

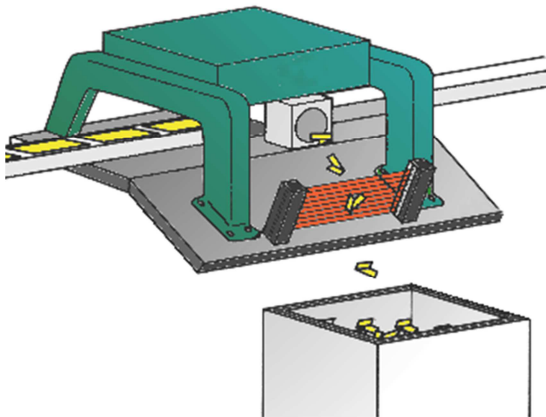
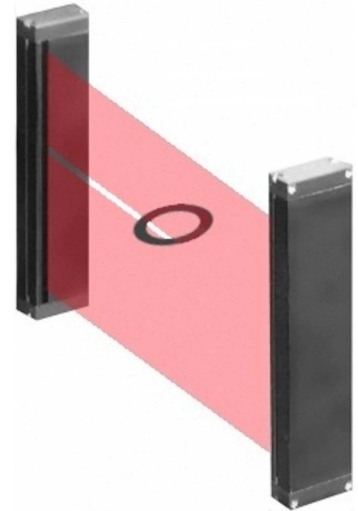
### Area sensors NI serie

1811

The NI system generates a high number of beams, effecting a very detailed scanning in the examined zone. The interruption of a beam change the output state.

It is arranged of an emitter and a receiver in two separate body. They are realised to detect object less to 1mm diameter, with a detection height from 35 up to 3000 mm in a range up to 12 m.

Due to the principle of operation, is very effective the detection of flat sheet of small thickness of any material.



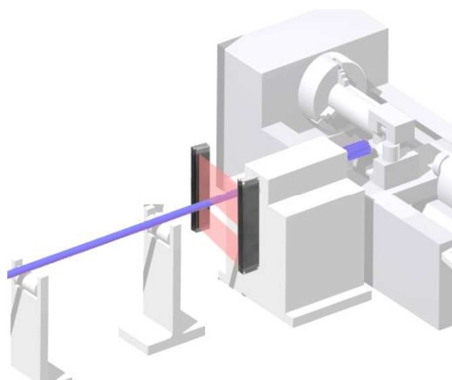
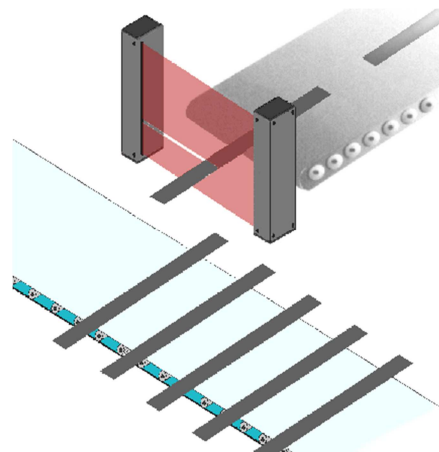
Due to the hi speed end the hi resolution it is ideal for the following applications:

- Checking ejected pieces from machines.
- Counting of pieces going out from production lines.
- Presence of material in product lines like rolling mill or similar.

**The detection is not influenced from material type and colour.**

They are suitable also for plastic material, wood, metal, and also glass and transparent materials.

The robust design of body and electronics, make this barriers suitable also for heavy duty applications and immune to external noises as sun light, flash, etc.



The NI series sensors are very easy to assembly, mechanically and electrically.

Position the elements parallel to each other, at a distance between the minimum and maximum range as reported on label.

Fix them to a stable part of the machine, using the rear tread holes near the end caps with a 3MA screw or using the support kit.

