Архангельск (8182)63-90-72 Астана (7172)727-132 Астрахань (8512)99-46-04 Барнаул (3852)73-04-60 Белгород (4722)40-23-64 Брянск (4832)59-03-52 Владивосток (423)249-28-31 Волгоград (844)278-03-48 Вологда (8172)26-41-59 Воронеж (473)204-51-73 Екатеринбург (343)384-55-89 Иваново (4932)77-34-06 Ижевск (3412)26-03-58 Казань (843)206-01-48 Калининград (4012)72-03-81 Калуга (4842)92-23-67 Кемерово (3832)68-02-04 Киров (8332)68-02-04 Красноярск (391)204-63-61 Курск (4712)77-13-04 Липецк (4742)52-20-81 Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Нижний Новгород (831)429-08-12 Новокузнецк (3843)20-46-81 Новосибирск (383)227-86-73 Омск (3812)21-46-40 Орел (4862)44-53-42 Оренбург (3532)37-68-04 Пенза (8412)22-31-16 Пермь (342)205-81-47 Ростов-на-Дону (863)308-18-15 Рязань (4912)46-61-64 Самара (846)206-03-16 Санкт-Петербург (812)309-46-40 Саратов (845)249-38-78 Севастополь (8692)22-31-93 Симферополь (3652)67-13-56 Смоленск (4812)29-41-54 Сочи (862)225-72-31 Ставрополь (8652)20-65-13 Сургут (3462)77-98-35 Тверь (4822)63-31-35 Томск (3822)98-41-53 Тула (4872)74-02-29 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Челябинск (351)202-03-61 Череповец (8202)49-02-64 Ярославль (4852)69-52-93

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#### ПРОГРАММНОЕ ОБЕСПЕЧЕНИЕ И АКСЕССУАРЫ

# Технические характеристики



## The SDK Baumer GAPI

## "Intelligent software integration"

The free high-performance Software Development Kit (SDK) Baumer GAPI allows for platform-independent integration by generic Application Programming Interface (API). This way, Baumer GigE, Dual GigE or USB 3.0 cameras are quickly and easily integrated in both application and software environment.

#### The SDK Baumer GAPI includes:

- Windows<sup>®</sup>, Linux<sup>®</sup> and ARM<sup>®</sup>-based platform support
- Full GigE Vision<sup>®</sup> and USB3 Vision<sup>™</sup> interface compatibility
- Flexible use of programming languages (C++ and C#)
- Most simplified configuration of all camera parameters and functionalities thanks to integrated intuitive Camera Explorer
- Consistent GenICam<sup>™</sup> compatibility and GenTL support for easy camera integration and quick exchange across different series
- Varied testing and visualization options
- Various example programs and camera setup tools for easy camera implementation
- Free license and technical support in soft and hardware- related image transmission

#### The Baumer Camera Link® SDK

#### "Easy implementation"

Baumer LX cameras operate on the Generic Control Protocol (GenCP) for convenient configuration and minimized integration time in application setup. When supported by the frame grabber provider, no additional Baumer software is required. Whether your frame grabber supports GenCP is seen on the compliant.

Where GenCP is not supported you may use Baumer Camera Link<sup>®</sup> SDK for configuration and evaluation of LX cameras. It includes a configuration tool for easy camera function testing, configuration and extended functions such as events. This allows for quick evaluation of even complex functions. GenICam<sup>™</sup> reference implementation serves camera integration by providing individual, LX functionality-specific examples such as how to apply the checksum.

## The matching software for our industrial cameras

# "Our product compatibility is your flexibility"

You may use the Baumer GAPI or Camera Link® SDK as well as third party software for evaluation or implementation of the Baumer industrial cameras. With full compliance to GenICam™ and the relevant interface standards and thanks to consistent compatibility tests and close cooperation with providers, Baumer industrial cameras are easy to integrate and offer a high level of flexibility.

#### "Simple to succeed"

The Baumer Application Suite is the intuitive configuration software for *VeriSens*<sup>®</sup> vision sensors, which makes it quick and simple for even new users to implement image processing tasks. Starting with the creation of test tasks through to the management of jobs, the program will take you through just a few steps to reach your goal.

## Cost free - carry out test tasks offline

The Application Suite offers an Offline mode, which you can use to simulate *VeriSens*<sup>®</sup> vision sensors in full. If no equipment is available, a simple digital camera will suffice to create application images and then evaluate them with the help of the software. You can get to know *VeriSens*<sup>®</sup> without spending one red cent.

# *VeriSens*<sup>®</sup> web interface – configurable user interface for operation

A configurable human-machine interface is already integrated for customers who want to configure *VeriSens*<sup>®</sup> also during the production process. It is the first user interface of a vision sensor that can be adapted regarding functional range, user groups and design with just a few clicks, saving users standard programming work. The *VeriSens*<sup>®</sup> web interface runs in standard web browsers and does not require any plug-ins.

#### "Build a complete system with the right accessories"

#### Accessories for industrial cameras and vision sensors

There is more to a high-quality image processing system than just a high-performing industrial camera or intuitive vision sensor. The overall system is always only as good as its individual components. That's why we offer you all you need from one source: Our accessories are specially tested and harmonized to ensure the optimum match. In this way, we support you in the easy and quick integration of our cameras and vision sensors and significantly contribute towards long-term stability and reliability of your image processing application.

