MEDITECNA
Instrumentación | Proyectos | Servicios

DATALOGIC

S65-M



IO-Link

TIME OF FLIGHT LONG RANGE BACKGROUND SUPPRESSOR SERIES

- Long Range background suppression detection up to 5m
- Black 6% detection up to 3,5mt
- Model for stable detection on glossy surface
- Cost effective solution for precise and reliable detection
- Risk-free Infrared LED emission and embedded green LED pointer
- Two independent fully programmable outputs
- NPN/PNP or IO-Link connection models
- Current and Voltage Analog out models
- Rugged plastic housing in compact 50x50x24 mm format

APPLICATIONS

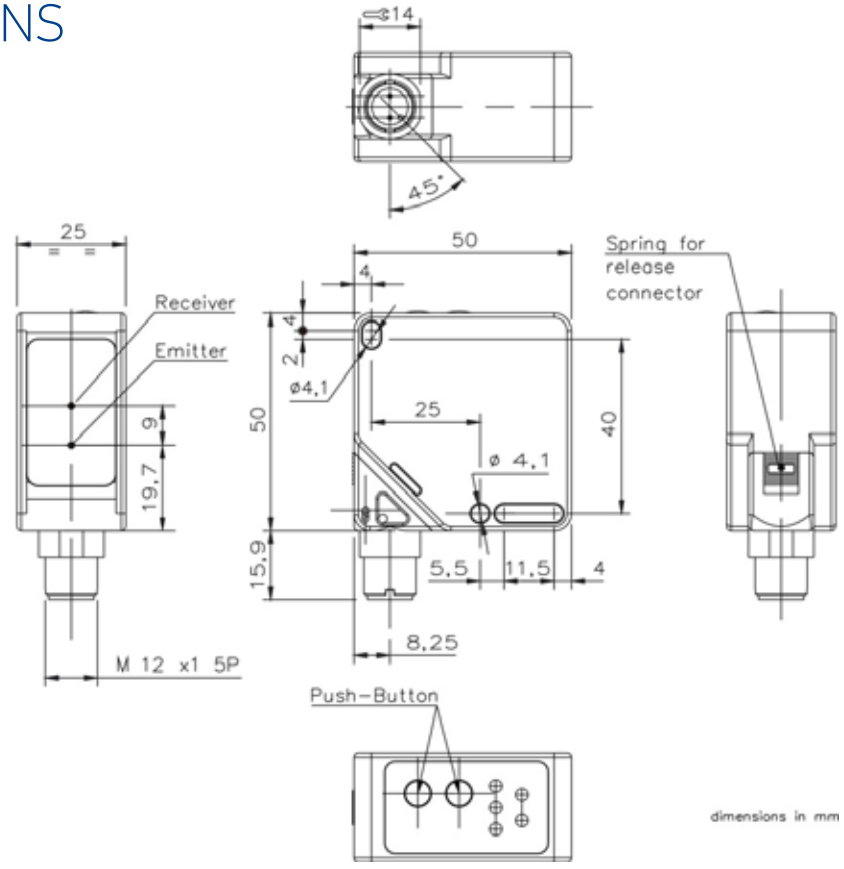
- Presence of all medium and large sized objects on conveyors
- Critical object detection in front of problematic background
- Critical shiny surface object detection
- Positioning tasks in palletizing
- Position limiter for deck and robot in automotive manufacturing
- Collision prevention limit switch for AGV applications
- Checking filling level for liquid and objects

S65-M		
Operating Distance		0.3..5 m (90% white) / 0.3..4.5 m (18% grey) / 0.3..3.5 m (6 % black) (Models S65...OO, ...OOZ, ...OOI, ...OOV) 0,3..4 m (90% white) / 0,3..2,6 m (18% grey) / 0,3..2 m (6% black) (Model S65..M53)
Difference White 90%/Grey 18% and White 90%/Black 6%		see chart (value Typ, 1σ, T=25°C, ambient light <1Klux)
Repeatability error		30mm for distance > 750mm / 40mm for distance <= 750mm (1σ, T=25°C)
Response time		8.5 msec max.; 30 msec max.(S65...M53)
Operating Frequency		<65Hz max; 16Hz max.
Setting		Teach-in buttons SET1, SET2
Teach-in Input		Active High (+24V) 1 sec < t < 3 sec = teach Q1 / > 3 sec = teach Q2
Supply voltage	Vdc	24 VDC ± 20%
	Vac	
	Vac/dc	
Switching output	PNP	
	NPN	
	NPN/PNP	Can be set up (PNP NPN / Light Dark) 100mA max.
	relay	
	other	IO-Link V1.1, dual channel IO-Link output with and dual digital output Current analog output 4...20mA with digital output Voltage analog output 0...10V with digital output
Connections	cable	
	connector	M12 - 5 poles
	pig-tail	
Exposed material		Body ABS / Display POLYESTER
Front side material		PMMA
Dimensions		50 x 50 x 25 mm
Mechanical protection		IP67
Weight		50 g.max.
UL (requirements)		Class 2 power supply according to UL 508

