

# SLIM



Highest mechanical flexibility for a perfect fit into machine structures

Simple commissioning and maintenance

High functional performance

- SLIM profile: 15 x 32 mm
- Pigtail cable with 5-pole M12 connectors
- Same cable for Emitter and Receiver
- No Dead Zone
- 14, 24 and 34 mm resolution
- 34 different protection lengths, with 30 mm modularity
- 3 different brackets shapes
- Cascadable up to 3 units
- Auto/Manual restart and EDM function configuration by wiring
- LED display messages diagnosis

## APPLICATIONS

- Primary packaging machinery (packing, filling, labelling, etc...)
- Cutting machinery
- Automatic assembly machines and lines
- Automatic and semi-automatic quality inspection machinery
- Material handling machinery
- Bending and metal-working machinery
- Process lines



## INDUSTRIES

- Food & Beverage
- Electronics
- Automotive
- Metal working

	FINGER	HAND	ARM	BODY
Type 2	x	x		
Type 4	x	x		

**SL2 - 14 - 0150 - E**

TYPE	
2	Type 2
4	Type 4

RESOLUTION	
14	Finger : 14 mm
24	Hand: 24 mm
34	Hand: 34 mm

MONITORED HEIGHT	
0150	150 mm
0210	210 mm
0270	270 mm
0300	300 mm
...	
1200	1200 mm

VERSION	
E	EDM, Restart

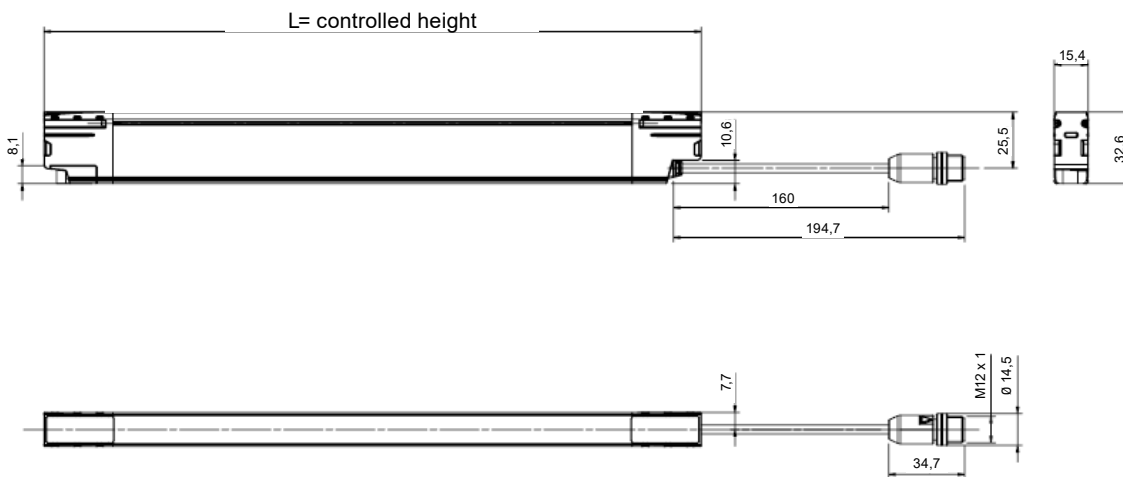
# TECHNICAL DATA

	SL2 [SL2-xx-xxxx-E]	SL4 [SL4-xx-xxxx-E]
<b>GENERAL DATA</b>		
Type (EN61496-1)	2	4
PL (EN ISO 13849-1)	c	e
SIL (IEC 61508)	1	3
Resolution	14 - 24 - 34 mm	
Protected heights	150 210 270 ... 1200 (with 30 mm steps)	
Operating distance	0.2 ... 6 m	
<b>ELECTRICAL DATA</b>		
Power supply (Vdd)	24 Vdc ± 20%	
Outputs	2 PNP	
Output current	0.3 A max / each output	
Capacitive load	1 uF @ 24Vdc max	
Response time*	RT = 7 ... 17 ms (14 mm resolution) RT = 7 ... 13 ms (24 mm resolution) RT = 7 ... 15 ms (34 mm resolution) Cascade Response time (up to 3 units) ≤ 20ms	
Cables length (for power supply)	20 m max	
<b>MECHANICAL AND ENVIRONMENTAL DATA</b>		
Operating temperature	-10 ... +55 °C	
Storage temperature	-25° ... 70°C	
Humidity	15 ... 95 % (no condensation)	
Mechanical protection	IP65 (EN 60529)	
Housing material	Painted Aluminium, Painted Zamak	
Window material	PMMA	
<b>FUNCTIONS</b>		
	Manual/Automatic restart	
	External Device Monitoring (EDM)	
	Alignment mode	