# **Productfinder Accessories**

sample picture	product family	description	features

	MMRN Permanent magnet Peripherals		<ul> <li>Magnet: Neodymium-Iron-Boron (NdFeB)</li> <li>Energy product: 280 kJ/m3</li> <li>Operating temperature: -40 +100 °C</li> <li>Quantity: 10 pieces</li> </ul>
	Adapter for glass fiber optic sensors 30  Lenses / apertures / glass covers	Adapter for fiber optic cables type A	• Material: POM
200	Adapter set MZZA 01 for standard slots  Mounting accessories	Adapter set for standard slots	<ul> <li>Type 1: C slot sensors in T slots</li> <li>Type 1: C slot sensors in davetail slots</li> <li>Type 3: T slot sensors in davetail slots</li> <li>Type 4: C and T slot sensors with additional fastening clamp or mounting bracket</li> </ul>
949	Adapter set MZZA 02 for special slots  Mounting accessories	Adapter set for special slots	<ul> <li>Type 1 - 4: T slot sensors in special slots</li> <li>Type 5: T slot sensors with additional fastening clamp for round cylinders</li> </ul>
•	Adjusting plate for glass fiber optic sensors 18 (replace)  Lenses / apertures / glass covers	-	Material: PETP     For re-orders when lost     Enclosed with every glass fiber optic of type A
	Bracket for profiles sensor series 04  Mounting accessories	-	Material: Aluminum
	Cap nut for glass fiber optic sensors 15 (replace) Lenses / apertures / glass covers	-	<ul> <li>Material: Nickel-plated brass</li> <li>For re-orders when lost</li> <li>Enclosed with every glass fiber optic of type B</li> </ul>
	Cap nut for glass fiber optic sensors 18 (replace) Lenses / apertures / glass covers		<ul> <li>Material: POM</li> <li>For re-orders when lost</li> <li>Enclosed with every glass fiber optic of type A</li> </ul>

	Cap nut for photoelectric sensors series 18  Lenses / apertures / glass covers	-	Material: Nickel-plated brass
	Cap nut for photoelectric sensors series 18  Lenses / apertures / glass covers	-	Material: Nickel-plated brass
	Cap nut for photoelectric sensors series 30  Lenses / apertures / glass covers	-	Material: Nickel-plated brass
	Clamping nut for sensors Ø 3 mm  Mounting accessories	-	
	Clamping nut for sensors Ø 4 mm  Mounting accessories	-	-
	Clamping nut for sensors Ø 6,5 mm  Mounting accessories	-	-
00	Clamping nut ZPART-M18.NUT for sensors Ø 18 mm (replace)  Mounting accessories	-	Material: Plastic (ABS TERLURAN)     For re-orders when lost
	Cutting tool  Mounting accessories	-	Delivered with every plastic fiber optic

9	Doubling lens for sensors serie 18 Lenses / apertures / glass covers	-	Material: PBTP / glass     For double the sensing distance FZAM 18
	Doubling lens for sensors serie 30  Lenses / apertures / glass covers	-	<ul> <li>Material: PC / glass</li> <li>For double the sensing distance FZAM 30</li> </ul>
& Legisland	Doubling lens M2,6 (side view version)  Lenses / apertures / glass covers	Doubling lens for fiber optic cables	• Side view version • Increases the actual range Sb by a factor of 6 • Contents: 2 pieces
Ø L	Doubling lens M2,6  Lenses / apertures / glass covers	Doubling lens for fiber optic cables	• Increases the actual range Sb by a factor of 6 • Contents: 2 pieces
3 3	Doubling lens M3  Lenses / apertures / glass covers	Doubling lens for fiber optic cables	<ul> <li>Material: brass / glass</li> <li>Increases the actual range Sb by a factor of 6</li> <li>Contents: 2 pieces</li> </ul>
3 3	Doubling lens M4  Lenses / apertures / glass covers	Doubling lens for fiber optic cables	<ul> <li>Material: brass / glass</li> <li>Increases the actual range Sb by a factor of 6</li> <li>Contents: 2 pieces</li> </ul>
	ES 14  Connectors and mating connectors	Cable socket M12 angular, not pre-assembled	<ul> <li>Connector female unshielded</li> <li>Connector only, no cable supplied</li> <li>4 and 5 pin versions</li> </ul>
	ES 18  Connectors and mating connectors	Cable socket M12 straight, not pre-assembled	<ul> <li>Connector female unshielded</li> <li>Connector only, no cable supplied</li> <li>4 and 5 pin versions</li> </ul>

ES 21  Connectors and mating connectors	Cable socket M8 straight, not pre-assembled	<ul> <li>Connector female unshielded</li> <li>Connector only, no cable supplied</li> <li>3 and 4 pin version</li> </ul>
ES 22  Connectors and mating connectors	Cable socket M8 angular, not pre-assembled	<ul> <li>Connector female unshielded</li> <li>Connector only, no cable supplied</li> <li>3 and 4 pin versions</li> </ul>
ESG 05  Connectors and mating connectors	Connector M5 straight	<ul> <li>Connector unshielded</li> <li>Miniature version</li> <li>Cable coating PUR</li> </ul>
ESG 05G  Connectors and mating connectors	Connector M5 straight, shielded	<ul><li>Connector shielded</li><li>Miniature version</li><li>Cable coating PUR</li></ul>
ESG 09  Connectors and mating connectors	Connector Ø 8 mm straight, snap-in	<ul> <li>Connector unshielded "snap-in"</li> <li>3 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>
ESG 16/KSG 16 Connection cables	M16 straight connector to M16 straight mating connector	<ul> <li>adapter connecting cables, from Denex 7-pins to Scatec 6-pins</li> <li>Insulation material: halogen-free PUR</li> <li>In lengths from 0,3 m</li> </ul>
ESG 32/KSG 32AH Connection cables	M8 straight connector to M8 straight mating connector	<ul> <li>Unshielded connecting cables, 4- pins</li> <li>Insulation material: halogen-free PUR</li> <li>Suitable for flexible cable carriers</li> <li>In lenghts from 0,2 m to 10 m</li> </ul>
ESG 32/KSG 32SH  Connection cables	M8 straight connector to M8 straight mating connector	<ul> <li>Unshielded connecting cables, 3- pins</li> <li>Insulation material: halogen-free PUR</li> <li>Suitable for flexible cable carriers</li> <li>In lengths from 0,25 m to 5 m</li> </ul>

