

NO SAFETY BARRIERS

– COMPLEX series–

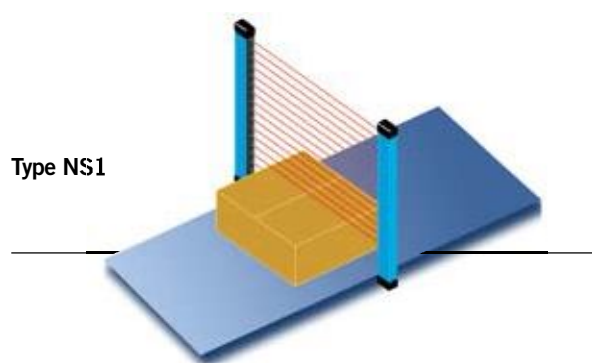
NS - NI series

For automation - control - measure and counting



■ Photoelectric barriers to detect area

The system formed by an emitter and receiver, produces a grid of parallel beams to detect the presence of object giving the signal related to the form and dimensions of the object. The heights detected are between 100 and 2000 mm with a range of 0.6 - 15 - 30 m.



NS versions

Type NS-1

gives the presence of an object, It is a standard curtain with solid state output 100 mA. The models A-B-C-D-E-F offer different solution on the basis of range and resolution of the system.

Type NS-2/1-2-3-4

gives the form and the dimensions of object. The output signals are RS-232, RS-485 analogic 0-10 Volt or 4 – 20 mA The signals are on, as the beams are detected. The models A-B-C-D-E-F offer different solution on the basis of range and resolution of the system.

All the electronic circuit are contained inside the two optic enclosures.

Applications

- Control of body or vehicle on automatic door
- Control of obstacle on automatic parking or lift
- Measure of packing dimensions
- Automation in general

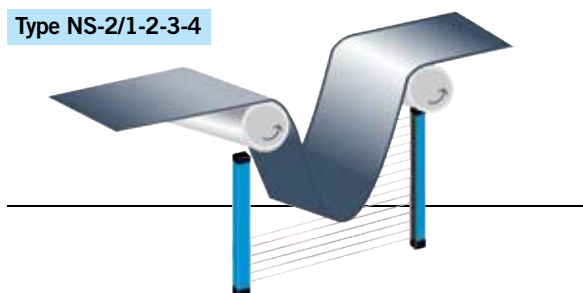
Features

- **Power supply** 24Vdc +/- 20%
- **Rating consumption** max. 300 mA
- **Output system** 2 x PNP
4 - 20 mA
0 - 10 Volt
485/232 OPEN-ASCII-MODBus
- **Speed of communication data** standard 19.2 KBit /
optional from 9,2 to 57,6 KBit

N.B.

on the basis of the requirements of EN 61.496-1/2 the units series NS cannot be used in safety application

Type NS-2/1-2-3-4



- Enclosure rating** IP 65
- Frontal protection standard** on plexiglass on request on glass.
- LED indication for different functions**
Yellow led on TX for power supply
Red/green leds on RX for free / interrupted barrier
- Output current PNP** max. 100mA protected against short circuit

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■ Models and technical features of NS series

NS _ _ - 10 A Distance between beams 10mm Resolution 12mm Range 0.6m										
Code	16-10A	32-10A	48-10A	64-10A	80-10A	96-10A	112-10A	128-10A	144-10A	160-10A
N Beams	16	32	48	64	80	96	112	128	144	160
H sensitive	162	322	482	642	802	962	1122	1282	1442	1602
H barrier	231	350	510	670	828	990	1146	1306	1466	1622

NS _ _ - 10 AL Distance between beams 10mm Resolution 14mm Range 2.5m										
Code	16-10AL	32-10AL	48-10AL	64-10AL	80-10AL	96-10AL	112-10AL	128-10AL	144-10AL	160-10AL
N Beams	16	32	48	64	80	96	112	128	144	160
H sensitive	164	324	484	644	804	964	1124	1284	1444	1604
H barrier	231	350	510	670	828	990	1146	1306	1466	1622

NS _ _ - 05 AT Distance between beams 5 / 10mm Resolution 6 / 12 mm Range 0.6m										
Code	31-05AT	63-05AT	95-05AT	127-05AT	159-05AT	191-05AT				
N Beams	31	63	95	127	159	191				
H sensitive	162	322	482	642	802	962				
H barrier	231	350	510	670	828	990				

NS _ _ - 05 ATL Distance between beams 5 / 10mm Resolution 7 / 14 mm Range 2.5m										
Code	31-05ATL	63-05ATL	95-05ATL	127-05ATL	159-05ATL	191-05ATL				
N Beams	31	63	95	127	159	191				
H sensitive	164	324	484	644	804	964				
H barrier	231	350	510	670	828	990				

