

Leica PA10

Personal Alert

Data sheet



Awareness

PA10 is a proximity detection system to provide information about pedestrians around vehicles and machines on a heavy construction site. PA10 creates awareness for operators and pedestrians about their surroundings.



Alert signals

Signal propagation time is measured between **anchors** installed inside machines/vehicles and battery-powered tags worn by pedestrians. The PA tag provides **audio, visual** and **haptic** feedback to the pedestrian and the anchor provides visual and audible feedback to the machine operator or driver.



Long range

PA10 is based on the latest Ultra-Wideband (UWB) time-on-flight technology that provides ranges up to 40 m with +/- 20 cm accuracy without separate RF link. It provides situational awareness and reliable alerts even under roof and close spaces where GNSS coverage is limited or unavailable (e.g. workshop, quarries).



Scalability

PA10 can be used for all machines and vehicles on a heavy construction site. The system provides three configurable alert distances around the machine or vehicle. PA10 is scalable from a single anchor up to 7 anchors on the vehicle.

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ENVIRONMENTAL DATA	PERSONAL TAG	VEHICLE ANCHOR
Water/Dust rating	IP64 (acc. to IEC60529)	IP67 (acc. to IEC60529)
Operation temperature	-20° - 50°C	-40° - 85°C
Storage temperature	-20° - 60°C	-40° - 85°C
Charging temperature	5° - 40°C	
Humidity	0-95% RH non-condensing	
Vibration	-	IEC 60068-2-6 5-500 Hz, 5 g, ±15 mm MIL-STD-810G_CHG-1 Fig. 514.7E-1, Category.24
Shock	-	IEC 60068-2-27 60 g - 6 msec
Drops	1.6 m on hard surfaces	Withstands 1 m onto hard surfaces
MECHANICAL DATA		
Weight	84 g	170 g
Dimensions	74 x 14 x 86 mm (LxWxH)	151 x 81 x 45 mm
Material	Polycarbonate	Polycarbonate
Colour	Yellow/translucent	Black
Surface treatment	Matt finish	Matt finish
COMPLIANCE		
CE	2014/53/EU RED	2014/53/EU RED
RoHs	2011/65/EU	2011/65/EU
WEEE	2012/19/EU	2012/19/EU
STANDARDS		
EMC	ETSI EN 301 489-1 V2.2.0 ETSI EN 301 489-1 V2.2.0 Safety: IEC 62368-1 204 (2. Edition) & cor. 1 2015 EN62368-1:2014/AC 2015/A11:2017	ETSI EN 302 065-2 ETSI EN301 489-1 V2.2.0 FCC in not tested yet) ISO7637-2:2004 ISO7637-2:2011 ISO16750-2012 EN 301 489-33 V2.2.0
Machinery	EN/ISO 12100:2010	EN/ISO 12100:2010
ELECTRICAL		
Antenna pattern	Omnidirectional	Omnidirectional
Battery	Lithium polymere, 1000 mAh 12 h use time	
Voltage range	5 Vdc (4.6...6V)	9-36 VDC
Current consumption	400mA @ 5Vdc @charging	40 mA @ 24VDC
Interface	Exposed pads RS232	4 pin M12 male connector CAN



ENVIRONMENTAL DATA	GANG CHARGER	MAIN UNIT
Water/Dust rating	IP10 (acc. to IEC60529)	IP54 (acc. to IEC60529)
Operation temperature	-20° - 50°C	-40° - 85°C
Storage temperature	-20° - 60°C	-40° - 85°C
Charging temperature	5° - 40°C	
Humidity	0-95% RH non-condensing	95%, non-condensing
Shock	-	
Drops	1.6 m on ard surfaces	
MECHANICAL DATA		
Weight	1.8 kg	260 g
Dimensions	455 x 87 x 108 mm (LxWxH)	81 x 30 x126 mm
Material	ABS	Black anodised aluminium
Colour	Dark grey	Black
Surface treatment	Matt finish	Matt finish
MECHANICAL DATA		
Physical interface	Serial	
COMPLIANCE		
CE	2014/30/EU EMC	2014/53/EU RED
WEEE	2012/19/EU	2012/19/EU
RoHs	2011/65/EU	2011/65/EU
STANDARDS		
EMC	EN 55032:2012 EN 55024:2010	IEC 62368-1: 2014 (2.Edition) and Cor. 1: 2015 EN 62368-1: 2014/AC: 2015/A11: 2017 EN 50665:2017 EN 62311 EN 301 489-1 V2.2.0 EN 301 489-3 V2.1.1 EN 13309 ISO 13766 ISO 14982 EN 301 511 V12.5.1 EN 301 908-1 V11.1.1 EN 300 220-1 V3.1.1 EN 300 220-2 V3.1.1
Machinery	EN/ISO 1210	EN/ISO 1210
ELECTRICAL		
Voltage range	5 Vdc (4.6...6V)	12-28 VDC
Current consumption	400mA @ 5Vdc @ 1 tag charging	< 100 mA @ 24VDC
Interface	Exposed pads 3.5 mm phone-jack 2.1/5.5 mm power-jack	4 pin M12 male connector

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