	ESG 32/KSG 34  Connection cables	M8 straight connector to M12 straight mating connector	<ul> <li>Unshielded connecting cables, 3- and 4- pins</li> <li>Insulation material: halogen-free PUR</li> <li>Suitable for flexible cable carriers</li> <li>In lengths from 0,3 m to 2 m</li> </ul>
	ESG 32  Connectors and mating connectors	Connector M8 straight	<ul> <li>Connector unshielded</li> <li>3 and 4 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> <li>Meet EN 60079-25 requirements for intrinsically safe ATEX applications</li> </ul>
	ESG 32A/KSG 34AU  Connection cables	M8 straight connector to M12 straight mating connector	<ul> <li>Adapter, from M8 female connector to M12 male connector</li> <li>4-pins version</li> <li>Unshielded</li> <li>Material of grip body TPU</li> </ul>
O Land	ESG 32F  Connectors and mating connectors	Connector M8 straight, PVC/V4A	<ul> <li>Connector unshielded</li> <li>3 pin version</li> <li>Cable coating PVC</li> <li>Cap nut material in stainless steel V4A</li> <li>Suitable for flexible cable carriers</li> </ul>
	ESG 32G  Connectors and mating connectors	Connector M8 straight, shielded	<ul> <li>Connector shielded, screen connected with cap nut</li> <li>3 and 4 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>
8	ESG 32Y (Food) Connectors and mating connectors	Connector M8 straight, PP/V4A	<ul> <li>For food &amp; beverage industry applications</li> <li>4 pin unshielded female versions</li> <li>Cable coating PP</li> <li>Cap nut material in stainless steel V4A</li> <li>Ecolab certified and FDA conform</li> <li>Follows EHEDG design requirements</li> </ul>
	ESG 34 (Outdoor)  Connectors and mating connectors	Connector M12 straight, PE-X cable	<ul> <li>For outdoor applications</li> <li>4 pin versions unshielded</li> <li>Cable coating PE-X</li> <li>Halogen-free</li> <li>Cap nut material in high grade steel (1.4401)</li> </ul>

ESG 34 (Railway)  Connectors and connectors	shielded	or M12 straight, , RADOX cable	<ul> <li>For railway applications</li> <li>4 pin versions shielded</li> <li>Cable coating RADOX</li> <li>Cabel according EN 45545-2</li> </ul>
ESG 34/KSG 3 Connection cab	M8 strai	night connector to ght mating or	<ul> <li>Unshielded connecting cables, 3-pins</li> <li>Insulation material: halogen-free PUR</li> <li>Suitable for flexible cable carriers</li> <li>In lengths from 1 m to 5 m</li> </ul>
ESG 34/KSG 3 Connection cal	M12 stra	night connector to night mating	<ul> <li>Unshielded connecting cables, 3- and 4- pins</li> <li>Insulation material: halogen-free PUR</li> <li>Suitable for flexible cable carriers</li> <li>In lengths from 0,3 m to 2 m</li> </ul>
ESG 34  Connectors and connectors		or M12 straight	<ul> <li>Connector unshielded</li> <li>3, 4 and 5 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>
ESG 34A/KSG Connection cab	M8 strai	night connector to ght mating or	<ul> <li>Adapter, from M12 female connector to M8 male connector</li> <li>4-pins version</li> <li>Unshielded</li> <li>Material of grip body TPU</li> </ul>
ESG 34F  Connectors and connectors	PVC/V4	or M12 straight,	<ul> <li>Connector unshielded</li> <li>4 pin version</li> <li>Cable coating PVC</li> <li>Cap nut material in stainless steel V4A</li> <li>Ecolab certified and FDA conform</li> <li>UL listed, number E315836</li> </ul>
ESG 34FG  Connectors and connectors	shielded	or M12 straight, TPE/V4A	<ul> <li>Connector shielded, screen connected with cap nut</li> <li>5 and 8 pin versions</li> <li>Cable coating TPE</li> <li>Cap nut material in stainless steel V4A</li> </ul>
ESG 34G (Outdoor) Connectors and connectors	shielded	or M12 straight, , PE-X cable	<ul> <li>For outdoor applications</li> <li>4 pin versions shielded</li> <li>Cable coating PE-X</li> <li>Halogen-free</li> <li>Cap nut material in high grade steel (1.4401)</li> </ul>

