	*M-Bus communication=fault/missing* *Counter communication=OK*
RED	*Always ON*	*Counter communication=fault/missing*
GREEN/RED	*Alternating colours for 5 s*	*SET DEFAULT procedure in progress*

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COLLEGAMENTI
CONNECTIONS

I ITALIANO

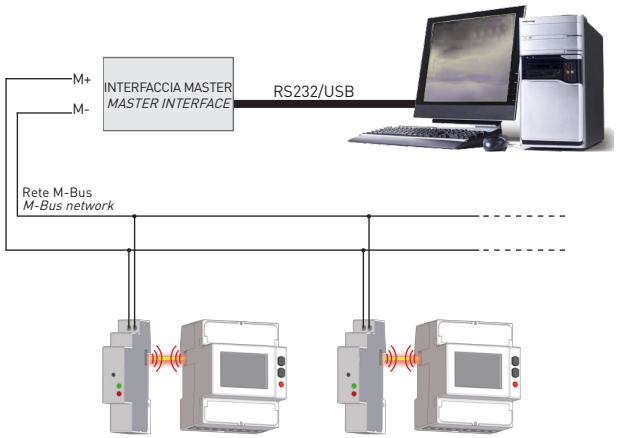
Tra il PC e la rete M-Bus è richiesta un'interfaccia master per adattare la porta RS232/USB alla rete. Il numero di moduli collegabili dipende dall'interfaccia master utilizzata. Per il collegamento tra i diversi dispositivi, utilizzare un cavo schermato con i due conduttori di segnale "twistati".

Dopo aver effettuato i collegamenti sulla rete M-Bus, abbinare ogni modulo M-Bus ad un singolo contatore: avvicinarli e allinearli perfettamente in modo che le rispettive porte ottiche si fronteggino.

GB ENGLISH

A master interface is required between PC and the M-Bus network to adapt RS232/USB port to network. The maximum number of modules to be connected can change according to the used master interface. For the connection among the different modules, use a cable with a twisted pair and a third wire.

After making M-Bus connections, combine each M-Bus module with a single counter: place them side by side, perfectly lined up, with module optical port facing the counter optical port.



APPLICAZIONE M-BUS MASTER
M-BUS MASTER APPLICATION

I ITALIANO

M-Bus Master è un software di applicazione che consente di gestire la comunicazione del modulo M-Bus. Tramite questa applicazione è possibile:

- rilevare e comunicare con i moduli M-Bus
- cambiare le impostazioni dei moduli M-Bus connessi
- visualizzare i valori di misura del contatore connesso al modulo M-Bus
- impostare la cadenza e il tipo di misura da rilevare

Per utilizzare M-Bus Master, seguire le istruzioni.

1. Collegare uno o più moduli su linea M-Bus come precedentemente descritto.
2. Posizionare un contatore per ogni modulo in modo che le porte ottiche di entrambi si fronteggino.
3. Installare M-Bus Master su PC.
4. Al termine dell'installazione, avviare M-Bus Master.
5. Effettuare una ricerca dei moduli M-Bus sulla rete.

GB ENGLISH

M-Bus Master is an application software which allows to manage M-Bus module communication. With this application software it is possible to:

- *detect and communicate with M-Bus modules*
- *change M-Bus module settings*
- *display the detected measurements of the energy counter connected to the M-Bus module*
- *set the measurement rate and type to be detected*

To use M-Bus Master, follow the instructions.

1. *Connect one or more modules on M-Bus network as previously described.*
2. *Place one counter for each M-Bus module: module optical port must face up to counter optical port.*
3. *Install M-Bus Master on PC.*
4. *At the end of installation, run M-Bus Master.*
5. *Carry out a search for the available M-Bus modules on the network.*

CARATTERISTICHE TECNICHE
TECHNICAL FEATURES

I ITALIANO

Dati conformi alla normativa EN 13757-1-2-3.

ALIMENTAZIONE
Tramite linea bus

COMUNICAZIONE M-BUS
Protocollo: M-Bus
Porta: 2 morsetti a vite
Velocità di comunicazione: 300...9600 bps

COMUNICAZIONE SERIALE
Tipo: porta ottica
Velocità di comunicazione: 38400 bps

NORME DI CONFORMITA'
EN 13757-1-2-3
EN 61000-6-2 Immunità per ambienti industriali:
EN 61000-4-2 Compatibilità elettromagnetica, EN 61000-4-3 Immunità a RF irradiata,
EN 61000-4-4 Immunità al burst/fast transient, EN 61000-4-5 Immunità ai surge (Surge),
EN 61000-4-6 Immunità a RF condotta, EN 61000-4-11 Immunità ai dips sull'alimentazione AC
EN 55011 classe A: emissioni irradiate, emissioni condotte
Sicurezza: EN 60950

DIAMETRO FILO PER MORSETTI DI CONNESSIONE
Morsetti: 0,14...2,5 mm^2

CONDIZIONI AMBIENTALI
Temperatura di funzionamento: tra -15°C e +60°C
Temperatura di stoccaggio: tra -25°C e +75°C
Umidità relativa: 80% max senza condensa
Grado di protezione: IP20

GB ENGLISH

Data in compliance with EN 13757-1-2-3 standard.