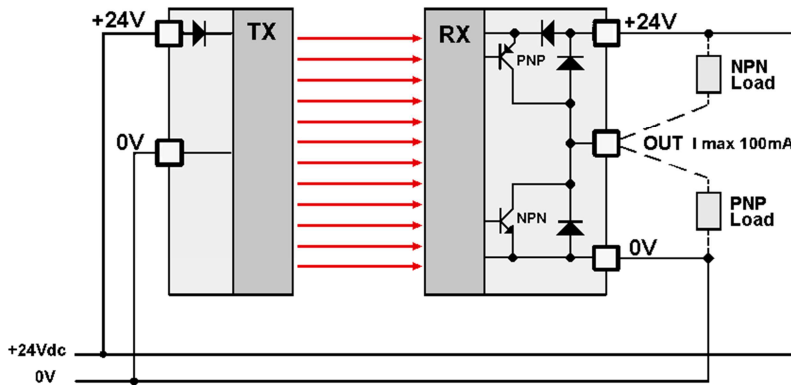
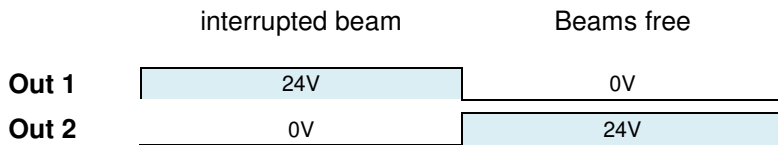
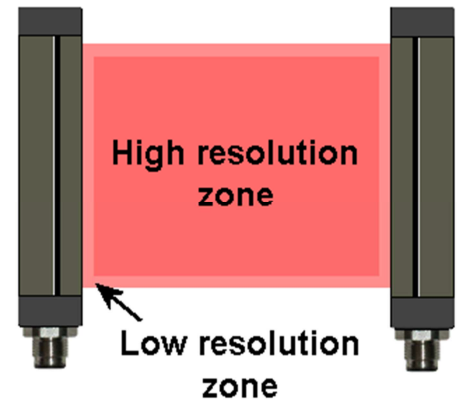
Pay attention that the ejected parts will not strike the barriers.

Take in consideration that all around the sensing field there is a zone with a reduced resolution.

The dimension of the 'hi resolution zone' is 90% of the total length 'L' and the 90% of the sensing height 'HS'.

To satisfy every required connection, the barrier have 2 output in opposite phase, each with the PNP and NPN transistor ( push-pull ).

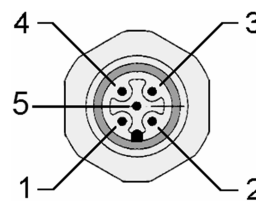
There are the following connection possibilities:



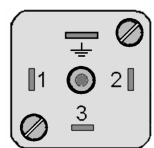
### Connections

TX	RX	Connector type		
		M12	Cable	C
+24V	+24V	1	Brown	3
Test	Out 1	2	White	1
0V	0V	3	Blue	Ground
	Out 2	4	Black	2
	Code	5	Gray	

### M12 Male connector



### Type 'C' connector



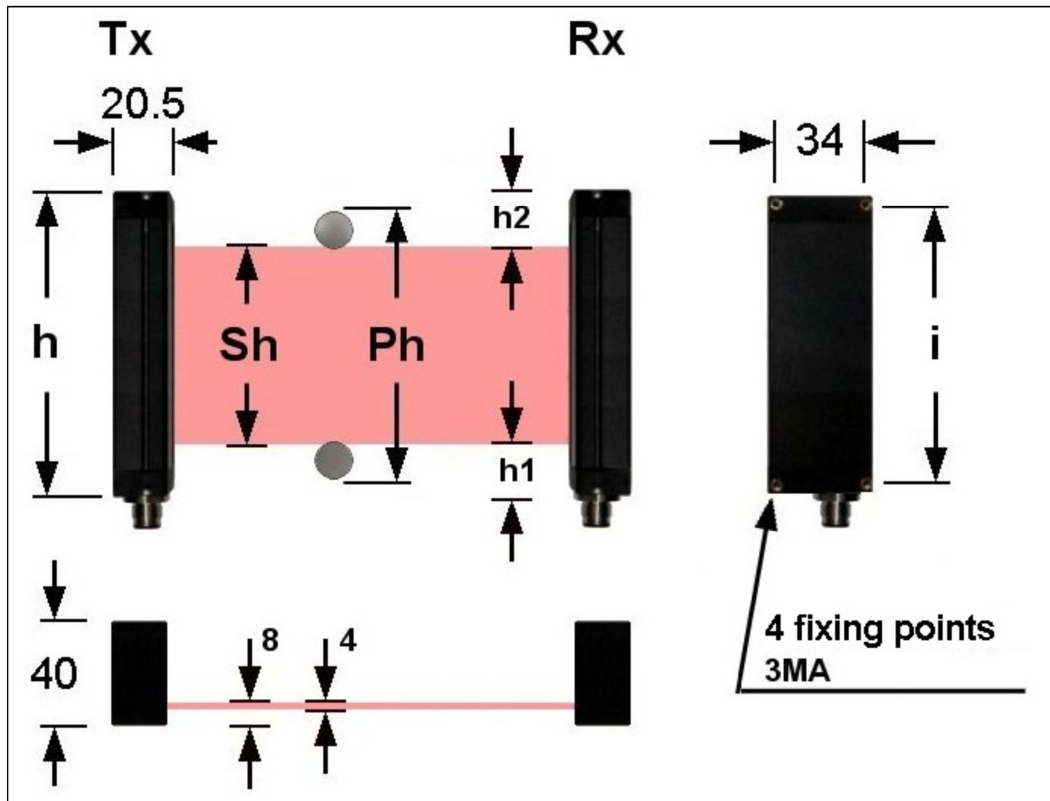
Provide power supply to the system and check the correct operation through the bicolour LED placed on the receiver.