ESG 34G  Connectors ar connectors	shielded	tor M12 straight,	<ul> <li>Connector shielded, screen connected with cap nut</li> <li>4, 5 and 8 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>
ESG 34G Connectors ar connectors	pin shie	tor M12 straight, 12 lded	<ul> <li>Connector shielded, screen connected with cap nut</li> <li>Cable coating PUR</li> <li>Not halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>
ESG 34X  Connectors ar connectors	only for	tor M12 straight, ATEX applications asor IWRM	<ul> <li>Connector unshielded</li> <li>3 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>
ESG 34Y (Food) Connectors ar connectors	PP/V4A	tor M12 straight,	<ul> <li>For food &amp; beverage industry applications</li> <li>4 pin unshielded female versions</li> <li>Cable coating PP</li> <li>Cap nut material in stainless steel V4A</li> <li>Ecolab certified and FDA conform</li> <li>Follows EHEDG design requirements</li> </ul>
ESG 62G  Connectors ar connectors	shielded	tor M9 straight,	<ul> <li>Connector shielded, screen connected with cap nut</li> <li>5 and 8 pin versions</li> <li>Cable coating PUR</li> <li>Suitable for flexible cable carriers</li> </ul>
ESW 05  Connectors ar connectors		tor M5 angular	<ul> <li>Connector unshielded</li> <li>Miniature version</li> <li>Cable coating PUR</li> </ul>
ESW 07/KSG Connection ca	to M8 st	onnector A angled traight mating or	<ul> <li>Unshielded connecting cables, 3- pins</li> <li>Valve connector</li> <li>Insulation material: halogen-free PUR</li> <li>In lengths from 0,5 m to 2 m</li> </ul>
ESW 08  Connectors ar connectors	snap-in	tor Ø 8 mm angular,	<ul> <li>Connector unshielded "snap-in"</li> <li>3 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>

ESW 16/KSG 16 Connection cables	M16 angled connector to M16 straight mating connector	<ul> <li>adapter connecting cables, from Denex 7-pins to Scatec 6-pins</li> <li>Insulation material: halogen-free PUR</li> <li>In lengths from 0,3 m</li> </ul>
ESW 31/KSG 34 Connection cables	M8 angled connector to M12 straight mating connector	<ul> <li>Unshielded connecting cables, 3- and 4- pins</li> <li>Insulation material: halogen-free PUR</li> <li>Suitable for flexible cable carriers</li> <li>In lengths from 0,6 m to 3,5 m</li> </ul>
ESW 31  Connectors and mating connectors	Connector M8 angular	<ul> <li>Connector unshielded</li> <li>3 and 4 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> <li>Meet EN 60079-25 requirements for intrinsically safe ATEX applications</li> </ul>
ESW 31A/KSG 32 Connection cables	M8 angled connector to M8 straight mating connector	<ul> <li>Unshielded connecting cables, 3- and 4- pins</li> <li>Insulation material: halogen-free PUR</li> <li>Suitable for flexible cable carriers</li> <li>In lengths from 0,25 m to 5 m</li> </ul>
ESW 31G  Connectors and mating connectors	Connector M8 angular, shielded	<ul> <li>Connector shielded, screen connected with cap nut</li> <li>3 and 4 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>
ESW 31S/KSG 32S  Connection cables	M8 angled connector to M8 straight mating connector	<ul> <li>Unshielded connecting cables, 3-pins</li> <li>Insulation material: halogen-free PUR</li> <li>Suitable for flexible cable carriers</li> <li>In lengths from 0,25 m to 5 m</li> </ul>
ESW 31Y (Food)  Connectors and mating connectors	Connector M8 angular, PP/V4A	<ul> <li>For food &amp; beverage industry applications</li> <li>4 pin unshielded female versions</li> <li>Cable coating PP</li> <li>Cap nut material in stainless steel V4A</li> <li>Ecolab certified and FDA conform</li> <li>Follows EHEDG design requirements</li> </ul>

ESW 33 (Railway) Connectors and mating connectors	Connector M12 angular, shielded, RADOX cable	<ul> <li>For railway applications</li> <li>4 pin versions shielded</li> <li>Cable coating RADOX</li> <li>Cabel according EN 45545-2</li> </ul>
ESW 33/KSG 32 Connection cables	M12 angled connector to M8 straight mating connector	<ul> <li>Unshielded connecting cables, 3-pins</li> <li>Insulation material: halogen-free PUR</li> <li>Suitable for flexible cable carriers</li> <li>In lengths from 0,5 m to 5 m</li> </ul>
ESW 33/KSG 34  Connection cables	M12 angled connector to M12 straight mating connector	<ul> <li>Unshielded connecting cables, 3- and 4- pins</li> <li>Insulation material: halogen-free PUR</li> <li>Suitable for flexible cable carriers</li> <li>In lengths from 1 m to 2 m</li> </ul>
ESW 33  Connectors and mating connectors	Connector M12 angular	<ul> <li>Connector unshielded</li> <li>3, 4 and 5 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>
ESW 33F  Connectors and mating connectors	Connector M12 angular, PVC/V4A	<ul> <li>Connector unshielded</li> <li>4 pin version</li> <li>Cable coating PVC</li> <li>Cap nut material in stainless steel V4A</li> <li>Ecolab certified and FDA conform</li> <li>UL listed, number E315836</li> </ul>
ESW 33G  Connectors and mating connectors	Connector M12 angular, shielded	<ul> <li>Connector shielded, screen connected with cap nut</li> <li>4, 5 and 8 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>
ESW 33G  Connectors and mating connectors	Connector M12 angular, 12 pin shielded	<ul> <li>Connector shielded, screen connected with cap nut</li> <li>Cable coating PUR</li> <li>Not halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>
ESW 33X  Connectors and mating connectors	Connector M12 angular, only for ATEX applications with sensor IWRM 12I9704/S14X	<ul> <li>Connector unshielded</li> <li>3 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>

