



SL-V64H

Main Unit, General-purpose Type, 64 Optical Axes



SPECIFICATIONS

Model			SL-V64H		
Detection capability			ø0.98" ø25 mm		
Beam axis spacing/Lens diameter			20 mm/ø5 mm 0.79"/ø0.20"		
Effective aperture angle			Max. ±2.5 ° (When operating distance is 3 m 98.23' or more)		
Working distance			0.1 to 9 m		
Response time (ms)	ON→OFF		14.7 ⁻¹		
	OFF→ON		54.7 ⁻¹		
Light source			Infrared LED (850 nm)		
Operation mode			Turns on when no interruptions are present in the detection zone (excluding when the muting function is used)		
OSSD output	Output		2 outputs each for PNP and NPN. Can be changed by using the connector cable.		
	Max. load current		500 mA ²		
	Residual voltage (during ON)		Max. 2.5 V (with a cable length of 7 m 22.97')		
	Leakage current		Max. 100 µA ³		
	Max. capacitive load		2.2 µF (with a load resistance of 100 Ω)		
	Load wiring resistance		Max. 2.5 Ω ⁴		
Non safety-related output	AUX		Output with automatic PNP/NPN switching function, 50 mA max.		
	Interlock-reset-ready output				
	Alarm output				
	Clear/blocked output				
	State information output 1, 2				
	Muting lamp output		Incandescent lamp (24 VDC, 1 to 7 W) or LED lamp (load current: 10 to 300 mA) ⁵ can be connected		
Input	EDM input		Short-circuit current 10 mA		
	Wait input		Short-circuit current 2.5 mA		
	Reset input				
	Muting input 1, 2				
	Override input				
Protection circuit			Reverse current protection, short-circuit protection for each output, surge protection for each output		
Approved standards	EMC	EMS		IEC61496-1, EN61496-1, UL61496-1	
	EMC			EN55011 Class A, FCC Part15B Class A	
	Safety			IEC61496-1, EN61496-1, UL61496-1 (Type 4 ESPE) IEC61496-2, UL61496-2, EN61496-2 (Type 4 AOPD) IEC61508 (SIL3), EN61508 (SIL3), IEC62061 (SIL3), EN ISO13849-1: 2015 (Category 4, PLe) UL508 UL1998	
Rating	Power voltage		24 VDC +10 %, -20 %, Ripple (P-P) 10 % or less		
	Current consumption (mA)	When the center indicator is ON	Transmitter	130 ⁶	
			Receiver	93 ⁶	
		When the center indicator is OFF	Transmitter	120 ⁶	
			Receiver	77 ⁶	
Environmental resistance	Enclosure rating		IP65 (IEC60529)		
	Overvoltage category		II		
	Ambient light		Incandescent lamp: 5,000 lux max., Sunlight: 20,000 lux max.		
	Operating ambient temperature		-10 to +55 °C 14 to 131 °F (No freezing)		
	Storage temperature		-25 to +60 °C -13 to 140 °F (No freezing)		
	Operating relative humidity		15 to 85 % RH (No condensation)		
	Storage relative humidity		15 to 95 % RH		
	Vibration resistance		10 to 55 Hz, Double amplitude 0.7 mm 0.03", 20 sweeps in each of the X, Y, and Z directions		
	Shock resistance		100 m/s ² (Approx. 10 G), 16 ms pulse, 1,000 times in each of the X, Y, and Z directions		
Material	Main unit case		Aluminum		
	Upper case/lower case		Zinc die-cast		
	Front cover		Polycarbonate, SUS304		
Weight	Transmitter		860 g		
	Receiver		885 g		

^{*1} When connecting the SL-V units in series, the response time (ON to OFF) is the sum of the response times of all the individual SL-V units, but the response time (OFF to ON) is the same as that of a single SL-V unit.
e.g. When connecting the SL-V32H (32 beam axes), SL-V24H (24 beam axes), and SL-V12L (12 beam axes) in series, the response time of each unit is 10.3 ms, 9.2 ms, and 7.6 ms respectively, and the response time (ON to OFF) is 10.3 ms + 9.2 ms + 7.6 ms = 27.1 ms.

