



WEBSITE



S3N

MINI PHOTOELECTRIC SENSOR SERIES



Top performances series in a very rugged and miniaturized standard housing. Complete solution for any detection application in any automation industry. Available with trimmer and Teach-in models with high connectivity features thanks to extended IO-Link communication.

- Bright LED and Safe Laser emission models
- Smart BGS and clear detection functions
- Single, Double trimmer & Push Button models
- Long distance detection models
- Very fast and very precise RGB Contrast sensor
- Cable, M8 connector, Pigtail M8 and M12 connection
- Rugged IP67 Plastic miniature case
- IO-Link with extended Smart Tasks



CODE DESCRIPTION

S3N - P R - 5 - B 0 1 - P L

Category	Code	Description
series	S3N	Miniature photoelectric sensors
housing	P	Standard housing
emission	R	Radial LED emission
	H	Radial LASER emission
connection	2	2 m cable
	3	Pigtail M12-4 pins connector
	4	Pigtail M8-4 pins connector
	5	M8-4 pins connector
	6	Pigtail M8-3 pins connector
	function	B
C		Diffused
FG		Through beam
M		Background suppression
T		Transparent for clear objects
W		Mark reader
distance	0	Standard distance
	1	Long distance
	5	Coaxial optic
adjustment	1	Trimmer adjustment
	3	Teach-In push button
output	P	PNP output
	N	NPN output
	0	IO-Link configurable I/O
output configuration		L/D configurable by trimmer
	L	Light mode
	D	Dark mode
	Z	IO-Link

S3N TECHNICAL SPECIFICATIONS

	S3N-PR-* B0 *-**	S3N-PR-* C0 *-**
		
GENERAL DATA		
Functions	Polarized retroreflective	Diffused narrow beam
Nominal sensing distance	0.05 ... 7 m On R5 reflector	1 ... 250 mm on White 90%
Emission	635 nm LED Red	
Spot dimension	Ø 40 mm @500 mm (rounded spot)	Ø 4 mm @100 mm (rounded spot)
Sensitivity adjustment	1 turn trimmer or Teach-In push button (*)	
Maximum switching frequency	1 kHz	
Response time max	500 µs	
Output type	NPN (no IO-Link) or PNP (no IO-Link) / PNP, NPN, PP, IO-Link (*)	
Output function	Don or IO-Link or L/D Selectable by trimmer or Lon (*)	
LED indicators	yellow OUTPUT LED, green POWER ON LED, blue LED IO-Link Activity (IO-Link models), yellow OUTPUT LED, green STABILITY LED (No IO-Link models) (**)	
ELECTRICAL DATA		
Supply voltage	10 ... 30 Vdc	
Maximum residual ripple	≤10 %	
Leakage current	≤ 300 µA	
Maximum No-load absorption	35mA	
Maximum DC output voltage drop	2 V @ IL=100mA	
Maximum DC load current	100 mA	
Short circuit protection	Yes	
Reverse polarity protection	Yes	
Impulsive overvoltage protections	Yes	
Protection to capacitive loads	Yes	
Insulation resistance	>20 MΩ 500 Vdc, between electronics and housing	
Ground resistivity	500 Vac 1 min., between electronics and housing	
MECHANICAL DATA		
Dimensions	11 x 31 x 19 mm Cubic	
Housing material	Plastic Polymer Fiber Glass reinforced	
Active part material	PMMA	
Optical location	Radial 90°	
Weight	10 g Connector, 50 g Cable and Pigtail	
Shaft material	POM, PMMA	
Connector material	Metal	
ENVIRONMENTAL DATA		
Operating Temperature	-25 ... 55 °C	
Storage temperature max.	-25 ... 70 °C	
Mechanical Protection	IP67	
Shocks and vibrations	0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)	
Ambient light immunity	according to EN 60947-5-2 : 2020	
TEST/CERTIFICATIONS		
Certifications	CE, UKCA, cULus	
Electromagnetic compatibility	EN 60947-5-2	

(*) For a correct Part Number selection, see "AVAILABLE MODELS" table

(**) For detailed information, see "USER INTERFACE" table

TECHNICAL SPECIFICATIONS

	S3N-PR-*C1*-**	S3N-PR-*FG0*-**
		
GENERAL DATA		
Functions	Diffused beam	Through beam emitter and receiver
Nominal sensing distance	0 ... 1 m on white 90%	0 ... 20 m
Emission	635 nm LED Red	
Spot dimension	Ø 20 mm @300 mm (rounded spot)	Ø 30 mm @500 mm (rounded spot)
Sensitivity adjustment	1 turn trimmer or Teach-In push button (*)	
Maximum switching frequency	1 kHz	500 Hz
Response time max	500 µs	1 ms
Output type	NPN (no IO-Link) or PNP (no IO-Link) / PNP, NPN, PP, IO-Link (*)	
Output function	Don or IO-Link or L/D Selectable by trimmer or Lon (*)	
LED indicators	yellow OUTPUT LED, green POWER ON LED, blue LED IO-Link Activity (IO-Link models), yellow OUTPUT LED, green STABILITY LED (No IO-Link models) (**)	
ELECTRICAL DATA		
Supply voltage	10 ... 30 Vdc	
Maximum residual ripple	≤10 %	
Leakage current	≤ 300 µA	
Maximum No-load absorption	35mA	
Maximum DC output voltage drop	2 V @ IL=100mA	
Maximum DC load current	100 mA	
Short circuit protection	Yes	
Reverse polarity protection	Yes	
Impulsive overvoltage protections	Yes	
Protection to capacitive loads	Yes	
Insulation resistance	>20 MΩ 500 Vdc, between electronics and housing	
Ground resistivity	500 Vac 1 min., between electronics and housing	
MECHANICAL DATA		
Dimensions	11 x 31 x 19 mm Cubic	
Housing material	Plastic Polymer Fiber Glass reinforced	
Active part material	PMMA	
Optical location	Radial 90°	
Weight	10 g Connector, 50 g Cable and Pigtail	
Shaft material	POM, PMMA	
Connector material	Metal	
ENVIRONMENTAL DATA		
Operating Temperature	-25 ... 55 °C	
Storage temperature max.	-25 ... 70 °C	
Mechanical Protection	IP67	
Shocks and vibrations	0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)	
Ambient light immunity	according to EN 60947-5-2 : 2020	
TEST/CERTIFICATIONS		
Certifications	CE, UKCA, cULus	
Electromagnetic compatibility	EN 60947-5-2	

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S3N TECHNICAL SPECIFICATIONS

PHOTOELECTRIC CUBIC SENSORS

	S3N-PR-*M01-**	S3N-PR-*M03-**
		
GENERAL DATA		
Functions	Background suppression	
Nominal sensing distance	10 ... 800 mm (on White 90%) 15 ... 400 mm (on Grey 18%) 25 ... 200 mm (on Black 6%)	25 ... 180 mm
Emission	635 nm LED Red	
Spot dimension	7 mm @100 mm	15 mm @60 mm
Sensitivity adjustment	9 turns trimmer (*)	Teach-In push button (*)
Maximum switching frequency	500 Hz	
Response time max	1 ms	
Output type	NPN (no IO-Link) / PNP (no IO-Link) (*)	PNP, NPN, PP, IO-Link (*)
Output function	Don or L/D Selectable by trimmer or Lon (*)	IO-Link (*)
LED indicators	yellow OUTPUT LED, green POWER ON LED (No IO-Link models) (**)	yellow OUTPUT LED, green POWER ON LED, blue LED IO-Link Activity (IO-Link models) (**)
ELECTRICAL DATA		
Supply voltage	10 ... 30 Vdc	
Maximum residual ripple	≤10 %	
Leakage current	≤ 300 µA	≤ 400 µA
Maximum No-load absorption	35mA	
Maximum DC output voltage drop	2 V @ IL=100mA	
Maximum DC load current	100 mA	
Short circuit protection	Yes	
Reverse polarity protection	Yes	
Impulsive overvoltage protections	Yes	
Protection to capacitive loads	Yes	
Insulation resistance	>20 MΩ 500 Vdc, between electronics and housing	
Ground resistivity	500 Vac 1 min., between electronics and housing	
MECHANICAL DATA		
Dimensions	11 x 31 x 19 mm Cubic	
Housing material	Plastic Polymer Fiber Glass reinforced	
Active part material	PMMA	
Optical location	Radial 90°	
Weight	10 g Connector, 50 g Cable and Pigtail	
Shaft material	POM, PMMA	
Connector material	Metal	
ENVIRONMENTAL DATA		
Operating Temperature	-25 ... 55 °C	
Storage temperature max.	-25 ... 70 °C	
Mechanical Protection	IP67	
Shocks and vibrations	0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)	
Ambient light immunity	according to EN 60947-5-2 : 2020	
TEST/CERTIFICATIONS		
Certifications	CE, UKCA, cULus	
Electromagnetic compatibility	EN 60947-5-2	

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(**) For detailed information, see "USER INTERFACE" table

