

# Accessories

Meeting all needs

## Mechanical accessories

from Page A-4

- *Brackets for sensors*
- *Brackets for VISOR® and illumination*



## Optical accessories

from Page A-18

- *Reflectors and reflective tape*
- *Lenses and protective casings*
- *Illumination*
- *Calibration accessories*



A sensor rarely comes unaccompanied: accessories supporting their mounting, commissioning and use are of considerable importance for the reliable functioning of an automation solution. The characteristic practical orientation of SensoPart products is thus also evident in a particularly versatile and user-friendly range of accessories. In this section they are divided into categories: mechanical, optical and electrical accessories.

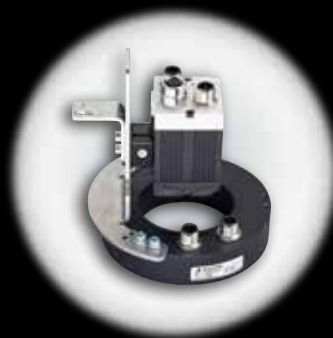
The mechanical accessories include everything that is involved in mounting and protecting the sensor: mounting brackets, blocks, rods and rails, brackets with protective hoops, stainless steel casings for hygienic areas and many others. All accessories are extremely robust and designed to meet practical demands. We thus offer clever, sometimes patented, detailed solutions that greatly simplify the mounting and fine adjustment of sensors, particularly in difficult locations, such as dovetail mountings or rotatable brackets.

Optical accessories include lenses as well as protective casings, external illumination such as ring and surface lights, and reflectors of differing designs, shapes and sizes. All SensoPart lenses offer high optical quality. We offer C-mount lenses as an alternative to integrated lenses especially for vision sensors when, for example, very high measurement distances are required.

Our electrical accessories include a great variety of cables and adapters, power supply units and switching devices, as well as interface components for the integration of supplementary functions. One example of the latter category is the SmartPlug – very popular amongst users – which expands switching sensors with logic and control functions such as counters, timing elements, inverters or frequency converters. The SmartPlug is simply plugged in between the sensor and the cable – a brilliant little product that is only available from SensoPart!

**Electrical accessories  
from Page A-40**

- Cables
- Converters
- Power supply units, switching devices and Panel Viewer



**Flexible:** MG 3A Mounting angle with 2 axes and drilled hole for mounting rod.



**Practical:** sensors can be comfortably and precisely aligned after mounting with the help of rod brackets.



**Versatile:** SensoPart offers a comprehensive selection of reflectors and reflective tape: rectangular, square or round.



**Robust:** all mounting and bracket elements are extremely stable and offer additional protection for sensors when necessary.

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A

# Accessories


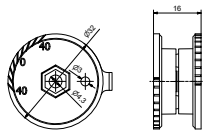
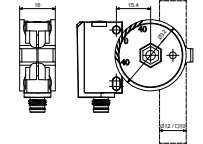

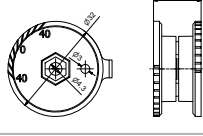
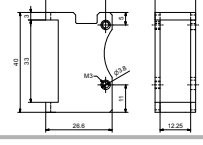

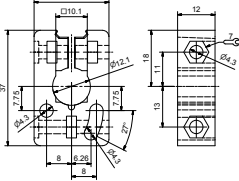

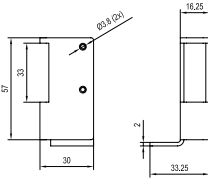
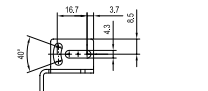

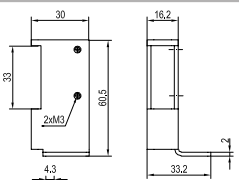
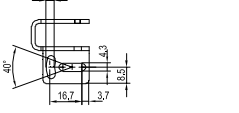

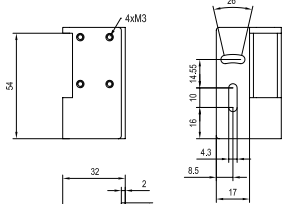
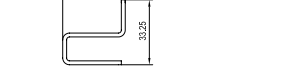
## Brackets



- Brackets


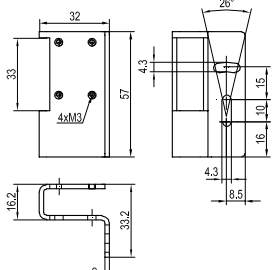

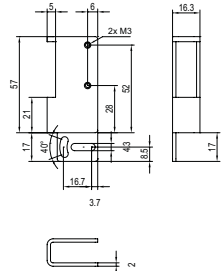

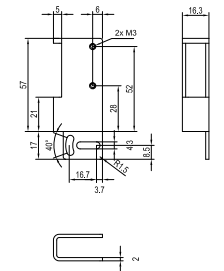

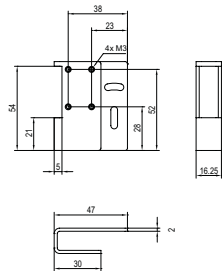

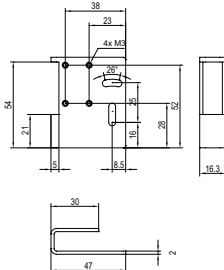

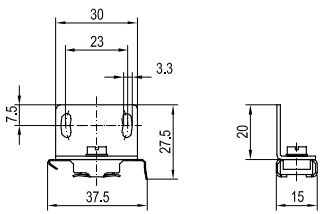
Brackets for F 10 series				
		153-00899	Part number / Article number	MBD F 10 / 660-01001
			Description	Dovetail clamp mounting, adjustable $\pm 10^\circ$ Material: PBT
			Suitable for	F 10
		153-00907	Part number / Article number	MS F 10 / 660-01000
			Description	Mounting bracket with screws 1x mounting plate M3 1x mounting plate $\varnothing 3.1$ mm Material: stainless steel V2A
			Suitable for	F 10

Brackets for F 25, FL 20, UT 20				
		153-00945	Part number / Article number	MBD F 25 / 661-01000
			Description	Dovetail clamp mounting, adjustable $\pm 15^\circ$ , with screws Material: anodised aluminium
			153-00946	Part number / Article number
Description				Mounting bracket with screws 1x retaining strip Material: nickel-plated steel
Suitable for		F 20 F 25 UT 20 FL 20		

Brackets for F 25, FL 20, UT 20 (Cont.)				
		153-01155	Part number / Article number	MBD F 25ST2 / 661-01005
			153-01156	Description
		153-01155	Part number / Article number	Set: MBD F 25STP / 661-01004
			153-01163	Description
		153-01164	Part number / Article number	MB ST2 / 661-01007
				Description
		153-01017	Part number / Article number	MSP F 20-11 / 558-41006
				Description
		153-00296	Part number / Article number	MSP F 20-1 / 558-41004
				Description
		153-00908	Part number / Article number	MSP F 20-23 / 558-41011
				Description
			Suitable for	F 20 F 25 UT 20 FL 20

# Accessories

## Brackets


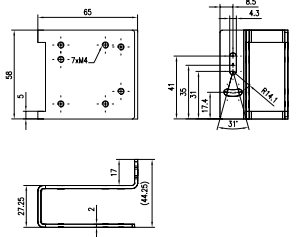

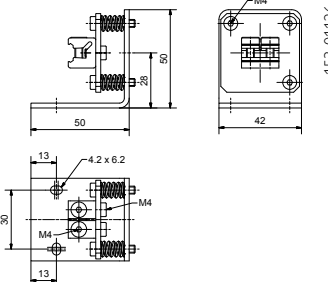

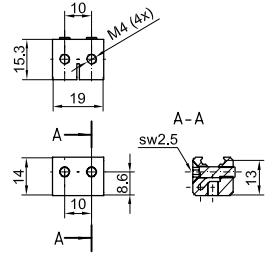

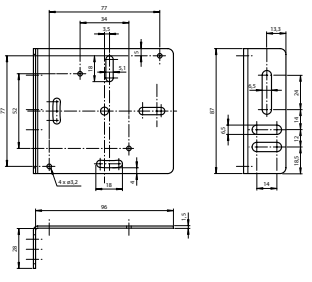

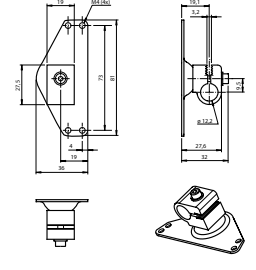

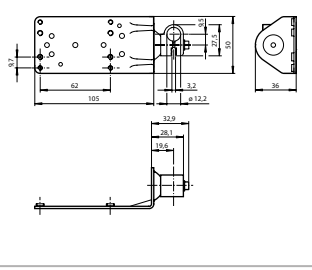
Brackets for F 25, FL 20, UT 20 (Cont.)			
		<p>153-00297</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MSP F 20-2 / 558-41005</p> <p>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</p> <p>F 20    UT 20-150 F 25    UT 20-S150 FL 20    UT 20-240</p>
		<p>153-00973</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MSP F 20-13 / 558-41008</p> <p>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</p> <p>F 20    UT 20-150 F 25    UT 20-S150 FL 20    UT 20-240</p>
		<p>153-00972</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MSP F 20-12 / 558-41007</p> <p>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</p> <p>F 20    UT 20-150 F 25    UT 20-S150 FL 20    UT 20-240</p>
		<p>153-00974</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MSP F 20-21 / 558-41009</p> <p>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</p> <p>F 20    UT 20-150 F 25    UT 20-S150 FL 20    UT 20-240</p>
		<p>153-00975</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MSP F 20-22 / 558-41010</p> <p>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</p> <p>F 20    UT 20-150 F 25    UT 20-S150 FL 20    UT 20-240</p>
		<p>153-00291</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MS F 20-DIN / 558-41001</p> <p>DIN rail mounting with screws Material: nickel-plated steel</p> <p>FL 20</p>


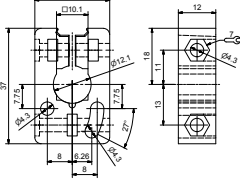
Brackets for F 25, FL 20, UT 20 (Cont.)			
		<p>153-01040</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MZ F 25 / 661-01003</p> <p>Mounting adapter for FT 25 contrast sensors with horizontal or vertical light exit options, with screws Material: stainless steel V2A</p> <p>FT 25-W...-KL4 FT 25-RGB...-KL4</p>
Brackets for F 50, F 55, F 80, F 88, FGL series			
		<p>153-01164</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MB ST2 / 661-01007</p> <p>Mounting component for Ø 12 mm mounting rod and 10 x 10 mm square profile, and F 55 and fork sensors (FGL), with M4 screw Material: die-cast zinc</p> <p>F 55, FGL, MST 45-20, MST 45-30, MST 45-40</p>
		<p>153-01287</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MBD F 55ST2 / 579-50012</p> <p>Mounting component for F 55 metall housing for bar Ø 12 mm or squared profile 10 x 10 mm, with M4 screw and M4 nut Material: die-cast zinc</p> <p>F 55 metall housing</p>
		<p>153-00065</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MS F 50 / 579-50000</p> <p>Angle bracket with screws Material: stainless steel VA</p> <p>F 50 F 55 F 80</p>
		<p>153-00298</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MSP F 50 / 579-50005</p> <p>Protective sensor angle bracket with screws, very robust, light exit possible on three sides Material: stainless steel VA</p> <p>F 50</p>
		<p>153-00818</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MS F 55 / 579-50010</p> <p>Angle bracket with screws Material: stainless steel V2A</p> <p>F 50 F 55</p>


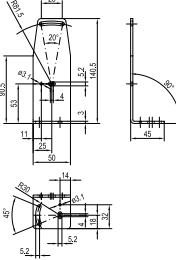

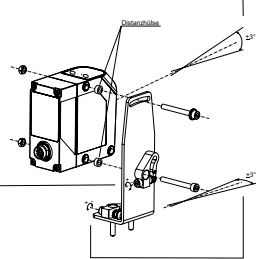

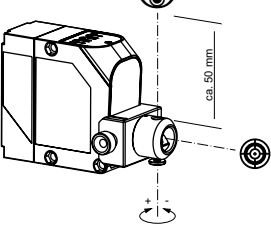


# Accessories

## Brackets

Brackets for F 50, F 55, F 80, F 88, FGL series (Cont.)			
	 <p>153-00819</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MSP F 55 / 579-50011</p> <p>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</p> <p>F 55</p>
	 <p>153-01126</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MA F 55 / 579-50007</p> <p>Mounting angle, fine-adjustable with adjusting screws. Material: stainless steel V2A</p> <p>F 55</p>
	 <p>153-00542</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MBD-S94 / 533-21000</p> <p>Dovetail double clamp mounting Material: metal</p> <p>F 55 FGL F 88</p>
	 <p>153-00561</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MS F 88-1 / 820-41001</p> <p>Angle bracket Material: stainless steel</p> <p>F 80 F 88</p>
	 <p>153-00562</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MS F 88-2 / 820-41002</p> <p>Bracket for mounting rod with joint for fine adjustment, with screws Material: metal</p> <p>F 80 F 88</p>
	 <p>153-00563</p>	<p>Bestellbezeichnung / Artikel-Nr.</p> <p>Beschreibung</p> <p>Passend für</p>	<p>MS F 88-3 / 820-41003</p> <p>Halterung für Montagegange mit Gelenk für Feinjustage, mit Schrauben Material: Metall</p> <p>F 80 F 88</p>

Brackets for F 50, F 55, F 80, F 88, FGL series (Cont.)			
		<p style="text-align: center;">153-01164</p> <p>Part number / Article number Description  Suitable for</p>	<p>MB ST2 / 661-01007</p> <p>Mounting component for <math>\varnothing</math> 12 mm mounting rod and 10 x 10 mm square profile, and F 55 and fork sensors (FGL), with M4 screw Material: die-cast zinc</p> <p>F 55, FGL, MST 45-20, MST 45-30, MST 45-40</p>

Brackets for F 90, F 91, F 92 series			
		<p style="text-align: center;">153-01164</p> <p>Part number / Article number Description  Suitable for</p>	<p>MSP F 90 / 599-91002</p> <p>Angle bracket with screws Material: stainless steel V2A</p> <p>F 90 F 91 F 92</p>
		<p style="text-align: center;">153-00470</p> <p>Part number / Article number Description  Suitable for</p>	<p>MSP F 90 A / 599-91003</p> <p>Fine adjustment for angle bracket MSP F 90, set of two Material: metal</p> <p>MSP F 90</p>
		<p style="text-align: center;">155-00212</p> <p>Part number / Article number Description  Suitable for</p>	<p>AS F 90 / 599-91004</p> <p>Aligning aid for pilot laser, for fine adjustment at long distances</p> <p>F 90 F 91 F 92</p>



# Accessories

## Brackets

### Brackets for fibre-optic cables and round housings


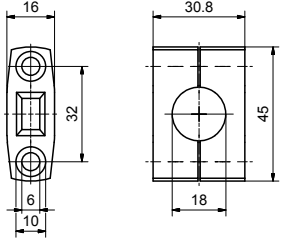
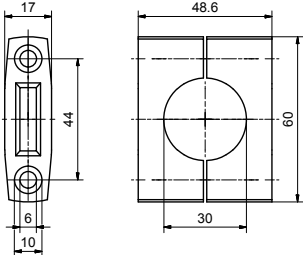
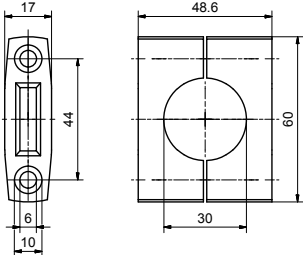

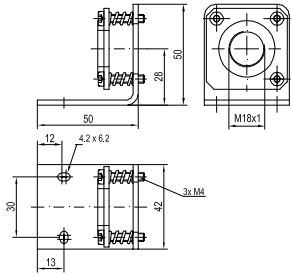

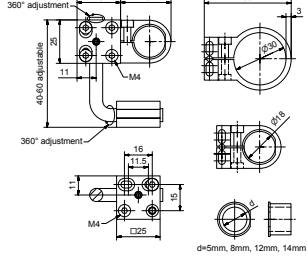

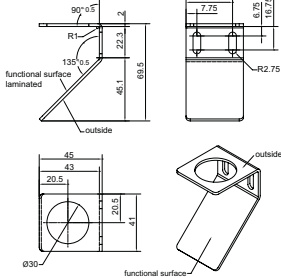


<p>153-00193</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MB 3,5 / 903-50313</p> <p>Mounting block / fibre mount, closed curve</p> <p>Material: nickel-plated brass</p> <p>Fibre-optic cables</p>
<p>153-00234</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MB 4,5 / 903-50314</p> <p>Mounting block / fibre mount, open curve</p> <p>Material: nickel-plated brass</p> <p>Fibre-optic cables</p>
<p>153-00194</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MB 6 / 903-05139</p> <p>Mounting block / fibre mount, open curve</p> <p>Material: nickel-plated brass</p> <p>Fibre-optic cables</p>
<p>153-00195</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MB 7 / 903-05140</p> <p>Mounting block / fibre mount, open curve</p> <p>Material: nickel-plated brass</p> <p>Fibre-optic cables</p>
<p>153-00235</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MB 8 / 903-05141</p> <p>Mounting block / fibre mount, open curve</p> <p>Material: nickel-plated brass</p> <p>Fibre-optic cables, round M8 housings</p>
<p>153-00236</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MB 10 / 903-05142</p> <p>Mounting block / fibre mount, open curve</p> <p>Material: nickel-plated brass</p> <p>Fibre-optic cables, round M10 housings</p>

