Sensor & Wire-saving Link System S-LINK

FIBER SENSORS LASER SENSORS

PHOTOELECTRIC SENSORS MICRO PHOTOELECTRIC SENSORS

AREA SENSORS LIGHT CURTAINS / SAFETY PRESSURE / FLOW SENSORS INDUCTIVE PROXIMITY SENSORS

PARTICULAR USE SENSORS

SENSOR OPTIONS SIMPLE WIRE-SAVING UNITS

MEASUREMENT SENSORS STATIC ELECTRICITY PREVENTION DEVICES LASER MARKERS

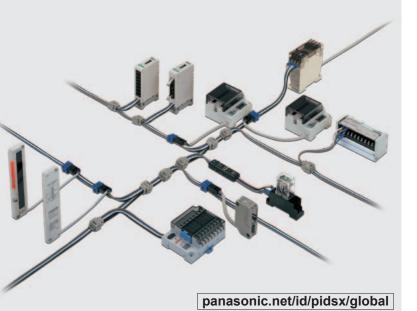
PLC HUMAN MACHINE INTERFACES

ENERGY CONSUMPTION VISUALIZATION COMPONENTS FA COMPONENTS

MACHINE VISION SYSTEMS UV CURING SYSTEMS

For Large Scale Systems

S-LINK

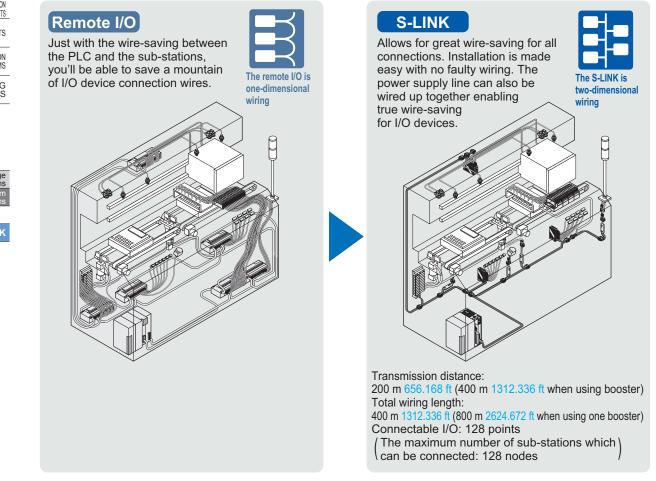




This product is introduced to only limited countries. Please contact our office for details.

S-LINK transmits 128 points on two signal lines, and "T"-branch multi-drop system enabling flexible cable layout

We've realized a wire-saving system that's easy to use



High noise immunity

Large voltage amplitude (24 V) and wide pulse width (35 μ s) signal transmissions make for units less prone to impulse noise effects with no code errors. This high level of noise proofing enables them to be

used even in worksites with conventional, high-priced optical communication remote I/O units.

Specifies malfunctioning S-LINK I/O devices

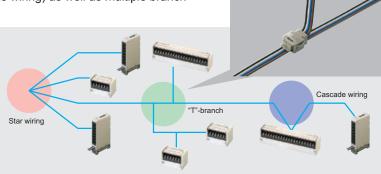
In the event that verification cannot be obtained from an **S-LINK** I/O unit, such as if the main cable is cutoff, the address of the particular unverifiable **S-LINK** I/O unit is specified and displayed allowing equipment recovery time to be greatly reduced.



"T"-branch

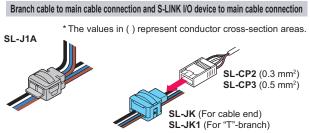
Alleviates the burden laid on engineer for designing and wiring

Labor-saving hook-up connectors are used enabling multiple "T"-branch hookups. It goes without saying that cascade wiring (bus wiring) as well as multiple branch wiring (star wiring) is also possible.



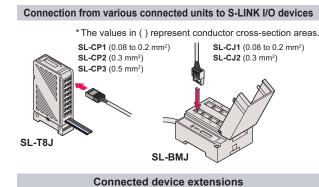
Simple and reliable connections

We've provided all types of hook-up connectors. Connections from **S-LINK** I/O devices to the main cable and from sensors and other devices to **S-LINK** I/O devices are all realized with one-touch hook-up connectors. They can be connected anywhere quickly and maintenance is easy.



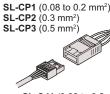
In addition, to enhance the reliability of the crimping, **S-LINK** exclusive pliers are made available so that anyone can do it with ease.





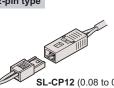
* The values in () represent conductor cross-section areas.

2-pin type



4-pin type

SL-CJ1 (0.08 to 0.2 mm²) SL-CJ2 (0.3 mm²) SL-JK (0.5 mm²)



SL-CP12 (0.08 to 0.2 mm²) SL-CP22 (0.3 mm²)

SL-CJ12 (0.08 to 0.2 mm²) SL-CJ22 (0.3 mm²) FIBER SENSORS

LASER

SENSORS PHOTOELECTRIC SENSORS

MICRO PHOTOELECTRIC

SENSORS AREA SENSORS

LIGHT CURTAINS / SAFETY COMPONENTS PRESSURE / FLOW SENSORS INDUCTIVE PROXIMITY

PARTICULAR USE SENSORS

SENSOR

SIMPLE WIRE-SAVING UNITS

SYSTEMS

MEASUREMENT SENSORS

STATIC ELECTRICITY PREVENTION DEVICES

LASER MARKERS

PLC

HUMAN MACHINE INTERFACES

VISUALIZATION COMPONENTS

FA COMPONENTS

MACHINE VISION SYSTEMS

For Large Scale Systems For Medium Scale Systems

PHOTOELECTRIC

PHOTOELECTRIC

LIGHT CURTAINS /

PRESSURE / FLOW SENSORS INDUCTIVE PROXIMITY

SAFETY COMPONENTS

SENSORS PARTICULAR USE SENSORS SENSOR

SIMPLE WIRE-SAVING

UNITS

MEASUREMENT SENSORS

STATIC ELECTRICITY

PREVENTION DEVICES

LASER MARKERS

PLC

LASER SENSORS

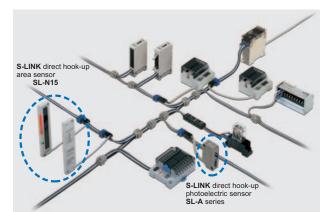
SENSORS

SENSORS AREA SENSORS

MICRO

1035

Direct main cable connecting of sensors and actuators possible



All types of transmission line direct-connecting type sensors are made available. Even partner makers are putting on the market manifold electromagnetic valves and limit switches that can be directly connected with the S-LINK system making wire-saving and labor-saving a reality.

Items offered by partner makers

Manifold

electromagnetic



Manifold electromagnetic alve manufactured valve manufactured by SMC Pneumatics by CKD Corp

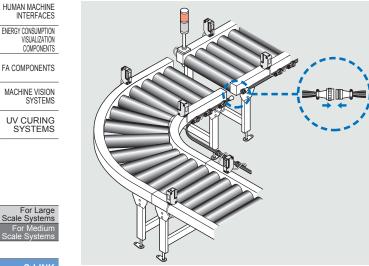
Component indicator lamp manufactured by Yazaki Industrial Chemical Co., Ltd.