TECHNICAL SPECIFICATIONS

	S3N-PR-*_T5*_**	S3N-PR-*_W03-OZ
		 
GENERAL DATA		
Functions	Polarized retroreflective for clear object	Contrast sensor
Nominal sensing distance	0 ... 2 m On R7 reflector	12 mm ± 3 mm
Emission	635 nm LED Red	RGB blue (460 nm) / green (525 nm) / red (633 nm)
Spot dimension	Ø 20 mm @800 mm (rounded spot)	1 x 3 mm Rectangular / Longitudinal
Sensitivity adjustment	1 turn trimmer or Teach-In push button (*)	Teach-In push button (*)
Maximum switching frequency	1 kHz (T51 no IO-Link model), 500 Hz (T53 IO-Link model)	60 kHz
Response time max	500.00 µs (T51 no IO-Link model), 1.00 ms (T53 IO-Link model)	8.00 µs 4 µs jitter
Output type	NPN (no IO-Link) or PNP (no IO-Link) / PNP, NPN, PP, IO-Link (*)	PNP, NPN, PP, IO-Link (*)
Output function	Don or IO-Link or L/D Selectable by trimmer or Lon (*)	IO-Link (*)
LED indicators	yellow OUTPUT LED, green POWER ON LED, blue LED IO-Link Activity (IO-Link models), yellow OUTPUT LED, green STABILITY LED (No IO-Link models) (**)	yellow OUTPUT LED, green POWER ON LED, blue LED IO-Link Activity (IO-Link models) (**)
ELECTRICAL DATA		
Supply voltage	10 ... 30 Vdc	
Maximum residual ripple	≤ 10 %	
Leakage current	≤ 300 µA	≤ 400 µA
Maximum No-load absorption	35mA	40mA
Maximum DC output voltage drop	2 V @ IL=100mA	1 V @ IL=100mA
Maximum DC load current	100 mA	
Short circuit protection	Yes	
Reverse polarity protection	Yes	
Impulsive overvoltage protections	Yes	
Protection to capacitive loads	Yes	
Insulation resistance	>20 MΩ 500 Vdc, between electronics and housing	
Ground resistivity	500 Vac 1 min., between electronics and housing	
MECHANICAL DATA		
Dimensions	11 x 31 x 19 mm Cubic	
Housing material	Plastic Polymer Fiber Glass reinforced	
Active part material	PMMA	
Optical location	Radial 90°	
Weight	10 g Connector, 50 g Cable and Pigtail	
Shaft material	POM, PMMA	
Connector material	Metal	
ENVIRONMENTAL DATA		
Operating Temperature	-25 ... 55 °C	
Storage temperature max.	-25 ... 70 °C	
Mechanical Protection	IP67	
Shocks and vibrations	0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)	
Ambient light immunity	according to EN 60947-5-2 : 2020	
TEST/CERTIFICATIONS		
Certifications	CE, UKCA, cULus	
Electromagnetic compatibility	EN 60947-5-2	

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(**) For detailed information, see "USER INTERFACE" table

S3N TECHNICAL SPECIFICATIONS

	S3N-PH-*-B0*-**	S3N-PH-*-FG0*-**
		
GENERAL DATA		
Functions	Polarized retroreflective	Through beam emitter and receiver
Nominal sensing distance	0.1 ... 12 m On R7 reflector	0 ... 30 m
Emission	650 nm LASER Red class 1	
Spot dimension	Ø 6 mm @6 m (rounded spot)	Ø 10 mm @10 m (rounded spot)
Sensitivity adjustment	1 turn trimmer or Teach-In push button (*)	
Maximum switching frequency	2 kHz	
Response time max	250 µs	
Output type	NPN (no IO-Link) or PNP (no IO-Link) / PNP, NPN, PP, IO-Link (*)	
Output function	IO-Link or L/D Selectable by trimmer (*)	
LED indicators	yellow OUTPUT LED, green POWER ON LED (No IO-Link models), yellow OUTPUT LED, green POWER ON LED, blue LED IO-Link Activity (IO-Link models) (**)	
ELECTRICAL DATA		
Supply voltage	10 ... 30 Vdc	
Maximum residual ripple	≤10 %	
Leakage current	≤ 300 µA	
Maximum No-load absorption	35mA	
Maximum DC output voltage drop	2 V @ IL=100mA	
Maximum DC load current	100 mA	
Short circuit protection	Yes	
Reverse polarity protection	Yes	
Impulsive overvoltage protections	Yes	
Protection to capacitive loads	Yes	
Insulation resistance	>20 MΩ 500 Vdc, between electronics and housing	
Ground resistivity	500 Vac 1 min., between electronics and housing	
MECHANICAL DATA		
Dimensions	11 x 31 x 19 mm Cubic	
Housing material	Plastic Polymer Fiber Glass reinforced	
Active part material	PMMA	
Optical location	Radial 90°	
Weight	10 g Connector, 50 g Cable and Pigtail	
Shaft material	POM, PMMA	
Connector material	Metal	
ENVIRONMENTAL DATA		
Operating Temperature	-25 ... 55 °C	
Storage temperature max.	-25 ... 70 °C	
Mechanical Protection	IP67	
Shocks and vibrations	0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)	
Ambient light immunity	according to EN 60947-5-2 : 2020	
TEST/CERTIFICATIONS		
Certifications	CE, UKCA, cULus	
Electromagnetic compatibility	EN 60947-5-2	

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(**) For detailed information, see "USER INTERFACE" table

TECHNICAL SPECIFICATIONS

	S3N-PH-*-M01-**	S3N-PH-*-M03-**
		
GENERAL DATA		
Functions	Background suppression	
Nominal sensing distance	10 ... 500 mm (on White 90%) 10 ... 250 mm (on Grey 18%) 30 ... 130 mm (on Black 6%)	22 ... 130 mm
Emission	650 nm LASER Red class 1	
Spot dimension	Ø 1.5 mm @100 mm (rounded spot)	Ø 1 mm @50 mm (rounded spot)
Sensitivity adjustment	9 turns trimmer (*)	Teach-In push button (*)
Maximum switching frequency	2 kHz	1.5 kHz
Response time max	250 µs	333 µs
Output type	NPN (no IO-Link) / PNP (no IO-Link) (*)	PNP, NPN, PP, IO-Link (*)
Output function	L/D Selectable by trimmer (*)	IO-Link (*)
LED indicators	yellow OUTPUT LED, green POWER ON LED (No IO-Link models) (**)	yellow OUTPUT LED, green POWER ON LED, blue LED IO-Link Activity (IO-Link models) (**)
ELECTRICAL DATA		
Supply voltage	10 ... 30 Vdc	
Maximum residual ripple	≤10 %	
Leakage current	≤ 300 µA	≤ 400 µA
Maximum No-load absorption	35mA	
Maximum DC output voltage drop	2 V @ IL=100mA	
Maximum DC load current	100 mA	
Short circuit protection	Yes	
Reverse polarity protection	Yes	
Impulsive overvoltage protections	Yes	
Protection to capacitive loads	Yes	
Insulation resistance	>20 MΩ 500 Vdc, between electronics and housing	
Ground resistivity	500 Vac 1 min., between electronics and housing	
MECHANICAL DATA		
Dimensions	11 x 31 x 19 mm Cubic	
Housing material	Plastic Polymer Fiber Glass reinforced	
Active part material	PMMA	
Optical location	Radial 90°	
Weight	10 g Connector, 50 g Cable and Pigtail	
Shaft material	POM, PMMA	
Connector material	Metal	
ENVIRONMENTAL DATA		
Operating Temperature	-25 ... 55 °C	
Storage temperature max.	-25 ... 70 °C	
Mechanical Protection	IP67	
Shocks and vibrations	0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)	
Ambient light immunity	according to EN 60947-5-2 : 2020	
TEST/CERTIFICATIONS		
Certifications	CE, UKCA, cULus	
Electromagnetic compatibility	EN 60947-5-2	

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(**) For detailed information, see "USER INTERFACE" table

S3N AVAILABLE MODELS

POLARIZED RETROREFLECTIVE

PHOTOELECTRIC CUBIC SENSORS

Nominal sensing distance	Sensitivity adjustment	Output function	Connections	PNP	NPN	PNP, NPN, PP, IO-Link
0.05 ... 7 m On R5 reflector 635 nm LED Red	1 turn trimmer	Lon	M8 plug 4 pin	S3N-PR-5-B01-PL (95B010092)	S3N-PR-5-B01-NL (95B010252)	-
		Don		S3N-PR-5-B01-PD (95B010112)	S3N-PR-5-B01-ND (95B010272)	-
		L/D Selectable by trimmer		S3N-PR-5-B01-P (95B010612)	S3N-PR-5-B01-N (95B010602)	-
		Don	2 m cable	S3N-PR-2-B01-PD (95B010102)	S3N-PR-2-B01-ND (95B010262)	-
		Lon		S3N-PR-2-B01-PL (95B010082)	S3N-PR-2-B01-NL (95B010242)	-
		L/D Selectable by trimmer		S3N-PR-2-B01-P (95B010592)	S3N-PR-2-B01-N (95B010582)	-
				M12-4 pin Pigtail	S3N-PR-3-B01-P (95B010035)	S3N-PR-3-B01-N (95B010083)
			M8-4 pin Pigtail	S3N-PR-4-B01-P (95B010058)	S3N-PR-4-B01-N (95B010063)	-
			M8-3 pin Pigtail	S3N-PR-6-B01-P (95B010104)	S3N-PR-6-B01-N (95B010103)	-
	Teach-In push button	IO-Link	M8 plug 4 pin	-	-	S3N-PR-5-B03-OZ (95B010780)
			M12-4 pin Pigtail	-	-	S3N-PR-3-B03-OZ (95B010053)
			M8-4 pin Pigtail	-	-	S3N-PR-4-B03-OZ (95B010076)
	0.1 ... 12 m On R7 reflector 650 nm LASER Red class 1	1 turn trimmer	L/D Selectable by trimmer	M8 plug 4 pin	S3N-PH-5-B01-P (95B010462)	S3N-PH-5-B01-N (95B010472)
2 m cable				S3N-PH-2-B01-P (95B010442)	S3N-PH-2-B01-N (95B010452)	-
M12-4 pin Pigtail				S3N-PH-3-B01-P (95B010045)	S3N-PH-3-B01-N (95B010048)	-
M8-4 pin Pigtail				S3N-PH-4-B01-P (95B010068)	S3N-PH-4-B01-N (95B010071)	-
M8-3 pin Pigtail				S3N-PH-6-B01-P (95B010125)	S3N-PH-6-B01-N (95B010124)	-
Teach-In push button		IO-Link	M8 plug 4 pin	-	-	S3N-PH-5-B03-OZ (95B010880)
			M12-4 pin Pigtail	-	-	S3N-PH-3-B03-OZ (95B010051)
			M8-4 pin Pigtail	-	-	S3N-PH-4-B03-OZ (95B010074)