Brackets for fibre-optic cables and round housings (Cont.)			
		<p>153-00196</p>	<p>Part number / Article number Description Suitable for</p> <p>MB 12 / 903-05143 Mounting block / fibre mount, closed curve Material: nickel-plated brass Fibre-optic cables, round M12 housings</p>
		<p>153-00559</p>	<p>Part number / Article number Description Suitable for</p> <p>MC 08 / 041-01306 Mounting angle for round housings Material: aluminium Round M8 housings</p>
		<p>153-00558</p>	<p>Part number / Article number Description Suitable for</p> <p>MA 12 / 041-01305 Mounting angle for round housings Material: aluminium Round M12 housings</p>
		<p>153-00015</p>	<p>Part number / Article number Description Suitable for</p> <p>MA 18 / 041-01304 Mounting angle for round housings Material: aluminium Round M18 housings</p>
		<p>153-00017</p>	<p>Part number / Article number Description Suitable for</p> <p>MA 30 / 041-01303 Mounting angle for round housings Material: aluminium Round M30 housings</p>

# Accessories

## Brackets

Brackets for fibre-optic cables and round housings (Cont.)				
		153-00016	Part number / Article number	MC 18 / 042-01528
			Description	Retaining clip for round housings Material: plastic
			Suitable for	Round M18 housings
		153-00018	Part number / Article number	MC 30 / 042-01527
			Description	Retaining clip for round housings Material: plastic
			Suitable for	Round M30 housings
		153-00059	Part number / Article number	MA 18 A / 042-12825
			Description	Universal mounting angle for round housings, fine-adjustable with adjusting screws Material: galvanised steel
			Suitable for	Round M12 and M18 housings
		153-01016	Part number / Article number	MS M5-30 / 558-41012
			Description	Universal bracket for round housings Material: connecting rod, metal / mounting elements, plastic
			Suitable for	Round M5, M8, M12, M14, M18 and M30 housings
		153-00959	Part number / Article number	Deflection mirror / 691-51535
			Description	Deflection mirror for ultrasonic sensors Material: stainless steel
			Suitable for	UMT 30-350 UMT 30-1300

Brackets for V10, V20			
		<p>153-00547</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MP 45 / 543-11003</p> <p>Mounting plate for mounting rod Material: anodised aluminium</p> <p>MST 45-xx</p>
		<p>153-01000</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MB ST1 / 661-01002</p> <p>Mounting for mounting rod with clamping screw Material: aluminium</p> <p>MST 45-20 MST 45-30 MST 45-40</p>
		<p>153-00545</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MST 45-20 / 543-11005 MST 45-30 / 543-11006 MST 45-40 / 543-11007</p> <p>Mounting rod with M6 internal thread Material: stainless steel</p> <p>MP 45, MB ST 1, MG 45, MB 45, MZ 45</p>
		<p>153-00776</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MG 45 / 543-11008</p> <p>Mounting clamp for mounting rod Material: anodised aluminium, steel screw with plastic handle</p> <p>MST 45-xx</p>
		<p>153-00546</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MZ 45 / 543-11004</p> <p>Intermediate mounting piece for mounting rod Material: anodised aluminium</p> <p>MST 45-xx</p>
		<p>153-00481</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MB 45 / 543-11002</p> <p>Mounting block for mounting rod Material: anodised aluminium</p> <p>MST 45-xx MA 45 MA 45 L</p>


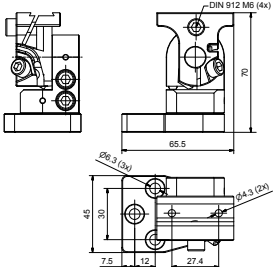


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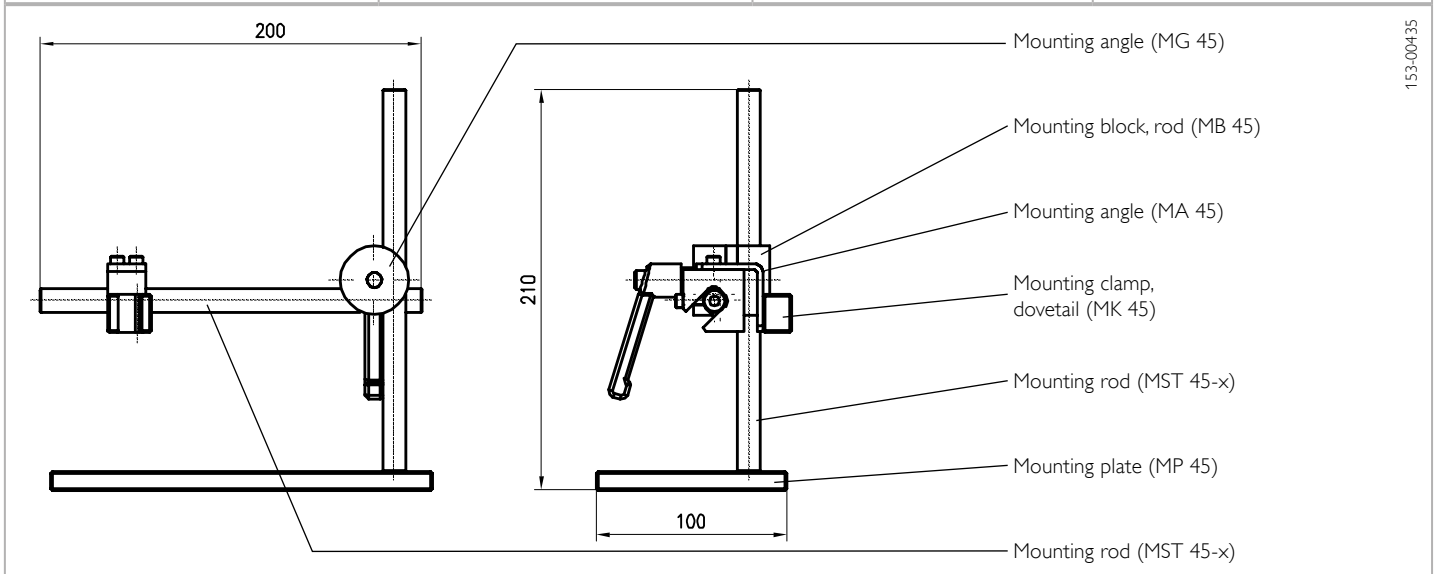
# Accessories

## Brackets

Brackets for V10,V20 (Cont.)				
		153-00482	Part number / Article number	MA 45 / 543-11001
			Description	Mounting angle Material: stainless steel V2A
		153-00600	Part number / Article number	MA 45 L / 543-11013
			Description	Mounting angle, long Material: stainless steel V2A
		153-00480	Part number / Article number	MK 45 / 543-11000
			Description	Mounting clamp, dovetail Material: anodised aluminium Screw: steel
		153-00901	Part number / Article number	MK 45 L / 543-11021
			Description	Mounting clamp, dovetail, long Material: anodised aluminium, Screw: steel
		153-13535	Part number / Article number	MA 45-63/105 UR / 543-11043
			Description	Mounting angle for VISOR® for UR robot Material: aluminium
			Suitable for	V10 / V20


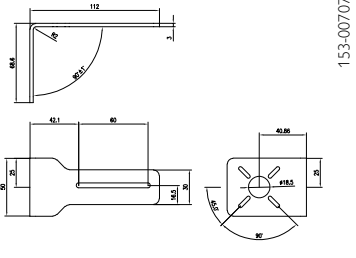

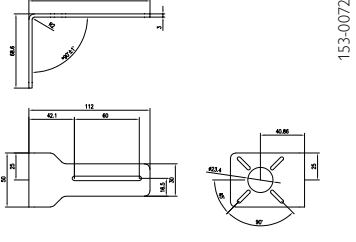

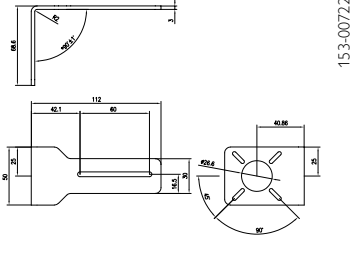

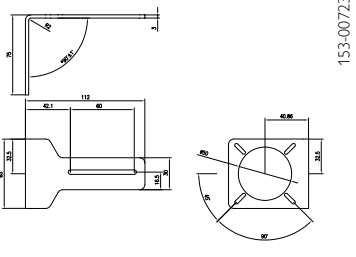

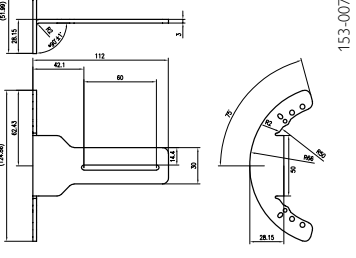
Brackets for V10, V20 (Cont.)

		<p>153-01181</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MG 3A / 543-11024</p> <p>Mounting angle with 2 axes and drilled hole for mounting rod</p> <p>Material: anodised aluminium</p> <p>V10 / V20</p>
			



# Accessories

## Brackets

Brackets for illumination			
		<p>153-00707</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MA LR-18/112 / 543-11016</p> <p>Angle bracket for lighting, Ø 18 mm Length: 112 mm Material: nickel-plated steel</p> <p>LR 32 x-24-KFL5 LD 50 xD-24-KFL5</p>
		<p>153-00721</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MA LR-23/112 / 543-11019</p> <p>Angle bracket for lighting, Ø 23 mm Length: 112 mm Material: nickel-plated steel</p> <p>LR 56 x-24-KFL5 LR 70 xD-24-KFL5 LR 70 xID-24-KFL5</p>
		<p>153-00722</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MA LR-26/112 / 543-11017</p> <p>Angle bracket for lighting, Ø 26 mm Length: 112 mm Material: nickel-plated steel</p> <p>LR 50 xW-24-KFL5 LR 70 x-24-KFL5</p>
		<p>153-00723</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MA LR-50/112 / 543-11018</p> <p>Angle bracket for lighting, Ø 50 mm Length: 112 mm Material: nickel-plated steel</p> <p>LR 74 xW-24-KFL5 LR 75 xI-24-KFL5 LR 90 xW-24-KFL5 LR 100 xID-24-KFL5</p>
		<p>153-00724</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MA LR-100/112 / 543-11015</p> <p>Angle bracket for lighting, Ø 100 mm Length: 112 mm Material: nickel-plated steel</p> <p>LM 100 WWK-24Q4-2L12 LM 100 RWK-24Q4-2L12 LR 100 xD-24-KFL5 LR 130 xI-24-KFL5 LR 132 xW-24-KFL LFR 115 xD-24-2L12</p>



**Brackets for illumination (Cont.)**

		<p>1 V10,V20</p> <p>2 Mounting clamp, dovetail, long MK 45 L/ 543-11021</p> <p>3 Angle bracket for lighting: MA LR-100/112 / 543-11015 MA LR-18/112 / 543-11016 MA LR-26/112 / 543-11017 MA LR-50/112 / 543-11018 MA LR-23/112 / 543-11019</p> <p>4 Mounting angle with 2 axes MG 3A / 543-11024</p> <p>5 Mounting Rod MST 45-x</p> <p>6 Mounting block MB 45</p> <p>7 Mounting angle MA 45</p>
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155-01930

**Brackets for light strips, High Power, LBxxx**

		<p>Part number / Article number Description Suitable for</p>	<p>153-01178</p> <p>MG LB L / 543-11025 Mounting clamp light strip long Material: nickel-plated steel Light strips High Power, LBxxx</p>
		<p>Part number / Article number Description Suitable for</p>	<p>153-01179</p> <p>MG LB LL / 543-11026 Mounting angle light strip long, lite Material: anodised aluminium Light strips High Power, LBxxx</p>

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# Accessories

## Reflectors




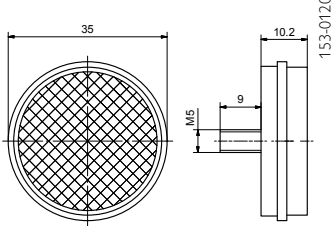

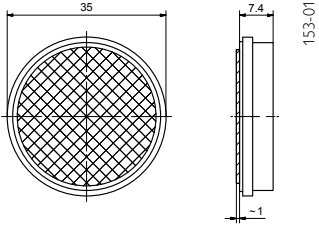

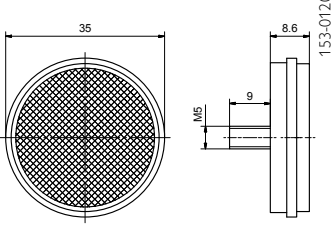

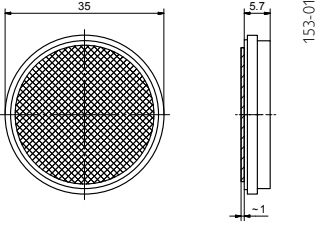

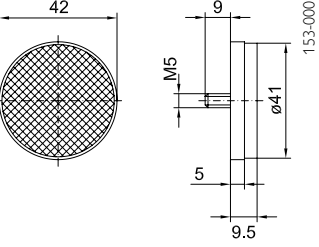

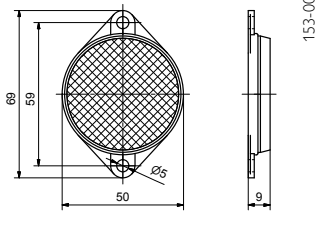
- Reflectors
- Lenses / Protective casings
- Illumination

Reflectors for Retroreflective photoelectric sensor															
		153-01197	<table border="1"> <tr> <td>Part number / Article number</td> <td>RD 10L / 904-51653</td> </tr> <tr> <td>Description</td> <td>Reflector in housing</td> </tr> <tr> <td>Dimensions</td> <td>Ø 10 x 5.6 mm</td> </tr> <tr> <td>Mounting</td> <td>Grub screw M3, centred</td> </tr> <tr> <td>Temperature range</td> <td>-20 ... +60 °C</td> </tr> <tr> <td>Suitable for</td> <td>Retroreflective photoelectric sensor (laser)</td> </tr> </table>	Part number / Article number	RD 10L / 904-51653	Description	Reflector in housing	Dimensions	Ø 10 x 5.6 mm	Mounting	Grub screw M3, centred	Temperature range	-20 ... +60 °C	Suitable for	Retroreflective photoelectric sensor (laser)
Part number / Article number	RD 10L / 904-51653														
Description	Reflector in housing														
Dimensions	Ø 10 x 5.6 mm														
Mounting	Grub screw M3, centred														
Temperature range	-20 ... +60 °C														
Suitable for	Retroreflective photoelectric sensor (laser)														
		153-01198	<table border="1"> <tr> <td>Part number / Article number</td> <td>RD 10LK / 904-51654</td> </tr> <tr> <td>Description</td> <td>Reflector in housing</td> </tr> <tr> <td>Dimensions</td> <td>Ø 10 x 3.7 mm</td> </tr> <tr> <td>Mounting</td> <td>Self-adhesive</td> </tr> <tr> <td>Temperature range</td> <td>-20 ... +60 °C</td> </tr> <tr> <td>Suitable for</td> <td>Retroreflective photoelectric sensor (laser)</td> </tr> </table>	Part number / Article number	RD 10LK / 904-51654	Description	Reflector in housing	Dimensions	Ø 10 x 3.7 mm	Mounting	Self-adhesive	Temperature range	-20 ... +60 °C	Suitable for	Retroreflective photoelectric sensor (laser)
Part number / Article number	RD 10LK / 904-51654														
Description	Reflector in housing														
Dimensions	Ø 10 x 3.7 mm														
Mounting	Self-adhesive														
Temperature range	-20 ... +60 °C														
Suitable for	Retroreflective photoelectric sensor (laser)														
		153-01199	<table border="1"> <tr> <td>Part number / Article number</td> <td>RD 15 / 904-51655</td> </tr> <tr> <td>Description</td> <td>Reflector in housing</td> </tr> <tr> <td>Dimensions</td> <td>Ø 15 x 6.4 mm</td> </tr> <tr> <td>Mounting</td> <td>Grub screw M3, centred</td> </tr> <tr> <td>Temperature range</td> <td>-20 ... +60 °C</td> </tr> <tr> <td>Suitable for</td> <td>Retroreflective photoelectric sensor (LED)</td> </tr> </table>	Part number / Article number	RD 15 / 904-51655	Description	Reflector in housing	Dimensions	Ø 15 x 6.4 mm	Mounting	Grub screw M3, centred	Temperature range	-20 ... +60 °C	Suitable for	Retroreflective photoelectric sensor (LED)
Part number / Article number	RD 15 / 904-51655														
Description	Reflector in housing														
Dimensions	Ø 15 x 6.4 mm														
Mounting	Grub screw M3, centred														
Temperature range	-20 ... +60 °C														
Suitable for	Retroreflective photoelectric sensor (LED)														
		153-01200	<table border="1"> <tr> <td>Part number / Article number</td> <td>RD 15K / 904-51656</td> </tr> <tr> <td>Description</td> <td>Reflector in housing</td> </tr> <tr> <td>Dimensions</td> <td>Ø 15 x 4.5 mm</td> </tr> <tr> <td>Mounting</td> <td>Self-adhesive</td> </tr> <tr> <td>Temperature range</td> <td>-20 ... +60 °C</td> </tr> <tr> <td>Suitable for</td> <td>Retroreflective photoelectric sensor (LED)</td> </tr> </table>	Part number / Article number	RD 15K / 904-51656	Description	Reflector in housing	Dimensions	Ø 15 x 4.5 mm	Mounting	Self-adhesive	Temperature range	-20 ... +60 °C	Suitable for	Retroreflective photoelectric sensor (LED)
Part number / Article number	RD 15K / 904-51656														
Description	Reflector in housing														
Dimensions	Ø 15 x 4.5 mm														
Mounting	Self-adhesive														
Temperature range	-20 ... +60 °C														
Suitable for	Retroreflective photoelectric sensor (LED)														

