



Digital link sensors AnyWireASLINK

Mitsubishi Electric's programmable controllers together with Anywire's digital link sensors realize seamless sensor communication





"Higher operation ratio", "shorter wiring/maintenance hours", and "space saving" are the three fundamental concepts of the digital link sensor AnyWireASLINK (AnyWire Actuator Sensor LINK).

AnyWireASLINK enables a programmable controller to centrally monitor all the sensor states to improve the operation ratio while reducing the wiring and maintenance hours.

AnyWireASLINK also helps to save space in the machine and control system that uses various sensors.

AnyWireASLINK is compatible with iQ Sensor Solution (iQSS) which is an innovative solution that realizes TCO reduction.

Visible.





Mitsubishi Electric Corporation, a global leader in industrial automation technology, introduces new possibilities in sensor technology.

As a total solution provider, Mitsubishi Electric Corporation offers a wide range of advanced industrial automation products and solutions. From enterprise level information systems to shop floor level field networks, Mitsubishi Electric Corporation can provide a seamless network that optimizes operations from development to maintenance.

Anywire

Anywire has consistently stayed one step ahead when it comes to wire saving in factories. With its innovative ideas, Anywire contributes to the factory automation industry.

Starting with the original development of the world's first 'double duplex' communication chip, Anywire has created new products such as system sensors that merge sensing with wire-saving and have realized advanced sensor innovation with AnyWireASLINK.

Supporting iQ Sensor Solution (iQSS) to broaden sensor control possibilities

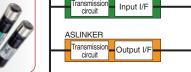
-Simplifying sensor setting and monitoring-











Circuit block diagram

ASLINKER

ASLINKTERMINAL...P.12 (compact 8-point terminal)

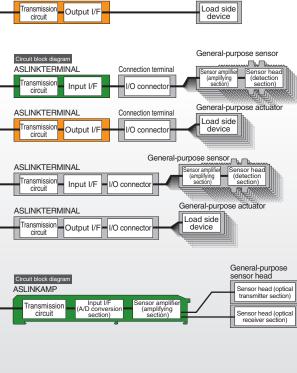


ASLINKAMP...P.13



ASLINKSENSOR---P.14





General-purpose sensor

General-purpose actuator





This solution strengthens the collaboration of the sensor, programmable controller, display and engineering environment to achieve further TCO* reductions for the user.

*TCO: Total Cost of Ownership





AnyWireASLINK Directly connecting to the programmable controller to centrally monitor sensor statuses!

ASLINKSENSOR

Input I/F (A/D conversion



Preventive maintenance can prevent slight stop, etc., by detecting disconnection of connector sensors and by visualizing the internal state, by that contributing to higher operation ratio.



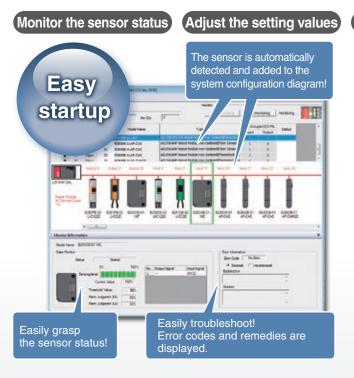
Settings such as the sensor sensitivity can be set and adjusted from the programmable controller, by that contributing to shorter wiring / maintenance hours and improved traceability.

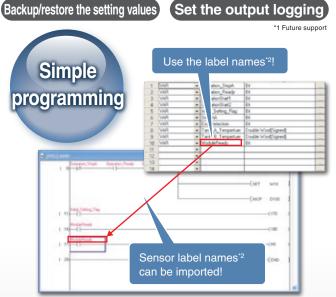


Space saving can be achieved by using the ASLINKER or ASLINKTERMINAL and eliminating the relay box.

Engineering Environment

EXWORK 52 Easily monitor and adjust sensor status and logging settings¹¹ in the engineering environment.





- *2 These character strings are displayed instead of the device name, and help to improve the programming efficiency and prevent mistakes when inputting devices
- FB (Function Blocks) and sample ladders are scheduled to be released. Please contact your local Mitsubishi Electric office or representative for further details.

GOT Display





Use the GOT at the site to easily monitor and adjust the sensor status and complete the logging settings³!

Monitor the sensor status

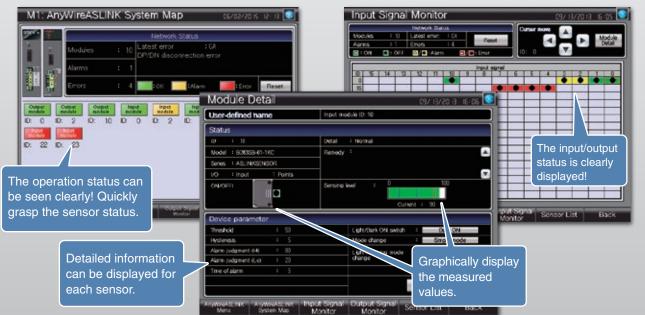
Adjust the setting values

Backup/restore the setting values

Set the output logging

*3 Future support

The slave module type and ID (address) status can be confirmed.



To obtain the monitor screen for the adjustment shown above, please contact your local Mitsubishi Electric office or representative (The monitor adjustment screen for GOT 2000 can be found in the GOT display screen design software MELSOFT GT Works3.) With the GOT2000 Series, sensor setting and monitoring can also be adjusted by using iQSS utility.

A tool for connecting! Visualizing! For a more seamless sensor control!