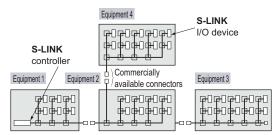
Mid-system main / branch cable installation and removal possible

For conveyors or other large scale equipment, transport can also be done after dividing the whole into units of several meters in length right at the factory. Then, reassembly and wiring can be effectuated onsite afterwards. Because the S-LINK can be easily divided even from mid-system main / branch cables with the help of commercially available connectors and terminals, the segmented equipment can be wired up prior to transport. Once onsite, assembly work is all but complete with just the connecting of the individual units to each other.

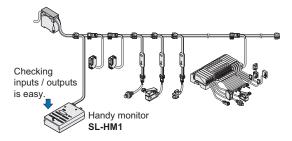
In addition, when assembling the equipment, the S-LINK can work even disconnected from the PLC enabling software (PLC programming) and hardware (machine assembly, I/O check) work to be done concurrently, which results in quick delivery time. With the handy monitor, I/O devices can be checked for each piece of equipment separately enabling subcontractors to conduct check work on delivery. This results in a total delivery deadline reduction and clearly defined subcontractor responsibilities. Also, checking can be performed even without programming so you'll know immediately if malfunctions are coming from the PLC or the S-LINK.



Dividing equipment into subunits possible



Individual equipment subunits can be checked separately



S-LINK

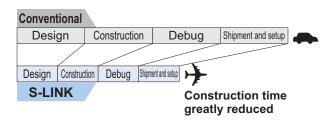
For N

Total cost reductions and great savings in setup time

By introducing the **S-LINK**, you can reduce the total cost of system construction to one-fifth. Total costs including for materials go down dramatically and, by decreasing the workload, construction time is lessened which means you can easily meet that tough deadline. The **S-LINK** system:

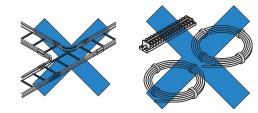
 A hardware-only construction makes layout design simple

- With hook-up connectors, construction time is greatly reduced
- Layout modifications made easy
- Equipment divided into separate segments make for easy debugging
- Segmented equipment can be easily interlinked with commercially available connectors



Auxiliary materials reduced

Great reductions in auxiliary materials such as cable racks, cable ducts, intermediate terminal blocks, and cables. This system also contributes greatly to the reduction waste caused by cutting cable ends.

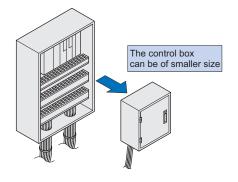


Space-saving

Because of great reductions in the amount of

intermediate terminal blocks and cables needed, you can save space and minimize the size of your control board and machines.

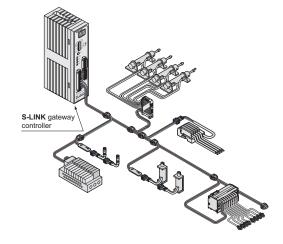
This will finally let you put all that wasted space to good use.



Upper-level network connection possible

Because it can be connected to any main open network, long-distance and multi-point transmission networks can be constructed enabling a greatly enhanced network upgrade. Also, by wiring up scattered bit-oriented I/O devices that include mostly connected sensors and switches, an efficient wire-saving layout can be realized. If exporting equipment that was setup with any open network, it can be made to correspond to different networks just by installing an **S-LINK** gateway controller with the entire **S-LINK** system left as it is.





FIBER SENSORS

1036

LASER SENSORS

PHOTOELECTRIC SENSORS

MICRO PHOTOELECTRIC SENSORS

AREA SENSORS

LIGHT CURTAINS / SAFETY COMPONENTS PRESSURE / FLOW SENSORS INDUCTIVE PROXIMITY

PARTICULAR

USE SENSORS SENSOR OPTIONS

SIMPLE WIRE-SAVING UNITS

WIRE-SAVING SYSTEMS

MEASUREMENT SENSORS

STATIC ELECTRICITY PREVENTION DEVICES

LASER MARKERS

PLC

HUMAN MACHINE INTERFACES

VISUALIZATION COMPONENTS

MACHINE VISION SYSTEMS

For Large Scale Systems For Medium Scale Systems

APPLICATIONS

FIBER SENSORS

LASER SENSORS

PHOTOELECTRIC SENSORS MICRO PHOTOELECTRIC SENSORS

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WIRE-SAVIN SYSTEM

MEASUREMENT SENSORS STATIC ELECTRICITY PREVENTION DEVICES

LASER MARKERS

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HUMAN MACHINE INTERFACES ENERGY CONSUMPTION VISUALIZATION COMPONENTS

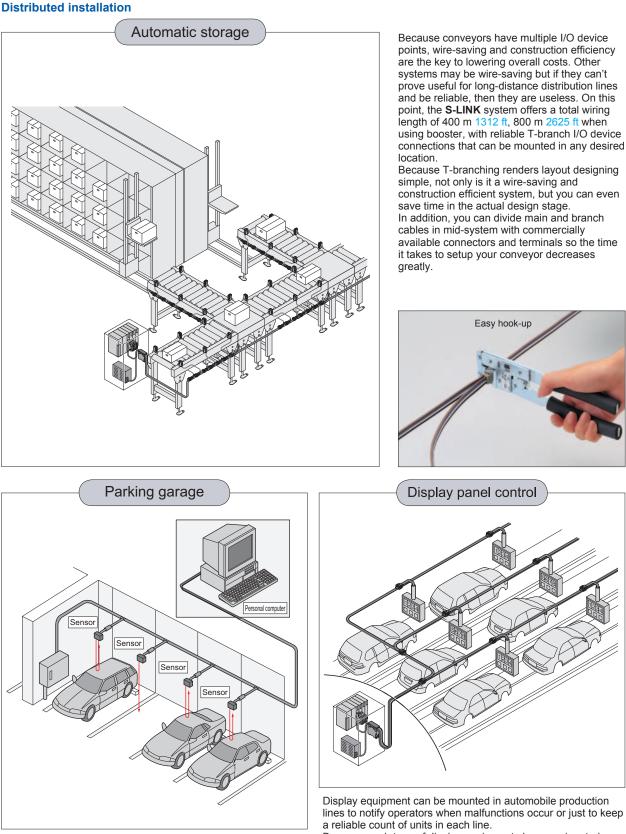
FA COMPONENTS

MACHINE VISION SYSTEMS

UV CURING SYSTEMS

For Large Scale Systems For Medium Scale Systems

S-LINK



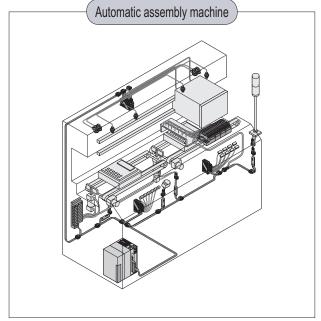
The **S-LINK** system is very suitable to wire up car detection sensors in a large parking garage. It reduces wires and installation time.

Because each type of display equipment shows variegated data, they necessitate a great amount of wiring. This wiring must be conducted in very large factories requiring a substantial amount of cables and wires. A wire-saving system in this situation would be most effective.

Using the **S-LINK** system means that even display equipment can be wired up with just one flat cable, and clearing up all the bulky wiring inside the display panels themselves and realizing great material cost savings as well as a reduced workload.