S.	ESW 33Y (Food) Connectors and mating connectors	Connector M12 angular, PP/V4A	<ul> <li>For food &amp; beverage industry applications</li> <li>4 pin unshielded female versions</li> <li>Cable coating PP</li> <li>Cap nut material in stainless steel V4A</li> <li>Ecolab certified and FDA conform</li> <li>Follows EHEDG design requirements</li> </ul>
	ESW 61G  Connectors and mating connectors	Connector M9 angular, shielded	<ul> <li>Connector shielded, screen connected with cap nut</li> <li>5 pin version</li> <li>Cable coating PUR</li> <li>Suitable for flexible cable carriers</li> </ul>
	Fastening clamps MZZB 01 for micro cylinders  Mounting accessories	Fastening clamps for micro cylinders	• Diameter: ø 8 25 mm • Material: PA AISI 303
2	Fastening clamps MZZB 02 for round cylinders  Mounting accessories	Fastening clamps for round cylinders	• Diameter: ø 11 65 mm • Material: PA AISI 303
	Fiber optic cable extension  Mounting accessories	-	<ul> <li>Reduction in range due to fiber optic extension: 2 m = approx. 25%</li> <li>Reduction in range due to fiber optic extension: 5 m = approx. 60%</li> </ul>
	Focusing lens M3 Ø 0,1 mm  Lenses / apertures / glass covers	Focusing lens for fiber optic cables	• Light spot Ø 0,1 mm at a distance of 4,6 mm
	Focusing lens M3 Ø 0,4 m  Lenses / apertures / glass covers	Focusing lens for fiber optic cables	• Light spot Ø 0,4 mm at a distance of 7 mm
	Focusing lens M3 ø 2 mm  Lenses / apertures / glass covers	Focusing lens for fiber optic cables	• Light spot Ø 2 mm at a distance of 19 mm

	FTAR 013 Reflectors	-	<ul> <li>Fastening method self-adhesive</li> <li>Micro structure</li> <li>For Retro-reflective sensors</li> </ul>
	FTAR 014 Reflectors	-	Fastening method self-adhesive     For Retro-reflective sensors
	FTAR 019 Reflectors	-	Fastening method self-adhesive     For Retro-reflective sensors
And the land of his are to be to the dis- place of the second of the displace of the displace of the displace of the second of the second of the second of the displace of the second of the second of the second of the displace of the second of the second of the second of the displace of the second of the second of the second of t	FTAR 020 Reflectors		<ul> <li>Fastening method self-adhesive</li> <li>Micro structure</li> <li>For Retro-reflective sensors</li> </ul>
	FTAR 038 Reflectors		Fastening method self-adhesive     For Retro-reflective sensors
	FTDF 005 Reflectors	-	<ul> <li>Fastening method self-adhesive</li> <li>For pocket-size edge sensor PosCon</li> </ul>
	FTDF 012 Reflectors	-	Fastening method self-adhesive     For pocket-size edge sensor ParCon
	FTDF 020 Reflectors	-	<ul> <li>Fastening method self-adhesive</li> <li>For pocket-size edge sensor PosCon</li> </ul>

FTDF 020F Reflectors	-	Fastening method self-adhesive     For laser light sensors
FTDF 035 Reflectors	-	Fastening method self-adhesive     For pocket-size edge sensor ParCon
FTDF 035I Reflectors	-	Fastening method self-adhesive     For pocket-size edge sensor PosCon
FTDF 050 Reflectors		Fastening method self-adhesive     For pocket-size edge sensor ParCon
FTDR 005 Reflectors	-	Fastening method screw mounting     For pocket-size edge sensor PosCon
FTDR 008/01 Reflectors	-	Bracket with reflective tape     For pocket-size edge sensor ParCon
FTDR 008/21 Reflectors	-	Bracket with reflective tape     For pocket-size edge sensor ParCon
FTDR 010A Reflectors	-	Fastening method self-adhesive     For Retro-reflective sensors

FTDR 010D Reflectors	-	Fastening method self-adhesive     For laser light sensors
FTDR 015  Reflectors	-	Fastening method self-adhesive     For Retro-reflective sensors
FTDR 017 Reflectors	-	<ul> <li>Fastening method screw mounting</li> <li>Micro structure</li> <li>For Retro-reflective sensors</li> </ul>
FTDR 017W Reflectors	-	Stainless steel reflector for SmartReflect in hygiene design     EHEDG-certified
FTDR 020 Reflectors		Fastening method screw mounting     For pocket-size edge sensor PosCon
FTDR 029 Reflectors	-	Fastening method self-adhesive     For Retro-reflective sensors
FTDR 035 Reflectors	-	Fastening method screw mounting     For pocket-size edge sensor PosCon
FTDR 047 Reflectors	-	Fastening method screw mounting     For Retro-reflective sensors

