

INDUSTRY Range

Monoblock reader

MOF100 M232 1301

www.balogh-rfid.com

GENERAL FEATURES

Read/Write Mono-Block allowing to exchange data with RFID tags at 13.56MHz :

- TAI compliant with the standards ISO 18000-3 mode 1 & ISO 15693
- BALOGH TAM (ISO 15693 and 52Kb BALOGH protocol)

The mono-block has :

- a RFID module (electronic + antenna)
- RS232 serial module that exchanges data in Modbus RTU ®

MOF100 could be configured using :

- MO Manager PC utility (connected in RS232 for the configuration)
- TAM Master TAG

The R/W Mono-Block meets the food processing requirements:

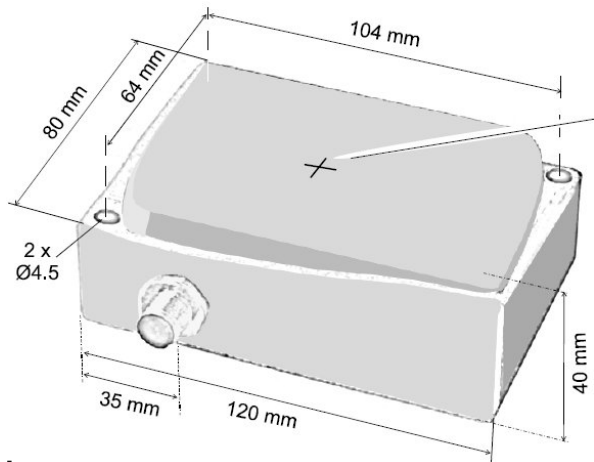
- housing quality white polypropylene fiber reinforced food 30%
- connector IP69K stainless steel
- Stainless steel fastener insert
- To prevent food contamination the case identifier is engraved



MOF reader can be used directly by a Supervisor via Modbus RTU ® protocol.

MOF can also be a slave to Balogh Interface Concentrators : BRMO 80.

ASSEMBLY



transmission
zone centre

Assembly using 2 screws
length under head \geq 35 mm
(right-angled distances: 104 x 64 mm)

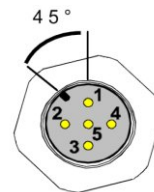
CONNECTION

MOF100 M232 1301 is fitted with a 5 pin M12 metallic male socket in accordance with food requirement.

Use a corresponding female cable connector(A-coded) and a shielded cable with the following characteristics:

- max length : 50m,
- overall max. capacity between conductors and the shield :10nF.

The shield must be in contact to the cable connector housing 360° round crimping.



Pin Nr	Description
1	+24 Vdc
2	Tx
3	Rx
4	0 V
5	0 V

CHARACTERISTICS

MOF100 M232 1301	TAG (data carrier)		
	TAI20 IC SLI	TAI30 IC SLI	TAI50 IC SLI
S _n nominal range	75	130	160
S _r recommended range	45	80	95
LS _r length of transmission zone @ Sr	55	105	130
D _{tt} distance between tags end to end @ Sr	180	240	320
D _{er} distance between transceivers end to end @ Sr	110	190	250
D _{ef} distance between transceivers face to face @ Sr	110	190	250
	TAG (data carrier)		
	TAI20 2K FRAM	TAI30 2K FRAM	TAI50 2K FRAM
S _n nominal range	70	90	150
S _r recommended range	40	55	90
LS _r length of transmission zone @ Sr	50	70	115
D _{tt} distance between tags end to end @ Sr	180	220	320
D _{er} distance between transceivers end to end @ Sr	110	140	220
D _{ef} distance between transceivers face to face @ Sr	110	140	220
	TAG (data carrier)		
	TAI711	TAI56	TAM931 2K or 8K
S _n nominal range	125	200	85
S _r recommended range	75	120	50
LS _r length of transmission zone @ Sr	100	140	65
D _{tt} distance between tags end to end @ Sr	240	380	240
D _{er} distance between transceivers end to end @ Sr	190	360	150
D _{ef} distance between transceivers face to face @ Sr	190	360	150

