

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.

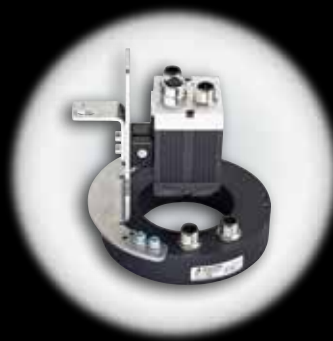
The mechanical accessories include everything that is involved in mounting and protecting the sensor: mounting brackets, blocks, rods and rails, brackets with protective hoops, stainless steel casings for hygienic areas and many others. All accessories are extremely robust and designed to meet practical 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-46**

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



Flexible: MG 3A Mounting angle with 3 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




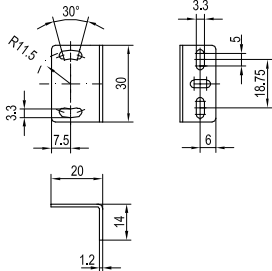

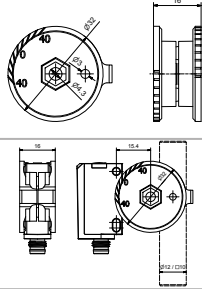
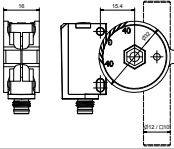

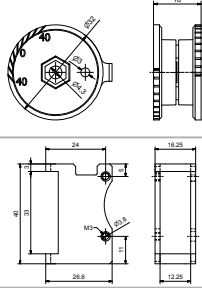
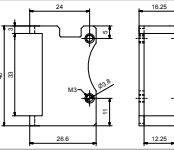

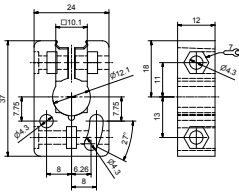

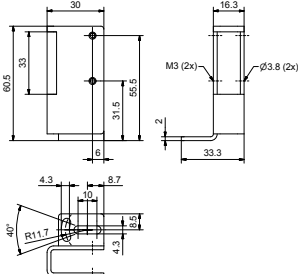

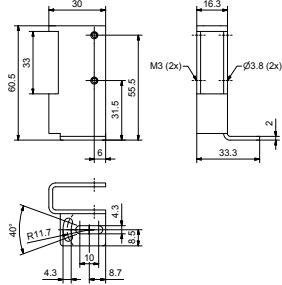
- Brackets

Brackets for F 10 series

		Part number / Article number 153-00899	MBD F 10 / 660-01001
Description	Suitable for	Dovetail clamp mounting, adjustable $\pm 10^\circ$ Material: PBT	F 10
		Part number / Article number Description 153-13562	MBD F 10ST2 / 660-01004 Universal rod mounting compo- nent for attaching dovetail F 10 to mounting rods $\varnothing 6$ mm adjustable $\pm 45^\circ$ Material: die-cast zinc
Suitable for	153-13566 	F 10	
		Part number / Article number Description 153-00907	MS F 10 / 660-01000
Suitable for	Mounting bracket with screws 1x mounting plate M3 1x mounting plate $\varnothing 3.1$ mm Material: stainless steel V2A F 10		

Brackets for F 25, FL 20, UT 20


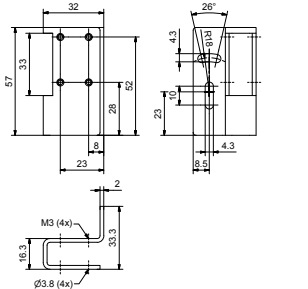

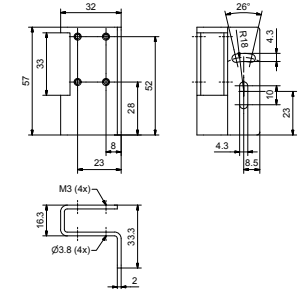

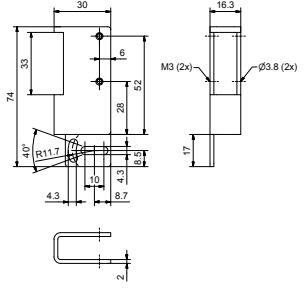

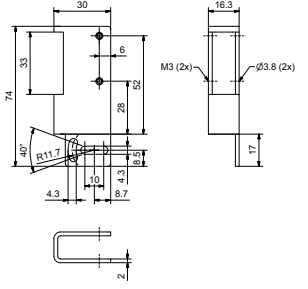

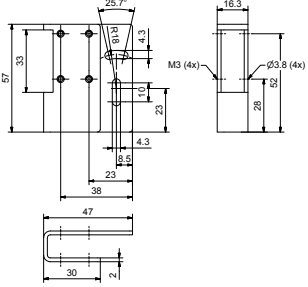

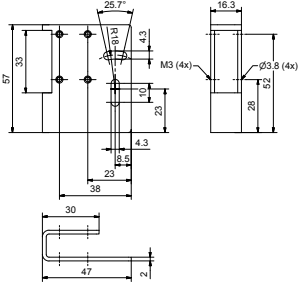
		Part number / Article number Description 153-00945	MBD F 25 / 661-01000
Suitable for	153-00946 	Dovetail clamp mounting, adjustable $\pm 15^\circ$, with screws Material: anodised aluminium F 25	

Brackets for F 25, FL 20, UT 20 (Cont.)				
		153-00241	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MS F 20 / 558-41000</p> <p>Mounting bracket with screws 1x retaining strip Material: nickel-plated steel</p> <p>F 20 F 25 UT 20 FL 20</p>
		153-01155	<p>Part number / Article number</p> <p>Description</p>	<p>MBD F 25ST2 / 661-01005</p> <p>Clamping bracket for Ø 12 mm mounting rod and 10 x 10 mm square profile, with M4 screw and M4 nut Material: die-cast zinc</p> <p>F 25</p>
		153-01156	<p>Suitable for</p>	
		153-01155	<p>Part number / Article number</p> <p>Description</p>	<p>Set: MBD F 25STP / 661-01004</p> <p>Clamping bracket for Ø 12 mm mounting rod and 10 x 10 mm square profile, with protective casing, M4 screw, M4 thumbscrew, M4 nut, 2x M3 screw Material: die-cast zinc Casing Material: stainless steel V2A</p> <p>F 25</p>
		153-01163	<p>Suitable for</p>	
		153-01164	<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>
		153-01017	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MSP F 20-11 / 558-41006</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>Suitable for</p>	
		153-00296	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MSP F 20-1 / 558-41004</p> <p>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</p> <p>F 20 F 25 UT 20 FL 20</p>

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Accessories

Brackets


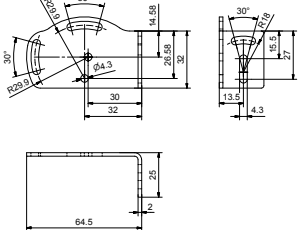

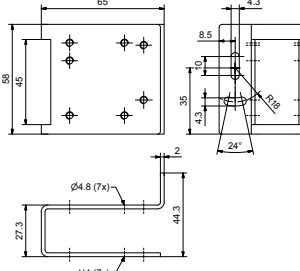

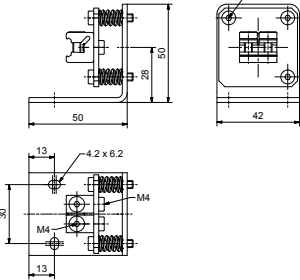

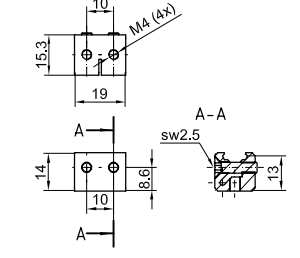

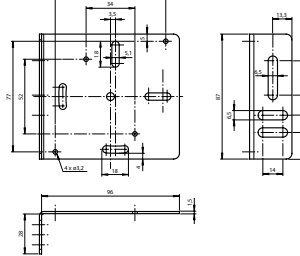

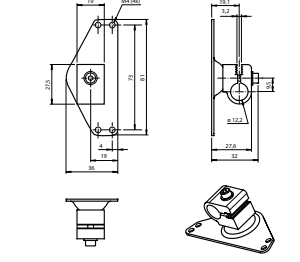
Brackets for F 25, FL 20, UT 20 (Cont.)			
		<p>Part number / Article number 153-00908</p> <p>Description</p> <p>Suitable for</p>	<p>MSP F 20-23 / 558-41011</p> <p>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</p> <p>F 20 F 25 UT 20 FL 20</p>
		<p>Part number / Article number 153-00297</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>Part number / Article number 153-00973</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>Part number / Article number 153-00972</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>Part number / Article number 153-00974</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>Part number / Article number 153-00975</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>


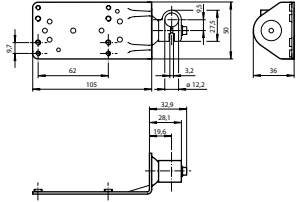

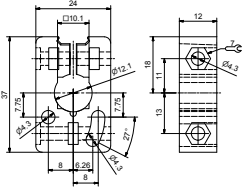
Brackets for F 25, FL 20, UT 20 (Cont.)				
		153-01040	Part number / Article number	MZ F 25 / 661-01003
			Description	Mounting adapter for FT 25 contrast sensors with horizontal or vertical light exit options, with screws Material: stainless steel V2A
			Suitable for	FT 25-W...-KL4 FT 25-RGB...-KL4


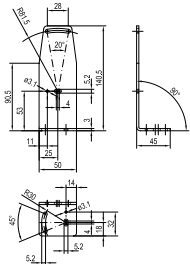

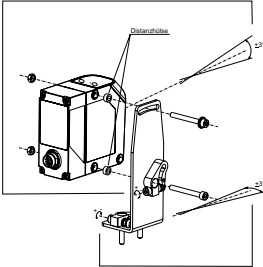

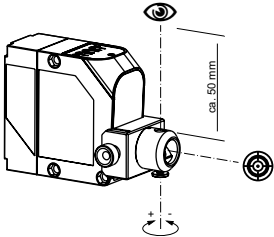
Brackets for F 50, F 55, F 80, F 88, FGL series				
		153-01164	Part number / Article number	MB ST2 / 661-01007
			Description	Mounting component for Ø 12 mm mounting rod and 10 x 10 mm square profile, and F 55 and fork sensors (FGL), with M4 screw Material: die-cast zinc
		153-01287	Part number / Article number	MBD F 55ST2 / 579-50012
			Description	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
		153-01288	Suitable for	F 55 metall housing
		153-00065	Part number / Article number	MS F 50 / 579-50000
			Description	Angle bracket with screws Material: stainless steel VA
			Suitable for	F 50 F 55 F 80
		153-00298	Part number / Article number	MSP F 50 / 579-50005
			Description	Protective sensor angle bracket with screws, very robust, light exit possible on three sides Material: stainless steel VA
			Suitable for	F 50

Accessories

Brackets

Brackets for F 50, F 55, F 80, F 88, FGL series (Cont.)									
		153-00818	<table border="1"><tr><td>Part number / Article number</td><td>MS F 55 / 579-50010</td></tr><tr><td>Description</td><td>Angle bracket with screws Material: stainless steel V2A</td></tr><tr><td>Suitable for</td><td>F 50 F 55</td></tr></table>	Part number / Article number	MS F 55 / 579-50010	Description	Angle bracket with screws Material: stainless steel V2A	Suitable for	F 50 F 55
Part number / Article number	MS F 55 / 579-50010								
Description	Angle bracket with screws Material: stainless steel V2A								
Suitable for	F 50 F 55								
		153-00819	<table border="1"><tr><td>Part number / Article number</td><td>MSP F 55 / 579-50011</td></tr><tr><td>Description</td><td>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</td></tr><tr><td>Suitable for</td><td>F 55</td></tr></table>	Part number / Article number	MSP F 55 / 579-50011	Description	Protective sensor angle bracket with screws, very robust Material: stainless steel V2A	Suitable for	F 55
Part number / Article number	MSP F 55 / 579-50011								
Description	Protective sensor angle bracket with screws, very robust Material: stainless steel V2A								
Suitable for	F 55								
		153-01126	<table border="1"><tr><td>Part number / Article number</td><td>MA F 55 / 579-50007</td></tr><tr><td>Description</td><td>Mounting angle, fine-adjustable with adjusting screws. Material: stainless steel V2A</td></tr><tr><td>Suitable for</td><td>F 55</td></tr></table>	Part number / Article number	MA F 55 / 579-50007	Description	Mounting angle, fine-adjustable with adjusting screws. Material: stainless steel V2A	Suitable for	F 55
Part number / Article number	MA F 55 / 579-50007								
Description	Mounting angle, fine-adjustable with adjusting screws. Material: stainless steel V2A								
Suitable for	F 55								
		153-00542	<table border="1"><tr><td>Part number / Article number</td><td>MBD-S94 / 533-21000</td></tr><tr><td>Description</td><td>Dovetail double clamp mounting Material: metal</td></tr><tr><td>Suitable for</td><td>F 55 FGL F 88</td></tr></table>	Part number / Article number	MBD-S94 / 533-21000	Description	Dovetail double clamp mounting Material: metal	Suitable for	F 55 FGL F 88
Part number / Article number	MBD-S94 / 533-21000								
Description	Dovetail double clamp mounting Material: metal								
Suitable for	F 55 FGL F 88								
		153-00561	<table border="1"><tr><td>Part number / Article number</td><td>MS F 88-1 / 820-41001</td></tr><tr><td>Description</td><td>Angle bracket Material: stainless steel</td></tr><tr><td>Suitable for</td><td>F 80 F 88</td></tr></table>	Part number / Article number	MS F 88-1 / 820-41001	Description	Angle bracket Material: stainless steel	Suitable for	F 80 F 88
Part number / Article number	MS F 88-1 / 820-41001								
Description	Angle bracket Material: stainless steel								
Suitable for	F 80 F 88								
		153-00562	<table border="1"><tr><td>Part number / Article number</td><td>MS F 88-2 / 820-41002</td></tr><tr><td>Description</td><td>Bracket for mounting rod with joint for fine adjustment, with screws Material: metal</td></tr><tr><td>Suitable for</td><td>F 80 F 88</td></tr></table>	Part number / Article number	MS F 88-2 / 820-41002	Description	Bracket for mounting rod with joint for fine adjustment, with screws Material: metal	Suitable for	F 80 F 88
Part number / Article number	MS F 88-2 / 820-41002								
Description	Bracket for mounting rod with joint for fine adjustment, with screws Material: metal								
Suitable for	F 80 F 88								

Brackets for F 50, F 55, F 80, F 88, FGL series (Cont.)			
		Bestellbezeichnung / Artikel-Nr.	MS F 88-3 / 820-41003
		Beschreibung	Halterung für Montagegestange mit Gelenk für Feinjustage, mit Schrauben Material: Metall
		Passend für	F 80 F 88
		Part number / Article number	MB ST2 / 661-01007
		Description	Mounting component for \varnothing 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
		Suitable for	F 55, FGL, MST 45-20, MST 45-30, MST 45-40