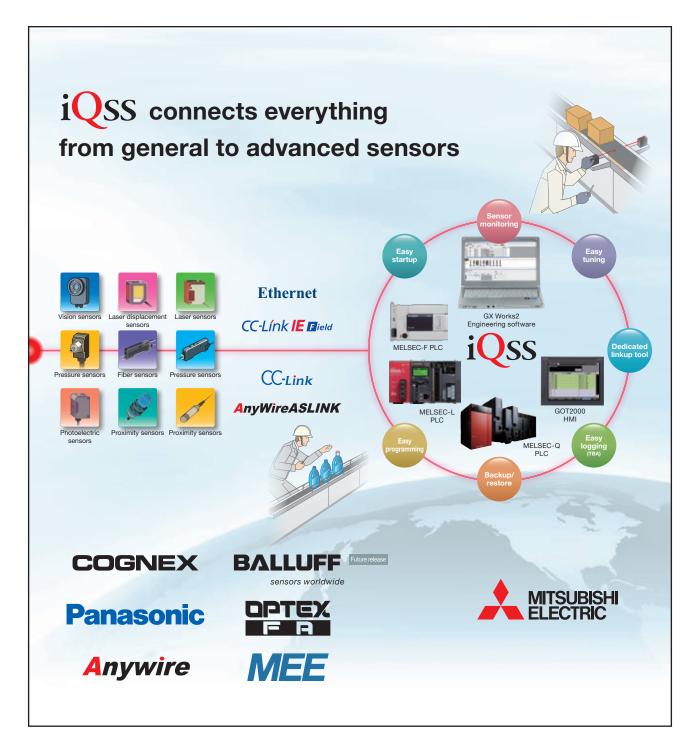
Sensors used on the manufacturing floor are becoming more intelligent and complex, requiring even more maintenance of equipment and the overall management of various configuration setup software. With iQSS, the intelligent sensor solution provided by Mitsubishi Electric, configuration and maintenance of sensors are further simplified with the connectivity to other components such as automation controllers, HMIs, and engineering software even further enhanced reducing the overall TCO*.

* Total Cost of Ownership



Refer to the "Sensor Solution iQ Sensor Solution Catalog for details.

L(NA)16029ENG



Do you have problems to solve at your production site?

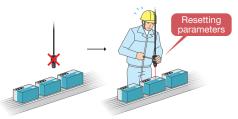
Sensor setting

Complex sensors require many setting items, increasing setup and maintenance time.



Replacing sensors

When sensors fail, they don't just have to be replaced. It is also necessary to reset the parameters for the new sensor. System recovery takes time.



Duplicating lines

When you reorganize your factory space, the parameters for each sensor on your existing lines must be individually set. Creating multiple lines takes time.



Changing the set-up

When you manufacture multiple products on a single line, sensor parameters have to be changed every time the product changes. Changing the set-up takes time.



Enhanced linkups between third party partner sensors and Mitsubishi PLCs, HMIs and engineering software reduces customers' TCO.

System design

To manage projects simply, we provide a workspace tree that enables projects to be managed in a single location, and a system configuration chart that depicts the entire system graphically.



Implementation

Functions are provided that allow monitoring from a single screen based on the system configuration chart so that the causes of problems can be identified quickly. This also shortens the time taken to adjust sections involving multiple devices.



Monitoring

Programming

The labels used by PLCs can also be used by HMIs and sensors. This takes all the bother out of label setting. GOT sample screen libraries, sample ladders and function blocks, etc. are supported.



Operation & maintenance

To make backups less laborious, batch read/write functions are provided for PLC, HMI and sensor settings

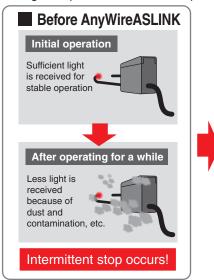


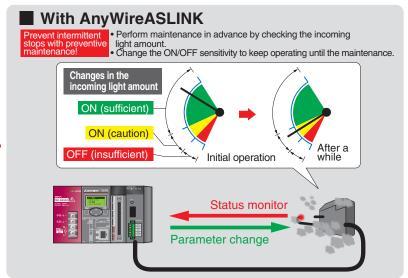
iQSS eliminates the problems of conventional sensor control.

Features of AnyWireASLINK

1. Preventive maintenance – preventing intermittent stops ASLINKER ASLINKER TERMINAL

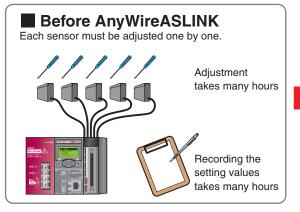
AnyWireASLINK enables a programmable controller to monitor and save the sensor information and to change the parameters. Perform preventive maintenance to prevent intermittent stops.

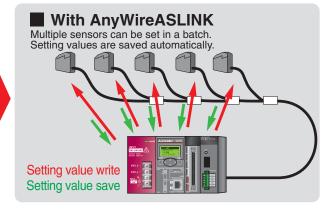




2. Reduce adjustment hours, improve traceability ASLINKER TERMINAL

Adjusting the detection level of multiple sensors and recording the sensor values takes a lot of time. AnyWireASLINK enables a personal computer or GOT to set detection levels and to save setting values at once. AnyWireASLINK also provides traceability in sensor systems.

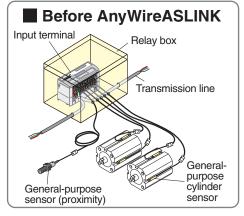




3. Eliminate relay boxes (space saving)

ASLINKER ASLINK

AnyWireASLINK is equipped with miniature relay connector-size terminals, which are capable of branching off in pairs. Depending on the installation environment, it is possible to eliminate the relay box and downsize the system.



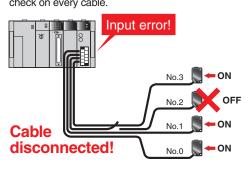


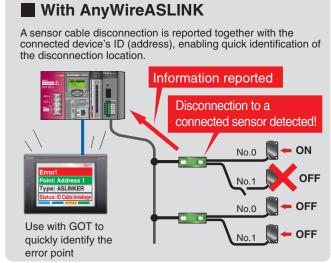
4. Sensor cable disconnection detection (error recovery support) ASLINKER¹

In AnyWireASLINK, disconnected sensor cables are quickly detected and reported to a programmable controller. If an input error occurs due to a cable disconnection, the cause and faulty place are pinpointed immediately, supporting early recovery of the system.

