IDEC

Safety Laser Scanner

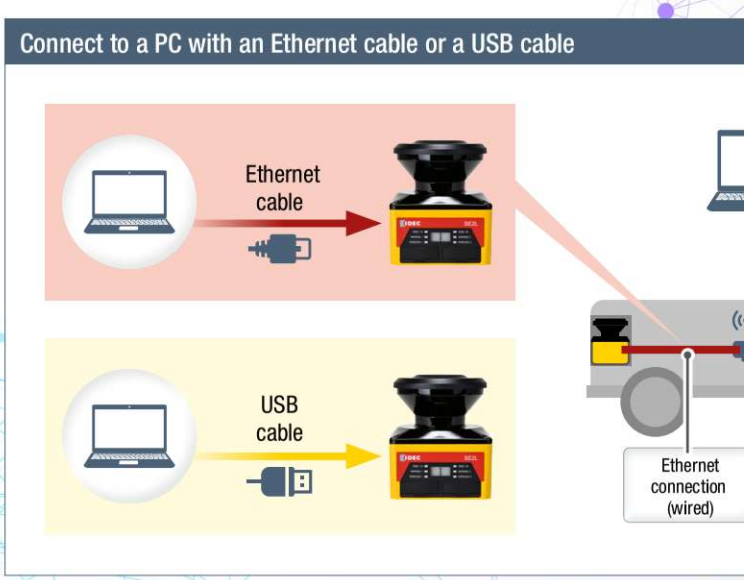
SE2L Advanced

Optimized safety for harsher environments

High-performance scanner with improved durability, effective under tough use conditions

APEM
an IDEC company

By connecting the SE2L Advanced to the Ethernet access point on an AGV or AMR, the scanner can also be connected to a PC via Wi-Fi. A connected PC can be used to set the scanner's operation area.



onmental resistance

afety

d and components reduce ght, and other interference d.

Prevents dirt and dust from sticking

The optical window's conductive coating greatly reduces the risk of dirt and dust clinging to the scanner. This helps to prevent machinery from stopping unexpectedly.

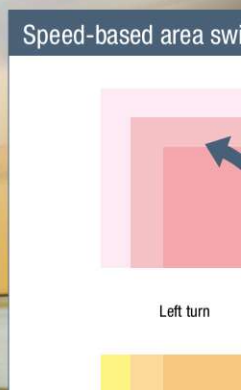
Sensing area changes based on the A turning speed

Additional encoder input

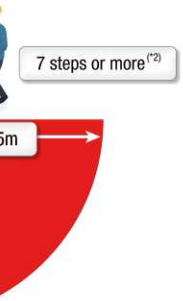
The SE2L Advanced has 4 encoder inputs for 2-axis monitoring. This allows for speed-based sensing area switching while the AGV/AMR the scanner is mounted on is turning.

The pulse signal from the incremental encoder can be input directly without a controller, making speed-based area switching easier.

This improvement of the scanner's hardware also increases the AGV/AMR's navigational accuracy.



°,
to 30m.



ide area (5m and 270°)
such as in large-scale

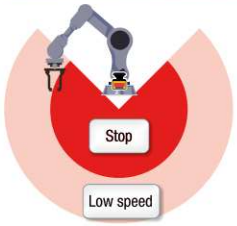
on

Advanced can monitor 2
azardous areas and stop
when it detects access
s. No reflective sensor is
eliminating the need for
s alignment. The scanner
e up to 2 light curtains.

nce

maximum of 128
otection areas can be

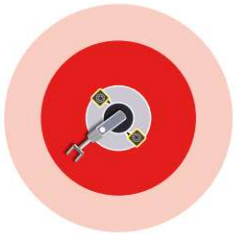
Ensures productivity and safety



The SE2L Advanced's stopping area can be reduced by detecting approach at the additional protection zone and starting slowdown.(*3)

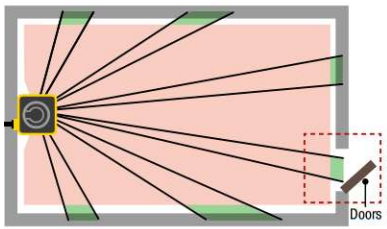
*3) A conventional configuration of 1 protection zone + 2 warning zones is also possible.

Master-slave function



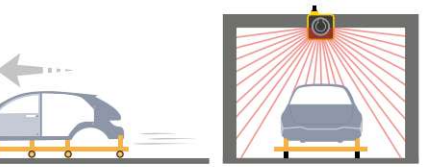
Master/slave unit operation is possible using RS-485, and a maximum of 4 SE2L Advanced units can be interconnected.

Ensures safety during positional changes



The reference monitoring function ensures safety by detecting position changes and reference boundaries, such as whether a door is open or closed.

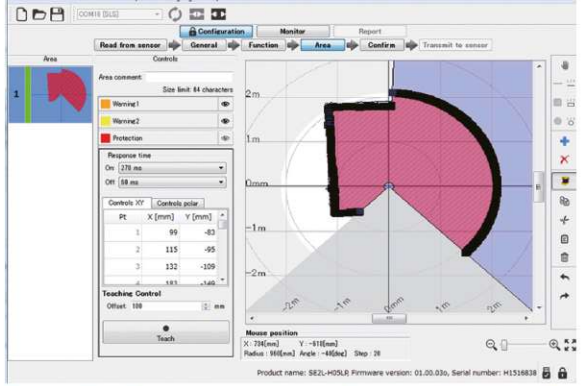
, override function enables restart from an unexpected stop



The muting function can disable part of the protection zone, allowing workpieces to be brought into the area. The override function also makes it easy to move workpieces even if they are stopped due to false positives during muting.

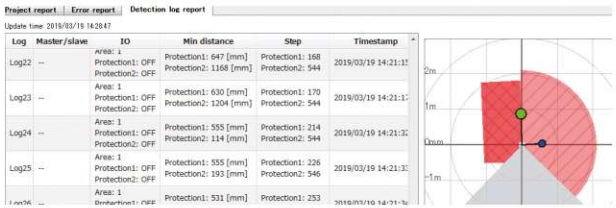
Utilize distance measurement data

While maintaining safety protection, the SE2L

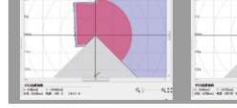


The teaching function enables automatic protection area configuration by using obstacles such as walls and columns as reference points. It is easy to sketch out protective areas, even on complex backgrounds.

Detection log reporting function reduces maintenance



Operational status is displayed on the SE2L Advanced unit. It can also be displayed on a connected PC, to check errors and detection history and for simple troubleshooting. The detection history is displayed in an easily understandable visual format, with numerical data and mapping.