Brackets for F 90, F 91, F 92 series			
		Part number / Article number	MSP F 90 / 599-91002
		Description	Angle bracket with screws Material: stainless steel V2A
		Suitable for	F 90 F 91 F 92
		Part number / Article number	MSP F 90 A / 599-91003
		Description	Fine adjustment for angle bracket MSP F 90, set of two Material: metal
		Suitable for	MSP F 90
		Part number / Article number	AS F 90 / 599-91004
		Description	Aligning aid for pilot laser; for fine adjustment at long distances
		Suitable for	F 90 F 91 F 92

Accessories

Brackets

Brackets for fibre-optic cables and round housings




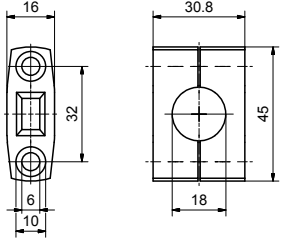
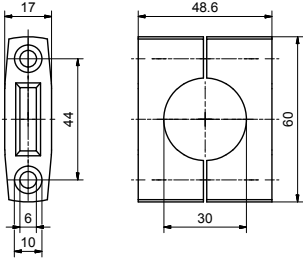
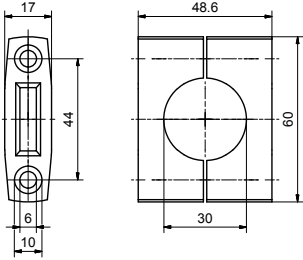

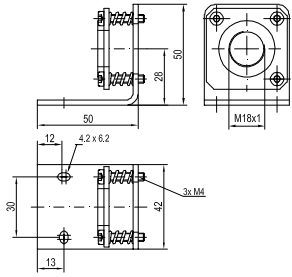

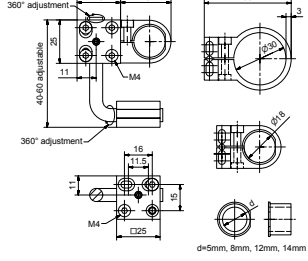

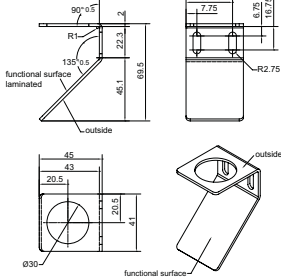
Brackets for fibre-optic cables and round housings		Part number / Article number	Description	Suitable for
	153-00193	MB 3,5 / 903-50313	Mounting block / fibre mount, closed curve Material: nickel-plated brass	Fibre-optic cables
	153-00234	MB 4,5 / 903-50314	Mounting block / fibre mount, open curve Material: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

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

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Accessories

Brackets

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

Brackets for V10,V20															
		153-00547	<table border="0"> <tr> <td>Part number / Article number</td> <td>MP 45 / 543-11003</td> </tr> <tr> <td>Description</td> <td>Mounting plate for mounting rod Material: anodised aluminium</td> </tr> <tr> <td>Suitable for</td> <td>MST 45-xx</td> </tr> </table>	Part number / Article number	MP 45 / 543-11003	Description	Mounting plate for mounting rod Material: anodised aluminium	Suitable for	MST 45-xx						
Part number / Article number	MP 45 / 543-11003														
Description	Mounting plate for mounting rod Material: anodised aluminium														
Suitable for	MST 45-xx														
		153-01000	<table border="0"> <tr> <td>Part number / Article number</td> <td>MB ST1 / 661-01002</td> </tr> <tr> <td>Description</td> <td>Mounting for mounting rod with clamping screw Material: aluminium</td> </tr> <tr> <td>Suitable for</td> <td>MST 45-20 MST 45-30 MST 45-40</td> </tr> </table>	Part number / Article number	MB ST1 / 661-01002	Description	Mounting for mounting rod with clamping screw Material: aluminium	Suitable for	MST 45-20 MST 45-30 MST 45-40						
Part number / Article number	MB ST1 / 661-01002														
Description	Mounting for mounting rod with clamping screw Material: aluminium														
Suitable for	MST 45-20 MST 45-30 MST 45-40														
	<table border="1" data-bbox="612 954 842 1066"> <tr> <td>x = 200</td> <td>MST 45-20</td> </tr> <tr> <td>x = 300</td> <td>MST 45-30</td> </tr> <tr> <td>x = 400</td> <td>MST 45-40</td> </tr> </table>	x = 200	MST 45-20	x = 300	MST 45-30	x = 400	MST 45-40	153-00545	<table border="0"> <tr> <td>Part number / Article number</td> <td>MST 45-20 / 543-11005 MST 45-30 / 543-11006 MST 45-40 / 543-11007</td> </tr> <tr> <td>Description</td> <td>Mounting rod with M6 internal thread Material: stainless steel</td> </tr> <tr> <td>Suitable for</td> <td>MP 45, MB ST 1, MG 45, MB 45, MZ 45</td> </tr> </table>	Part number / Article number	MST 45-20 / 543-11005 MST 45-30 / 543-11006 MST 45-40 / 543-11007	Description	Mounting rod with M6 internal thread Material: stainless steel	Suitable for	MP 45, MB ST 1, MG 45, MB 45, MZ 45
x = 200	MST 45-20														
x = 300	MST 45-30														
x = 400	MST 45-40														
Part number / Article number	MST 45-20 / 543-11005 MST 45-30 / 543-11006 MST 45-40 / 543-11007														
Description	Mounting rod with M6 internal thread Material: stainless steel														
Suitable for	MP 45, MB ST 1, MG 45, MB 45, MZ 45														
		153-00776	<table border="0"> <tr> <td>Part number / Article number</td> <td>MG 45 / 543-11008</td> </tr> <tr> <td>Description</td> <td>Mounting hinge for mounting rod Material: anodised aluminium, steel screw with plastic handle</td> </tr> <tr> <td>Suitable for</td> <td>MST 45-xx</td> </tr> </table>	Part number / Article number	MG 45 / 543-11008	Description	Mounting hinge for mounting rod Material: anodised aluminium, steel screw with plastic handle	Suitable for	MST 45-xx						
Part number / Article number	MG 45 / 543-11008														
Description	Mounting hinge for mounting rod Material: anodised aluminium, steel screw with plastic handle														
Suitable for	MST 45-xx														
		153-00546	<table border="0"> <tr> <td>Part number / Article number</td> <td>MZ 45 / 543-11004</td> </tr> <tr> <td>Description</td> <td>Intermediate mounting piece for mounting rod Material: anodised aluminium</td> </tr> <tr> <td>Suitable for</td> <td>MST 45-xx</td> </tr> </table>	Part number / Article number	MZ 45 / 543-11004	Description	Intermediate mounting piece for mounting rod Material: anodised aluminium	Suitable for	MST 45-xx						
Part number / Article number	MZ 45 / 543-11004														
Description	Intermediate mounting piece for mounting rod Material: anodised aluminium														
Suitable for	MST 45-xx														
		153-00481	<table border="0"> <tr> <td>Part number / Article number</td> <td>MB 45 / 543-11002</td> </tr> <tr> <td>Description</td> <td>Mounting block for mounting rod Material: anodised aluminium</td> </tr> <tr> <td>Suitable for</td> <td>MST 45-xx MA 45 MA 45 L</td> </tr> </table>	Part number / Article number	MB 45 / 543-11002	Description	Mounting block for mounting rod Material: anodised aluminium	Suitable for	MST 45-xx MA 45 MA 45 L						
Part number / Article number	MB 45 / 543-11002														
Description	Mounting block for mounting rod Material: anodised aluminium														
Suitable for	MST 45-xx MA 45 MA 45 L														

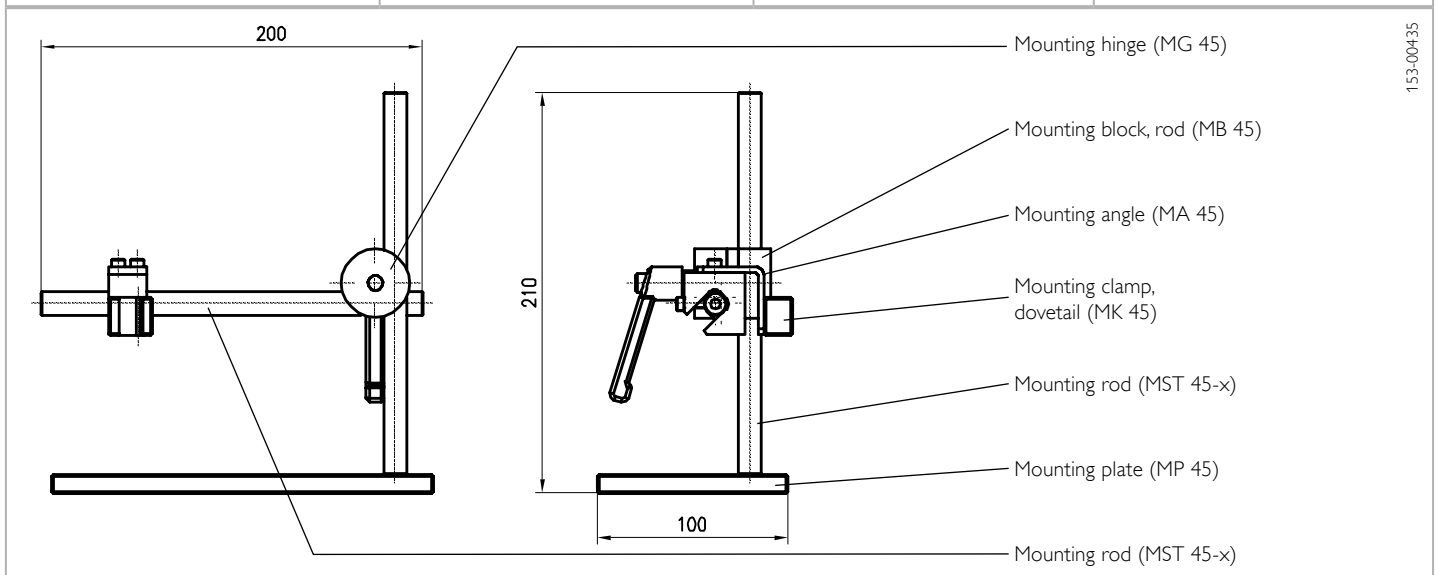
Accessories

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
		153-01286	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


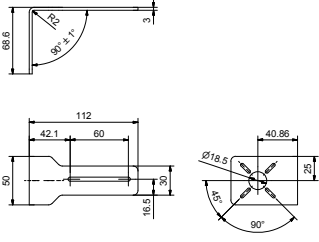

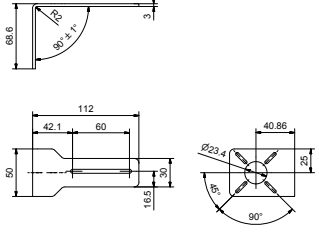

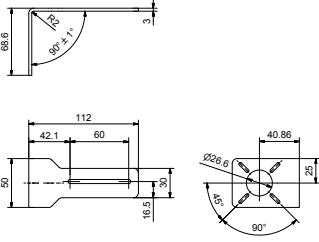

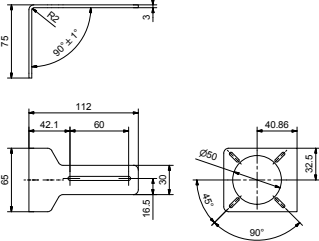

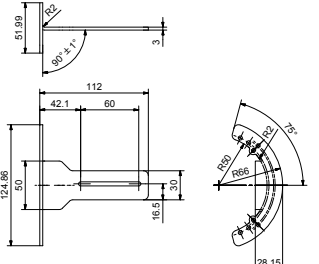
Brackets for V10, V20 (Cont.)

		<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 hinge with 3 axes and drilled hole for mounting rod Material: anodised aluminium</p> <p>V10 / V20</p>
		<p>153-12583</p> <p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>MG 3A-MST12 / 543-11034</p> <p>Mounting hinge with 3 axes for fixing at mounting rods 12 mm Material: anodised aluminium</p> <p>V10 / V20</p>

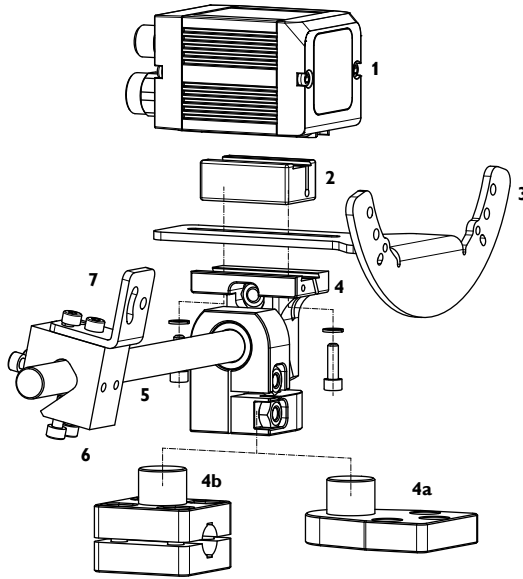


Accessories

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>

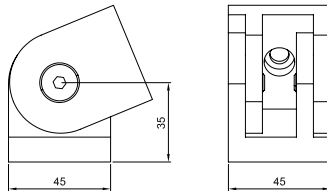
Brackets for illumination (Cont.)



