

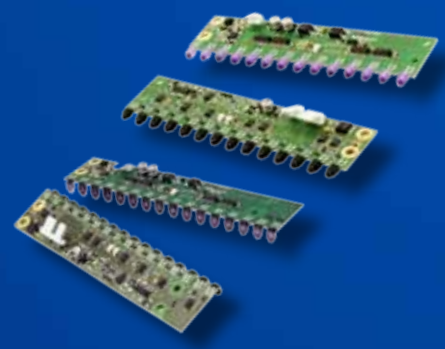


NX series

Medium resolution area sensors
without housing



Special Area Sensors



features

- Complete protection against electrical damages
- LED indicators
- Crossed beams detection
- Without housing
- 16 or 14 optics
- Detection of goods in automatic vending machines
- Detection of objects with irregular shape

web contents



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code description

NX 16SR / X A N - A 0 00

series	NX	Area sensor without housing
optics	16	16 optics (150 mm area height)
	14	14 optics (132 mm area height)
emitter / receiver	S	Emitter with sensitivity adjustment
	R	Receiver
	SR	Emitter + receiver kit
emitter / receiver	0	Emitter without check
	X	Emitter with check
	R	Receiver
output	0	Emitter
	A	NO output
	C	NC output
output	0	Emitter
	P	PNP output
	N	NPN output
optics	A	Axial optics
	C	Right angle optics
model	0	Standard model
	T	Moisture resistant model
output	00	Output without delay off
	10	100 ms output delay off

available models

Special Area Sensors

function	optics	adjust.	check	output	moisture resistant	delay (ms)	distance (m)	model			
emitter + receiver	14 axial	●	●	NPN - NO		100	0,37...2	NX14SR/XAN-A010			
										NX14SR/XAP-A000	
	14 right angle			PNP - NO	-	-		NX14SR/XAP-C000			
									NX14SR/XAP-C010		
	14 axial				●	100		NX14SR/XCN-AT10			
									NX14SR/XCN-C010		
	14 right angle				●			NX14SR/XCN-CT10			
									NX14SR/XCP-C000		
	16 axial								100	NX16SR/XAN-A010	
											NX16SR/XAN-C000
	16 right angle										NX16SR/XAN-C010
									●		NX16SR/XAN-CT10
	16 axial										NX16SR/XAP-A010
	16 right angle							PNP - NO	-	100	NX16SR/XAN-C010
											NX16SR/XCN-A010
	16 axial								●		NX16SR/XCN-AT10
							NX16SR/XCN-C010				
16 right angle				NPN - NC	-		NX16SR/XCN-CT10				
					●						

NX**SR/***_*****	
type	medium resolution area sensor with 16/14 optics, step 10 mm
nominal sensing distance	0.37...2 m 880 nm (beam pitch ≥ 10 mm)
emission	infrared (880 nm), modulated
controlled height	150 mm (16 optics) ; 132 mm (14 optics)
minimum sensing distance	370 mm
minimum detectable object	$\varnothing 15^{(1)}$ / $\varnothing 7.5^{(2)}$ / $\varnothing 5^{(3)}$ mm
hysteresis	< 10%
supply voltage	10 – 26 Vdc
ripple	10%
no-load supply current	150 mA (emitter) – 25 mA (receiver)
output current	100 mA
leakage current	< 10 μ A (a Vdc max.)
voltage drop	2 V a 100 mA
output type	NPN or PNP open collector, NO or NC
input	check input
response time (Light/Dark)	500 μ sec
response time (Light/Dark)	7 ms
power on delay	< 85 ms (switch on delay)
output delay	100 ms (according to models)
power supply protections	polarity reversal - transient
output protection	short circuit (autoreset)
temperature range	-0 /+ 55 °C (without freeze)
interference to external light	1000 lux (incandescent lamp) 1500 lux (sunlight)
IP mechanical protection	not defined
emitter LED	yellow (supply and emission active)
receiver LED	red (signal level) – Yellow (output state active)
housing material	No housing. Mechanical and electrical protections of the PCB have to be submitted to the machine structure
connections	With PCB connectors / Emitter, Conn. 3 MOLEX 22-05-7038 - Positive, Check, Common / Receiver, Conn. 1 MOLEX 22-05-7038 - Positive, Check, Common / Receiver, Conn. 2 MOLEX 22-05-7048 Positive, Check, Output, Common
dimensions	157 x 36 x 18 mm (16 optics) - 140 x 36 x 18 mm (14 optics)
weight (approximate)	104 g