APPLICATIONS

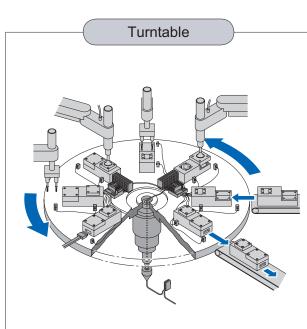
Integrated installation



The wire-saving system is being greatly emphasized even for assembly lines crowded with multiple I/O devices.

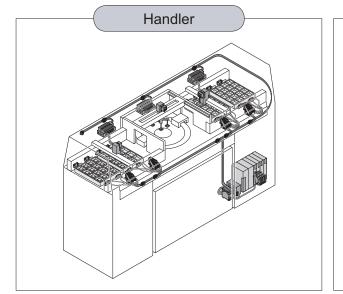
Also, to enhance productivity, using a wire-saving system is the key to reliability and avoiding the occurrence of troubles. In the **S-LINK** loop wiring, the system maintains signal transmission even when the loop may break at any one place. Also, the controller displays disconnected unit address. Further, when excess current flows or short-circuit occurs in the signal transmission lines, the signal transmission is stopped to protect the system.

S-LIŃK is a wire-saving system optimal for the automatic assembly machinery.



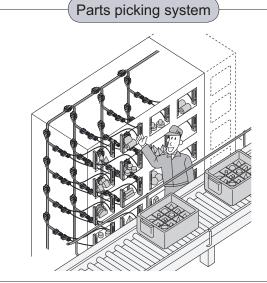
The wiring of I/O devices mounted on a rotating board (turntable) used to be quite a difficult task. Because a slip ring with the same number of terminals as wires had to be used. Therefore, there have been difficulties such as employing a large slip ring or reduction of I/O point count.

S-LINK enables the connection of up to 128 I/O points on a 4-pole slip ring. A compact slip ring can be used without worrying about I/O points.



"The handler" as the IC test equipment uses multiple sensors. Cost reduction or downsizing depends on how to reduce these wires and to save space.

S-LINK realizes wire-saving and space-saving; hence these problems are solved all at once.



Many small picking sensors are employed in the parts picking system in order to verify the correct selection of components. The number of input points is required as much as the number of shelves, the number of output points is also required to be the same in adopting the operational indicators.

S-LINK system greatly contributes to wire-saving both in I/O points and in space. Also, extra shelves can be added easily.

