**S6** 

### **COLONIA STATE**

















## **MULTIVOLTAGE 50X50 MM COMPACT SENSORS SERIES**

- 50x50 mm compact dimensions
- Free voltage Vac/Vdc models with relay output
- 10-30 Vdc model with transistor output
- Standard cable or M12 4-pole connection

### **APPLICATIONS**

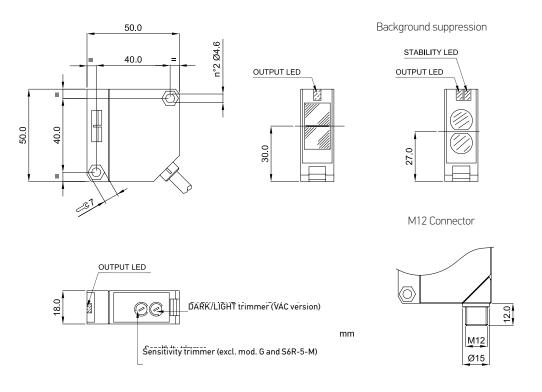
- Automatic machines
- Packaging lines
- Transportation lines
- Automatic warehouses

	S6	
Through beam		020 m
Retroreflective (on R2 reflector)		0,16 m
Polarized retroreflective (on R2 reflector)		0,15 m
Diffuse proximity		10900 mm
		102000 mm
Background suppression		30100 mm
		30250 mm
		100500 mm
	Vdc	1030 V
Power supply	Vac	
	Vac/dc	15264 Vac/Vdc
	PNP	•
	NPN	•
Output	NPN/PNP	•
	relay	•
	other	
	cable	•
Connection	connector	•
	pig-tail	
Approximate dimensions (mm)		18x50x50
Housing material		ABS
Mechanical protection		IP65

# TECHNICAL DATA

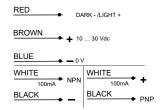
Power supply	10 30 Vdc limit values (mod. S6/S6T/S6R-5) 15 264 Vac/Vdc (48 60 Hz) limit values (mod. S6-1)		
Ripple	2 Vpp max.		
Consumption (output current excluded)	30 mA max. (mod. S6/S6T/S6R-5)		
	40 mA max. (mod. S6-1)		
Light emission	IR LED 880 nm		
	red LED 660 nm (mod. S6/S6R/S6TB/M10)		
Setting	sensivity trimmer (excl. mod. S6G, S6R-5-M)		
	adjustment screw (mod. S6/S6T/S6R-5-M)		
	LIGHT/DARK selection by cable or connector (mod. S6/S6T/S6R-5)		
Operating mode	LIGHT/DARK selection by N.O./N.C. output (mod. S6R-5-M)		
	LIGHT/DARK selection by trimmer (mod. S6-1)		
Indicators	red OUTPUT LED (excl. mod. S6G), POWER LED (mod. S6G)		
	green STABILITY LED (mod. S6-5-M25)		
	NPN/PNP (mod. S6)		
	PNP (mod. S6T)		
Output	NPN or PNP: NC: NO (mod. S6R)		
	Relay 1 NO and NC contact 250 Vac, 30 Vdc min. applicable load 5 Vdc, 10 mA (mod. S6-1)		
Outrot comment	7 11 11 11 11 11		
Output current	100 mA max., 3 A max. (mod. S6-1)		
Saturation voltage	1,5 V max. (NPN/PNP output)		
n e	1 ms max.		
Response time	2 ms max. (mod. S6/S6R/S6TF/G)		
	30 ms max. (mod. S6-1) 500 Hz		
Switching frequency	250 Hz max. (mod. S6/S6R/S6TF/G)		
Switching frequency	16 Hz (mod. S6-1)		
Connection	2 m cable – 6 mm (mod. S6-1), 2 m cable – 5 mm (mod. S6-5), M12 4-pole connector (mod. S6T-S6R)		
Dielectric strength	500 Vac, 1 min between electronics and housing		
Insulating resistance	>20 MΩ, 500 Vdc between electronics and housing		
Electrical protection	class 2. class 1 (mod. S6-1)		
Mechanical protection	IP65		
Ambient light rejection	according to EN 60947-5-2		
Vibrations	0,5 mm amplitude, 10 55 Hz frequency, for every axis (EN60068-2-6)		
Shock resistance	11 ms (30 G) 6 shock for every axis (EN60068-2-27)		
Housing material	ABS UL 94V-0		
Lens material	PMMA plastic		
Operating temperature	-25 55 °C		
Storage temperature	-25 70 °C		
Weight	160 g max. cable vers., 40 g max. conn. vers.		