Reflectors for Retroreflective photoelectric sensor (Cont.)			
		153-01201	<p>Part number / Article number RD 15L / 904-51657</p> <p>Description Reflector in housing</p> <p>Dimensions Ø 15 x 6.4 mm</p> <p>Mounting Grub screw M3, centred</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Retroreflective photoelectric sensor (laser)</p>
		153-01202	<p>Part number / Article number RD 15LK / 904-51658</p> <p>Description Reflector in housing</p> <p>Dimensions Ø 15 x 3.7 mm</p> <p>Mounting Self-adhesive</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Retroreflective photoelectric sensor (laser)</p>
		153-01014	<p>Part number / Article number RD2-G / 904-51567</p> <p>Description Reflector in housing</p> <p>Dimensions Ø 19 x 5.6 mm</p> <p>Mounting Grub screw M3, centred</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Retroreflective photoelectric sensor (LED)</p>
		153-00066	<p>Part number / Article number RD2 / 904-51534</p> <p>Description Reflector in housing</p> <p>Dimensions Ø 21 x 5 mm</p> <p>Mounting Self-adhesive</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Retroreflective photoelectric sensor (LED)</p>
		153-01203	<p>Part number / Article number RD 25L / 904-51659</p> <p>Description Reflector in housing</p> <p>Dimensions Ø 25 x 7.5 mm</p> <p>Mounting Grub screw M4, centred</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Retroreflective photoelectric sensor (laser)</p>
		153-01204	<p>Part number / Article number RD 25LK / 904-51660</p> <p>Description Reflector in housing</p> <p>Dimensions Ø 25 x 5.5 mm</p> <p>Mounting Self-adhesive</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Retroreflective photoelectric sensor (laser)</p>

# Accessories

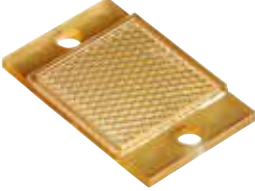
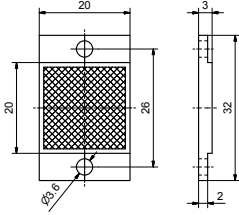

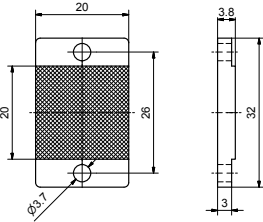

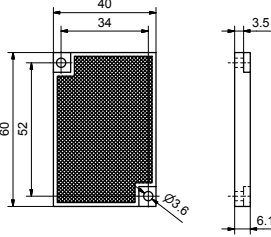

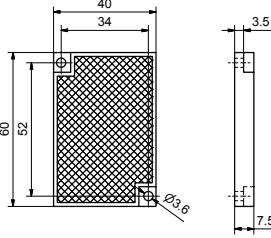
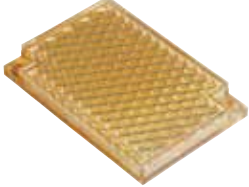
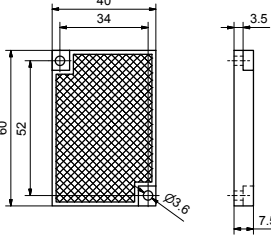
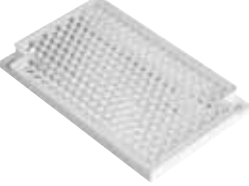
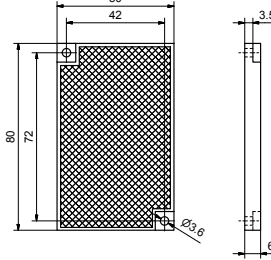
## Reflectors

Reflectors for Retroreflective photoelectric sensor (Cont.)			
		<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>RD 35 / 904-51661</p> <p>Reflector in housing</p> <p>Ø 35 x 10.2 mm</p> <p>Grub screw M5, centred</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (LED)</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>RD 35K / 904-51662</p> <p>Reflector in housing</p> <p>Ø 35 x 7.4 mm</p> <p>Self-adhesive</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (LED)</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>RD 35L / 904-51663</p> <p>Reflector in housing</p> <p>Ø 35 x 8.6 mm</p> <p>Grub screw M5, centred</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (laser)</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>RD 35LK / 904-51664</p> <p>Reflector in housing</p> <p>Ø 35 x 5.7 mm</p> <p>Self-adhesive</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (laser)</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>RD4 / 904-51535</p> <p>Reflector in housing</p> <p>Ø 42 x 9.5 mm</p> <p>Grub screw M5, centred</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (LED)</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>RD46 / 904-51572</p> <p>Reflector in housing</p> <p>Ø 46 x 9 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (LED)</p>


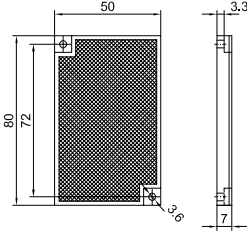

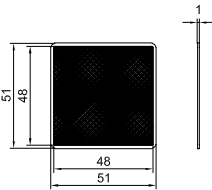

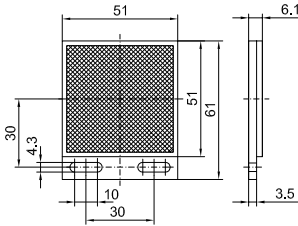

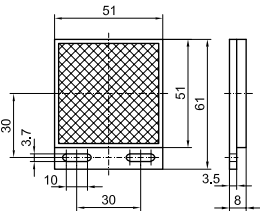

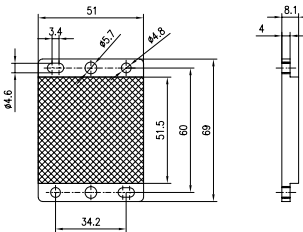

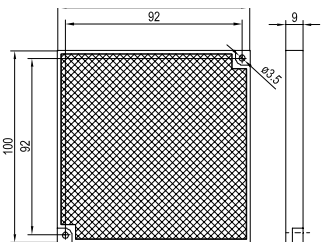
Reflectors for Retroreflective photoelectric sensor (Cont.)			
		153-00070	<p>Part number / Article number RD8 / 904-51531</p> <p>Description Reflector in housing</p> <p>Dimensions Ø 84 x 9 mm</p> <p>Mounting 1 mounting hole, centred</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Retroreflective photoelectric sensor (LED)</p>
		153-00280	<p>Part number / Article number R1L / 904-51559</p> <p>Description Reflector in housing</p> <p>Dimensions 10 x 62 x 3.5 mm</p> <p>Mounting 2 mounting holes</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Retroreflective photoelectric sensor (laser)</p>
		153-00068	<p>Part number / Article number R1 / 904-51532</p> <p>Description Reflector in housing</p> <p>Dimensions 19 x 73 x 8 mm</p> <p>Mounting 2 mounting holes M3</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Retroreflective photoelectric sensor (LED)</p>
		153-00772	<p>Part number / Article number R3-2LK / 904-51588</p> <p>Description Reflector in housing</p> <p>Dimensions 20 x 30 x 2.5 mm</p> <p>Mounting Self-adhesive</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Retroreflective photoelectric sensor (laser)</p>
		153-01047	<p>Part number / Article number R3-2LK1 / 904-51596</p> <p>Description Reflector in housing with very fine structure</p> <p>Dimensions 20 x 30 x 2.5 mm</p> <p>Mounting Self-adhesive</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Retroreflective photoelectric sensor (laser)</p>
		153-00773	<p>Part number / Article number R2-2LB / 904-51586</p> <p>Description Reflector in housing</p> <p>Dimensions 20 x 32 x 3 mm</p> <p>Mounting 2 mounting holes</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Retroreflective photoelectric sensor (laser)</p>

# Accessories

## Reflectors

Reflectors for Retroreflective photoelectric sensor (Cont.)				
		153-01210	<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R3-2LBC / 904-51666</p> <p>Reflector; chemically resistant for critical cleaning processes</p> <p>20 x 32 x 3 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (laser)</p> <p style="text-align: right;"><b>ECOLAB®</b></p>
		153-01046	<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R2-2LB1 / 904-51595</p> <p>Reflector in housing, with very fine structure</p> <p>20 x 32 x 3.8 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (laser)</p>
		153-01196	<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R4-6LB / 904-51652</p> <p>Reflector in housing</p> <p>40 x 60 x 6.1 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (laser)</p>
		153-01195	<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R4-6B / 904-51651</p> <p>Reflector in housing</p> <p>40 x 60 x 7.5 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (LED)</p>
		153-01209	<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R4-6BC / 904-51665</p> <p>Reflector; chemically resistant for critical cleaning processes</p> <p>40 x 60 x 7.5 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (LED)</p> <p style="text-align: right;"><b>ECOLAB®</b></p>
		153-01194	<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R5-7B / 904-51650</p> <p>Reflector in housing</p> <p>50 x 70 x 6.8 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (LED)</p>

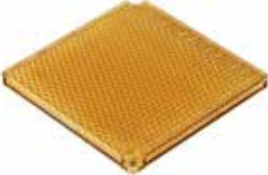
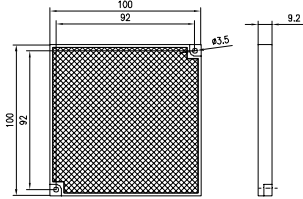

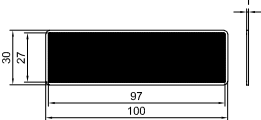

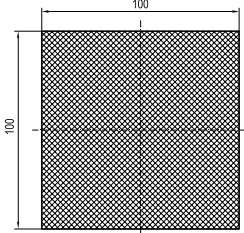

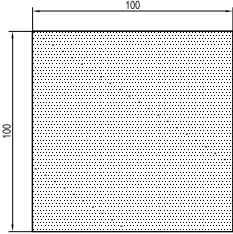

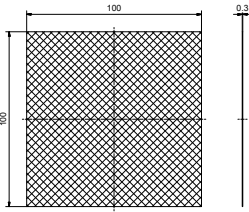


Reflectors for Retroreflective photoelectric sensor (Cont.)			
		<p>153-00544</p> <p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R5-8/L / 904-51576</p> <p>Reflector in housing</p> <p>50 × 80 × 7 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (laser)</p>
		<p>153-00701</p> <p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>RF-50 KL / 904-51590</p> <p>Reflective foil</p> <p>51 × 51 mm</p> <p>Self-adhesive</p> <p>-40 ... +70 °C</p> <p>Retroreflective photoelectric sensor (laser)</p>
		<p>153-00242</p> <p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R5L / 904-51543</p> <p>Reflector in housing</p> <p>51 × 61 × 6.1 mm</p> <p>2 mounting holes (slots)</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (laser)</p>
		<p>153-00069</p> <p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R5 / 904-51533</p> <p>Reflector in housing</p> <p>51 × 61 × 8 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Retroreflective photoelectric sensor (LED)</p>
		<p>153-00816</p> <p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R50 BC / 904-51641</p> <p>Reflector; chemically resistant for critical cleaning processes</p> <p>51 × 69 × 8.1 mm</p> <p>6 mounting holes</p> <p>-20 ... +140 °C</p> <p>Retroreflective photoelectric sensor (LED)</p> <p><b>ECOLAB®</b></p>
		<p>153-00557</p> <p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R10 / 904-51637</p> <p>R10 / 2 (2 × R10) / 904-51636</p> <p>Reflector in housing</p> <p>100 × 100 × 9 mm</p> <p>2 mounting holes</p> <p>-40 ... +70 °C</p> <p>Retroreflective photoelectric sensor (LED)</p> <p>FR 85</p>



# Accessories

## Reflectors


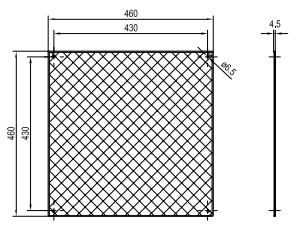

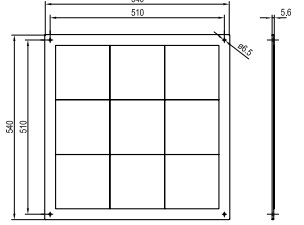

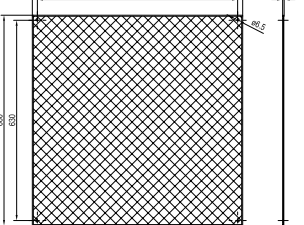

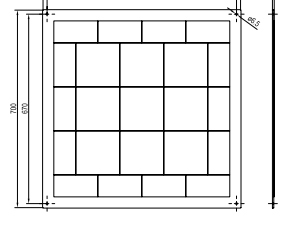
Reflectors for Retroreflective photoelectric sensor (Cont.)			
	 <p style="text-align: right;">153-00817</p>	<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R100 BC / 904-51642</p> <p>Reflector; chemically resistant for critical cleaning processes</p> <p>100 x 100 x 9.2 mm</p> <p>2 mounting holes</p> <p>-20 ... +140 °C</p> <p>Retroreflective photoelectric sensor (LED)</p> <p style="text-align: right;"><b>ECOLAB®</b></p>
	 <p style="text-align: right;">153-00950</p>	<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>RF-30x100 KL / 904-51592</p> <p>Reflective foil</p> <p>100 x 30 mm</p> <p>Self-adhesive</p> <p>-40 ... +70 °C</p> <p>Retroreflective photoelectric sensor (laser)</p>
	 <p style="text-align: right;">153-00071</p>	<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>RF 10 / 904-51536</p> <p>Reflective foil</p> <p>100 x 100 mm</p> <p>Self-adhesive</p> <p>-34 ... +70 °C</p> <p>Retroreflective photoelectric sensor (LED)</p>
	 <p style="text-align: right;">153-00556</p>	<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>RF 10C / 904-51633</p> <p>Reflective foil for FT 50 C colour sensor</p> <p>100 x 100 mm</p> <p>Self-adhesive</p> <p>-40 ... +70 °C</p> <p>FT 50 C</p>
	 <p style="text-align: right;">153-01125</p>	<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>RF-100 KL / 904-51644</p> <p>Reflective foil 100 x 100 mm, to cut to size</p> <p>100 x 100 mm</p> <p>Self-adhesive</p> <p>-40 ... +70 °C</p> <p>Retroreflective photoelectric sensor (laser)</p>

Reflectors for Retroreflective photoelectric sensor (Cont.)				
		153-01015	Part number / Article number	RF 775x 100 mm / 904-51643
			Description	RF 775x 200 mm / 904-51645 RF 775x 300 mm / 904-51646 RF 775x 400 mm / 904-51647 RF 775x 500 mm / 904-51648
			Dimensions	Reflective foil, weatherproof 775 x ... mm
			Mounting	Self-adhesive
			Temperature range	-40 ... +70°C
			Suitable for	Retroreflective photoelectric sensor (LED)

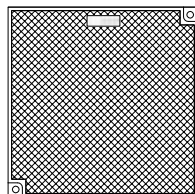
Reflectors für time-of-flight devices (Cont.)				
		153-00483	Part number / Article number	RL 250 / 904-51562
			Description	Reflector for ranges up to 50 m / 70 m
			Dimensions	248 x 248 x 4.5 mm
			Mounting	4 mounting holes
			Temperature range	-20 ... +60 °C
			Suitable for	FR 55, FR 90, FR 91
		153-00483	Part number / Article number	RL 250/V / 904-51578
			Description	Reflector for ranges up to 30 m
			Dimensions	248 x 248 x 4.5 mm
			Mounting	4 mounting holes
			Temperature range	-20 ... +60 °C
			Suitable for	FR 92
		153-00488	Part number / Article number	RF 250 / 599-91009
			Description	Reflective foil for ranges up to 50 m / 70 m
			Dimensions	250 x 250 mm
			Mounting	Self-adhesive
			Temperature range	-20 ... +60 °C
			Suitable for	FR 55, FR 90, FR 91
		153-00488	Part number / Article number	RF 250/V / 904-51579
			Description	Reflective foil for ranges up to 30 m
			Dimensions	250 x 250 mm
			Mounting	Self-adhesive
			Temperature range	-20 ... +60 °C
			Suitable for	FR 92