155-03137

- 1** V10;V20
- 2** Mounting clamp, dovetail, long
MK 45 L / 543-11021
- 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
- 4** Mounting hinge with 3 axes
*for fixing at mounting rods 12 mm
- 4a** MG 3A / 543-11024
- 4b** *MG 3A-MST12 / 543-11034
- 5** Mounting Rod MST
MST 45-20 / 543-11005
MST 45-30 / 543-11006
MST 45-40 / 543-11007
- 6** Mounting block MB / 45 543-11002
- 7** Mounting angle MA 45 / 543-11001
Mounting angle MA 45L / 543-11013

Brackets for light strips, High Power, LBxxx



153-01178

Part number / Article number

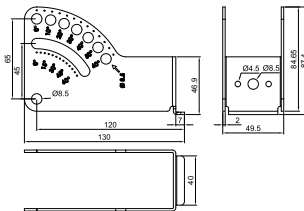
MG LB L / 543-11025

Description

Mounting hinge light strip long
Material: nickel-plated steel

Suitable for

Light strips High Power, LBxxx



153-01179

Part number / Article number

MG LB LL / 543-11026

Description

Mounting angle light strip long, lite
Material: anodised aluminium

Suitable for

Light strips High Power, LBxxx

A

Accessories

Reflectors



- Reflectors
- Lenses / Protective casings
- Illumination


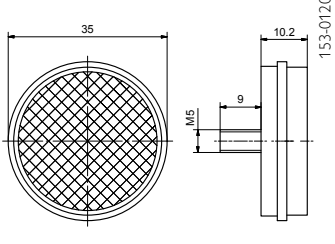

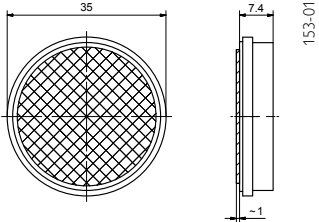

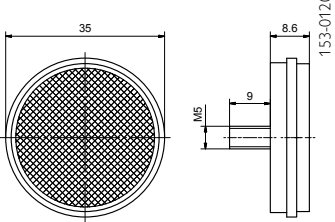

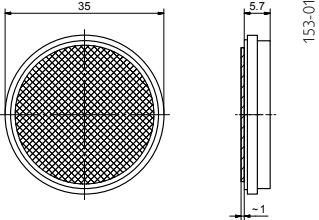

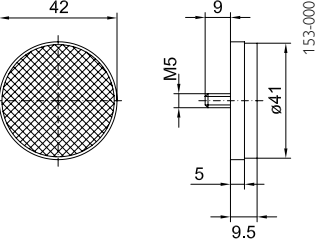

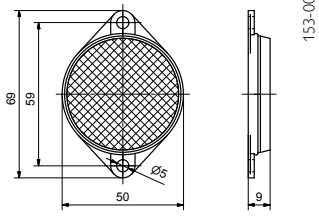
Reflectors for Photoelectric retro-reflective sensor															
		153-01197	<table border="1"> <tr> <td>Part number / Article number</td> <td>RD 10L / 904-51653</td> </tr> <tr> <td>Description</td> <td>Reflector in housing</td> </tr> <tr> <td>Dimensions</td> <td>Ø 10 x 5.6 mm</td> </tr> <tr> <td>Mounting</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>Photoelectric retro-reflective 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	Photoelectric retro-reflective 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	Photoelectric retro-reflective 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>Photoelectric retro-reflective 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	Photoelectric retro-reflective 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	Photoelectric retro-reflective 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>Photoelectric retro-reflective 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	Photoelectric retro-reflective 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	Photoelectric retro-reflective 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>Photoelectric retro-reflective 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	Photoelectric retro-reflective 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	Photoelectric retro-reflective sensor (LED)														

Reflectors for Photoelectric retro-reflective sensor (Cont.)			
		153-01201	<p>Part number / Article number RD 15L / 904-51657</p> <p>Description Reflector in housing</p> <p>Dimensions Ø 15 × 6.4 mm</p> <p>Mounting Grub screw M3, centred</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Photoelectric retro-reflective 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 × 3.7 mm</p> <p>Mounting Self-adhesive</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Photoelectric retro-reflective 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 × 5.6 mm</p> <p>Mounting Grub screw M3, centred</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Photoelectric retro-reflective sensor (LED)</p>
		153-00066	<p>Part number / Article number RD2 / 904-51534</p> <p>Description Reflector in housing</p> <p>Dimensions Ø 21 × 5 mm</p> <p>Mounting Self-adhesive</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Photoelectric retro-reflective 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 × 7.5 mm</p> <p>Mounting Grub screw M4, centred</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Photoelectric retro-reflective 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 × 5.5 mm</p> <p>Mounting Self-adhesive</p> <p>Temperature range -20 ... +60 °C</p> <p>Suitable for Photoelectric retro-reflective sensor (laser)</p>

A

Accessories

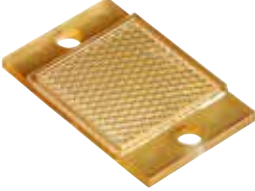
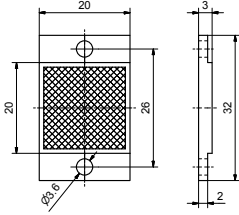

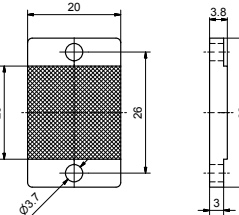

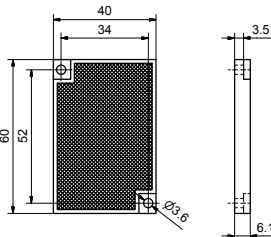

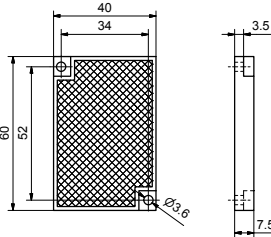
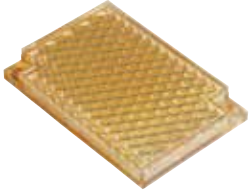
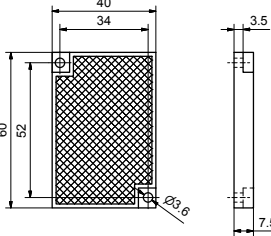

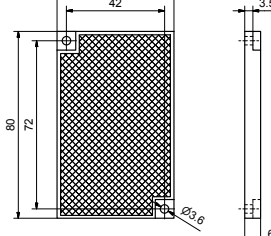
Reflectors

Reflectors for Photoelectric retro-reflective 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>Photoelectric retro-reflective 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>Photoelectric retro-reflective 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>Photoelectric retro-reflective 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>Photoelectric retro-reflective 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>Photoelectric retro-reflective 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>Photoelectric retro-reflective sensor (LED)</p>

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

Accessories

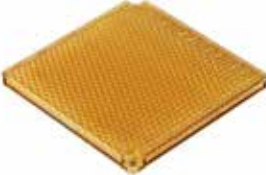
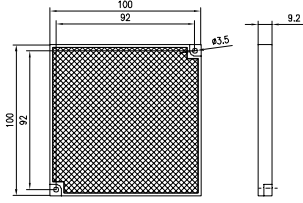

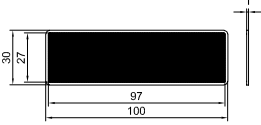

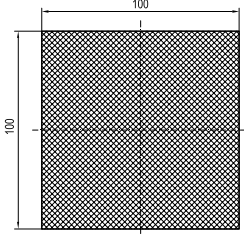

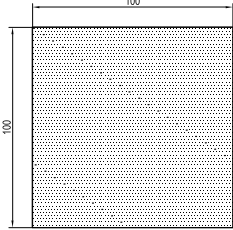

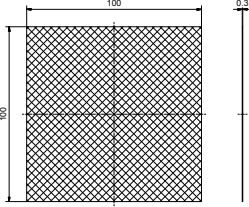
Reflectors

Reflectors for Photoelectric retro-reflective 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 × 32 × 3 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Photoelectric retro-reflective sensor (laser)</p> <p style="text-align: right;">ECOLAB®</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 × 32 × 3.8 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Photoelectric retro-reflective 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 × 60 × 6.1 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Photoelectric retro-reflective 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 × 60 × 7.5 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Photoelectric retro-reflective 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 × 60 × 7.5 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Photoelectric retro-reflective sensor (LED)</p> <p style="text-align: right;">ECOLAB®</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 × 70 × 6.8 mm</p> <p>2 mounting holes</p> <p>-20 ... +60 °C</p> <p>Photoelectric retro-reflective sensor (LED)</p>

Reflectors for Photoelectric retro-reflective 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>Photoelectric retro-reflective 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>Photoelectric retro-reflective 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>Photoelectric retro-reflective 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>Photoelectric retro-reflective 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>Photoelectric retro-reflective sensor (LED)</p> <p>ECOLAB®</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>Photoelectric retro-reflective sensor (LED)</p> <p>FR 85</p>

Accessories

Reflectors


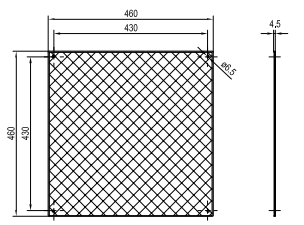

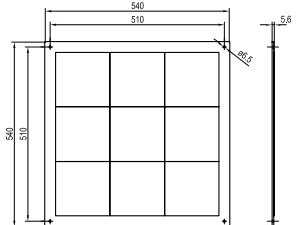

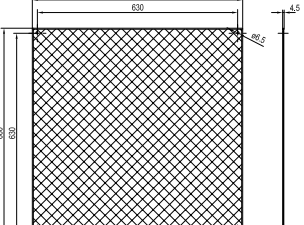

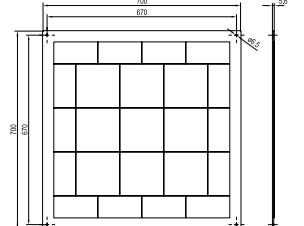
Reflectors for Photoelectric retro-reflective sensor (Cont.)			
	 <p style="text-align: right;">153-00817</p>	<p>Part number / Article number</p> <p>Description</p> <p>Dimensions</p> <p>Mounting</p> <p>Temperature range</p> <p>Suitable for</p>	<p>R100 BC / 904-51642</p> <p>Reflector; chemically resistant 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>Photoelectric retro-reflective sensor (LED)</p> <p style="text-align: right;">ECOLAB®</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>Photoelectric retro-reflective 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>Photoelectric retro-reflective 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 color 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>Photoelectric retro-reflective sensor (laser)</p>

Reflectors for Photoelectric retro-reflective 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	
	Mounting		775 x ... mm	
	Temperature range		Self-adhesive	
	Suitable for		-40 ... +70 °C	
			Photoelectric retro-reflective sensor (LED)	

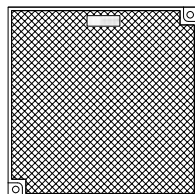
Reflectors für time-of-flight devices (Cont.)				
		153-00483	Part number / Article number	RL 250 / 904-51562
			Description	Reflector for ranges up to 50 m / 70 m
			Dimensions	248 x 248 x 4.5 mm
			Mounting	4 mounting holes
			Temperature range	-20 ... +60 °C
	Suitable for		FR 55, FR 90, FR 91	
		153-00483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

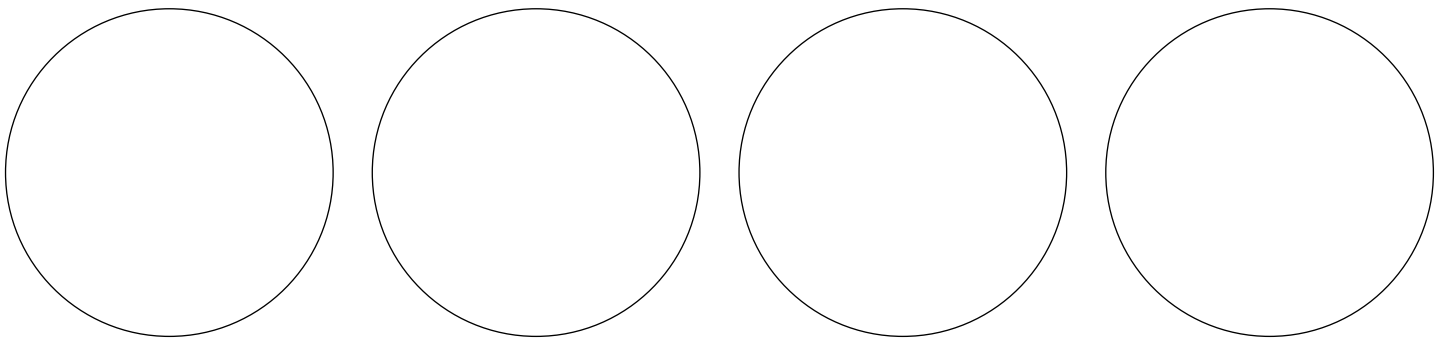
Accessories

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



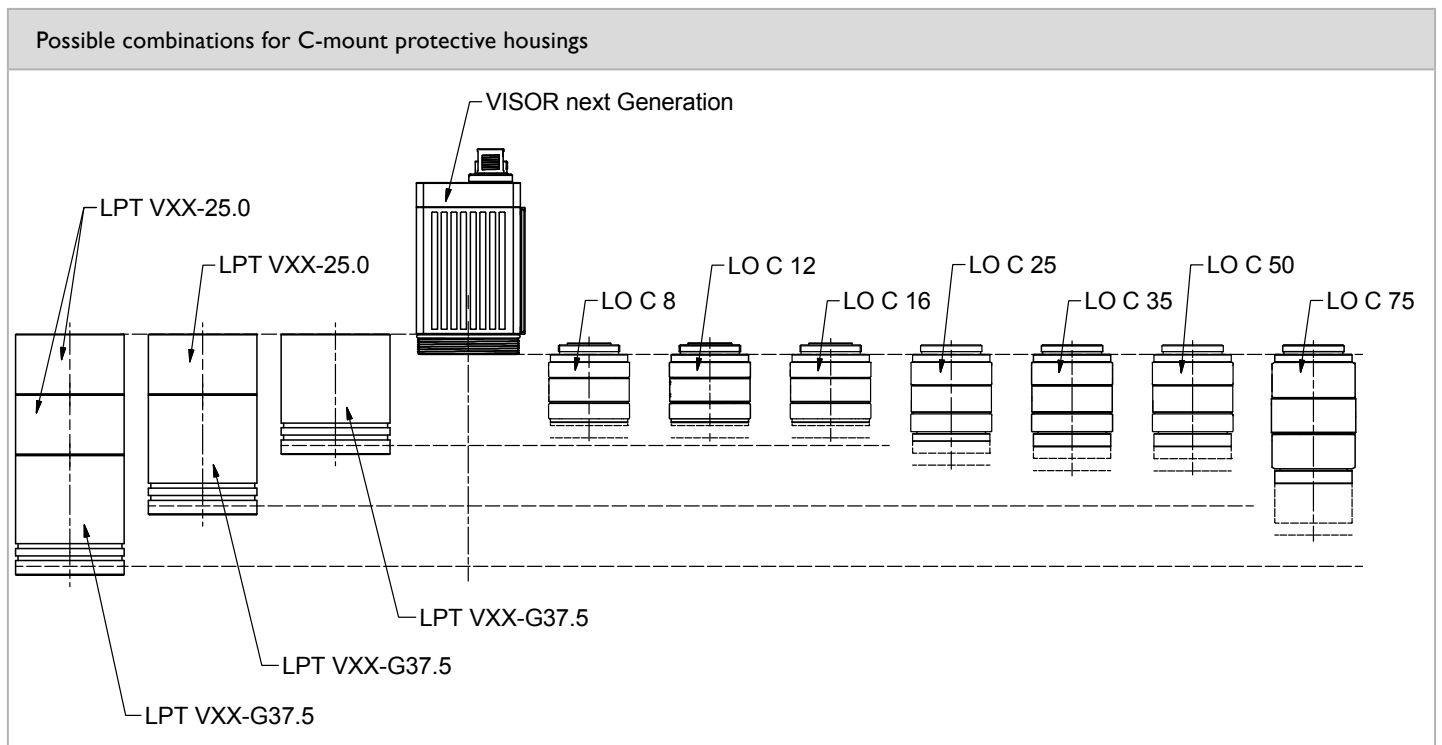


Accessories

Lenses

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>

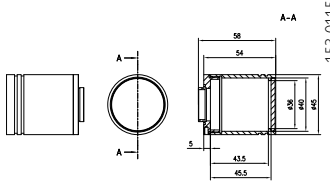

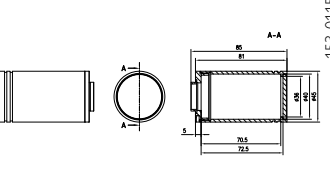
Lenses, C-mount (Cont.)			
		Part number / Article number	LO C 75 / 526-51116
		Description	C-mount lens 75 mm focal length Aperture/focus: manual Filter thread: 30.5/0.5 Diameter: 35.0 mm Max. length: 73.6 mm Weight: 113 g
		Suitable for	V10 /V20 C-Mount