NOTE

\* Response time is dependent on height: for more details refer to product manual

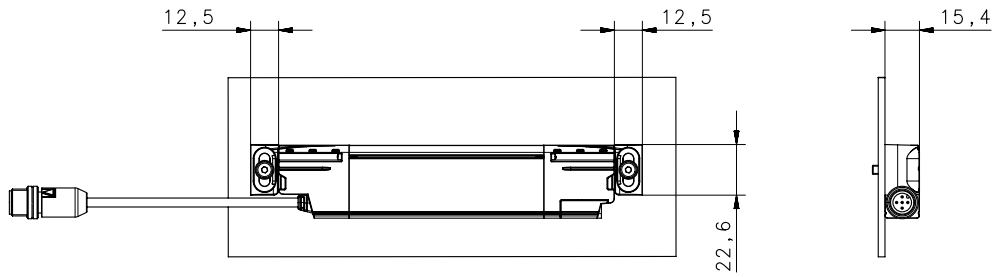
# DIMENSIONS



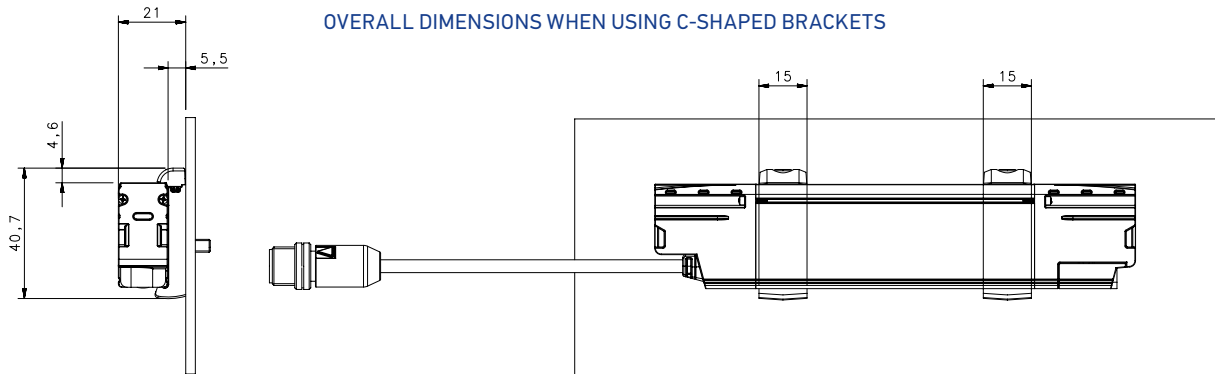
MODEL	L (mm)
SLx-yy-0150-E	150
SLx-yy-0210-E	210
SLx-yy-0270-E	270
SLx-yy-0300-E	300
SLx-yy-0330-E	330
SLx-yy-0360-E	360
SLx-yy-0390-E	390
SLx-yy-0420-E	420
SLx-yy-0450-E	450
SLx-yy-0480-E	480
SLx-yy-0510-E	510
SLx-yy-0540-E	540
SLx-yy-0570-E	570
SLx-yy-0600-E	600
SLx-yy-0630-E	630
SLx-yy-0660-E	660
SLx-yy-0690-E	690
SLx-yy-0720-E	720
SLx-yy-0750-E	750
SLx-yy-0780-E	780
SLx-yy-0810-E	810
SLx-yy-0840-E	840
SLx-yy-0870-E	870
SLx-yy-0900-E	900
SLx-yy-0930-E	930
SLx-yy-0960-E	960
SLx-yy-0990-E	990
SLx-yy-1020-E	1020
SLx-yy-1050-E	1050
SLx-yy-1080-E	1080
SLx-yy-1110-E	1110
SLx-yy-1140-E	1140
SLx-yy-1170-E	1170
SLx-yy-1200-E	1200