# Accessories

## Reflectors

Reflectors für time-of-flight devices (Cont.)															
		<table border="1"> <tr> <td>Part number / Article number</td> <td>RL 460 / 904-51565</td> </tr> <tr> <td>Description</td> <td>Reflector for ranges up to 80 m</td> </tr> <tr> <td>Dimensions</td> <td>460 x 460 x 4.5 mm</td> </tr> <tr> <td>Mounting</td> <td>4 mounting holes</td> </tr> <tr> <td>Temperature range</td> <td>-20 ... +60 °C</td> </tr> <tr> <td>Suitable for</td> <td>FR 90, FR 91, FR 92</td> </tr> </table>	Part number / Article number	RL 460 / 904-51565	Description	Reflector for ranges up to 80 m	Dimensions	460 x 460 x 4.5 mm	Mounting	4 mounting holes	Temperature range	-20 ... +60 °C	Suitable for	FR 90, FR 91, FR 92	
Part number / Article number	RL 460 / 904-51565														
Description	Reflector for ranges up to 80 m														
Dimensions	460 x 460 x 4.5 mm														
Mounting	4 mounting holes														
Temperature range	-20 ... +60 °C														
Suitable for	FR 90, FR 91, FR 92														
		<table border="1"> <tr> <td>Part number / Article number</td> <td>RL 540 / 904-51571</td> </tr> <tr> <td>Description</td> <td>Reflector in housing for ranges up to 200 m</td> </tr> <tr> <td>Dimensions</td> <td>540 x 540 x 5.6 mm</td> </tr> <tr> <td>Mounting</td> <td>4 mounting holes</td> </tr> <tr> <td>Temperature range</td> <td>-20 ... +60 °C</td> </tr> <tr> <td>Suitable for</td> <td>FR 90, FR 91, FR 92</td> </tr> </table>	Part number / Article number	RL 540 / 904-51571	Description	Reflector in housing for ranges up to 200 m	Dimensions	540 x 540 x 5.6 mm	Mounting	4 mounting holes	Temperature range	-20 ... +60 °C	Suitable for	FR 90, FR 91, FR 92	
Part number / Article number	RL 540 / 904-51571														
Description	Reflector in housing for ranges up to 200 m														
Dimensions	540 x 540 x 5.6 mm														
Mounting	4 mounting holes														
Temperature range	-20 ... +60 °C														
Suitable for	FR 90, FR 91, FR 92														
		<table border="1"> <tr> <td>Part number / Article number</td> <td>RL 660 / 904-51564</td> </tr> <tr> <td>Description</td> <td>Reflector for ranges up to 80 m</td> </tr> <tr> <td>Dimensions</td> <td>660 x 660 x 4.5 mm</td> </tr> <tr> <td>Mounting</td> <td>4 mounting holes</td> </tr> <tr> <td>Temperature range</td> <td>-20 ... +60 °C</td> </tr> <tr> <td>Suitable for</td> <td>FR 90, FR 91, FR 92</td> </tr> </table>	Part number / Article number	RL 660 / 904-51564	Description	Reflector for ranges up to 80 m	Dimensions	660 x 660 x 4.5 mm	Mounting	4 mounting holes	Temperature range	-20 ... +60 °C	Suitable for	FR 90, FR 91, FR 92	
Part number / Article number	RL 660 / 904-51564														
Description	Reflector for ranges up to 80 m														
Dimensions	660 x 660 x 4.5 mm														
Mounting	4 mounting holes														
Temperature range	-20 ... +60 °C														
Suitable for	FR 90, FR 91, FR 92														
		<table border="1"> <tr> <td>Part number / Article number</td> <td>RL 700 / 904-51570</td> </tr> <tr> <td>Description</td> <td>Reflector in housing for ranges up to 250 m</td> </tr> <tr> <td>Dimensions</td> <td>700 x 700 x 5.6 mm</td> </tr> <tr> <td>Mounting</td> <td>4 mounting holes</td> </tr> <tr> <td>Temperature range</td> <td>-20 ... +60 °C</td> </tr> <tr> <td>Suitable for</td> <td>FR 90, FR 91, FR 92</td> </tr> </table>	Part number / Article number	RL 700 / 904-51570	Description	Reflector in housing for ranges up to 250 m	Dimensions	700 x 700 x 5.6 mm	Mounting	4 mounting holes	Temperature range	-20 ... +60 °C	Suitable for	FR 90, FR 91, FR 92	
Part number / Article number	RL 700 / 904-51570														
Description	Reflector in housing for ranges up to 250 m														
Dimensions	700 x 700 x 5.6 mm														
Mounting	4 mounting holes														
Temperature range	-20 ... +60 °C														
Suitable for	FR 90, FR 91, FR 92														


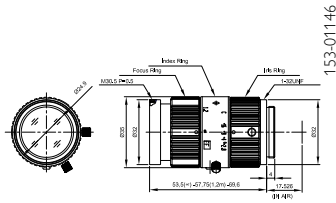
Mounting of the reflectors as shown in the dimensional drawing or alignment according to labeling on reflector front




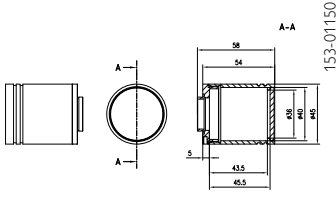

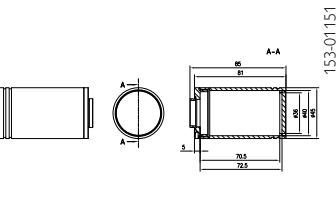

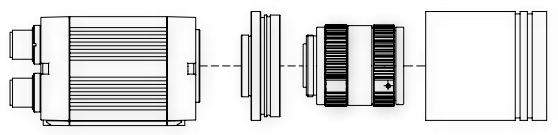
Lenses, C-mount			
		<p>Part number / Article number Description</p>	<p>LO C 8 / 526-51513 C-mount lens 8 mm focal length Aperture/focus: manual Filter thread: 30.5/0.5 Diameter: 33.5 mm Max. length: 33.5 mm Weight: 70 g</p>
		<p>Part number / Article number Description</p>	<p>LO C 12 / 526-51514 C-mount lens 12 mm focal length Aperture/focus: manual Filter thread: 30.5/0.5 Diameter: 33.5 mm Max. length: 33.5 mm Weight: 65 g</p>
		<p>Part number / Article number Description</p>	<p>LO C 16 / 526-51515 C-mount lens 16 mm focal length Aperture/focus: manual Filter thread: 30.5/0.5 Diameter: 33.5 mm Max. length: 33.5 mm Weight: 65 g</p>
		<p>Part number / Article number Description</p>	<p>LO C 25 / 526-51516 C-mount lens 25 mm focal length Aperture/focus: manual Filter thread: 30.5/0.5 Diameter: 33.5 mm Max. length: 44.9 mm Weight: 75 g</p>
		<p>Part number / Article number Description</p>	<p>LO C 35 / 526-51525 C-mount lens 35 mm focal length Aperture/focus: manual Filter thread: 30.5/0.5 Diameter: 33.5 mm Max. length: 47.5 mm Weight: 87 g</p>
		<p>Part number / Article number Description</p>	<p>LO C 50 / 526-51113 C-mount lens 50 mm focal length Aperture/focus: manual Filter thread: 30.5/0.5 Diameter: 33.5 mm Max. length: 47.2 mm Weight: 90 g</p>

# Accessories

## Lenses

Lenses, C-mount (Cont.)			
		Part number / Article number	LO C 75 / 526-51116
		Description	C-mount lens 75 mm focal length Aperture/focus: manual Filter thread: 30.5/0.5 Diameter: 35.0 mm Max. length: 73.6 mm Weight: 113 g
		Suitable for	V10 / V20 C-Mount

Accessories, lenses				
		Part number	Article number	Description
		LR 5	543-11011	Intermediate ring 5 mm
		ETS	527-51143	Intermediate ring set: 1 x 0,5 mm    1 x 10 mm 2 x 1 mm     1 x 20 mm 1 x 5 mm     1 x 40 mm
		Part number	Article number	Description
		LOF-BP-R635-30,5x0,5	533-01015	Red filter for C-mount lens, Bandpass 610 - 660 nm
		LOF-LP-IR850-30,5x0,5	533-01010	Infrared filter for C-mount lens, Transmission > 825 nm
		LOF-PF-30,5 x 0,5	526-51531	Polarisation filter for C-mount lens

Protective casing and polarizer glasses			
		Part number / Article number	LPT 45 CML 5 / 527-51132
		Description	C-mount IP 65 protective casing Flange 5 mm Maximum lens dimensions: diameter: 38 mm length: 42 mm
		Suitable for	V10 / V20 C-Mount
		Part number / Article number	LPT 45 CML 5L / 527-51134
		Description	C-mount IP 65 protective casing Flange 5 mm Maximum lens dimensions: diameter: 38 mm length: 60 mm
		Suitable for	V10 / V20 C-Mount
			V10, V20
			C-mount IP 65 protective casing LPT 45 CML 5 / 527-51132
			C-mount lenses LO C 8 / 526-51513 LO C 12 / 526-51514 LO C 16 / 526-51515 LO C 25 / 526-51516 LO C 35 / 526-51525 LO C 50 / 526-51113 LO C 75 / 526-51116

## Protective casing and polarizer glasses

Protective casing and polarizer glasses (Cont.)			
		<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPTW50 / 527-51135</p> <p>Spark protection V10/V20</p> <p>Material: anodised aluminium incl. front screen, glass</p> <p>V10 / V20</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPT S5 / 527-51136</p> <p>Replacement front screen, set of 5 pcs for LPTW50</p> <p>Material: glass</p> <p>LPTW50</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPF S1 / 527-51139</p> <p>Polarizer glass for welding spark protection (100% coverage)</p> <p>Material: coated glass</p> <p>V10 / V20</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPF S2 / 527-51140</p> <p>Polarizer glass for welding spark protection (50% coverage, switchable)</p> <p>Material: coated glass</p> <p>V10 / V20</p>

Surface light for V10, V20			
	<p>Part number</p>	<p>Article number</p>	<p>Description</p>
	<p>LF45 W-24-2L12</p>	<p>525-51147</p>	<p>Surface light, V10 / V20, white, 12-pin</p>
	<p>LF45 R-24-2L12</p>	<p>525-51148</p>	<p>Surface light, V10 / V20, red, 12-pin</p>
	<p>LF45 IR-24-2L12</p>	<p>525-51149</p>	<p>Surface light, V10 / V20, infrared, 12-pin*</p>

\* External IR illumination can only be combined with IR Types or C-Mount sensors.  
 LED area lighting for incidental illumination in IP67 housings. Can be cascaded to illuminate from several directions.  
 No switching amplifier required.



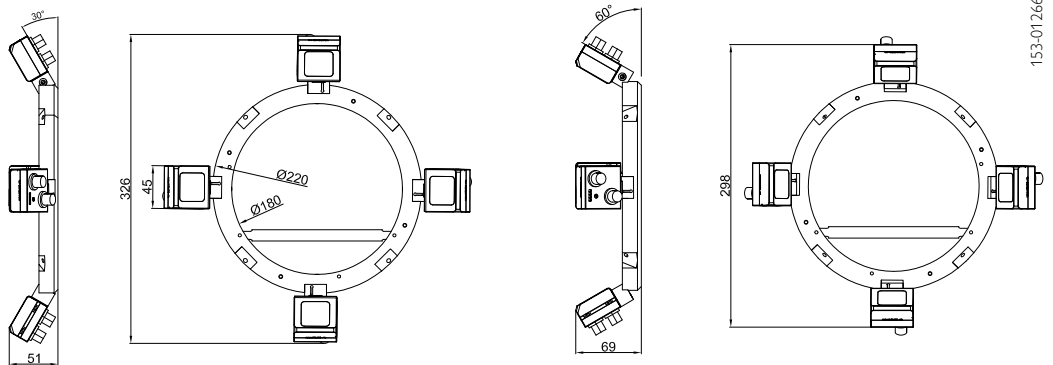
# Accessories

## Illumination

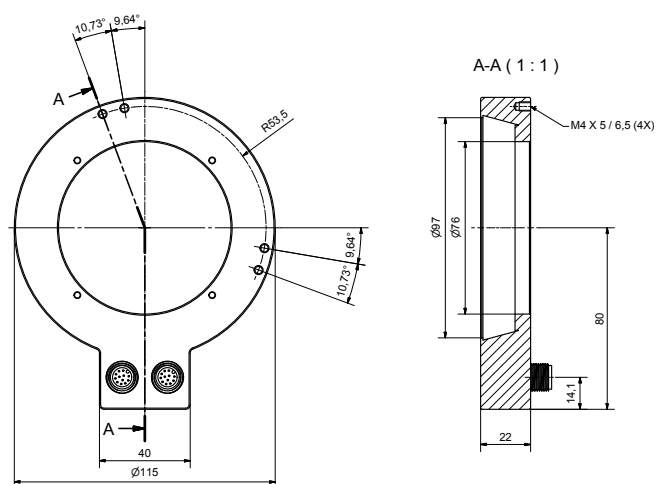
### Multishot




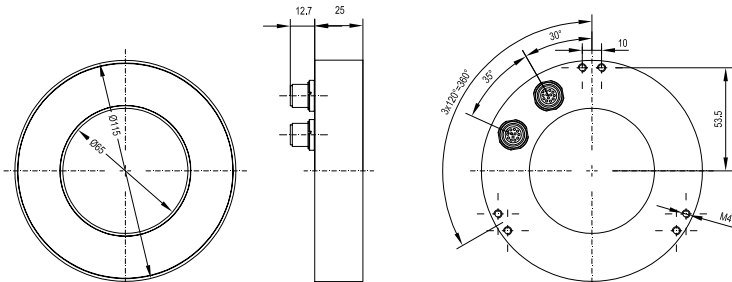
Part number	Article number	Description
LM 300 WWK-24Q4-2L12	525-51158	Illumination Multishot, 4 x LF 45 white, including MG3A for VISOR, mounting, apre-assembled on retaining ring and pre-wired with 3 special cables, beam angle 60°, changeable to 30 °
LM 300 RWK-24Q4-2L12	525-51159	Illumination Multishot, 4 x LF 45 red, including MG3A for VISOR, mounting, apre-assembled on retaining ring and pre-wired with 3 special cables, beam angle 60°, changeable to 30 °
LM 300 IWK-24Q4-2L12	525-51160	Illumination Multishot, 4 x LF 45 infrared, including MG3A for VISOR, mounting, apre-assembled on retaining ring and pre-wired with 3 special cables, beam angle 60°, changeable to 30 °



LM 100 WWK-24Q4-2L12	532-51096	Ring light, angled, 100 mm, white, individual control of 4 segments for Multishot, connection with illumination cable without LA45
LM 100 RWK-24Q4-2L12	532-51097	Ring light, angled, 100 mm, red, individual control of 4 segments for Multishot, connection with illumination cable without LA45
LM 100 W DF2	532-51098	Diffuser for LM 100, angled


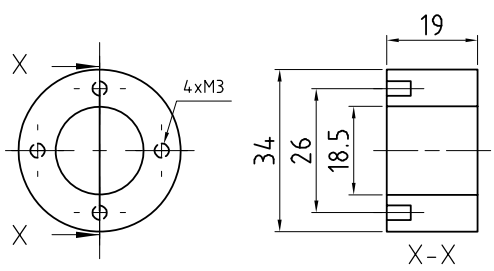
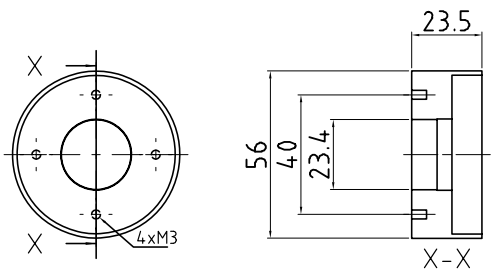
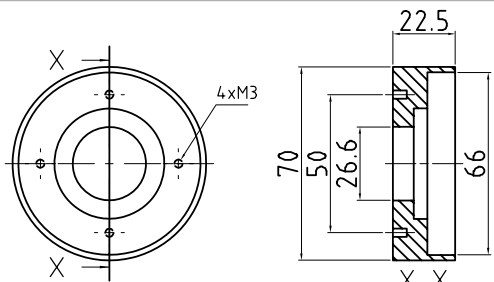




Ring light for V10, V20				
	Part number	Article number	Description	Angle bracket
	LFR 115 WD-24-2L12	525-51150	Ring light, V10 / V20, white, diffuse, 12-pin	543-11015
	LFR 115 RD-24-2L12	525-51151	Ring light, V10 / V20, red, diffuse, 12-pin	543-11015
	LFR 115 ID-24-2L12	525-51152	Ring light, V10 / V20, infrared, diffuse, 12-pin*	543-11015
	LFR 115 WK-24-2L12	525-51153	Ring light, V10 / V20, white, clear, 12-pin	543-11015
	LFR 115 RK-24-2L12	525-51154	Ring light, V10 / V20, red, clear, 12-pin	543-11015
	LFR 115 IK-24-2L12	525-51155	Ring light, V10 / V20, infrared, clear, 12-pin*	543-11015
				153-00926

\* External IR illumination is only possible for IR types or C-Mount sensors.

LED ring lighting for the incidental illumination of objects in IP67-tight housings. No switching amplifier is required and cascading is possible.


Ring light							
	Part number	Article number	Description	Angle bracket	Draw.		
	LR 32 W-24-KFL5	532-51000	Ring light, 32 mm, white	543-11016	1		
	LR 56 W-24-KFL5	532-51001	Ring light, 56 mm, white	543-11019	2		
	LR 70 W-24-KFL5	532-51002	Ring light, 70 mm, white	543-11017	3		
	LR 32 R-24-KFL5	532-51003	Ring light, 32 mm, red	543-11016	1		
	LR 56 R-24-KFL5	532-51004	Ring light, 56 mm, red	543-11019	2		
	LR 70 R-24-KFL5	532-51005	Ring light, 70 mm, red	543-11017	3		
1			153-00726	2			153-00727
3			153-00731				

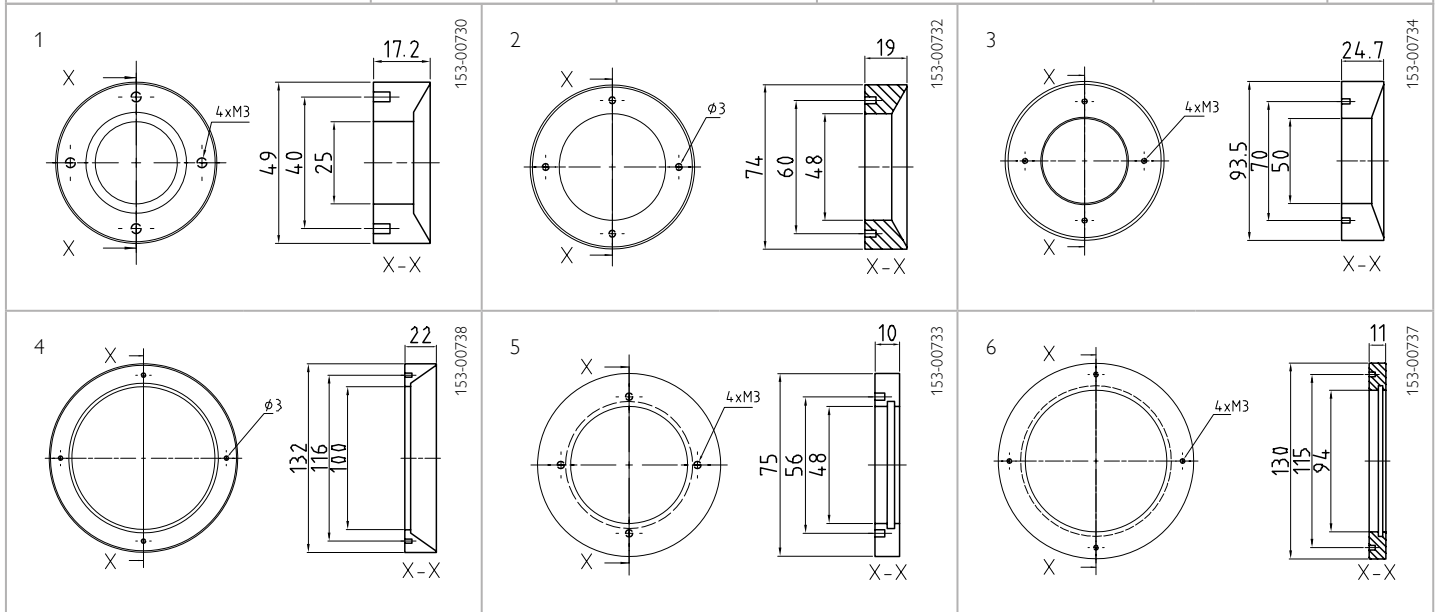
LED ring lighting for the incidental illumination of objects.