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		

Accessories

Protective casing and polarizer glasses


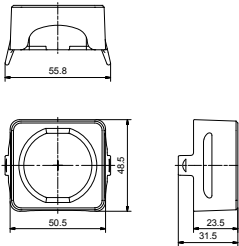

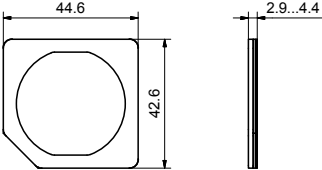
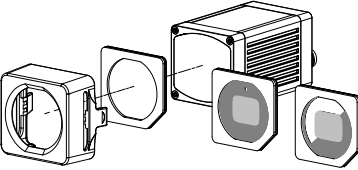
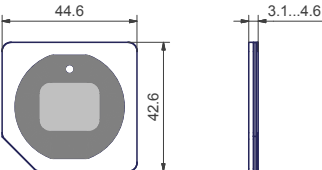

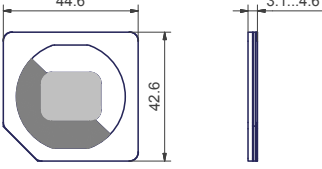

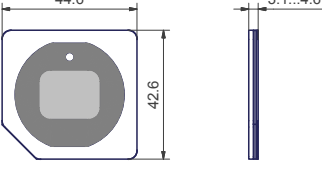
C-mount protective casing for VISOR® generation 1			
	 <p style="text-align: right;">153-01150</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPT 45 CML 5 / 527-51132</p> <p>C-mount IP 65 protective casing Flange 5 mm Maximum lens dimensions: diameter: 38 mm length: 42 mm</p> <p>V10 / V20 C-Mount</p>
	 <p style="text-align: right;">153-01151</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPT 45 CML 5L / 527-51134</p> <p>C-mount IP 65 protective casing Flange 5 mm Maximum lens dimensions: diameter: 38 mm length: 60 mm</p> <p>V10 / V20 C-Mount</p>
		 <p style="text-align: right;">153-01129</p> <p>V10,V20</p> <p>C-mount IP 65 protective casing LPT 45 CML 5 / 527-51132</p> <p>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</p> <p>LPT 45 CML 5L / 527-51134</p>	
C-mount protective casing for VISOR® new generation			
	 <p style="text-align: right;">153-13561</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPT Vxx-G37.5 / 651-01006</p> <p>C-mount IP 65 protective casing Protective tube for Vx0 C-Mount 37,5 mm</p> <p>V10 / V20 C-Mount</p>
	 <p style="text-align: right;">153-13560</p>	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPT Vxx-25.0 / 651-01007</p> <p>Protective tube extension 25.0 mm for LPT Vxx-G37.5</p> <p>V10 / V20 C-Mount</p>
		 <p style="text-align: right;">153-03144</p> <p>V10,V20</p> <p>C-mount IP 65 protective casing LPT Vxx-G37.5 / 651-01006</p> <p>Protective tube extension 25.0 mm for LPT Vxx-G37.5 LPT Vxx-25.0 / 651-01007</p> <p>C-Mount Objektiv: 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</p>	

Protective casing and polarizer glasses


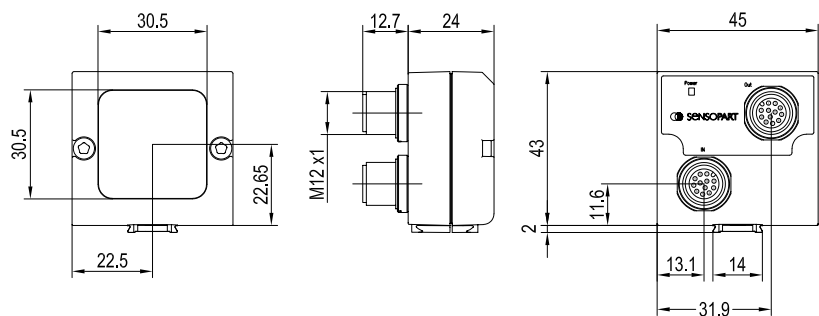
Protective casing and polarizer glasses for VISOR® generation 1 (Cont.)			
		<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPTW50 / 527-51135</p> <p>Spark protection V10/V20 Material: anodised aluminium incl. front screen, glass</p> <p>V10 /V20</p>
		<p>Part number / Article 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 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) 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) Material: coated glass</p> <p>V10 /V20</p>

Accessories


Protective casing and polarizer glasses

Protective casing and polarizer glasses for VISOR® new generation				
		153-13556	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPC Vxx / 651-01001</p> <p>Removable protective casing for Vx0 with integrated lens/lighting</p> <p>V10 / V20</p>
		153-13559	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPC Vxx S1-5 / 651-01002</p> <p>Replacement panels (glass) for LPC Vxx, set of 5 pieces</p> <p>Material: coated glass</p> <p>LPC Vxx</p>
		153-13557	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPF Vxx S1 / 651-01003</p> <p>Polarising filter panel for LPC Vxx (100 % coverage)</p> <p>Material: coated glass</p> <p>LPC Vxx</p>
		153-13558	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPF Vxx S2 / 651-01004</p> <p>Polarising filter panel for LPC Vxx (50 % coverage, switchable)</p> <p>Material: coated glass</p> <p>LPC Vxx</p>
		153-13557	<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LPF Vxx S1-5 / 651-01005</p> <p>Polarising filter panel for LPC Vxx (100 % coverage), set of 5 pieces</p> <p>Material: coated glass</p> <p>LPC Vxx</p>

Illumination

Surface light for V10, V20			
	Part number	Article number	Description
	LF45 W-24-2L12	525-51147	Surface light, V10 / V20, white, 12-pin
	LF45 R-24-2L12	525-51148	Surface light, V10 / V20, red, 12-pin
	LF45 IR-24-2L12	525-51149	Surface light, V10 / V20, infrared, 12-pin*
			153-00924

* 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.

Spot illumination V10, V20			
	Part number	Article number.	Description
	LS 55 x 46 WK-24-A13 2L12	532-51101	Illumination, V10/V20, Spot, LS 55x46, white, 2 x M12/12-pin
	LS 55 x 46 RK-24-A13 2L12	532-51102	Illumination, V10/V20, Spot, LS 55x46, red, 2 x M12/12-pin
	LS 55 x 46 IRK-24-A13 2L12	532-51103	Illumination, V10/V20, Spot, LS 55x46, infrared, 2 x M12/12-pin Does not require switching amplifier

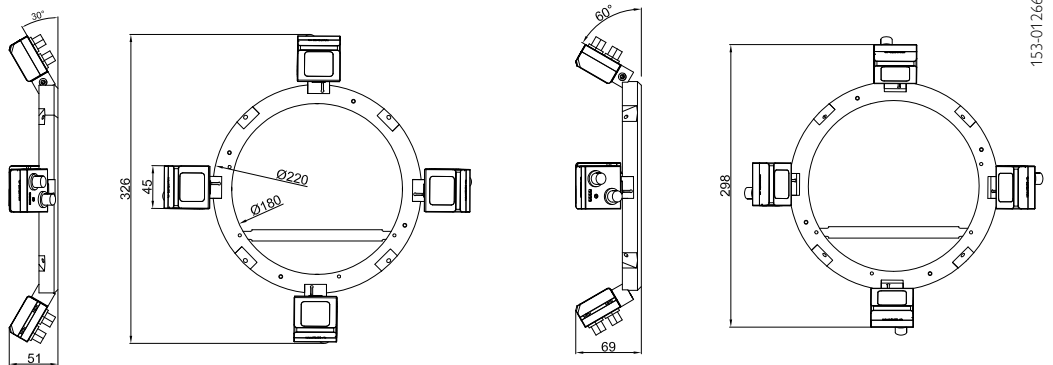
Accessories

Illumination

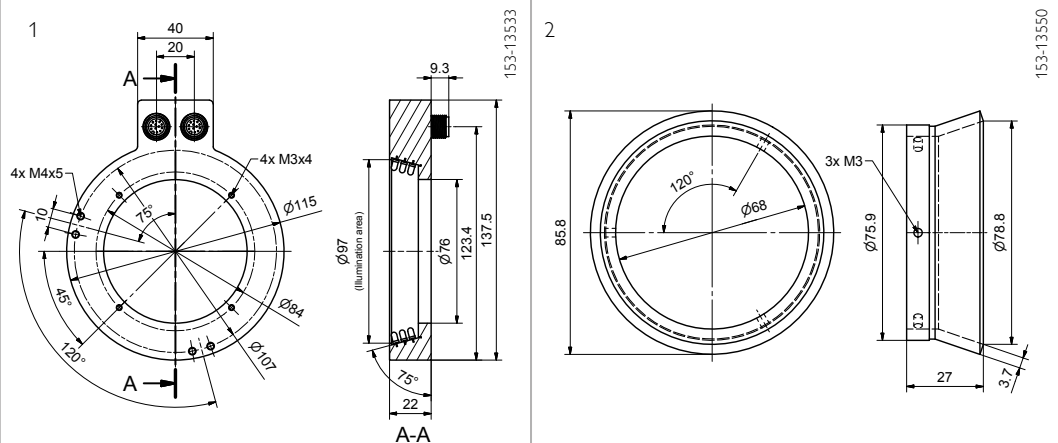
Multishot


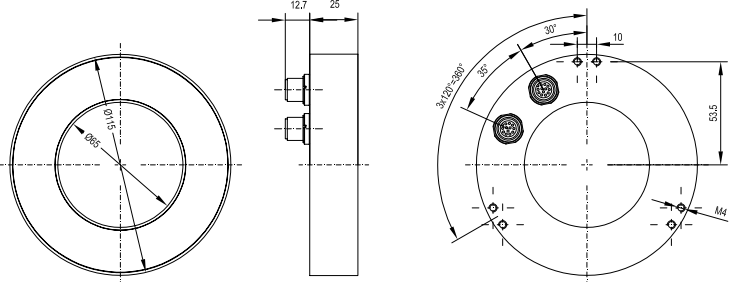


Part number	Article number	Description
LM 300 WWK-24Q4-2L12	525-51158	Illumination Multishot, 4 x LF 45 white, including MG 3A for VISOR®, mounting, apre-assembled on retaining ring and pre-wired with 3 special cables, beam angle 60°, changeable to 30°
LM 300 RWK-24Q4-2L12	525-51159	Illumination Multishot,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




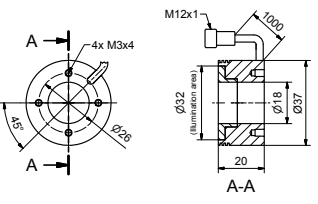
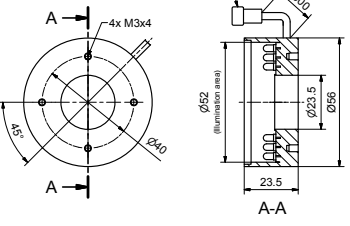
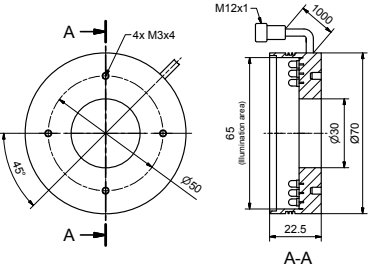
Part number	Article number	Description	Draw
LM 100 WWK-24Q4-2L12	532-51096	Ring light, angled, 100 mm, white, individual control of 4 segments for Multishot, connection with illumination cable without LA 45	1
LM 100 RWK-24Q4-2L12	532-51097	Ring light, angled, 100 mm, red, individual control of 4 segments for Multishot, connection with illumination cable without LA 45	1
LM 100 W DF	532-51098	Diffuser for LM 100, angled	2



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				

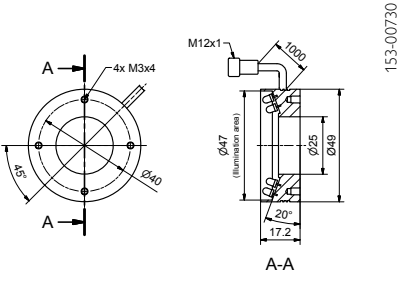
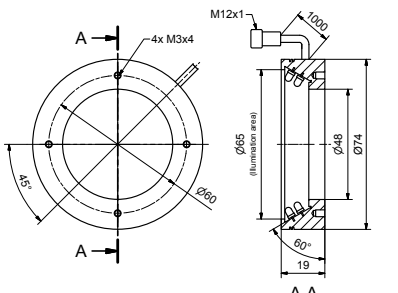
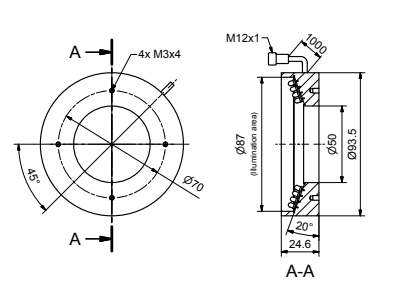
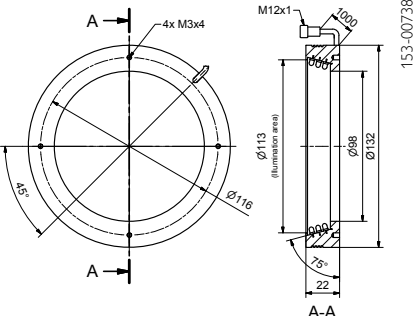
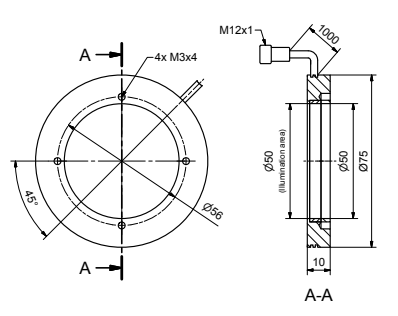
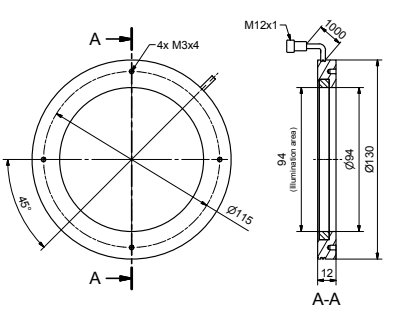
LED ring lighting for the incidental illumination of objects.