NS _ _ - 20 B Distance between beams 20mm Resolution 22 mm Range 0.6m										
Code	8-20B	16-20B	24-20B	32-20B	40-20B	48-20B	56-20B	64-20B	72-20B	80-20B
N Beams	8	16	24	32	40	48	56	64	72	80
H sensitive	162	322	482	642	802	962	1124	1284	1444	1604
H barrier	231	350	510	670	828	990	1146	1306	1466	1622

NS _ _ - 20 BL Distance between beams 20mm Resolution 24 mm Range 2.5m										
Code	8-20BL	16-20BL	24-20BL	32-20BL	40-20BL	48-20BL	56-20BL	64-20BL	72-20BL	80-20BL
N Beams	8	16	24	32	40	48	56	64	72	80
H sensitive	164	324	484	644	804	964	1124	1284	1444	1604
H barrier	231	350	510	670	828	990	1146	1306	1466	1622

NS _ _ - 10 BT Distance between beams 10 / 20mm Resolution 6 / 12 mm Range 0.6m										
Code	15-10BT	31-10BT	47-10BT	63-10BT	79-10BT	95-10BT	111-10BT	127-10BT	143-10BT	159-10BT
N Beams	15	31	47	63	79	95	111	127	143	159
H sensitive	162	322	482	642	802	962	1124	1284	1444	1604
H barrier	231	350	510	670	828	990	1146	1306	1466	1622

NS _ _ - 10 BTL Distance between beams 10 / 20mm Resolution 7 / 14 mm Range 2.5m										
Code	15-10BTL	31-10BTL	47-10BTL	63-10BTL	79-10BTL	95-10BTL	111-10BTL	127-10BTL	143-10BTL	159-10BTL
N Beams	15	31	47	63	79	95	111	127	143	159
H sensitive	164	324	484	644	804	964	1124	1284	1444	1604
H barrier	231	350	510	670	828	990	1146	1306	1466	1622

Identification code

	model	code	bracket
NS-1 output 2xPNP	= NS1		
NS-2/1 output 4-20mA	= NS2/1		
NS-2/2 output 0-10 V	= NS2/2		
NS-2/3 output 232	= NS2/3		
NS-2/4 output 485	= NS2/4		
see table			
no brackets	= 0		
brackets STGM	= 1		
brackets STGL	= 2		
brackets STVB	= 3		

■ Models and technical features of NS series

NS - C Distance between beams 24mm Resolution 30 mm Range 15m														
Code	150 C	300 C	450 C	600 C	750 C	900 C	1050 C	1200 C	1350 C	1500 C	1650 C	1800 C	1950 C	2100 C
N Beams	6	12	18	24	30	36	42	48	54	60	66	72	78	84
H sensitive	126	270	414	558	702	846	990	1134	1278	1422	1566	1710	1854	1998
H barrier	244	320	460	604	748	892	1036	1180	1324	1468	1612	1756	1900	2044

NS - CL Distance between beams 24mm Resolution 40 mm Range 30m														
Code	150 CL	300 CL	450 CL	600 CL	750 CL	900 CL	1050 CL	1200 CL	1350 CL	1500 CL	1650 CL	1800 CL	1950 CL	2100 CL
N Beams	6	12	18	24	30	36	42	48	54	60	66	72	78	84
H sensitive	136	280	424	568	712	856	1000	1144	1288	1432	1576	1720	1864	2008
H barrier	244	320	460	604	748	892	1036	1180	1324	1468	1612	1756	1900	2044

NS - D Distance between beams 48mm Resolution 55 mm Range 15m														
Code	150 D	300 D	450 D	600 D	750 D	900 D	1050 D	1200 D	1350 D	1500 D	1650 D	1800 D	1950 D	2100 D
N Beams	3	6	9	12	15	18	21	24	27	30	33	36	39	42
H sensitive	102	246	390	534	678	822	966	1110	1254	1398	1542	1686	1830	1974
H barrier	244	320	460	604	748	892	1036	1180	1324	1468	1612	1756	1900	2044

NS - DL Distance between beams 48mm Resolution 65 mm Range 30m														
Code	150 DL	300 DL	450 DL	600 DL	750 DL	900 DL	1050 DL	1200 DL	1350 DL	1500 DL	1650 DL	1800 DL	1950 DL	2100 DL
N Beams	3	6	9	12	15	18	21	24	27	30	33	36	39	42
H sensitive	112	256	400	544	688	832	976	1120	1264	1408	1552	1696	1840	1984
H barrier	244	320	460	604	748	892	1036	1180	1324	1468	1612	1756	1900	2044