POWER SUPPLY
Through bus connection

M-BUS COMMUNICATION
Protocol: M-Bus
Port: 2 screw terminals
Communication speed: 300...9600 bps

SERIAL COMMUNICATION
Type: optical port
Communication speed: 38400 bps

STANDARDS COMPLIANCE
EN 13757-1-2-3
EN 61000-6-2 Immunity for industrial environments:
EN 61000-4-2 Electrostatic discharge, EN 61000-4-3 RF radiated disturbance,
EN 61000-4-4 Fast Transient (BURST), EN 61000-4-5 Overvoltage (Surge),
EN 61000-4-6 RF conducted disturbance, EN 61000-4-11 Voltage dips and short interruptions,
EN 55011 Class A: radiated emissions, conducted emissions
Safety: EN 60950

DIAMETER WIRE FOR CONNECTION TERMINALS
Terminals: 0.14...2.5 mm^2

ENVIRONMENTAL CONDITIONS
Operating temperature: between -15°C and +60°C
Storage temperature: between -25°C and +75°C
Humidity: 80% max without condensation
Protection degree: IP20

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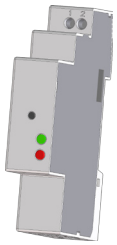
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Tel. +39.049.8705355 - 8705359 - Fax +39.049.8706287
e-mail: info@seneca.it - www.seneca.it

S500-MBU

M-Bus Kommunikationsmodul - *M-Bus communication module*

1MSOECMBU002

Änderungen vorbehalten.
Subject to change without prior notice.



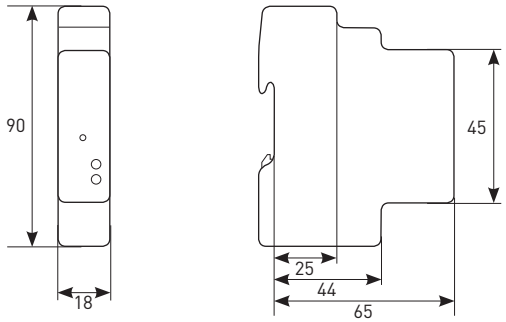
D - BEDIENUNGSANLEITUNG

GB - USER MANUAL

⚠ ACHTUNG!
Die Installation und Inbetriebsnahme des Moduls darf nur von ausgebildeten Fachkräften durchgeführt werden. Vor jeder Tätigkeit am Gerät muß die Versorgung getrennt werden.

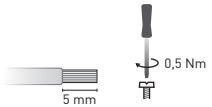
⚠ WARNING!
Device installation and use must be carried out only by qualified staff. Switch off the voltage before device installation.

ABMESSUNGEN (mm)
SIZE (mm)



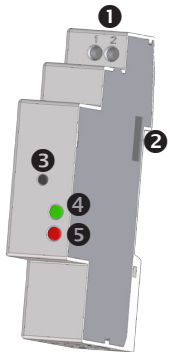
KABELABISOLIERE LÄNGE
CABLE STRIPPING LENGTH

Verdrahtung an den Klemmen
Terminals connection



Ein 0,8x3,5 mm Flachschraubendreher anwenden
Use a blade screwdriver with 0.8x3.5 mm size

ÜBERSICHT
OVERVIEW



D DEUTSCH

1. Klemmen zum M-Bus Anschluss
2. Infrarot-Schnittstelle
3. Taste WERKSEINSTELLUNG
4. LED der Hilfsspannung
5. LED der Kommunikation

GB ENGLISH

1. *M-Bus connection terminals*
2. *Optical COM port*
3. *SET DEFAULT key*
4. *Power supply LED*
5. *Communication LED*

FUNKTION WERKSEINSTELLUNG
SET DEFAULT FUNCTION

D DEUTSCH

Die Funktion WERKSEINSTELLUNG dient zum Rücksetzen aller Einstellungen und stellt die Werkseinstellungen ein (z.B. wenn der M-Bus Primärwert vergessen wird).
Um die Werkseinstellung durchzuführen soll die Taste WERKSEINSTELLUNG mindestens 5 s ausgedrückt werden, dann wird das Kommunikationsled Grün/Rot für 5 s blinken. Nach der Werkseinstellung wird das Kommunikationsled ständig Rot sein, damit die Taste erlösen wird.