FIBER SENSORS

LASER SENSORS

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MICRO PHOTOELECTRIC SENSORS

AREA SENSORS

LIGHT CURTAINS / SAFETY COMPONENTS PRESSURE / FLOW SENSORS INDUCTIVE

INDUCTIVE PROXIMITY SENSORS PARTICULAR USE SENSORS

SENSOR

SIMPLE WIRE-SAVING UNITS

VIRE-SAVING

MEASUREMENT SENSORS

STATIC ELECTRICITY PREVENTION DEVICES

LASER MARKERS

PLC

HUMAN MACHINE INTERFACES

VISUALIZATION COMPONENTS

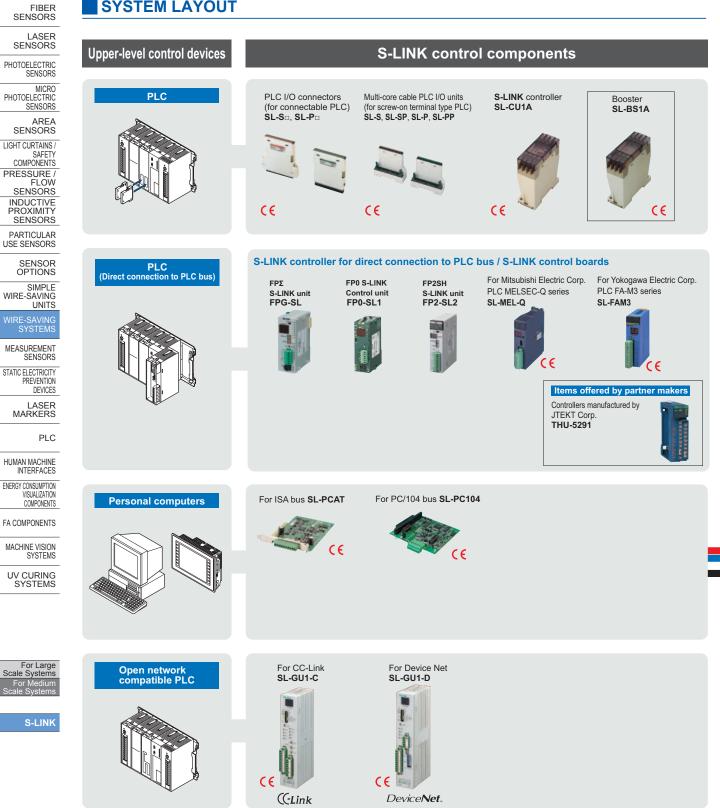
FA COMPONENTS

MACHINE VISION SYSTEMS

UV CURING SYSTEMS

> For Large Scale Systems For Medium Scale Systems

SYSTEM LAYOUT



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SYSTEM LAYOUT

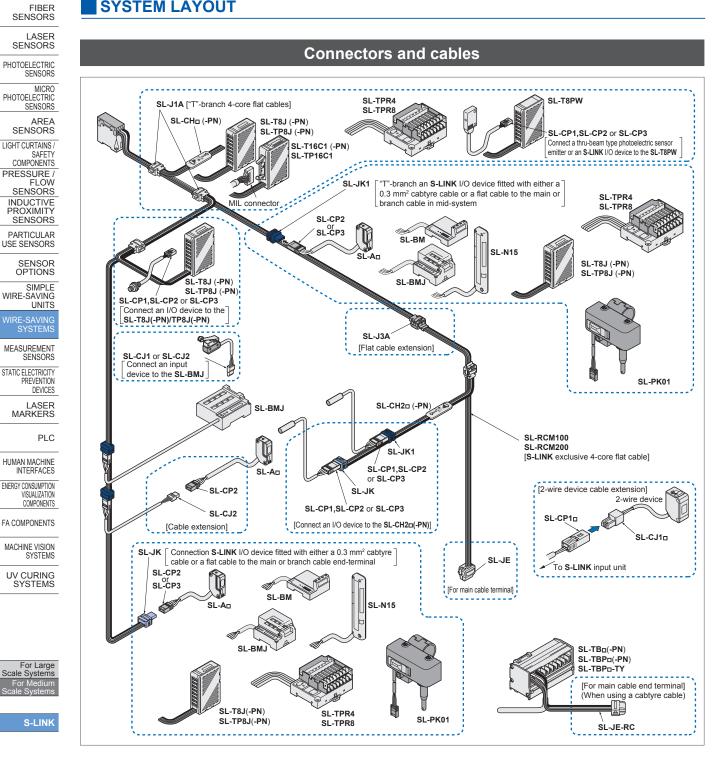
CE



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CE

SYSTEM LAYOUT



Other S-LINK devices

I/O modules SL-Mo,SL-MoF 8 or 16 inputs 8 or 16 outputs 4 inputs and 4 outputs





Handy monitor SL-HM1



ORDER GUIDE

S-LINK control units

Designation	Appearance (Note)	Model No.	Description	E C				
				E E				
S-LINK			It supplies the synchronization signal to the complete system to send and receive I/O data	<u>-</u>				
controller	and the second se	SL-CU1A	from external devices correctly. It also monitors the signal transmission line, and specifies the addresses of the disconnected devices if the line breaks, etc.					
	(€)							
				L CSC				
FPΣ S-LINK		FPG-SL	It controls the S-LINK system by directly connecting to the FPΣ series.					
unit		(AFPG780)						
				-				
FP0				_				
S-LINK		FP0-SL1	It controls the S-LINK system by directly connecting to the FP0 series.					
Control unit	1	(AFP02700)		-				
FP2SH	EP2-SI 2							
S-LINK		FP2-SL2 (AFP2780)	It controls the S-LINK system by directly connecting to the FP2SH series.					
unit	(* ** 2:00)							
Mitsubishi Electric PLC			It can be directly connected to the bus line of the MELSEC-Q series PLC manufactured by Mitsubishi Electric Corp.	-				
bus S-LINK	-	SL-MEL-Q	Has S-LINK controller as well as PLC input and output connector functions so you don't					
controller			have to prepare for these items. Also, it doesn't need a PLC input or output module.					
	_		It can be directly connected to the bus line of the FA-M3 series PLC manufactured by	-				
Yokogawa Electric PLC		SL-FAM3	Yokogawa Electric Corp.	-				
bus S-LINK controller		SE-FAM5	(Has S-LINK controller as well as PLC input and output connector functions so you don't have to prepare for these items. Also, it doesn't need a PLC input or output module.					
				-				
DOME & LINK	A Different		It can be fitted into the expansion slot (ISA bus) of PC/AT series or compatible to control the S-LINK system.	-				
PC/AT S-LINK control board		SL-PCAT	(Has S-LINK controller as well as PLC input and output connector functions so you don't					
	CE		have to prepare for these items.					
PC/104 bus	1000		Controls the S-LINK system by directly coupling (stack) the PC/104 bus line to a PC/104 bus compatible PC board or panel computer.					
S-LINK control board		SL-PC104	(Has S-LINK controller as well as PLC input and output connector functions so you don't					
	~~~ (E		have to prepare for these items.					

Note: Components with " C€" mark conform to the CE marking EMC Directive. The following condition must be met to conform to EN 61000-6-2.

Conditions

 ① Cable length between the main power supply and the S-LINK control unit should be less than 10 m 32.808 ft.
 ② When the power is supplied from S-LINK control unit to S-LINK I/O devices at a cable distance of more than 10 m 32.808 ft add a surge absorber between 24 V and 0 V at a cable distance of less than 10 m 32.808 ft, or use a local power supply at a cable distance of less than 10 m 32.808 ft from each S-LINK I/O device.

For Large S

S-LINK

1042

FIBER SENSORS

LASER SENSORS

LASER SENSORS

PARTICULAR USE SENSORS

SENSOR OPTIONS

SIMPLE WIRE-SAVING UNITS

ORDER GUIDE

Products for open network

		<u> </u>		
PHOTO- ELECTRIC SENSORS MICRO	Designation	Appearance (Note)	Model No.	Description
PHOTO- ELECTRIC SENSORS AREA SENSORS	S-LINK gateway controller for CC-Link	i ce	SL-GU1-C	S-LINK gateway controller for connection to open network CC-Link, promoted by Mitsubishi Electric Corp.
CURTAINS / SAFETY COMPONENTS PRESSURE / FLOW SENSORS	S-LINK gateway controller for DeviceNet		SL-GU1-D	S-LINK gateway controller for connection to open network DeviceNet. * The SL-GU1-D will be discontinued at the end of September, 2015.
INDUCTIVE PROXIMITY SENSORS		s with " CC " mark conform t		

The following condition must be met to conform to EN 61000-6-2.

Conditions

① Cable length between the main power supply and the S-LINK control unit should be less than 10 m 32.808 ft.

2 When the power is supplied from S-LINK control unit to S-LINK I/O devices at a cable distance of more than 10 m 32.808 ft add a surge absorber between 24 V and 0 V at a cable distance of less than 10 m 32.808 ft, or use a local power supply at a cable distance of less than 10 m 32.808 ft from each S-LINK I/O device.

PLC related units

STOLENIS								
MEASURE-	Decignoti	PLC of Article Automatic Cable Multi-coc Cable PLC //O unit	Annoaranaa	(Note 1)	Mode	el No.		Description
MENT SENSORS	Designatio		Appearance	(Note I)	For input	For output		Description
STATIC ELECTRICITY PREVENTION DEVICES LASER MARKERS	Multi-core				SL-S	SL-P	on terminal type Interfaces I/O da	-core cable PLC I/O unit for connecting the screw- PLC with the S-LINK system. ata between the S-LINK controller and PLC. /0 data conversion circuit for serial to parallel or
PLC	cable PLC I/O unit	be	Multi-core				parallel to serial	l conversion.
HUMAN MACHINE INTERFACES	cable PLC				SL-SP	SL-PP	Connection to s	crew-on terminal type PLC is by an optional multi- ched with an MIL connector on one end.
ENERGY CONSUMPTION VISUALIZATION COMPONENTS	Multi-core ca	able			SL-L20	000F	Length: 2 m 6.562 ft	The multi-core cable attached with an MIL connector on one end links the multi-core cable PLC I/O unit to a screw-on terminal type PLC
MACHINE	Notes: 1) Cor	npon	ents with " < ; mark conforr	n to the CE marking EM0	Directive.			I/O module.

However, note that for the multi-core cable PLC I/O units to conform to CE marking EMC Directive, it is necessary to use cascade cable SL-F70, SL-F150 or SL-F250, control cable SL-C2000F and multi-core cable SL-L2000F.