FTDR 047W Reflectors	-	Stainless steel reflector for retro-reflective sensor in hygiene design     EHEDG-certified
FTDR 050 Reflectors	-	Stainless steel reflector for SmartReflect in washdown design     Material: Stainless steel V4A
FTDR 051 Reflectors	-	Detergent resistant reflector     Ecolab approved     For Retro-reflective sensors
FTDR 084 Reflectors		Fastening method screw mounting     For Retro-reflective sensors
Glass cover for sensors series 18  Lenses / apertures / glass covers		Material: glass
Glass cover for sensors series 30  Lenses / apertures / glass covers	-	Material: glass
KSG 32  Connectors and mating connectors	Connector M8 straight	<ul> <li>Connector male unshielded</li> <li>3 pin versions</li> <li>Cable coating PUR</li> <li>Halogen-free</li> <li>Suitable for flexible cable carriers</li> <li>UL listed, number E315836</li> </ul>
KSG 34/KSG 45  Connection cables	Ethernet cable; connector M12, straight to RJ45 mating connector	<ul> <li>Ethernet connecting cable M12 - RJ45, shielded</li> <li>Cable coating PUR</li> <li>Screen connected with cap nut</li> <li>In lengths from 2 m to 10 m</li> </ul>

KSW 30 Connectors and mating connectors	Connector Ø 8 mm angular, snap-in	<ul> <li>Connector male unshielded "snap-in"</li> <li>2 pin version</li> <li>Cable coating PVC</li> </ul>
Lens cleaning air nozzle bracket  Mounting accessories	-	• Material: Steel
Minofix-Mounting kit for MINOS  Mounting accessories	-	Material: brass nickel-plated
MMFN Permanentmagnet Peripherals	-	<ul> <li>Magnet: Neodymium-Iron-Boron (NdFeB)</li> <li>Energy product: 280 kJ/m3</li> <li>Operating temperature: -40 +100 °C</li> <li>Quantity: 10 pieces</li> </ul>
MMFS Permanentmagnet Peripherals	-	<ul> <li>Magnet: Samarium-Cobalt (SmCo5)</li> <li>Energy product: 190 kJ/m3</li> <li>Operating temperature: -40 +180 °C</li> <li>Quantity: 10 pieces</li> </ul>
MMRH Permanentmagnet Peripherals	-	<ul> <li>Magnet: Hard ferrite (SrFe)</li> <li>Energy product: 30 kJ/m3</li> <li>Operating temperature: -25 +130 °C</li> <li>Quantity: 5 pieces</li> </ul>
MMRS Permanentmagnet Peripherals	-	<ul> <li>Magnet: Samarium-Cobalt (SmCo5)</li> <li>Energy product: 190 kJ/m3</li> <li>Operating temperature: -40 +180 °C</li> <li>Quantity: 10 pieces</li> </ul>
Mounting bracket 1,1 mm  Mounting accessories	Mounting bracket for fiber optic cables	Material: Aluminum

<b>4</b> 3	Mounting bracket 2,2 mm  Mounting accessories	Mounting bracket for fiber optic cables	Material: Aluminum
	Mounting bracket 20 mm  Mounting accessories	-	Material: Polypropylene (PP)
	Mounting bracket 6,5 mm  Mounting accessories	-	Material: Plastic (PA6)
	Mounting bracket 8 mm  Mounting accessories		• Material: Plastic (PA6)
	Mounting bracket for adjustment ZADAP- M18.MICRO series 18 Mounting accessories	Alignment aid for fine adjustment for sensors series 18	Material: Steel galvanized
	Mounting bracket for adjustment ZADAP-M18.SWING series 18 Mounting accessories	Alignment aid for adjustment for sensors series 18	Material: Plastic (ABS TERLURAN)
	Mounting bracket for fiber optic sensors series 12  Mounting accessories	-	Material: Steel     Delivered with every plastic fiber optic sensor series 12
	Mounting bracket for fiber optic sensors series 22  Mounting accessories	-	<ul> <li>Material: Steel</li> <li>Delivered with every plastic fiber optic sensor series 22</li> </ul>

Mounting bracket for fiber optic sensors series 60  Mounting accessories	-	Material: Steel     Must be ordered separately for series 66 and series 67sensors
Mounting bracket for fine adjustment series 16  Mounting accessories	-	Material: Steel
Mounting bracket for Logipal/PosCon Mounting accessories	-	Material: Steel
Mounting bracket for sensor OxDM 20  Mounting accessories	-	Material: Steel
Mounting bracket for sensors O300 (L design) Mounting accessories	Mounting bracket for sensors O300	Material: Steel
Mounting bracket for sensors O300  Mounting accessories	Mounting bracket - Retrofit for sensors series 20	Material: Steel
Mounting bracket for sensors O500/U500 (L design) Mounting accessories	Mounting bracket for sensors O500/U500	• Material: Steel
Mounting bracket for sensors O500/U500 Mounting accessories	Mounting bracket - Retrofit for sensors series 30	Material: Steel

Mounting bracket for sensors series 10 (L design)  Mounting accessories	Mounting bracket for sensors series 10 (L design)	• Material: Steel
Mounting bracket for sensors series 10 (U design)  Mounting accessories	Mounting bracket for sensors series 10 (U design)	• Material: Steel
Mounting bracket for sensors series 10  Mounting accessories	Mounting bracket for sensors series 10	• Material: Steel
Mounting bracket for sensors series 12  Mounting accessories	Mounting bracket for sensors series 12	Material: Steel
Mounting bracket for sensors series 13  Mounting accessories	Mounting bracket for sensors series 13	Material: Steel
Mounting bracket for sensors series 14  Mounting accessories	Mounting bracket for sensors series 14	Material: Steel
Mounting bracket for sensors series 15  Mounting accessories	Mounting bracket for sensors series 15	Material: Steel
Mounting bracket for sensors series 16  Mounting accessories	Mounting bracket for sensors series 16	• Material: Steel

