



Systems for mobile machines

# Robust camera system O2M for mobile machines



Cameras for mobile applications



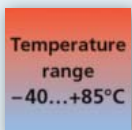
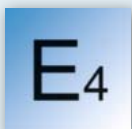
Encapsulated, fully potted housing with IP 67 / IP 69K

High shock and vibration resistance

Temperature-controlled lens heating

Automatic brightness adjustment

E4 type approval



## Heavy-duty universal cameras

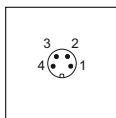
Work area and rear area monitoring are becoming more and more important for mobile machines. The O2M camera system with analogue video output (PAL) is designed for particularly difficult conditions and excels thanks to its pressure-resistant housing and a light sensitivity of < 0.05 lux. The new O2M camera system can, for instance, be directly connected to the graphic PDM360 dialogue modules with colour display and analogue interface. This makes it possible to use the dialogue module not only to display machine information but also images of up to two cameras. Consequently, no separate monitor is needed.

Besides, the plug & play monitors E2M231 or E2M232 can be connected.



Type	Type of sensor	PAL resolution horizontal x vertical [pixels]	Angle of aperture [°]	Mirror function	Order no.
<b>CMOS camera · lens heating · 0.5 m connection cable with M16 connector</b>					
	1/4" 4:3 VGA CMOS image sensor colour	640 x 480	80	–	<b>O2M200</b>
	1/4" 4:3 VGA CMOS image sensor colour	640 x 480	80	integrated	<b>O2M201</b>
	1/4" 4:3 VGA CMOS image sensor colour	640 x 480	118	–	<b>O2M202</b>
	1/4" 4:3 VGA CMOS image sensor colour	640 x 480	118	integrated	<b>O2M203</b>
	1/4" 4:3 VGA CMOS image sensor colour	640 x 480	170	–	<b>O2M210</b>
	1/4" 4:3 VGA CMOS image sensor colour	640 x 480	170	integrated	<b>O2M211</b>

### Wiring diagram



M16 connector  
 Pin 1: coax cable core (video signal)  
 Pin 2: coax screen (video GND)  
 Pin 3: U+  
 Pin 4: 0 V

### Accessories

Type	Description	Order no.
<b>Mounting accessories</b>		
	Protective metal cover	<b>E2M212</b>
	Dome fixture	<b>E2M211</b>
	Vibration damper set	<b>E2M213</b>
	Replacement fixture	<b>E2M210</b>

<b>7.0" TFT LCD monitor with LED backlight, resolution: WVGA 800 x RGB x 480</b>		
	Direct connection of an O2M2 camera or O3M2 smart camera. 1 video input	<b>E2M231</b>
	Direct connection of O2M2 cameras and / or O3M2 smart cameras. 2 video inputs	<b>E2M232</b>

### Common technical data

Operating voltage	[V DC]	8...32
Current consumption (at 24 V)	[mA]	< 150 (incl. lens heating)
Shock resistance	[g]	50
Vibration resistance	[Grms]	15.3
Light sensitivity	[lux]	< 0.05
Dynamic range	[db]	> 80
Image repetition rate	[fps]	50 / interlaced PAL 25
Protection rating		IP 67 / IP 69K
Ambient temperature	[°C]	-40...85
Storage temperature	[°C]	-40...100
Housing material		Cycloy (PC, ABS) black
Connection		connection cable 0.5 m with M16 connector
Standards and tests (extract)		CE, E4 (UN-ECE R10)
Dimensions	[mm]	Ø 55.5 x 51.3

### Accessories

Type	Description	Order no.
<b>Cable, M16 connector to M16 socket</b>		
	5 m black, PVC cable	<b>E2M203</b>
	11 m black, PVC cable	<b>E2M204</b>
	16 m black, PVC cable	<b>E2M205</b>
	21 m black, PVC cable	<b>E2M206</b>
<b>Adapter cable</b>		
	M12 plug to M16 socket, black, PVC cable To connect a camera to the PDM NG	<b>E2M200</b>
	M12 plug to 2 x M16 socket, black, PVC cable To connect two cameras to the PDM NG	<b>E2M201</b>