# **DIMENSIONS**

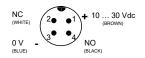


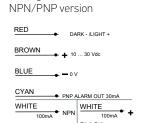
## CONNECTIONS

### NPN/PNP version



#### NPN or PNP and NC/NO version





**VDC MODELS** 

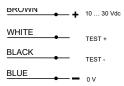
Through beam receiver -

#### PNP version

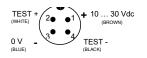
BLACK



#### Through beam emitter -NPN/PNP version

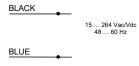


#### Through beam emitter - PNP version



### **VAC MODELS**

Through beam emitter

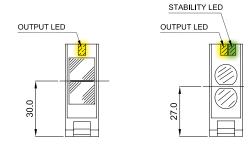


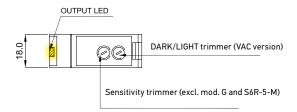


## INDICATORS AND SETTINGS

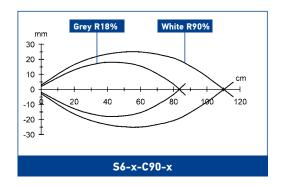
Background suppression

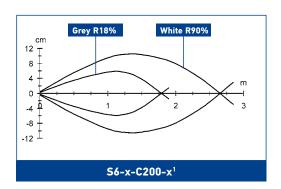


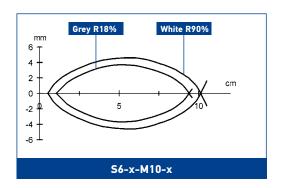


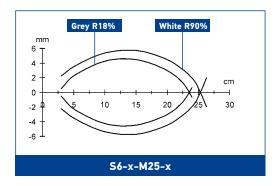


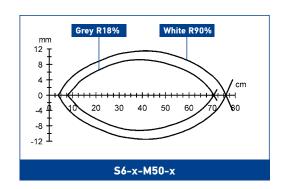
## **DETECTION DIAGRAMS**

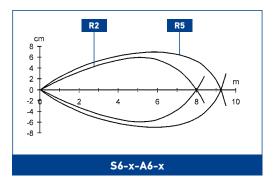


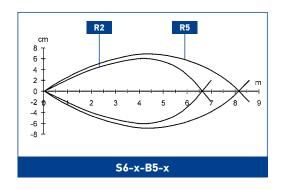


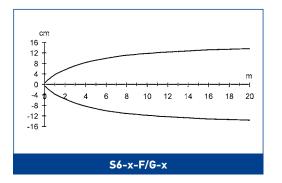










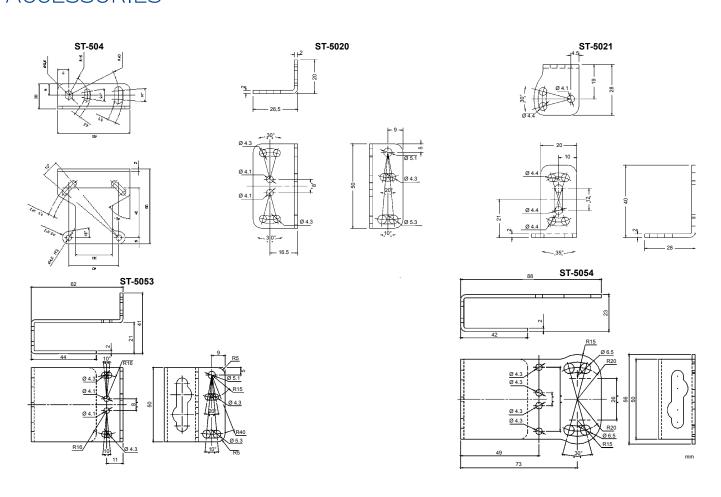


The detection diagrams indicate the typical operating distance with excess gain 1.