There aren't particulars precaution to take because the sensor is immune to optical noises like sun light, flashes, stroboscopic light and electrical noises also.

**Sensitivity adjustment** (optional): adjust the trimmer on the transmitter until the green LED on the receiver will be ON. Increase the sensitivity for a best immunity to vibration and dust on the optics.

**Timer** (optional): on the receiver, allows you to maintain the output ON after the exit of the detected objet, regulate to obtain the desired delay.

**Code** ( optional ) the coded versions allow to the operation of two pairs of barrier also in case of interfering installation. Connecting the "CODE" terminal to 0V is selected the **A** code, connecting at +24V is selected the **B** code. Emitter and receiver must be set to the same code.



$$i \text{ ( fixing center )} = h - 7 \text{ mm}$$

Tables for standard versions, on request are available customized heights, range and response time.

Resolution 0,9 mm			Standard range			Long range L4		
Model	Detection Height Sh mm	Body dimension h mm	Minimum distance mm	Maximum Distance mm	Response time ms	Minimum distance mm	Maximum Distance mm	Response time ms
NI 01- 40 SEb	35	100	50	500	0.8	300	4000	0.9
NI 01- 50 SEb	45	100	50	500	0.8	300	4000	1.2
NI 01- 60 SEb	55	100	50	500	0.8	300	4000	1.4
NI 01- 70 SEb	65	100	50	500	0.8	300	4000	1.6
NI 01- 80 SEb	75	100	100	500	0.8	300	4000	1.9
NI-H 01-160 SEb	155	180	100	500	1.2	300	4000	3.8
NI-H 01-240 SEb	235	260	100	500	1.9	300	4000	5.7
NI-H 01-320 SEb	315	340	100	500	2.5	300	4000	7.6
NI-H 01-400 SEb	395	420	100	500	3.2	300	4000	9.6
NI-H 01-480 SEb	475	500	100	500	3.8	300	4000	11.5
NI-H 01-560 SEb	555	580	100	500	4.4	300	4000	13.4
NI-H 01-640 SEb	635	660	100	500	5.1	300	4000	15.3
NI-H 01-720 SEb	715	740	100	500	5.7	300	4000	17.2
NI-H 01-800 SEb	795	820	100	500	6.4	300	4000	19.2

Resolution 2 mm			Standard range			Long range			
Model	Detection Height Sh mm	Body dimension h mm	Minimum distance mm	Maximum Distance mm	Response time ms	Minimum distance mm	L2 Maximum Distance mm	L4 Maximum Distance mm	Response time ms
NI 02- 40 SEb	35	100	50	800	0.8	500	1800	4000	0.9
NI 02- 50 SEb	45	100	50	800	0.8	500	1800	4000	1.2
NI 02- 60 SEb	55	100	50	800	0.8	500	1800	4000	1.4
NI 02- 70 SEb	65	100	50	800	0.8	500	1800	4000	1.6
NI 02- 80 SEb	75	100	80	800	0.8	500	1800	4000	1.9
NI-H 02 -160 SEb	155	180	150	800	1.2	300	1800	4000	3.8
NI-H 02 -240 SEb	235	260	150	800	1.9	300	1800	4000	5.7
NI-H 02 -320 SEb	315	340	150	800	2.5	300	1800	4000	7.6
NI-H 02 -400 SEb	395	420	150	800	3.2	300	1800	4000	9.6
NI-H 02 -480 SEb	475	500	150	800	3.8	300	1800	4000	11.5
NI-H 02 -560 SEb	555	580	150	800	4.4	300	1800	4000	13.4
NI-H 02 -640 SEb	635	660	150	800	5.1	300	1800	4000	15.3
NI-H 02 -720 SEb	715	740	150	800	5.7	300	1800	4000	17.2
NI-H 02 -800 SEb	795	820	150	800	6.4	300	1800	4000	19.2
NI-H 02 -880 SEb	875	900	150	800	7	300	1800	4000	21.1
NI-H 02 -960 SEb	955	980	150	800	7.6	300	1800	4000	23
NI-H 02-1040 SEb	1035	1060	150	800	8.3	300	1800	4000	24.9
NI-H 02-1120 SEb	1115	1140	150	800	8.9	300	1800	4000	26.8
NI-H 02-1200 SEb	1195	1220	150	800	9.6	300	1800	4000	28.8
NI-H 02-1280 SEb	1275	1300	150	800	10.2	300	1800	4000	30.7