GB ENGLISH

SET DEFAULT function allows to restore on the module default settings (e.g. in case of M-Bus primary address forgotten).
To restore default settings, keep SET DEFAULT key pressed for at least 5 s, communication LED will blink green/red for 5 s. At the end of SET DEFAULT procedure, communication LED will be red continuously indicating to release the key.

EINSTELLUNGEN ***SETTINGS***	**WERKSEINSTELLUNGEN** ***DEFAULT VALUES***
M-Bus Primäradresse *M-Bus primary address*	000
M-Bus Sekundäradresse (ID Nummer) *M-Bus secondary address (ID number)*	Zunehmender 8-stelliger Wert *Progressive value on 8 digits*
M-Bus Kommunikationsgeschwindigkeit *M-Bus communication speed*	2400 bps
Vom Zähler aufgenommene Angabentabelle durch das Modul *Mask of data detected on the counter by the module*	Werkseinstellung *Default*

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LED FUNKTION
LEDS FUNCTIONALITY

Die zwei LED befinden sich auf die Frontseite des Moduls zur Anzeige des Versorgungs- und Kommunikationsstandes.
Two LEDs are available on the module front panel to provide power supply and communication status.

D DEUTSCH

LED FARBE	**MELDUNG**	**BEDEUTUNG**
LED DER HILFSSPANNUNG		
-	Ausgeschaltet	Ausgeschaltetes Modul
GRÜN	Blinkend	Eingeschaltetes Modul
LED DER KOMMUNIKATION		
-	Ausgeschaltet	Ausgeschaltetes Modul
GRÜN	Langsam blinkend (jede 2 s aus)	M-Bus Kommunikation=OK Kommunikation zum Zähler=OK
ROT	Schnell blinkend (jede 1 s aus)	M-Bus Kommunikation=fehlende/fehlerhaft Kommunikation zum Zähler=OK
ROT	Immer angeschaltet	Kommunikation zum Zähler=fehlende/fehlerhaft
GRÜN/ROT	Wechselfarben für 5 s	Laufende Werkseinstellung

GB ENGLISH

LED COLOUR	***SIGNALLING***	***MEANING***
POWER SUPPLY LED		
-	*Power OFF*	*The module is OFF*
GREEN	*Blinking*	*The module is ON*
COMMUNICATION LED		
-	*Power OFF*	*The module is OFF*
GREEN	*Slow blink (2 s OFF time)*	*M-Bus communication=OK* *Counter communication=OK*
RED	*Fast blink (1 s OFF time)*	*M-Bus communication=fault/missing* *Counter communication=OK*
RED	*Always ON*	*Counter communication=fault/missing*
GREEN/RED	*Alternating colours for 5 s*	*SET DEFAULT procedure in progress*

VERDRAHTUNG
CONNECTIONS

D DEUTSCH

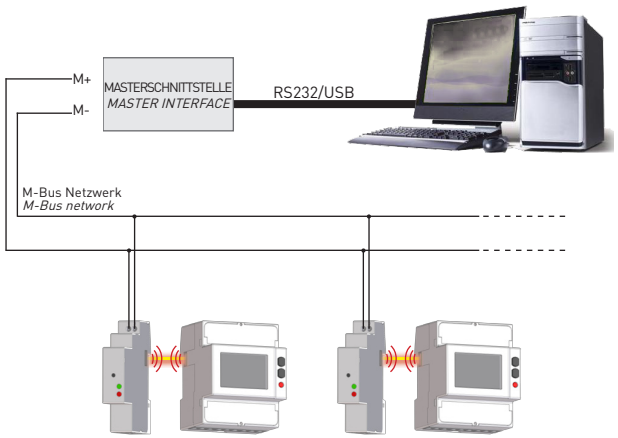
Zwischen PC und M-Bus Netzwerk ist ein Masterschnittstelle zur Anpassung der RS232/USB zum M-Bus Netzwerk erfordert. Die Anzahl der anzuschliessenden Module hängt von der angewendenten Master ab. Die Verdrahtung unter der verschiedenen Module soll mit geschilderten gedrehten Kabel durchgeführt werden.

Nachdem die Anschlusse an dem MBUS Netwerk durgeführt worden sind, jedes MBUS Modul mit einem Zähler ankoppeln: die zwei nähern und einreihen, damit die Infrarot-Schnittstelle gegenüber stehen.