2) In case the output circuit of the PLC output module contains capacitive components for improving the noise characteristics, since it is possible that the multi-core cable PLC output units SL-P, SL-PP may not be able to receive the signal correctly, please use output modules which have an output circuit capacitance of 0.01 µF or less.

3) Since the multi-core cable PLC output units SL-P, SL-PP are high input impedance, time division input type devices, please use PLC output modules whose output circuit can operate at a load current of even 0.1 mA.



VISION SYSTEMS

CURING SYSTEMS

Sensor & Wire-saving Link System $\ensuremath{\textbf{S-LINK}}$

ORDER GUIDE

PLC related units

			Mode	el No.		Desc	ription			
Designation	Appearance	(Note 1)	For input	For output	Manufacturer	PLC	PLC input module (Note 4)	PLC output module (Note 4)		
			SL-S1	SL-P1	Panasonic Industrial Devices SUNX Co., Ltd.	FPΣ (Excluding the FPG-C32T) FP2	FPG-XY64D2T (X side) FP2-X32D2	FPG-XY64D2T (Y side) FP2-Y32T		
					Toshiba Machine Co., Ltd.	TC200 NS series	TC64DI NS-X64-1 NS-XY64-1 (X side)	NS-Y64-T1		
						NV1X3204	NV1Y32T05P1			
			SL-S2	SL-P2	Fuji Electric FA Components & Systems Co., Ltd.	F70	NC1X3204 NC1X3204-3 NC1X3206 NC1X6404 NC1X6406 NC1W6406T (X side)	module (Note 4) FPG-XY64D2T (Y side) FP2-Y32T TC64DON NS-Y64-T1 NS-XY64.1 (Y side) NV1Y32T05P1 NC1Y32T05P1 NC1Y32T05P1 NC1Y64T05P1-1 NC1Y64T05P1-1 NC1Y64T05P1 NC1Y32T09P1 NP1Y32T09P1 NP1Y32T09P1 NP1Y32T09P1 NP1Y32T09P1 NP1Y64T08 AH42 (Y side) QY41P, QY42P AJ35TC1-32T JW-232S JW-32SC JW-0261 C1W-0D231 C1W-0D261 C31W-0D261 C31W-0D261 C31W-0D213 C4-1A WD64-6N (Y side) F3YD32-1A F3YD32-1A F3YD32-1A		
		Fujitsu Component connector specs. MIL connector specs.				F80H, F120H F120S F140S F15XS	FTU125A FTU126A FTU127C FTU612A (X side)			
		specs.			Fuji Electric FA Components & Systems Co., Ltd.	SX series SPH	NP1X3206-W NP1X6406-W	/ NP1Y64T09P1 A1SY41 A1SY42 e)A1SH42 (Y side) AY42 AY42 AH42 (Y side)		
						AnS	Nr Nr<			
		PLC output connectors	SL-S3	SL-P3	Mitsubishi Electric Corp.	AnN, AnA AnU, QnA QnAs	AH42 (X side)	 module (Note 4) FPG-XY64D2T (Y side) FP2-Y32T TC64DON NS-Y64-T1 NC1Y32T05P1 NC1Y32T05P1 PTU222A FTU227C FTU612A (Y side) A1SY41 A1SY42 A1SY42		
PLC input		(same shape) (Note 2)				Q A2CJ				
connector	PLC output connectors (Note 3)	The listed PLC I/O			Sharp	JW20, JW20H JW30H		AH42 (Y side) QY41P, QY42P AJ35TC1-32T JW-232S JW-262S JW-62SC CJ1W-0D231 CJ1W-0D261 (Y side) CS1W-0D231		
PLC output connector (Max. four PLC I/O connectors can be cascaded with one S-LINK controller.	Max. four PLC I/O connectors can be cascaded with one	modules (NPN I/O type) allow the mating PLC I/O connector to be plugged	SL-S4	SL-P4	Manufacturing Systems Corp.	JW50H	JW-34NC JW-64NC	JW-32SC		
	IS-LINK controller. 1	on them for signal transmission between the PLC and the S-LINK				CJ1	CJ1W-ID231 CJ1W-ID261	JW-32SC JW-62SC CJ1W-OD231 CJ1W-OD261 e) CJ1W-MD261 (Y side) CS1W-OD231 CS1W-OD261		
	PLC	controller.				CS1	CS1W-ID231 CS1W-ID261			
	Control cable	/ The PLC I/O connector converts I/O data from serial to parallel, and vice		SL-P5	Omron Corp.	CVM1, CV C500 C1000H C2000H	C500-ID219			
		Versa. I/O points: 32 points per connector	SL-S5			C200H series	C200H-ID216 C200H-ID217	C200H-OD219		
		(F			Liteobi Ltd	CQM1	CQM1-ID213			
					Hitachi Ltd.	EH-150	EH-XD32 XD64-6N			
					Yokogawa Electric Corp.	FA500 FA-M3	WD64-6N (X side) F3XD32-3N	WD64-6N (Y side) F3YD32-1A		
					Tashiha Qara		F3XD64-3N DI-335			
					Toshiba Corp.	T3 GL20, GL40S	DI-335H	DO-335		
					Yasukawa Electric Corp.	GL60S, GL60H GL70H				
			SL-S6	SL-P6	Hitachi Ltd.	H series	XDC24D2H	YTR24DH		
			SL-S7		Yasukawa Electric Corp.	GL20, GL40S GL60S, GL60H GL70H	B2605			
End connector		O	SL-E		It must be conn	ected at the end	of the last PLC I	/O connector.		
			SL-F7		Length: 70 mn					
Cascade			SL-F1		Length: 150 m			ut / PLC output		
cable			SL-F2		Length: 250 m		connectors.			
			SL-F1		Length: 1,000					
			SL-C1000		Length: 1 m 3.281 ft		It links the CLINE			
							It links the S-LI	NK controller		
Control cable			SL-C SL-C SL-C	2000	Length: 2 m 6. Length: 5 m 16	562 ft	It links the S-LI and the first PL connector.			

Notes: 1) Components with " (? mark conform to the CE marking EMC Directive. However, note that for the PLC I/O connectors to conform to CE marking EMC Directive, it is necessary to use cascade cable **SL-F70**, SL-F150 or SL-F250 and control cable SL-C2000F.

2) The PLC I/O connectors use Fujitsu connectors. However, SL-S1, SL-S6, SL-P1 and SL-P6 connectors use MIL connectors.

3) PLC I/O connectors are connectable to S-LINK controller SL-CU1A only.

4) X side and Y side indicate the input and the output connectors, respectively, of the compound input / output module.

FIBER SENSORS LASER SENSORS OTO-ECTRIC NSORS

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LASER SENSORS

ORDER GUIDE

S-LINK I/O devices

PHOTO- ELECTRIC SENSORS MICRO	D	esignation	Appearance (Note)	Model No.		Description		
PHOTO- ELECTRIC SENSORS AREA	1.0	hannel		SL-CH1	NPN type	It can be used as either an input unit or an output unit by switch selection.		
SENSORS LIGHT CURTAINS / SAFETY COMPONENTS			CE	SL-CH1-PN	PNP type	Signals, such as from the sensor and limit switch, can be transmitted by the signal transmission line. These signals from the signal transmission line can turn ON / OFF the transistor output.		
PRESSURE / FLOW SENSORS	2 0	hannel		SL-CH21	NPN type	1 input and 1 output are equipped. 1 input device and 1 output		
INDUCTIVE PROXIMITY SENSORS PARTICULAR USE		autoutuutuutuutuutuutuutuutuutuutuutuutuu	(6	SL-CH21-PN	PNP type	device are connectable.		
SENSOR OPTIONS	2 c	hannel		SL-CH20	NPN type			
SIMPLE WIRE-SAVING UNITS	inp	ut unit	((SL-CH20-PN	PNP type	2 input devices are connectable.		
WIRE-SAVING SYSTEMS MEASURE- MENT SENSORS	2 0	hannel		SL-CH22	NPN type			
SENSORS STATIC ELECTRICITY PREVENTION DEVICES			(€	SL-CH22-PN	PNP type	 2 output devices are connectable. 		
LASER MARKERS				SL-T8J	8 NPN inputs			
PLC				SL-T8J-PN	8 PNP inputs	8 input or 8 output devices are connectable with snap male connectors. The output writ is incorrected with an output sized held function.		
HUMAN	unit			SL-TP8J	8 NPN outputs	The output unit is incorporated with an output signal hold function, which retains the output state just prior to an error on the signal transmission line.		
MACHINE INTERFACES ENERGY	or I/O		(€	SL-TP8J-PN	8 PNP outputs			
CONSUMPTION VISUALIZATION COMPONENTS	necto			SL-T16C1	16 NPN inputs	Since connection can be made with an MIL connector, 16 input or 16		