AVAILABLE MODELS

DIFFUSE BEAM

Nominal sensing distance	Sensitivity adjustment	Output function	Connections	PNP	NPN	PNP, NPN, PP, IO-Link
1 ... 250 mm on White 90% 635 nm LED Red	1 turn trimmer	Lon	M8 plug 4 pin	S3N-PR-5-C01-PL (95B010052)	S3N-PR-5-C01-NL (95B010212)	-
		L/D Selectable by trimmer		S3N-PR-5-C01-P (95B010692)	S3N-PR-5-C01-N (95B010682)	-
		Lon	2 m cable	S3N-PR-2-C01-P (95B010672)	S3N-PR-2-C01-N (95B010662)	-
				S3N-PR-2-C01-PL (95B010042)	S3N-PR-2-C01-NL (95B010202)	-
		Don	M8 plug 4 pin	S3N-PR-2-C01-PD (95B010062)	S3N-PR-2-C01-ND (95B010222)	-
				S3N-PR-5-C01-PD (95B010072)	S3N-PR-5-C01-ND (95B010232)	-
	Teach-In push button	IO-Link		-	-	S3N-PR-5-C03-OZ (95B010790)
	0 ... 1 m on white 90% 635 nm LED Red	1 turn trimmer	L/D Selectable by trimmer	M8 plug 4 pin	S3N-PR-5-C11-P (95B010652)	S3N-PR-5-C11-N (95B010642)
Lon			2 m cable	S3N-PR-2-C11-PL (95B010002)	S3N-PR-2-C11-NL (95B010162)	-
Don				S3N-PR-2-C11-PD (95B010022)	S3N-PR-2-C11-ND (95B010182)	-
				S3N-PR-2-C11-P (95B010632)	S3N-PR-2-C11-N (95B010622)	-
L/D Selectable by trimmer			M12-4 pin Pigtail	S3N-PR-3-C11-P (95B010036)	S3N-PR-3-C11-N (95B010041)	-
			M8-4 pin Pigtail	S3N-PR-4-C11-P (95B010059)	S3N-PR-4-C11-N (95B010064)	-
			M8-3 pin Pigtail	S3N-PR-6-C11-P (95B010107)	S3N-PR-6-C11-N (95B010106)	-
Lon			M8 plug 4 pin	S3N-PR-5-C11-PL (95B010012)	S3N-PR-5-C11-NL (95B010172)	-
Don				S3N-PR-5-C11-PD (95B010032)	S3N-PR-5-C11-ND (95B010192)	-
Teach-In push button		IO-Link	M8-4 pin Pigtail	-	-	S3N-PR-4-C13-OZ (95B010077)
			M12-4 pin Pigtail	-	-	S3N-PR-3-C13-OZ (95B010054)
			M8 plug 4 pin	-	-	S3N-PR-5-C13-OZ (95B010800)

S3N AVAILABLE MODELS

THROUGH BEAM EMITTER AND RECEIVER

PHOTOELECTRIC CUBIC SENSORS

Nominal sensing distance	Sensitivity adjustment	Output function	Connections	PNP	NPN	PNP, NPN, PP, IO-Link
0 ... 20 m 635 nm LED Red	1 turn trimmer	Lon	M8 plug 4 pin	S3N-PR-5-FG01-PL (95B010132)	S3N-PR-5-FG01-NL (95B010292)	-
		Don		S3N-PR-5-FG01-PD (95B010152)	S3N-PR-5-FG01-ND (95B010312)	-
		L/D Selectable by trimmer		S3N-PR-5-FG01-P (95B010732)	S3N-PR-5-FG01-N (95B010722)	-
		Lon	2 m cable	S3N-PR-2-FG01-PL (95B010122)	S3N-PR-2-FG01-NL (95B010282)	-
		Don		S3N-PR-2-FG01-PD (95B010142)	S3N-PR-2-FG01-ND (95B010302)	-
		L/D Selectable by trimmer		S3N-PR-2-FG01-P (95B010712)	S3N-PR-2-FG01-N (95B010702)	-
	Teach-In push button	IO-Link	M12-4 pin Pigtail	S3N-PR-3-FG01-P (95B010037)	S3N-PR-3-FG01-N (95B010084)	-
			M8-4 pin Pigtail	S3N-PR-4-FG01-P (95B010087)	S3N-PR-4-FG01-N (95B010065)	-
			M8-3 pin Pigtail	S3N-PR-6-FG01-P (95B010113)	S3N-PR-6-FG01-N (95B010109)	-
			M8 plug 4 pin	-	-	S3N-PR-5-FG03-OZ (95B010810)
			M12-4 pin Pigtail	-	-	S3N-PR-3-FG03-OZ (95B010055)
			M8-4 pin Pigtail	-	-	S3N-PR-4-FG03-OZ (95B010078)
			M8-3 pin Pigtail	-	-	-
0 ... 30 m 650 nm LASER Red class 1	1 turn trimmer	L/D Selectable by trimmer	M8 plug 4 pin	S3N-PH-5-FG01-P (95B010542)	S3N-PH-5-FG01-N (95B010552)	-
			2 m cable	S3N-PH-2-FG01-P (95B010522)	S3N-PH-2-FG01-N (95B010532)	-
			M12-4 pin Pigtail	S3N-PH-3-FG01-P (95B010046)	S3N-PH-3-FG01-N (95B010049)	-
			M8-4 pin Pigtail	S3N-PH-4-FG01-P (95B010069)	S3N-PH-4-FG01-N (95B010093)	-
			M8-3 pin Pigtail	S3N-PH-6-FG01-P (95B010128)	S3N-PH-6-FG01-N (95B010127)	-
	Teach-In push button	IO-Link	M8 plug 4 pin	-	-	S3N-PH-5-FG03-OZ (95B010890)
			M12-4 pin Pigtail	-	-	S3N-PH-3-FG03-OZ (95B010086)
			M8-4 pin Pigtail	-	-	S3N-PH-4-FG03-OZ (95B010075)
			M8-3 pin Pigtail	-	-	-

AVAILABLE MODELS

BACKGROUND SUPPRESSION

Nominal sensing distance	Sensitivity adjustment	Output function	Connections	PNP	NPN	PNP, NPN, PP, IO-Link
10 ... 800 mm (on White 90%) 15 ... 400 mm (on Grey 18%) 25 ... 200 mm (on Black 6%) 635 nm LED Red	9 turns trimmer	Don	M8 plug 4 pin	S3N-PR-5-M01-PD (95B010562)	-	-
		L/D Selectable by trimmer		S3N-PR-5-M01-P (95B010772)	S3N-PR-5-M01-N (95B010762)	-
		Lon	2 m cable	S3N-PR-2-M01-PL (95B010332)	S3N-PR-2-M01-NL (95B010322)	-
		L/D Selectable by trimmer		S3N-PR-2-M01-P (95B010752)	S3N-PR-2-M01-N (95B010742)	-
		L/D Selectable by trimmer	M12-4 pin Pigtail	S3N-PR-3-M01-P (95B010038)	S3N-PR-3-M01-N (95B010043)	-
			M8-4 pin Pigtail	S3N-PR-4-M01-P (95B010061)	S3N-PR-4-M01-N (95B010066)	-
			M8-3 pin Pigtail	S3N-PR-6-M01-P (95B010116)	S3N-PR-6-M01-N (95B010115)	-
Lon	M8 plug 4 pin	S3N-PR-5-M01-PL (95B010352)	S3N-PR-5-M01-NL (95B010342)	-		
25 ... 180 mm 635 nm LED Red	Teach-In push button	IO-Link	M8-4 pin Pigtail	-	-	S3N-PR-4-M03-OZ (95B010079)
			M8 plug 4 pin	-	-	S3N-PR-5-M03-OZ (95B010820)
			M12-4 pin Pigtail	-	-	S3N-PR-3-M03-OZ (95B010056)
10 ... 500 mm (on White 90%) 10 ... 250 mm (on Grey 18%) 30 ... 130 mm (on Black 6%) 650 nm LASER Red class 1	9 turns trimmer	L/D Selectable by trimmer	2 m cable	S3N-PH-2-M01-P (95B010482)	S3N-PH-2-M01-N (95B010492)	-
			M12-4 pin Pigtail	S3N-PH-3-M01-P (95B010047)	S3N-PH-3-M01-N (95B010085)	-
			M8-4 pin Pigtail	S3N-PH-4-M01-P (95B010089)	S3N-PH-4-M01-N (95B010073)	-
			M8 plug 4 pin	S3N-PH-5-M01-P (95B010502)	S3N-PH-5-M01-N (95B010512)	-
			M8-3 pin Pigtail	S3N-PH-6-M01-P (95B010134)	S3N-PH-6-M01-N (95B010133)	-
22 ... 130 mm 650 nm LASER Red class 1	Teach-In push button	IO-Link	M8-4 pin Pigtail	-	-	S3N-PH-4-M03-OZ (95B010136)
			M12-4 pin Pigtail	-	-	S3N-PH-3-M03-OZ (95B010135)
			M8 plug 4 pin	-	-	S3N-PH-5-M03-OZ (95B010900)