Before AnyWireASLINK

If a sensor cable is disconnected in a system where a programmable controller is connected with multiple sensors, the disconnected location had to be traced from the contact signals with thorough check on every cable.





*1 When 2-wire type sensors are connected.

5. RAS function*2

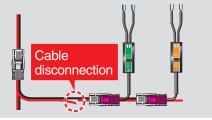




In addition to the features above, AnyWireASLINK is equipped with RAS functions for basic transmission. Transmission errors can be monitored with a programmable controller.

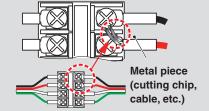
Transmission cable disconnection detection

If a transmission cable is disconnected, the AnyWireASLINK master module detects which module is disconnected, narrowing down the cable disconnection location.



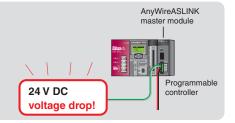
Transmission cable short-circuit detection

If the transmission cable is short-circuited, AnyWireASLINK master module detects it and stops data transmission, indicating a short-circuit occurrence on the transmission line.



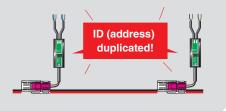
Transmission circuit power drop detection

The AnyWireASLINK master module can detect a voltage drop in the transmission circuit power (24 V DC) supplied from an external source.



Duplicated ID, unset ID detection

If an AnyWireASLINK master module finds a connected machine assigned with duplicated IDs (addresses), the master module reports an error to support ID (address) mis-setting checks.



Overall length Max. 200 m

Flexible topology

Max. 512 points* 2-wire (or 4-wire (2 transmission wires 2 power wires)

Fransmission clock

AnyWireASLINK series



- MELSEC-Q
 AnyWireASLINK
 master module
 QJ51AW12AL
- MELSEC-L
 AnyWireASLINK
 master module
 LJ51AW12AL
- ■MELSEC-F AnyWireASLINK master block FX3U-128ASL-M
- CC-Link IE Field– AnyWireASLINK bridge module NZ2AW1GFAL
- CC-Link-AnyWireASLINK bridge module NZ2AW1C2AL

AnyWireASLINK master modules connect sensor I/O to programmable controllers.

A master module controls up to 512 I/O points*1 with freely arranged miniature sensors.

The power for sensors is input from AnyWireASLINK transmission line (2-wire), allowing sensors to be easily added.

Disconnected sensor detection, slave module setting, and many other setup features can all be found in the engineering software GX Works2. With this integrated software, the engineering hours will be drastically reduced.

*1 MELSEC-F Series has 128 points.

Basic configuration

Either the 2-wire type or 4-wire slave module can be selected according to the load current for AnyWireASLINK. In addition to the 2-wire type, a 4-wire type can also be used by supplying the local power.

2-wire type

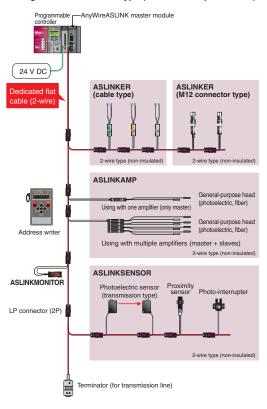
If the load current is low, 2-wire type (non-insulated) slave devices can be used without an external power supply.

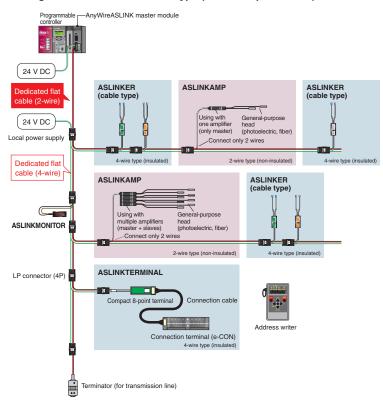
4-wire type

The 4-wire type (insulated) slave devices require an external 24 V DC power supply to satisfy large load current applications, for example.

Configuration with 2-wire type (with no local power feed)

Configuration with 2-wire/4-wire type (with local power feed)





MELSEC-Q/MELSEC-L/MELSEC-F Series AnyWireASLINK Master Module Performance

It	tem	QJ51AW12AL	LJ51AW12AL	FX3U-128ASL-M				
Number of connected I/O po	pints	Max. 512 points (256 input points/256 output points) Max. 128 points (128 input points/128 output points)						
Number of connected modules		Max. 128 modules (v	Max. 128 modules (varies according to each slave module's current consumption)					
Maximum transmission distance (overall length)*1			200 m*2					
Transmission method		DC p	ower superimposed total frame cyclic me	ethod				
Connection style		Bus type (mul	ti-drop method, T-branch method, tree b	ranch method)				
Transmission protocol			Dedicated protocol (AnyWireASLINK)					
Error control			Checksum, double verification method					
Transmission clock			27.0 kHz					
RAS function		Transmission cable disconnection detection function	on, transmission cable short-circuit detection function	n, transmission cable power drop detection function				
Transmission cable (DP, DN)		* UL compatible universal 2-wire cable (VCTF, VCT 1.25 mm², 0.75 mm², rated temperature 70°C or more) * UL compatible universal cable (1.25 mm², 0.75 mm², rated temperature 70°C or more) * Dedicated flat cable (1.25 mm², 0.75 mm², rated temperature 90°C)						
Power cable (24 V, 0 V)*1		* UL compatible universal 2-wire cable (VCTF, VCT 0.75 mm²2.0 mm², rated temperature 70°C or more) * UL compatible universal cable (0.75 mm²2.0 mm², rated temperature 70°C or more) * Dedicated flat cable (1.25 mm², 0.75 mm², rated temperature 90°C)						
Transmission cable supply of	current*1	Using 1.25 mm² cable: Max. 2A Using 0.75 mm² cable: Max. 1A						
Number of EEPROM write t	imes	Max. 100,000 times						
Power supply			6 V DC (24 V DC -10+15%), ripple volt mmended voltage: 26.4 V DC (24 V DC - Module current consumption: 0.1A ansmission cable current supply: Max. 2.	+10%)				
	Internal current consumption (5 V DC)	Voltage: 5 Current consum		Voltage: 5 V DC±5% Current consumption: Max. 0.13A				
Number of occupied input/o	utput points	32 points (I/O assignme	ent: 32 points for intelli.)	8 points				
External dimensions		98.0 mm(H)× 27.4 mm(W)×100.0 mm(D)	90.0 mm(H)× 28.5 mm(W)×104.5 mm(D)	90.0 mm(H)× 43.0 mm(W)×95.5 mm(D)				
Weight		0.2 kg						

^{*1:} Refer to the following table for the relation of the overall length, transmission cable (DP, DN) wire diameter and transmission cable current supply.

