



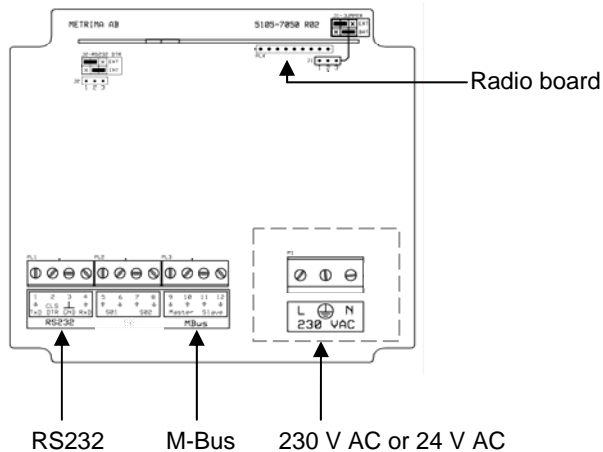
RT01 Radio terminal

Remote reading terminal with M-Bus output

[Data sheet](#)

Product overview

The radio terminal RT01 is designed for use together with M-Bus meters without a built-in radio communication. RT01 is included in a solution built for fixed network, walk-by or drive-by.



Technical data

RF-Communication	
Frequency range	868-870 MHz
RF regulatory standard	Complies with EN 300 220
Transmitter	
Power	3 mW (5 dBm)
Channel space	25kHz (narrowband)
Antenna	
Integrated ¼-wave antenna, alternatively an FME – contact for external antenna.	
Port-Communication	
M-Bus	According to EN1434.
Supported baud rates	300 and 2400bps
Mechanical data	
Ambient temperature	-20°C to +60°C

Supply	
230 V or 24 V AC.	
Port-Communication physical	
RS232 or M-Bus 3 slave-loads	
Mechanical data	
Protection class	IP66

Functionality

RT01 operates as an M-Bus-master for radio networks, where meters (slave nodes) are connected by cable, for M-Bus or RS232 communication. The RT01 can handle M-Bus nodes for heat, electricity and water from a wide range of suppliers. All M-Bus nodes must comply with the standard EN-1434.

The RT01 M-Bus master can handle up to three slave nodes connected directly to the M-Bus input. It is also possible to connect up to 60 slave nodes via an external M-Bus master, e.g. a PW60 or an AD-01 to the RS232 input.

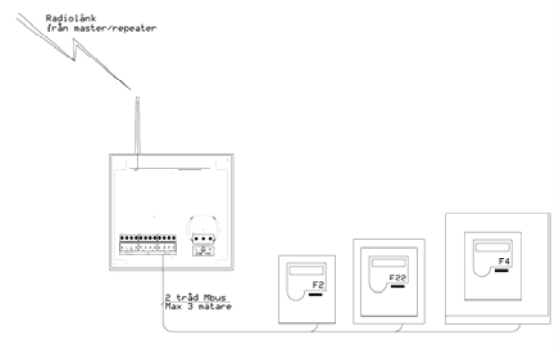
The M-Bus communication between the RT01 and the supervising system (MCom3) is handled automatically and uses 300 or 2400 baud. The RT01 performs a search for connected nodes and stores them locally.

