

RAILWAYS Range

Beacon

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OMR201 OMR201 1320

DESCRIPTION

Read only reprogrammable electronic beacon :

- Memory capability: 2 bytes (standard) or up to 512bits.
- No battery.
- Remote powering.
- Remote reading.
- General environment conditions according to EN 50125-3.
- Railways applications.

It must be written and read by other programming tool : LPP1712 OMR or LPP1712 1354 OMR81C.



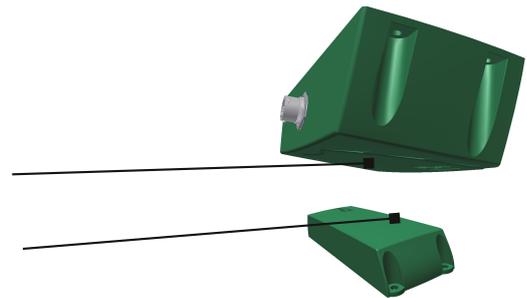
FUNCTIONAL DATA

Beacons OMR 201 (OMR201 1320) must be secured on sleeper between the rail in the transverse direction and reader MOL 81 mounted under the train in the transverse direction. Beacon OMR201 must be mounted without metal and OMR201 1320 with a metallic plate.

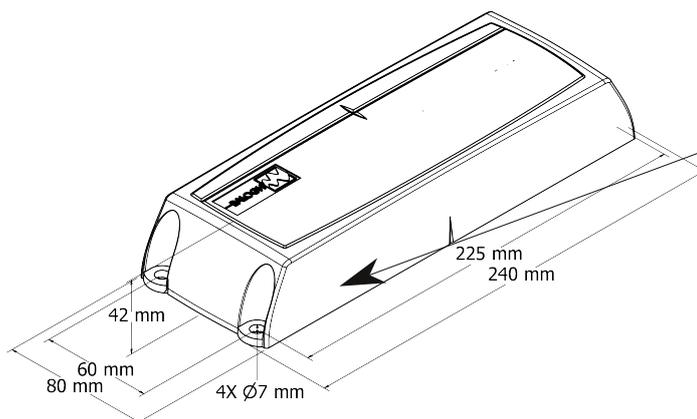
The distance between the higher face of the beacon and the lower face of the reader lies between 100mm and typically 700mm.

MOL81
lower face

OMR201
higher face



DIMENSIONS



Marking:

Part number identification :
OMR201 or OMR201 1320

Serial number identification :
yywwxxxxx-nnn-v
yy = year
ww=week
xxxxxx= manufacturing order
nnn=serial number
v=revision index

TECHNICAL SPECIFICATIONS

	Min.	Typ	Max.	Unit
Radio frequency communication				
Carrier frequency		6,78		MHz
Reading range with MOL81 reader	refer to reader specifications to recommend reading range			-

Memory

Technology	EEPROM			
Memory capacity		16	512	bits
Data rate		31,25		kbits/s
Time delay before availability (start-up time)			5	ms
Number of reading	Unlimited			
Data retention	40	200		years

Environment

Operating temperature	-25 ⁽¹⁾		+70 ⁽²⁾	°C
Storage temperature	-40		+85	°C
Electromagnetic compatibility (EMC)	EN 50121-4			-
Radiofrequency	EN 300330			-
Human exposure	EN 50364			-
Electrical safety	EN 60950			-
Shocks and vibrations mounting on sleeper	EN 50125-3			-
Fire and smoke	EN 45545 : R23 / HL2			-
Ingress protection rating	EN 60529 : IP67			-
Temperature cold test - dry heat test	EN 60068-2-1 & EN 60068-2-2			-
Temperature damp heat test EN 60068-2-30	+55°C			-
Humidity EN 50125-3	95%			-
Altitude air pressure : EN 50125-3	1 200			m
Solar radiation EN 50125-3	1 120			W/m ²
Rapid temperature variations	EN 60068-2-14 : -25°C to +85°C			-
Low temperature storage	EN 60068-2-1 : -40 °C			-
Guarantee of operation under water	Test under 200			mm
Guarantee of operation under ice	Test under 100			mm
Guarantee of operation under stones of ballast	Test under 100			mm
Guarantee of operation under mud	Test under 50			mm
Guarantee of operation under snow : fresh snow or sleet	Test under 150			mm
RoHS European directive 2011/65/EU and REACH European directive n°1907/2006	Compliant			-
RED European directive 2014/53/UE	Compliant			-

(1) : high derating of the reading range at -40°C

(2) : including the possible effects of altitude and solar radiation

RAMS features

MTBF according to IEC62380 (informative data)	fixed installation : 10x10 ⁶	h
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TECHNICAL SPECIFICATIONS

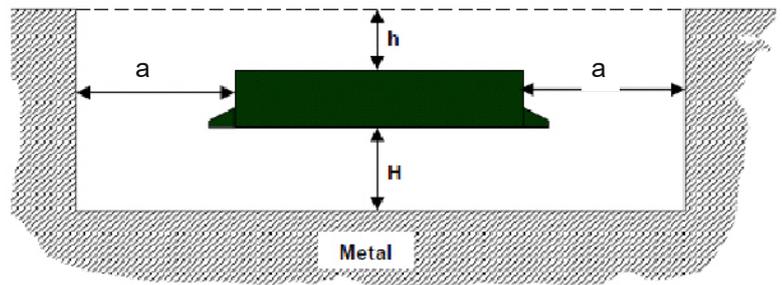
Enclosure

Material	PA6	
Weight	1 200	g
Coating	PU	
Recommended tightening torque (4 screws)	5	N.m

MOUNTING SPECIFICATIONS

Standard metal environment :

	OMR201	OMR201 1320
h	0	0
H	>10 cm	0
a	>10 cm	>10 cm



- OMR201 beacon must be fixed without metal, at least 10 cm around the beacon.
OMR201 1320 beacon must be fixed on metallic plate exceeding at least 10 cm all the beacon sides
- Non standard metal environment: see application note n°1405.
- Fixing : Fixing will be carried out by 4 screws (not provided).
- Important:
 - Minimum distance between two beacons on flat ground : recommended 2 m, minimum 1,8m.
 - 2 beacons in the field of one reader could be not read.

ACCESSORIES (to order separately)

- Tool for maintenance of the electronic beacon ref: LPP1712 OMR.