When there are no humans in the protection zone

When a

approach
protectio

Area data and distance me
monitoring on a PC. Detec
video. Data for several sec
recorded.

Optical window can be

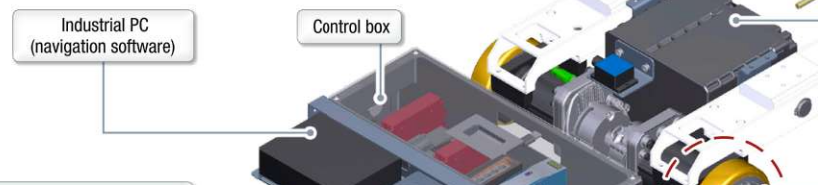
Users can replace the scan
downtime and costs. A cov
collision damage.

Reduced maintenance

Compatibility with Safety Wheel Drive

Easily build an AGV/AMR with integrated safety features

By installing the SE2L Advanced in combination with Safety Wheel Drive, it becomes even simpler to build AGVs/AMRs with integrated safety functions for use in areas where humans and autonomous vehicles coexist. (Safety Wheel Drive is an electric-powered wheel fitted with a safety system and a drive system.)



the safety laser scanner
afety signal is converted
-guided relay. 2 sets of

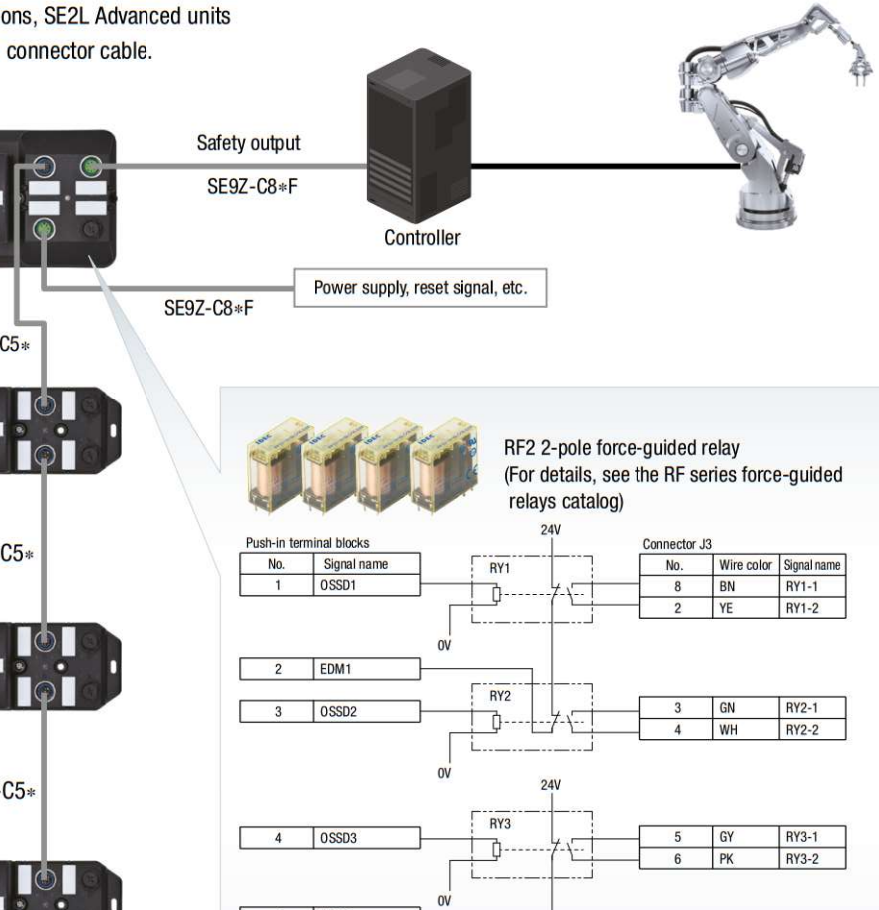
al can invert 1 of the 2
ded relay. This enables a


SE9Z-RT2D

SE9Z-RT2SV

SE9Z-T

ons, SE2L Advanced units
connector cable.



RF2 2-pole force-guided relay
(For details, see the RF series force-guided relays catalog)

Push-in terminal blocks

No.	Signal name
1	OSSD1
2	EDM1
3	OSSD2
4	OSSD3

Connector J3

No.	Wire color	Signal name
8	BN	RY1-1
2	YE	RY1-2
3	GN	RY2-1
4	WH	RY2-2
5	GY	RY3-1
6	PK	RY3-2

Name / Shape	Cable length	Part No.	
Cable type 	3m	SE2L-HA05LP	• The dedicated software SLS Pr function of the product and cre The SLS Project Designer can website. • Quantity: 1
Connector type 	0.3m	SE2L-HA05LPC	

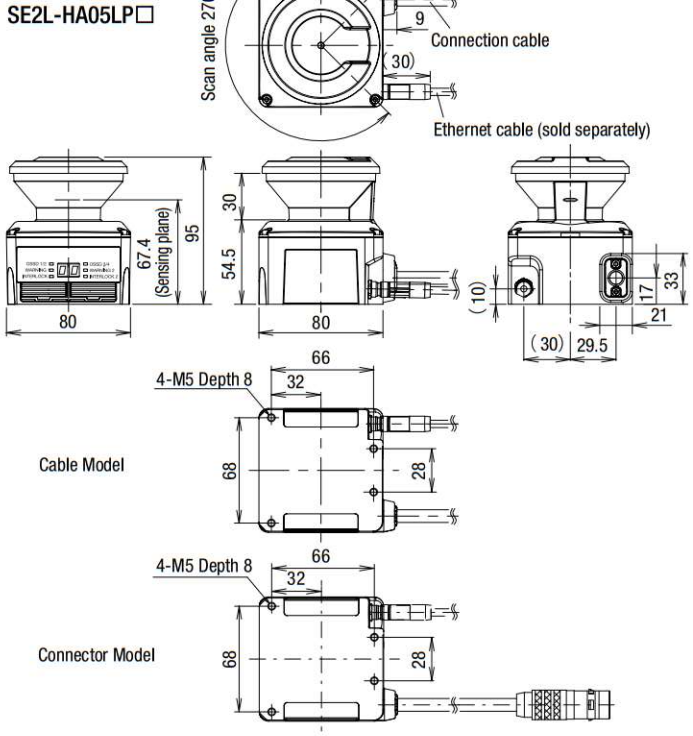
See website for details on approvals and standards.