Requires connection adapter for LED illumination LA 45 V(T)-24-2L12.

Accessories

Illumination

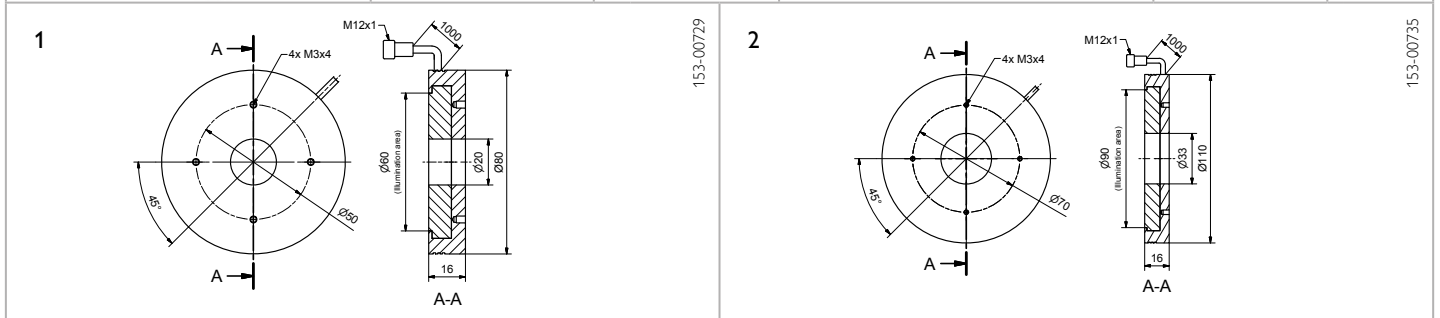
Ring light, angled					
	Part number	Article number	Description	Angle bracket	Draw.
	LR 50 WW-24-KFL5	532-51006	Ring light, angled, 50 mm, white	543-11017	1
	LR 74 WW-24-KFL5	532-51007	Ring light, angled, 74 mm, white	543-11018	2
	LR 90 WW-24-KFL5	532-51008	Ring light, angled, 90 mm, white	543-11018	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

<p>1</p> 	<p>2</p> 	<p>3</p> 
<p>4</p> 	<p>5</p> 	<p>6</p> 

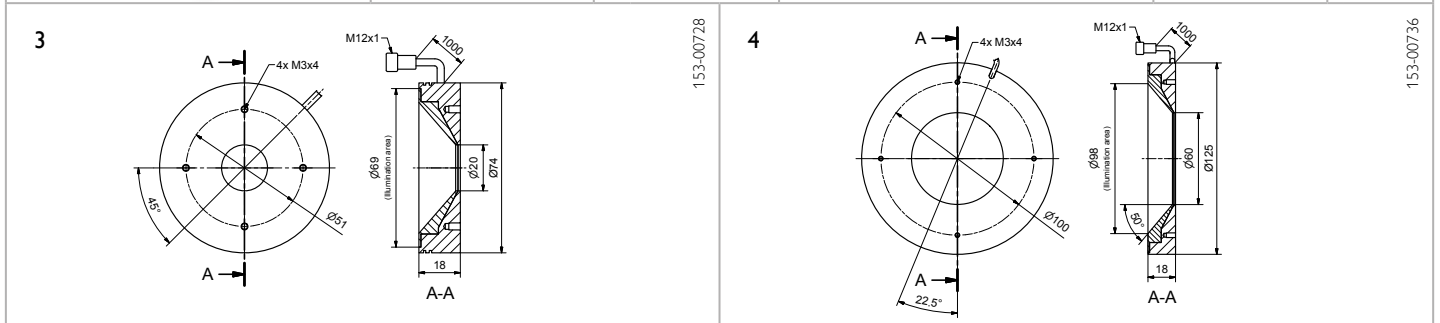
Funnel-shaped LED ring light for dark field illumination.

Requires connection adapter for LED illumination LA 45V(T)-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 LA 45 V(T)-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	

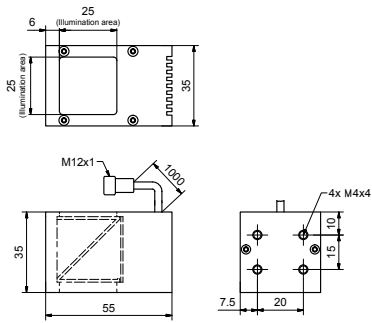
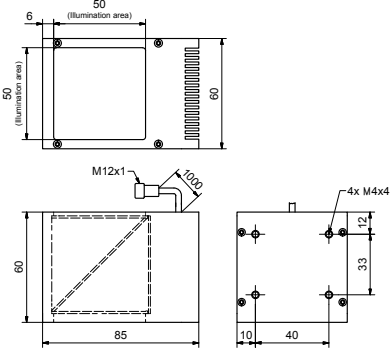
153-00704

LED ring lighting with funnel-shaped diffuser sheet for strongly reflective objects.
Requires connection adapter for LED illumination LA 45 V(T)-24-2L12.


Accessories

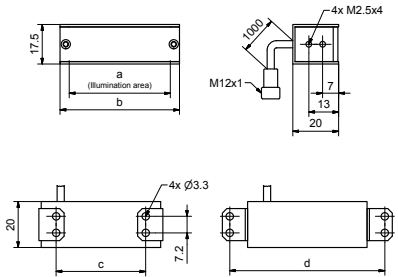
Illumination

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

1	153-00830	2	153-00831
			

Coaxial mirrored LED lighting for homogeneous illumination of reflected objects.
Requires connection adapter for LED illumination LA 45 V(T)-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		<table border="1"> <thead> <tr> <th></th> <th>Type 1</th> <th>Type 2</th> <th>Type 3</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>44 mm</td> <td>86 mm</td> <td>180 mm</td> </tr> <tr> <td>b</td> <td>52 mm</td> <td>94.5 mm</td> <td>191 mm</td> </tr> <tr> <td>c</td> <td>39 mm</td> <td>81.5 mm</td> <td>178.5 mm</td> </tr> <tr> <td>d</td> <td>67.5 mm</td> <td>110 mm</td> <td>206.5 mm</td> </tr> </tbody> </table>		Type 1	Type 2	Type 3	a	44 mm	86 mm	180 mm	b	52 mm	94.5 mm	191 mm	c	39 mm	81.5 mm	178.5 mm	d	67.5 mm	110 mm	206.5 mm
	Type 1	Type 2	Type 3																			
a	44 mm	86 mm	180 mm																			
b	52 mm	94.5 mm	191 mm																			
c	39 mm	81.5 mm	178.5 mm																			
d	67.5 mm	110 mm	206.5 mm																			

Bar-shaped light strip with diffuser sheet for indirect illumination.
Requires connection adapter for LED illumination LA 45 V(T)-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

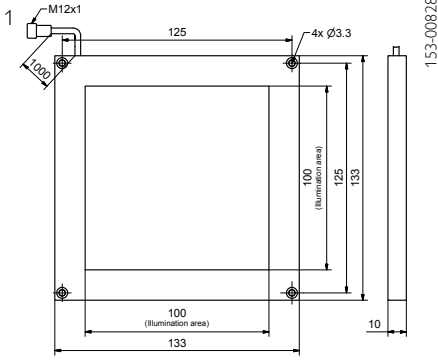
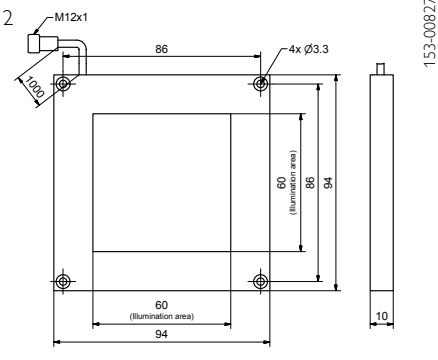
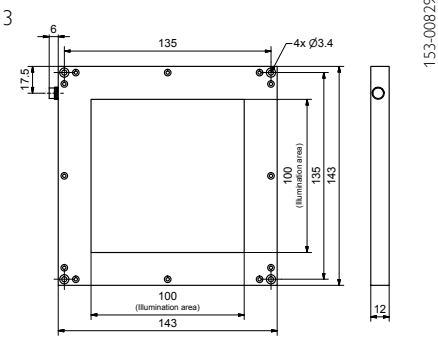
1	153-00758	3		153-00762
2	153-01282	4		153-00757

Surface LED background illumination with very bright, regular surface illumination.
 Requires connection adapter for LED illumination LA 45 V(T)-24-2L12.

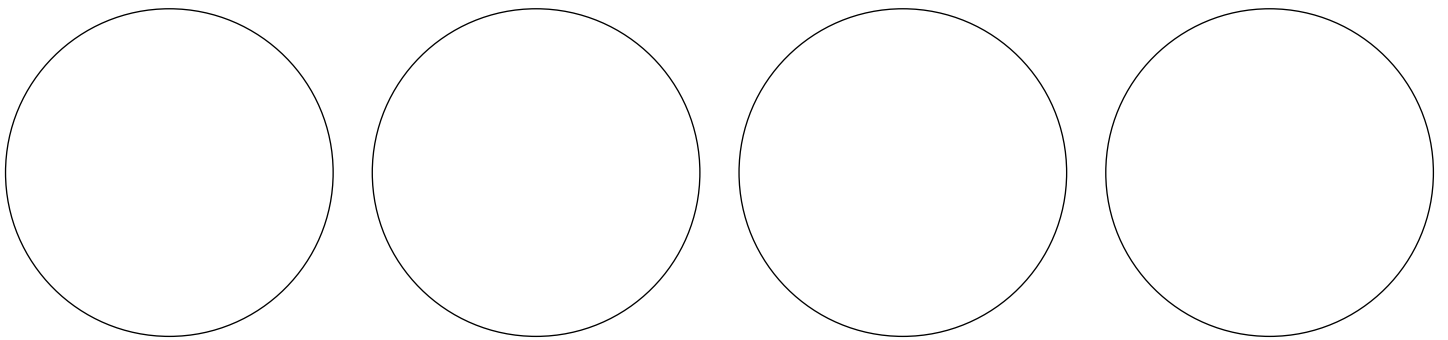
Accessories

Illumination

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	

<p>1</p> 	<p>2</p> 	<p>3</p> 
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Surface LED background lighting for diffuse illumination.
 Requires connection adapter for LED illumination LA 45 V(T)-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

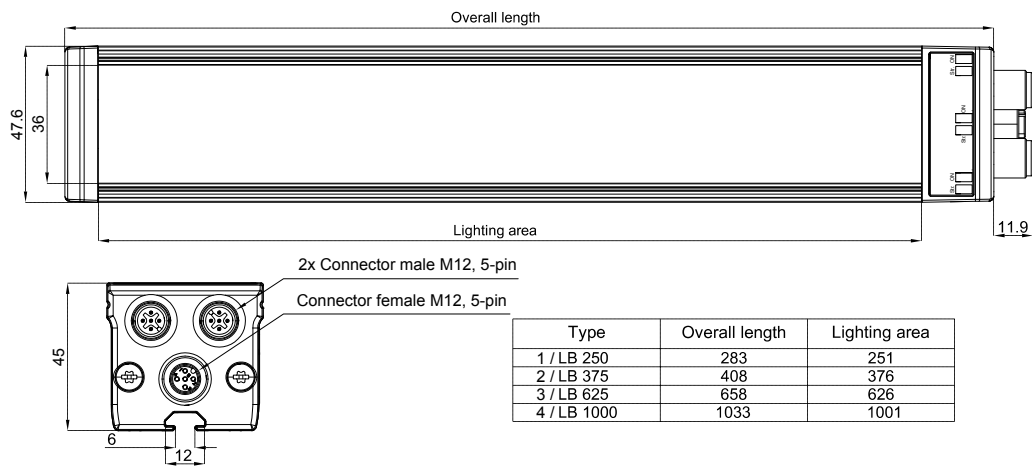
Connection cables

From Page A-46

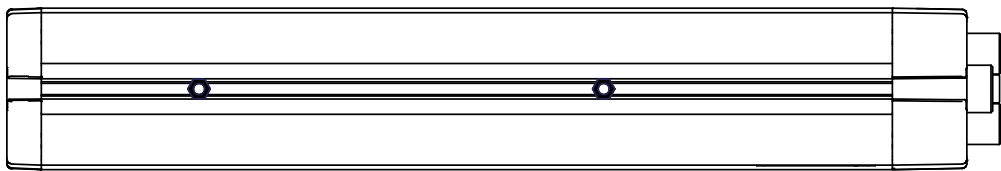
Brackets

From Page A-4

Light strips, High Power, LBxxx



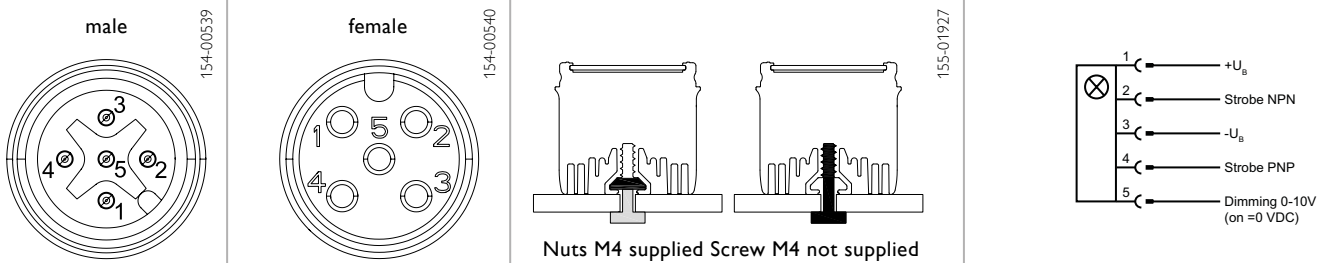
Mounting



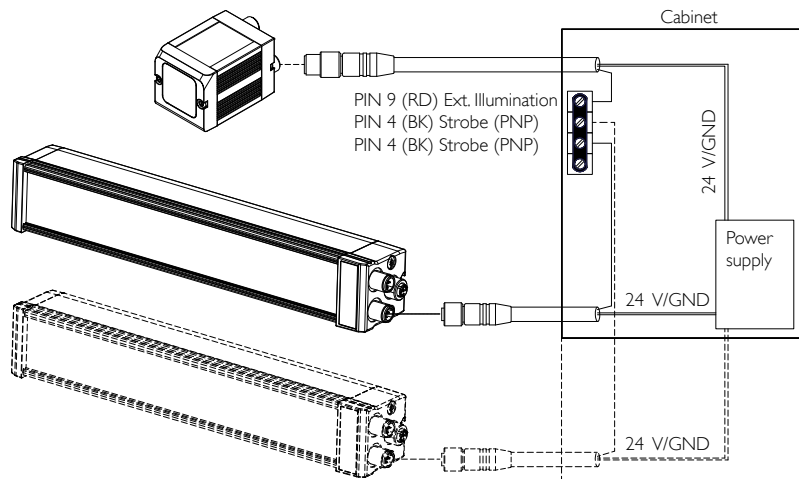
LB 250 / LB 375 = 2x M4 Nuts LB 625 / LB 1000 = 3x M4 Nuts

155-01926

Wiring



Connection illumination - sensor



Continuous operation: Strobe = 24 V DC

155-01906

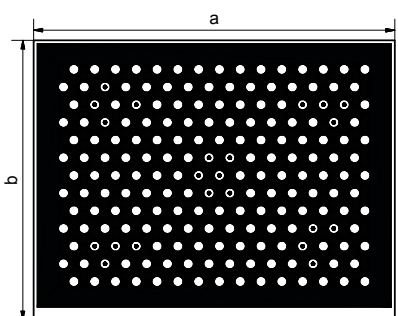
ZCP

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	15x13 points, crosshairs, 50 mm x 37,9 mm	X01
	ZCP 100-13x15-X01	533-11038	15x13 points, crosshairs, 100 mm x 75,8 mm	X01
	ZCP 200-13x15-X01	533-11039	15x13 points, crosshairs, 200 mm x 151,7 mm	X01
	ZCP 500-13x15-X01	533-11040	15x13 points, crosshairs, 500 mm x 379,2 mm	X01
	ZCP 100-13x15-X02	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	-

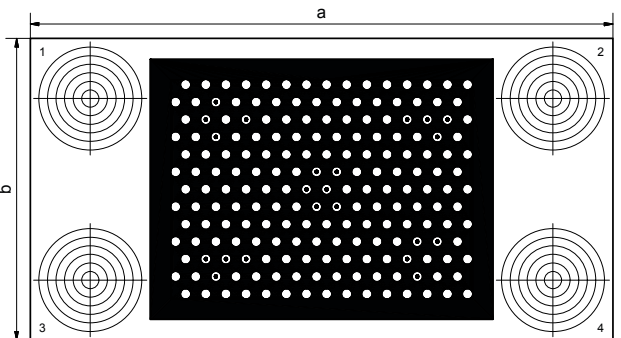
The calibration plates are used for calibrating the VISOR® vision sensor.