^{*2} When used under ambient temperature between 45 to 55 °C **113 to 131 °F**, the maximum should not exceed 300 mA.

^{*3} Applies to situations when power is either off or disconnected.

^{*4} The wiring resistance between the OSSD output and the connected equipment (excluding the resistance of the cable) must be 2.5 Ω or less to ensure operations. If using the NPN output with a cable length of 15 m or longer, and the load current consumption is 200 mA or more, the wire resistance must be 1.0 Ω or less.

^{*5} When used under ambient temperature between 45 to 55 °C **113 to 131 °F**, use incandescent lamps (24 VDC, 1 to 3 W) or LED lamps (load current: 10 to 100 mA).

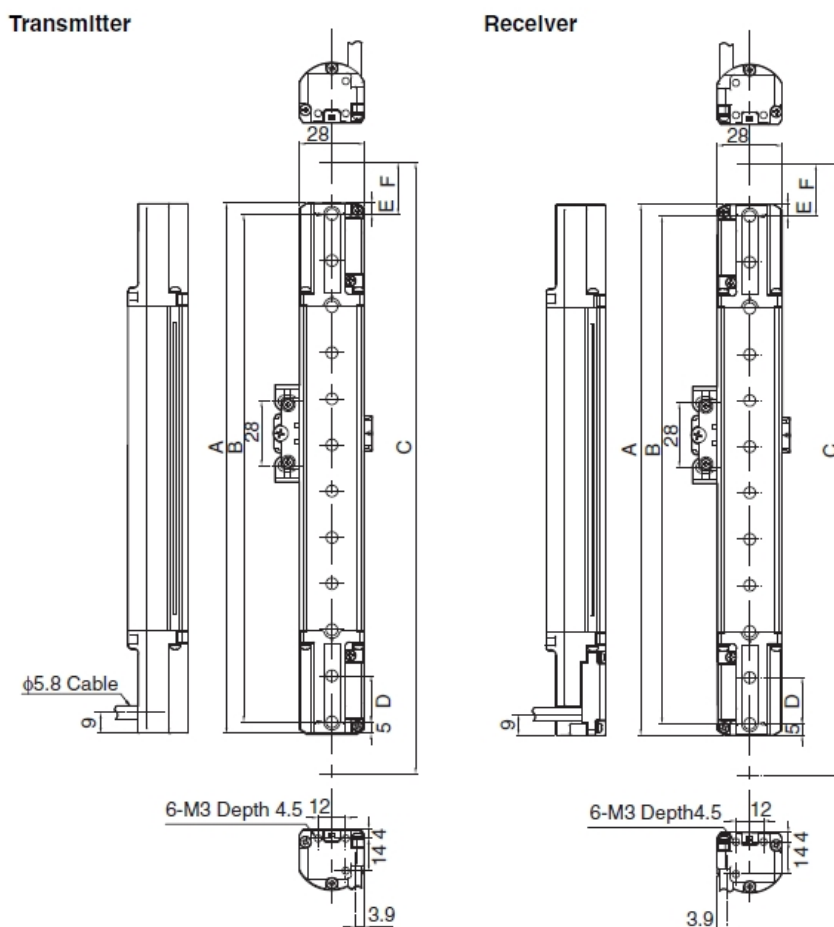
^{*6} The current consumption of the transmitter increases by 10 mA and decreases on the receiver by 10 mA when the AUX output (red wire of the transmitter) and the EDM input (red wire of the receiver) are short circuited if the following additional condition is met. (The total consumption of both transmitter and receiver is fixed.)
In the case where the PNP output type cable is used, the condition is that OSSD stays in the OFF state.
In the case where the NPN output type cable is used, the condition is that OSSD stays in the ON state.