FA COMPONENTS	Ō	input unit		SL-T16C1-PN	16 PNP inputs	output devices can be connected to this slim I/O unit.		
MACHINE VISION SYSTEMS		MIL		SL-TP16C1	16 NPN outputs	which retains the output state just prior to an error on the signal		
UV		output unit		SL-TP16C1-PN	16 PNP outputs			
CURING SYSTEMS	unit	snap-		SL-T8E	8 NPN inputs	Up to 8 input or output devices can be easily connected via e-CON.		
	or I/O	connector input unit		SL-T8E-PN	8 PNP inputs	Also, when there is an abnormality in the signal communication line, the output status just before the abnormality can be preserved since		
	necto	Snap- connector input unit 8 channel snap- connector output unit 16 channel MIL connector input unit 16 channel MIL connector output unit 8 channel MIL connector output unit 8 channel MIL connector output unit 8 channel Snap- connector output unit		SL-TP8E	8 NPN outputs	the output unit is equipped with an output hold function. *For the connector, please separately purchase a commercial		
For Large Scale	-	output unit	(٤	SL-TP8E-PN	8 PNP outputs	product which supports e-CON standards.		
Systems	Note	· Componente	with " (F " mark conform to	the CE marking EMC	Directive			

Note: Components with " $\mathbf{C}\mathbf{C}$ " mark conform to the CE marking EMC Directive.

S-LINK

ORDER GUIDE

S-LINK I/O devices

Designation Appearance (Note 1)		Model No.		Description			
		SL-TB4	4 NPN inputs				
		SL-TB4-PN	4 PNP inputs				
Input		SL-TB8	8 NPN inputs	They are screw-on terminal units to which 4, 8 or 16 input devices			
terminal		SL-TB8-PN	8 PNP inputs	are connectable. Since power supply terminals have been provided for every two input channel, neat wiring is possible.			
	Output terminal	SL-TB16	16 NPN inputs				
≦ l		SL-TB16-PN	16 PNP inputs				
Output terminal		SL-TBP4	4 NPN outputs				
		SL-TBP4-PN	4 PNP outputs				
output		SL-TBP8	8 NPN outputs	They are screw-on terminal units to which 4, 8 or 16 output devices are connectable. The output unit is incorporated with an output			
terminal		SL-TBP8-PN	8 PNP outputs	signal hold function, which retains the output state just prior to an error on the signal transmission line.			
		CE	CE	SL-TBP16	16 NPN outputs		
				-	-	_	SL-TBP16-PN
		SL-TBP4-TY	4 NPN outputs	In the case that a malfunction occurs to the output device that is			
Separate load power supply type		SL-TBP8-TY	8 NPN outputs	being connected, they enable forced turning OFF of the output device connected to the output terminal without halting the complete S-LINK system, by switching off the load power			
Subbia type		SL-TBP16-TY	16 NPN outputs	supply.			
4 relay output		SL-TPR4	4 outputs (Note 2)	They are terminal units to which 4 or 8 output devices can be connected by slim socket relays that can be easily replaced.	-		
4 relay output 8 relay output		SL-TPR8	8 outputs (Note 2)	 They are incorporated with an output signal hold function which retains the output state just prior to an error on the signal transmission line. 			

FIBER SENSORS

LASER SENSORS

LASER SENSORS

ORDER GUIDE

S-LINK I/O devices

SENSORS	0-L	IIIII		VICES					
PHOTO- ELECTRIC SENSORS MICRO	D	esigi	nation	Appearance (Note)	Model No.		Description		
PHOTO- ELECTRIC SENSORS AREA SENSORS UIGHT CURTAINS/ SAFET COMPONENTS		Snap-connector	Sensor main block	T. Sa	SL-BMJ	inductive proximity sensors, limit sw connectors. Changes signals from i the signal transmission line. One SI up to 16 input points.	s of input devices, such as, photoelectric sensors, vitches, and push buttons with the snap female input devices into serial signals and transmits them to L-BMJ can be extended by one SL-BXJ or two SL-BXs,		
PRESSURE / FLOW		-con				In this case, the first channel gets	gnosis output of all the connected devices.		
SENSORS INDUCTIVE PROXIMITY SENSORS PARTICULAR USE SENSORS	Sensor block	Snap	Extension block		SL-BXJ	It can follow either main block, and	allows connection of 8 input devices.		
SENSOR OPTIONS SIMPLE WIRE-SAVING UNITS WIRE-SAVING SYSTEMS	Senso	plug-in unit	Sensor main block	((SL-BM	into serial signals and transmits ther One SL-BM can be extended by the input points.	ree SL-BXs or one SL-BX plus one SL-BXJ, up to 16		
MEASURE- MENT SENSORS STATIC ELECTRCITY PREVENTION DEVICES		For plu	Extension block	((SL-BX	It can follow either main block, and	allows connection of four plug-in units.		
LASER MARKERS PLC	n unit	sepa	blifier- arated toelectric sor	((SU-7J	Its thickness is merely 10 mm 0.394 kinds of sensor heads are suitable v (For details, refer to the SU-7/SH se			
HUMAN MACHINE INTERFACES ENERGY CONSUMPTION VISUALIZATION COMPONENTS	Plug-in unit	Inpu tern	ut ninal unit	SL-TJ1		It allows connection of 1 No. of various kinds of input devices, such as, a photoelectric sensor, an inductive proximity sensor or a limit switch.			
FA				Retroreflective type with polarizing filters	SL-A11	Thru-beam type 10 m 32.808 ft			
MACHINE VISION SYSTEMS		INK k-up	direct		SL-A13	Thru-beam type 30 m 98.425 ft	These can be hooked up to the S-LINK cable, at any		
UV		toele	ectric		SL-A19	Retroreflective type with polarizing filters 0.1 to 5 m 0.328 to 16.404 ft	place, without any interface.		
CURING				Thru-beam type Diffuse reflective type	SL-A12	Diffuse reflective type 700 mm 27.559 in			
For Large Scale Systems For Medium Scale Systems		k-up	direct picking		SL-N15	Sensing range: 0.2 to 3 m 0.656 to 9.843 ft $\left(\begin{array}{c} 0.05 \text{ to 1 m } 0.164 \text{ to 3.281 ft} \\ \text{when the switch is set to SHORT} \end{array}\right)$ Beam pitch: 25 mm 0.984 in Sensing height: 100 mm 3.937 in Sensing object: ø35 mm ø1.378 in or more opaque object	It is a parts-taking verification sensor with five sensing beams and can be hooked up to the S-LINK cable without any interface. Both the emitter and the receiver are incorporated with bright orange LED job indicators that are easily visible to the operator.		
S-LINK			switch		SL-PK01	allows it to be installed on small-size with integrated connector and magr installation and provide freedom in f and vertically). Up to 64 units can b	on pipes. Its compact size (just 90 mm 3.543 in wide) ed shelving used with compact parts, while its cable netic (Hall element) contactless switch simplify terms of switch operation (back and forth, left and right, e connected to a single S-LINK control unit.		

Note: Components with " $\mathbf{C}\mathbf{C}$ " mark conform to the CE marking EMC Directive.