# DIMENSIONS

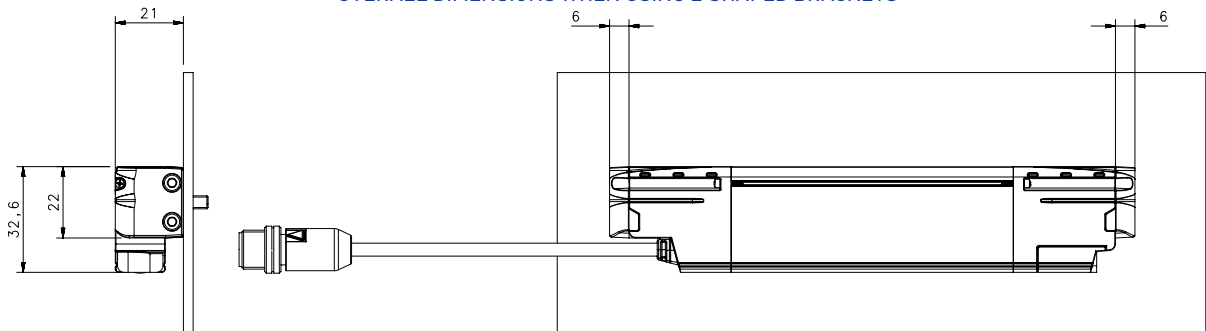
## OVERALL DIMENSIONS WHEN USING O-SHAPED BRACKETS



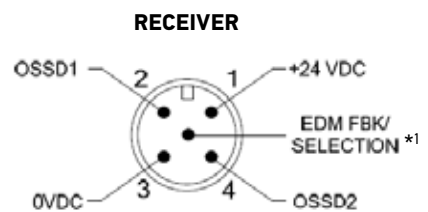
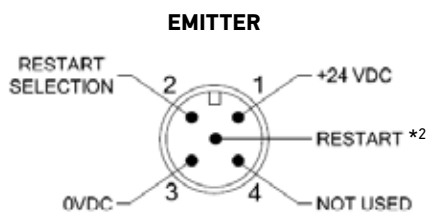
## OVERALL DIMENSIONS WHEN USING C-SHAPED BRACKETS



## OVERALL DIMENSIONS WHEN USING L-SHAPED BRACKETS



# CONNECTIONS

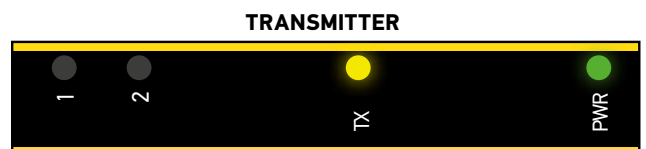
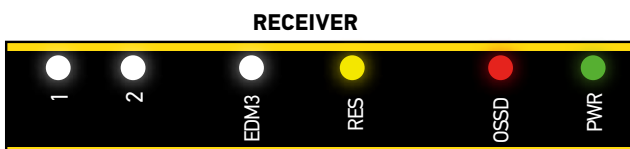


**NOTES:**

**EDM** : If connected to NC contact of a forced-guided relay, EDM function is ON; if connected to OSSD1, EDM function is OFF.

**RESTART**: if connected through NC contact to 24Vdc: MANUAL RESTART; if connected to RESTART SELECTION: AUTOMATIC RESTART; if left unconnected (floating): ALIGNMENT MODE.