Mounting bracket for sensors series 18 round (L design)  Mounting accessories	Mounting bracket for sensors series 18 (L design)	Material: Steel galvanized
Mounting bracket for sensors series 18 round (L design)  Mounting accessories	Mounting bracket for sensors series 18 (L design)	Material: Steel galvanized
Mounting bracket for sensors series 18 round  Mounting accessories	Mounting bracket for sensors series 18 (L design)	Material: Steel galvanized
Mounting bracket for sensors series 25  Mounting accessories	Mounting bracket for sensors series 25	Material: Steel
Mounting bracket for sensors series 26  Mounting accessories	Mounting bracket for sensors series 26	Material: Steel
Mounting bracket for Verisens (L design)  Mounting accessories		• Material: Steel
Mounting bracket for Verisens  Mounting accessories	-	Material: Steel
Mounting bracket for washdown sensors series 14 Mounting accessories	Mounting bracket for washdown sensors series 14	• Material: Stainless Steel

Mounting bracket X7  Mounting accessories	Mounting bracket for PosCon and MESAX 70	Fitting for PosCon and MESAX 70     Mounting at an angle of 90° or 30°     Bracket and mounting hardware incl. Torx wrench
Mounting brackets MZZC 01/005 for round cylinders with tie rods 5 9 mm  Mounting accessories	Mounting brackets for round cylinders with tie rods 5 9 mm	• Cylinder: ø 5 9 mm • Material: PA AISI 303 6005A
Mounting brackets MZZC 01/032 for round cylinders with tie rods 32 40 mm  Mounting accessories	Mounting brackets for round cylinders with tie rods 32 40 mm	• Cylinder: ø 32 40 mm • Material: PA AISI 303 6005A
Mounting brackets MZZC 01/050 for round cylinders with tie rods 50 63 mm  Mounting accessories	Mounting brackets for round cylinders with tie rods 50 63 mm	• Cylinder: ø 50 63 mm • Material: PA AISI 303 6005A
Mounting brackets MZZC 01/082 for round cylinders with tie rods 82 100 mm  Mounting accessories	Mounting brackets for round cylinders with tie rods 82 100 mm	• Cylinder: ø 82 100 mm • Material: PA AISI 303 6005A
Mounting brackets MZZC 01/125 for round cylinders with tie rods 125 mm  Mounting accessories	Mounting brackets for round cylinders with tie rods 125 mm	• Cylinder: ø 125 mm • Material: PA AISI 303 6005A
Mounting brad FHDK 04  Mounting accessories		Material: Nickel-plated steel
Mounting HI06-1H for sensors in hygienic design Ø 6,5 mm  Mounting accessories	-	Material: Stainless steel V4A     EHEDG-certified

	Mounting HI11-1H for sensors in hygienic design Ø 11 mm  Mounting accessories	-	Material: Stainless steel V4A     EHEDG-certified
The second secon	Mounting HI17-1H for sensors in hygienic design Ø 17 mm  Mounting accessories	-	Material: Stainless steel V4A     EHEDG-certified
	Mounting kit for CFDK 25  Mounting accessories	-	<ul> <li>1 pcs. mounting frame HC25; Material PA 12</li> <li>2 pcs. cable ties 186x4,7 mm</li> <li>2 pcs. adhesive pads</li> <li>2 pcs. spacer</li> </ul>
	Mounting panel for sensors scatec  Mounting accessories	mounting plate for mounting on round rod	Material: Aluminum
	Mounting panel for sensors series 10  Mounting accessories	-	-
	MSFN Rotor with permanent magnet  Peripherals	-	• Rotor: Aluminum • Operating temperature: -40 +120 °C
	MSFS Rotor with permanent magnet  Peripherals	-	• Rotor: Aluminum • Operating temperature: -40 +200 °C
	PNP pulse converter M12 Peripherals	-	<ul> <li>Adapter for pulse stretching</li> <li>For pulse stretching 1 150 ms</li> <li>For connector M12 - 3 pins</li> </ul>

PNP pulse converter M8  Peripherals	-	<ul> <li>Adapter for pulse stretching</li> <li>For pulse stretching 1 150 ms</li> <li>For connector M8 - 3 pins</li> </ul>
PNP to NPN Converter M12 Peripherals	-	<ul> <li>PNP/NPN Converter</li> <li>For frequencies up to max. 5 kHz</li> <li>For connector M12 - 3 pins</li> </ul>
PNP to NPN Converter M8  Peripherals	-	<ul> <li>PNP/NPN Converter</li> <li>For frequencies up to max. 5 kHz</li> <li>For connector M8 - 3 pins</li> </ul>
Power supply for sensor test unit  Peripherals	-	<ul> <li>Input 90-260 VAC</li> <li>Output 24 V/0,75 A</li> <li>Interchangeable plug-Type A, C, G and I</li> </ul>
Protector cap for OxDM 20  Lenses / apertures / glass covers	-	Material: PMMA     Self-adhesive
Reduction tube  Lenses / apertures / glass covers	-	• Set of 2 • Delivered with every 1 mm diameter plastic fiber optic
Sensofix-Base module  Mounting accessories	-	Clamps made of stainless steel     Ball pivots made of galvanized steel
Sensofix-Mounting kit for sensors O300  Mounting accessories	-	<ul> <li>Clamps made of stainless steel</li> <li>Ball pivots made of galvanized steel</li> <li>Mounting panel made of stainless steel</li> </ul>

