



General Description	
Technology	3D stereo vision / Edge computing with artificial intelligence (AI)
Environment	Transportation (train, bus, tram, metro, ferry, cable car)
Data storage	up to 500 days (depending on the number of counters)
Data privacy	4 privacy modes / data is only transmitted in text format and without any kind of personally identifiable information
Integration	API with Swagger documentation, data pushes, remote device management tool, count verification tool on-device
Housing	Waterproof and rugged aluminum housing, glass covered lenses and industrial M12 connectors.

Note: This datasheet applies only to PCT1-POE and PCT1-ASP product revisions RevAC and above.

Electrical Characteristics	
Power supply	<p>PCT1-POE:</p> <ul style="list-style-type: none"> (J1) Power over Ethernet, Class 0 IEEE 802.3af, Mode A, nominal 48 V galvanically isolated <p>PCT1-ASP:</p> <ul style="list-style-type: none"> (J1) Power over Ethernet, Class 0 IEEE 802.3af, Mode A, nominal 48 V galvanically isolated (J2) Auxiliary supply 12...36 VDC, -20% / +25%, protected against reverse polarity 10ms interruption bridging
Power consumption	Maximum 6.0 W, 0.125 A (PoE), 0.5 A (12V AUX)

Environmental Conditions	
Required illumination	Minimum 10 lux
Operating temperature	-25 °C to +70 °C / -13 °F to +158 °F
Storage temperature	-40 °C to +70 °C / -40 °F to +158 °F
Relative humidity	0 to 95% (non-condensing)
Pollution degree	PD4 (acc. to IEC 62368)
Salt mist	48 h acc. EN 60068-2-11
Ingress protection	IP65 (acc. to IEC 60529)
Impact protection	IK06 (acc. to EN 62262)
Shelf life	12 months

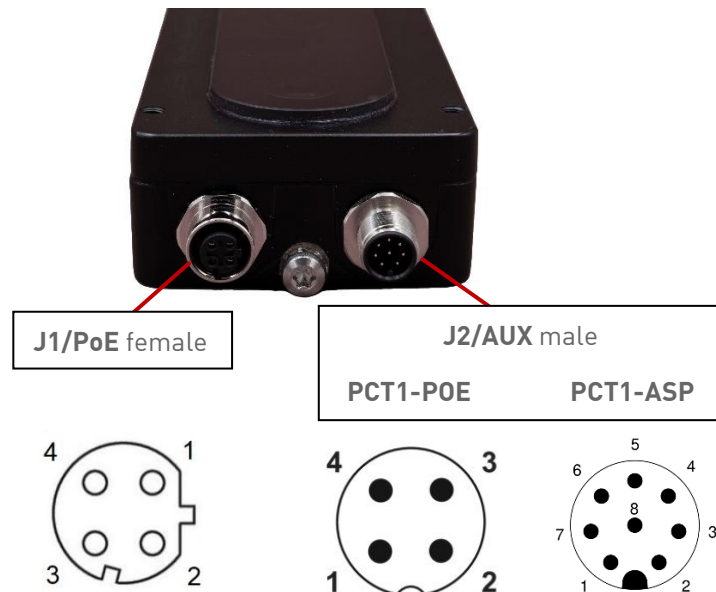
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Physical Interfaces	
Ethernet	IEEE 802.3u 10/100Base-TX (Fast Ethernet)
Connector J1/PoE	M12 D-coded 4 pol female: acc. Standard (IEC 61076-2-101) for Ethernet and PoE
Connector J2/AUX	<p>PCT1-POE:</p> <ul style="list-style-type: none"> M12 A-coded 4 pol male: Digital input galvanically isolated, minimal operating current of 1 mA <p>PCT1-ASP:</p> <ul style="list-style-type: none"> M12 A-coded 8 pol male: Auxiliary supply and galvanically isolated digital input, minimal operating current of 1 mA
PoE power source	Use power supplies compliant with all locally applicable safety standards

Ethernet J1/PoE		
Pin	Signal	Description
1	TX+	Ethernet Output
2	RX+	Ethernet Input
3	TX-	Ethernet Output
4	RX-	Ethernet Input

Auxiliary J2/AUX (PCT1-POE Model)		
Pin	Signal	Description
1	DI_P	Digital Input 9.6-45 V
2	DI_N	Digital Input reference 0 V
3	n. c.	Not connected
4	n. c.	Not connected