# INDICATORS



# MODEL SELECTION AND ORDER INFORMATION

FINGER PROTECTION - 14 mm RESOLUTION			HAND PROTECTION - 24 mm RESOLUTION		HAND PROTECTION - 34 mm RESOLUTION	
SL2 [SL2-14-xxxx-E]	Order number		SL2 [SL2-24-xxxx-E]	Order number	SL2 [SL2-34-xxxx-E]	Order number
SL2-14-0150-E	957911020		SL2-24-0150-E	957911360	SL2-34-0150-E	957911700
SL2-14-0210-E	957911030		SL2-24-0210-E	957911370	SL2-34-0210-E	957911710
SL2-14-0270-E	957911040		SL2-24-0270-E	957911380	SL2-34-0270-E	957911720
SL2-14-0300-E	957911050		SL2-24-0300-E	957911390	SL2-34-0300-E	957911730
SL2-14-0330-E	957911060		SL2-24-0330-E	957911400	SL2-34-0330-E	957911740
SL2-14-0360-E	957911070		SL2-24-0360-E	957911410	SL2-34-0360-E	957911750
SL2-14-0390-E	957911080		SL2-24-0390-E	957911420	SL2-34-0390-E	957911760
SL2-14-0420-E	957911090		SL2-24-0420-E	957911430	SL2-34-0420-E	957911770
SL2-14-0450-E	957911100		SL2-24-0450-E	957911440	SL2-34-0450-E	957911780
SL2-14-0480-E	957911110		SL2-24-0480-E	957911450	SL2-34-0480-E	957911790
SL2-14-0510-E	957911120		SL2-24-0510-E	957911460	SL2-34-0510-E	957911800
SL2-14-0540-E	957911130		SL2-24-0540-E	957911470	SL2-34-0540-E	957911810
SL2-14-0570-E	957911140		SL2-24-0570-E	957911480	SL2-34-0570-E	957911820
SL2-14-0600-E	957911150		SL2-24-0600-E	957911490	SL2-34-0600-E	957911830
SL2-14-0630-E	957911160		SL2-24-0630-E	957911500	SL2-34-0630-E	957911840
SL2-14-0660-E	957911170		SL2-24-0660-E	957911510	SL2-34-0660-E	957911850
SL2-14-0690-E	957911180		SL2-24-0690-E	957911520	SL2-34-0690-E	957911860
SL2-14-0720-E	957911190		SL2-24-0720-E	957911530	SL2-34-0720-E	957911870
SL2-14-0750-E	957911200		SL2-24-0750-E	957911540	SL2-34-0750-E	957911880
SL2-14-0780-E	957911210		SL2-24-0780-E	957911550	SL2-34-0780-E	957911890
SL2-14-0810-E	957911220		SL2-24-0810-E	957911560	SL2-34-0810-E	957911900
SL2-14-0840-E	957911230		SL2-24-0840-E	957911570	SL2-34-0840-E	957911910
SL2-14-0870-E	957911240		SL2-24-0870-E	957911580	SL2-34-0870-E	957911920
SL2-14-0900-E	957911250		SL2-24-0900-E	957911590	SL2-34-0900-E	957911930
SL2-14-0930-E	957911260		SL2-24-0930-E	957911600	SL2-34-0930-E	957911940
SL2-14-0960-E	957911270		SL2-24-0960-E	957911610	SL2-34-0960-E	957911950
SL2-14-0990-E	957911280		SL2-24-0990-E	957911620	SL2-34-0990-E	957911960
SL2-14-1020-E	957911290		SL2-24-1020-E	957911630	SL2-34-1020-E	957911970
SL2-14-1050-E	957911300		SL2-24-1050-E	957911640	SL2-34-1050-E	957911980
SL2-14-1080-E	957911310		SL2-24-1080-E	957911650	SL2-34-1080-E	957911990
SL2-14-1110-E	957911320		SL2-24-1110-E	957911660	SL2-34-1110-E	957912000
SL2-14-1140-E	957911330		SL2-24-1140-E	957911670	SL2-34-1140-E	957912010
SL2-14-1170-E	957911340		SL2-24-1170-E	957911680	SL2-34-1170-E	957912020
SL2-14-1200-E	957911350		SL2-24-1200-E	957911690	SL2-34-1200-E	957912030
SL4 [SL4-14-xxxx-E]	Order number		SL4 [SL4-24-xxxx-E]	Order number	SL4 [SL4-34-xxxx-E]	Order number
SL4-14-0150-E	957910000		SL4-24-0150-E	957910340	SL4-34-0150-E	957910680
SL4-14-0210-E	957910010		SL4-24-0210-E	957910350	SL4-34-0210-E	957910690
SL4-14-0270-E	957910020		SL4-24-0270-E	957910360	SL4-34-0270-E	957910700
SL4-14-0300-E	957910030		SL4-24-0300-E	957910370	SL4-34-0300-E	957910710
SL4-14-0330-E	957910040		SL4-24-0330-E	957910380	SL4-34-0330-E	957910720
SL4-14-0360-E	957910050		SL4-24-0360-E	957910390	SL4-34-0360-E	957910730
SL4-14-0390-E	957910060		SL4-24-0390-E	957910400	SL4-34-0390-E	957910740
SL4-14-0420-E	957910070		SL4-24-0420-E	957910410	SL4-34-0420-E	957910750
SL4-14-0450-E	957910080		SL4-24-0450-E	957910420	SL4-34-0450-E	957910760
SL4-14-0480-E	957910090		SL4-24-0480-E	957910430	SL4-34-0480-E	957910770
SL4-14-0510-E	957910100		SL4-24-0510-E	957910440	SL4-34-0510-E	957910780
SL4-14-0540-E	957910110		SL4-24-0540-E	957910450	SL4-34-0540-E	957910790
SL4-14-0570-E	957910120		SL4-24-0570-E	957910460	SL4-34-0570-E	957910800
SL4-14-0600-E	957910130		SL4-24-0600-E	957910470	SL4-34-0600-E	957910810
SL4-14-0630-E	957910140		SL4-24-0630-E	957910480	SL4-34-0630-E	957910820
SL4-14-0660-E	957910150		SL4-24-0660-E	957910490	SL4-34-0660-E	957910830
SL4-14-0690-E	957910160		SL4-24-0690-E	957910500	SL4-34-0690-E	957910840
SL4-14-0720-E	957910170		SL4-24-0720-E	957910510	SL4-34-0720-E	957910850
SL4-14-0750-E	957910180		SL4-24-0750-E	957910520	SL4-34-0750-E	957910860
SL4-14-0780-E	957910190		SL4-24-0780-E	957910530	SL4-34-0780-E	957910870
SL4-14-0810-E	957910200		SL4-24-0810-E	957910540	SL4-34-0810-E	957910880
SL4-14-0840-E	957910210		SL4-24-0840-E	957910550	SL4-34-0840-E	957910890
SL4-14-0870-E	957910220		SL4-24-0870-E	957910560	SL4-34-0870-E	957910900
SL4-14-0900-E	957910230		SL4-24-0900-E	957910570	SL4-34-0900-E	957910910
SL4-14-0930-E	957910240		SL4-24-0930-E	957910580	SL4-34-0930-E	957910920
SL4-14-0960-E	957910250		SL4-24-0960-E	957910590	SL4-34-0960-E	957910930
SL4-14-0990-E	957910260		SL4-24-0990-E	957910600	SL4-34-0990-E	957910940
SL4-14-1020-E	957910270		SL4-24-1020-E	957910610	SL4-34-1020-E	957910950
SL4-14-1050-E	957910280		SL4-24-1050-E	957910620	SL4-34-1050-E	957910960
SL4-14-1080-E	957910290		SL4-24-1080-E	957910630	SL4-34-1080-E	957910970
SL4-14-1110-E	957910300		SL4-24-1110-E	957910640	SL4-34-1110-E	957910980
SL4-14-1140-E	957910310		SL4-24-1140-E	957910650	SL4-34-1140-E	957910990
SL4-14-1170-E	957910320		SL4-24-1170-E	957910660	SL4-34-1170-E	957911000
SL4-14-1200-E	957910330		SL4-24-1200-E	957910670	SL4-34-1200-E	957911010