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	b	c	d	e Ø	t	Recommended field of view
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[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	b	c	d	e Ø	t	Recommended field of view
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[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

<p>Reference Code for quality parameters according ISO/IEC 15415. All parameters should have quality grade "A". Make shure that "Module height" and "Module width" > 10 and "Contrast" > 80. Use frame lines to make shure that code is in center of image.</p>	153-13529								

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

Accessories

Lines



- Lines
- Converters
- Power supply units and switching devices

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

LINES FOR ACTUATORS AND SENSORS

Part number	Article number	Description
M5 socket, 4-pin		Connection lines for actuators and sensors with self-locking threaded joint, unshielded
CN4 FG-2m-PUR	902-51793	2 m, straight, PUR, IP 67
CN4 FG-5m-PUR	902-51791	5 m, straight, PUR, IP 67
CN4 FW-2m-PUR	902-51794	2 m, 90 °, PUR, IP 67
CN4 FW-5m-PUR	902-51792	5 m, 90 °, PUR, IP 67
M8 socket, 3-pin		Connection lines for actuators and sensors with self-locking threaded joint, unshielded, suitable for drag chains
K3-2m-G-PUR	902-50679	2 m, straight, PUR, IP 67 / IP 69K
K3-5m-G-PUR	902-51614	5 m, straight, PUR, IP 67 / IP 69K
K3-10m-G-PUR	902-50694	10 m, gerade, PUR, IP 67 / IP 69K
K3-2m-W-PUR	902-50681	2 m, 90 °, PUR, IP 67 / IP 69K
K3-5m-W-PUR	902-51615	5 m, 90 °, PUR, IP 67 / IP 69K
K3-2m-W-PL-PUR	902-50683	2 m, 90 °, PUR, IP 67 / IP 69K, with indicator LED
K3-5m-W-PL-PUR	902-51616	5 m, 90 °, PUR, IP 67 / IP 69K, with indicator LED
K3-10m-W-PL-PUR	902-50693	10 m, 90 °, PUR, IP 67 / IP 69K, with indicator LED
M8 socket, 4-pin		Connection lines for actuators and sensors with self-locking threaded joint, unshielded, suitable for drag chains
K4-2m-G-PUR	902-50801	2 m, straight, PUR, IP 67 / IP 69K
K4-5m-G-PUR	902-51617	5 m, straight, PUR, IP 67 / IP 69K
K4-10m-G-PUR	902-51610	10 m, straight, PUR, IP 67 / IP 69K
K4-2m-W-PUR	902-50803	2 m, 90 °, PUR, IP 67 / IP 69K
K4-5m-W-PUR	902-51618	5 m, 90 °, PUR, IP 67 / IP 69K
K4-10m-W-PUR	902-51629	10 m, 90 °, PUR, IP 67 / IP 69K

Part number	Article number	Description
M8 socket, 4-pin (Cont.)		Connection lines for actuators and sensors with self-locking threaded joint, unshielded, suitable for drag chains
K4-2m-W-PL-PUR	902-51642	2 m, 90 °, PUR, IP 65 / IP 67 / IP 68, with indicator LED
K4-5m-W-PL-PUR	902-51643	5 m, 90 °, PUR, IP 65 / IP 67 / IP 68, with indicator LED
CM4 FG-E-5m-PVC	902-50221	5 m, straight, PVC, IP 67, hex nut SW 9 V2A, suited for food and beverages industries
CM4 FW-E-5m-PVC	902-50222	5 m, 90 °, PVC, IP 67 / IP 69K, hex nut SW 9 V2A, suited for food and beverages industries
M12 socket, 3-pin		Connection lines for actuators and sensors with self-locking threaded joint, unshielded, suitable for drag chains
L3-2m-G-PUR	902-50687	2 m, straight, a-coded, PUR, IP 67 / IP 68
L3-5m-G-PUR	902-51619	5 m, straight, a-coded, PUR, IP 67 / IP 68
L3-2m-W-PUR	902-50689	2 m, 90 °, a-coded, PUR, IP 67 / IP 68
L3-5m-W-PUR	902-51620	5 m, 90 °, a-coded, PUR, IP 67 / IP 68
L3-2m-W-PL-PUR	902-50690	2 m, 90 °, a-coded, PUR, IP 67 / IP 68, with indicator LED
L3-5m-W-PL-PUR	902-51621	5 m, 90 °, a-coded, PUR, IP 67 / IP 68, with indicator LED
M12 socket, 4-pin		Connection lines for actuators and sensors with self-locking threaded joint, unshielded, suitable for drag chains
L4-300mm-G-PUR	902-50811	0.3 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
L4-2m-G-PUR	902-50805	2 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
L4-5m-G-PUR	902-51612	5 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
L4-10m-G-PUR	902-51628	10 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
L4-2m-W-PUR	902-50807	2 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
L4-5m-W-PUR	902-51602	5 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
L4-2m-W-PL-PUR	902-50808	2 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68, with indicator LED
L4-5m-W-PL-PUR	902-51603	5 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68, with indicator LED
L4-10m-W-PL-PUR	902-51604	10 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68, with indicator LED
L4-15m-W-PL-PUR	902-51607	15 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68, with indicator LED
M12 socket, 4-pin		Connection lines for actuators and sensors with self-locking threaded joint, shielded 360 °
L4S-2m-G-PVC	902-51632	2 m, straight, a-coded, PVC, IP 67
L4S-5m-G-PVC	902-51634	5 m, straight, a-coded, PVC, IP 67
L4S-10m-G-PVC	902-51651	10 m, straight, a-coded, PVC, IP 67
L4S-2m-W-PVC	902-51633	2 m, 90 °, a-coded, PVC, IP 67
L4S-5m-W-PVC	902-51635	5 m, 90 °, a-coded, PVC, IP 67
M12 socket, 4-pin * M12 plug, 4-pin		Connection lines, plugs and sockets ready to assemble, for actuators and sensors with self-locking threaded joint, unshielded
CL4 FG-E-5m-PVC	902-50219	5 m, straight, PVC, IP 67, hex nut SW 9 V2A, suited for food and beverages industries
CL4 FW-E-5m-PVC	902-50220	5 m, 90 °, PVC, IP 67 / IP 69K, hex nut SW 14 V2A, suited for food and beverages industries
L4 KDG	022-50812	Coupling socket, ready to assemble, straight, with threaded joint, PBT, IP 67
L4 KDW	022-50813	Coupling socket, ready to assemble, 90 °, with threaded joint, PBT, IP 67
LS4-60-G-K	022-10773*	Connector, ready to assemble, with threaded joint, PA, IP 67
M12, 4-pin - M12, 4-pin Plug - socket		Connection lines, specifically for FT 85 with self-locking threaded joints, unshielded, suitable for drag chains
L4F/L4M-0,48 PUR	902-51670	0.48 m, M12 90 °, a-coded to M12 straight, a-coded, PUR, IP 67
L4F/L4M-B-codiert-0,48 PUR	902-51739	0.48 m, M12 90 °, a-coded to M12 straight, b-coded, PUR, IP 67
L4F/L4M-B-codiert-0,48-X02 PUR	902-51823	0.48 m, M12 90 °, a-coded to M12 straight, b-coded, twist PIN 2 & 4, PUR, IP 67
L4F/L4M/B-codiert-1,00 PUR	902-51827	1 m, M12 90 °, a-coded to M12 straight, b-coded, PUR, IP 67

Accessories

Cables

Part number	Article number	Description
M12 socket, 5-pin		Connection lines for actuators and sensors with self-locking threaded joint, unshielded, suitable for drag chains
L5-2m-G-PUR	902-51652	2 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
L5-5m-G-PUR	902-51624	5 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
L5-10m-G-PUR	902-51609	10 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
L5-2m-W-PUR	902-51613	2 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
L5-5m-W-PUR	902-51641	5 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
M12 socket, 5-pin		Data lines for actuators and sensors, specifically for V10, V20 with self-locking threaded joint, shielded, suitable for drag chains
CI L5FGS-2m-PUR	902-51813	2 m, straight, a-coded, PUR, IP 65 / IP 67
CI L5FGS-5m-PUR	902-51814	5 m, straight, a-coded, PUR, IP 65 / IP 67
CI L5FGS-10m-PUR	902-51815	10 m, straight, a-coded, PUR, IP 65 / IP 67
CI L5FWS-2m-PUR	902-51816	2 m, 90 °, a-coded, PUR, IP 65 / IP 67
CI L5FWS-5m-PUR	902-51817	5 m, 90 °, a-coded, PUR, IP 65 / IP 67
CI L5FWS-10m-PUR	902-51818	10 m, 90 °, a-coded, PUR, IP 65 / IP 67
M12 socket, 8-pin		Connection lines for actuators and sensors with self-locking threaded joint, shielded, suitable for drag chains
L8FS-2m-G-PUR	902-51671	2 m, straight, a-coded, PUR, IP 67
L8FS-5m-G-PUR	902-51646	5 m, straight, a-coded, PUR, IP 67
L8FS-10m-G-PUR	902-51689	10 m, straight, a-coded, PUR, IP 67
L8FS-2m-W-PUR	902-51687	2 m, 90 °, a-coded, PUR, IP 67
L8FS-5m-W-PUR	902-51688	5 m, 90 °, a-coded, PUR, IP 67
L8FS-10m-W-PUR	902-51690	10 m, 90 °, a-coded, PUR, IP 67
M12 socket, 8-pin		Connection lines for actuators and sensors (color assignment in acc. to DIN 60947-5-2) with self-locking threaded joint, shielded 360 °
C L8FG-S-2m-PUR	902-51830	2 m, straight, a-coded, PUR, IP 67 / IP 68 / IP 69K
C L8FG-S-5m-PUR	902-51831	5 m, straight, a-coded, PUR, IP 67 / IP 68 / IP 69K
C L8FG-S-10m-PUR	902-51832	10 m, straight, a-coded, PUR, IP 67 / IP 68 / IP 69K
M12 plug to M8 socket		Adapter lines for actuators and sensors, i.a. for IO-Link with self-locking threaded joint, unshielded, suitable for drag chains
K4/L4-2m-PUR	902-51860	2 m, M8 4-pin straight, to M12 4-pin straight, a-coded, PUR, IP 65 / IP 67 / IP 68 / IP 69K
K4/L4-5m-PUR	902-51876	5 m, M8 4-pin straight, to M12 4-pin straight, a-coded, PUR, IP 65 / IP 67 / IP 68 / IP 69K
K3/L4-2m-PUR	902-51861	2 m, M8 3-pin straight, to M12 4-pin straight, a-coded, PUR, IP 67 / IP 69K
K3/L4-5m-PUR	902-51877	5 m, M8 3-pin straight, to M12 4-pin straight, a-coded, PUR, IP 67 / IP 69K
M12 plug to M12 socket		Adapter lines for actuators and sensors, i.a. for IO-Link with self-locking threaded joint, unshielded, suitable for drag chains
L4/L4-2m-PUR	902-51873	2 m, M12 4-pin straight, a-coded to M12 4-pin straight, a-coded, PUR, IP 65 / IP 67 / IP 68 / IP 69K
L4/L4-5m-PUR	902-51878	5 m, M12 4-pin straight, a-coded to M12 4-pin straight, a-coded, PUR, IP 65 / IP 67 / IP 68 / IP 69K
L5/L5-2m-PUR	902-51874	2 m, M12 5-pin straight, a-coded to M12 5-pin straight, a-coded, PUR, IP 65 / IP 67 / IP 68 / IP 69K
L5/L5-5m-PUR	902-51879	5 m, M12 5-pin straight, a-coded to M12 5-pin straight, a-coded, PUR, IP 65 / IP 67 / IP 68 / IP 69K
L8/L4-2m-PUR	902-51857	2 m, M12 8-pin straight, a-coded to M12 4-pin straight, a-coded, PUR, IP 67 / IP 69K
L8/L4-5m-PUR	902-51875	5 m, M12 8-pin straight, a-coded to M12 4-pin straight, a-coded, PUR, IP 67 / IP 69K
M12 socket, 4-pin, t-coding		Supply lines, i.a. for 8-port master with self-locking threaded joint, unshielded, suitable for drag chains
C L4FG-2-PUR	902-51880	2 m, straight, t-coded, PUR, IP 65 / IP 67 / IP 68
C L4FG-5-PUR	902-51881	5 m, straight, t-coded, PUR, IP 65 / IP 67 / IP 68
C L4FG-10-PUR	902-51882	10 m, straight, t-coded, PUR, IP 65 / IP 67 / IP 68