⁽¹⁾ Guaranteed resolution everywhere in the detection area

⁽²⁾ Guaranteed resolution in the central part of the detection

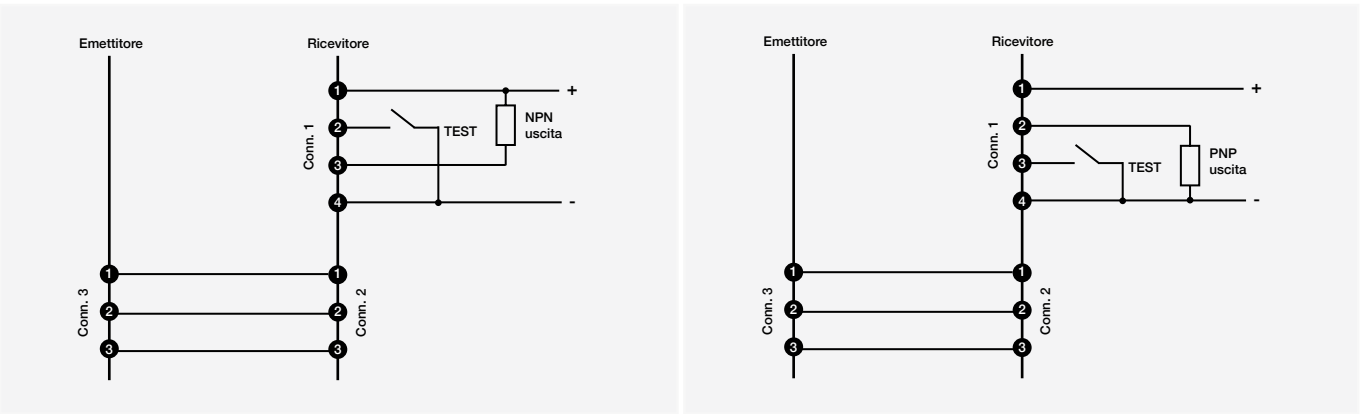
⁽³⁾ As note (2), but with sensivity adjustment

Dark zones are parts of the detection area close to the emitter and receiver, their amplitude X is proportional to the distance D between the emitter and the receiver. X=0.06D.