TYPE 2

TYPE 4

# ACCESSORIES SELECTION AND ORDER INFORMATION

BRACKETS		ORDER NUMBER
C-shaped Brackets (included): 2 pcs kit	ST-K2-SL-C	95ASE2510
O-shaped Brackets (included): 4 pcs kit	ST-K4-SL-O	95ASE2520
L-shaped Brackets: 2 pcs kit	ST-K2-SL-L	95ASE2540
C-shaped Orientable Brackets: 2 pcs kit	ST-K2-SL-C-OR	95ASE2530
MIRRORS		
Deviating Mirrors	SG-DM Series	See NOTE 1
Deviating Mirrors mounting kit for SG-PSB	ST-PS-DM	See NOTE 1
Mirror Mounting Bracket	ST-DM	See NOTE 1
SAFETY UNITS		
Safety Unit	SE-SR2	95ACC6170
EDM Relay Box**	CS-ME	95ASE1270
Safety control unit for single beams and SLC (with muting)	SG-BWS-T4-MT	957051010
TEST PIECES		
Test Piece 14mm L=300mm	TP-14	95ACC1630
Test Piece 24mm L=200mm	TP-24	95ASE2570
Test Piece 34mm L=200mm	TP-34	95ASE2580

## NOTES

NOTE 1 : For order numbers of these accessories refer to SAFETY REFERENCE GUIDE or to datasheets of SG-DM accessories