TECHNICAL DATA

Supply voltage	24 VDC ± 20%
Consumption	< 2.2 W (excluding any loads)
Operating Distance	0.3..5 m (90% white) / 0.3..4.5 m (18% grey) / 0.3..3.5 m (6 % black) (Models S65...00, ...00Z, ...00I, ...00V) 0,3..4 m (90% white) / 0,3..2,6 m (18% grey) / 0,3..2 m (6% black) (Model S65...M53)
Hysteresis	30mm / 50mm / 80mm
Response time	8.5 msec max. 30 msec max. (S65...M53)
Difference White 90%/Grey 18% and White 90%/Black 6%	see chart (value Typ, 1σ, T=25°C, ambient light <1Klux)
Repeatability error	20mm for distance > 750mm / 40mm for distance <= 750mm (1σ, T=25°C)
Thermal compensation error	1.5 mm /°C (T ≠ 25°C)
Switching output	Can be set up (PNP NPN / Light Dark) 100mA max.
Voltage output	0...10V (S65...00V)
Current output	4...20mA (S65...00I)
Teach-in Input	Active High (+24V) 1 sec < t < 3 sec: teach Q1 / > 3 sec: teach Q2
Warming-up time	20 min typ
Warnings	Q1 (YELLOW) / Q2 (YELLOW) / ON PWR (GREEN) - PNP / NPN (GREEN)
Operating temperature	-15°... +55 °C (with device ON)
Storage temperature	-25 ... +70 °C
Electrical strength	500 VAC, 1 min between electronics and case
Insulation resistance	> 20 MΩ, 500 VDC between electronics and case
Reading spot size	typ 200x200 mm @ 4m
Pointer spot size (green)	typ 250x250 mm @ 4m
Max. deviation of pointer/reading spot axes origin	+/- 40 mm
Emission and Wavelength	LED IR / 850 nm
Ambient light rejection	according to EN 60947-5-2,
Vibrations	width 0.5 mm, frequency 10 ... 55Hz, per axis (EN60068-2-6)
Shock resistance	11 ms (30 G) 6 shocks for each axis (EN60068-2-27)
Humidity	< 90% no condensation
Exposed material	Body ABS / Display POLYESTER
Front side material	PMMA
Mechanical protection	IP67
Connections	M12 - 5 poles
(Overall) Dimensions	50 x 50 x 25 mm
Weight	50 g.max.
I/O LINK Connection	NO (See parameter table on www.datalogic.com)
UL (requirements)	Class 2 power supply according to UL 508

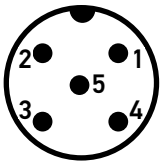
DIMENSIONS



CONNECTIONS

M12 CONNECTOR

S65-PA-5-M13-00

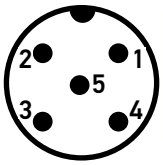


1 (BROWN) :	+24 V ±20%
2 (WHITE) :	Q2 100mA max.
3 (BLUE) :	0 V
4 (BLACK) :	Q1 100mA max.
5 (GREY) :	REMOTE TEACH-IN

IO-Link

S65-PA-5-M13-00Z

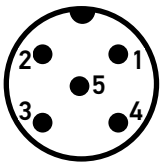
S65-PA-5-M53-00Z



1 (BROWN) :	+24 V ±20%
2 (WHITE) :	Q2 100mA max.
3 (BLUE) :	0 V
4 (BLACK) :	C/Q1 (I/O LINK)
5 (GREY) :	REMOTE TEACH-IN

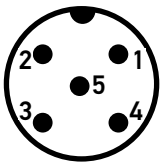
NOTE: Wire colour refers to European standard.