In some slave modules with cables, the wire diameter of the transmission cable (DP, DN) integrated with the module may be 0.75 mm² or less. There is no problem if the transmission cable (DP, DN) is as shown below.

Transmission cable (DP, DN)	Transmission cable supply current value						
diameter	Overall length 50 m or less	Overall length 50 m100 m	Overall length 100 m200 m				
1.25 mm ²	MAX 2A	MAX 1A	MAX 0.5A				
0.75 mm ²	MAX 1.2A	MAX 0.6A	MAX 0.3A				

^{*2:} With the slave module having an integrated transmission cable (DP, DN) and module, the length of the transmission cable (DP, DN) is included in the overall length.

CC-Link-AnyWireASLINK Bridge Module Performance

Item AnyWireASLINK performance		NZ2AW1C2AL
		Same as MELSEC-Q/MESELC-L Series AnyWireASLINK master module
CC-Link performance		CC-Link Ver. 2.0 remote device station
Power supply	External power supply	Voltage: 21.627.6 V DC (24 V DC -10+15%), ripple voltage 0.5 Vp-p or less Recommended voltage: 26.4 V DC (24 V DC +10%) Module current consumption: 0.2A Transmission cable supply current: 2A MAX.*1
External dimensions		96 mm(H)× 43 mm(W)× 102 mm(D)
Weight		0.2 kg

CC-Link IE Field-AnyWireASLINK Bridge Module Performance

ı	tem	NZ2AW1GFAL
AnyWireASLINK performance		Same as MELSEC-Q/MESELC-L Series AnyWireASLINK master module
CC-Link IE Field performand	ce	Intelligent device station
Power supply	External power supply	Voltage: 21.627.6 V DC (24 V DC -10+15%), ripple voltage 0.5 Vp-p or less Recommended voltage: 26.4 V DC (24 V DC +10%) Module current consumption: 0.3A Transmission cable supply current: 2A MAX.*1
External dimensions		96 mm(H)× 43 mm(W)× 102 mm(D)
Weight		0.2 kg

Communication Performance (Transmission Cycle Time*3)

Number of transmission	64 points	128 points	256 points*4	512 points*4
I/O point setting	(32 input points, 32 output points)	(64 input points, 64 output points)	(128 input points, 128 output points)	(256 input points, 256 output points)
1 transmission cycle time	2.3 ms	3.5 ms	5.9 ms	10.6 ms

 ^{*3:} The transmission cycle time is the time it takes for the master module to refresh the slave module's input/output data.
 *4: Up to 128 transmission I/O setting points can be set for the FX3U-128ASL-M.

General-purpose sensor connection type, actuator connection type

ASLINKER

Number of I/O points: 2 points

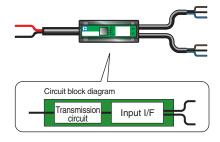


ASLINKER directly connects a general-purpose sensor (input) or actuator (output) to the AnyWireASLINK transmission line.

ASLINKER is a compact terminal with 2 I/O points and a wide range of diagnostic features including the cable disconnection detection.

* Use ASLINKTERMINAL if multiple input/output points are required.

AnyWireASLINK technology has been brought to a general-purpose sensor



Being as small as a relay connector, ASLINKER can be stored in a cable conduit and easily bundled with the cables. The relay box, required previously, can be eliminated.

Use of generalpurpose sensor 1

By supporting the existing sensors and switches, ASLINKER possibly saves wiring space.

Use of general-purpose sensor 2

ASLINKER is equipped with sensor disconnection detection, which discriminants a cable disconnection from a sensor OFF state. Error locations can be easily found, and the downtime can be minimized.

* When 2-wire type sensors are connected.

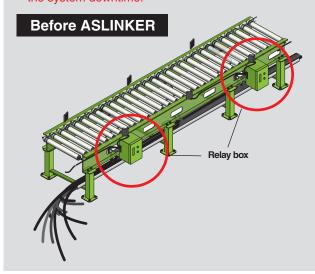
Conveyor line application

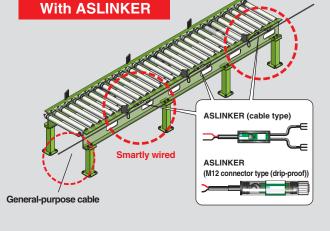
M12 connector type

- The sensor wiring was congested in the relay box making it difficult to add or remove sensors.
- Even if the sensor cable was cut off by an interfering workpiece, it was not visible and was difficult to perform maintenance.
- The box housing relay terminals were installed onto a side surface, deforming the layout and interfering passage of workers.
- Wires had to be housed in a relay box to be protected from conveyorcleaning water splashes, and those relay boxes were taking up space.

By using ASLINKER ...

- ✓Compact ASLINKERs can be dispersed and connected to each sensor, making it easy to add or remove sensors.
- ✓ASLINKER is equipped with a function that monitors each sensor for disconnection. This function makes the system operating state more visible and minimizes the system downtime.
- ✓Compact ASLINKERs can be dispersedly installed with sensors, eliminating the need of relay boxes.
- √The drip-proof ASLINKER (M12 connector type) allows easy expansion without a relay box.