Resolution 4 mm			Standard range			Long range			
Model	Detection Height Sh mm	Body dimension h mm	Minimum distance mm	Maximum Distance mm	Response time ms	Minimum distance mm	L4 Maximum Distance mm	L6 Maximum Distance mm	Response time ms
NI 04- 40	35	100	50	800	0.8	500	4000	6000	0.8
NI 04- 50	45	100	50	800	0.8	500	4000	6000	0.8
NI 04- 60	55	100	50	800	0.8	500	4000	6000	0.8
NI 04- 70	65	100	50	800	0.8	500	4000	6000	0.8
NI 04- 80	75	100	80	800	0.8	500	4000	6000	0.9
NI 04- 100	95	116	100	800	0.8	500	4000	6000	1.9
NI-H 04 -160	155	180	150	800	0.8	300	4000	6000	1.9
NI-H 04 -240	235	260	150	800	0.9	300	4000	6000	2.8
NI-H 04 -320	315	340	150	800	1.2	300	4000	6000	3.8
NI-H 04 -400	395	420	150	800	1.6	300	4000	6000	4.8
NI-H 04 -480	475	500	150	800	1.9	300	4000	6000	5.7
NI-H 04 -560	555	580	150	800	2.2	300	4000	6000	6.7
NI-H 04 -640	635	660	150	800	2.5	300	4000	6000	7.6
NI-H 04 -720	715	740	150	800	2.8	300	4000	6000	8.6
NI-H 04 -800	795	820	150	800	3.2	300	4000	6000	9.6
NI-H 04 -880	875	900	150	800	3.5	300	4000	6000	10.5
NI-H 04 -960	955	980	150	800	3.8	300	4000	6000	11.5
NI-H 04-1040	1035	1060	150	800	4.1	300	4000	6000	12.4
NI-H 04-1120	1115	1140	150	800	4.4	300	4000	6000	13.4
NI-H 04-1200	1195	1220	150	800	4.8	300	4000	6000	14.4
NI-H 04-1280	1275	1300	150	800	5.1	300	4000	6000	15.3
NI-H 04-1360	1355	1380	150	800	5.4	300	4000	6000	16.3
NI-H 04-1440	1435	1460	150	800	5.7	300	4000	6000	17.2
NI-H 04-1520	1515	1540	150	800	6	300	4000	6000	18.2
NI-H 04-1600	1595	1620	150	800	6.4	300	4000	6000	19.2
NI-H 04-1680	1675	1700	150	800	6.7	300	4000	6000	20.1
NI-H 04-1760	1755	1780	150	800	7	300	4000	6000	21.1
NI-H 04-1840	1835	1860	150	800	7.3	300	4000	6000	22
NI-H 04-1920	1915	1940	150	800	7.6	300	4000	6000	23
NI-H 04-2000	1995	2020	150	800	8	300	4000	6000	24
NI-H 04-2080	2075	2100	150	800	8.3	300	4000	6000	24.9
NI-H 04-2160	2155	2180	150	800	8.6	300	4000	6000	25.9
NI-H 04-2240	2235	2260	150	800	8.9	300	4000	6000	26.8
NI-H 04-2320	2315	2340	150	800	9.2	300	4000	6000	27.8
NI-H 04-2400	2395	2420	150	800	9.6	300	4000	6000	28.8
NI-H 04-2480	2475	2500	150	800	9.9	300	4000	6000	29.7
NI-H 04-2560	2555	2580	150	800	10.2	300	4000	6000	30.7

Also available L8 version with 8 m range.

