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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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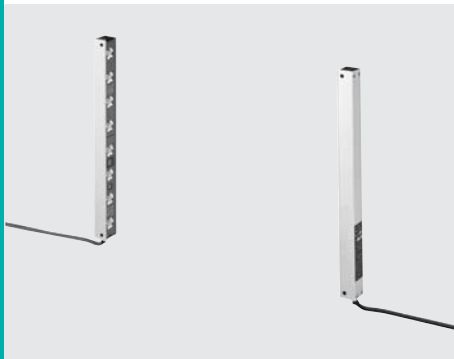
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# NA40 SERIES

## Related Information

- General terms and conditions ..... F-7
- Sensor selection guide ..... P.461~
- Glossary of terms / General precautions ..... P.1455~ / P.1458~
- Korea's S-mark ..... P.1506



Make sure to use light curtains when using a sensing device for personnel protection. Refer to p.495~ for details of light curtains.

[panasonic.net/id/pidsx/global](http://panasonic.net/id/pidsx/global)

## Slim and smart

## SPECIFICATIONS

The CAD data in the dimensions can be downloaded from our website.

Item	Number of beam channels	4	6	8	10	12	14	16	20	24
		Model No.	NA40-4	NA40-6	NA40-8	NA40-10	NA40-12	NA40-14	NA40-16	NA40-20
	With spatter protection hood	NA40-4-H	NA40-6-H	NA40-8-H	NA40-10-H	NA40-12-H	NA40-14-H	NA40-16-H	NA40-20-H	NA40-24-H
Sensing height		120 mm 4.724 in	200 mm 7.874 in	280 mm 11.024 in	360 mm 14.173 in	440 mm 17.323 in	520 mm 20.472 in	600 mm 23.622 in	760 mm 29.921 in	920 mm 36.221 in
Sensing range		5 m 16.404 ft								
Beam pitch		40 mm 1.575 in								
Sensing object		ø60 mm ø2.362 in or more opaque object (Completely beam interrupted object)								
Supply voltage		12 to 24 V DC ±10 % Ripple P-P 10 % or less								
Current consumption		Emitter: 30 mA or less Receiver: 60 mA or less			Emitter: 35 mA or less Receiver: 90 mA or less			Emitter: 35 mA or less Receiver: 115 mA or less		
Sensing output		NPN open-collector transistor <ul style="list-style-type: none"> <li>• Maximum sink current: 100 mA</li> <li>• Applied voltage: 30 V DC or less (between sensing output and 0 V)</li> <li>• Residual voltage: 1.6 V or less (at 100 mA sink current)</li> </ul>								
Output operation		ON when all beam channels are received / OFF when one or more beam channels are interrupted								
Self-diagnosis output		NPN open-collector transistor <ul style="list-style-type: none"> <li>• Maximum sink current: 50 mA</li> <li>• Applied voltage: 30 V DC or less (between self-diagnosis output and 0 V)</li> <li>• Residual voltage: 1.6 V or less (at 50 mA sink current)</li> </ul>								
Output operation		OFF when unstable light received condition continues for 5 sec. or more, or the output transistor fails								
Response time		12 ms or less								
Interference prevention function		Incorporated (Two units of sensors can be mounted close together.)								
Protection		IP65 (IEC)								
Ambient temperature		-10 to +50 °C +14 to +122 °F (No dew condensation or icing allowed), Storage: -10 to +60 °C +14 to +140 °F								
Emitting element		Infrared LED (synchronized scanning system)								
Material		Protection enclosure: Aluminum, Unit case: ABS, Front cover: Acrylic, Lens: Acrylic								
Net weight (Total of emitter and receiver)		400 g approx.	500 g approx.	630 g approx.	770 g approx.	890 g approx.	1,020 g approx.	1,150 g approx.	1,400 g approx.	1,660 g approx.
	With spatter protection hood	500 g approx.	630 g approx.	800 g approx.	990 g approx.	1,150 g approx.	1,330 g approx.	1,500 g approx.	1,840 g approx.	2,190 g approx.
Dimensions		W30 × H (Sensing height + 50) × D25.5 mm W1.181 × H (Sensing height + 1.969) × D1.004 in (However NA40-4 / NA40-4-H : H180 mm 7.087 in, and NA40-□-H: D50 mm 1.969 in)								
Accessories		MS-NA40-1 (Sensor mounting bracket): 1 set for emitter and receiver, Adjusting screwdriver: 1 pc.								


