

# RadioBeacon

RB-LED SS Series

## PRODUCT OVERVIEW

The RadioBeacon from Mimes gives the power of IoT to the field beacons, enabling beacons to only require local power. This gives you SIL capable beacon with no IO restrictions. Cyber security designed in from the core with 128bit AES encryption. The RB-LED utilises an array of high power Cree® LED's, orientated to optimise visibility in any direction, with robust IP66 corrosion proof 316L stainless steel enclosure. This makes the RadioBeacon suitable for all Zone 1, 2, 21 & 22 local signalling applications.

The RadioBeacon produces a high output LED flash required for effective signalling in environments with elevated levels of ambient light. The field replaceable colour filter enhances the strobe and is constructed from UV stable PC. The integrated ISA100 wireless I/O allows for efficient installation and is SIL1 and SIL2 compliant.



 **ISA100**Wireless

## APPROVALS

IEC
IECEX ULD 16.0017X
IEC 60079 - 0 : 2011
IEC 60079 - 1 : 2014
IEC 60079 - 31 : 2013
TR-CU Ex EAC certificate: RU C-GB. AA71.B.00109
SIL1 compliant to IEC 61508 (2010)
SIL2 compliant to IEC 61508 (2010)
ATEX
ATEX DEMKO 16 ATEX 1466X
EN 60079 - 0 : 2012 + A11 : 2013
EN 60079 - 1 : 2014
EN 60079 - 31 : 2014

## CODING

### Beacon:

Ex db IIC Gb T6 Ta -50°C to +40°C
Ex db IIC Gb T5 Ta -50°C to +55°C
Ex db IIC Gb T4 Ta -50°C to +70°C
Ex tb IIC Db T110°C Ta -50°C to +70°C

### Antenna:

Ex eb IIC T4 Gb T.amb -20°C til +70°C
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FEATURE	BENEFIT
<ul style="list-style-type: none"> <li>Universal usage globally with the use of ISA100 industrial communication</li> </ul>	<p>Guaranteed interoperability with other vendor's field instruments and infrastructure</p>
<ul style="list-style-type: none"> <li>The first wireless Beacon on the market that will be Exd certified and SIL capable.</li> </ul>	<p>Can be connected to 24v dc Ups power and activated via your ISA100 network</p>
<ul style="list-style-type: none"> <li>Bluetooth or over the air configuration</li> </ul>	<p>Fast and flexible provisioning of equipment. Efficient software and configuration upgrades</p>
<ul style="list-style-type: none"> <li>The RadioBeacon gives ISA100.11a communication with SIL capabilities</li> </ul>	<p>Can be used directly with any site that has ISA100 industrial network installed. Communication from system can be Modbus, or Profinet/Profisafe</p>
<ul style="list-style-type: none"> <li>Corrosion proof 316L stainless steel enclosure</li> </ul>	<p>Full environmental protection</p>
<ul style="list-style-type: none"> <li>High output array of 4 x High Power Cree® LED's</li> </ul>	<p>Optimal coverage and range</p>
<ul style="list-style-type: none"> <li>Choice of three flash rates</li> </ul>	<p>1Hz , 1.5Hz, 2Hz, Double strike flash, Triple strike flash, High Power Steady and Low Power Steady modes</p>
<ul style="list-style-type: none"> <li>Covers all applications from Industry, windfarms to oil fields</li> </ul>	<p>Tested towards industrial standards</p>
<ul style="list-style-type: none"> <li>Ex e antenna</li> </ul>	<p>Easy customizable antenna solutions suitable for any applications</p>

## PARTCODES

Version:	Partcode:	
Product type	RB	
Type	LED	LED Beacon
Safety	I	Industrial/standard
	S1	SIL1
	S2	SIL2
Enclosure	E01	GRP
	E02	Stainless Steel
	E02	Aluminium
Plug material	N	Nickel Plated
	S	Stainless Steel
Equipment tag	1	Label tag
	2	SS Equipment tag
Enclosure colour	R	Red
	S	Special (contact Mimes)
Lens colour	A	Amber
	B	Blue
	C	Clear
	G	Green
	M	Magenta
	R	Red
	Y	Yellow
Antenna	A	Standard mounted on enclosure
	A1	Custom cable length up to 10m
	N	No antenna

## NETWORK AND COMMUNICATIONS

ISA 100.11a	ISM 2475 – 2400 MHz
Encryption	128 - Bit AES
Network modes	STAR/MESH/STARMESH
Latency	10 msec to 1 minute
Line of sight RF range	EX 500m and Non Ex 2000m
Antenna:	Omnidirectional antenna with 2.4 GHZ, band
Configuration and software	Bluetooth v4.2 (pending) or serial port
Communication	ISA100, ProfiSafe, HART
External communication	Modbus, OPC UA, ProfiNet/Safe

## SPECIFICATION

**Source:** Array of 4 x High Power Cree® LED's

**Modes:** 1Hz flash (60 fpm) 1.5Hz flash (90 fpm) 2Hz flash (120 fpm) Double strike flash Triple strike flash High Power Steady Low Power Steady

**Eff. Intensity cd:** 500 cd – calculated from energy (J)

**Eff. Intensity cd:** 174 cd – High Power Steady

**Voltages DC:** 24v dc

**Inrush:** 1890mA within 0.22ms

**Ingress protection:** EN60529:IP66/67 Type rating per UL50E NEMA250:4/4X/3R/13

**LED life:** 60,000 hours+

**Enclosure material:** 316L Stainless Steel

**Enclosure finish:** Chromated & powder coated

**Lens guard:** 316 Stainless Steel

**Colour:** Red (RAL3000)

**Cable entries:** 4 x M20 x 1.5mm (2 x stopping plugs included as standard)

**Terminals:** 0.5 – 2.5mm<sup>2</sup> (20-14 AWG)

**Enclosure volume:** <2 litres

**Wireless interface:** ISA100

**Tube life:** Emissions are reduced to 70% after 5 million flashes

**Grounding stud:** M5

**Operating temp:** -20 to +70°C [-0° to +158°F]

**Relative humidity:** 95%

**Weight:** 6.0kg/13.23lbs

\*All candela data is representative of performance with Clear lens at optimum voltage.

## CURRENT CONSUMPTION

Nominal Voltage:	Voltage Range:	Steady High Power Nominal Current:	Steady Low Power Nominal Current:	Flashing 1Hz Nominal Current:	Max. Current:	In-rush:
24Vdc	20-30Vdc	240mA	134mA	110mA	500mA	1890mA <0.22ms