electrical diagrams of the connections

NPN output PNP output

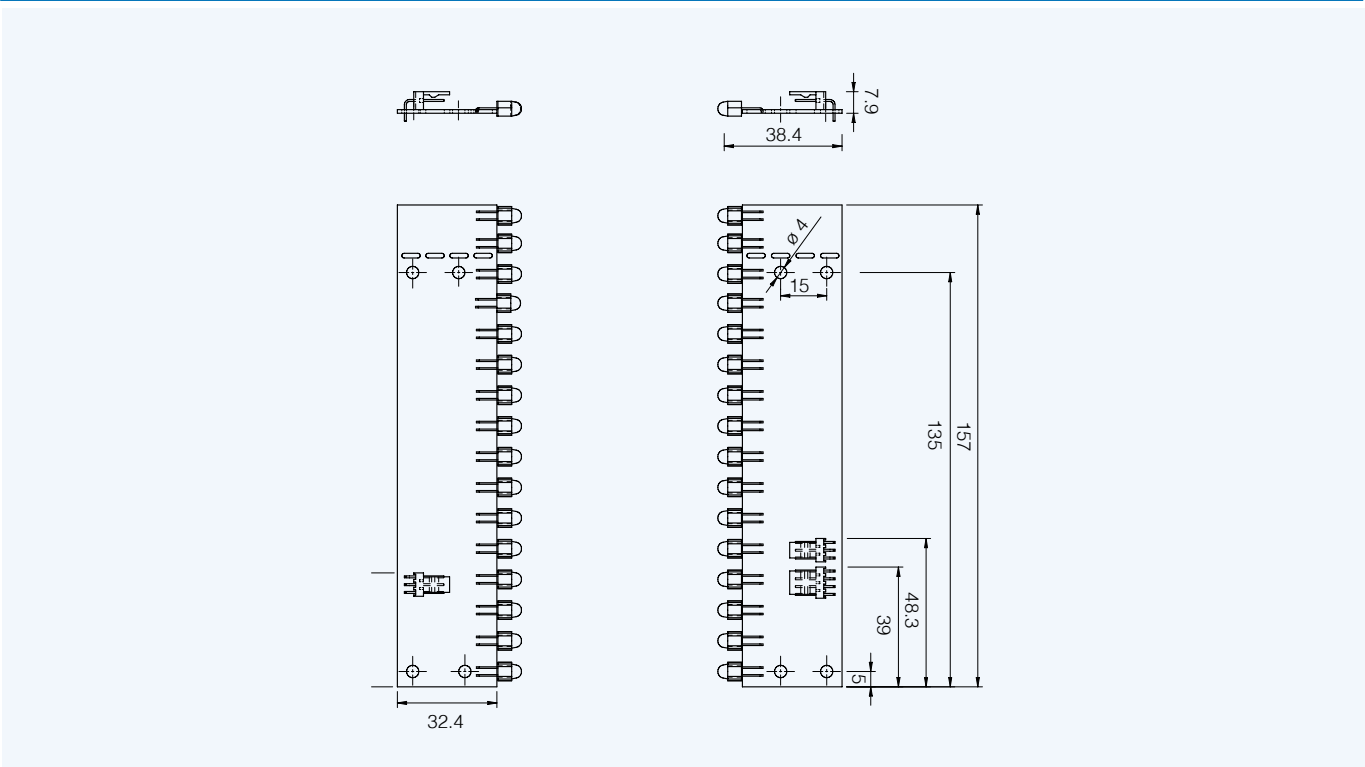


Warnings regarding to electrostatic discharge (ESD)

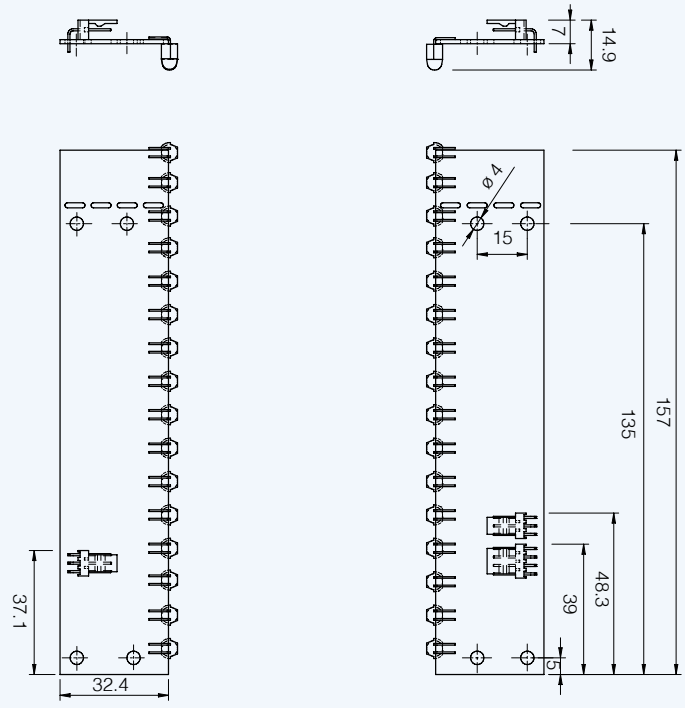
- disconnect the supply voltage before touching the device
- discharge the electrostatic charges before touching the device
- use metallic screws to install the device

dimensions (mm)

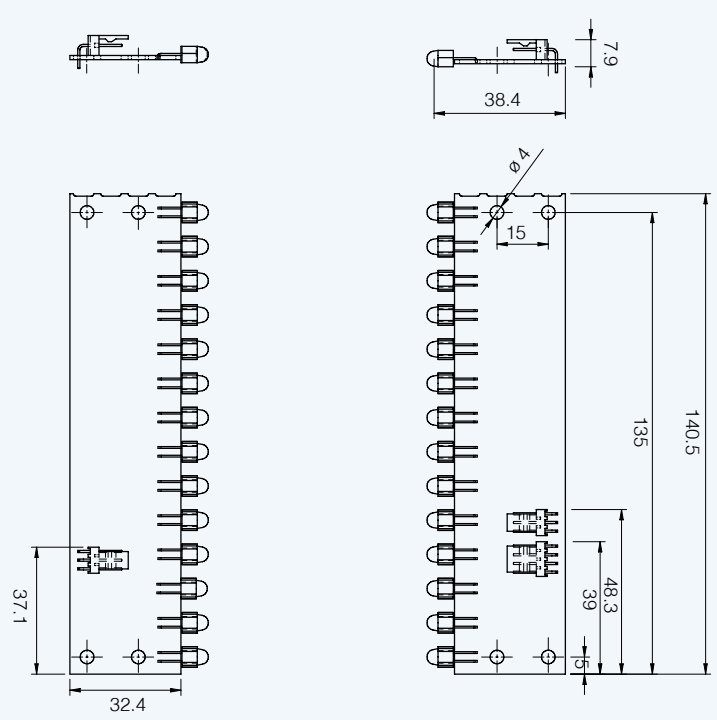
NX16SR/***_A***



NX16SR/***_C***



NX14SR/***_A***





NX14SR/***_A***