Dimensions

* Download CAD file or product manual for larger image/text and more detail.

■ For SL-VF, SL-VH, and SL-VL

Units: mm



■ SL-VH

Units: mm

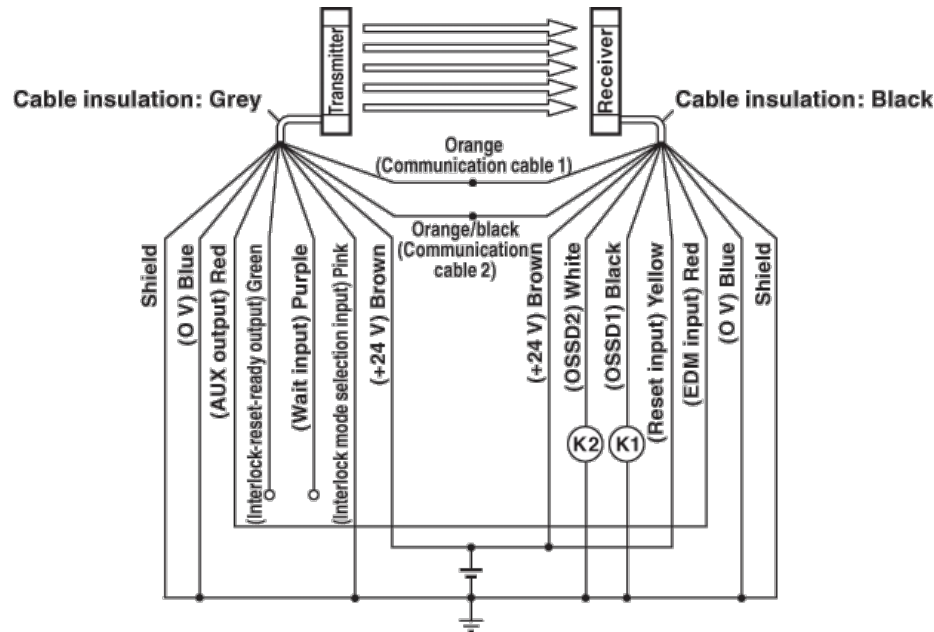
Model	Beam axes	A: Length	B: Detection height*1	C: Protection height	D: Beam axis spacing	E	F
SL-V08H	8	150	140	185	20	5	22.5
SL-V12H	12	230	220	265			
SL-V16H	16	310	300	345			
SL-V20H	20	390	380	425			
SL-V24H	24	470	460	505			
SL-V28H	28	550	540	585			
SL-V32H	32	630	620	665			
SL-V36H	36	710	700	745			
SL-V40H	40	790	780	825			
SL-V44H	44	870	860	905			
SL-V48H	48	950	940	985			
SL-V52H	52	1030	1020	1065			
SL-V56H	56	1110	1100	1145			
SL-V60H	60	1190	1180	1225			

SL-V64H	64	1270	1260	1305			
SL-V72H	72	1430	1420	1465			
SL-V80H	80	1590	1580	1625			
SL-V88H	88	1750	1740	1785			
SL-V96H	96	1910	1900	1945			
SL-V104H	104	2070	2060	2105			
SL-V112H	112	2230	2220	2265			
SL-V120H	120	2390	2380	2425			