Note: Where measurement conditions have not been specified precisely, the conditions used were an ambient temperature of +23 °C +73.4 °F.

### Products that obtained Korea's S-mark certification

We offer products that have obtained Korea's S-mark certification (excluding the sensors with spatter protection hood). When ordering this type, suffix "-K" to the model No. (e.g.) NA40-4 with Korea's S-mark certification is "NA40-4-K".

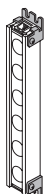
**ORDER GUIDE**

**Mating cables** Mating cable is not supplied with the sensor. Please order it separately.

Appearance	Model No.	Description
	<b>NA40-CC3</b>	Length: 3 m <b>9.843 ft</b> Net weight: 600 g approx. (two cables)
	<b>NA40-CC7</b>	Length: 7 m <b>22.966 ft</b> Net weight: 950 g approx. (two cables)
		0.5 mm <sup>2</sup> 3-core (for receiver: 4-core) cabtyre cable with connector on one end, two cables per set. Cable outer diameter: ø6.7 mm <b>ø0.264 in</b> Connector outer diameter: ø14 mm <b>ø0.551 in</b> max. Cable color: Gray (for emitter) Black (for receiver)

**Accessory**

- **MS-NA40-1** (Sensor mounting bracket)

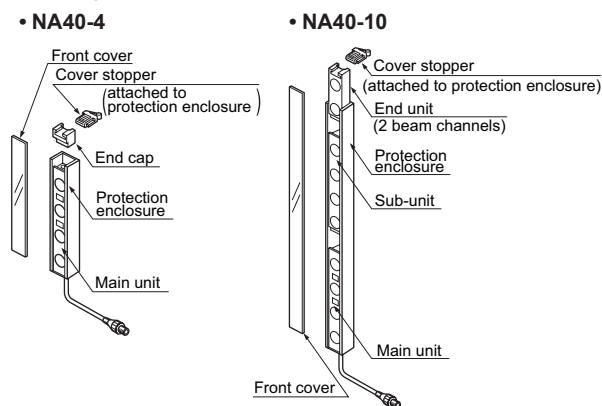


Four bracket set  
 [ Four M5 (length 40 mm 1.575 in) truss head screws, four nuts and four spring washers are attached. ]

**Individual units and associated components can be purchased separately**

Designation	Number of beam channels	Model No.	
		Emitter	Receiver
Main unit	4	<b>NA40-MUP</b>	<b>NA40-MUD</b>
Sub-unit	4	<b>NA40-4SUP</b>	<b>NA40-4SUD</b>
End unit	2	<b>NA40-2EUP</b>	<b>NA40-2EUD</b>
	4	<b>NA40-4EUP</b>	<b>NA40-4EUD</b>
End cap (Note)	—	<b>NA40-ECP</b>	<b>NA40-ECD</b>

Note: It is required only for **NA40-4** or **NA40-4-H**.