Accessories (optional)

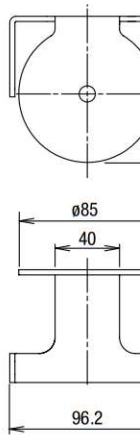
Name / Shape	Cable length	Part No.	
Connector cable 	2m	SE9Z-HS2-C002	• Degree of protection: IP65 • For connector model only.
	5m	SE9Z-HS2-C005	
	10m	SE9Z-HS2-C010	
	20m	SE9Z-HS2-C020	
Micro USB cable 	1m	SE9Z-HS2-XCM11	• Used to connect the SE2L Advanc
Ethernet cable 	3m	SE9Z-HS2-XCD13	• Degree of protection: IP65 • Waterproof LAN cable
Extension cable	10m	SE9Z-HS2-XCE010	• Used to extend the cable length o
	20m	SE9Z-HS2-XCE020	
Base mounting bracket 		SE9Z-HS2-BK01	• Used to change the vertical angle • Adjustable by 15 degrees total (7. • Material: Steel • Includes 4 bolts (M5×12)
Rear mounting bracket 		SE9Z-HS2-BK02	Used to change the vertical/horizontal a • Adjustable by 15 degrees total (7. • Material: Steel • Includes 4 bolts (M5×12)
Simple base mounting bracket 		SE9Z-HS2-BK03	• Includes four bolts (M5×12) • Material: Aluminum
Rear easy mounting bracket (Long type) 		SE9Z-HS2-BK04L	• Includes four bolts (M5×12) • Material: Aluminum
Cover bracket 		SE9Z-HS2-CM01	• Used to protect the optical windo rear mounting bracket. • Material: Steel • Includes 4 bolts (M5×12)
Replacement optical window 		SE9Z-HS2-WD02	• Material: polycarbonate • Includes 4 bolts (M3×8)
Robot controller connection terminal 		SE9Z-RT2D	• Dry contact output x 4 • Push-in terminal block 23-pin, M12 • Maximum current: Power line 2A,
Robot controller connection terminal 		SE9Z-RT2SV	• (Direct output + inverted output) x • Push-in terminal block 23-pin, M12 • Maximum current: Power line 2A,
Robot controller connection terminal 		SE9Z-T	• For slave connection (without buil • Push-in terminal block 23-pin, M12 • Maximum current: Power line 2A,
Connector cable 	2m	SE9Z-C5002	• M12 connector cable 5-pole (con
	5m	SE9Z-C5005	• Degree of protection: IP65

	5.0m maximum
	30m maximum (non-safety)
e 2)	+100mm
	Black reflector sheet (1.8%) to retro-reflector sheet
	270°
	ø30 mm (maximum protection distance: 1.8m) ø40 mm (maximum protection distance: 2.5m) ø50 mm (maximum protection distance: 3.0m) ø70 mm/ø150 mm (maximum protection distance: 5.0m)
	30ms (rotating speed 2,000 rpm)
	Up to 128 areas (when using fixed input mode/encoder mode)
	ON→OFF: 60 to 2010ms OFF→ON: 270 to 2010ms
	Pulse laser diode
	905nm
	Laser class 1 (IEC 60825-1)
	Type 3 (IEC 61946-1, IEC 61496-3)
	SIL 2 (Type B, HFT=1) (IEC 61508)
	8.1 x 10 -8 (T1=20 years) when master slave function is disabled 1.6 × 10-7 (T1=20 years): If the master slave function is enabled
	4 maximum
	80W × 80D × 95H (mm) (cable not included)
	Cable model: 0.8 kg (including 3m cable)/Connector model: 0.5 kg
	IP65
	Body: aluminum diecast / Optical window: polycarbonate
	Cable model: 3 m/Connector model 0.3 m
	24V DC ±10%: power from converter 24V DC –30%/+20%: power from battery
	6W
	50W
	Output type (High side SW)
	Output current (maximum: 500mA) (Note 4)
	Leakage current (maximum: 1mA)
	Cable (AWG 26)
	Allowable load (L/R=25 ms, C=1µF)
	Output type (high side SW)
	Output current (maximum: 250mA) (Note 4)
	Leakage current (maximum: 1mA)
	Cable (AWG 28)
	Allowable load (L/R=25ms, C=1µF)
	Output type (PNP transistor output)
	Output current (maximum: 200mA)
	Leakage current (maximum: 1mA)
)	Cable (AWG 28)
hannels) G2/MUTING3/MUTING4/ 1/RESET2/ENC1_A/ENC1_B/ 3_B/ENC4_A/ENC4_B	Input Resistance: 4.7kΩ Cable: AWG 28
	USB 2.0 (USB micro type B connector) / Ethernet 100BASE-TX (waterproof connector)
	RS-485 (cable)
utput	Ethernet 100BASE-TX (waterproof connector)
	-10 to +50°C (no freezing)
	-25 to +70°C (no freezing)
	95% RH (no condensation)
	95% RH (no condensation)
)	1500lx maximum
	Frequency: 10 to 55 Hz Sweep: 1 octave/minute Amplitude: 0.35 mm ±0.05 mm
	Acceleration: 100m/s² Pulse duration: 16ms
	Not permitted
	Below 2,000m

SE2L-HA05LP□



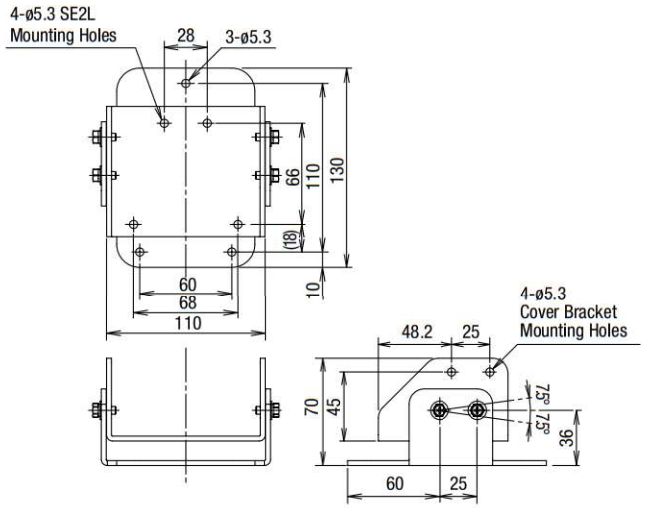
SE9Z-HS2-CM01



• Used to protect base mounting used with the s bracket.