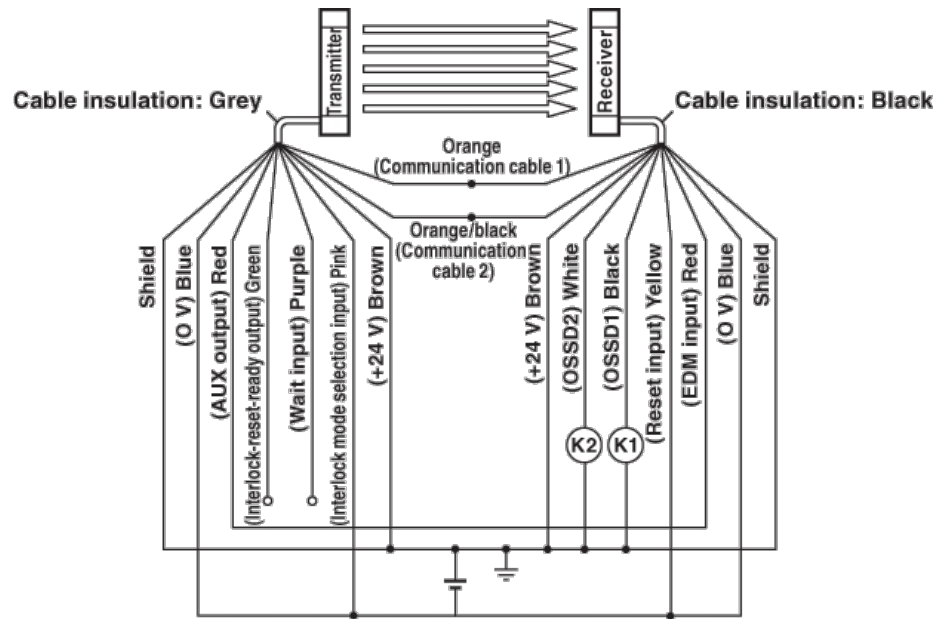
I/O Circuit Connection diagram

* Download CAD file or product manual for larger image/text and more detail.

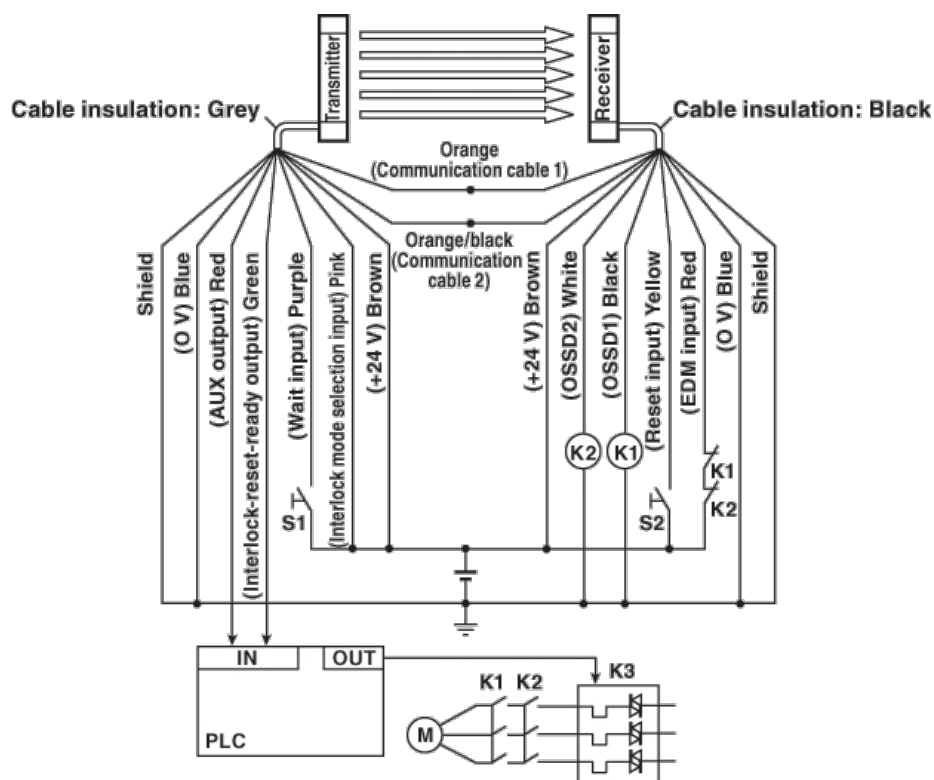
Wiring example with the simple function cable to use only OSSD outputs [Auto-reset mode]
PNP output