Resolution 8 mm			Standard range			Long range			
Model	Detection Height Sh mm	Body dimension h mm	Minimum distance mm	Maximum Distance mm	Response time ms	Minimum distance mm	L4 Maximum Distance mm	L8 Maximum Distance mm	Response time ms
NI 08- 80	70	100	80	800	0.8	300	4000	8000	1
NI 08- 100	95	116	150	800	0.8	300	4000	8000	1
NI 08- 160	155	180	200	800	0.8	300	4000	8000	1
NI-H 08- 200	190	212	150	800	0.8	300	4000	8000	1.9
NI-H 08- 240	230	260	150	800	0.9	300	4000	6000	2.8
NI-H 08- 300	280	308	150	800	0.8	300	4000	8000	2.8
NI-H 08- 400	380	404	150	800	0.8	300	4000	8000	3.8
NI-H 08- 500	480	500	150	800	0.8	300	4000	8000	4.8
NI-H 08- 600	570	596	150	800	1.9	300	4000	8000	5.7
NI-H 08- 700	670	692	150	800	2.2	300	4000	8000	6.7
NI-H 08- 800	760	788	150	800	2.5	300	4000	8000	7.6
NI-H 08- 900	860	884	150	800	2.8	300	4000	8000	8.6
NI-H 08- 1000	960	980	150	800	3.2	300	4000	8000	9.6
NI-H 08- 1050	1050	1076	150	800	3.5	300	4000	8000	10.5
NI-H 08- 1150	1150	1172	150	800	3.8	300	4000	8000	11.5
NI-H 08- 1250	1240	1268	150	800	4.1	300	4000	8000	12.4
NI-H 08- 1350	1340	1364	150	800	4.4	300	4000	8000	13.4
NI-H 08- 1450	1440	1460	150	800	4.8	300	4000	8000	14.4
NI-H 08- 1550	1530	1556	150	800	5.1	300	4000	8000	15.3
NI-H 08- 1650	1630	1652	150	800	5.4	300	4000	8000	16.3
NI-H 08- 1750	1720	1748	150	800	5.7	300	4000	8000	17.2
NI-H 08- 1850	1820	1844	150	800	6	300	4000	8000	18.2
NI-H 08- 1950	1920	1940	150	800	6.4	300	4000	8000	19.2
NI-H 08- 2000	2010	2036	150	800	6.7	300	4000	8000	20.1
NI-H 08- 2100	2110	2132	150	800	7	300	4000	8000	21.1
NI-H 08- 2200	2200	2228	150	800	7.3	300	4000	8000	22
NI-H 08- 2300	2300	2324	150	800	7.6	300	4000	8000	23
NI-H 08- 2400	2400	2420	150	800	8	300	4000	8000	24
NI-H 08- 2500	2490	2516	150	800	8.3	300	4000	8000	24.9
NI-H 08- 2600	2590	2612	150	800	8.6	300	4000	8000	25.9
NI-H 08- 2700	2680	2708	150	800	8.9	300	4000	8000	26.8
NI-H 08- 2800	2780	2804	150	800	9.2	300	4000	8000	27.8
NI-H 08- 2900	2880	2900	150	800	9.6	300	4000	8000	28.8
NI-H 08- 3000	2980	2996	150	800	10	300	4000	8000	29.8