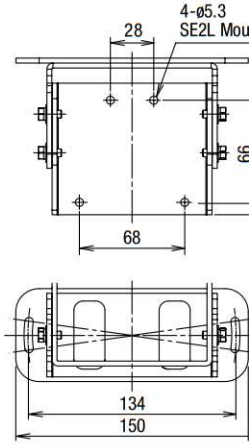
Base mounting bracket

SE9Z-HS2-BK01



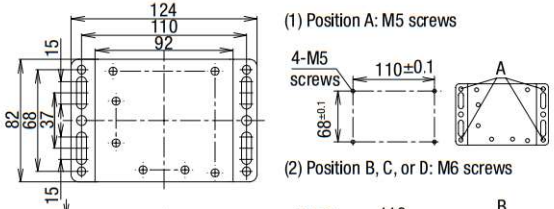
Rear mounting bracket

SE9Z-HS2-BK02



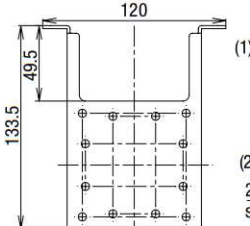
Simple base mounting bracket

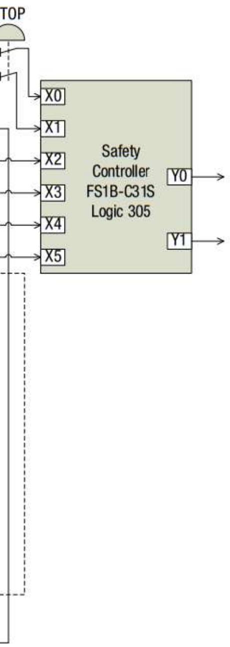
SE9Z-HS2-BK03 (Note 1)



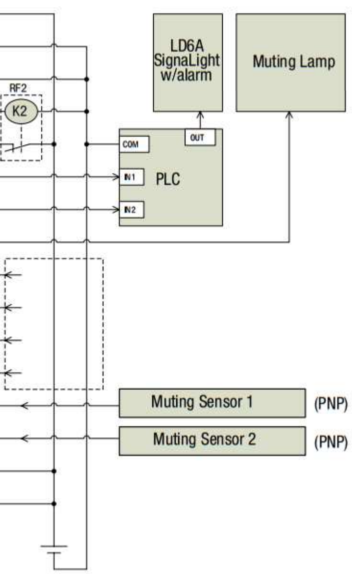
Rear mounting bracket (I

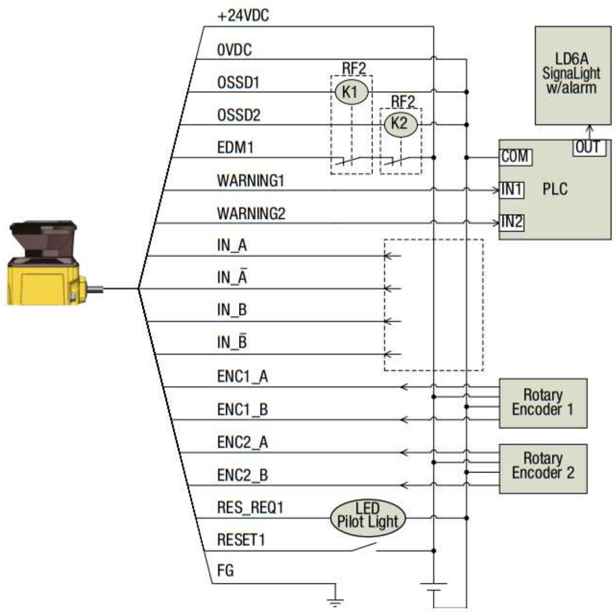
SE9Z-HS2-BK04L (Note





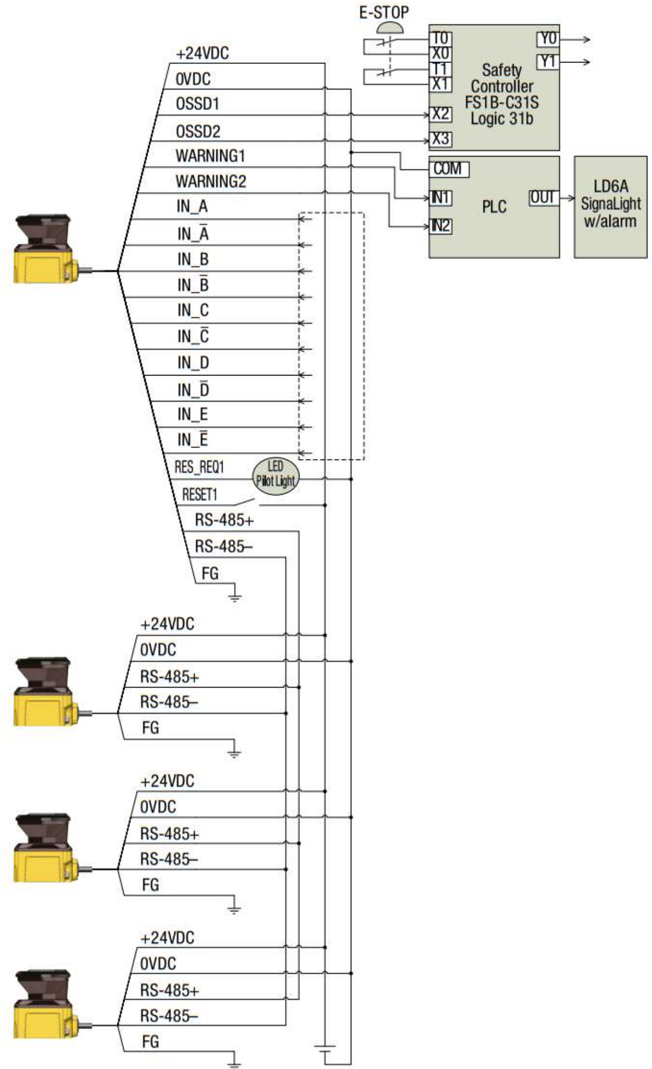
safety products
y controller: FS1B
p: X series

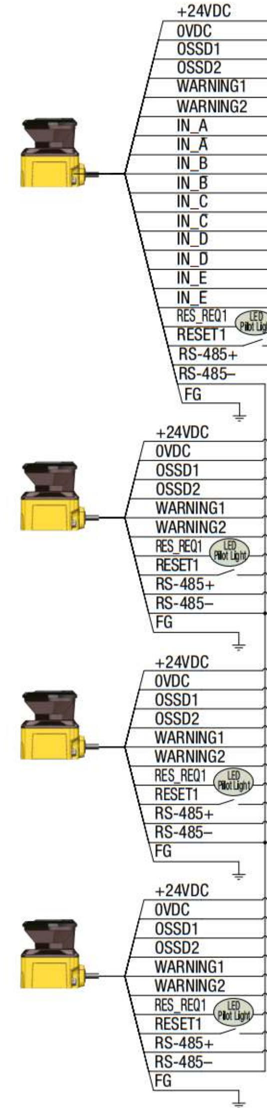




IDEC safety products
Light tower with buzzer: LD6A
PLC: FC6A
Pilot light: AP22
Force-guided relay: RF2

and perform partial stop



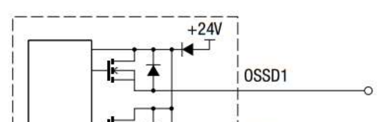


IDEC safety products
Light tower with buzzer: LD6A
PLC: FC6A
Pilot light: AP22
Safety controller: FS1B
E-stop: X series

Input/Output Circuit

OSSD/WARNING output circuit

OSSD/WARNING outputs are N channel MOSFET outputs.