S3N AVAILABLE MODELS

POLARIZED RETROREFLECTIVE FOR CLEAR OBJECT

PHOTOELECTRIC CUBIC SENSORS

Nominal sensing distance	Sensitivity adjustment	Output function	Connections	PNP	NPN	PNP, NPN, PP, IO-Link
0 ... 2 m On R7 reflector 635 nm LED Red	1 turn trimmer	L/D Selectable by trimmer	M8 plug 4 pin	S3N-PR-5-T51-P (95B010850)	S3N-PR-5-T51-N (95B010860)	-
		Don		S3N-PR-5-T51-PD (95B010362)	S3N-PR-5-T51-ND (95B010372)	-
		Lon		S3N-PR-5-T51-PL (95B010402)	S3N-PR-5-T51-NL (95B010412)	-
		L/D Selectable by trimmer	2 m cable	S3N-PR-2-T51-P (95B010830)	S3N-PR-2-T51-N (95B010840)	-
		Don		S3N-PR-2-T51-PD (95B010382)	S3N-PR-2-T51-ND (95B010392)	-
		Lon		S3N-PR-2-T51-PL (95B010422)	S3N-PR-2-T51-NL (95B010432)	-
		L/D Selectable by trimmer	M12-4 pin Pigtail	S3N-PR-3-T51-P (95B010039)	S3N-PR-3-T51-N (95B010044)	-
			M8-4 pin Pigtail	S3N-PR-4-T51-P (95B010088)	S3N-PR-4-T51-N (95B010067)	-
			M8-3 pin Pigtail	S3N-PR-6-T51-P (95B010119)	S3N-PR-6-T51-N (95B010118)	-
	Teach-In push button	IO-Link	M8 plug 4 pin	-	-	S3N-PR-5-T53-OZ (95B010870)
			M12-4 pin Pigtail	-	-	S3N-PR-3-T53-OZ (95B010057)
			M8-4 pin Pigtail	-	-	S3N-PR-4-T53-OZ (95B010094)

AVAILABLE MODELS

CONTRAST SENSOR

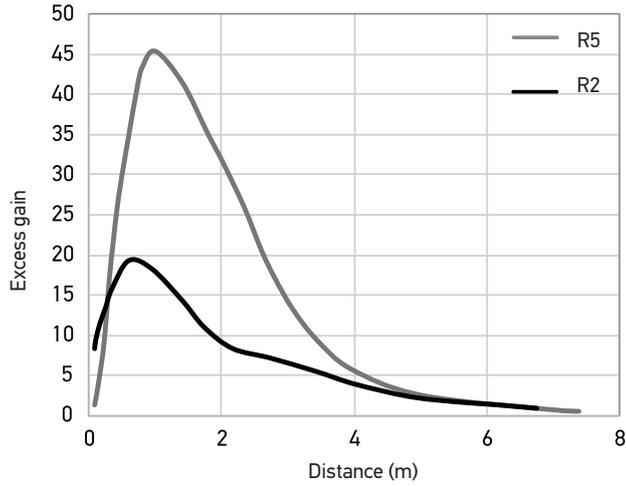


Nominal sensing distance	Sensitivity adjustment	Output function	Connections	PNP, NPN, PP, IO-Link
12 mm ± 3 mm RGB blue (460 nm) / green (525 nm) / red (633 nm)	Teach-In push button	IO-Link	M8 plug 4 pin	S3N-PR-5-W03-OZ (95B010026)
			M12-4 pin Pigtail	S3N-PR-3-W03-OZ (95B010137)
			M8-4 Pin Pigtail	S3N-PR-4-W03-OZ (95B010138)