General-purpose sensor connected type, actuator connected type

ASLINKTERMINAL

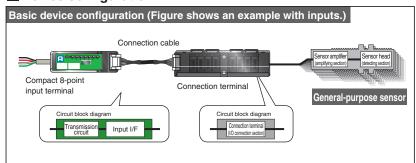
Number of I/O points: 8 points or 16 points

ASLINKTERMINAL directly connects a general-purpose sensor (input) or actuator (output) to the AnyWireASLINK transmission line. In a system with many I/O devices, wiring is compactly arranged with ASLINKTERMINAL.

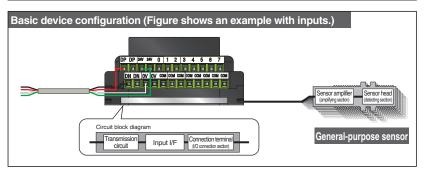
* Use ASLINKER when preventive maintenance by the cable disconnection detection function is necessary.

Compact 8-point terminal Connection terminal

■ Device configuration







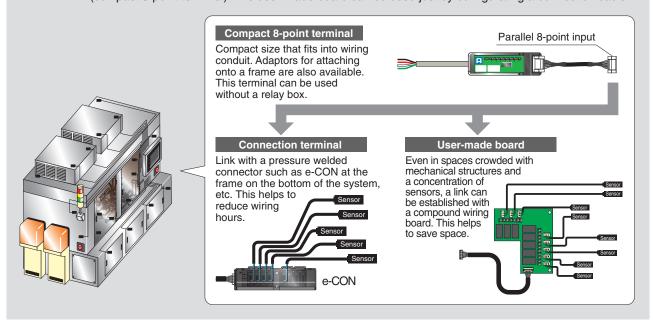
Semi-conductor manufacturing system application

By using ASLINKER ...

While the semiconductor manufacturing system needs to be compact, it requires many sensors so it is essential to efficiently arrange the bundles of sensor cables in the system.

ASLINKTERMINAL is compact, and multiple sensor cables can be easily connected using e-CON, etc. Wiring hours and space can be reduced, allowing downsizing and a shorter system delivery.

Even if the sensors are congested on the user-made board, these can be directly connected with ASLINK-TERMINAL (compact 8-point terminal). The user-made board can be used just by configurating a connection cable.



Sensor head separated type

ASLINKAMP

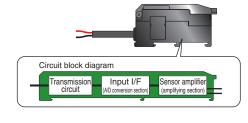


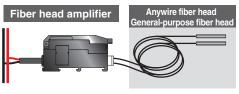
Number of input points: 1 point for master, 1 point for slave

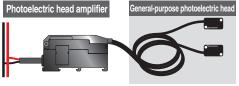
Being equipped with sensor amplifies, ASLINKAMP connects general-purpose sensor heads to the AnyWireASLINK transmission line. A variety of sensor heads provide "visualization", "preventative maintenance", "intelligence" and other added values.

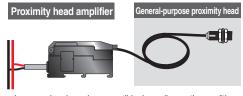
AnyWireASLINK functionalities are brought into sensor amplifiers. General-purpose fiber, photoelectric, and proximity heads are directly connectable.











* General-purpose head may be compatible depending on the conditions.



Setting the sensitivity of a plastic container conveyor

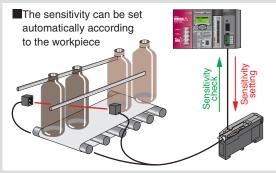
- A conveyor line for products with different transparencies needed several sensors for each transparency. Installation and operation of multiple sensors were difficult.
- Multiple sensors meant an increased possibility of sensor interferences, which were hard to avoid.
- A multiple of photoelectric sensors, which require complicated setting value control and adjustment, were required, reducing no cost.

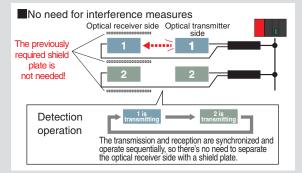


By using ASLINKAMP ...

- √Through ASLINKAMP, which supports sensitivity setting changes, a single programmable controller can connect with different sensors and set/change the sensitivity for each.
- ✓ASLINKAMP, which operates by time sharing, does not require communication interference measures for sensors.
- ✓ The setting values can be read from the programmable controller, so the sensitivity check and control can be easily automated.

Example of sensitivity setting application for plastic container detection



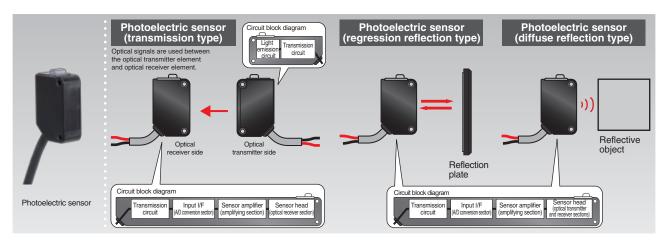


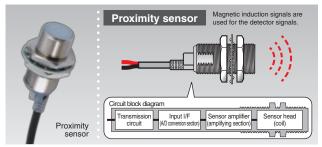
Amplifier integrated type

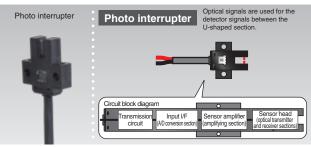
ASLINKSENSOR

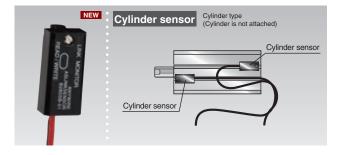
Number of I/O points: 1 point

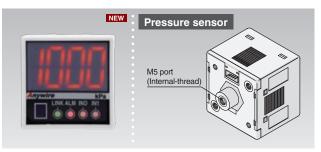
ASLINKSENSORs (photoelectric, proximity, photo interrupter, etc.) can be directly connected to the AnyWireAS-LINK transmission line. ASLINKSENSORs, which incorporate a part of transmission lines, take up minimum space and provide "visualization", "preventative maintenance", "intelligence" and other added values.