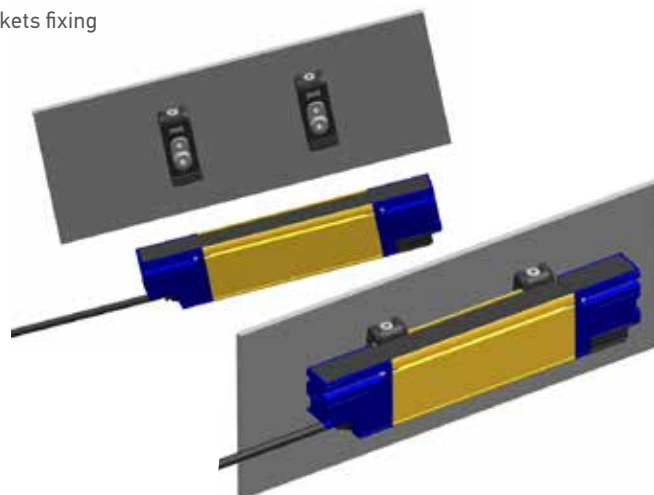
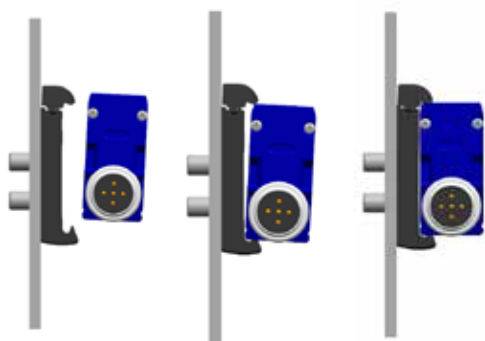
NOTE 2: When using EDM Relay Box or Muting connection box, connect EDM input, and be sure EDM function is active on the safety light curtain

## BRACKETS

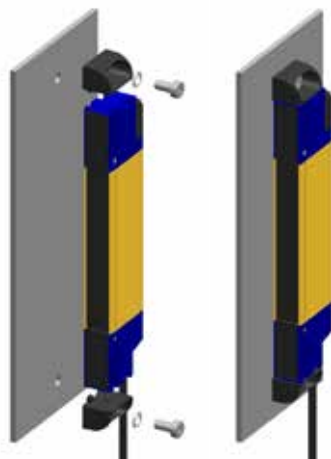
C-shaped bracket



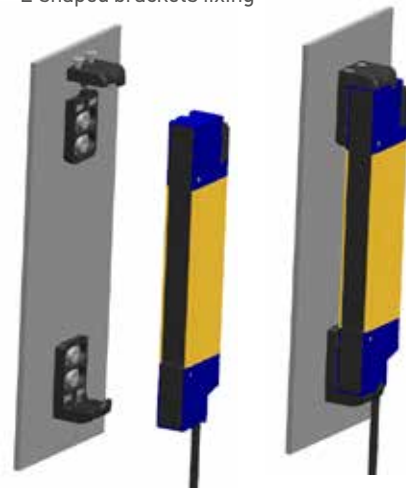
C-shaped brackets fixing



O-shaped brackets fixing



L-shaped brackets fixing



O-shaped bracket



L-shaped bracket



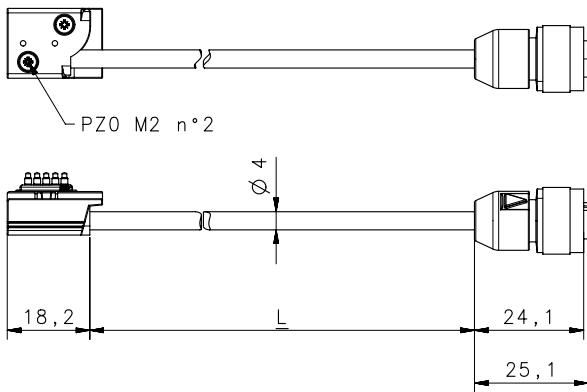
# CABLES

	RECEIVER/TRANSMITTER CABLE	LENGTH (m)	Order Number
SL2/SL4 [SLx-xx-xxxx-E]	CS-A1-03-U-03	3	95ASE1170
	CS-A1-03-U-05	5	95ASE1180
	CS-A1-03-U-10	10	95ASE1190
	CS-A1-03-U-15	15	95ASE1200
	CASCADE CABLES	LENGTH (m)	Order Number
SL2/SL4 [SLx-xx-xxxx-E]	CS-H1-03-B-001	0.1	95A252950
	CS-H1-03-B-005	0.5	95ASE2550
	CS-H1-03-B-01	1	95ASE2560

**NOTE**

All cables have axial connectors

## CASCADE CABLE DIMENSIONS



CASCADE CABLES	L +/- 10 (mm)
CS-H1-03-B-001	90
CS-H1-03-B-005	490
CS-H1-03-B-01	990

**TO CONNECT CASCADE UNIT:**

- Fix all cascade units with proper brackets. (1)
- Remove Terminator Caps at the end of Master by loosening the two fixing screws for both emitter and receiver. (2)
- Fasten the cascade cables in place of removed terminator caps, ensure all cables bend radius it's not less than 4mm. (3)
- Connect Slaves M12 male connectors to M12 Female connectors from cascade cables. (4)