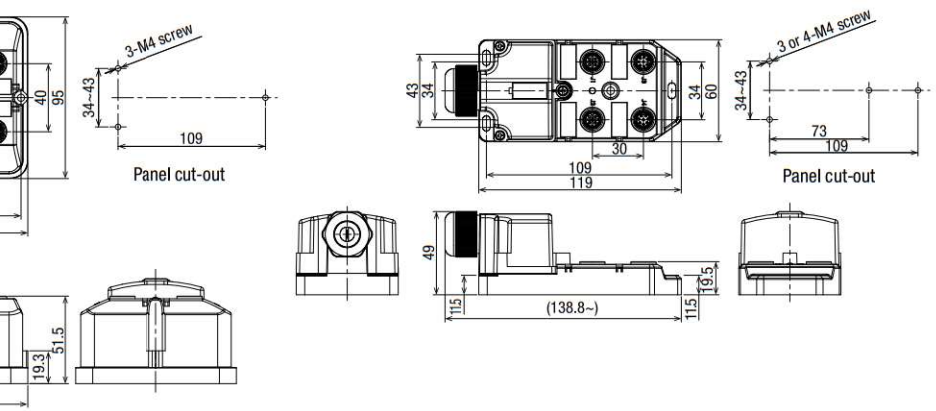


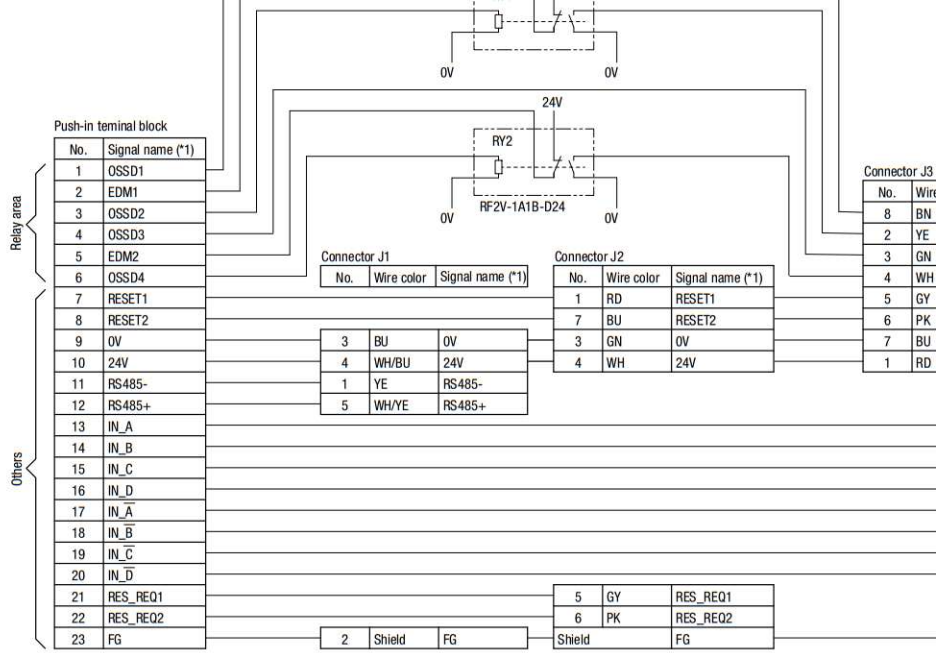
Other output circuits

RES_REQ1, RES_REQ2, MUT_OUT1, MUT_OUT2, AUX_OUT1, AUX_OUT2 outputs are PNP outputs.

Inpu

Avai
MUT
and





Push-in teminal block

No.	Signal name (*1)
1	OSSD1
2	EDM1
3	OSSD2
4	OSSD3
5	EDM2
6	OSSD4
7	RESET1
8	RESET2
9	0V
10	24V
11	RS485-
12	RS485+
13	IN_A
14	IN_B
15	IN_C
16	IN_D
17	IN_$\overline{A}$
18	IN_$\overline{B}$
19	IN_$\overline{C}$
20	IN_$\overline{D}$
21	RES_REQ1
22	RES_REQ2
23	FG

Connector J1

No.	Wire color	Signal name (*1)
3	BU	0V
4	WH/BU	24V
1	YE	RS485-
5	WH/YE	RS485+
2	Shield	FG

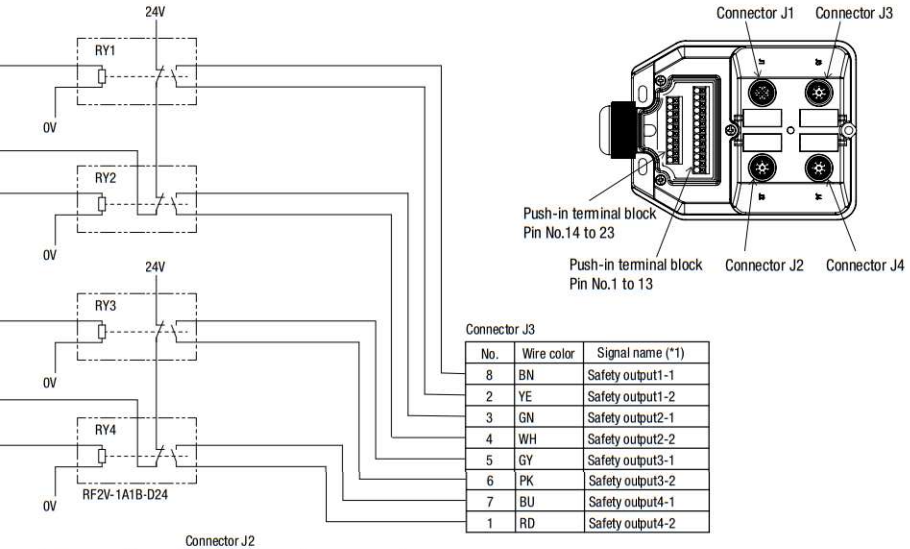
Connector J2

No.	Wire color	Signal name (*1)
1	RD	RESET1
7	BU	RESET2
3	GN	0V
4	WH	24V
5	GY	RES_REQ1
6	PK	RES_REQ2
Shield		FG

Connector J3

No.	Wire
8	BN
2	YE
3	GN
4	WH
5	GY
6	PK
7	BU
1	RD

*1) Signal name: when connected to the SE2L Advanced.



