


GE552Y050

GE552Y051

GE552Y055

GE552Y056

Description

The new M-bus modular centralization system comprises two solutions and allows to place the various devices in series expanding the reading possibility from 60 to 250 devices.

The **standard solution** is to use a local M-Bus concentrator that supports up to 60 devices and allows the on-site consultation and acquisition of data on the PC through a special software and USB cable. Up to 4 local concentrators can be placed in series and therefore up to 240 devices managed.

The **complete solution** consists of a data logger with integrated web server that supports up to 4 local concentrators expanding the network to 250 devices.

Advantages

- The integrated web server allows the set-up, the search and the consultation of data from all the devices that make up the M-Bus network directly on the display of the device.
- Through a dial-up router all data can be managed and viewed on a PC or smartphone.
- Management of alarms due to failure, tampering or the exceeding of configurable thresholds with the sending of email notifications.
- Scheduling for the generation and forwarding of reports on the data gathered.

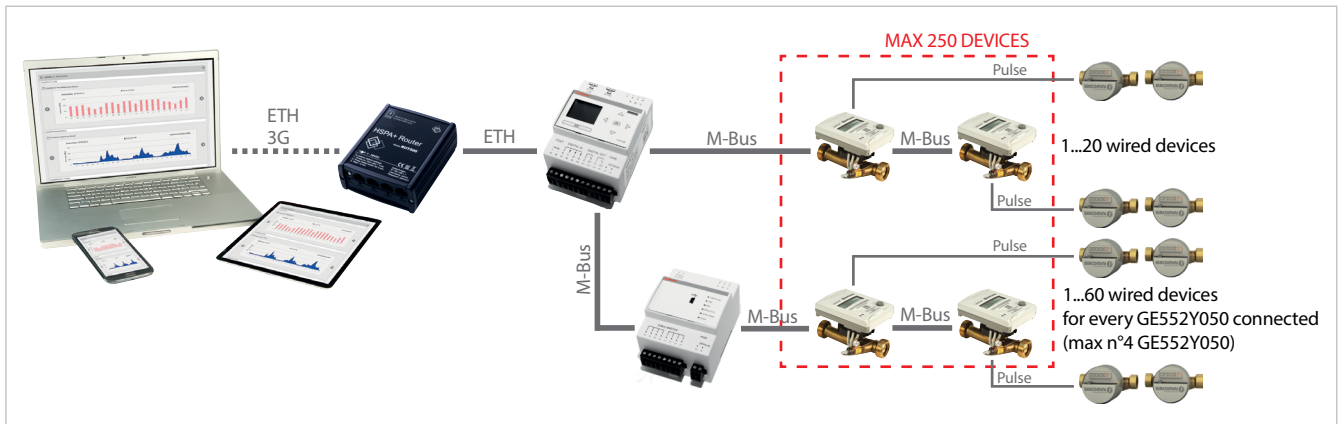
Versions and product codes

Product code	Description
GE552Y050	Local concentrator for the collection, processing and recording of data originated from the M-Bus network. Capable of managing up to 60 devices.
GE552Y051	M-Bus data logger for the collection, processing and recording of data originating from local GE552Y050 concentrators (max. 4 concentrators). Can manage directly up to 20 devices and expands the M-Bus network up to 250 devices.
GE552Y055	3G/EDGE/GPRS – wireless modem router for remote connection of the GE552Y051 data logger
GE552Y056	Software for data acquisition from the M-Bus central unit. To be combined with the GE552Y050 data concentrator