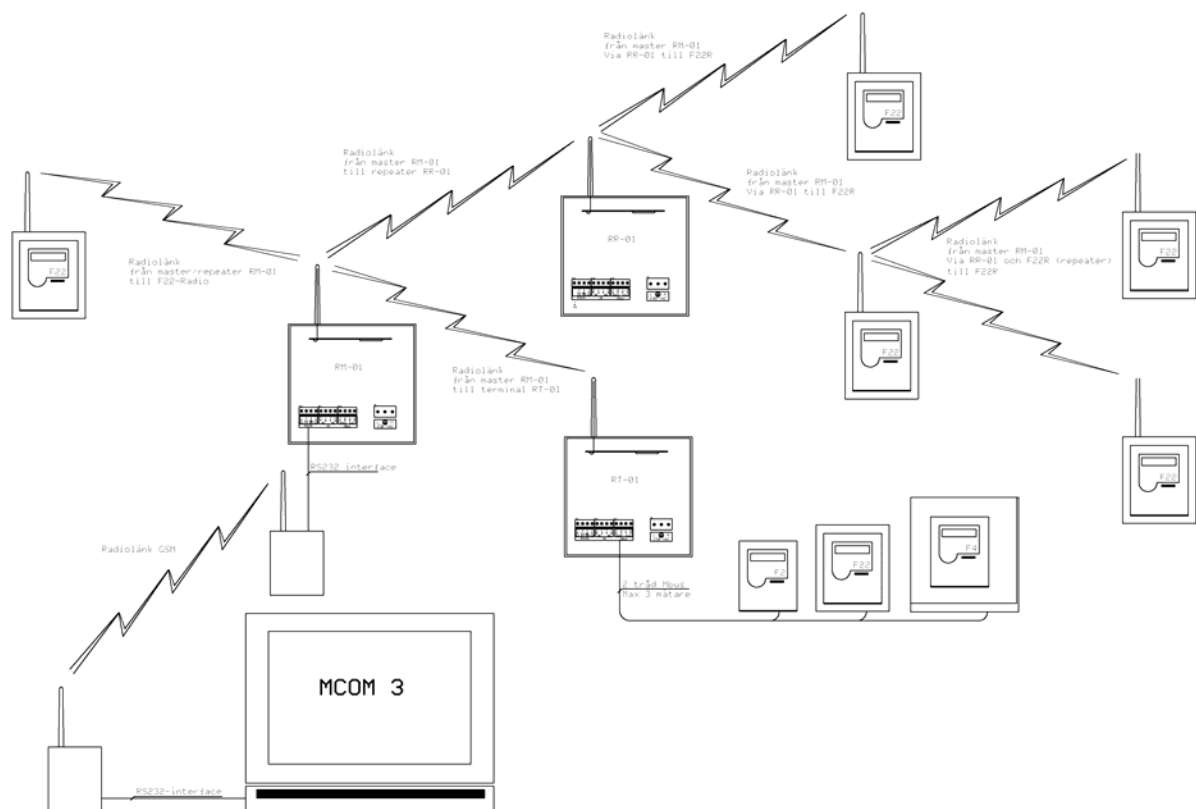
Settings

All settings, e.g. power supply and frequency, are factory-made according to the order requirements, cf. the Article number key.

Applications

The RT01 may be connected to energy meters through the M-Bus connection, or to an external M-Bus master through the RS232 connection.





System description of Radio network

A radio network is designed for transmitting meter data via radio, and consists of a number of radio nodes. The heat meter F22 with a Radio board RK01, radio terminal RT01 and radio repeater RR01 are connected to a radio master RM01, operating as an access point / media converter.

The fixed network is accomplished by using the radio as a repeater to reach further than the maximum radio range. Every single radio unit (node) can act as a repeater in the network to reach other nodes. The maximum repeating depth is 10 steps. The routing path is dynamic and is set from the supervision system (MCom3). The radio network can easily be implemented into MCom3 R3.

The network is transparent for M-Bus communication and handles standard M-Bus questions. All M-Bus protocols are available over the radio network.

The network is configured in the same way that it would be for twisted-pair communication, i.e. the meter's M-Bus address (secondary-address), is programmed in the central system. The M-Bus request is sent via the connection / transport media that the network is offering. As a transport media to and from the radio master RM01, it is possible to use Telephone modem, GSM, GPRS, TCP/IP, Radio or other communication solutions.

The radio nodes have a range from 50 up to 300 meters or more, depending on the surroundings and the physical obstacles (walls, etc.) between the radio master and the nodes. The radio nodes may be equipped with either a built-in antenna or an external antenna via a standard FME-contact.

Radio terminal RT01

RT-ABCDE-FGH

A	1	Radio board for Radio terminal	
B	A	System (point to multipoint)	
C	1	Standard	
D	3	Mains supply 230 V AC	
D	5	Mains supply 24 V AC	
E	2	Built in antenna	
E	3	FME contact for external antenna	
FGH	A13	868,3125 MHz	Standard frequency
FGH	A14	868,3375 MHz	
FGH	A15	868,3625 MHz	
FGH	A16	868,3875 MHz	
FGH	A17	868,4125 MHz	
FGH	A18	868,4375 MHz	
FGH	A19	868,4625 MHz	
FGH	A20	868,4875 MHz	
FGH	A21	868,1250 MHz	
FGH	A22	868,5375 MHz	
FGH	A23	868,5625 MHz	
FGH	A24	868,5875 MHz	

Article number key for Radio terminal RT01

Fill in the blanks to obtain the applicable article number.

			A	B	C	D	E		FGH
R	T	-	1	A	1			-	

Accessories

- RA-TOOL1 Special tool for changing the antenna
- RA-ADAPT-FME FME-contact for external antenna (spare part)
- 5102-7705-01 Antenna cover for F22 (spare part)



Metrima AB

Norra Stationsgatan 93
113 64 Stockholm
Tel: 08 23 60 30 Fax: 08 23 60 31

www.metrima.se
info@metrima.se

6-08-02E
070111/MC