Connector J3

No.	Wire color	Signal name (*1)
8	BN	Safety output1-1
2	YE	Safety output1-2
3	GN	Safety output2-1
4	WH	Safety output2-2
5	GY	Safety output3-1
6	PK	Safety output3-2
7	BU	Safety output4-1
1	RD	Safety output4-2

Connector J2

No.	Wire color	Signal name (*1)
1	RD	RESET1
7	BU	RESET2
3	GN	0V
4	WH	24V

Connector J4

No.	Wire color	Signal name (*1)
1	RD	IN_A
2	YE	IN_B
3	GN	IN_C
4	WH	IN_D
5	GY	IN_$\overline{A}$
6	PK	IN_$\overline{B}$
7	BU	IN_$\overline{C}$
8	BN	IN_$\overline{D}$

SE9Z-T

Push-in terminal block

No.	Signal name (*1)
1	Free4
2	Free5
3	Free6
4	Free1
5	Free2
6	Free3
9	0V
10	24V
11	RS485-
12	RS485+
13	Free7
14	Free8
15	Free9
16	Free10
17	Free11
18	Free12
19	Free13
20	Free14
23	FG

Connector J1

No.	Wire color	Signal name (*1)
3	BU	0V
4	WH/BU	24V
1	YE	RS485-
5	WH/YE	RS485+
2	Shield	FG

Connector J2

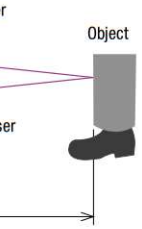
No.	Wire color	Signal name (*1)
3	BU	0V
4	WH/BU	24V
1	YE	RS485-
5	WH/YE	RS485+
2	Shield	FG

Connector J3

No.	Wire color	Signal
5	GY	Free4
6	PK	Free5
8	BN	Free6
2	YE	Free1
3	GN	Free2
4	WH	Free3
7	BU	0V
1	RD	24V
Shield		FG

*1) Signal name: when connected to SE2L Advanced.

is reflected back from an



me difference between the
eception of the reflected

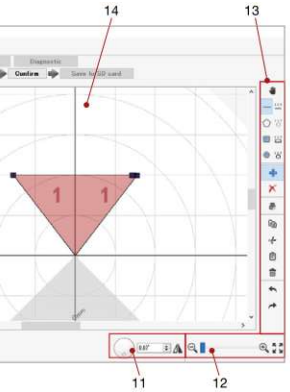
tection zones and warning
es, maximum 128 areas
ncoder mode is used).
with the SE2L Advanced is
g zones, providing excellent
by referring the boundary

wnloaded from IDEC

ad.

ulation of safety distance.

rding to the application.



13. Drawing toolbar
14. Area display screen
15. Area input pattern
16. Minimum detection width

nformation
ol

Maximum number of patterns

Mode	Protection area	Max external input	Max. areas by external input		Max. areas by encoder input
			Pairing mode	Fixed input mode	
Standard	1	10	32	128	-
	2	10	32	128	-
EDM	1	8	16	70	-
	2	8	16	70	-
MUTING/EDM	1	4	4	6	-
	2	2	2	2	-
Encoder*2	1	6	7	-	128*3
	2	6	7	-	128*3

Note 1: Muting function modes cannot be used when encoder input mode is selected.

Note 2: Among the eight input patterns, at least one pattern must be used for encoder input. Other seven remaining patterns can be selected to be used as a static input or not in use. A pattern with encoder input mode has up to 128 areas.

Selected scan area and input signal

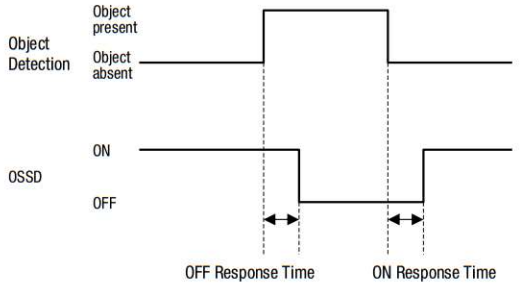
• 10 inputs (5 x 2)

Area	IN_A	IN_B	IN_C	IN_D	IN_E	IN_$\bar{A}$	IN_$\bar{B}$	IN_$\bar{C}$	IN_$\bar{D}$	IN_$\bar{E}$
1	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF
3	ON	OFF	ON	ON	ON	OFF	ON	OFF	OFF	OFF
4	OFF	OFF	ON	ON	ON	ON	ON	OFF	OFF	OFF
5	ON	ON	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
6	OFF	ON	OFF	ON	ON	ON	OFF	ON	OFF	OFF
7	ON	OFF	OFF	ON	ON	OFF	ON	ON	OFF	OFF
8	OFF	OFF	OFF	ON	ON	ON	ON	ON	OFF	OFF
9	ON	ON	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
10	OFF	ON	ON	OFF	ON	ON	OFF	OFF	ON	OFF

• See the User's Manual for more combinations (max. 128 areas).

can be set for protection zone 1 and 2 each. The stability of the SE2L Advanced can be increased by setting a long response time, but a long safety distance is required (see User's Manual). Before setting the response time, the user must perform a risk assessment thoroughly. The configurable response time is shown in the table below. Be sure to add the time taken to switch areas (30ms).