Requires connection adapter for LED illumination LA45V-24-2L12.

# Accessories


## Illumination

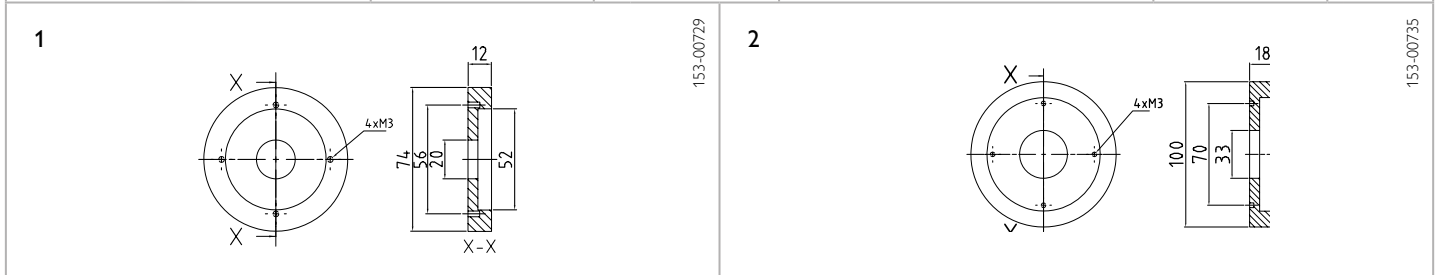
Ring light, angled					
	Part number	Article number	Description	Angle bracket	Draw.
	LR 50 WW-24-KFL5	532-51006	Ring light, angled, 50 mm, white	543-11017	1
	LR 74 WW-24-KFL5	532-51007	Ring light, angled, 74 mm, white	543-11018	2
	LR 90 WW-24-KFL5	532-51008	Ring light, angled, 90 mm, white	543-11018	3
	LR 132 WW-24-KFL5	532-51009	Ring light, angled, 132 mm, white	543-11015	4
	LR 50 RW-24-KFL5	532-51010	Ring light, angled, 50 mm, red	543-11017	1
	LR 74 RW-24-KFL5	532-51011	Ring light, angled, 74 mm, red	543-11018	2
	LR 90 RW-24-KFL5	532-51012	Ring light, angled, 90 mm, red	543-11018	3
	LR 132 RW-24-KFL5	532-51013	Ring light, angled, 132 mm, red	543-11015	4
	LR 75 WI-24-KFL5	532-51014	Ring light, indirect, 75 mm, white	543-11018	5
LR 130 WI-24-KFL5	532-51015	Ring light, indirect, 130 mm, white	543-11015	6	
LR 75 RI-24-KFL5	532-51016	Ring light, indirect, 75 mm, red	543-11018	5	
LR 130 RI-24-KFL5	532-51017	Ring light, indirect, 130 mm, red	543-11015	6	




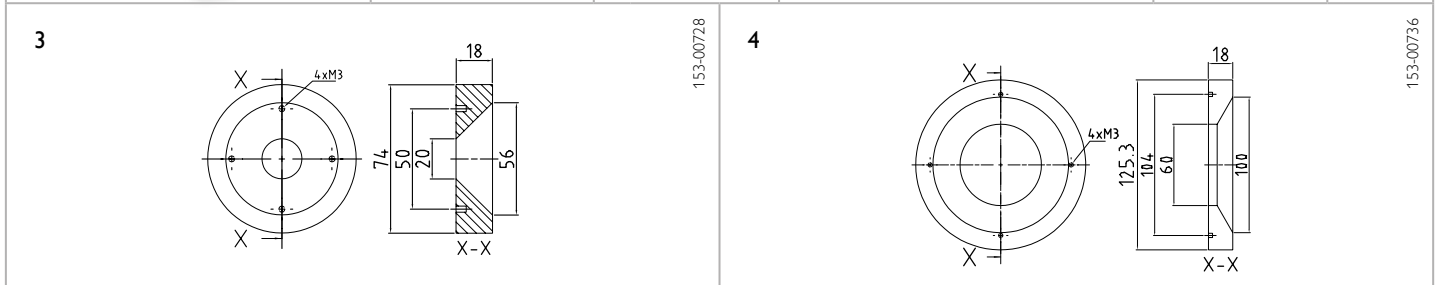
Funnel-shaped LED ring light for dark field illumination.

Requires connection adapter for LED illumination LA45V-24-2L12.


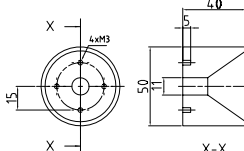
Ring light, indirect, diffuse					
	Part number	Article number	Description	Angle bracket	Draw.
	LR 70 WID-24-KFL5	532-51030	Ring light, indirect, diffuse, 70 mm, white	543-11019	1
	LR 100 WID-24-KFL5	532-51031	Ring light, indirect, diffuse, 100 mm, white	543-11018	2
	LR 70 RID-24-KFL5	532-51032	Ring light, indirect, diffuse, 70 mm, red	543-11019	1
	LR 100 RID-24-KFL5	532-51033	Ring light, indirect, diffuse, 100 mm, red	543-11018	2



Ring light, indirect, diffuse					
	Part number	Article number	Description	Angle bracket	Draw.
	LR 70 WD-24-KFL5	532-51034	Ring light, diffuse, 70 mm, white	543-11019	3
	LR 100 WD-24-KFL5	532-51035	Ring light, diffuse, 100 mm, white	543-11015	4
	LR 70 RD-24-KFL5	532-51036	Ring light, diffuse, 70 mm, red	543-11019	3
	LR 100 RD-24-KFL5	532-51037	Ring light, diffuse, 100 mm, red	543-11015	4




LED ring light with LEDs shining surfacely and directly on centre of circle.  
Requires connection adapter for LED illumination LA45V-24-2L12.

Ring light, dome, diffuse				
	Part number	Article number	Description	Angle bracket
	LD 50 WD-24-KFL5	532-51038	Ring light, dome, diffuse, 50 mm, white	543-11016
	LD 50 RD-24-KFL5	532-51039	Ring light, dome, diffuse, 50 mm, red	543-11016
				153-00704

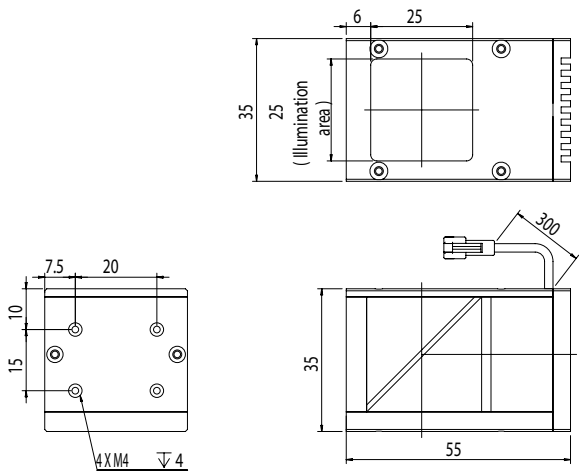
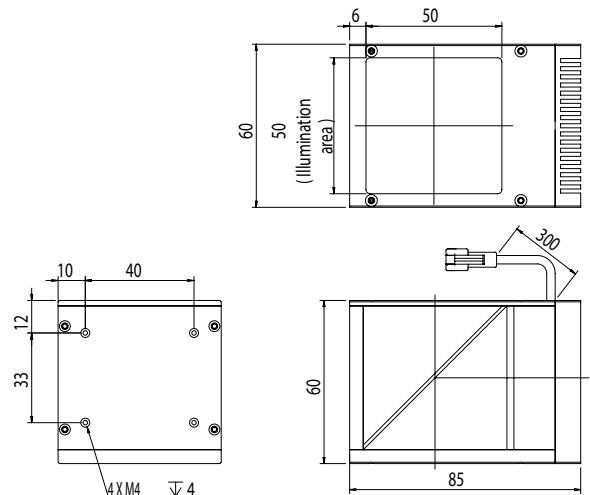
LED ring lighting with funnel-shaped diffuser sheet for strongly reflective objects.  
Requires connection adapter for LED illumination LA45V-24-2L12.

# Accessories


## Illumination

Coaxial illumination				
	Part number	Article number	Description	Drawing
		LK 25 R-24-KFL5	532-51043	Coaxial lighting, 25 mm, red
	LK 46 R-24-KFL5	532-51044	Coaxial lighting, 46 mm, red	2

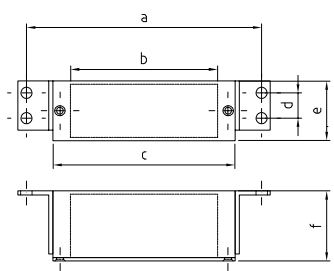
  

1		153-00830	2		153-00831
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Coaxial mirrored LED lighting for homogeneous illumination of reflected objects.  
Requires connection adapter for LED illumination LA45V-24-2L12.

Light strip, diffuse				
	Part number	Article number	Description	Type
		LB 44 WD-24-KFL5	532-51026	Light strip, diffuse, 44 mm, white
	LB 86 WD-24-KFL5	532-51027	Light strip, diffuse, 86 mm, white	2
	LB 180 WD-24-KFL5	532-51049	Light strip, diffuse, 180 mm, white	3
	LB 44 RD-24-KFL5	532-51028	Light strip, diffuse, 44 mm, red	1
	LB 86 RD-24-KFL5	532-51029	Light strip, diffuse, 86 mm, red	2
	LB 180 RD-24-KFL5	532-51052	Light strip, diffuse, 180 mm, red	3

	153-00756				

Bar-shaped light strip with diffuser sheet for indirect illumination.  
Requires connection adapter for LED illumination LA45V-24-2L12.

Surface light				
	Part number	Article number	Description	Drawing
	LF 36 WD-24-KFL5	532-51018	Surface light, diffuse, 36 mm, white	1
	LF 51 WD-24-KFL5	532-51019	Surface light, diffuse, 51 mm, white	2
	LF 100 WD-24-KFL5	532-51020	Surface light, diffuse, 100 mm, white	3
	LF 200 WD-24-KFL5	532-51024	Surface light, diffuse, 200 mm, white	4
	LF 36 RD-24-KFL5	532-51021	Surface light, diffuse, 36 mm, red	1
	LF 51 RD-24-KFL5	532-51022	Surface light, diffuse, 51 mm, red	2
	LF 100 RD-24-KFL5	532-51023	Surface light, diffuse, 100 mm, red	3
LF 200 RD-24-KFL5	532-51025	Surface light, diffuse, 200 mm, red	4	

1	<table border="1"> <tr><td>a</td><td>=</td><td>47</td><td>mm</td></tr> <tr><td>b</td><td>=</td><td>25</td><td>mm</td></tr> <tr><td>c</td><td>=</td><td>3,4</td><td>mm</td></tr> <tr><td>d</td><td>=</td><td>36</td><td>mm</td></tr> <tr><td>e</td><td>=</td><td>40</td><td>mm</td></tr> <tr><td>f</td><td>=</td><td>47</td><td>mm</td></tr> <tr><td>g</td><td>=</td><td>36</td><td>mm</td></tr> <tr><td>h</td><td>=</td><td>15</td><td>mm</td></tr> </table>	a	=	47	mm	b	=	25	mm	c	=	3,4	mm	d	=	36	mm	e	=	40	mm	f	=	47	mm	g	=	36	mm	h	=	15	mm	153-00758	3		153-00762
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2	<table border="1"> <tr><td>a</td><td>=</td><td>62</td><td>mm</td></tr> <tr><td>b</td><td>=</td><td>40</td><td>mm</td></tr> <tr><td>c</td><td>=</td><td>3,4</td><td>mm</td></tr> <tr><td>d</td><td>=</td><td>50</td><td>mm</td></tr> <tr><td>e</td><td>=</td><td>54</td><td>mm</td></tr> <tr><td>f</td><td>=</td><td>62</td><td>mm</td></tr> <tr><td>g</td><td>=</td><td>50</td><td>mm</td></tr> <tr><td>h</td><td>=</td><td>15</td><td>mm</td></tr> </table>	a	=	62	mm	b	=	40	mm	c	=	3,4	mm	d	=	50	mm	e	=	54	mm	f	=	62	mm	g	=	50	mm	h	=	15	mm	153-00758	4		153-00757
a	=	62	mm																																		
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d	=	50	mm																																		
e	=	54	mm																																		
f	=	62	mm																																		
g	=	50	mm																																		
h	=	15	mm																																		

Surface LED background illumination with very bright, regular surface illumination.  
Requires connection adapter for LED illumination LA45V-24-2L12.

Surface light				
	Part number	Article number	Description	Drawing
	LF 100 A RD-24-KFL5	532-51040	Surface light, 100 mm, red, diffuse	1
	LF 60 A RD-24-KFL5	532-51041	Surface light, 60 mm, red, diffuse	2
	LF 100 A WD-24-KFL5-65	532-51042	Surface light, 100 mm, white, diffuse, IP 65	3
	LF 51 PF	532-51099	Polarizer for LF 51	
	LF 100 PF	532-51100	Polarizer for LF 100	


1		153-00828	2		153-00827
3		153-00829			

Surface LED background lighting for diffuse illumination.  
Requires connection adapter for LED illumination LA45V-24-2L12.

# Accessories

## Illumination

### Light strips, High Power, LBxxx

	Part number	Article number	Description	Type
	LB 250 WK 24 A15 3L5	532-51056	Light strip, 250 mm, white, clear glass, 24V DC, 15°, 3 x M12, 5-pin	1
	LB 375 WK 24 A15 3L5	532-51057	Light strip, 375 mm, white, clear glass, 24V DC, 15°, 3 x M12, 5-pin	2
	LB 625 WK 24 A15 3L5	532-51058	Light strip, 625 mm, white, clear glass, 24V DC, 15°, 3 x M12, 5-pin	3
	LB 1000 WK 24 A15 3L5	532-51059	Light strip, 1000 mm, white, clear glass, 24V DC, 15°, 3 x M12, 5-pin	4
	LB 250 WK 24 A35 3L5	532-51060	Light strip, 250 mm, white, clear glass, 24V DC, 35°, 3 x M12, 5-pin	1
	LB 375 WK 24 A35 3L5	532-51061	Light strip, 375 mm, white, clear glass, 24V DC, 35°, 3 x M12, 5-pin	2
	LB 625 WK 24 A35 3L5	532-51062	Light strip, 625 mm, white, clear glass, 24V DC, 35°, 3 x M12, 5-pin	3
	LB 1000 WK 24 A35 3L5	532-51063	Light strip, 1000 mm, white, clear glass, 24V DC, 35°, 3 x M12, 5-pin	4
	LB 250 RK 24 A15 3L5	532-51064	Light strip, 250 mm, red, clear glass, 24V DC, 15°, 3 x M12, 5-pin	1
	LB 375 RK 24 A15 3L5	532-51065	Light strip, 375 mm, red, clear glass, 24V DC, 15°, 3 x M12, 5-pin	2
	LB 625 RK 24 A15 3L5	532-51066	Light strip, 625 mm, red, clear glass, 24V DC, 15°, 3 x M12, 5-pin	3
	LB 1000 RK 24 A15 3L5	532-51067	Light strip, 1000 mm, red, clear glass, 24V DC, 15°, 3 x M12, 5-pin	4
	LB 250 RK 24 A35 3L5	532-51068	Light strip, 250 mm, red, clear glass, 24V DC, 35°, 3 x M12, 5-pin	1
	LB 375 RK 24 A35 3L5	532-51069	Light strip, 375 mm, red, clear glass, 24V DC, 35°, 3 x M12, 5-pin	2
	LB 625 RK 24 A35 3L5	532-51070	Light strip, 625 mm, red, clear glass, 24V DC, 35°, 3 x M12, 5-pin	3
	LB 1000 RK 24 A35 3L5	532-51071	Light strip, 1000 mm, red, clear glass, 24V DC, 35°, 3 x M12, 5-pin	4
	LB 250 IRK 24 A15 3L5	532-51055	Light strip, 250 mm, infrared, clear glass, 24V DC, 15°, 3 x M12, 5-pin	1
	LB 375 IRK 24 A15 3L5	532-51072	Light strip, 375 mm, infrared, clear glass, 24V DC, 15°, 3 x M12, 5-pin	2
	LB 625 IRK 24 A15 3L5	532-51073	Light strip, 625 mm, infrared, clear glass, 24V DC, 15°, 3 x M12, 5-pin	3
	LB 1000 IRK 24 A15 3L5	532-51074	Light strip, 1000 mm, infrared, clear glass, 24V DC, 15°, 3 x M12, 5-pin	4
	LB 250 IRK 24 A35 3L5	532-51075	Light strip, 250 mm, infrared, clear glass, 24V DC, 35°, 3 x M12, 5-pin	1
	LB 375 IRK 24 A35 3L5	532-51076	Light strip, 375 mm, infrared, clear glass, 24V DC, 35°, 3 x M12, 5-pin	2
	LB 625 IRK 24 A35 3L5	532-51077	Light strip, 625 mm, infrared, clear glass, 24V DC, 35°, 3 x M12, 5-pin	3
	LB 1000 IRK 24 A35 3L5	532-51078	Light strip, 1000 mm, infrared, clear glass, 24V DC, 35°, 3 x M12, 5-pin	4
	LB-250 DF	532-51090	Diffusor for light bar 250 mm	
	LB-375 DF	532-51091	Diffusor for light bar 375 mm	
	LB-625 DF	532-51092	Diffusor for light bar 625 mm	
	LB-1000 DF	532-51093	Diffusor for light bar 1000 mm	