Applicable beam channels		Designation								
		4 beam channels	6 beam channels	8 beam channels	10 beam channels	12 beam channels	14 beam channels	16 beam channels	20 beam channels	24 beam channels
Protection enclosure	Model No.	<b>MC-NA40-4</b>	<b>MC-NA40-6</b>	<b>MC-NA40-8</b>	<b>MC-NA40-10</b>	<b>MC-NA40-12</b>	<b>MC-NA40-14</b>	<b>MC-NA40-16</b>	<b>MC-NA40-20</b>	<b>MC-NA40-24</b>
	With spatter protection hood	Model No.	<b>MC-NA40-4H</b>	<b>MC-NA40-6H</b>	<b>MC-NA40-8H</b>	<b>MC-NA40-10H</b>	<b>MC-NA40-12H</b>	<b>MC-NA40-14H</b>	<b>MC-NA40-16H</b>	<b>MC-NA40-20H</b>
Front cover	Model No.	<b>FC-NA40-4</b>	<b>FC-NA40-6</b>	<b>FC-NA40-8</b>	<b>FC-NA40-10</b>	<b>FC-NA40-12</b>	<b>FC-NA40-14</b>	<b>FC-NA40-16</b>	<b>FC-NA40-20</b>	<b>FC-NA40-24</b>

Note: The model Nos. given above denote a single unit, not a pair of units.

- FIBER SENSORS
- LASER SENSORS
- PHOTO-ELECTRIC SENSORS
- MICRO PHOTO-ELECTRIC SENSORS
- AREA SENSORS
- LIGHT CURTAINS / SAFETY COMPONENTS
- PRESSURE / FLOW SENSORS
- INDUCTIVE PROXIMITY SENSORS
- PARTICULAR USE SENSORS
- SENSOR OPTIONS
- WIRE-SAVING SYSTEMS
- MEASUREMENT SENSORS
- STATIC ELECTRICITY PREVENTION DEVICES
- LASER MARKERS
- PLC
- HUMAN MACHINE INTERFACES
- ENERGY CONSUMPTION VISUALIZATION COMPONENTS
- FA COMPONENTS
- MACHINE VISION SYSTEMS
- UV CURING SYSTEMS
- Selection Guide
- Slim Body
- Picking
- Other Products

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- PARTICULAR USE SENSORS
- SENSOR OPTIONS
- SIMPLE WIRE-SAVING UNITS
- WIRE-SAVING SYSTEMS
- MEASUREMENT SENSORS
- STATIC ELECTRICITY PREVENTION DEVICES
- LASER MARKERS
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## OPTIONS

Applicable beam channels		4 beam channels	6 beam channels	8 beam channels	10 beam channels	12 beam channels	14 beam channels	16 beam channels	20 beam channels	24 beam channels
Designation										
Slit mask	Model No.	<b>OS-NA40-4</b>	<b>OS-NA40-6</b>	<b>OS-NA40-8</b>	<b>OS-NA40-10</b>	<b>OS-NA40-12</b>	<b>OS-NA40-14</b>	<b>OS-NA40-16</b>	<b>OS-NA40-20</b>	<b>OS-NA40-24</b>

Note: The model Nos. given above denote a single unit, not a pair of units.

### Slit mask

- OS-NA40-□



#### Sensing range

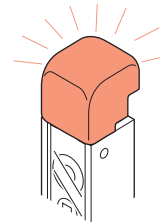
- Slit on emitter side: 1.3 m 4.265 ft
- Slit on receiver side: 3 m 9.843 ft
- Slit on both sides: 0.8 m 2.625 ft

Designation	Model No.	Description
Large indicator for area sensor	<b>SF-IND</b>	With the large indicators put on the sensors, the operation is easily observable from various directions. Orange.

Note: Two **SF-INDs** are required if they are to be mounted on, both, the emitter and the receiver.

### Large indicator for area sensor

- SF-IND



The large indicator can be easily mounted on the sensor head at the top. It also can be mounted on an area sensor already being used.

## PRECAUTIONS FOR PROPER USE

Refer to p.1458~ for general precautions.



- Never use this product as a sensing device for personnel protection.
- For sensing devices to be used as safety devices for press machines or for personnel protection, use products which meet laws and standards, such as OSHA, ANSI or IEC etc., for personnel protection applicable in each region or country.
- If this product is used as a sensing device for personnel protection, death or serious body injury could result.
- For a product which meets safety standards, use the following products.  
Type 4: **SF4B** series (p.565~)  
Type 2: **SF2B** series (p.609~)