Auxiliary J2/AUX (PCT1-ASP Model)		
Pin	Signal	Description
1	Reserved	Leave open (internal use only)
2	Reserved	Leave open (internal use only)
3	Reserved	Leave open (internal use only)
4	Reserved	Leave open (internal use only)
5	VEXT_N	AUX Supply 0 V
6	VEXT_P	AUX Supply 12-36 V
7	DI_P	Digital Input 9.6-45 V
8	DI_N	Digital Input reference 0V



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Installation / Mounting

Mounting options	Flush or surface mounting. Find more information in our accessory brochure. Note: Pay attention to the orientation of the connectors, to ensure that connected cables match the installation environment
Mounting height	1.95 m to 3.50 m / 6.40 ft to 11.48 ft
Mounting angle (tilt)	+/-15° in x-axis +/- 5° in y-axis
Grounding	Sensor grounding is mandatory via functional earth screw (M5x6 TX25), Inox, (3 different treads available for maximum flexibility). The use of shielded cables is recommended.

Network Interfaces

Supported protocols	IPv6, IPv4, DHCP, HTTPS and password-protected configuration access, DNS, ITxPT, VDV-301 (IBIS-IP)
Data push protocols	HTTP(S), FTP(S), SFTP, MQTT(S), TCP, UDP

Mechanical Characteristics

Weight	PCT1-POE: 475 g / 1.05 lb PCT1-ASP: 495 g / 1.09 lb
Dimensions (L x W x H) including glass	15.0 x 7.1 x 3.6 cm / 5.91 x 2.80 x 1.42 in

Standards, Approval, Certificates

Railway applications	EN 50155 / IEC60571
EMC	EN 50121-3-2 + A1:2019 acc. EN 50155 2014/30/EU IEC 62236-3-2 UN/ECE R10 Electromagnetic compatibility of vehicles
Shock and vibration	EN 61373 cat.1, class B
Fire protection	EN 45545-2, HL3 ; UN/ECE R118
Privacy	ePrivacy seal, 4 privacy levels for GDPR-compliant operation
Others	2011/65/EU (RoHS)

Models and ordering information

Available models	Features / Benefits
PCT1-POE	PoE Power supply Digital Input
PCT1-ASP	PoE Power supply Digital Input Auxiliary supply: 12...36 VDC
Color	Black (RAL9005)

MTBF Results PCT1-POE E1 (stationary and weather protected use)		
Temperature °C	Failure rate [FIT]	MTBF [h/years]
25	727.0	1'375'459 / 157.02
40	1261.7	792'594 / 90.48
55	2286.4	437'374 / 49.93
60	2805.3	356'465 / 40.69
65	3449.8	289'876 / 33.09

MTBF Calculation based on IEC 61709:2017 (SN 29500:2014 for stationary use at weather protected locations (E1) for mean component ambient temperatures.

MTBF Results PCT1-ASP E1 (stationary and weather protected use)		
Temperature °C	Failure rate [FIT]	MTBF [h/years]
25	917.8	1'089'558 / 124.38
40	1580.9	632'555 / 72.21
55	2840.7	352'024 / 40.19
60	3475.9	287'694 / 32.84
65	4263.5	234'549 / 26.78

MTBF Calculation based on IEC 61709:2017 (SN 29500:2014 for stationary use at weather protected locations (E1) for mean component ambient temperatures.

MTBF Results PCT1-POE E3 (portable and non stationary use)		
Temperature °C	Failure rate [FIT]	MTBF [h/years]
25	2908.1	343'865 / 39.25
40	5046.7	198'148 / 22.62
55	9145.5	109'343 / 12.48
60	11'221.3	89'116 / 10.17
65	13'799.0	72'469 / 8.27

MTBF Calculation based on IEC 61709:2017 (SN 29500:2014 for portable and non-stationary use, ground vehicle installation (E3) for mean component ambient temperatures.

MTBF Results PCT1-ASP E3 (portable and non stationary use)		
Temperature °C	Failure rate [FIT]	MTBF [h/years]
25	3'671.2	272'390 / 31.09
40	6'323.6	158'139 / 18.05
55	11'362.9	88'006 / 10.05
60	13'903.7	71'923 / 8.21
65	17'054.0	58'637 / 6.69

MTBF Calculation based on IEC 61709:2017 (SN 29500:2014 for portable and non-stationary use, ground vehicle installation (E3) for mean component ambient temperatures.

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Xovis AG
Industriestrasse 1
CH-3052 Zollikofen
+41 32 342 04 70
info@xovis.com
www.xovis.com

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