### Accessories

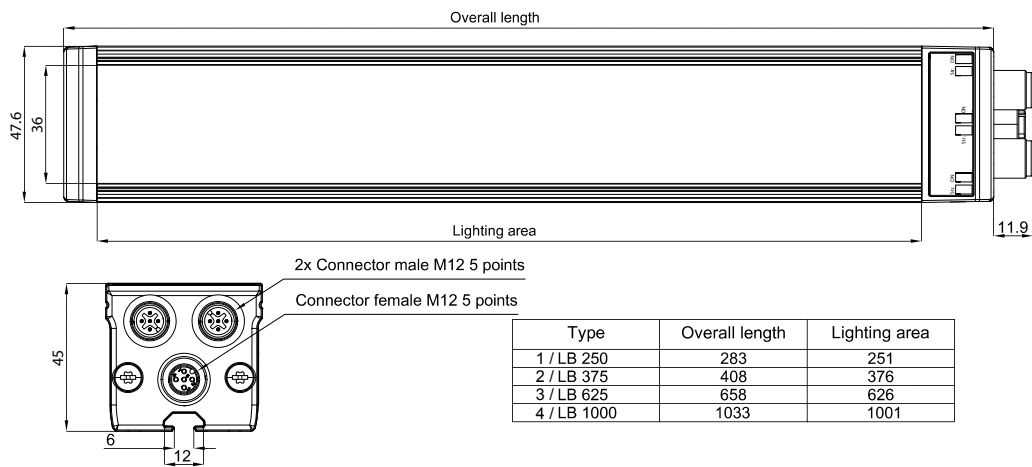
Connection cables

From Page A-40

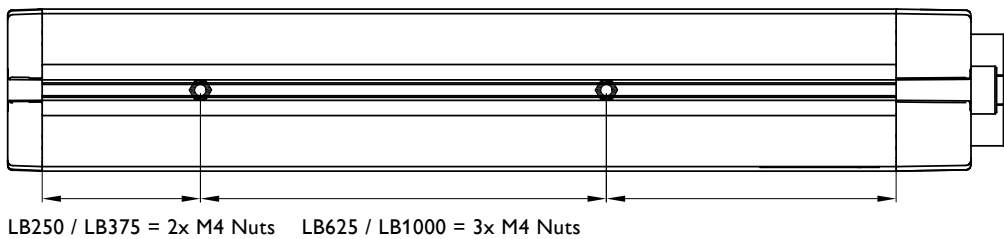
Brackets

From Page A-4

Light strips, High Power, LBxxx

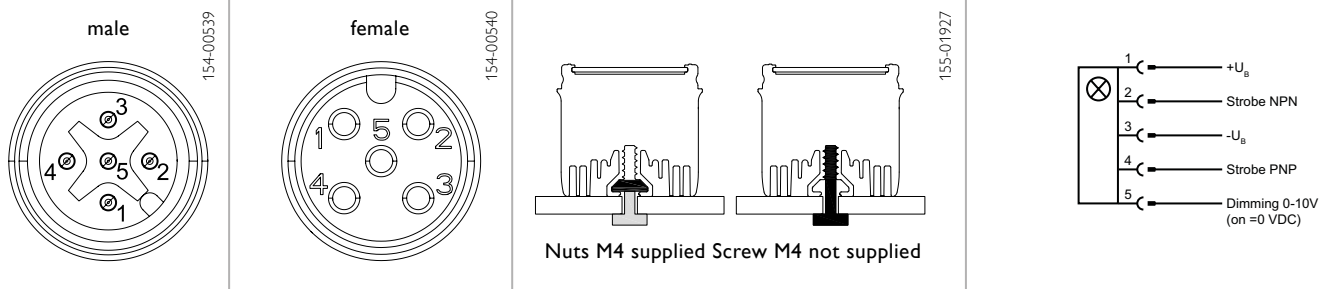


Mounting

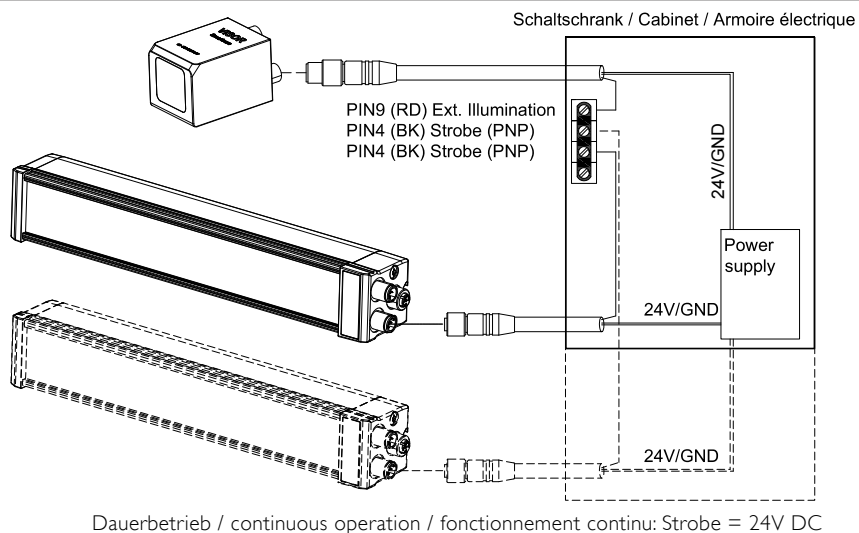


155-01926

Wiring



Connection illumination - sensor



155-01906

A



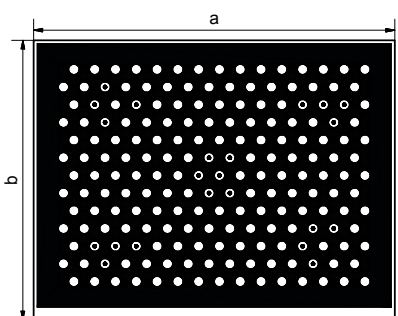
# ZCP

## Calibration accessories for SensoPart vision sensors

Calibration plates				
	Part number	Article number	Description	Typ
	ZCP 50-13x15	533-11030	15x13 points, 50 mm x 37,9 mm	Standard
	ZCP 100-13x15	533-11031	15x13 points, 100 mm x 75,8 mm	Standard
	ZCP 200-13x15	533-11032	15x13 points, 200 mm x 151,7 mm	Standard
	ZCP 500-13x15	533-11033	15x13 points, 500 mm x 379,2 mm	Standard
	ZCP 50-13x15-X01	533-11037	5x13 points, crosshairs, 50 mm x 37,9 mm	X01
	ZCP 50-13x15-X01	533-11038	15x13 points, crosshairs, 100 mm x 75,8 mm	X01
	ZCP 100-13x15-X01	533-11039	15x13 points, crosshairs, 200 mm x 151,7 mm	X01
	ZCP 200-13x15-X01	533-11040	15x13 points, crosshairs, 500 mm x 379,2 mm	X01
	ZCP 500-13x15-X01	533-11035	15x13 points, fiducials, 100 mm x 75,8 mm	X02
	ZCP 50-13x15-X03	533-11042	15x13 points, fitting holes, 50 mm x 37,9 mm	X03
	ZCP 100-13x15-X03	533-11041	15x13 points, fitting holes, 100 mm x 75,8 mm	X03
	ZCP 100-ECC200	533-11036	Calibration plate for Code Reader ECC200 quality parameters	-

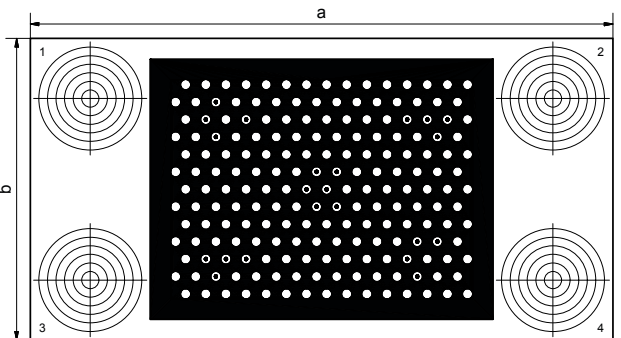
The calibration plates are used for calibrating the VISOR® vision sensor.

Scaling, tilt angle against perpendicular view to the measurement plane or by lens distortion are all corrected.

Dimensional drawing Standard			a	b	c	d	e Ø	t	Recommended field of view
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
	153-113531	ZCP 50-13x15	54	47				2	22 - 50
		ZCP 100-13x15	104	85				2	30 - 100
		ZCP 200-13x15	204	161				4	60 - 200
		ZCP 500-13x15	504	389				4	150 - 500

Supports calibration method „Calibration plate (Measurement)“.

Reference marks: none..

Dimensional drawing X01			a	b	c	d	e Ø	t	Recommended field of view
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
	153-01300	ZCP 50-13x15-X01	98	54				2	22 - 50
		ZCP 100-13x15-X01	180	100				2	30 - 100
		ZCP 200-13x15-X01	340	176				4	60 - 200
		ZCP 500-13x15-X01	820	403				4	150 - 500

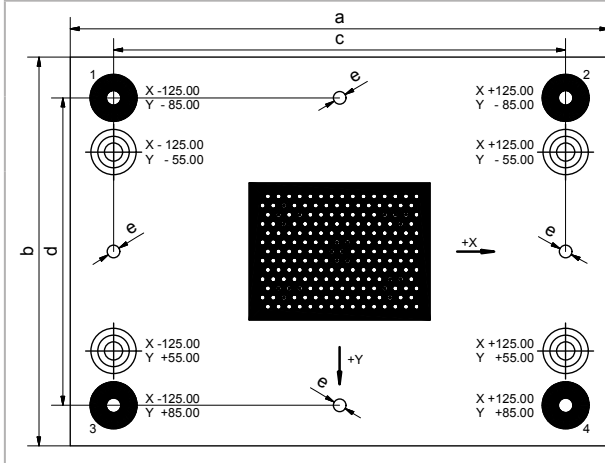
Supports calibration method „Calibration plate (Robotics)“.

With the reference marks, a reference to the absolute coordinate system is established.

Reference marks: crosshairs.

### Calibration plates (Cont)

#### Dimensional drawing X02

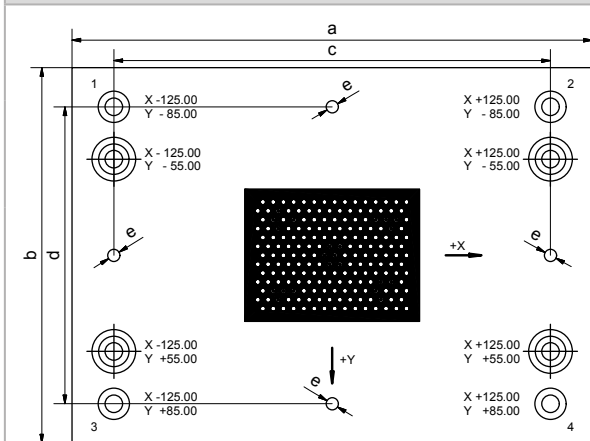


153-13528

	a [mm]	b [mm]	c [mm]	d [mm]	e Ø [mm]	t [mm]	Recommended field of view [mm]
ZCP 100-13x15-X02	295	215	250	170	7	4	30 - 100

For establishing an absolute reference, reflex marks are available. The transformation is calculated in the robot.  
Reference marks: fiducials, crosshairs.

#### Dimensional drawing X03



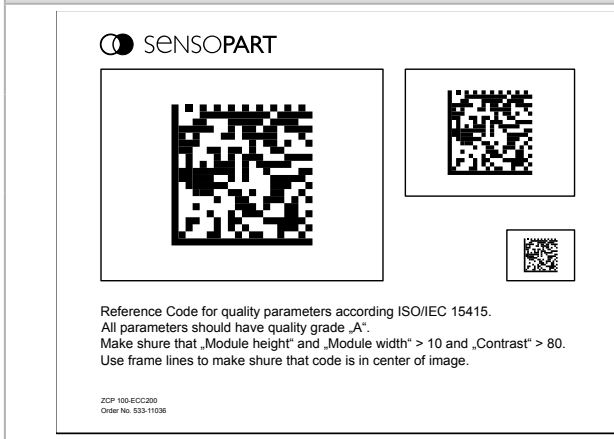
153-13530

	a [mm]	b [mm]	c [mm]	d [mm]	e Ø [mm]	t [mm]	Recommended field of view [mm]
ZCP 50-13x15-X03	298	218	250	170	7	4	22 - 50
ZCP 100-13x15-X03	298	218	250	170	7	4	30 - 100

See version X02.

Reference marks: fitting holes, crosshairs.

#### Dimensional drawing ZCP 100-ECC200



153-13529





Calibration plate for ECC200 Codes, sample code in quality grad „A“ according ISO/IEC 15415.

# Accessories

## Cables



- Cables
- Converters
- Power supply units and switching devices

Straight connectors	90° connectors	90° connectors with LED	Shielded connectors
			

Part number	Article number	Description
<b>M5, 4-pin</b>		
CN4 FG-2m-PUR	902-51793	2 m, straight, PUR
CN4 FG-5m-PUR	902-51791	5 m, straight, PUR
CN4 FW-2m-PUR	902-51794	2 m, 90°, PUR
CN4 FW-5m-PUR	902-51792	5 m, 90°, PUR
<b>M8, 3-pin</b>		
K3-2m-G-PUR	902-50679	2 m, straight, PUR
K3-5m-G-PUR	902-51614	5 m, straight, PUR, suitable for drag chains
K3-10m-G-PUR	902-50694	10 m, straight, PUR, suitable for drag chains
K3-2m-W-PUR	902-50681	2 m, 90°, PUR, suitable for drag chains
K3-5m-W-PUR	902-51615	5 m, 90°, PUR, suitable for drag chains
K3-2m-W-PL-PUR	902-50683	2 m, 90°, PUR, with indicator LED
K3-5m-W-PL-PUR	902-51616	5 m, 90°, PUR, with indicator LED, suitable for drag chains
K3-10m-W-PL-PUR	902-50693	10 m, 90°, PUR, with indicator LED, suitable for drag chains
<b>M8, 4-pin</b>		
K4-2m-G-PUR	902-50801	2 m, straight, PUR, suitable for drag chains
K4-5m-G-PUR	902-51617	5 m, straight, PUR, suitable for drag chains
K4-10m-G-PUR	902-51610	10 m, straight, PUR, suitable for drag chains
K4-2m-W-PUR	902-50803	2 m, 90°, PUR, suitable for drag chains
K4-5m-W-PUR	902-51618	5 m, 90°, PUR, suitable for drag chains
K4-10m-W-PUR	902-51629	10 m, 90°, PUR, suitable for drag chains
K4-2m-W-PL-PUR	902-51642	2 m, 90°, PUR, with indicator LED
K4-5m-W-PL-PUR	902-51643	5 m, 90°, PUR, with indicator LED
CM4 FG-E-5m-PVC	902-50221	5 m, straight, PVC, with hex nut SW 9 stainless steel (IP 69K), suitable for drag chains
CM4 FW-E-5m-PVC	902-50222	5 m, 90°, PVC, with hex nut SW 9 stainless steel (IP 69K), suitable for drag chains

Part number	Article number	Description
<b>M12, 3-pin</b>		
L3-2m-G-PUR	902-50687	2 m, straight, PUR, suitable for drag chains
L3-5m-G-PUR	902-51619	5 m, straight, PUR, suitable for drag chains
L3-2m-W-PUR	902-50689	2 m, 90°, PUR, suitable for drag chains
L3-5m-W-PUR	902-51620	5 m, 90°, PUR, suitable for drag chains
L3-2m-W-PL-PUR	902-50690	2 m, 90°, PUR, with indicator LED, suitable for drag chains
L3-5m-W-PL-PUR	902-51621	5 m, 90°, PUR, with indicator LED, suitable for drag chains
<b>M12, 4-pin</b>		
L4-300mm-G-PUR	902-50811	300 mm, straight, PUR
L4-2m-G-PUR	902-50805	2 m, straight, PUR, suitable for drag chains
L4-5m-G-PUR	902-51612	5 m, straight, PUR, suitable for drag chains
L4-10m-G-PUR	902-51628	10 m, straight, PUR, suitable for drag chains
L4-2m-W-PUR	902-50807	2 m, 90°, PUR, suitable for drag chains
L4-5m-W-PUR	902-51602	5 m, 90°, PUR, suitable for drag chains
L4-2m-W-PL-PUR	902-50808	2 m, 90°, PUR, with indicator LED, suitable for drag chains
L4-5m-W-PL-PUR	902-51603	5 m, 90°, PUR, with indicator LED, suitable for drag chains
L4-10m-W-PL-PUR	902-51604	10 m, 90°, PUR, with indicator LED, suitable for drag chains
L4-15m-W-PL-PUR	902-51607	15 m, 90°, PUR, with indicator LED,
L4S-2m-G-PVC	902-51632	2 m, straight, PVC, shielded
L4S-5m-G-PVC	902-51634	5 m, straight, PVC, shielded
L4S-10m-G-PVC	902-51651	10 m, straight, PVC, shielded
L4S-2m-W-PVC	902-51633	2 m, 90°, PVC, shielded
L4S-5m-W-PVC	902-51635	5 m, 90°, PVC, shielded
CL4 FG-E-5m-PVC	902-50219	5 m, straight, PVC, with hex nut SW 14 stainless steel (IP 69K), suitable for drag chains
CL4 FW-E-5m-PVC	902-50220	5 m, 90°, PVC, with hex nut SW 14 stainless steel (IP 69K), suitable for drag chains
L4 KDG	022-50812	Coupling socket, straight
L4 KDW	022-50813	Coupling socket, 90°
LS4-60-G-K	022-10773	Plug connection
L4F/L4M-0,48 PUR	902-51670	Extension cable / connection cable FR 85, M12 (angled, a-coded) to M12 (straight, a-coded), 0.48 m, suitable for drag chains
L4F/L4M-b-coded-0,48 PUR	902-51739	Connection cable FR 85, M12 (angled, a-coded) to M12 (straight, b-coded), 0.48 m, suitable for drag chains
L4F/L4M-b-coded-0,53 PUR	902-51825	Connection cable FR 85, M12 (angled, a-coded) to M12 (straight, b-coded), 0.53 m, suitable for drag chains
L4F/L4M-b-coded-0,48-X02 PUR	902-51823	Connection cable FR 85, M12 (angled, a-coded) to M12 (straight, b-coded), PINs 2 & 4 interchanged, suitable for drag chains
<b>M12, 5-pin</b>		
L5-2m-G-PUR	902-51652	2 m, straight, PUR, suitable for drag chains
L5-5m-G-PUR	902-51624	5 m, straight, PUR, suitable for drag chains
L5-10m-G-PUR	902-51609	10 m, straight, PUR, suitable for drag chains
L5-2m-W-PUR	902-51613	2 m, 90°, PUR, suitable for drag chains
L5-5m-W-PUR	902-51641	5 m, 90°, PUR, suitable for drag chains
CI L5FG-S-2m-PUR	902-51813	2 m, straight, shielded, PUR, suitable for drag chains
CI L5FG-S-5m-PUR	902-51814	5 m, straight, shielded, PUR, suitable for drag chains
CI L5FG-S-10m-PUR	902-51815	10 m, straight, shielded, PUR, suitable for drag chains
CI L5FW-S-2m-PUR	902-51816	2 m, 90°, shielded, PUR, suitable for drag chains
CI L5FW-S-5m-PUR	902-51817	5 m, 90°, shielded, PUR, suitable for drag chains
CI L5FW-S-10m-PUR	902-51818	10 m, 90°, shielded, PUR, suitable for drag chains