Resolution 12 mm			Standard range			Long range			
Model	Detection Height Sh mm	Body dimension h mm	Minimum distance mm	Maximum Distance mm	Response time ms	Minimum distance mm	L4 Maximum Distance mm	L8 Maximum Distance mm	Response time ms
NI 12- 100	95	116	100	800	0.8	500	4000	8000	0.8
NI-H 12- 200	190	212	150	800	0.8	300	4000	8000	0.8
NI-H 12- 300	280	308	150	800	0.8	300	4000	8000	0.9
NI-H 12- 400	380	404	150	800	0.8	300	4000	8000	1.4
NI-H 12- 500	480	500	150	800	0.8	300	4000	8000	1.9
NI-H 12- 600	570	596	150	800	0.8	300	4000	8000	2.4
NI-H 12- 700	670	692	150	800	0.9	300	4000	8000	2.8
NI-H 12- 800	760	788	150	800	1.1	300	4000	8000	3.3
NI-H 12- 900	860	884	150	800	1.2	300	4000	8000	3.8
NI-H 12- 1000	960	980	150	800	1.4	300	4000	8000	4.3
NI-H 12- 1050	1050	1076	150	800	1.6	300	4000	8000	4.8
NI-H 12- 1150	1150	1172	150	800	1.7	300	4000	8000	5.2
NI-H 12- 1250	1240	1268	150	800	1.9	300	4000	8000	5.7
NI-H 12- 1350	1340	1364	150	800	2	300	4000	8000	6.2
NI-H 12- 1450	1440	1460	150	800	2.2	300	4000	8000	6.7
NI-H 12- 1550	1530	1556	150	800	2.4	300	4000	8000	7.2
NI-H 12- 1650	1630	1652	150	800	2.5	300	4000	8000	7.6
NI-H 12- 1750	1720	1748	150	800	2.7	300	4000	8000	8.1
NI-H 12- 1850	1820	1844	150	800	2.8	300	4000	8000	8.6
NI-H 12- 1950	1920	1940	150	800	3	300	4000	8000	9.1
NI-H 12- 2000	2010	2036	150	800	3.2	300	4000	8000	9.6
NI-H 12- 2100	2110	2132	150	800	3.3	300	4000	8000	10
NI-H 12- 2200	2200	2228	150	800	3.5	300	4000	8000	10.5
NI-H 12- 2300	2300	2324	150	800	3.6	300	4000	8000	11
NI-H 12- 2400	2400	2420	150	800	3.8	300	4000	8000	11.5
NI-H 12- 2500	2490	2516	150	800	4	300	4000	8000	12
NI-H 12- 2600	2590	2612	150	800	4.1	300	4000	8000	12.4
NI-H 12- 2700	2680	2708	150	800	4.3	300	4000	8000	12.9
NI-H 12- 2800	2780	2804	150	800	4.4	300	4000	8000	13.4
NI-H 12- 2900	2880	2900	150	800	4.6	300	4000	8000	13.9
NI-H 12- 3000	2980	2996	150	800	4.8	300	4000	8000	14.4

Resolution 25 mm			Standard range			Long range			
Model	Detection Height Sh mm	Body dimension h mm	Minimum distance mm	Maximum Distance mm	Response time ms	Minimum distance mm	L4 Maximum Distance mm	L8 Maximum Distance mm	Response time ms
NI 25- 100	95	116	100	800	0.8	500	4000	8000	0.8
NI-H 25- 200	190	212	150	800	0.8	300	4000	8000	0.8
NI-H 25- 300	280	308	150	800	0.8	300	4000	8000	0.8
NI-H 25- 400	380	404	150	800	0.8	300	4000	8000	0.8
NI-H 25- 500	480	500	150	800	0.8	300	4000	8000	0.8
NI-H 25- 600	570	596	150	800	0.8	300	4000	8000	1.2
NI-H 25- 700	670	692	150	800	0.8	300	4000	8000	1.4
NI-H 25- 800	760	788	150	800	0.8	300	4000	8000	1.6
NI-H 25- 900	860	884	150	800	0.8	300	4000	8000	1.9
NI-H 25- 1000	960	980	150	800	0.8	300	4000	8000	2.1
NI-H 25- 1050	1050	1076	150	800	0.8	300	4000	8000	2.4
NI-H 25- 1150	1150	1172	150	800	0.8	300	4000	8000	2.6
NI-H 25- 1250	1240	1268	150	800	0.9	300	4000	8000	2.8
NI-H 25- 1350	1340	1364	150	800	1	300	4000	8000	3.1
NI-H 25- 1450	1440	1460	150	800	1.1	300	4000	8000	3.3
NI-H 25- 1550	1530	1556	150	800	1.2	300	4000	8000	3.6
NI-H 25- 1650	1630	1652	150	800	1.2	300	4000	8000	3.8
NI-H 25- 1750	1720	1748	150	800	1.3	300	4000	8000	4
NI-H 25- 1850	1820	1844	150	800	1.4	300	4000	8000	4.3
NI-H 25- 1950	1920	1940	150	800	1.5	300	4000	8000	4.5
NI-H 25- 2000	2010	2036	150	800	1.6	300	4000	8000	4.8
NI-H 25- 2100	2110	2132	150	800	1.6	300	4000	8000	5
NI-H 25- 2200	2200	2228	150	800	1.7	300	4000	8000	5.2
NI-H 25- 2300	2300	2324	150	800	1.8	300	4000	8000	5.5
NI-H 25- 2400	2400	2420	150	800	1.9	300	4000	8000	5.7
NI-H 25- 2500	2490	2516	150	800	2	300	4000	8000	6
NI-H 25- 2600	2590	2612	150	800	2	300	4000	8000	6.2
NI-H 25- 2700	2680	2708	150	800	2.1	300	4000	8000	6.4
NI-H 25- 2800	2780	2804	150	800	2.2	300	4000	8000	6.7
NI-H 25- 2900	2880	2900	150	800	2.3	300	4000	8000	6.9
NI-H 25- 3000	2980	2996	150	800	2.4	300	4000	8000	7.2