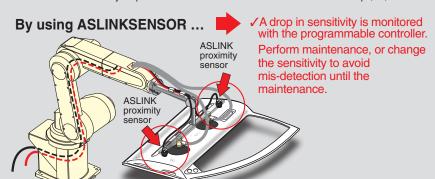


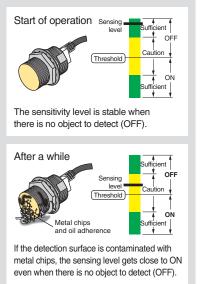


Measures to prevent mis-detection caused by contaminated detection surface

It can be a lot of work to pinpoint the cause and place of mis-detection caused by contamination on the sensor's detection surface. ASLINKSENSOR enables a programmable controller to monitor such sensing states. Minimize or eliminate system downtime caused by mis-detection.

A metal-sheet-transferring robot is equipped with a proximity sensor, which detects workpieces.
 The sensor's sensitivity drops over time as it becomes contaminated with metal chips, oil, and dust.





Electric screwdriver

■ DLV30/45/70-ASL series delug NEW

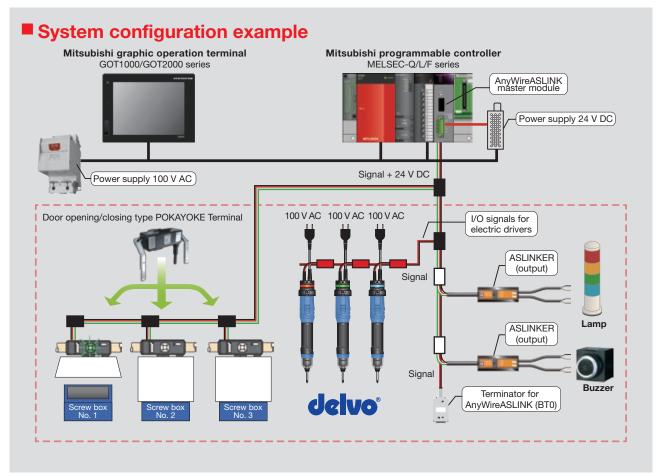
AnyWireASLINK partner product



Overview

Delvo is the electric screwdrivers connectable to MELSEC-Q/L/F Series via wire-saving AnyWireASLINK.

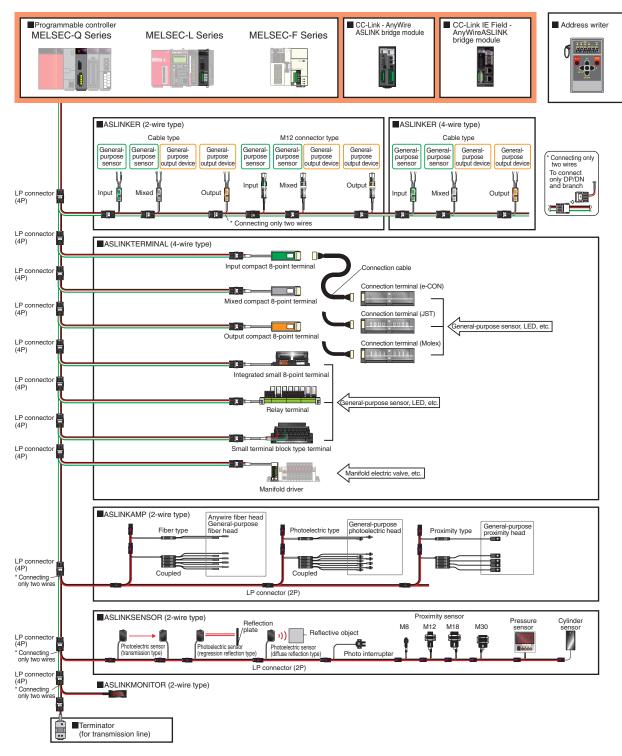
- Electric screwdriver equipped with LED.
 LED colors are switchable in 7 colors including blue, green, and red via AnyWireASLINK to prevent driver selection errors.
- POKAYOKE Terminals can also be used via AnyWireASLINK for screw selection. With the improved working environment, a significant drop in screw tightening mistakes can be expected.
- Cable disconnection detection between the programmable controller and the driver.
- DLV7000/7100/7200/8000/8100/8200 series are also supported.





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Configuration of AnyWireASLINK devices



List of function by AnyWireASLINK model

List of fulletion	by Any Whicho	Liitit iiioaci									
			Function								
Model		Example of	mple of Improved operation rate			Reduced man-hours	Space	saving			
	Specifications	connection target	Wire disconnection detection*1	Sensor monitor	RAS function	Sensor setting value read/write	Compact	Drip-proof			
2-point input/ output cable type		General-purpose	•	_	•	_	•	_			
ASLINKER	2-point input/ output M12 connector type	sensor, switch, general-purpose output device	•	_	•	_	•	•			
ASLINKTERMINAL	8-point input/output		_	_	•	_	•	_			
ASLINKAMP	1-point sensor	General-purpose fiber head, general-purpose photoelectric head, general-purpose proximity head		•	•	Sensitivity,	•	_			
ASLINKSENSOR	input	- (sensor built-into body) Proximity sensors				threshold, etc.		•			

^{*1} When 2-wire type sensors are connected.

■ Product List

Mitsubishi Electric Corporation products

Product name	Model	Outline		indai		
	•	•	•	•		
	•	•	•	•		
AnyWireASLINK master block	FX3U-128ASL-M	AnyWireASLINK system master block for MELSEC-F Series For FX3U/FX3G Series (FX3S Series is not supported)	•	•	•	_
CC-Link IE Field-AnyWireASLINK bridge module	NZ2AW1GFAL	CC-Link IE Field-AnyWireASLINK bridge module	•	•	•	•
CC-Link - AnyWireASLINK bridge module	NZ2AW1C2AL	CC-Link - AnyWireASLINK bridge module CC-Link Ver. 2.0 compatible	•		•	•

^{*}Please contact your local Mitsubishi representative for details.