# Accessories

## Cables

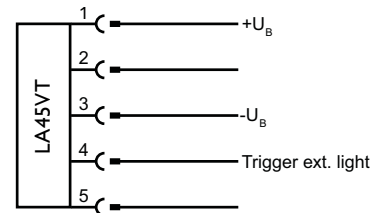
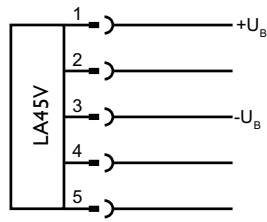
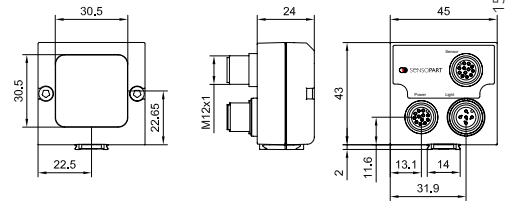
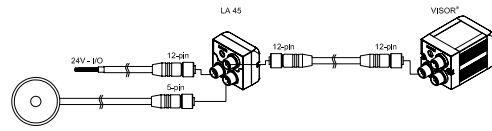
Part number	Article number	Description
<b>M12, 8-pin</b>		
L8FS-2m-G-PUR	902-51671	2 m, straight, PUR, shielded, suitable for drag chains
L8FS-5m-G-PUR	902-51646	5 m, straight, PUR, shielded, suitable for drag chains
L8FS-10m-G-PUR	902-51689	10 m, straight, PUR, shielded, suitable for drag chains
L8FS-2m-W-PUR	902-51687	2 m, 90°, PUR, shielded, suitable for drag chains
L8FS-5m-W-PUR	902-51688	5 m, 90°, PUR, shielded, suitable for drag chains
L8FS-10m-W-PUR	902-51690	10 m, 90°, PUR, shielded, suitable for drag chains
<b>M12, 8-pin (DIN 60947-5-2)</b>		
C L8FG-S-2m-PUR	902-51830	2 m straight, PUR, shielded, colour assignment in acc. to DIN 60947-5-2, suitable for drag chains
C L8FG-S-5m-PUR	902-51831	5 m straight, PUR, shielded, colour assignment in acc. to DIN 60947-5-2, suitable for drag chains
C L8FG-S-10m-PUR	902-51832	10 m straight, PUR, shielded, colour assignment in acc. to DIN 60947-5-2, suitable for drag chains
<b>Cables for IO-Link</b>		
L4/L4-2m-PUR	902-51873	2 m, straight, PUR, Adapter cable IO-Link M12 4-pin to M12 4-pin
L4/L4-5m-PUR	902-51878	5 m, straight, PUR, Adapter cable IO-Link M12 4-pin to M12 4-pin
L5/L5-2m-PUR	902-51874	2 m, straight, PUR, Adapter cable IO-Link M12 5-pin to M12 5-pin
L5/L5-5m-PUR	902-51879	5 m, straight, PUR, Adapter cable IO-Link M12 5-pin to M12 5-pin
L8/L4-2m-PUR	902-51857	2 m, straight, PUR, Adapter cable IO-Link M12 8-pin to M12 4-pin
L8/L4-5m-PUR	902-51875	5 m, straight, PUR, Adapter cable IO-Link M12 8-pin to M12 4-pin
K4/L4-2m-PUR	902-51860	2 m, straight, PUR, Adapter cable IO-Link M8 4-pin to M12 4-pin
K4/L4-5m-PUR	902-51876	5 m, straight, PUR, Adapter cable IO-Link M8 4-pin to M12 4-pin
K3/L4-2m-PUR	902-51861	2 m, straight, PUR, Adapter cable IO-Link M8 3-pin to M12 4-pin
K3/L4-5m-PUR	902-51877	5 m, straight, PUR, Adapter cable IO-Link M8 3-pin to M12 4-pin
<b>M16, 12-pin</b>		
Q12-3m-G-PVC	902-51656	3 m, straight, PVC
Q12-5m-G-PVC	902-51657	5 m, straight, PVC
Q12-10m-G-PVC	902-51658	10 m, straight, PVC
Q12-20m-G-PVC	902-51663	20 m, straight, PVC
Q12-30m-G-PVC	902-51664	30 m, straight, PVC
Q12-3m-W-PVC	902-51659	3 m, 90°, PVC
Q12-10m-W-PVC	902-51661	10 m, 90°, PVC
<b>Cables for SmartPlug</b>		
IR-RS232	901-05096	Programmer adapter (MFU)
CUSB-IR-2m	901-05098	Converter; USB to infrared (SmartPlug)
L3M/K3F-0,6 PUR	902-51653	Connection adapter M12 3-pin straight (plug), M8 3-pin straight (socket), suitable for drag chains
L4M/K4F-0,6 PVC	902-51645	Connection adapter M12 4-pin straight (plug), M8 4-pin straight (socket), suitable for drag chains
L4M/K4FW-0,6 PVC	902-51650	Connection adapter M12 4-pin straight (plug), M8 4-pin 90° (socket)
L5F/Q8F-0,5 PUR	606-51686	Connection adapter M12 5-pin straight (socket), M16 8-pin straight (plug), (also for FR 85)
<b>Power supply and I/O cables for V10, V20 (default)</b>		
C L12FG-S-2m-PUR	902-51801	Power supply and I/O cable, 2 m, M12, straight, 12-pin, shielded, suitable for drag chains
C L12FG-S-5m-PUR	902-51796	Power supply and I/O cable, 5 m, M12, straight, 12-pin, shielded, suitable for drag chains
C L12FG-S-10m-PUR	902-51797	Power supply and I/O cable, 10 m, M12, straight, 12-pin, shielded, suitable for drag chains
C L12FG-S-20m-PUR	902-51805	Power - I/O, cable, 20 m, M12, straight, 12-pin, shielded, suitable for drag chains
C L12FG-S-30m-PUR	902-51845	Power - I/O, cable, 30 m, M12, straight, 12-pin, shielded, suitable for drag chains
C L12FW-S-2m-PUR	902-51798	Power supply and I/O cable, 2 m, M12, 90°, 12-pin, shielded, suitable for drag chains
C L12FW-S-5m-PUR	902-51799	Power supply and I/O cable, 5 m, M12, 90°, 12-pin, shielded, suitable for drag chains
C L12FW-S-10m-PUR	902-51800	Power supply and I/O cable, 10 m, M12, 90°, 12-pin, shielded, suitable for drag chains
C L12FW-S-20m-PUR	902-51821	Power - I/O, cable, 20 m, M12, 90°, 12-pin, shielded, suitable for drag chains
C L12FW-S-30m-PUR	902-51846	Power - I/O, cable, 30 m, M12, 90°, 12-pin, shielded, suitable for drag chains

Part number	Article number	Description
<b>Power supply and I/O cables for V10,V20 (3-pin)</b>		
C L12/3FG-S-2m-PUR	902-51833	Power supply and I/O cable, 2 m, M12, straight, 3-pin (24V, GND, Trigger), shielded, suitable for drag chains
C L12/3FG-S-5m-PUR	902-51834	Power supply and I/O cable, 5 m, M12, straight, 3-pin (24V, GND, Trigger), shielded, suitable for drag chains
C L12/3FG-S-10m-PUR	902-51835	Power supply and I/O cable, 10 m, M12, straight, 3-pin (24V, GND, Trigger), shielded, suitable for drag chains
C L12/3FG-S-20m-PUR	902-51839	Power supply and I/O cable, 20 m, M12, straight, 3-pin (24V, GND, Trigger), shielded, suitable for drag chains
C L12/3FG-S-30m-PUR	902-51847	Power supply and I/O cable, 30 m, M12, straight, 3-pin (24V, GND, Trigger), shielded, suitable for drag chains
C L12/3FW-S-2m-PUR	902-51836	Power supply and I/O cable, 2 m, M12, 90°, 3-pin (24V, GND, Trigger), shielded, suitable for drag chains
C L12/3FW-S-5m-PUR	902-51837	Power supply and I/O cable, 5 m, M12, 90°, 3-pin (24V, GND, Trigger), shielded, suitable for drag chains
C L12/3FW-S-10m-PUR	902-51838	Power supply and I/O cable, 10 m, M12, 90°, 3-pin (24V, GND, Trigger), shielded, suitable for drag chains
C L12/3FW-S-20m-PUR	902-51840	Power supply and I/O cable, 20 m, M12, 90°, 3-pin (24V, GND, Trigger), shielded, suitable for drag chains
C L12/3FW-S-30m-PUR	902-51848	Power supply and I/O cable, 30 m, M12, 90°, 3-pin (24V, GND, Trigger), shielded, suitable for drag chains
<b>Ethernet cables for V10/V20</b>		
CI L4MG/RJ45G-GS-3m-PUR	902-51754	Ethernet cable, 3 m, M12, straight, 4-pin/RJ45, shielded, suitable for drag chains
CI L4MG/RJ45G-GS-5m-PUR	902-51782	Ethernet cable, 5 m, M12, straight, 4-pin/RJ45, shielded, suitable for drag chains
CI L4MG/RJ45G-GS-10m-PUR	902-51784	Ethernet cable, 10 m, M12, straight, 4-pin/RJ45, shielded, suitable for drag chains
CI L4MG/RJ45G-GS-20m-PUR	902-51820	Ethernet, cable, 20m, M12, straight connector, 4-pin/RJ45 shielded
CI L4MG/RJ45G-GS-30m-PUR	902-51843	Ethernet, cable, 30m, M12, straight connector, 4-pin/RJ45 shielded
CI L4MW/RJ45G-GS-3m-PUR	902-51786	Ethernet cable, 3 m, M12, 90°, 4-pin/RJ45, shielded, suitable for drag chains
CI L4MW/RJ45G-GS-5m-PUR	902-51788	Ethernet cable, 5 m, M12, 90°, 4-pin/RJ45, shielded, suitable for drag chains
CI L4MW/RJ45G-GS-10m-PUR	902-51790	Ethernet cable, 10 m, M12, 90°, 4-pin/RJ45, shielded, suitable for drag chains
CI L4MW/RJ45G-GS-20m-PUR	902-51822	Ethernet, cable, 20m, M12, angled connector, 4-pin/RJ45 shielded
CI L4MW/RJ45G-GS-30m-PUR	902-51844	Ethernet, cable, 30m, M12, angled connector, 4-pin/RJ45 shielded
<b>Data cables for V10/V20</b>		
CI L5FG-S-2m-PUR	902-51813	Data cable, 2 m, straight, shielded, suitable for drag chains
CI L5FG-S-5m-PUR	902-51814	Data cable, 5 m, straight, shielded, suitable for drag chains
CI L5FG-S-10m-PUR	902-51815	Data cable, 10 m, straight, shielded, suitable for drag chains
CI L5FW-S-2m-PUR	902-51816	Data cable, 2 m, 90°, shielded, suitable for drag chains
CI L5FW-S-5m-PUR	902-51817	Data cable, 5 m, 90°, shielded, suitable for drag chains
CI L5FW-S-10m-PUR	902-51818	Data cable, 10 m, 90°, shielded, suitable for drag chains
<b>Illumination cables for V10/V20</b>		
CB L12FS/L12FS-0,35m-GG-PUR	902-51841	Illumination cable 2 x M12/12-pin, 0,35 m, straight, shielded, suitable for drag chains
CB L12FS/L12FS-0,5m-GG-PUR	902-51806	Illumination cable 2 x M12/12-pin, 0,5 m, straight, shielded, suitable for drag chains
CB L12FS/L12FS-2m-GG-PUR	902-51807	Illumination cable 2 x M12/12-pin, 2 m, straight, shielded, suitable for drag chains
CB L12FS/L12FS-10m-GG-PUR	902-51854	Illumination cable 2 x M12/12-pin, 10 m, straight, shielded, suitable for drag chains
CB L12FS/L12FS-0,35m-WW-PUR	902-51842	Illumination cable 2 x M12/12-pin, 0,35 m, 90°, shielded, suitable for drag chains
CB L12FS/L12FS-0,5m-WW-PUR	902-51808	Illumination cable 2 x M12/12-pin, 0,5 m, 90°, shielded, suitable for drag chains
CB L12FS/L12FS-2m-WW-PUR	902-51809	Illumination cable 2 x M12/12-pin, 2 m, 90°, shielded, suitable for drag chains
CB L4MG-10m-PUR	902-51756	Illumination cable 1 x M12/4-pin, 10 m, suitable for drag chains for direct connection of devices 532-51000 to 532-51052
<b>Connection adapter, illumination</b>		
LA45V-24-2L12	525-01001	V10 /V20 connection adapter for LED illumination with 5-pin M12 plug
LA 45 VT-24-2L12	525-01002	V10 /V20 connection adapter with 5-pin M12 socket for LED illumination with trigger line

# Accessories

## Adapter

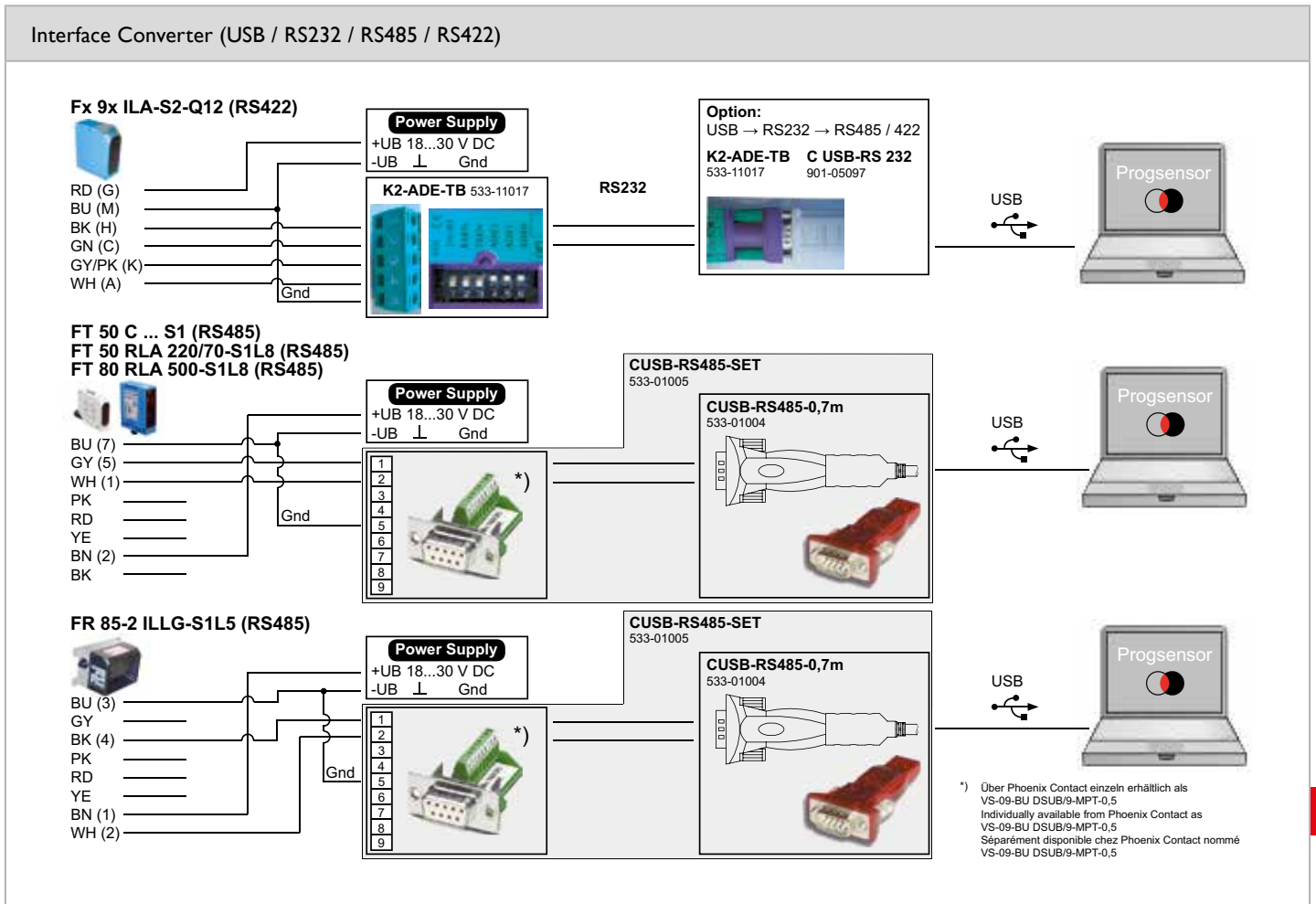
### Connection adapter for illumination on V10, V20