	Standard range	Long range Lx
Sunlight immunity	> 80 Klux	> 50 Klux
Flash immunity	Up to 200Hz	Up to 100Hz
Power requirement max. tot	200 mA load excluded	
Power supply	24 Vcc +/- 10%	
Indicators	TX LED yellow - RX LED Red / Green	
Output	2 x NPN / PNP 80 mA	
Scanning speed	> 100 parts per second	
Restart time	- standard 20 ms - from 20 ms to 1 sec timer version - 2 ms TF0 version	
Temperature range	-10 ..+65°C	
Protection degree	IP 65	




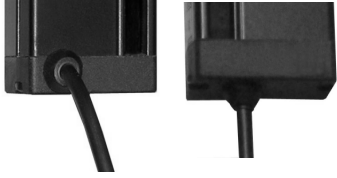
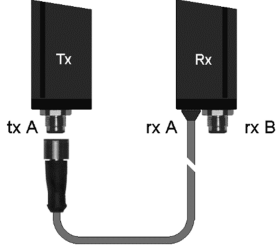
The indicated resolution is related to static cylindrical objects. The detection capability is best for moving object or flat objects such as sheets or washers, for which it is sufficient to a thickness of some tenths of a millimeter. Additional information are available upon request.

In the table are indicated the features for standard applications. The barriers were designed to have a considerable flexibility, so features such as response time, resolution, range, etc. are adaptable to specific requirements, for example is available the NI ST version, capable to detect object with a speed up to **1000 m / sec**

### IMPORTANT

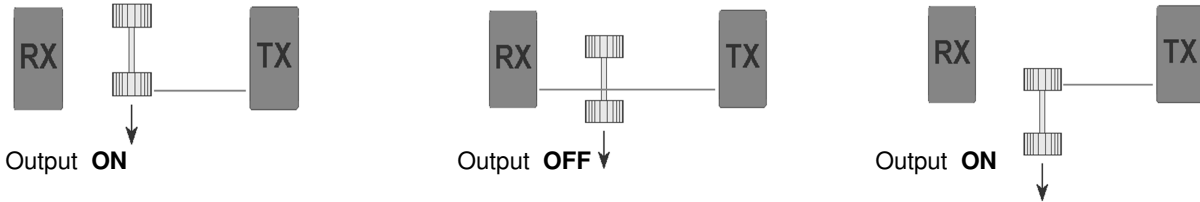
These devices **may not be used for the safety of the operator**, for this function other models are available.

**Connection**

<p><b>M12</b>      <b>M12 connector male 4 poles</b></p> <p>The connection is realized with an M12 4 poles male connector.</p>	
<p><b>CAVM12</b>      <b>Cable with M12 male 4 poles connector</b></p> <p>Standard cable length 300mm.</p>	
<p><b>C</b>      <b>4 poles Male + female</b></p> <p>C style connector The female has a screw connector adjustable in the 4 directions</p>	
<p><b>CAV xx</b>      <b>Cable connection</b></p> <p>The connection is a free cable, the standard length is 2m The cable entry can be on the bottom <b>CAVbxx</b>, or from the front <b>CAVaxx</b>.</p>	 <p style="text-align: center;">cav A                  cav B</p>
<p><b>ME xx</b>      <b>M12 connector + M12 connection cable for TX</b></p> <p>The receiver has a M12 connector + a cable to supply the emitter. In this way the customer need only of one cable to connect both. The cable length between emitter and receiver is XX cm</p>	 <p style="text-align: center;">tx A                  rx A                  rx B</p>
<p><b>XX</b> indicates the cable length in cm, the standard maximum length is 200cm. Ask for higher length of cable.</p>	



**Output timer**

The electronic is very fast, but sometimes it may be disadvantageous, for example for the counting of irregular object, may happens a mistake in counting.



The timer can be regulated for a time higher than the time employed from the piece to go through the sensing field, and so the output will remain **ON**.