Part number	Article number	Description
M16 socket, 12-pin		Connection lines for actuators and sensors, strands in pairs 6x2 with self-locking threaded joint, shielded
Q12-3m-G-PVC	902-51656	3 m, straight, PVC, IP 67
Q12-5m-G-PVC	902-51657	5 m, straight, PVC, IP 67
Q12-10m-G-PVC	902-51658	10 m, straight, PVC, IP 67
Q12-20m-G-PVC	902-51663	20 m, straight, PVC, IP 67
Q12-30m-G-PVC	902-51664	30 m, straight, PVC, IP 67
Q12-3m-W-PVC	902-51659	3 m, 90 °, PVC, IP 67
Q12-10m-W-PVC	902-51661	10 m, 90 °, PVC, IP 67
M12 socket 3/4/5-pin		Connection lines, adapter and converter i.a. for SmartPlug and FR 85
L3M/K3F-0,6 PUR	902-51653	0,6 m, connection adapter M12 3-pin plug straight, a-coded to M8 3-pin socket straight, IP 67
L4M/K4F-0,6 PVC	902-51645	0,6 m, connection adapter M12 4-pin plug straight, a-coded to M8 4-pin socket straight, IP 67
L4M/K4FW-0,6 PVC	902-51650	0,6 m, connection adapter M12 4-pin plug straight, a-coded to M8 4-pin socket 90 °, IP 67
L5F/Q8F-0,5 PUR	902-51686	0,5 m, connection adapter M12 5-pin socket straight, a-coded to M16 8-pin plug straight, IP 67

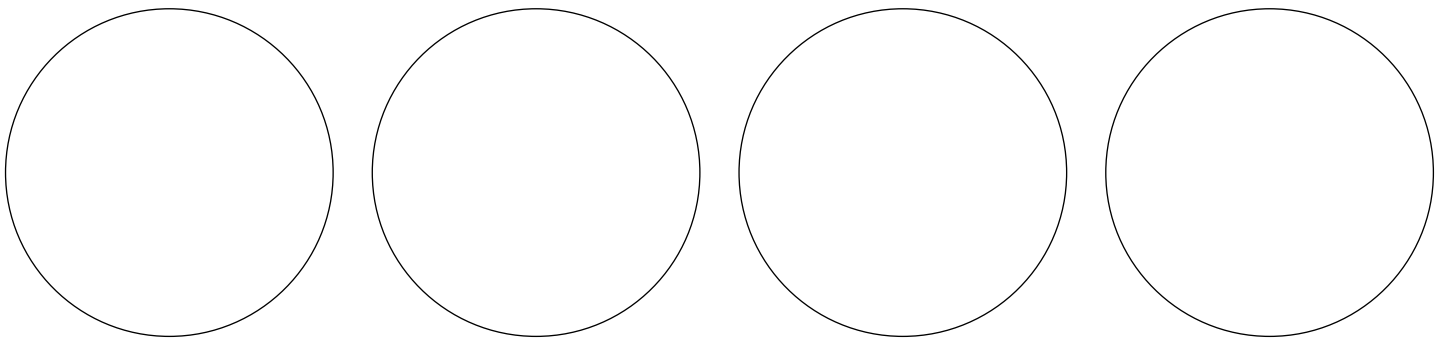
CABLES FOR VISION SENSORS

M12 socket, 12-pin		Supply and I/O lines i.a. for V10,V20 shielded 360 °, suitable for drag chains, suitable for robotics applications
C L12FG-S-2m-PUR	902-51801	2 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12FG-S-5m-PUR	902-51796	5 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12FG-S-10m-PUR	902-51797	10 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12FG-S-20m-PUR	902-51805	20 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12FG-S-30m-PUR	902-51845	30 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12FW-S-2m-PUR	902-51798	2 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12FW-S-5m-PUR	902-51799	5 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12FW-S-10m-PUR	902-51800	10 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12FW-S-20m-PUR	902-51821	20 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12FW-S-30m-PUR	902-51846	30 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
M12 socket, 3-pin		Supply and I/O lines i.a. for V10,V20 (3-pin - 24V, GND, trigger) shielded, suitable for drag chains, suitable for robotics applications
C L12/3FG-S-2m-PUR	902-51833	2 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12/3FG-S-5m-PUR	902-51834	5 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12/3FG-S-10m-PUR	902-51835	10 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12/3FG-S-20m-PUR	902-51839	20 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12/3FG-S-30m-PUR	902-51847	30 m, straight, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12/3FW-S-2m-PUR	902-51836	2 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12/3FW-S-5m-PUR	902-51837	5 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12/3FW-S-10m-PUR	902-51838	10 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12/3FW-S-20m-PUR	902-51840	20 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
C L12/3FW-S-30m-PUR	902-51848	30 m, 90 °, a-coded, PUR, IP 65 / IP 67 / IP 68
M12 plug 4-pin, d-coding to RJ45 plug		Ethernet lines i.a. for V 10,V 20, IO-Link master shielded 360 °, suitable for drag chains, suitable for robotics applications
CI L4MG/RJ45G-GS-3m-PUR	902-51754	3 m, straight, d-coded, PUR, IP 65 / IP 67 / IP 68
CI L4MG/RJ45G-GS-5m-PUR	902-51782	5 m, straight, d-coded, PUR, IP 65 / IP 67 / IP 68
CI L4MG/RJ45G-GS-10m-PUR	902-51784	10 m, straight, d-coded, PUR, IP 65 / IP 67 / IP 68
CI L4MG/RJ45G-GS-20m-PUR	902-51820	20 m, straight, d-coded, PUR, IP 65 / IP 67 / IP 68
CI L4MG/RJ45G-GS-30m-PUR	902-51843	30 m, straight, d-coded, PUR, IP 65 / IP 67 / IP 68
CI L4MW/RJ45G-GS-3m-PUR	902-51786	3 m, 90 °, d-coded, PUR, IP 65 / IP 67 / IP 68
CI L4MW/RJ45G-GS-5m-PUR	902-51788	5 m, 90 °, d-coded, PUR, IP 65 / IP 67 / IP 68
CI L4MW/RJ45G-GS-10m-PUR	902-51790	10 m, 90 °, d-coded, PUR, IP 65 / IP 67 / IP 68
CI L4MW/RJ45G-GS-20m-PUR	902-51822	20 m, 90 °, d-coded, PUR, IP 65 / IP 67 / IP 68
CI L4MW/RJ45G-GS-20m-PUR	902-51844	30 m, 90 °, d-coded, PUR, IP 65 / IP 67 / IP 68

Accessories

Cables


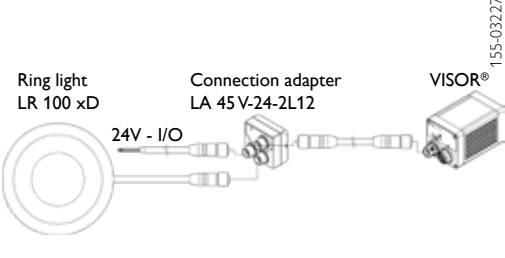
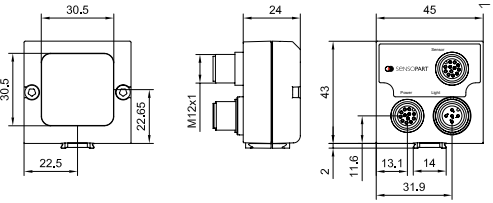
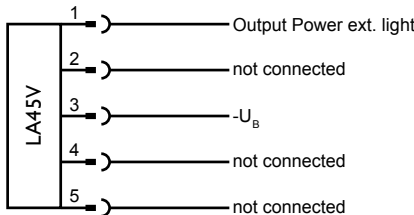
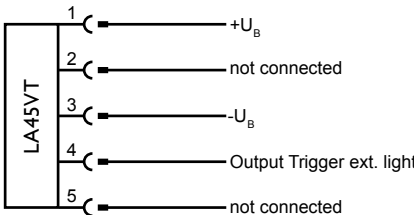
Part number	Article number	Description
M12 socket, 5-pin		Data lines i.a. for V10,V20 shielded, suited for drag chains
CI L5FGS-2m-PUR	902-51813	2 m, straight, a-coded, PUR, IP 65 / IP 67
CI L5FGS-5m-PUR	902-51814	5 m, straight, a-coded, PUR, IP 65 / IP 67
CI L5FGS-10m-PUR	902-51815	10 m, straight, a-coded, PUR, IP 65 / IP 67
CI L5FWS-2m-PUR	902-51816	2 m, 90 °, a-coded, PUR, IP 65 / IP 67
CI L5FWS-5m-PUR	902-51817	5 m, 90 °, a-coded, PUR, IP 65 / IP 67
CI L5FWS-10m-PUR	902-51818	10 m, 90 °, a-coded, PUR, IP 65 / IP 67
M12 socker 4-pin to M12 socket 12-pin		Illumination lines for V10,V20 shielded 360 °, suitable for drag chains
CB L12FS/L12FS-0,35m-GG-PUR	902-51841	0.35 m, M12 straight socket a-coded to 12-pin straight socket a-coded, PUR, IP 65 / IP 67 / IP 68
CB L12FS/L12FS-0,5m-GG-PUR	902-51806	0.5 m, M12 straight socket a-coded to 12-pin straight socket a-coded, PUR, IP 65 / IP 67 / IP 68
CB L12FS/L12FS-2m-GG-PUR	902-51807	2 m, M12 straight socket a-coded to 12-pin straight socket a-coded, PUR, IP 65 / IP 67 / IP 68
CB L12FS/L12FS-10m-GG-PUR	902-51854	10 m, M12 straight socket a-coded to 12-pin straight socket a-coded, PUR, IP 65 / IP 67 / IP 68
CB L12FS/L12FS-0,35m-WW-PUR	902-51842	0.35 m, M12 90 ° socket a-coded to 12-pin 90 ° socket a-coded, PUR, IP 67 / IP 69K
CB L12FS/L12FS-0,5m-WW-PUR	902-51808	0.5 m, M12 90 ° socket a-coded to 12-pin 90 ° socket a-coded, PUR, IP 67 / IP 69K
CB L12FS/L12FS-2m-WW-PUR	902-51809	2 m, M12 90 ° socket a-coded to 12-pin 90 ° socket a-coded, PUR, IP 67 / IP 69K
M12 plug, 12-pin		Illumination lines for V10,V20 unshielded 360 °, suitable for drag chains
CB L4MG-10m-PUR	902-51756	10 m, M12 4-pin straight, PUR, IP 67, for direct connection of devices 532-51000 to 532-51052



Accessories

Adapter

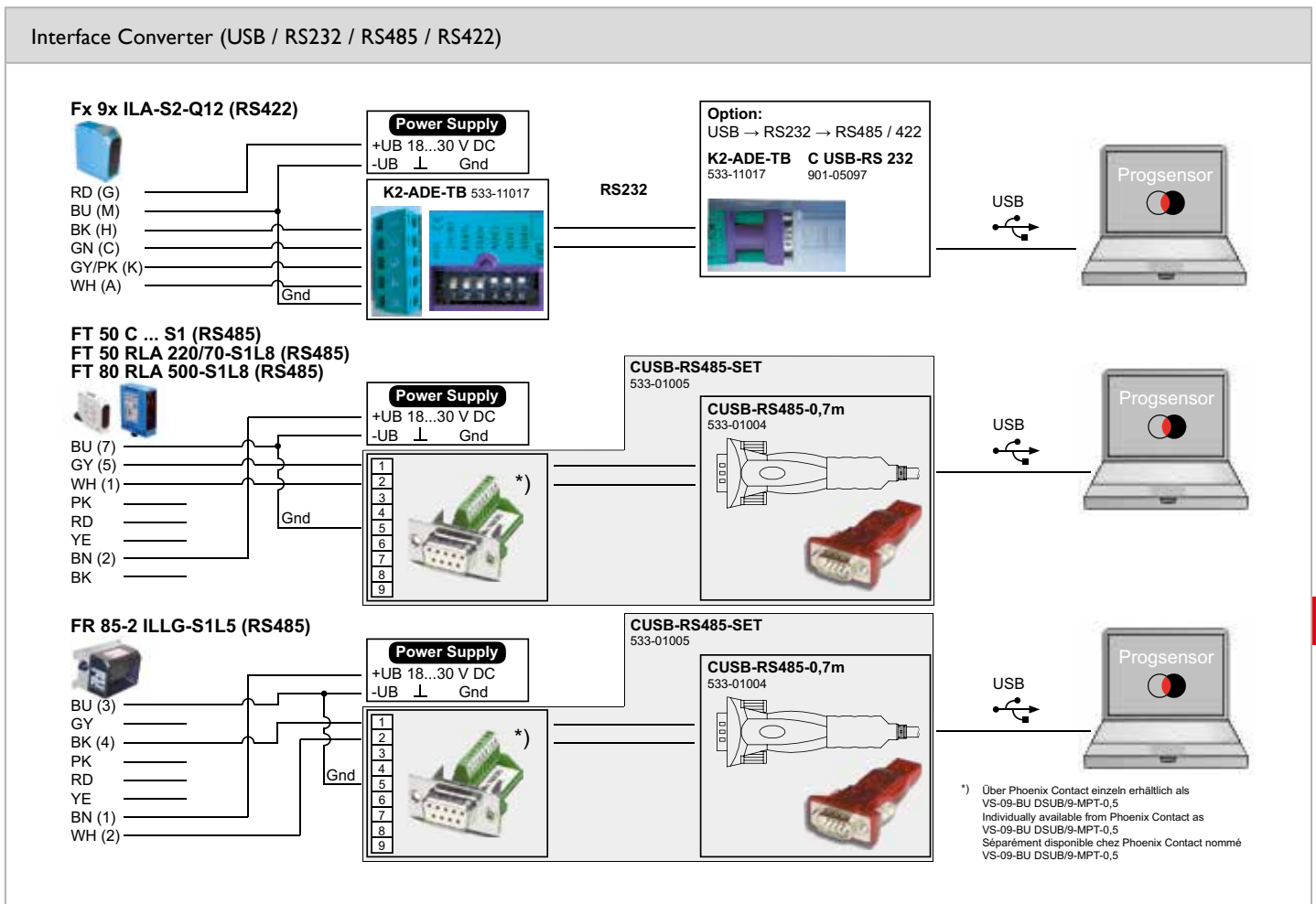
Connection adapter for illumination on V10, V20

	 <p>Ring light LR 100 xD</p> <p>Connection adapter LA 45 V-24-2L12</p> <p>24V - I/O</p> <p>VISOR® 155-03227</p>	 <p>30.5</p> <p>30.5</p> <p>22.5</p> <p>22.65</p> <p>M12x1</p> <p>24</p> <p>43</p> <p>45</p> <p>2</p> <p>11.6</p> <p>13.1</p> <p>14</p> <p>31.9</p> <p>153-00916</p>
	 <p>1 — Output Power ext. light</p> <p>2 — not connected</p> <p>3 — $-U_B$</p> <p>4 — not connected</p> <p>5 — not connected</p> <p>LA45V</p> <p>154-00502</p>	 <p>1 — $+U_B$</p> <p>2 — not connected</p> <p>3 — $-U_B$</p> <p>4 — Output Trigger ext. light</p> <p>5 — not connected</p> <p>LA45VT</p> <p>154-00555</p>

