

Product

DATA

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Camera CMOS 78°/115° PAL



Article no 01460*0

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Technical Specifications

Camera CMOS 78°/115° PAL

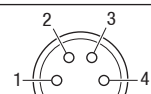
Article number	0146000	0146060
Description	CMOS 78° PAL	CMOS 115° PAL
Horz. lens angle	78°	115°
	Standard set to direct-view.	
Sensor element	1/4" 4:3 VGA CMOS digital image sensor	
Active Pixels	640H x 480V,	
TV System	Interlaced PAL 25fps 720H x 576V (Active 720 x 480). Set Orlaco display to cinema mode for correct viewing.	
Video	1Vtt in 750hm.	
Light sensitivity	<0,25lux	
Dynamic Range	>70dB	
Frame rate	50 frames/s	
Pixel size	5,6µm x 5,6µm	
Shutter	Electronic rolling shutter (ERS)	
Features	Auto Exposure (AE), Auto white balance (AWB), Auto Black Reference (ABR), Auto Flicker Avoidance, Auto Color Saturation.	
Housing	Anodised aluminium, black, UV resistant, light fastness >8, corrosion proof according IEC 60068-2-52 salt mist, cyclic.	
Ingress protection	IP68 according to IEC 60529 (up to 10 m under water). IP69k according to DIN 40050-9: camera can withstand a high pressure cleaning with water: 14-16L/min. 80°C and 100 bars flow.	
Nitrogen filled	Filled with overpressure 1 bar.	
Lens glass	Chemically hardened, toughed, tempered float glass: 5 to 7 times stronger than ordinary glass, protected against acid: class 2-3; DIN 12116, passed flying stone test.	
Mounting hardware	Standard stainless steel.	
Shock constancy	Shock and vibration resistant for usage on trucks, cranes, fork-lifts, maritime applications, machinery. Random vibration test 15,3Grms at frequency: 24 to 2000, PSD (g ² /Hz) 0,04 to 0,10.	
Camera bracket	Material: glass reinforced polyamide, test: 50 Nm at -40°C to +85°C.	
Weight	0,21kg, 0,29 in standard packing.	
Truck use	Withstand all fluids and materials used in and around trucks like: ammonia solution 5%, ethanol 80-100%, isopropanol 5-10%, soapy water (min. 50% soap per volume), alkaline degreasing compounds (used in high pressure washing equipment).	
Power input	12..30V/DC.	
Power consumption	Heating off: 1,2W at 24V; Heating on (max. Power at -40°C): 3,6W at 24V.	
Transient protection	Camera may be powered directly from 12v or 24v battery without additional electrical protection since camera has an integrated circuit that protects the camera against over- and undervoltage, spikes, ripples and loaddumps.	
Heater	2,4W max. Puls Width Modulated, activated from +30°C (min) to -40°C.	
Inrush current	With and without heating: 0,7A at 24V, t=2ms.	
Operating temperature	-40°C to +85°C.	
Storage temperature	-40°C to +125°C.	
Connectors	0,5m cable with 4p male connector (camera power input and video output).	
Approvals	EMC in compliance with 72/245/EC, 95/54/EC. Mirror directive 2003/97/EC, 2005/27/EC.	
Min. cable bend radius	50mm.	

If a non-Orlaco display does not have Cinema mode it is advised to work in NTSC mode.

If you use an Orlaco display by selecting camera 2 or 3 without using switcher or quad module may result in a scrambled display. When using more than 1 camera always use the switcher or quad module.

***Power input**
Below 6V: camera is non functional. Between 6V and 7V: camera is functional but heating element is not able to activate. Above 7V: heating element is automatically activated and is at 20% of its capacity. At 8V the camera is fully functional and the heating is at 40% of its capacity. At 12V the heating is at 100% capacity. Between 12V and 33V camera and heating element are fully functional. Above 33V the overvoltage protection is activated and camera plus heating element are switched off. This overvoltage-protection is deactivated below 32V.

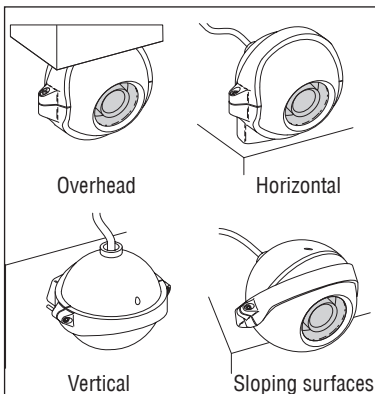
Soldering side of male connector (1312001)



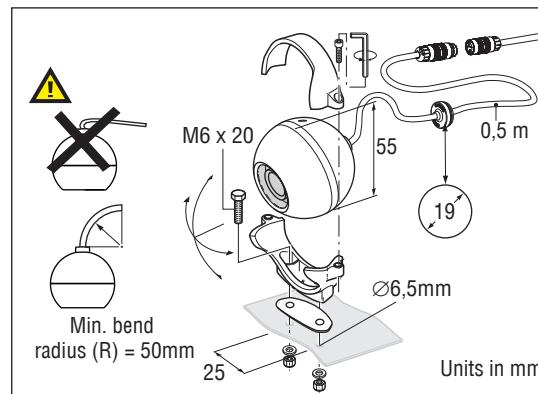
1 = Coax core (Video signal)
2 = Coax screen (Video GND)
3 = Red (24V/DC)
4 = Black (0V)
Shielding N.C.

Installation

Universal camera Bracket



Camera attachment and dimensions



All data subject to change without notice. All dimensions are for commercial purpose only.
The camera/display systems from Orlaco comply with the latest CE, ADR, EMC and mirror-directive regulations.
All products are manufactured in accordance with the ISO 9001 quality management system, ISO 14001 environmental management systems and all Ex products with the IECEx scheme and ATEX directives.



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