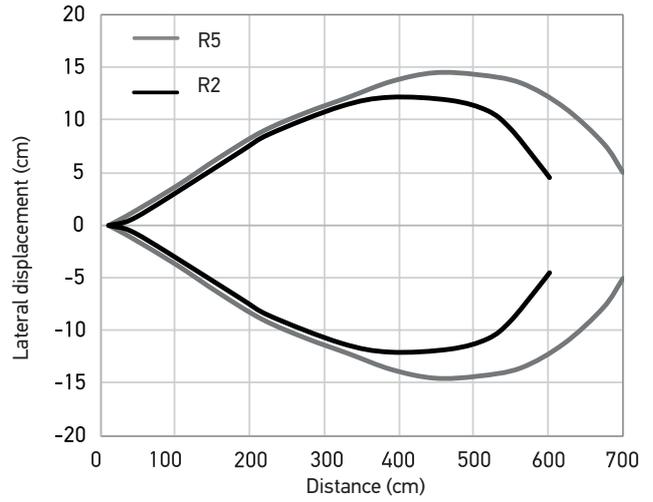
RESPONSE DIAGRAMS

POLARIZED RETROREFLECTIVE LED RED

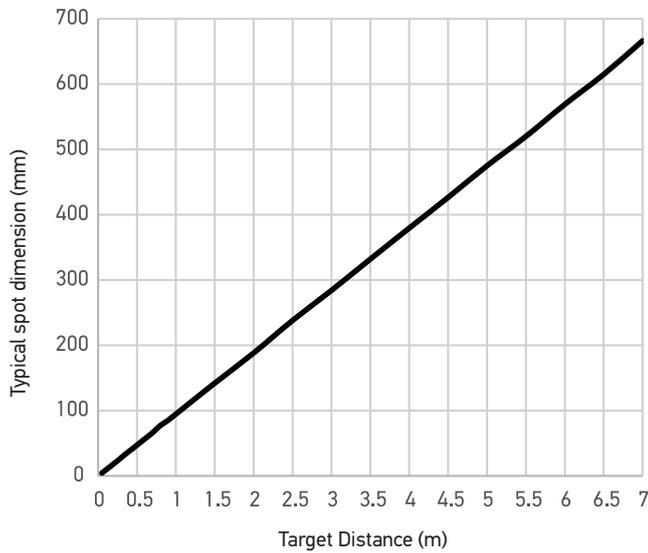
S3N-PR-*-B-** (Excess gain)**



S3N-PR-*-B-** (Beam diagram)**

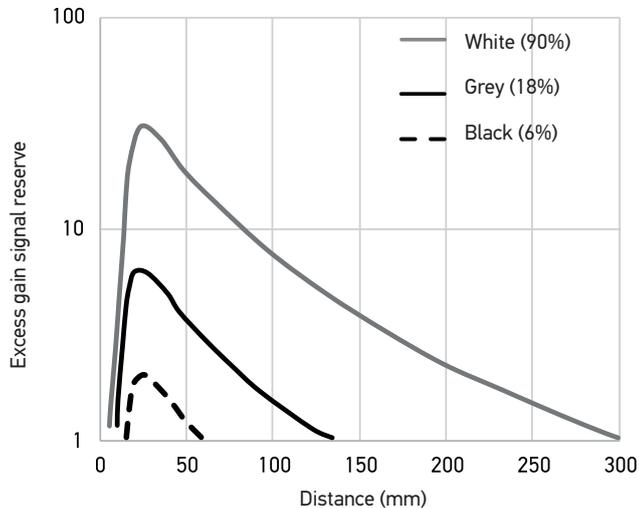


S3N-PR-*-B-** (Spot dimension)**

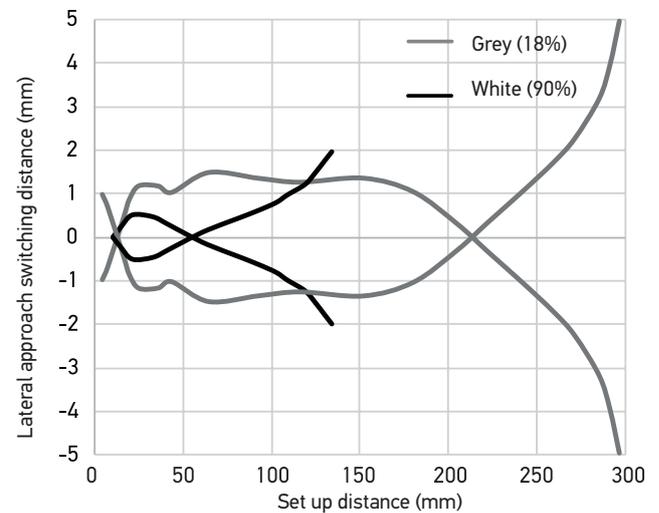


DIFFUSE BEAM LED RED

S3N-PR-*-C0-** (Excess gain)**



S3N-PR-*-C0-** (Beam diagram)**

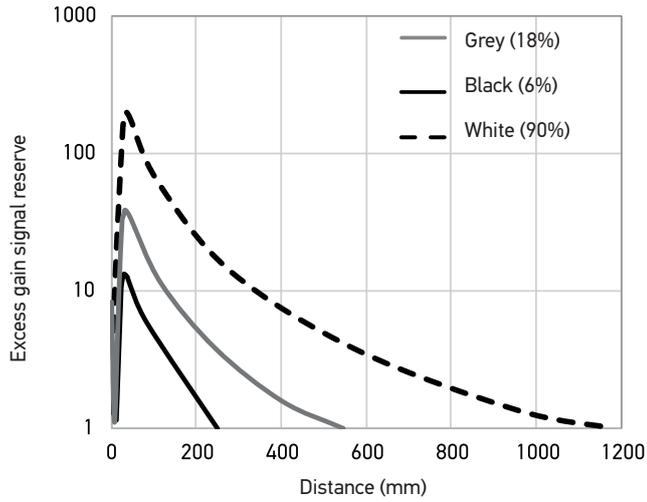


S3N RESPONSE DIAGRAMS

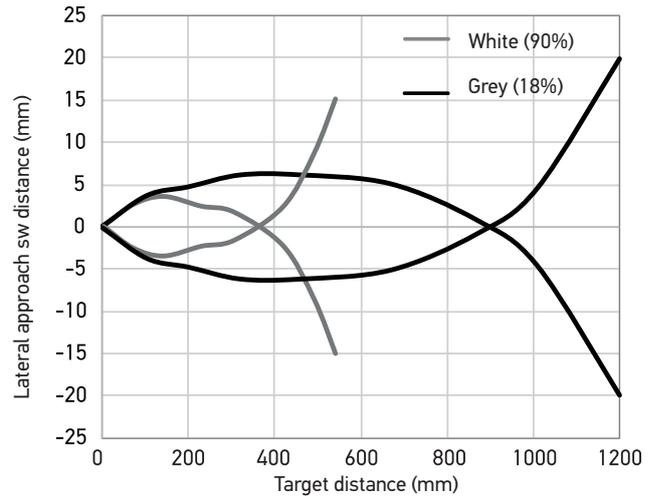
DIFFUSE BEAM LED RED

PHOTOELECTRIC CUBIC SENSORS

S3N-PR-*-C1*- (Excess gain)**

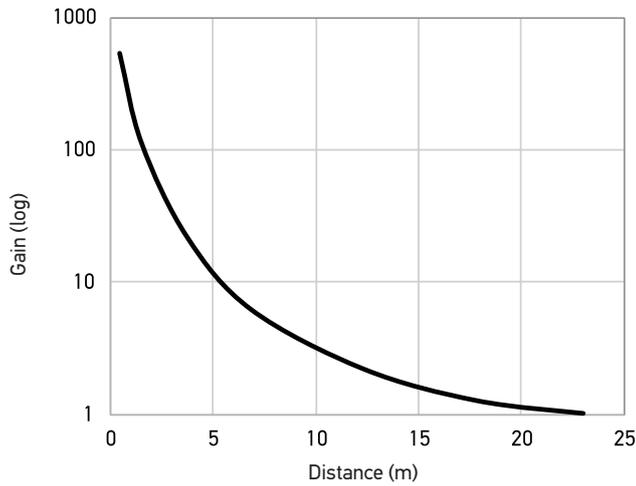


S3N-PR-*-C1*- (Beam diagram)**

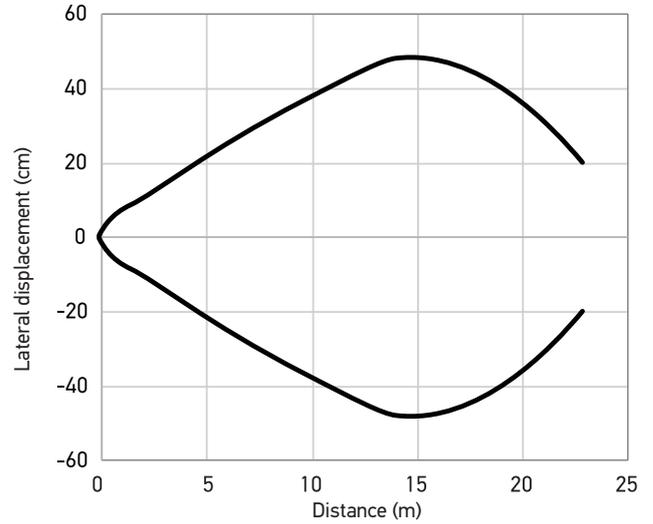


THROUGH BEAM EMITTER AND RECEIVER LED RED

S3N-PR-*-FG-** (Excess gain)**

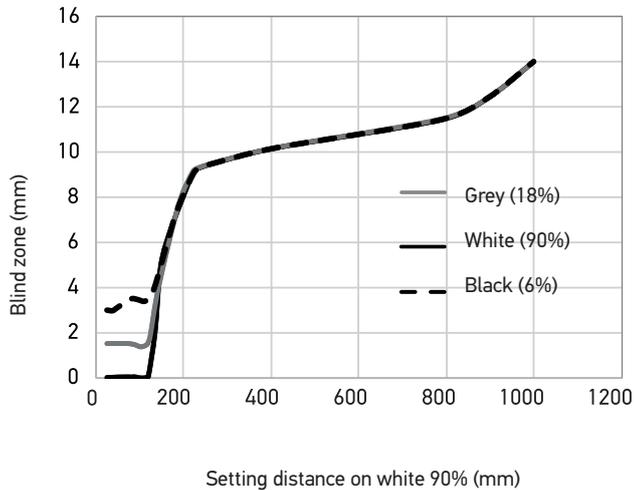


S3N-PR-*-FG-** (Beam diagram)**

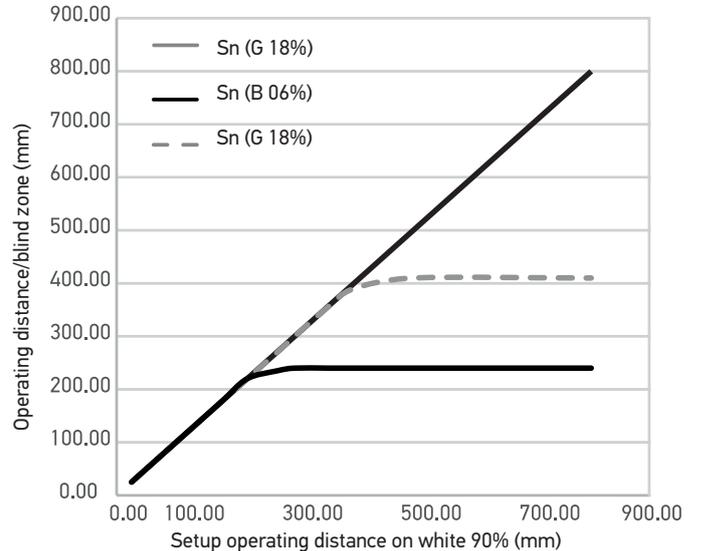


BACKGROUND SUPPRESSION LED RED

S3N-PR-*-M01 (Blind zone)**



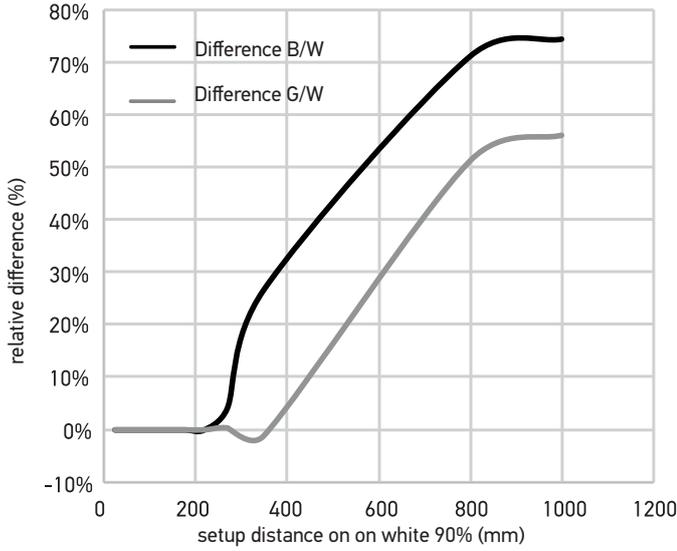
S3N-PR-*-M01 (Operating distance)**



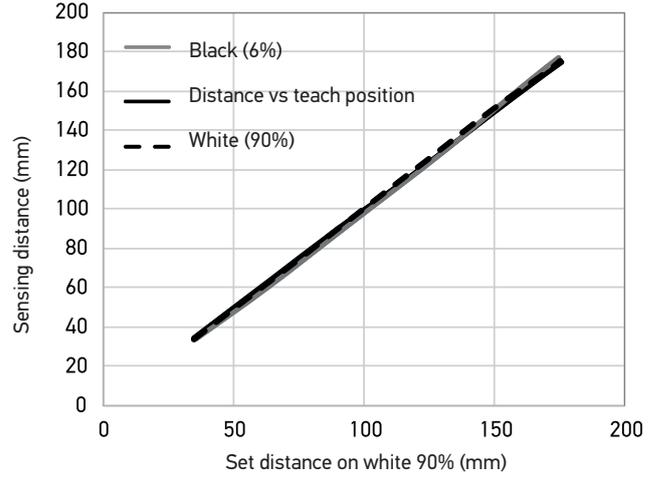
RESPONSE DIAGRAMS

BACKGROUND SUPPRESSION LED RED

S3N-PR-*-M01- (Teach beaviour (on white 90%))**

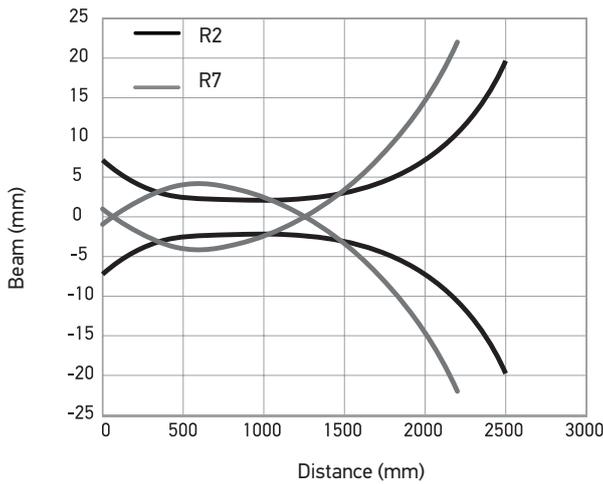


S3N-PR-5-M03-OZ (Sensing vs. Set Distance difference)