Time Chart



SE2L Advanced response time

	Response time (ms)							
OFF (ON→OFF)	60	90	120	150	180	210	240	270
	300	330	360	390	420	450	480	510
	540	570	600	630	660	690	720	750
	780	810	840	870	900	930	960	990
	1020	1050	1080	1110	1140	1170	1200	1230
	1260	1290	1320	1350	1380	1410	1440	1470
	1500	1530	1560	1590	1620	1650	1680	1710
	1740	1770	1800	1830	1860	1890	1920	1950
	1980	2010	–	–	–	–	–	–

	Response time (ms)							
ON (OFF→ON)	–	–	–	–	–	–	–	270
	300	330	360	390	420	450	480	510
	540	570	600	630	660	690	720	750
	780	810	840	870	900	930	960	990
	1020	1050	1080	1110	1140	1170	1200	1230
	1260	1290	1320	1350	1380	1410	1440	1470
	1500	1530	1560	1590	1620	1650	1680	1710
	1740	1770	1800	1830	1860	1890	1920	1950
	1980	2010	–	–	–	–	–	–

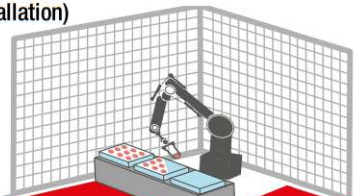
• Minimum configurable response time in Master/Slave mode
OFF: 60ms (when OSSD is used), ON: 300ms

Safety distance

Access protection

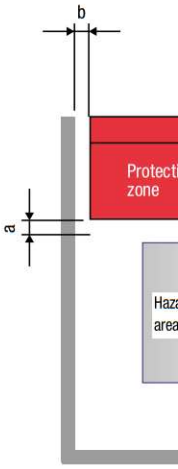
In this application, the SE2L Advanced is horizontally installed to protect the hazardous area. The protection zone is set around the hazardous area to prevent humans or objects from entering the hazardous area.

Protection zone 1 application (stationary installation)



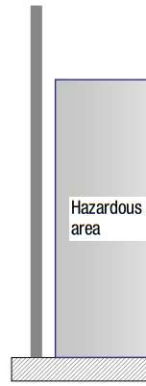
switches from ON to OFF.

Top View (stationary)



• Maintain the distance "a"
To prevent unwanted dete

Side View (stationary)



Safety distance calculati

$S = (K \times (T_m + T_s) + C + Z$

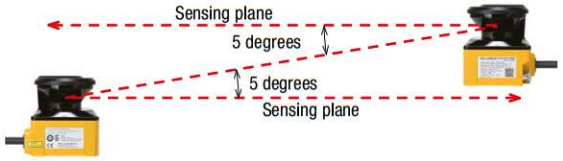
S = Safety distance (mm
K = Human approach sp
T_m = Maximum stop spee
T_s = Response time of SE
C = $1200 - 0.4 \times H \geq 85$
H = height from the
$1000 \geq H \geq 15 \times (d$
d = Minimum sensir
Z_s = Additional safety dis

ounding environment. If the
vironment shown below,
ource is located more than
nt light interference.

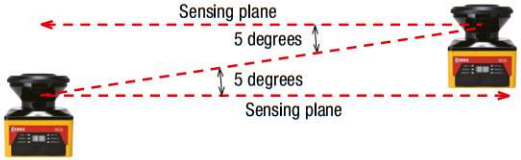
1) Changing the installation height

Install the SE2L Advanced units at different heights to keep at least 5 degree distance between the sensing surface.

①Face to face installation



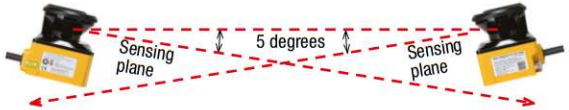
②Parallel installation



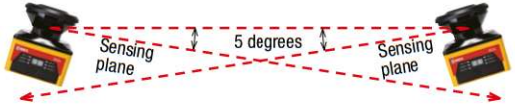
2) Changing the installation angle

Adjust the angle of SE2L Advanced units to keep at least 5 degree distance between the sensing surface.

①Face to face installation



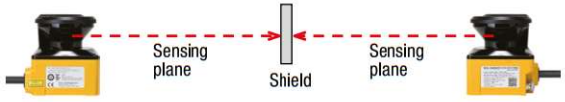
②Parallel installation



3) Separation by light shielding plate

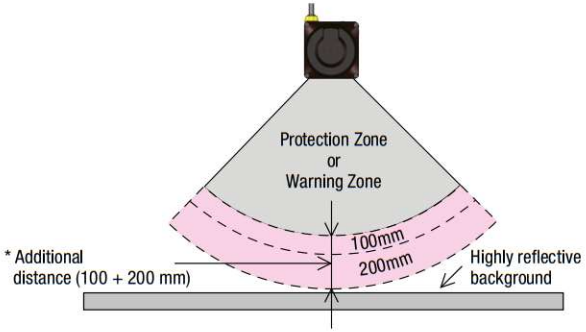
Place a light shielding plate between the SE2L Advanced units, which may interfere with each other, to prevent the laser beam from reaching.

①Face to face installation



②Parallel installation

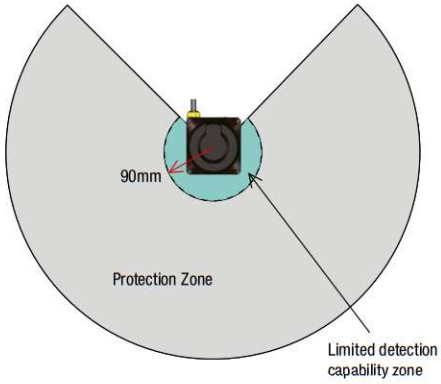
the 100mm additional safety distance, is needed when configuring protection or warning zones.

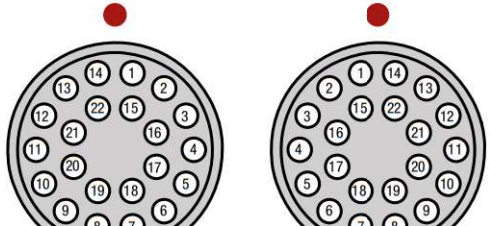


* Additional distance: the distance required to operate the SE2L Advanced under high reflective background

Limited detection capability area

The limited detection capability area is the area between the optical window and the beginning of the detection zone. The area from the origin point of the SE2L Advanced to 90 mm from the origin point is the limited detection capability area. In this area, a low reflective object is difficult to detect.





Blue	0V DC	Power
Red	OSSD 1	Output
Yellow	OSSD 2	
Red/ Black	OSSD 3 WARNING1	Output
Yellow/ Black	OSSD 4 WARNING2	Output
Purple	IN_A	Input
Gray	IN_B MUTING3 ENC3_A ENC4_A	
White	IN_C OVERRIDE1 ENC1_A	
Pink	IN_D MUTING1 ENC1_B	
Green	IN_E EDM1	
Purple/ Black	IN_$\bar{A}$	
Gray/ Black	IN_$\bar{B}$ MUTING4 ENC3_B ENC4_B	
White/ Black	IN_$\bar{C}$ OVERRIDER2 ENC2_A	
Pink/ Black	IN_$\bar{D}$ MUTING2 ENC2_B	
Green/ Black	IN_$\bar{E}$ EDM2 ENC3_B ENC4_B	
Yellow/ Green	RESET1 ENC3_A ENC4_A	
Yellow/ Blue	RESET2 ENC3_B ENC4_B	
Orange	RES_REQ1 MUT_OUT1 AUX_OUT1	Output
Orange/ Black	RES_REQ2 MUT_OUT2 AUX_OUT2	
White/ Blue	RS-485+	Commu-nication
White/ Red	RS-485–	
Shield	FG	–