Anywire Co	orporatio	n products						
Product	name	Model	Outline	Supported of 2-wire type (non-insulated)	. <u> </u>	1		
	Cable type M12 connector type Cable type adaptor Compact 8-point terminal Connection cable Connection terminal (e-CON)	B281SB-02U-CC20	2 input points, DC input, NPN method, rated input voltage/current, 24 V DC/3.5 mA/point	•	_	•	•	•
		B281SB-02US-CC20	2 input points, DC input, PNP method, rated input voltage/current, 24 V DC/3.5 mA/point	•			_	_
		B281XB-02U-CC20	rated input/output voltage/current, input 24 V DC/3.5 mA, output 24 V DC/100 mA/point, 100 mA/common	•	_	•	•	•
	Cable type M12 connector type Cable type adaptor Compact 8-point terminal Connection cable Connection terminal (JST) Connection terminal (Molex) EP connector (for connection terminal e-CON)	B281XB-02US-CC20	1 input point 1 output point, DC input/Tr output, PNP method, rated input/output voltage/current, input 24 V DC/3.5 mA, output 24 V DC/100 mA/point, 100 mA/common	•	_	•	-	_
		B281PB-02U-CC20	2 output points, Tr output, NPN method, rated output voltage/current, 24 V DC/100 mA/point, 100 mA/common	•	_	•	•	•
	Cable type	B281PB-02US-CC20	2 output points, Tr output, PNP method, rated output voltage/current, 24 V DC/100 mA/point, 100 mA/common	•	_	•	_	_
	SLINKER M12 connector type Cable type adaptor Compact 8-point terminal Connection cable Connection terminal (JST) Connection terminal (Molex) EP connector (for connector terminal e-CON) Adaptor for compact		2 input points, DC input, NPN method, rated input voltage/current, 24 V DC/3.5 mA/point		_	-	•	
			1 input points, DC input, PNP metriod, rated input voltage/current, 24 v DC/3.5 mA/point 1 input point 1 output point, DC input/Tr output, NPN method,	_				_
			rated input/output voltage/current, input 24 V DC/3.5 mA, output 24 V DC/100 mA/point, 100 mA/common				_	
ASLINKER			rated input/output voltage/current, input 24 V DC/3.5 mA, output 24 V DC/100 mA/point, 100 mA/common	_	•	-	_	_
			2 output points, Tr output, NPN method, rated output voltage/current, 24 V DC/100 mA/point, 200 mA/common					
ASLINKER M12 conr type Cabla adap Con cabla Con term (e-Ci Con term (Moli Adaplo connec Adaplo connec Integ sma 8-po term NEV Man drive Relay				_	•			
							_	_
			1 input point 1 output point, DC input/Tr output, NPN method,					
		B280XB-02U-C1220	rated input/output voltage/current, input 24 V DC/3.5 mA, output 24 V DC/100 mA/point, 100 mA/common	•			•	•
		B280XB-02US-C1220	1 input point 1 output point, DC input/Tr output, PNP method, rated input/output voltage/current, input 24 V DC/3.5 mA, output 24 V DC/100 mA/point, 100 mA/common	•	_	-	CE KC	_
		B280PB-02U-C1220	2 output points, Tr output, NPN method, rated output voltage/current, 24 V DC/100 mA/point, 100 mA/common	•	_		•	
		B280PB-02US-C1220	2 output points, Tr output, PNP method, rated output voltage/current, 24 V DC/100 mA/point, 100 mA/common	•	_	_	_	_
		ADP-81	2-wire type ASLINKER cable type mounting dedicated adaptor (incl. 4 adaptors)			_	_	
	adaptor	-	4-wire type ASLINKER cable type mounting dedicated adaptor (incl. 4 sets)		_		_	
			8 input points, DC input, NPN method, rated input voltage/current, 24 V DC/3.5 mA/point		_	-		
			4 input points, DC input, FNF metriod, rated input voltage/current, 24 V DC/3.5 mA/point.				=	
Product name Cable ASLINKER M12 connect type Cable t adaptor Connect termina (e-CON) Adaptor for connect termina (Molex) EP connect termina (Molex) Adaptor for connect termina (Molex) Integra small S-point termina S-point termina NEW Maniford Miniford Miniford Relay te		BL296XB-08F-20	rated output voltage/current, 24 V DC/100 mA/point, 400 mA/common	_	•	•	•	•
	Cable type Cable type M12 connector type Cable type adaptor Compact 8-point terminal (e-CON) Connection terminal (yST) Connection terminal (Molex) EP connector (for connection terminal e-CON) Adaptor for compact 8-point terminal e-CON) Integrated small 8-point terminal New Manifold driver New	BL296XB-08FS-20	4 input points 4 output points, DC input/Tr output, PNP method, rated input voltage/current, 24 V DC/3.5 mA/point, rated output voltage/current, 24 V DC/100 mA/point, 400 mA/common	_	•	•	_	_
		BL296PB-08F-20	8 output points, Tr output, NPN method, rated output voltage/current, 24 V DC/100 mA/point, 800 mA/common	_	•	•	•	•
		BL296PB-08FS-20	8 output points, Tr output, PNP method, rated output voltage/current, 24 V DC/100 mA/point, 800 mA/common	_	•			Ξ,
B280PB-02U-C1220 2 output points, Tr output, NPN method, rate B280PB-02US-C1220 2 output points, Tr output, PNP method, rate adaptor ADP-81 2-wire type ASLINKER cable type mount			_	Z	4	4		
						И	4	4
	0 "					\square	4	\leq
	Connector type Cable type adaptor Compact 8-point terminal Connection terminal (e-CON) Connection terminal (JST) Connection terminal (Molex) EP connector (for connector connector (for connection terminal (molex))							
					_			
	Connection	BL296S-08-9	For input, 8 points, attached connector (JST XH Series)	_	_	-	=	=
ASLINKER M12 connect type Cable typ adaptor Compact 8-point terminal (e-CoN) Connect terminal (JST) Connectiterminal (Molex) EP connectiterminal (Molex) EP connectiterminal (e-CoN) Adaptor for connectic terminal e-CoN) Integrate small 8-point terminal New Manifold driver Nelay terminal New Manifold Relay terminal New Relay terminal New Relay terminal New			For input/output, 4 input points 4 output points, attached connector (JST XH Series)	_	_		_	_
	, ,					_	_	
							_	
								=
	<u> </u>		For wire diameter 0.14 sq0.2 sq, sheath outer diameter ϕ 0.81.0 mm (red)	_	_		_	_
ASLINK		EP4-YE-8P	For wire diameter 0.14 sq0.2 sq, sheath outer diameter ϕ 1.01.2 mm (yellow)	_	_	_		_
TERMINAL		EP4-OR-8P	For wire diameter 0.14 sq0.2 sq, sheath outer diameter ϕ 1.21.6 mm (orange)	_	_		=	
ASLINKER M12 connector type Cable type Cable type Cable type Cable type Cable type Cable type Cappoint terminal (e-Con) Connection terminal (Molex) EP connection terminal (Molex) EP connection terminal (Molex) Integrate small 8-point terminal Integrate small 8-point terminal Integrate small Repoint terminal		EP4-GR-8P	For wire diameter 0.3 sq0.5 sq, sheath outer diameter ϕ 1.01.2 mm (green)	_	_	_	-	_
		EP4-BL-8P	For wire diameter 0.3 sq0.5 sq, sheath outer diameter ϕ 1.21.6 mm (blue)			_	CE KC	
B281SB-02U-S-C202 Input points, DC input, PNP method, rated input voltage Input points DC input, PNP method, rated output voltage Input points Toutput points DC input/ routput, PNP method Input points	For wire diameter 0.3 sq0.5 sq, sheath outer diameter ϕ 1.62.0 mm (gray)	_	_	-	_	_		
	1	ADP-96	ASLINKTERMINAL compact 8-point terminal installation dedicated DIN rail adaptor (incl. 4 adaptors)	_	_	-	_	_
		ADP-T96	ASLINKTERMINAL connection terminal installation dedicated DIN rail adaptor (incl. 4 sets)	_	_	_	-	_
		BL296SB-08F-4-20	8 input points, NPN method, rated input voltage/current, 24 V DC/3.5 mA/point	_	•	•	Ξ	Ξ
		BL296SB-08FS-4-20	8 input points, PNP method, rated input voltage/current, 24 V DC/3.5 mA/point	_	•		_	_
ASLINK TERMINAL ASLINK TERMINAL Integral Adaptor for connection Integral S—point terminal Adaptor for connection to terminal Integral S—point terminal	small	BL296XB-08F-4-20	4 input points 4 output points, NPN method, rated input/output voltage/current, input 24 V DC/3.5 mA/point,output 24 V DC/100 mA/point, 400 mA/common	_	•	•	_	_
	terminal	BL296XB-08FS-4-20	4 input points 4 output points, PNP method,	_	•	•	_	_
	NEW	BI 206DB 00E 4 20	rated input/output voltage/current, input 24 V DC/3.5 mA/point,output 24 V DC/100 mA/point, 400 mA/common 8 output points, NPN method, rated output voltage/current, 24 V DC/100 mA/point, 800 mA/common					
			8 output points, NPN method, rated output voltage/current, 24 V DC/100 mA/point, 800 mA/common			-	3	
Connection terminal (JST) Connection Be terminal (Molex) EP connector (for connection terminal e-CON) Adaptor for compact A Apoint terminal Adaptor for connection terminal Be terminal Adaptor for connection terminal Be terminal Adaptor for connection terminal Adaptor for connection terminal Adaptor for connection terminal Adaptor for connection terminal Be term		16 output points, NPN method, manufactured by CKD Corporation, MN4G-T70-FL series manifold supported				Ξ		
			16 output points, PNP method, manufactured by CKD Corporation, MN4G-T70-FL series manifold supported					_
			8 independent output points, G2R NO contact, 3A/point, 24 V DC, 200 V AC	_	•			
	Relay terminal							
	(relay not mounted)							