The timer can be used also to give the right time to the piece to arrive at the correct position for the next operation, i.e. in packaging systems after the detection is necessary to wait that the piece arrive in the correct position before to seal.

<p><b>TE x.x      External timer</b></p> <p>The external timer can be regulated by a knob placed in the top of the receiver end cup</p>	
<p><b>Ti x.x      Internal timer</b></p> <p>The internal timer can be placed on the aluminium <b>Ti</b></p> <p>or can be placed in the bottom end cup <b>Tia</b> ( not compatible with MExx connection )</p>	
<p><b>TF x.x      Fix timer</b></p> <p>Fix Timer of x.x seconds, defined in the order.</p>	
<p><b>TF0      Fix timer 0</b></p> <p>Timer of 2 ms, ideal in time-based measuring applications and in case of passing close-up objects.</p>	
<p><b>x.x</b> indicates the seconds of the timer, eg. <b>Ti 0.5</b> is a timer on the aluminium of max 0,5 seconds</p>	
<p><b>NF      Flash protection</b></p> <p>The barriers of the NI series has a high immunity to optical noises, as immunity to sunlight and flash. The flash protection allows a considerable reduction of the detection errors, and is included as standard. The disabling of this function with the NF option has the advantage of reducing at 50% the response time.</p>	



### Optical options


<b>TR</b>	<b>Enhanced optics</b> It is necessary when the object dimensions are near to detection, and also for detection of semitransparent object. Is supplied as standard for NI 01 and NI 02	
<b>UV</b>	<b>Detection of transparent</b> Blue light emitters, capable of improving detection of transparent objects.	
<b>PR</b>	<b>Reduced range</b> The barrier has a minimum range lower than that indicated in the table.	

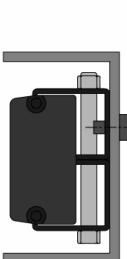
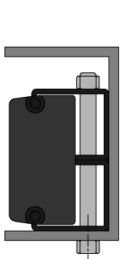
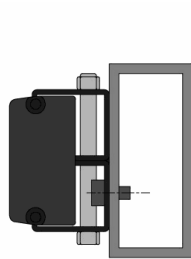
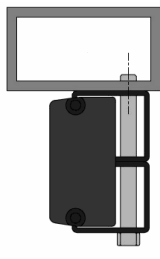
### Additional external protection


The protections are necessary in heavy applications.  
The external protection in polycarbonate is suggest for occasional strong impact.  
The glass external protection is suggested for frequently low impact, or for frequent cleaning of the barrier.

<b>V</b>	<b>Internal glass window protection</b> Suitable for frequent cleaning with abrasive methods that will damage the polycarbonate, or if mounted near to UV lamp, used normally in the painting plant.	
<b>PE</b>	<b>External polycarbonate protection</b> Couple of external protection in polycarbonate	
<b>VE</b>	<b>External glass protection</b> Couple of external protection in glass	

### Fixing supports

<b>KPL02</b>	<b>Kit of 4 supports</b> For side / rear mounting Recommended for barrier height greater than 500 mm	
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<b>SE_                      Sensitivity regulator</b> It is necessary for detection near to the limit of the resolution or for detection of transparent object. The regulation can be on front SEa or on bottom SEb. The SEb sensitivity regulator is standard for the series NI 01 and 02, can be modify with SEa  <div style="text-align: center;"> <p>Front adjustment <b>SEa</b></p> <p>Bottom adjustment <b>SEb</b></p> </div>	
<b>T                              TEST input on the emitter</b>  For applications where it is necessary to ensure a high levels of safety, Allows the customer to test the operation of the barrier simulating an interruption of the beams.	

### Order code

Model	
Optics	- / Lx / TR / PR / UV
Timer	- / Tex.x / Tix.x / TFx.x
Flash protection	- / NF
Sensitivity regulator	- / SEa / SEb
Test	- / T
External protection	- / V / PEx / VEx
Connection	M12 / CavM12 / M8 / CAVxx / Cexx / C

**Example NI 04-80 / Ti 1 / M12**

Sensor type NI, resolution 4mm, detection height 75mm, range 100 .. 800 mm,  
 with internal regulating timer 1 sec max,  
 Flash protection active,  
 No sensitivity regulator,  
 No test input,  
 Standard polycarbonate optical cover  
 M12 connector.

**Important:** In applications near to detection limits, is important to indicate in the order the approximate installation distance.