*1) Pin number of SE2L-HA05LPC co

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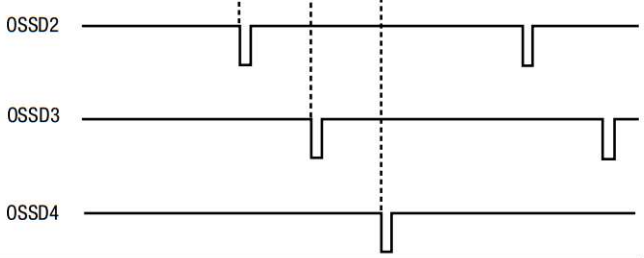

note of the following

electronic Protective Device
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- Do not drop the product. Otherwise, the product may be damaged, lead to failure, and the performance will be degraded. Injury may also be caused.
- Take measures on the network system side to prevent unauthorized access to SE2L Advanced from external devices. Under no circumstances shall IDEC Corporation be held liable or responsible for any indirect or consequential damages and expenses resulting from unauthorized access.

Operating Environment

- Make sure that the operating environment is within the range of the specifications (temperature, humidity, light interference) described in the User's Manual, otherwise malfunction or degradation of detection performance may result.
- Do not use the SE2L Advanced near a machine that may generate strong radio waves. It may interfere with the operation of the SE2L Advanced.
- Do not use or install the SE2L Advanced where dust, smoke, or corrosive chemical substances exist. Using the SE2L Advanced under these environments may lead to degradation of detection performance.
- The SE2L Advanced is for indoor use only.

Installation

- Install the SE2L Advanced on a stable surface or structure to prevent displacement of the sensor.
- Install the SE2L Advanced securely so that screws do not loosen due to shock or vibration. (Recommended tightening torque 3 N·m). Displacement may degrade protection performance.
- Determine the safety distance before installing the SE2L Advanced. After installing the SE2L Advanced, use a test piece for all protection zones to check the sensing functions.
- After installing the SE2L Advanced, use protective materials such as safety guards and light curtains to prevent entry into the protective zone.
- The following switches must be installed far from the protection zone, so that the operator can operate the switches while overseeing the entire protection zone.
  * Switch to reset the interlock function
  * Switch to start muting function
  * Switch to start override function
- If several SE2L Advanced units are installed on the same sensing plane, mutual interference may occur.
- Provide enough space for installation and maintenance of the SE2L Advanced.
- When using converter power, make sure to use power that satisfies the following requirements.
  1) The rated output voltage is within 24V DC±10% (SELV circuit, overvoltage category II)
  2) The circuit between primary circuit and secondary circuit is reinforced insulation or double insulation.
  3) The output holding time is 20 ms.
  4) The power supply must comply with electrical safety and electromagnetic compatibility (EMC) regulations requirements of each country, state, and district.
- All input/output cables must be located away from power cables and high voltage cables.
- To control safety-related machine or system, use OSSD output. Because warning zone output (warning signal) is a non-safety signal, do not use for safety purposes.
- Both the OSSD1 and OSSD2 outputs should be connected to safety-related machines or control system. When OSSD3 and OSSD4 are used, connect the outputs in the same manner.
- Use shielded cable for the connection between OSSD signals and safety-related machines or systems.

Settings

- A password is used for configuring the safety function. Only an administrator or operator should be able to set safety functions.
- SE2L Advanced will not operate without initial configuration.
- Perform test operation and check the configuration before using the SE2L Advanced.
- The stability of the SE2L Advanced increases by delaying the response time of the OSSD signal but the sensing performance decreases for moving objects. Before using this function, be sure to carry out risk assessment.
- The operator must record the changes made in the configuration. SLS Configurator report function is available. For details, see the User's Manual.
- User must check the operations of this user configurable product on user's responsibility.
  Under no circumstances shall IDEC Corporation be held liable or responsible for the operations of the functions configurated by users, and any damages or losses due to the user's configurations.

based on the checklist des
1) Pre-operation inspecti
2) Operation inspection
3) Daily inspection
4) Periodic inspection
The checklist in the User'
tests and maintenance. T
and maintenance if neces
- Stop the machine if failure
- Clean the optical window i
damaged. Refer to the Use

Be sure to read the instruction manual carefully before performing installation, wiring, or maintenance.

For details on mounting, wiring, and maintenance, see the instruction manual from the

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3. Inspections

We ask that you implement inspections for IDEC products you purchase without delay, as well as thoroughly keep in mind management/ maintenance regarding handling of the product before and during the inspection.

4. Warranty

(1) Warranty period

The warranty period for IDEC products shall be one (1) year after purchase or delivery to the specified location. However, this shall not apply in cases where there is a different specification in the Catalogs or there is another agreement in place between you and IDEC.

(2) Warranty scope

Should a failure occur in an IDEC product during the above warranty period for reasons attributable to IDEC, then IDEC shall replace or repair that product, free of charge, at the purchase location / delivery location of the product, or an IDEC service base. However, failures caused by the following reasons shall be deemed outside the scope of this warranty.

i. The product was handled or used deviating from the conditions / environment listed in the Catalogs
ii. The failure was caused by reasons other than an IDEC product
iii. Modification or repair was performed by a party other than IDEC
iv. The failure was caused by a software program of a party other than IDEC
v. The product was used outside of its original purpose
vi. Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and Catalogs
vii. The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from IDEC
viii. The failure was due to other causes not attributable to IDEC (including cases of force majeure such as natural disasters and other disasters)

Furthermore, the warranty described here refers to a warranty on the IDEC product as a unit, and damages induced by the failure of an IDEC product are excluded from this warranty.

5. Limitation of liability

The warranty listed in this Agreement is the full and complete warranty for IDEC products, and IDEC shall bear no liability whatsoever regarding special damages, indirect damages, incidental damages, or passive damages that occurred due to an IDEC product.

6. Service scope

The prices of IDEC products do not include the cost of services, such as dispatching technicians. Therefore, separate fees are required in the following cases.

(1) Instructions for installation / adjustment and accompaniment at test operation (including creating application software and testing operation, etc.)
(2) Maintenance inspections, adjustments, and repairs
(3) Technical instructions and technical training
(4) Product tests or inspections specified by you

The above content assumes transactions and usage within your region. Please consult with an IDEC sales representative regarding transactions and usage outside of your region. Also, IDEC provides no guarantees whatsoever regarding IDEC products sold outside your region.

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