GB ENGLISH

A master interface is required between PC and the M-Bus network to adapt RS232/USB port to network. The maximum number of modules to be connected can change according to the used master interface. For the connection among the different modules, use a cable with a twisted pair and a third wire.

After making M-Bus connections, combine each M-Bus module with a single counter: place them side by side, perfectly lined up, with module optical port facing the counter optical port.



M-BUS MASTER TOOL
M-BUS MASTER APPLICATION

D DEUTSCH

M-Bus Master ist eine Software zur Verwaltung der Kommunikation mit dem M-Bus Modul. Die Software dient:

- Zur Identifizierung und Kommunikation der M-Bus Module
- Zur Änderung der Einstellungen der angeschlossenen M-Bus Module
- Zur Anzeige der Messwerte aus dem an dem Modul gekoppelten Zähler
- Zur Einstellung der Takt und der gewünschten Messung

Zur Anwendung der M-Bus Master wie unter verfolgen.

1. Ein oder mehere Module an der M-Bus Linie anschliessen.
2. Ein Modul bei jedem Zähler stellen, so daß die optischen Schnittstellen kopplen können.
3. M-Bus Master an PC installieren.
4. Nach der Installation die M-Bus Master laufen lassen.
5. Eine Suche nach M-Bus Module im Netzwerk durchführen.

GB ENGLISH

M-Bus Master is an application software which allows to manage M-Bus module communication. With this application software it is possible to:

- *detect and communicate with M-Bus modules*
- *change M-Bus module settings*
- *display the detected measurements of the energy counter connected to the M-Bus module*
- *set the measurement rate and type to be detected*

To use M-Bus Master, follow the instructions.

1. *Connect one or more modules on M-Bus network as previously described.*
2. *Place one counter for each M-Bus module: module optical port must face up to counter optical port.*
3. *Install M-Bus Master on PC.*
4. *At the end of installation, run M-Bus Master.*
5. *Carry out a search for the available M-Bus modules on the network.*

TECHNISCHES EIGENSHAFTEN
TECHNICAL FEATURES

D DEUTSCH

Angaben gemäß der Richtlinie EN 13757-1-2-3.

HILFSPANNUNG
Aus der Buslinie

M-BUS KOMMUNIKATION
Protokoll: M-Bus
Schnittstelle: 2 Schraubenklemmen
Kommunikationsgeschwingidkeit: 300 ... 9600 bps

BUSLINIE
Typ: Infrarot-Schnittstelle
Kommunikationsgeschwindigkeit: 38400 bps

KONFORMITÄTSERKLÄRUNG
EN 13757-1-2-3
EN 61000-6-2 Störfestigkeit (Industriebereich):
EN 61000-4-2 Elektromagnetische Verträglichkeit, EN 61000-4-3 Abgestrahlte RF Störung,
EN 61000-4-4 schnelle Transienten (Burst), EN 61000-4-5 Stoßspannungen (Surge),
EN 61000-4-6 leitungsgeführte RF-Signale, EN 61000-4-11 Spannungseinbrüche am AC Hilfspannung
EN 55011 Klasse A: Angestrahlte und Ausgeführte Ausstoß
Sicherheitsbestinnungen: EN 60950

ANSCHLIESSBARER LEITER
Klemmen: 0,14 ... 2,5 mm²

UMWELTBEDIENGUNGEN
Arbeitstemperaturbereich: zwischen -15°C und +60°C
Lagertemperaturbereich: zwischen -25°C und +75°C
Relative Luftfeuchte: 80% max ohne Kondensation
Schutzgrad: IP20

GB ENGLISH

Data in compliance with EN 13757-1-2-3 standard.

POWER SUPPLY
Through bus connection

M-BUS COMMUNICATION
Protocol: M-Bus
Port: 2 screw terminals
Communication speed: 300 ... 9600 bps

SERIAL COMMUNICATION
Type: optical port
Communication speed: 38400 bps

STANDARDS COMPLIANCE
EN 13757-1-2-3
EN 61000-6-2 Immunity for industrial environments:
EN 61000-4-2 Electrostatic discharge, EN 61000-4-3 RF radiated disturbance,
EN 61000-4-4 Fast Transient (BURST), EN 61000-4-5 Overvoltage (Surge),
EN 61000-4-6 RF conducted disturbance, EN 61000-4-11 Voltage dips and short interruptions,
EN 55011 Class A: radiated emissions, conducted emissions
Safety: EN 60950

DIAMETER WIRE FOR CONNECTION TERMINALS
Terminals: 0.14 ... 2.5 mm²

ENVIRONMENTAL CONDITIONS
Operating temperature: between -15°C and +60°C
Storage temperature: between -25°C and +75°C
Humidity: 80% max without condensation
Protection degree: IP20

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