All distances are in millimeters (mm)

* See **Assembly recommendations** chapter (page 3) to have distance description

min	nominal	max	unit
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Power

Supply direct voltage (ripple included)	21	24	29	V
Protection against polarity reversal	yes			-
Supply current @ 24V	90			mA

Electronic

Protection against short-circuits	yes			-
Carrier frequency	13,56			MHz

General

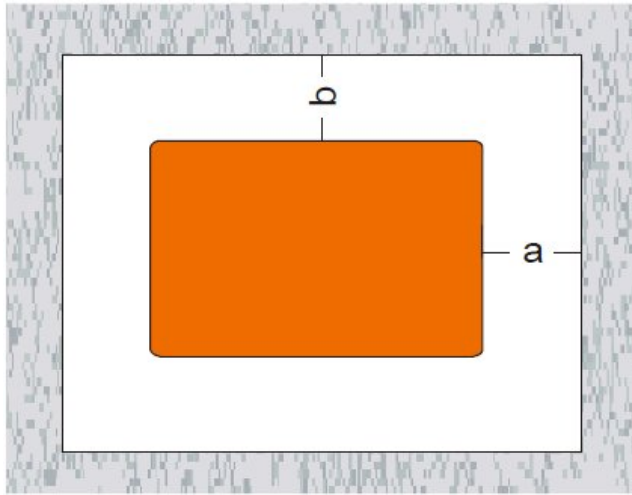
Casing	Polypropylene fiber reinforced food 30%			-
Operating temperature	- 25		70	°C
Protection rating	IP69K			-
Weight	550			g

ASSEMBLY RECOMMENDATIONS

- The reader is not to be mounted directly in a recessed metal cavity. A minimum metal-free clearance is required round the reader :

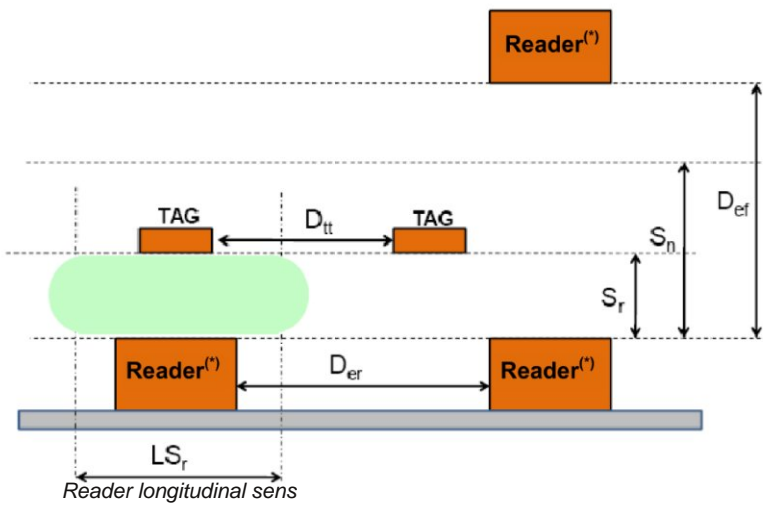
$a \geq 30 \text{ mm}$

$b \geq 30 \text{ mm}$



- **Important:**

To avoid interference between two MOF100, there must be a minimum space (D_{er}) between them (refer to the above table).



S_n	Nominal range
S_r	Recommended range
LS_r	Length of transmission zone @ S_r
D_{tt}	Distance between tags end to end
D_{er}	Distance between transceivers end to end
D_{ef}	Distance between transceivers face to face
(*)	Header or reader

Transmission zone style
(the actual outline depends on the reader)

ACCESSORY

Cable Shielded 5 meters Pur, ref CDR5PM12/5M PUR.