S65-PA-5-M13-00I



1 (BROWN): +24 V ±
2 (WHITE): Q2 100mA max.
3 (BLUE): 0 V
4 (BLACK): Q1 100mA max.
5 (GREY): Current Analog Output 4-20mA

S65-PA-5-M13-00I



1 (BROWN): +24 V ±
2 (WHITE): Q2 100mA max.
3 (BLUE): 0 V
4 (BLACK): Q1 100mA max.
5 (GREY): Current Voltage Output 0-10V

INDICATORS AND SETTINGS



OUTPUT LED (yellow)

Yellow LEDs on, numbered as 1 and 2, indicate activation of Q1 and Q2 outputs.

LEDs blink at the same time if measurement is out of range or not available due to the presence of environmental contamination.

POWER LED (green)

Green PWR LED on indicates that the device is switched on and operating.

ACTIVE SETUP LED (green)

Green PNP/NPN LEDs on indicate that the device is in the selected setup.

SET1 Push Button

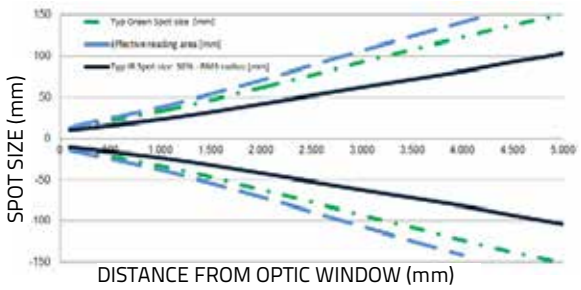
Teach-in push buttonfor Q1 and setting parameter menu

SET2 Push Button

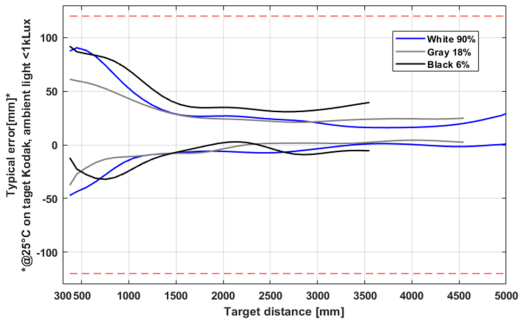
Teach-in push buttonfor Q2 and setting parameter menu