ORDER GUIDE

Connectors

Connectors						
Designation	Appearance	Model No.		Description		
Hook-up connector	(Note)	SL-J1A 10 pcs. per set	It creates a "T"-branch connection For 0.5 mm ² flat cable to 0.5 mm ² Applicable hook-up pliers: SL-JPS			
Cable extension hook-up connector	(Note)	SL-J3A 10 pcs. per set	It can extend the S-LINK exclusive For 0.5 mm ² flat cable to 0.5 mm ² Applicable hook-up pliers: SL-JPS	flat cable connection (Black)		
End hook-up connector	(Note)	SL-JE 5 pcs. per set	For 0.5 mm ² flat cable (Gray)	must be connected at the end of the main cable. or 0.5 mm² flat cable (Gray) oplicable hook-up pliers: SL-JPS, SL-JPD		
Cable attached end connector		SL-JE-RC 1 pc.	/hen cabtyre cable is used as the main cable, it must be connected at the end of the main able.			
Cable end socket- branch hook-up connector	(Note)	SL-JK 10 pcs. per set	t enables one I/O device to be connected at the S-LINK exclusive 0.5 mm² flat cable 4-core) end with the snap male connector (SL-CP □). (Light blue) Applicable hook-up pliers: SL-JPS, SL-JPD			
"T"-branch hook-up connector		SL-JK1 10 pcs. per set	It enables one I/O device to be bra flat cable (4-core) with the snap m Applicable hook-up pliers: SL-JPS			
4-pin type snap female	(Note)	SL-CJ1 (White) 10 pcs. per set	For 0.08 to 0.2 mm ² (Conductor cross-section area) Wire dia.: ø0.7 to ø1.2 mm ø0.028 to ø0.047 in	This snap female connector is used for plugging into the socket of SL-BMJ or SL-BXJ to connect an input device, or into the snap male connector SL-CP1 or		
connector	(Note)	SL-CJ2 (Black) 10 pcs. per set	For 0.3 mm ² (Conductor cross-section area) Wire dia.: Ø1.1 to Ø1.6 mm Ø0.043 to Ø 0.063 in	SL-CP2. Applicable hook-up pliers: SL-JPC		
	(Note)	SL-CP1 (White) 10 pcs. per set	For 0.08 to 0.2 mm ² (Conductor cross-section area) Wire dia.: ø0.7 to ø1.2 mm ø0.028 to ø0.047 in	This snap male connector is used for connecting		
I-pin type snap nale connector	(Note)	SL-CP2 (Black) 10 pcs. per set	For 0.3 mm ² (Conductor cross-section area) Wire dia.: ø1.1 to ø1.6 mm ø0.043 to ø 0.063 in			
	(Note)	SL-CP3 (Greenish blue) 10 pcs. per set	For 0.5 mm ² (Conductor cross-section area) Wire dia.: ø1.7 to ø2.5 mm ø0.067 to ø0.098 in	(for the SL-CP1 and SL-CP2) SL-JPE (for the SL-CP3)		
lata: Far III. comp	atibility, please contact or		0.007 10 00.090 11			

For Large Sc Systems

UV CURING SYSTEMS

S-LINK

FIBER SENSORS

1048

ORDER GUIDE

LASER Basic units

PHOTO- ELECTRIC SENSORS MICRO	D	esig	nation	Appearance	Model No.		Description
PHOTO- ELECTRIC SENSORS			Input		SL-M8	8 inputs	
AREA SENSORS		be	module		SL-M16	16 inputs	
LIGHT CURTAINS / SAFETY COMPONENTS PRESSURE / FLOW		Vertical type	I/O mixed module		SL-M4P4	4 inputs and 4 outputs	
INDUCTIVE PROXIMITY SENSORS		Ve	Output	and and and a second	SL-MP8	8 outputs	
PARTICULAR USE SENSORS	odule		module		SL-MP16	16 outputs	These are IC type modules which enable external connection of
SENSORS SENSOR OPTIONS	I/O module		Input		SL-M8F	8 inputs	address setting switches and operation indicators. They increase the design flexibility.
SIMPLE WIRE-SAVING UNITS		ype	module		SL-M16F 16 inputs		
WIRE-SAVING SYSTEMS		Horizontal type	I/O mixed module		SL-M4P4F	4 inputs and 4 outputs	
MEASURE- MENT SENSORS		Hori	Output	The state of the s	SL-MP8F	8 outputs	
STATIC ELECTRICITY PREVENTION DEVICES			module		SL-MP16F	16 outputs	

Optional units

PLC HUMAN MACHINE INTERFACES	Designation	Appearance	Model No.	Description
INTERFACES ENERGY CONSUMPTION VISUALIZATION COMPONENTS FA COMPONENTS	Booster	ر و	SL-BS1A	It can extend the signal transmission distance by 200 m 656.168 ft. A maximum of seven boosters can be connected for one S-LINK control unit. However, one booster can never be followed by another booster in series.
MACHINE VISION SYSTEMS UV CURING SYSTEMS	Handy monitor	IIII.	SL-HM1	It can be connected at any place on the signal transmission line and the I/O states can be checked in batches of 16. The handy monitor is also incorporated with the S-LINK control functions, so that, for example, it can perform an I/O check on conveyor system segments, still under assembly, even without the S-LINK controller.

Note: Components with " CE " mark conform to the CE marking EMC Directive.



LASER MARKERS

FIBER SENSORS

ORDER GUIDE

Others

Others						LA SE		
Designation	Appearance	Model No.			Description	PH EL SE		
8-branch connector tap		SL-T8PW		s easily to up to 8 thru-bear es with snap male connect	n type photoelectric sensor emitters or S-LINK ors.			
2-pin type snap female	(Note)	SL-CJ12 (White)	ø0.028 to ø0.047 in		It can be used for cable extension of 2-wire I/O devices by combining with a 2-pin type snap male	- CUF SAF PR FLC 		
connector	(Note)	SL-CJ22 (Black)		m² or cross-section area) ∞01.1 to ø1.6 mm ∞0.043 to ø 0.063 in	connector SL-CP⊡2. Applicable hook-up pliers: SL-JPC	PR SE 		
2-pin type	(Note)	SL-CP12 (White) 10 pcs. per set	(Conduct	to 0.2 mm ² or cross-section area) Ø0.7 to Ø1.2 mm Ø0.028 to Ø0.047 in	section area) ø1.2 mm It can be used for cable extension of 2-wire I/O			
snap male connector	(Note)	SL-CP22 (Black) 10 pcs. per set	Ø0.028 to Ø0.047 in For 0.3 mm² (Conductor cross-section area) Wire dia.: Ø1.1 to Ø1.6 mm Ø0.043 to Ø 0.063 in		connector SL-CJ⊒2. Applicable hook-up pliers: SL-JPC	SIM WIF UNI		
	15 2	SL-RCM100 SL-RCM100-PK	Length:	D line: White ① D line: White with pink stripe ②		- ME ME SE		
Exclusive ① flat cable (4-core)		SL-RCM100-GN SL-RCM100-GY	100 m 328.084 ft	D line: White with green stripe ③ D line: White with gray stripe ④	S-LINK / S-LINK V exclusive flat cable (4-core) Conductor cross-section area: 0.5 mm ² Outer diameter: ø2.5 mm ø0.098 in × 4	STA ELE PRE DEV		
	(Note)	SL-RCM200	Length: 200) m 656.168 ft, D line: White ⑤		LA MA		
Exclusive cable	,	SL-CBM100	Length: 1	00 m 328.084ft	S-LINK / S-LINK V exclusive cabtyre cable (4-core) Conductor cross-section area: 0.5 mm ²	- Pl		
(4-core)	T	SL-CBM200	Length: 2	200 m 656.168 ft	Outer diameter: ø7.4 mm ø0.291 in (Hook-up connector cannot be used)			
Exclusive pliers		SL-JPS	Hook-up	connector (SL-J □) can be	connected in one grip.	- INT ENE CON VISI CON FA		
SL-CP3 exclusive pliers	A CONTRACTOR OF THE OFFICE OFF	SL-JPE	4-pin type	e snap male connector (SL	-CP3) can be connected in one grip.			
Male / female connector exclusive pliers		SL-JPC			J2, SL-CJ11/CJ12) and snap male connector n be connected in one grip.	- CL SY		