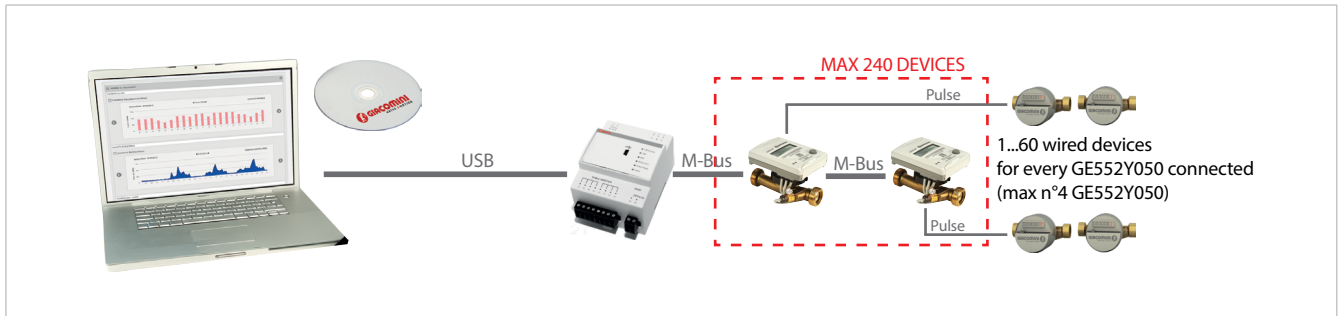


Example of scheme

- 250 wired devices



- 240 wired devices





GE552Y050 local concentrator

Description

The M-Bus GE552Y050 local concentrator enables connection with a network of devices compliant with the M-Bus standard (EN13757-2 Physical Layer) and supports up to 60 devices.

It has been designed to be used in combination with the GE552Y051 data logger, the GE552Y056 software or as an M-Bus repeater. Moreover, it can be used to interface with other software programmes or third-party devices.

Characteristics

• **Flexible:** it can be used both as a “Master” in an M-Bus network, connected in series with a data logger, and as a repeater, to extend an existing M-Bus network with a further 60 devices.

Its modularity enables the optimal calibration of the cost of the reading system.

In “Master” mode, the device enables the GE552Y051 data logger to communicate with the M-Bus devices linked to the M-Bus Master port.

The datalogger must be connected to the local concentrator via a RS232 serial bus.

In “Repeater/Slave” mode, the device works as an amplifier/signal regenerator, thus enhancing an existing M-Bus network in terms of distance and devices supported (a further 60).

• **Kit:** the local concentrator enables the GE552Y056 application software to communicate with the meters linked to the M-Bus Master port.

Though the GE552Y056 software it is possible to manage several systems, reading the relevant meters and generating the relevant reports.

Signalling LED

- USB Activity (orange LED): connection status with GE552Y056 sw
- TXD (green LED): transmission status on M-Bus Master
- RXD (Green LED): Reception status from M-Bus Master
- M-Bus ERROR (Red LED): shows an M-bus overload or a short circuit
- M-Bus Available (Green LED): indicates the correct M-Bus polarisation
- POWER (Red LED): indicates correct device supply

Electrical characteristics

- Nominal voltage: 24 Vdc +/- 10 % (Rev. HW 1.0 or if not specified)
24 Vdc +/- 10 %, 24 Vac (min. 20 Vac, max. 40 Vac) for HW 2.0 versions
- Installation class: class III
- Nominal voltage: 3 W + (0.07 W * number of M-Bus slaves)
- Maximum voltage: 12 W

Mechanical characteristics

- Operating temperature range: -20÷55 °C
- Storage temperature range: -25÷65 °C
- Size: 90x71x62 mm (HxLxP) – DIN
- Assembly: 35 mm DIN bar (EN60715)
- Protection degree: IP20 (EN60529)
- Connections:
 - M-Bus Slave: for connection as repeater/extender
 - M-Bus Master: for connection to the M-Bus meter network
 - Mini-USB type B: for connection with the GE552Y056 software

M-Bus selection

- Reference Standard: EN13757-2 (Physical Layer)
- Baudrate: min. 300 bps – max. 9,600 bps
- M-Bus/RS232 insulation: 1 KV AC
- M-Bus/USB insulation: 1 KV AC
- Max. number of M-Bus devices: 60
- Max. no of repeaters:
 - unlimited in stand-alone mode for reading of current data via USB connection
 - No. 4 as slaves to GE552Y051
- Transmission speed:
 - Minimum: 300 bps
 - Typical: 2400bps
 - Maximum: 9600bps
- Voltage on the Bus:
 - Min. 12V
 - Max. 42V
- Short-circuit protection: yes



GE552Y051 data logger

Description

The GE552Y051 data logger is a collection, processing and recording system for data originated by devices that use the M-Bus standard protocol (for example, energy meters...). It supports up to 20 counters per cable through an integrated M-Bus port and, with the use of one or several GE552Y050 local concentrators, the data logger can manage up to 250 M-Bus devices, guaranteeing the storage of daily readings for up to 10 years. Through its web interface, it supports meter reading, report generation, consulting readings history, setting up the M-Bus network and managing local I/Os. It is equipped with a graphic display for the setup and the consultation of readings and I/Os status with no need for a PC. Moreover, it is fitted with three digital inputs and two relays on which AND/OR logics and sending emails can be defined.

