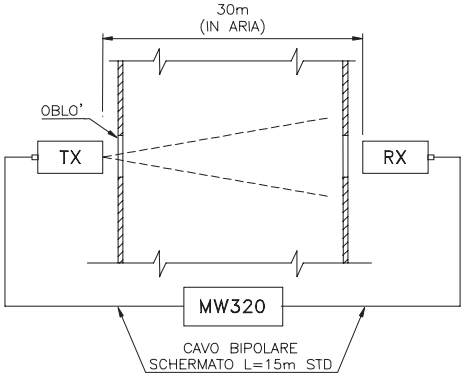
MW-320
Microwave level control

MW-320 - Block diagram



MW-320 - Atex II 3D Ex tD A22 IP66 T80°C

Coding
Example: **MW-320 C 1 1 1 5**

Controllo a Microonde	
Esecuzione:	**A** = solo elettronica **B** = custodia standard **C** = Custodia Ex II 3D
Ricevitore:	**0** = senza **1** = MR-801 **2** = MR-851
Trasmettitore:	**0** = senza **1** = MT-801 **2** = MT-851
Lunghezza cavi:	**XX** = Lunghezza in m

The MW-320 is a one-point ON/OFF level control. It can be used as level control or object detection. The equipment 'sees' through a window that is transparent to microwaves. This is very useful in applications with aggressive materials or high-temperature products, as sensors are not in direct contact with the material to be controlled.

Functioning

The MW-320 level control is a non-contact microwave-based system. The transmitter consists of a power supply, a pulse modulator, a Gunn oscillator and a directional antenna.
The receiver consists of a directional antenna, a microwave cavity with a Schottky diode detector, a low-noise, high-gain amplifier and a final relay drive circuit.

Typical applications

Controlling liquids or solids on tanks, hoppers or hoists are typical applications. On fibreglass tanks there is minimal microwave leakage. The microwave sensors are mounted diametrically opposite each other on the outside of the tank. Microwave leakage through the tank walls and product vapours are minimal. When the product reaches the control point, the signal is significantly attenuated, causing the output relay to switch.
Metal tanks or hoppers must have a transparent 'window' to the microwave signal.
A 75÷100mm porthole can be used on liquid storage tanks. The porthole material must be compatible with: the pressure inside the tank, product temperature and chemical properties of the product.
For solid storage tanks, the 'window' must be made of material compatible with the product contained in the tank.

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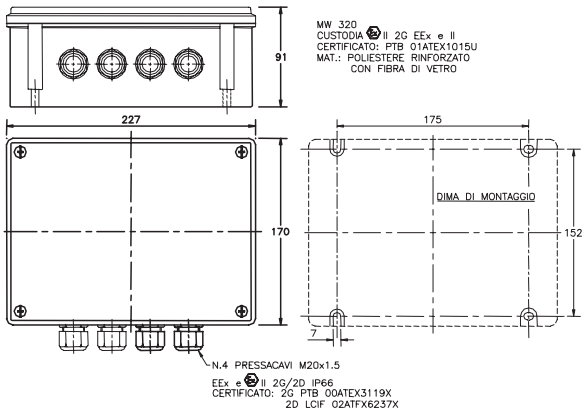
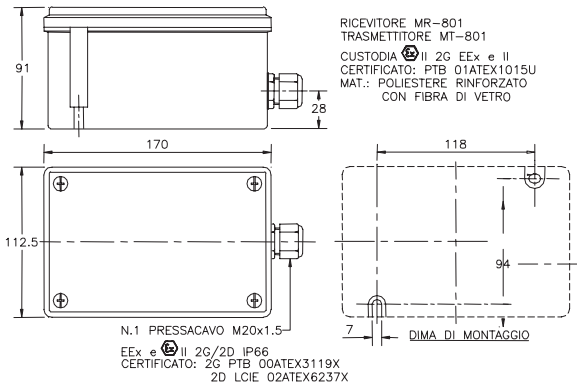
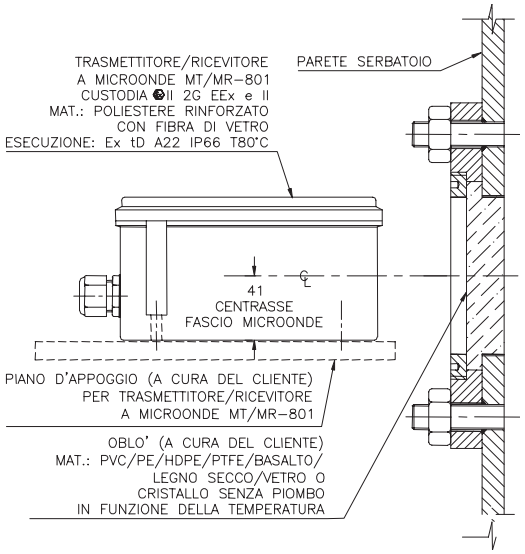
Electronic enclosure dimensions



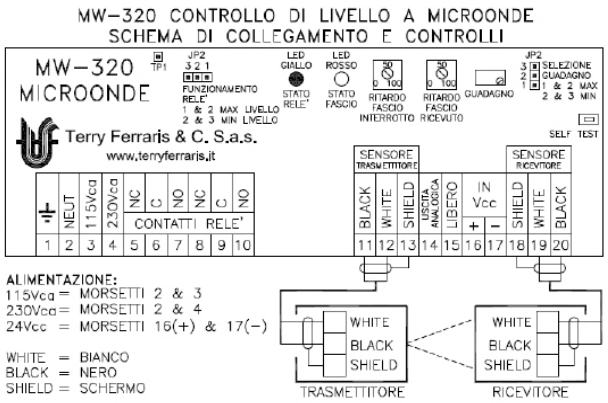
Dimensions transmitter/receiver enclosure



Typical installation



Wiring diagram



Technical specifications

Power supply	Rated: 115Vca - 230Vca - 24Vcc Absolute limits: 95÷135Vca - 190÷270Vca - 20÷26Vcc
Frequency	50÷60Hz (45Hz minimum)
Consumption	5VA
Relay	N.1 DPDT; 5A @ 120Vac, resistive load; 3A @ 240Vac, resistive load; 3A @ 24Vdc, resistive load
Delay time	N.2 independent with Auto Reset on interrupted beam or received beam
Delay time field	Minimum: 50msec; Maximum: 30 seconds; Nominal: 10 seconds
Safety	Selectable via Max Level or Min Level jumper
Operating temperature	-40 ÷ +70°C
Maximum cable length	PVC: 305m; Teflon: 91m
Sensor mounting	MT/MR-801: Support bracket*; MT/MR-851: 2 ½"NPT
Sensor working range	Min: 15cm; Max. sensor distance in air: 30m; Max: 15m depending on the materials used for the cassette and porthole; Max. distance Exec. ATEX: </=1.9m
Protection rating	IP65; IP66 on request
Protection mode on request	ATEX II 3D; Ex tD A22 IP66 T80°C

**To be provided by the Customer*

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