DETECTION DIAGRAMS

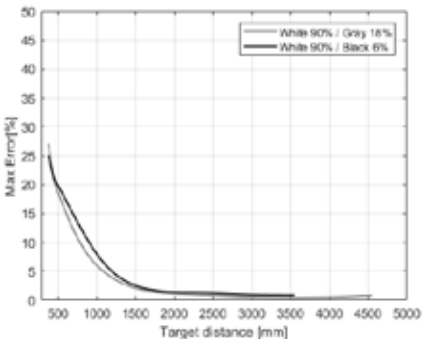
Typical spot size - squared section



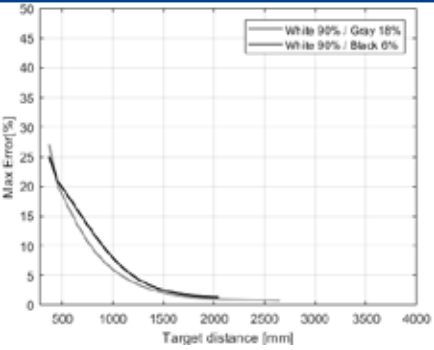
Reading area dimension



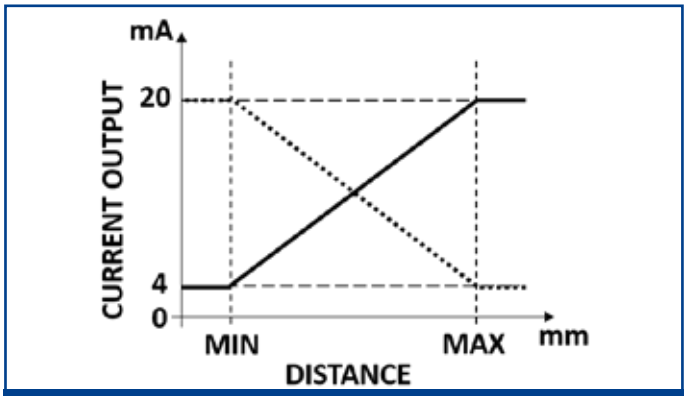
Accuracy - All models



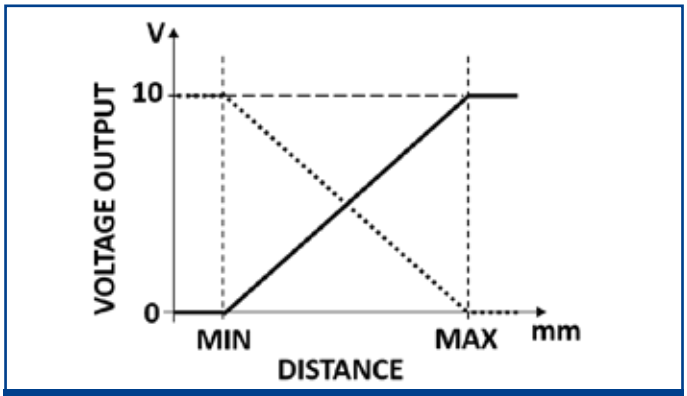
Difference white/grey – white/black - Models S65..00,00Z,00I,00V



Difference white/grey-white/black-Model S65...M53



Current analog output - model S65 ...00I



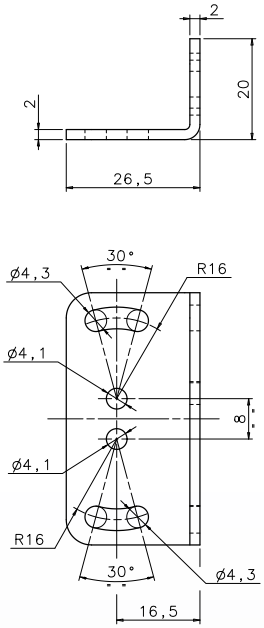
Voltage analog output - model S65 ...00V

MODEL SELECTION AND ORDER INFORMATION

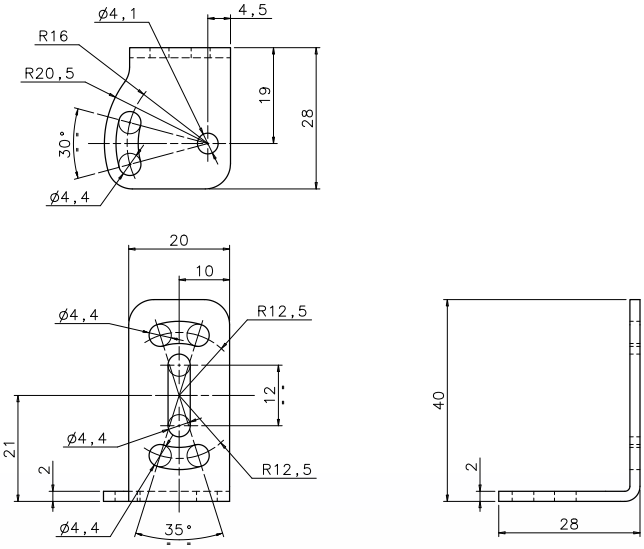
OPTIC FUNCTION	CONNECTION	OUTPUT	MODEL	ORDER No.
Background Suppression long range IR	M12 5 poles	NPN/PNP	S65-PA-5-M13-00	956251161
		NPN/PNP + I Out	S65-PA-5-M13-00I	956255001
		NPN/PNP + V Out	S65-PA-5-M13-00V	956251181
		IO-Link NPN/PNP	S65-PA-5-M13-00Z	956251171
Background Suppression long range for shiny objects		IO-Link NPN/PNP	S65-PA-5-M53-00Z	956250001

ACCESSORIES

ST-5020



ST-5021



MODEL	DESCRIPTION	ORDER No.
ST-5020	mounting bracket 50 x 27 x 20 mm	95ACC5330
ST-5021	mounting bracket 20 x 40 x 28 mm	95ACC5340

CABLES

TYPE	DESCRIPTION	LENGTH	MODEL	ORDER No.
Axial M12 Connector	M12 5-pole conn. with 3 m unshielded cable	3 m	CS-A1-03-G-03	95ACC2110
	M12 5-pole conn. with 5 m unshielded cable	5 m	CS-A1-03-G-05	95ACC2120
	M12 5-pole conn. with 10 m unshielded cable	10 m	CS-A1-03-G-10	95ACC2140
	5-pole, L coded power cable	3 m	CS-M1-02-B-03	95ACC0007
Axial M12 F/M8 M Connector	4-pole, double headed	3 m	CS-H1-02-B-03	95ACC0008
Axial M12 F/M12 M Connector	4-pole, double headed	3 m	CS-I1-02-B-03	95ACC0009