## Converters

Part number	Article number	Description
<b>Converters and adapter cables</b>		
K2-ADE-TB	533-11017	Converter RS232 ↔ RS485/422, in combination with CUSB-RS232-2m (901-05097) for PC connection of F 90/91 sensors, parameterisation via „ProgSensor“ software
CUSB-RS232-2m	901-05097	Interface converter incl. CD-ROM, cable 2 m, USB ↔ RS232, in combination with K2-ADE-TB (533-11017) for PC connection of F 90/91 sensors, parameterisation via „ProgSensor“ software
CUSB-RS485-SET	533-01005	Set: interface converter incl. CD-ROM, cable 0.7 m, USB ↔ RS485 and D-SUB socket, 9-pin, socket, for PC connection of F 50/80 sensors, parameterisation via „ProgSensor“ software
CUSB-RS485-0,7m	533-01004	Interface converter incl. CD-ROM, cable 0.7 m, USB ↔ RS485
AS S7/B1 D9F-D9F	902-51735	Anybus Communicator 4, PROFIBUS Interface

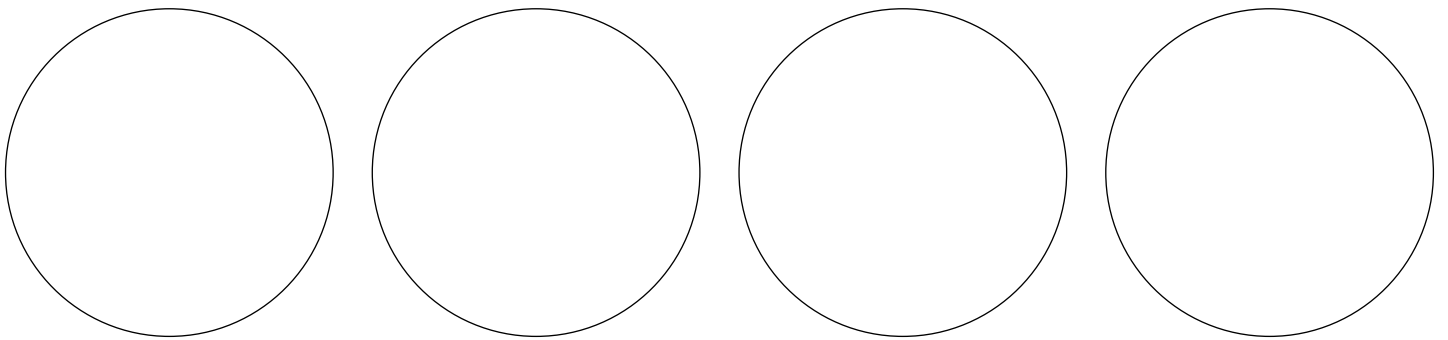


Download software: [www.sensopart.com](http://www.sensopart.com)

# Accessories

## Power supply units and switching devices

Power supply units and switching devices		
	Part number / Article number Description	ST-05 / 997-51467 Sensor tester for PNP and NPN sensors – battery operated, 2 x 9 Volt (supplied) – with acoustic and optical signalling of switching output
	Part number / Article number Description	PA L4M4-TI / 997-51465 Teach-in unit for programming of SmartPlugs and sensors with Teach input – power supply voltage connection via 3-wire cable – M8 and M12 connection plugs
	Part number / Article number Description	Setup Box FR 85-2 ILLX / 533-11016 Setup Box for FR 85 Rail Pilot system. Enables parameterisation of the switching points of FR 85 via PC – Connection of power supply via plug M12, 5-pin – M12, 8-pin – Plug adapter M12, 8-pin to M12, 5-pin for the connection of FR 85 (5-pin) – RS232 interface for connection to PC – Gender Changer – Null modem adapter
	Part number / Article number Description	ST M12-12 / 994-51135 Power supply unit for V10 / V20, M12 connector; 12-pin, Europlug – connection of power supply voltage via Europlug – M12 connector
	Part number / Article number Description	ST M12-12-M / 994-51138 Power supply unit for V10 / V20, M12 connector; 12-pin, Multiplug – connection of power supply voltage via Multiplug – M12 connector
	Part number / Article number Description	ST V10 / 543-11022 Demo and Test Box for all V10 / V20 types. Allows test mode with simulation of inputs (triggers, etc.) and the display of outputs. All I/Os are through-wired, so parallel operation with controller also possible. Connections: – V10 / V20 via 12-pin, plug-in screw terminal – Trigger sensor via 9-pin, plug-in screw terminal and encoder input – PLC via M12 plug, 12-pin – Power supply via 9-pin, plug-in terminal – Power supply via small device plug – Display of switching outputs via LEDs – Operation of inputs via buttons; NPN / PNP selectable



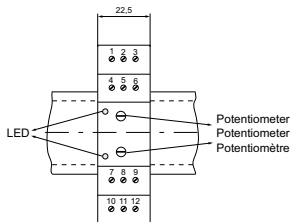
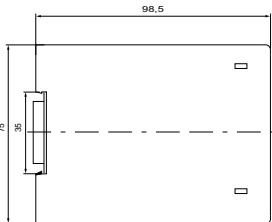
# SG 12

Power supply unit and switching device for standard rails

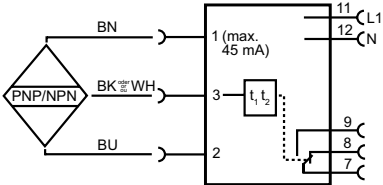
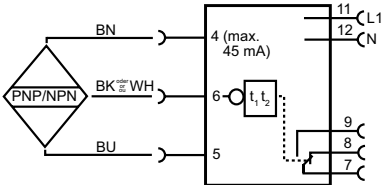


## PRODUCT HIGHLIGHTS

- DIN rail mounting
- Switch on/off delay
- Inversion of output

Functions		Dimensional drawing	
LED indicator, yellow Adjustment possibilities	Switching state indicator Delay: rise / fall: 50 ms ... 30 s Input impulse: $\geq 50$ ms		
		090-12339	
Electrical data		Mechanical data	
Operating voltage, $+U_B$ (L1 - N)	See Selection Table	Dimensions	98,5 × 75 × 22,5 mm <sup>3</sup>
No-load current, $I_0$	16 mA at 230V AC / 32 mA at 115V AC	Enclosure rating	IP 40 <sup>2</sup>
Switching output	Relay contact	Material, housing	Makrolon
Switching function	Change-over contact, potential-free	Type of connection	See Selection Table
Switching current	Max. 8 A	Ambient temperature: operation	-30 ... +70 °C
Switching voltage	380V AC / 250V DC	Weight	250 g
Switching frequency (ti/tp 1:1)	$\leq 10$ Hz		
Duty cycle	1		
Output current, sensor	45 mA		
Power supply (V), sensor	24V $\pm$ 10 % DC <sup>1</sup>		
Device input	PNP / NPN		
Repeatability	$\leq 5$ %		

<sup>1</sup> 2 % output ripple    <sup>2</sup> With connected IP 40 plug

Connection, non-inverted operation	Connection, inverted operation
	
154-00161	154-00162

Operating voltage	Type of connection	Part number	Article number
230V AC (40 ... 60 Hz)	Terminals	SG 12 T-00	688-51089
115V AC (40 ... 60 Hz)	Terminals	SG 12 T-02	688-51090



### PRODUCT HIGHLIGHTS

- Input/output expansion for V10, V20
- Transcribes sensor's serial data to discrete outputs
- 32 digital switching outputs for the discrete provision of up to 32 individual digital results
- 8 digital switching inputs, e.g. for changing over configurations
- Encoder input, e.g. for ejector control independent of conveyor speed
- Rail mounting
- Display for easy visualisation and operator guidance

Functions		Dimensional drawing, IO Box	
Programmable time function	Switch-on delay 0 to 7 s, switch-off delay 0 to 1 s, each adjustable in 1 ms increments via control panel.		
Programmable counting function	Alternative to time function, 0 to 2000 encoder steps for switch-on delay, 0 to 200 encoder steps for switch-off delay (acc. to prescaler), each adjustable in individual steps via control panel, cache for 512 parts.		
Ejector	2x potential-free relay contacts N.O. / N.C. (2 A / 24 V)		
Electrical data		Mechanical data	
Operating voltage +U <sub>B</sub>	20.4 ... 26.4V DC	Dimensions	107.6 × 104.2 × 60.7 mm
No-load current, I <sub>0</sub>	≤ 250 mA	Enclosure rating	IP 20
Switching outputs	32x PNP (50 mA per output), total current max. 1 A	Material, housing	Plastic
On delay, t <sub>On</sub> , switching output	≤ 2 ms	Connection system	Screw clamp contacts, plug-in
Off delay, t <sub>Off</sub> , switching output	≤ 2 ms	Ambient temperature: operation	5 ... +50 °C
Inputs	8 x	Ambient temperature: storage	0 ... +50 °C
U <sub>IN,HIGH</sub> control/trigger inputs	> 18V	Vibration and impact resistance	EN 60947-5-2
U <sub>IN,LOW</sub> control/trigger inputs	< 3V		
Max. permissible cable length	Power 3 m, others 30 m		

Part number	Article number
T-AS7T-12ET34PRD	533-01008

Accessories	
Connection cable (data cable)	From Page A-40

# Sensolo

Service tool for parameterization of sensors with IO-Link



## PRODUCT HIGHLIGHTS

- Parameterization tool for sales, service and development
- Connects an IO-Link sensor to a windows PC via USB
- Intuitive user interface for visualizing and editing the IO-link parameters

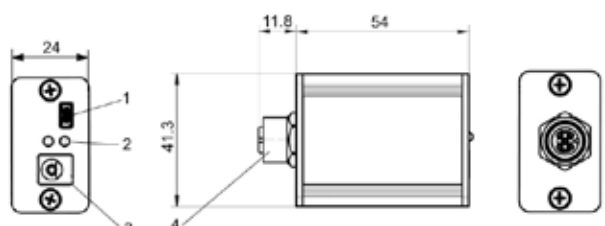
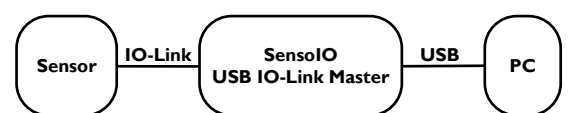
Functions	
LED green: permanently on	Device ready for operation, no IO-Link communication
LED green: permanent flash	Device ready for operation, active IO-Link communication
LED red: permanently on	Error message
Electrical data	
Output voltage USB mode	24V DC
Output current USB mode	max. 65 mA
Output voltage mains operation	$\triangleq$ input voltage
Output current mains operation	max. 500 mA
Input voltage Sensolo external power supply	24V AC (EN 60950)
Input current Sensolo external power supply	max. 600 mA
Protective circuit	Short-circuit protection
IO-Link	
Communication mode	COM 1, COM 2, COM 3
Specification	1.1
Number of Ports	1

Mechanical data	
Dimensions	54 x 41.3 x 24 mm
Enclosure rating	IP 20
Material, housing	Aluminium anodised
Ambient temperature: operation	-0 ... +55 °C
Weight	~ 100 g

Part number	Article number	Description
Sensolo <sup>1</sup>	901-01000	IO-Link USB-Master

<sup>1</sup> incl. USB-cable: USB-A to mini-USB

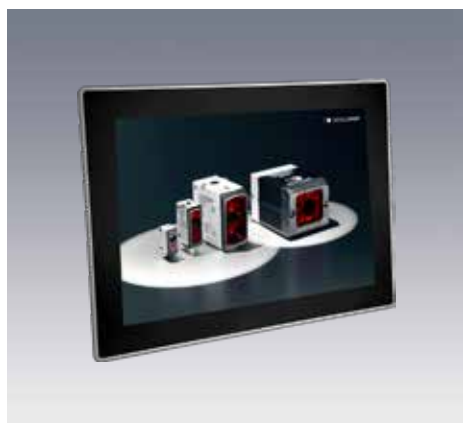
Accessories	
Connection cable (L4F/L4M-0,48 PUR / 902-51670)	From Page A-40

Dimensional drawing	Connection 5-pin																																				
 <p>153-01277</p> <p>1 USB 2.0 (mini USB)                  2 LED                  3 24V DC D5.5/2.1 mm                  4 M12, Type A</p>	 <p>155-02036</p> <table border="1"> <thead> <tr> <th>IO-LINK</th> <th>PIN</th> <th>SIGNAL</th> <th>USB</th> <th>PIN</th> <th>SIGNAL</th> </tr> </thead> <tbody> <tr> <td></td> <td>1</td> <td>24V DC</td> <td></td> <td>1</td> <td>5V DC</td> </tr> <tr> <td></td> <td>2</td> <td>not connected</td> <td></td> <td>2</td> <td>D-</td> </tr> <tr> <td></td> <td>3</td> <td>GND</td> <td></td> <td>3</td> <td>D+</td> </tr> <tr> <td></td> <td>4</td> <td>IO-Link</td> <td></td> <td>4</td> <td>not connected</td> </tr> <tr> <td></td> <td>5</td> <td>not connected</td> <td></td> <td>5</td> <td>GND</td> </tr> </tbody> </table>	IO-LINK	PIN	SIGNAL	USB	PIN	SIGNAL		1	24V DC		1	5V DC		2	not connected		2	D-		3	GND		3	D+		4	IO-Link		4	not connected		5	not connected		5	GND
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# PV-AW10IoT10.4TX(-V)

Display and configuration device for SensoPart vision sensors



## PRODUCT HIGHLIGHTS

- Display and configuration device for SensoPart vision sensors and systems
- Suitable for installation in switching cabinet doors and operating panels
- Completely preconfigured

### Functions

Resolution	1024 x 768
Aspect ratio	4 : 3
Technology	TFT
Colors	16.2 millions
Backlight	LED
Backlight life time	30,000 h
Luminance <sup>1)</sup>	350 cd/m <sup>2</sup>
Contrast ratio <sup>1)</sup>	1200 : 1
Operating system	Windows® 10 IoT

### Electrical data

Operating voltage +U <sub>B</sub>	24V DC ± 20 %
CPU	AMD® GX-415GA / Quad Core™ / 1.5 GHz 64 Bit / 2 MB Cache
USB	2 x USB Host 3.0
Ethernet	2 x 1 Gbit Ethernet
Communication	1 x RS232
Video	1 x DVI-I
Memory	4 GB DDR3L
Storage	64 GB MLC
BIOS	AMI BIOS, supports ACPI function

### Mechanical data

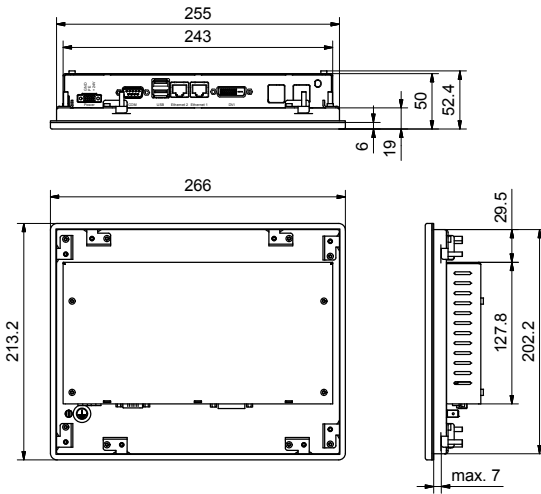
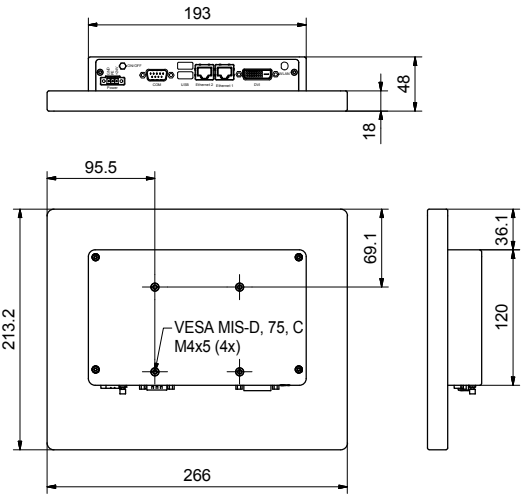
Dimensions	266 x 213.2 x 52.4 mm
Enclosure rating	IP 65
Ambient temperature: operation	0 ... +50 °C
Ambient temperature: storage	-10 ... +70 °C
Weight	1700 g

<sup>1)</sup> The values are referring to the displays only

Part number	Article number	Description
PV-AW10IoT10.4TX	533-01031	Panel PC 10.4", Win10 IoT, XGA, Touch, front panel mount
PV-AW10IoT10.4TX-V	533-01032	Panel PC 10.4", Win10 IoT, XGA, VESA mount

### Accessories

Connection cable (Ethernet cable)	From Page A-40
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Dimensional drawing PV-AW10loT10.4TX	Dimensional drawing PV-AW10loT10.4TX-V
 <p>153-13536</p>	 <p>153-13539</p>