Wiring example with the simple function cable to use only OSSD outputs [Auto-reset mode]
NPN output



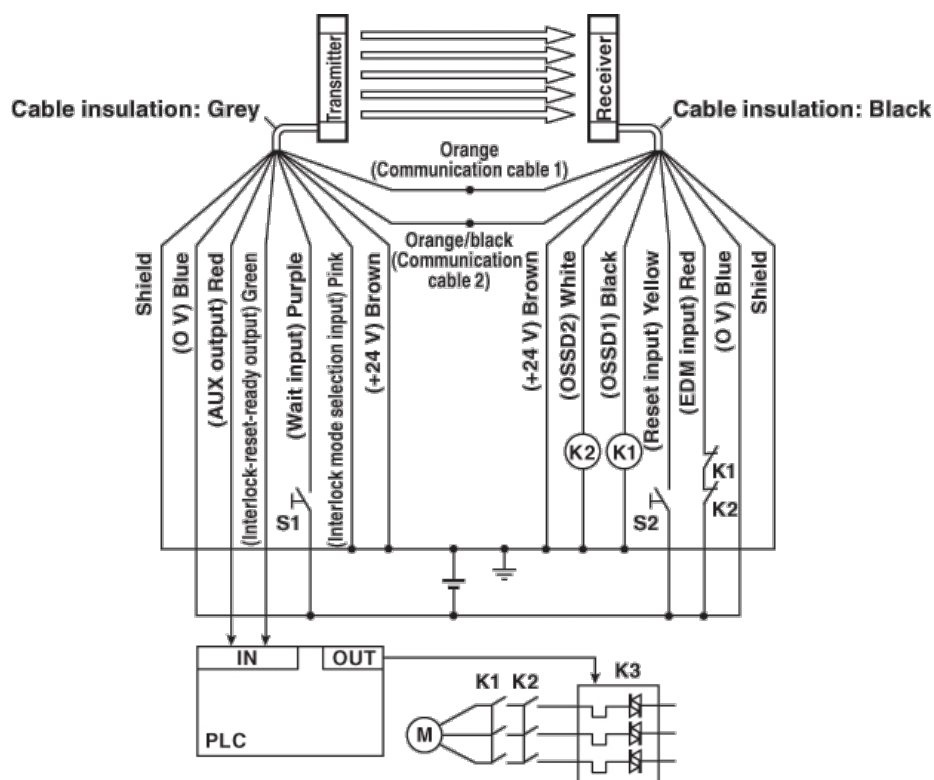
Wiring example when using all of the functions that can be performed with the simple function cable
[Manual reset mode]
PNP output



Wiring example when using all of the functions that can be performed with the simple function cable

