

MR03 HIGH POWER RADIO TRANSMISSION MODULE

FEATURES:

- ISM
- IP 54
- Transmitter power
- 869 MHz

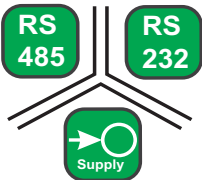
INPUTS:

- ISM

OUTPUTS:

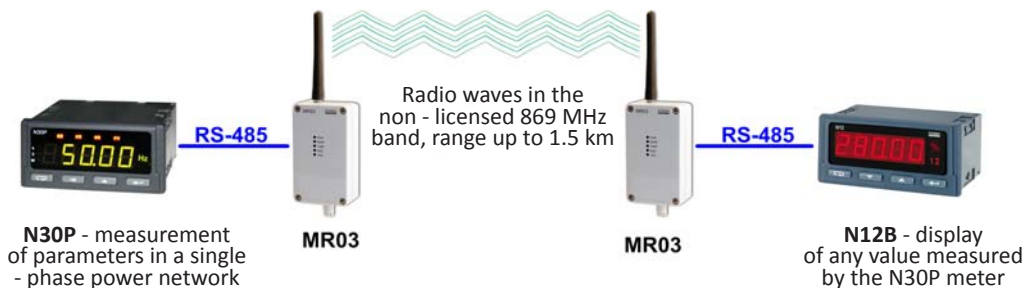
- RS 232
- RS 485

GALVANIC ISOLATION:



- Destined for data transmission through radio way in the non-licensed band: 869.4 - 869.65 MHz
- Co-operates with RS-485 and RS-232 interfaces
- Output power: 500 mW
- Finds application in telemetering systems in which there is no technical possibilities to conduct wires for device connections in the shape of a wire network
- Operating range of the MR03 module: 1.5 km, on average (depending on the terrain configuration and applied antenna)
- Available working modes allow individual communication of MR03 module pairs ("point-to-point" mode) and broadcast communication ("point-to-many points" mode).

EXAMPLE OF APPLICATION



DIGITAL INTERFACES

Port	Properties	
Port 1 - RS-232 interface	Modes:	8N1, 8N2, 8E1, 8O1, 7E1, 7O1
	Baud rate:	4800...11520 bit/s
Port 2 - RS-485 interface	Modes:	8N1, 8N2, 8E1, 8O1, 7E1, 7O1
	Baud rate:	4800...11520 bit/s
Radio line	Carrier frequency:	869.4 – 869.65 MHz
	Power:	500 mW
	Receiver sensitivity:	>-103 dBm
	Baud rate:	4800 bit/s
	Transmission range in a straight line:	1500 m
	Number of channels:	5
	Antenna output:	50 Ω SMA

RATED OPERATING CONDITIONS

Supply voltage	8..30 V a.c./d.c.	Input power : ≤ 5VA
Temperature	ambient: 0..23..50°C	Storage: -20..70 °C
Relative humidity	< 95%	Inadmissible condensation
Operating position	any	
Maximum time to delay the transmission through a pair of MR03 modules	≤ 1.5 sec	
Time to obtain the readiness to work since the supply switching on	≤ 2 sec	

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EXTERNAL FEATURES

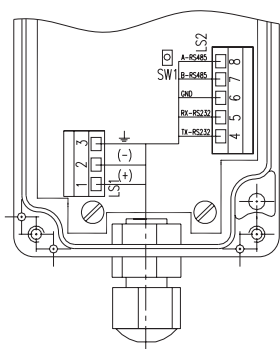
Overall dimensions	115 x 65 x 40 mm	
Weight	< 0.4 kg	
Protection grade	housing: IP54	leads: IP54
Fixing	to fix on a wall	Industrial housing

SAFETY AND COMPATIBILITY REQUIREMENTS

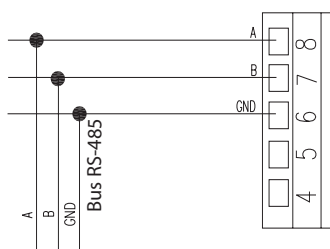
Electromagnetic compatibility	Noise immunity	acc. to EN 61000-6-2
	Fastness against supply decays	acc. to EN 61000-6-2
	Emission of radio electric perturbations	acc. to EN 61000-6-4
Pollution level	2	acc. to EN 61010-1
Installation category	III	
Maximum phase-to-earth operating voltage	Supply: 300 V, input 50 V, Output: 50 V	

CONNECTION DIAGRAMS

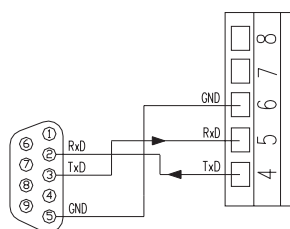
Description of MR03 leads



Way to connect the MR03 module to the RS-485 bus



Way to connect the MR03 module to the RS-232 bus



Terminal	Terminal description
1	Tightening line (+ to supply by d.c.current)
2	Tightening line (+ to supply by d.c.current)
3	Functional earthing line (supply by d.c.current)
4	TxD line for RS-232 interface
5	RxD line for RS-232 interface
6	GND line of RS-232/RS-485 interface
7	B line of RS-485 interface
8	A line of RS-485 interface

ORDERING

Radio transmission module - MR03	XX	X
Version:		
standard	00	
custom-made *	XX	
Acceptance tests:		
without additional quality inspection requirements		8
with an extra quality inspection certificate		7
acc.to customers request *		X

* after agreeing with the manufacturer

Ordering example:

The code **MR03 - 00 7** means:

MR03 - module of MR03 type

00 - standard version

7 - with an extra quality inspection certificate

SEE ALSO:



Input and output modules of SM series



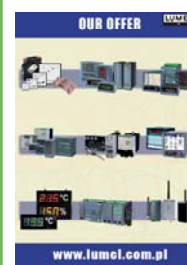
SM9 - feeder module



SM7 - radio transmission module



LUMEL - Proces software



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