Characteristics

- **User friendliness:** thanks to the graphic display, it supports the initial start-up of the metering system in few steps guided by a configuration wizard. The main settings can be input locally via the display or a web interface. Equipped with two Ethernet ports with switch functionality, it supports cascading several devices with no need for network equipment; moreover, it can also be supplied via Power over Ethernet (PoE).
- **Always up-to-date:** through the internet connection, the device checks the presence of any upgrades, informing the user who may decide to install them by simply clicking the web interface.
- **Smart:** the user can start the scan of the M-Bus network to enable the acquisition of connected devices via a simple button. The automatic recognition of identified devices supports the immediate start of data acquisition and the automatic connection of reports with pre-defined data sets, which can be modified by the user, including units of measure, type of size and description (in the relevant language), with no need for further actions by the user.

M-BUS communication

- Reference Standard: EN13757-3 (Application Layer)
- Baudrate: min. 300 bps – max. 9,600 bps
- Number of M-bus measure indicators supported: 20 without GE552Y050
250 with GE552Y050
- Reading interval: 15 min / 60 min / 6 hours / 12 hours/ 1 day/ 1 month
- Collision recognition on M-Bus network: yes
- Device research/acquisition: through Primary and Secondary Address

Electrical characteristics

- Power supply: 24 Vdc +/- 10 %, 24 Vac (min 20 Vac, max 40 Vac), as an alternative PoE (IEEE 802.3)
- Installation class: class III
- Maximum consumption: 7,5 W
- Ethernet: No. 2 (1 MAC): ETH1: Ethernet 1(PoE), ETH2: Ethernet 2
- Digital inputs: No. 3 - OFF=Vin<12 Vdc, ON=Vin>12 Vdc, max Vin=24 Vdc
- Digital outputs: No. 2 Relays; Contact rating: 5 A @ 250 Vac (Resistive Load); 5 A @ 30 Vdc (Resistive Load); 2 A @ 250 Vac (cosφ Inductive Load=0,4 ; L/R=7 ms); 2 A @ 30 Vdc (cosφ Inductive Load =0,4 ; L/R=7 ms)
- Auxiliary voltage for digital inputs: 15 Vdc max 10 mA

Mechanical characteristics

- Operating temperature field: -20÷55 °C
- Storage temperature field: -25÷65 °C
- Sizes: 90x71x62 mm (HxLxP) – DIN
- Assembly: 35 mm DIN bar (EN60715)
- Protection degree: IP20 (EN60529)

Data logging

- Data retention: 1 year for intra-day data from cabled measurers; 10 years for daily summary data
- Reports: XLS or CSV format
- Transmission method: SMTP, FTP (Client), Webserver (Report creation and download)
- Report generation planning: Daily/Monthly/Bi-monthly. / Quarterly/Four monthly. / Half-yearly. / Yearly

User interface

- Display: graphic, light, 16 grey scale gradations, multi-lingual
- Keypad: 6 keys tactile membrane
- Led: operation status
- HTTP: multilingual webserver for the data and configuration consultation

Logics/Alarms/Planning

- M-bus network alarm notification: anomalies/meter alarms, communication anomaly, exceeding of thresholds
- I/Os on-board: e-mail notification of digital input status
- Logics: AND/OR based on local I/Os; Exceeding of thresholds (max., min. value, interval, max, consumption)
- Planned actions: activation of local relays, sending of readings reports

GE552Y055 modem router

Description

3G/EDGE/GPRS wireless modem router for remote connection of GE552Y051 data logger.

Characteristics

- Internal 3G/EDGE/GPRS modem with up to 7.2 Mbps downlink and 2 Mbps uplink. No external cards required for 3G connection.
- High speed 54 Mbps 802.11 b/g wireless network. No need to drill holes or run Ethernet cabling to set up your network.
- Advanced secure wireless network with Wi-Fi Protected Access™ (WPA/WPA2).
- 10/100 BASE-T with auto MDIX. No need for crossover cables.

The router is pre-configured to accept telephone TIM telephone SIMs without pin code. It is possible to use WIND as an alternative operator, as long as the router is suitably reconfigured.

We recommend you should use a data sim with a "traffic" contract, rather than a "time" one.

Software GE552Y056

Description

Software for data acquisition from the M-Bus central unit.
To be combined with the GE552Y050 data concentrator.

Additional information

For additional information please check the website: www.giacomini.com or contact the technical service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
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