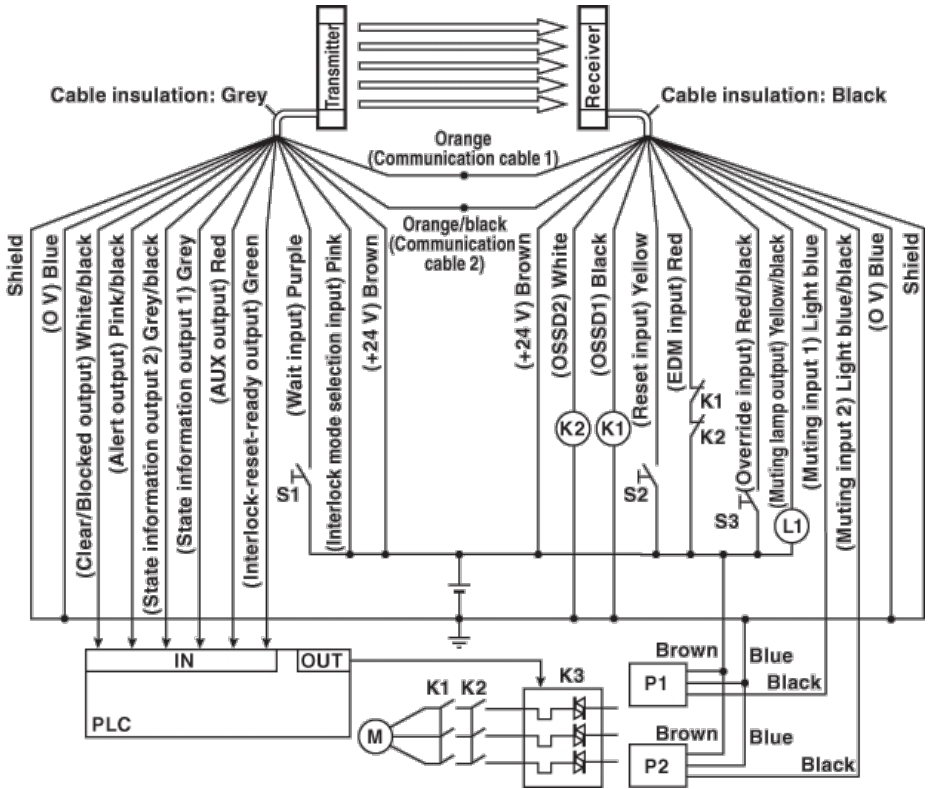
[Manual reset mode]

NPN output

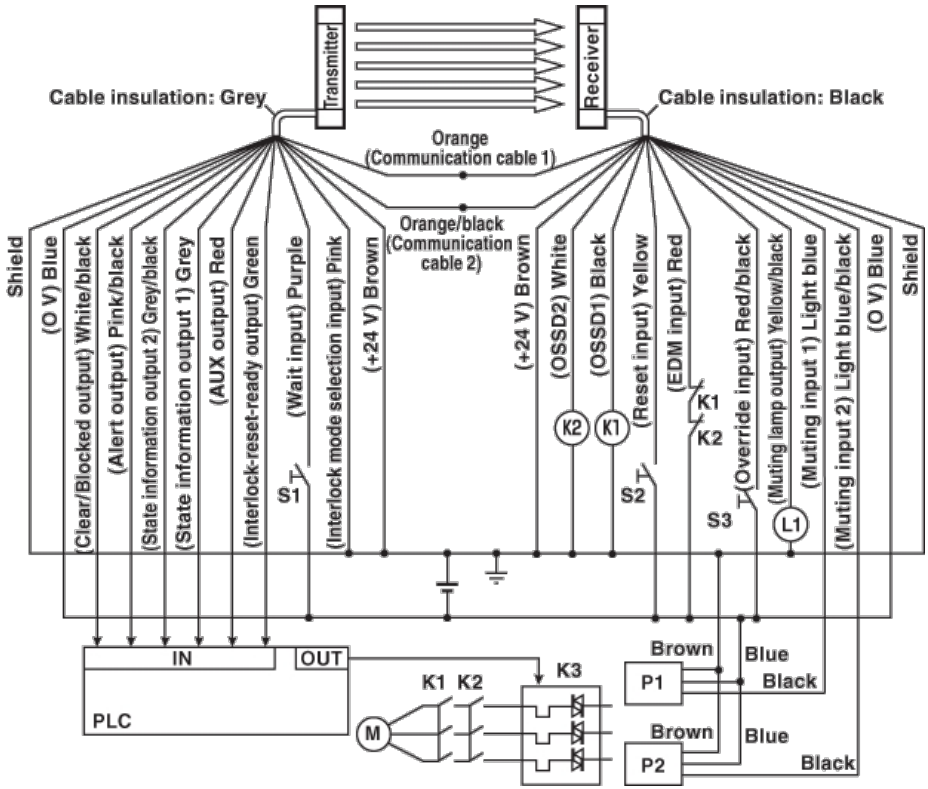


Example of wiring for the multi-function type cable

Example of PNP output



Example of wiring for the multi-function type cable
NPN output



Overall circuit diagram