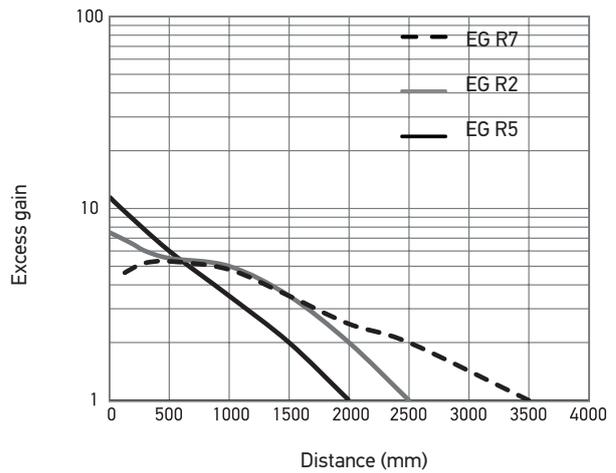


POLARIZED RETROREFLECTIVE FOR CLEAR OBJECT LED RED

S3N-PR-*-T5*- (Beam diagram)**

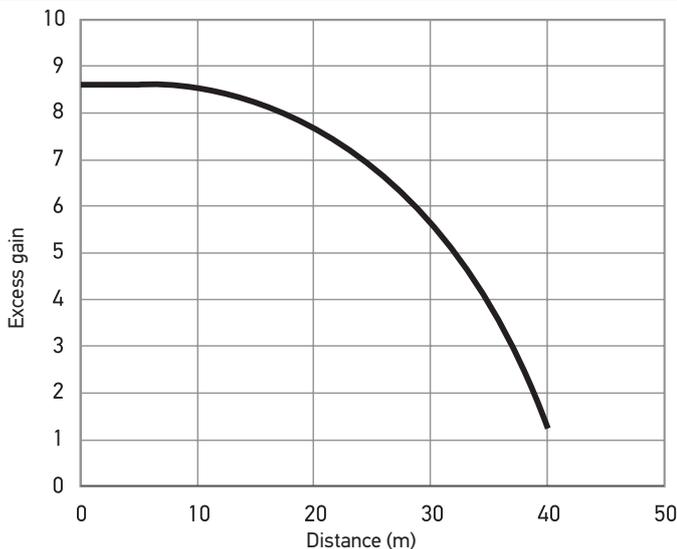


S3N-PR-*-T5*- (Excess gain)**



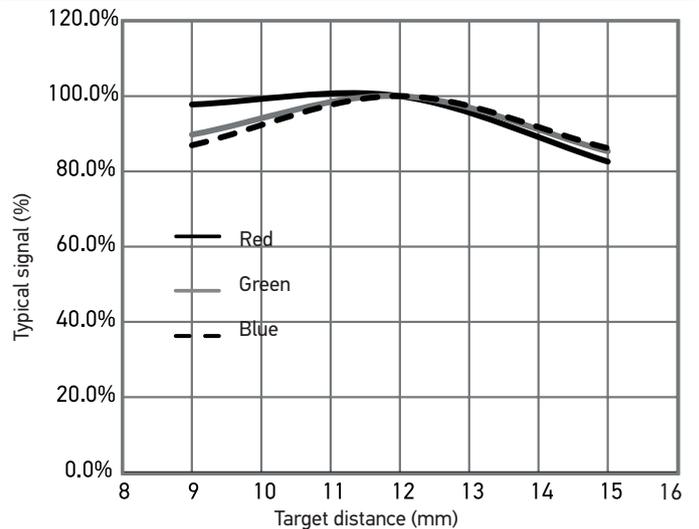
THROUGH BEAM LED RED

S3N-PH-*-FG*- (Excess gain)**



CONTRAST SENSOR RGB LED

S3N-PR-*-W03-OZ (Sensing range)

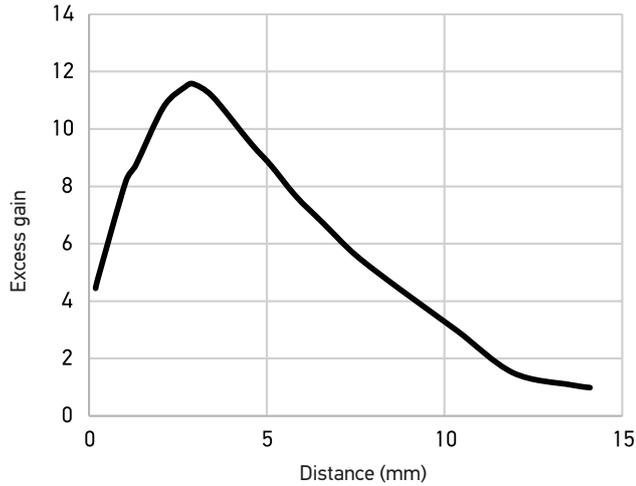


S3N RESPONSE DIAGRAMS

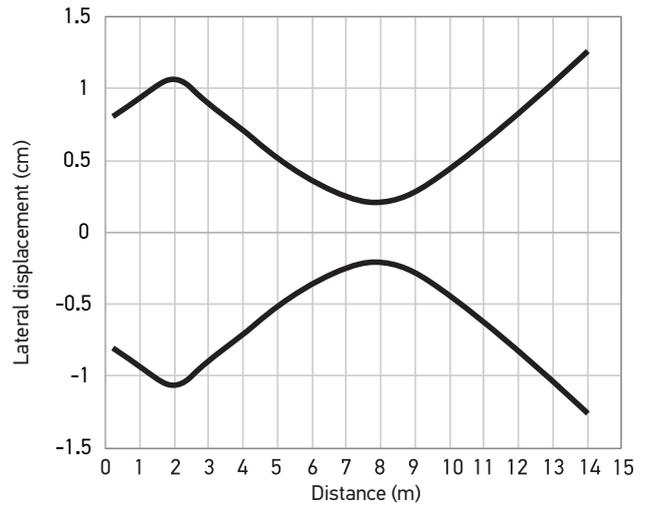
POLARIZED RETROREFLECTIVE LASER RED CLASS 1

PHOTOELECTRIC CUBIC SENSORS

S3N-PH-*-B-** (Excess gain)**

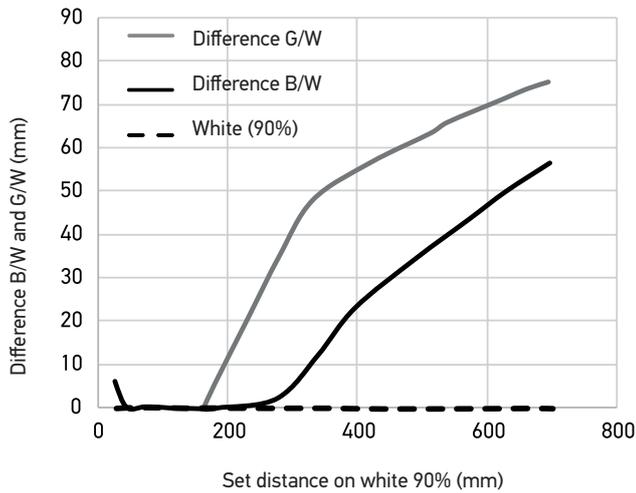


S3N-PH-*-B-** (Beam diagram)**

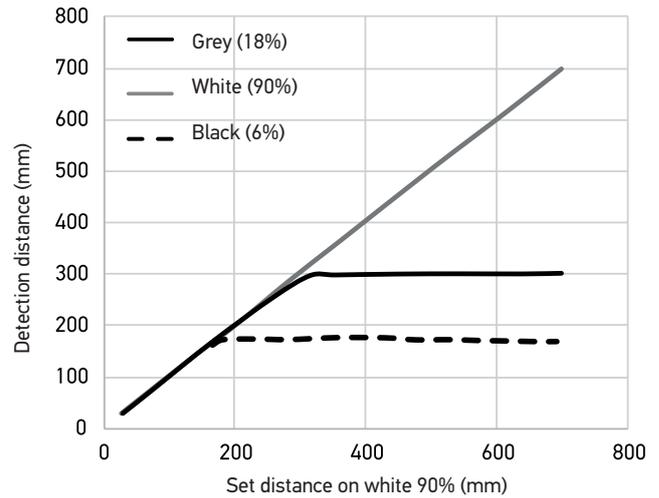


BACKGROUND SUPPRESSION LASER RED CLASS 1

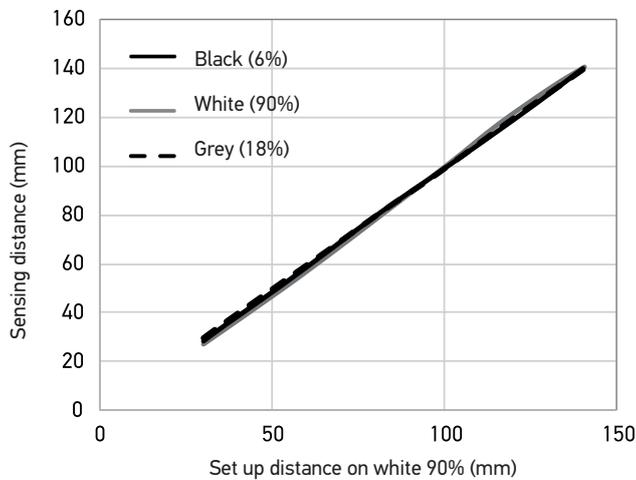
S3N-PH-*-M01-** (Black and white difference)**