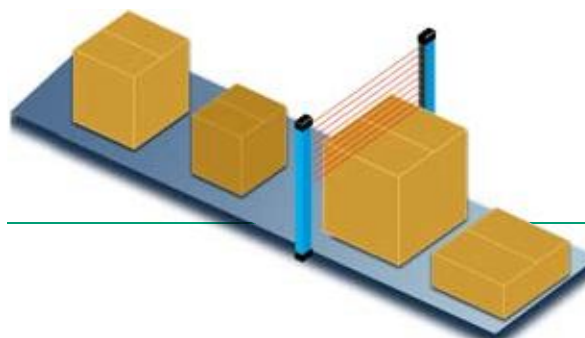
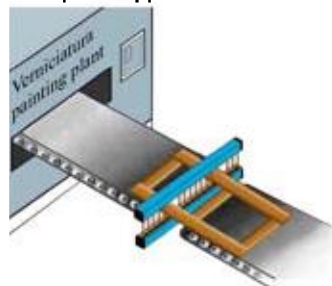
NS - E Distance between beams 120 / 170mm Resolution 175 mm Range 15m													
Code	450 E	750 E	1050 E	1350 E	1650 E	1950 E							
N Beams	4	6	8	10	12	14							
H sensitive	414	702	990	1278	1566	1854							
H barrier	460	748	1036	1324	1612	1900							

NS - EL Distance between beams 120 / 170mm Resolution 185 mm Range 30m													
Code	450 EL	750 EL	1050 EL	1350 EL	1650 EL	1950 EL							
N Beams	4	6	8	10	12	14							
H sensitive	424	712	1000	1288	1576	1864							
H barrier	460	748	1036	1324	1612	1900							

NS - F Distance between beams 120 / 310mm Resolution 320 mm Range 15m													
Code	600 F	1050 F	1500 F	1950 F									
N Beams	4	6	8	10									
H sensitive	558	990	1422	1854									
H barrier	604	1036	1468	1900									

NS - FL Distance between beams 120 / 310mm Resolution 330 mm Range 30m													
Code	600 F	1050 F	1500 F	1950 F									
N Beams	4	6	8	10									
H sensitive	568	1000	1432	1864									
H barrier	604	1036	1468	1900									

Example of application



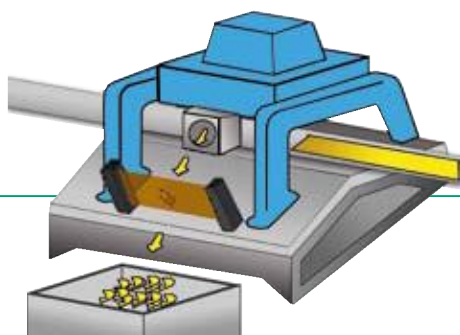
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■ Applications

Barriers NI series

To control the process of expulsion pieces on the presses. This series of units are adapted to check small object with diameter less than 1 mm. The checking of rectangular objects is extremely effective, as it is possible to detect thin sheets with thickness of 0.1 mm. The curtain generates a dense beam that scans the item.

The interruption of only one beam, generates the OFF of the curtain.



The high speed of detection and the low resolution of the system, are ideal for the following applications:



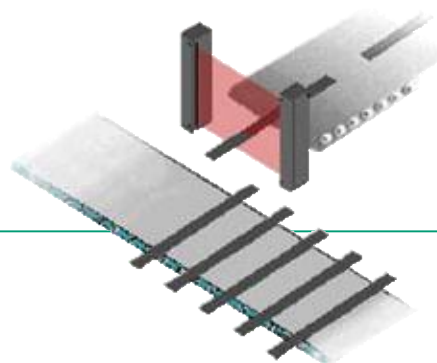
■ Applications

- Checking expulsion pieces from presses
- Counting of pieces on production line
- Control of presence of material on painting plant or on rolling machine etc.

Features

Type NI-1 with resolution 0,9 mm Sensitive hight protected 75- 315 mm Range 50 – 300 mm Response time 1,2 msec.	NI-01
Type NI-2 with resolution 2mm Sensitive hight protected 75- 315 mm Range 100 – 2.500 mm Response time 0,8 msec.	NI-02
Type NI-4 with resolution 4mm Sensitive hight protected 75 – 475 mm Range 100 – 2.500 mm Response time 0,6 msec.	NI-04
Type NI-8 with resolution 8mm Sensitive hight protected 75 – 475 mm Range 100 – 2.500 mm Response time 0,4 msec	NI-08
Standard range	0
Long range	1
Without timer	0
With timer	1
Connector type C	0
Connector type M12	1

	Standard range	Long range
Max power consumption	120 mA	150mA
Light immunity	> 80.000 LUX	> 50.000 LUX
Flash immunity	total up to 200Hz	total up to 100Hz
Power supply	24 Vcc +/- 10%	
Output	NPN / PNP 100 mA	
Speed reading	> 100 part/sec	
Reset time	standard 20 msec from 3 msec to 1sec timing version	



For further information, contact commercial service