<p>M12 plug 5-pin, 2x12 plug 12-pin</p> <p>LA45V-24-2L12</p> <p>LA 45 VT-24-2L12</p>	<p>525-01001</p> <p>525-01002</p>	<p>Connection adapter, illumination</p> <p>V10, V20 connection adapter for LED illumination with 5-pin M12 plug</p> <p>V10, V20 connection adapter with 5-pin M12 socket for LED illumination with trigger line</p>
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Converters and adapter lines

Part number	Article number	Description
RS232 ↔ RS485/422 K2-ADE-TB	533-11017	Converters and adapter lines Converter RS232 ↔ RS485/422, in combination with CUSB-RS232-2m (901-05097) for PC connection of F 90 / F 91 sensors, parameterisation via "ProgSensor" software
USB ↔ RS232 CUSB-RS232-2m	901-05097	
USB ↔ RS485 CUSB-RS485-SET	533-01005	
CUSB-RS485-0,7m	533-01004	



Download software: www.sensopart.com

IO-Link Master

Gateways for industrial networks

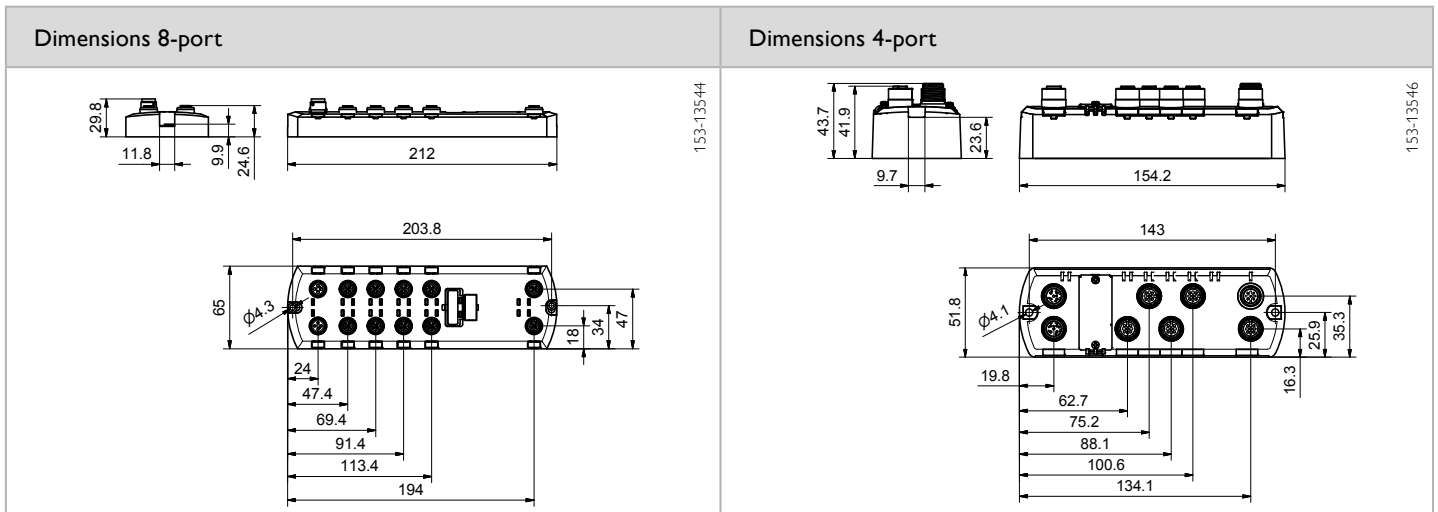


PRODUCT HIGHLIGHTS

- Gateways for PROFINET, EtherNet/IP / Modbus TCP
- Efficient web server for easy parameter setting of IO-Link sensors, including IODD management
- Robust IP 67 housing for harsh production environments
- Support of "Data storage" for an easy sensor replacement
- Additional digital input at each port
- Daisy chain to other network members possible

IO-Link		Functions	
Supported IO-Link versions	1.1 and 1.0	Web server Firmware Update Interfaces	For easy parameter setting of the sensors, incl. upload and management of IODDs Compatible See selection table
Communication mode	COM 1, COM 2, COM 3		
Max. cable length	20 m		
Data storage	Compatible		
Electrical data			
Operating voltage 8-port	20 ... 30V DC	Max. current consumption 4-port	4 A
Max. output current PIN 4 (C/Q)	200 mA	Max. current consumption 8-port	12 A
Max. output current PIN 1/3 port 1 (8-port model)	1,6 A	Max. current consumption (without load)	100 mA @ 24V DC
Max. output current PIN 1/3 other ports	500 mA	Protective circuit	Short-circuit protection
		Switching output	PNP / NPN
Mechanical data 4-port		Mechanical data 8-port	
Dimensions	154 x 51.8 x 43.7 mm	Dimensions	212 x 65 x 29.8 mm
Enclosure rating	IP 67	Enclosure rating	IP 67
Connection power supply	M12, 5-pin, A-coded	Connection power supply	M12, 4-pin, T-coded
Connection sensor	M12, A-coded	Connection sensor	M12, A-coded
Connection network cable	M12, D-coded	Connection network cable	M12, D-coded
Material housing	ABS	Material housing	ABS
Ambient temperature: operation	0 ... +55 °C	Ambient temperature: operation	-25 ... +60 °C
Ambient temperature: storage	-40 ... +70 °C	Ambient temperature: storage	-40 ... +70 °C
Weight	318 g	Weight	454 g

Interfaces	Number of ports	Part number	Article number
PROFINET	8-Port	PN-L-8-LT4	533-11053
PROFINET	4-Port	PN-L-4-LA5	533-11052
EtherNet/IP / Modbus TCP	8-Port	EIP/MB-L-8-LT4	533-11051
EtherNet/IP / Modbus TCP	4-Port	EIP/MB-L-4-LA5	533-11050



Accessories IO-Link Master		
Part number	Article number	Description
M12 socket, 4-pin, t-coding <hr/> C L4FG-2-PUR <hr/> C L4FG-5-PUR <hr/> C L4FG-10-PUR	<hr/> 902-51880 <hr/> 902-51881 <hr/> 902-51882	Supply lines 8-port master, with self-locking threaded joint, unshielded, suitable for drag chains <hr/> 2 m, straight, t-coded, PUR, IP 65 / IP 67 / IP 68 <hr/> 5 m, straight, t-coded, PUR, IP 65 / IP 67 / IP 68 <hr/> 10 m, straight, t-coded, PUR, IP 65 / IP 67 / IP 68
M12 socket, 5-pin <hr/> CI L5FGS-2m-PUR <hr/> CI L5FGS-5m-PUR <hr/> CI L5FGS-10m-PUR	<hr/> 902-51813 <hr/> 902-51814 <hr/> 902-51815	Supply lines 4-port master, with self-locking threaded joint, shielded, suitable for drag chains <hr/> 2 m, straight, a-coded, PUR, IP 65 / IP 67 <hr/> 5 m, straight, a-coded, PUR, IP 65 / IP 67 <hr/> 10 m, straight, a-coded, PUR, IP 65 / IP 67
M12 plug 4-pin, d-coding to RJ45 plug <hr/> CI L4MG/RJ45G-GS-3m-PUR <hr/> CI L4MG/RJ45G-GS-5m-PUR <hr/> CI L4MG/RJ45G-GS-10m-PUR <hr/> CI L4MG/RJ45G-GS-20m-PUR <hr/> CI L4MG/RJ45G-GS-30m-PUR	<hr/> 902-51754 <hr/> 902-51782 <hr/> 902-51784 <hr/> 902-51820 <hr/> 902-51843	Ethernet and sensor lines for 4-port and 8-port master, shielded 360°, suitable for drag chains, suitable for robotics applications <hr/> 3 m, straight, d-coded, PUR, IP 65 / IP 67 / IP 68 <hr/> 5 m, straight, d-coded, PUR, IP 65 / IP 67 / IP 68 <hr/> 10 m, straight, d-coded, PUR, IP 65 / IP 67 / IP 68 <hr/> 20 m, straight, d-coded, PUR, IP 65 / IP 67 / IP 68 <hr/> 30 m, straight, d-coded, PUR, IP 65 / IP 67 / IP 68
M12 plug to M8 socket <hr/> K4/L4-2m-PUR <hr/> K3/L4-2m-PUR <hr/> K4/L4-5m-PUR <hr/> K3/L4-5m-PUR	<hr/> 902-51860 <hr/> 902-51861 <hr/> 902-51876 <hr/> 902-51877	Ethernet and sensor lines for 4-port and 8-port master, with self-locking threaded joint, unshielded, suitable for drag chains <hr/> 2 m, M8 4-pin straight, to M12 4-pin straight, a-coded, PUR, IP 65 / IP 67 / IP 68 / IP 69K <hr/> 2 m, M8 3-pin straight, to M12 4-pin straight, a-coded, PUR, IP 67 / IP 69K <hr/> 5 m, M8 4-pin straight, to M12 4-pin straight, a-coded, PUR, IP 65 / IP 67 / IP 68 / IP 69K <hr/> 5 m, M8 3-pin straight, to M12 4-pin straight, a-coded, PUR, IP 67 / IP 69K
M12 plug to M12 socket <hr/> L8/L4-2m-PUR <hr/> L4/L4-2m-PUR <hr/> L8/L4-5m-PUR <hr/> L4/L4-5m-PUR	<hr/> 902-51857 <hr/> 902-51873 <hr/> 902-51875 <hr/> 902-51878	Ethernet and sensor lines for 4-port and 8-port master, with self-locking threaded joint, unshielded, suitable for drag chains <hr/> 2 m, M12 8-pin straight, a-coded to M12 4-pin straight, a-coded, PUR, IP 67 / IP 69K <hr/> 2 m, M12 4-pin straight, a-coded to M12 4-pin straight, a-coded, PUR, IP 65 / IP 67 / IP 68 / IP 69K <hr/> 5 m, M12 8-pin straight, a-coded to M12 4-pin straight, a-coded, PUR, IP 67 / IP 69K <hr/> 5 m, M12 4-pin straight, a-coded to M12 4-pin straight, a-coded, PUR, IP 65 / IP 67 / IP 68 / IP 69K

A

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	\triangle 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 ¹	901-01000	IO-Link USB-Master

¹ incl. USB-cable: USB-A to mini-USB

Accessories	
Connection cable (L4F/L4M-0,48 PUR / 902-51670)	From Page A-46

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
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																																

Accessories

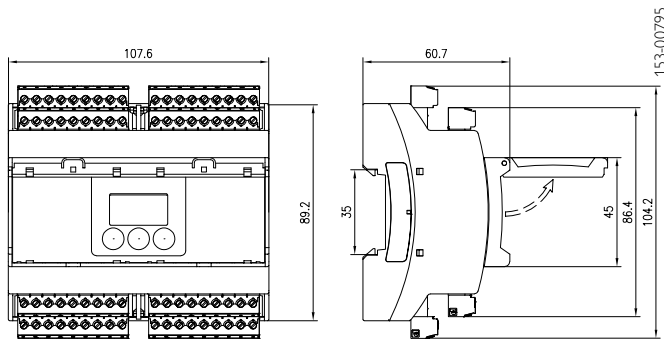
Power supply units and switching devices

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
	Part number / Article number Description	Z-USB-VISOR® / 651-01000 USB stick with VISOR® PC software



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 $+U_B$	20.4 ... 26.4V DC	Dimensions	107.6 × 104.2 × 60.7 mm
No-load current, I_0	≤ 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_{On} , switching output	≤ 2 ms	Connection system	Screw clamp contacts, plug-in
Off delay, t_{Off} , switching output	≤ 2 ms	Ambient temperature: operation	5 ... +50 °C
Inputs	8 x	Ambient temperature: storage	0 ... +50 °C
$U_{IN,HIGH}$ control/trigger inputs	> 18V	Vibration and impact resistance	EN 60947-5-2
$U_{IN,LOW}$ 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-46

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

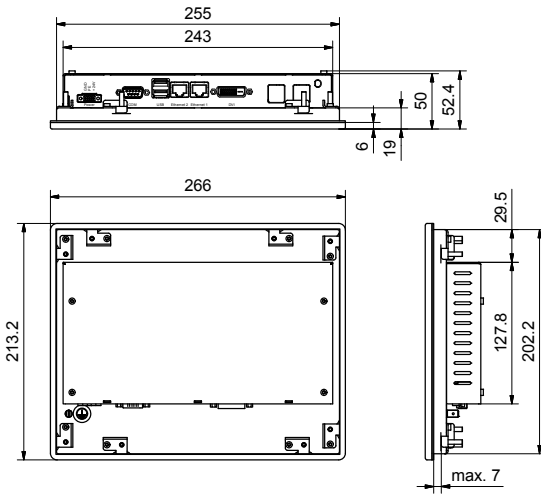
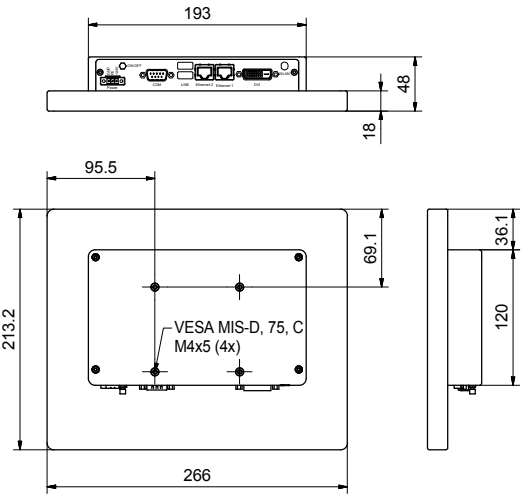
Functions	
Resolution	1024 x 768
Aspect ratio	4 : 3
Technology	TFT
Colors	16.2 millions
Backlight	LED
Backlight life time	30,000 h
Luminance ¹⁾	350 cd/m ²
Contrast ratio ¹⁾	1200 : 1
Operating system	Windows® 10 IoT

Electrical data		Mechanical data	
Operating voltage +U _B	24V DC ± 20 %	Dimensions	266 x 213.2 x 52.4 mm
CPU	AMD® GX-415GA / Quad Core™ / 1.5 GHz 64 Bit / 2 MB Cache	Enclosure rating	IP 65
USB	2 x USB Host 3.0	Ambient temperature: operation	0 ... +50 °C
Ethernet	2 x 1 Gbit Ethernet	Ambient temperature: storage	-10 ... +70 °C
Communication	1 x RS232	Weight	1700 g
Video	1 x DVI-I		
Memory	4 GB DDR3L		
Storage	64 GB MLC		
BIOS	AMI BIOS, supports ACPI function		

¹⁾ 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-46

Dimensional drawing PV-AW10loT10.4TX	Dimensional drawing PV-AW10loT10.4TX-V
 <p>153-13536</p>	 <p>153-13539</p>