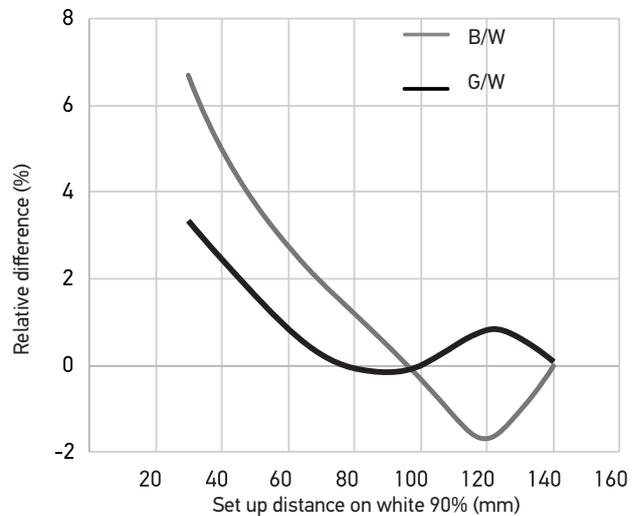
S3N-PH-*-M01-** (Operating distance)**



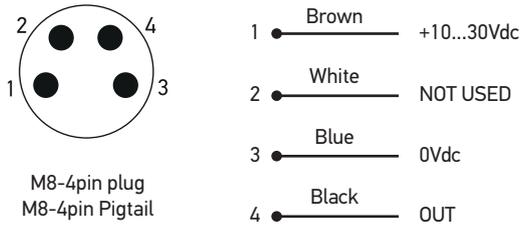
S3N-PH-*-M03-** (Sensing vs. Set Distance difference)**



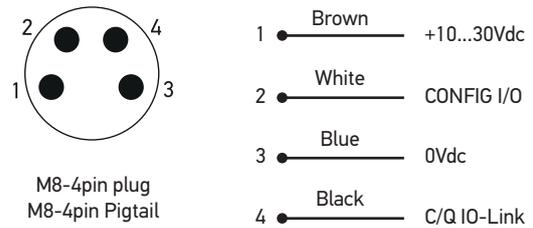
S3N-PH-*-M03-** (Black and white difference)**



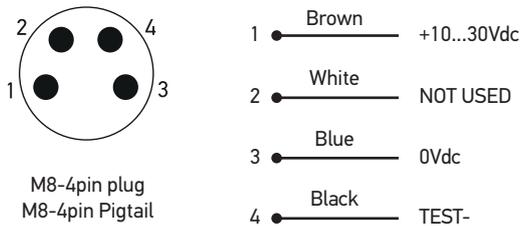
S3N-P*-_*-*1-****
(With Trimmer and PNP or NPN Out)



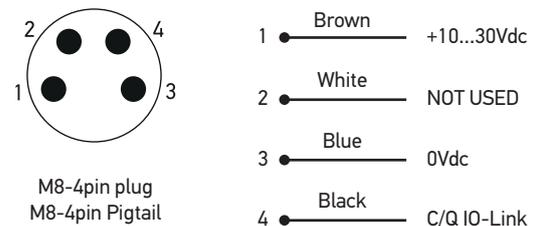
S3N-P*-_*-*3-OZ**
(With Teach-In and IO-Link)



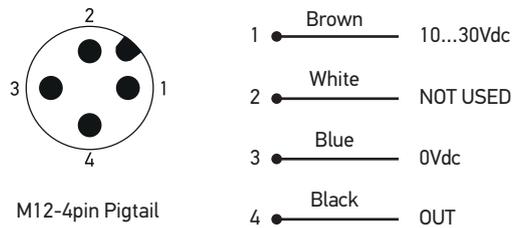
S3N-P*-_*-*G_****
(Emitter with TEST-)



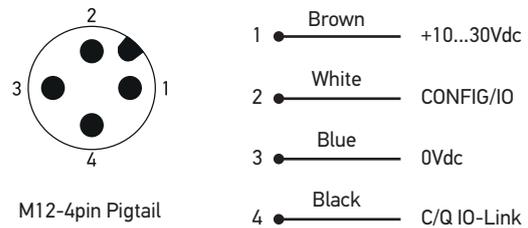
S3N-P*-_*-*G-OZ**
(Emitter with TEST- and IO-Link)



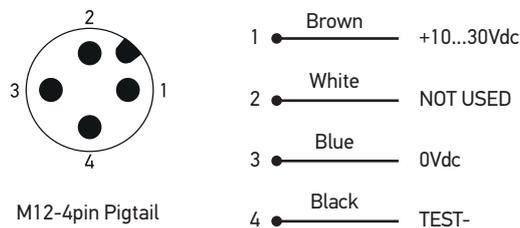
S3N-P*-3-*1-****
(With Trimmer and PNP or NPN Out)



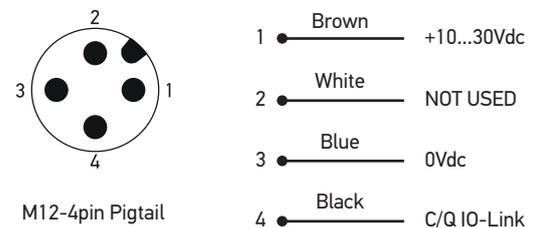
S3N-P*-3-*3-OZ**
(With Teach-In and IO-Link)



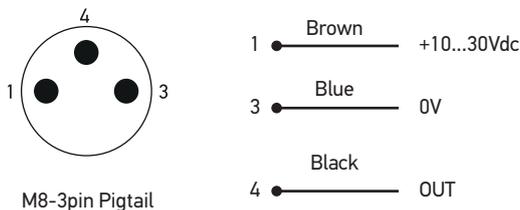
S3N-P*-3-*G_****
(Emitter with TEST-)



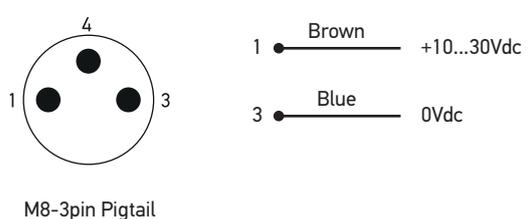
S3N-P*-3-*G-OZ**
(Emitter with TEST- and IO-Link)



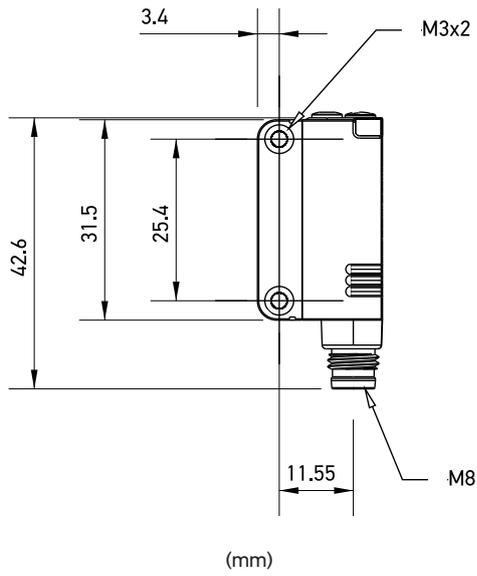
S3N-P*-6-*1-****
(With Trimmer and PNP or NPN Out)



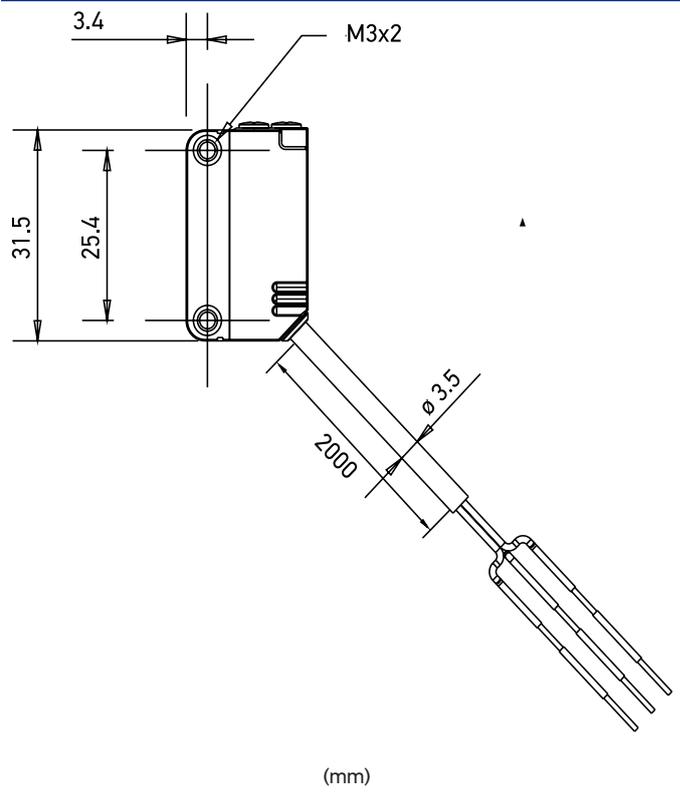
S3N-P*-6-*G_****
(Emitter with TEST-)