Address label		SL-MA1-SET 4 sheets. per set	a 4-sheet	By sticking the labels on the respective S-LINK devices, the set addresses can be confirmed at one glance. SL-MA1-SET is available in white, pink, green and gray colors, a 4-sheet set, and is convenient when used by matching the color with that of the S-LINK exclusive flat cable (100 m 328.084 ft type).				
DIN rail mounting bracket for SL-CH □	A CONTRACT	MS-CH×10 10 pcs. per set	1.378 in v	width DIN rail. They can als	CH□(-PN) I/O units to be mounted onto a 35 mm so be affixed with screws. two M4 pan-head screws separately.)	- For Sca		
I/O unit holder for SL-CH □		MS-SLH 5 pcs. per set		to mount the SL-CH □(-PN arrange two M4 pan-head s		-		

Note: For UL compatibility, please contact our office.

LASER SENSORS

PHOTO-ELECTRIC SENSORS

PHOTO-ELECTRIC SENSORS AREA SENSORS

LIGHT CURTAINS / SAFETY COMPONENTS PRESSURE / SENSORS INDUCTIVE PROXIMITY SENSORS

PARTICULAR

MICRO

ORDER GUIDE

Accessories

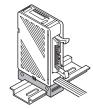
• NPS-CV Protective cover for the SL-CU1A, SL-BS1A or SL-CU1-485



• RF-230 (Reflector for the SL-A19)



• MS-SL-2 (Mounting base for connector I/O units)

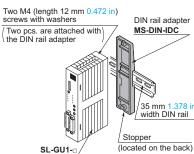


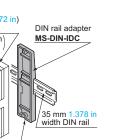
OPTIONS

USE SENSORS				
SENSOR	Designation	Model No.	Description	
SIMPLE WIRE-SAVING UNITS	Sensor mounting bracket for SL-A	MS-NX5-1	Foot angled mounting bracket (The thru-beam type sensor needs two brackets.)	
WIRE-SAVING SYSTEMS		MS-NX5-2	Foot biangled mounting bracket (sensor protection bracket) (The thru-beam type sensor needs two brackets.)	
MEASURE- MENT SENSORS STATIC		MS-NX5-3	Back angled mounting bracket (The thru-beam type sensor needs two brackets.)	
ELECTRICITY PREVENTION DEVICES LASER MARKERS	Sensor mounting	MS-NA1-1	Four bracket set Four M4 (length 15 mm 0.591 in) screws with washers, eight nuts, four hooks, four spacers	
PLC	bracket for SL-N15	MS-NA2-1	and eight M4 (length 18 mm 0.709 in) screws with washers are attached. (Spacers are not attached with MS-NA1-1 .)	
HUMAN MACHINE INTERFACES ENERGY CONSUMPTION VISUALIZATION COMPONENTS	Sensor protection bracket for SL-N15	MS-NA3	It protects the sensor body. Two bracket set (Silver) Four M4 (length 15 mm 0.591 in) screws with washers, and four nuts are attached.	
FA COMPONENTS MACHINE VISION SYSTEMS		MS-NA3-BK	It protects the sensor body. Two bracket set (Black) Four M4 (length 15 mm 0.591 in) screws with washers, and four nuts are attached.	
UV CURING SYSTEMS	Reflector mounting bracket	MS-RF23	Reflector mounting bracket for RF-230	
	Slit mask for SL-N15	OS-NA1-5 10 sheets. per set	The seal type slit mask restrains the amount of beam emitted or received. (Take care that the sensing range will be reduced when the slit mask is used.	
For Large Scale Systems For Medium Scale Systems	Connector I/O unit mounting bracket, 8-branch connector tap mounting bracket	MS-DIN-3	It is a DIN rail mounting bracket which can be fitted on the mounting base of SL-T8J, SL-TP8J, SL-T16C1, SL-TP16C1 and SL-T8PW.	
S-LINK	DIN rail adapter	MS-DIN-IDC	This adapter is used when mounting the SL-GU1 -□ to the 35 mm 1.378 in width DIN rail.	

DIN rail adapter

• MS-DIN-IDC





Sensor mounting bracket for SL-AD





Two M4 (length 25 mm 0.984 in) screws with washers and two M4 nuts are attached.

Sensor mounting bracket for SL-N15

• MS-NA1-1

are attached

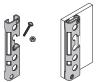


M4 screws with washers, nuts and hooks are attached.

Sensor protection bracket for SL-N15

• MS-NA3

• MS-NA3-BK



M4 screws with washers and nuts are attached.

Slit mask for SL-N15

• OS-NA1-5



• MS-NX5-3



Two M4 (length 25 mm 0.984 in) screws with washers and two M4 nuts



M4 screws with washers, nuts, hooks and spacers are attached.

Reflector mounting bracket

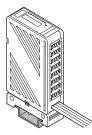
• MS-RF23



Two M4 (length 10 mm 0.394 in) screws with washers are attached.

Connector I/O unit mounting bracket, 8-branch connector tap mounting bracket

• MS-DIN-3



• MS-NX5-2



Two M4 (length 25 mm 0.984 in) screws with washers and two M4 nuts

are attached.





PRECAUTIONS FOR PROPER USE

- Never use this product in a device for personal protection.
- In case of using sensing devices 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.



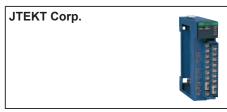
- Handle safety related or emergency stop signals without passing them through the S-LINK system due to fail-safe considerations.
 Referse touching this product, remove any electrostatic charge that may be present on your body. There is a
- Before touching this product, remove any electrostatic charge that may be present on your body. There is a danger of this product getting damaged due to the electrostatic charge.

The sensor & wire-saving link system **S-LINK** are not mutually interchangeable with the flexible wire-saving system **S-LINK V** and cannot be mixed or matched. Please exercise caution.

Nevertheless, any of the exclusive 4-core flat cable, connectors, hook-up pliers, or **SL-T8PW** 8-branch connector taps]

Information about S-LINK partner makers Befer directly to our partner makers for more details pertaining to the S-LINK compatible devices introduced here.

[Controllers suitable for S-LINK]



[S-LINK direct hook-up I/O devices]

Component indicator lamp Yazaki Industrial Chemical Co., Ltd.	Manifold electromagnetic valves Koganei Corp.	Manifold electromagnetic valves SMC Pneumatics	Contraction of the second	
Manifold electromagnetic valves CKD Corp.		1		FC Sj St

Information about the "Design Manual" and "Construction Manual" for the S-LINK sensor & wire-saving link system

We have two manuals available with more detailed information pertaining to the S-LINK sensor & wire-saving link system. Please contact our office for details.



S-LINK Design Manual

Holds information necessary when designing the layout for the **S-LINK** system.

Refer to it for specifications and for illustration showing exterior dimensions.



S-LINK Construction Manual

Holds information necessary when introducing, constructing, and activating the **S-LINK** system. Refer to it for construction or startup cautionary items.

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

SIMPLE WIRE-SAVING UNITS

WIRE-SAVING SYSTEMS MEASURE-MENT SENSORS

PLC

MACHINE INTERFACES ENERGY CONSUMPTION VISUALIZATION COMPONENTS

FA COMPONENTS

MACHINE VISION SYSTEMS UV CURING SYSTEMS



单击下面可查看定价,库存,交付和生命周期等信息

>>Panasonic(松下)