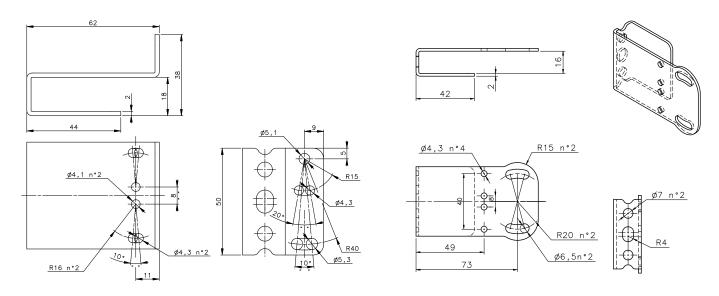
# MODEL SELECTION AND ORDER INFORMATION

OPTIC FUNCTION	OPERATING	POWER SUPPLY	OUTPUT	MODEL	ORDER No
Short diffuse proximity		15264 V A.C.	relay SPDT 250V/3A	S6-1-C90	S937530090
	10900 mm	1030 V D.C.	NPN/PNP	S6-5-C90	S937530000
	10900 mm		PNP N.O./N.C.	S6R-5-C90-P	950201190
			PNP	S6T-5-C90-P	961031020
		15264 V A.C.	relay SPDT 250V/3A	S6-1-C200	950151140
Lange difference managina in c	102000 mm	1030 V D.C.	NPN/PNP	S6-5-C200	950201150
Long diffuse proximity	102000 mm		PNP N.O./N.C.	S6R-5-C200-P	950201200
			NPN N.O./N.C.	S6R-5-C200-N	956101050
		15264 V A.C.	relay SPDT 250V/3A	S6-1-A6	S937330090
Retroreflective	0.1 ( ( D2 fl )	1030 V D.C.	NPN/PNP	S6-5-A6	S937330000
Retroreflective	0,16 m (on R2 reflector)		PNP	S6T-5-A6-P	961031000
			PNP N.O./N.C.	S6R-5-A6-P	950201170
		15264 V A.C.	relay SPDT 250V/3A	S6-1-B5	S937420090
Delevie destruction	0.1	1030 V D.C.	NPN/PNP	S6-5-B5	S937420000
Polarized retroreflective	0,15 m (on R2 reflector)		PNP N.O./N.C.	S6R-5-B5-P	950201180
			PNP	S6T-5-B5-P	961031010
	30100 mm	1030 V D.C.	PNP N.O./N.C.	S6R-5-M10-P	950201230
			NPN/PNP	S6-5-M25	S937830000
B 1			PNP N.O./N.C.	S6R-5-M25-P	950201220
Background suppression	30250 mm		NPN N.O./N.C.	S6R-5-M25-N	956101080
			PNP	S6T-5-M25-P	961041000
	100500 mm		PNP N.O./N.C.	S6R-5-M50-P	950201250
		15264 V A.C.	relay SPDT 250V/3A	S6-1-F20	S937200090
Through beam	020 m	1030 V D.C.	NPN/PNP	S6-5-F20	S937200010
(Receiver)	020 m		PNP N.O./N.C.	S6R-5-F20-P	950201160
			PNP	S6T-5-F20-P	961211010
Through beam (Emitter)	-	15264 V A.C.	-	S6-1-G20	S937130090
		1030 V D.C.	-	S6-5-G20	S937130000
(Limitel)			-	S6T-5-G20	961211000

# **ACCESSORIES**



ST-5018 ST-5019



MODEL	DESCRIPTION	ORDER No.
ST-5018	protective bracket	95ACC5310
ST-5019	protective bracket	95ACC5320
ST-5020	mounting bracket	95ACC5330
ST-5021	mounting bracket	95ACC5340
ST-504	mounting bracket	95ACC2820
ST-5053	protective bracket	95ACC2410
ST-5054	protective bracket	95ACC2420
JOINT-S62	protective bracket with jointed support	95ACC2430

## **CABLES**

ТҮРЕ	DESCRIPTION		MODEL	ORDER No.
Axial M12 Connector		3 m	CS-A1-02-G-03	95A251380
	/ I DVC	5 m	CS-A1-02-G-05	95A251270
	4-pole, grey, P.V.C.	7 m	CS-A1-02-G-07	95A251280
		10 m	CS-A1-02-G-10	95A251390
	4-pole, P.U.R.	2 m	CS-A1-02-R-02	95A251540
		5 m	CS-A1-02-R-05	95A251560
		3 m	CS-A2-02-G-03	95A251360
		5 m	CS-A2-02-G-05	95A251240
Radial M12 Connector	4-pole, grey, P.V.C.	7 m	CS-A2-02-G-07	95A251245
Radial M12 Connector		10 m	CS-A2-02-G-10	95A251260
	/l. DUD	2 m	CS-A2-02-R-02	95A251550
	4-pole, P.U.R.	5 m	CS-A2-02-R-05	95A251570
Radial M12 Connector with		3 m	CS-A2-12-G-03	95A251400
LED	4-pole, grey, P.V.C.	5 m	CS-A2-12-G-05	95A251350
(for PNP N.O. sensors)		10 m	CS-A2-12-G-10	95A251370
		3 m	CV-A1-22-B-03	95ACC1480
	4-pole, shielded, black, P.V.C.	5 m	CV-A1-22-B-05	95ACC1490
Axial M12 Connector		10 m	CV-A1-22-B-10	95ACC1500
		15 m	CV-A1-22-B-15	95ACC2070
		25 m	CV-A1-22-B-25	95ACC2090
		3 m	CV-A2-22-B-03	95ACC1540
Radial M12 Connector		5 m	CV-A2-22-B-05	95ACC1550
		10 m	CV-A2-22-B-10	95ACC1560
		3 m	CS-A1-02-U-03	95ASE1120
	4-pole, U.L., black, P.V.C.	5 m	CS-A1-02-U-05	95ASE1130
Axial M12 Connector		10 m	CS-A1-02-U-10	95ASE1140
		15 m	CS-A1-02-U-15	95ASE1150
		25 m	CS-A1-02-U-25	95ASE1160
	/ male black	Connector- not cabled	CS-A1-02-B-NC	G5085002
Radial M12 Connector	4-pole, black	Connector- not cabled	CS-A2-02-B-NC	G5085003

Rev. 01, 07/2016