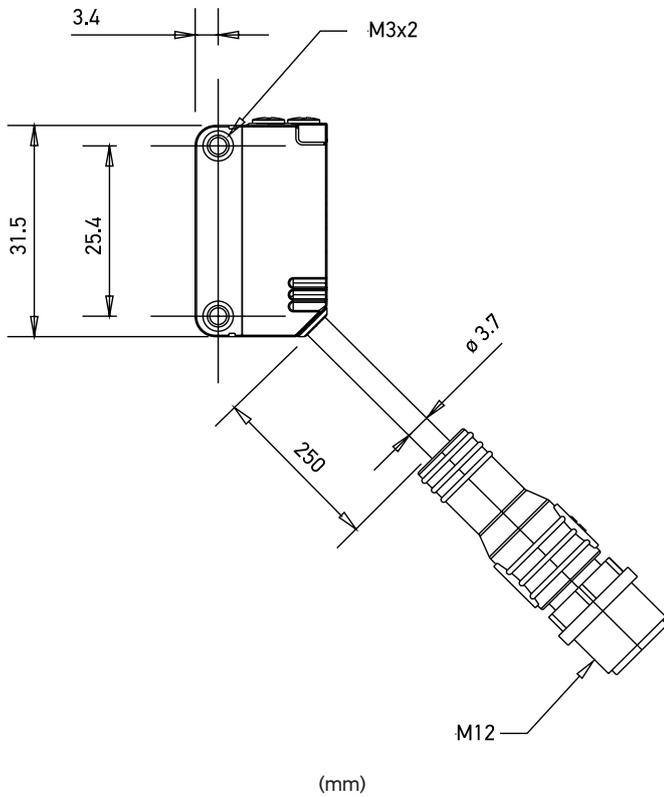
S3N-P*-5-**-****
(M8-4 pins connector)



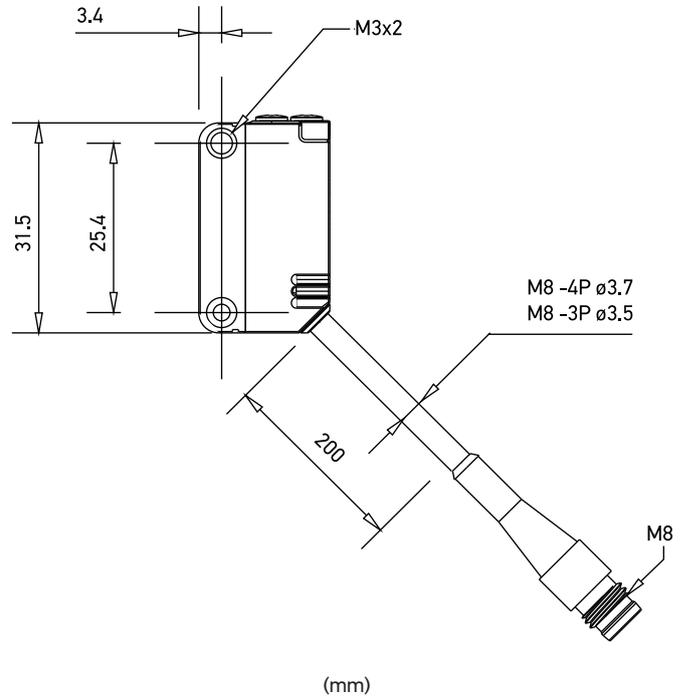
S3N-P*-2-**-****
(Cable out)



S3N-P*-3-**-****
(M12-4 pins connector pigtail)



S3N-P*-4-**-**; S3N-P*-6-****-****
(M8-4 pins or 3 pins connector pigtail)



OPTICAL DISPLACEMENT

S3N Front view	Models	A	B
	S3N-PR-*B0**	7.2	8.25
	S3N-PH-*B0**		6.2
	S3N-P*-*T5**		17.2
	S3N-P*-*M01**	7.2	10.65
	S3N-P*-*C0**		6.3
	S3N-P*-*C1**		7
	S3N-P*-*M03**		10.2
	S3N-PR-*G0**	13.6	-
	S3N-PH-*G0**	13.8	-
	S3N-PR-*W03**	7.2	7.5
	S3N-P*-*F0**	14.2	-

USER INTERFACE

	S3N-P*-*-*D; S3N-P*-*-*L Single trimmer	S3N-P*-*-*P; S3N-P*-*-*N Dual trimmer	S3N-P*-*-*OZ Teach-in	S3N-P*-*-*G01** Transmitter	S3N-P*-*-*G03** Transmitter IO-Link
A	Green LED: POWER ON (M01, Laser models) STABILITY (other models)	Green LED: POWER ON (M01, Laser models) STABILITY (other models)	Green LED: POWER ON	Green LED: POWER ON	Green LED: POWER ON
B	Yellow LED OUTPUT status	Yellow LED OUTPUT status	Yellow LED OUTPUT status	-	Blue LED : IO-Link Activity
C	Sensitivity Adjust M01: 9 turns Others: 1 turn	L/D Selection	TEACH-IN Push Button	-	-
D	-	Sensitivity Adjust M01 9 turns Others 1 turn	Blue LED : IO-Link Activity	-	-

ACCESSORIES

MOUNTING BRACKETS

Model	Description
S3N L-Shaped Fixing Bracket (95ACC0024)	S3N L-Shaped Side Fixing bracket ST-1051
S3N Protection Bracket-Horiz (95ACC0025)	S3N Protection Bracket-Horizontal Fixing bracket ST-1049
S3N Protection Bracket-Vert U shaped (95ACC0026)	S3N Protection Bracket-Vertical U shaped Fixing bracket QM ST 103
S3N Bracket for M03 (95ACC0033)	S3N Bracket for M03 products over the belt applications ST-1053

S3N ACCESSORIES

REFLECTORS

PHOTOELECTRIC CUBIC SENSORS

Model	Description
R4-PLASTIC REFL -51X61MM (95A151340)	R4 = Prismatic reflector 47x 47 mm - plastic support 51.5 x 61 mm
R7 REFL RRX LASER 51x61mm M505-12 (95A151360)	R7 = Microprismatic reflector 38 x 40 mm - plastic support 51 x 61 mm
R5-PLASTIC REFL -MM.75 (S940700075)	R5 = Prismatic reflector ø 75 mm - plastic support ø 82 mm

CABLES

Model	Description
CS-B1-02-G-03 (95A251420)	CS-B1-02-G-03 4 poli M8 3m grigio
CS-B1-02-G-05 (95A251430)	CS-B1-02-G-05 = M8 4-p axial 5m
CS-B2-02-G-03 (95A251450)	CS-B2-02-G-03 = M8 4-p radial 3m
CS-B2-02-G-05 (95A251460)	CS-B2-02-G-05 = M8 4-p radial 5m
CS-B1-02-G-10 (95A251480)	CS-B1-02-G-10 4 poli M8 10m grigio
CS-B2-02-G-10 (95A251530)	CS-B2-02-G-10 = M8 4-p radial 10m
CS-B1-02-R-02 (95A251620)	CS-B1-02-R-02 M8 4 poli diritto 2m PUR
CS-B2-02-R-02 (95A251630)	CS-B2-02-R-02 = M8 4-p radial 2m PUR
CS-B1-02-R-05 (95A251640)	CS-B1-02-R-05 = M8 4-p axial 5m PUR
CS-B2-02-R-05 (95A251650)	CS-B2-02-R-05 = M8 4-p radial 5m PUR
CS-H1-02-B-03 (95ACC0008)	CS-H1-02-B-03 4p M12-M/M8-F axial 3m bk

OPTICAL APERTURES

Model	Description
S3N-SLIT1 Ø 0,5 mm for through beam (95ACC0027)	S3N-SLIT1 round aperture of Ø 0,5 mm for through beam optical functions
S3N-SLIT2 Ø 1 mm for through beam (95ACC0028)	S3N-SLIT2 round aperture of Ø 1 mm for through beam optical functions
S3N-SLIT3 Ø 2 mm for through beam (95ACC0029)	S3N-SLIT3 round aperture of Ø 2 mm for through beam optical functions
S3N-SLIT4 0,5x19 mm for through beam (95ACC0030)	S3N-SLIT4 round aperture of 0,5x19 mm for through beam optical functions
S3N-SLIT5 1x19 mm for through beam (95ACC0031)	S3N-SLIT5 rectangular aperture of 1x19 mm for through beam optical functions
S3N-SLIT6 2x19 mm for through beam (95ACC0032)	S3N-SLIT6 rectangular aperture of 2x19 mm for through beam optical functions

Rev. 2 2024-03-13

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