Sensofix-Mounting kit for sensors O500/U500  Mounting accessories	-	Clamps made of stainless steel     Ball pivots made of galvanized steel     Mounting panel made of stainless steel
Sensofix-Mounting kit for sensors series 08 round  Mounting accessories	-	<ul> <li>Clamps made of stainless steel</li> <li>Ball pivots made of galvanized steel</li> <li>Mounting panel made of stainless steel</li> </ul>
Sensofix-Mounting kit for sensors series 10/20  Mounting accessories	-	<ul> <li>Clamps made of stainless steel</li> <li>Ball pivots made of galvanized steel</li> <li>Mounting panel made of stainless steel</li> </ul>
Sensofix-Mounting kit for sensors series 12 round  Mounting accessories		<ul> <li>Clamps made of stainless steel</li> <li>Ball pivots made of galvanized steel</li> <li>Mounting panel made of stainless steel</li> </ul>
Sensofix-Mounting kit for sensors series 12  Mounting accessories	-	Clamps made of stainless steel     Ball pivots made of galvanized steel     Mounting panel made of stainless steel
Sensofix-Mounting kit for sensors series 13  Mounting accessories	-	<ul> <li>Clamps made of stainless steel</li> <li>Ball pivots made of galvanized steel</li> <li>Mounting panel made of stainless steel</li> </ul>
Sensofix-Mounting kit for sensors series 14  Mounting accessories	-	Clamps made of stainless steel     Ball pivots made of galvanized steel     Mounting panel made of stainless steel
Sensofix-Mounting kit for sensors series 16  Mounting accessories	-	<ul> <li>Mounting panel made of stainless steel</li> <li>Clamps made of stainless steel</li> <li>Ball pivots made of galvanized steel</li> </ul>

	Sensofix-Mounting kit for sensors series 18 round  Mounting accessories	-	<ul> <li>Clamps made of stainless steel</li> <li>Ball pivots made of galvanized steel</li> <li>Mounting panel made of stainless steel</li> </ul>
	Sensofix-Mounting kit for sensors series 18/20  Mounting accessories	-	<ul> <li>Clamps made of stainless steel</li> <li>Ball pivots made of galvanized steel</li> <li>Mounting panel made of stainless steel</li> </ul>
	Sensofix-Mounting kit for sensors series 30  Mounting accessories		<ul> <li>Clamps made of stainless steel</li> <li>Ball pivots made of galvanized steel</li> <li>Mounting panel made of stainless steel</li> </ul>
	Sensofix-Mounting kit for washdown sensors series 14  Mounting accessories		<ul> <li>Clamps made of stainless steel</li> <li>Ball pivots made of galvanized steel</li> <li>Mounting panel made of stainless steel</li> </ul>
	Slot aperture stickers series 14  Lenses / apertures / glass covers	-	<ul><li>Material: Polyester foil</li><li>Contents: 2 pieces</li><li>self-adhesive</li></ul>
	Sonic beam deflector for ultrasonic sensors series 10  Peripherals	-	• Set of 2 included 1 x left, 1 x right
P	Sonic beam deflector for ultrasonic sensors series 18 round Peripherals	-	Sonic beam deflector for ultrasonic sensors
	Sonic beam deflector for ultrasonic sensors series 20 Peripherals	-	Sonic beam deflector for ultrasonic sensors

	Sonic beam deflector for ultrasonic sensors U500  Peripherals	-	Sonic beam deflector for ultrasonic sensors
	Teach Pen Peripherals	-	Local Teach-in of NextGen sensors in hygienic design
	Teach-in Adapter M12 Peripherals	-	-
	Test unit for sensors analog & digital  Peripherals	-	Output via display (V or mA) or LED (PNP/NPN) Teach-in of sensors with integrated Teachbutton Connection for plug in power supply (available as accessory)
	Test unit for sensors digital Peripherals		LED (red/green) for digital PNP/NPN signals     Teach-in of sensors with integrated Teach-button     Connection for plug in power supply (available as accessory)
300	USB IO-Link Master Peripherals	USB Master for IO-Link sensors	Integration of IO-Link sensors via USB     Including power supply (EU, KOR, USA, AUS, UK) and USB cable
	Velcro strip cut to length for mounting frame HC25  Mounting accessories	-	<ul> <li>Base material: Polyamide</li> <li>Overall thickness: 1,8 to 2,2 mm</li> <li>Breaking strength: &gt; 210 N/cm</li> </ul>
	Z-FTDF 005 Reflectors	-	Fastening method self-adhesive     For pocket-size edge sensor PosCon

Z-FTDF 020 Reflectors		Fastening method self-adhesive     For pocket-size edge sensor PosCon
Z-FTDF 035 Reflectors		Fastening method self-adhesive     For pocket-size edge sensor PosCon
Z-FTDF 050 Reflectors	-	Fastening method self-adhesive     For pocket-size edge sensor PosCon
Z-FTDF 050K Reflectors	-	Fastening method self-adhesive     For Retro-reflective sensors
Z-FTDF 610 Reflectors	-	Fastening method self-adhesive     For pocket-size edge sensor PosCon

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