Product	name	Model	Outline	Supported of 2-wire type (non-insulated)	4-wire type (insulated)	Stand		T
		BL296SB-08F	8 input points, NPN method, screw-type terminal block, rated input voltage/current, 24 V DC/3.5 mA/point	_	•		Ξ	Ē
		BL296XB-08F	4 input points 4 output points, NPN method, screw-type terminal block, rated input/output voltage/current, input 24 V DC/3.5 mA, output 24 V DC/100 mA/point, 400 mA/common	_	•	-	_	-
		BL296PB-08F	8 output points, NPN method, screw-type terminal block, rated output voltage/current, 24 V DC/100 mA/point, 800 mA/common	_	•		=	-
		BL296SB-08F-3	8 input points, NPN method, spring terminal block, rated input voltage/current, 24 V DC/3.5 mA/point	_	•		_	
		BL296XB-08F-3	4 input points 4 output points, NPN method, spring terminal block, rated input/output voltage/current, input 24 V DC/3.5 mA, output 24 V DC/100 mA/point, 400 mA/common	_	•	$\left -\right $	_	-
		BL296PB-08F-3	8 output points, NPN method, spring terminal block,	_	•		_	
		BL296SB-08F-11	rated output voltage/current, 24 V DC/100 mA/point, 800 mA/common 8 input points, NPN method, Euro terminal block, rated input voltage/current, 24 V DC/3.5 mA/point	_	•		_	_
		BL296XB-08F-11	4 input points 4 output points, NPN method, Euro terminal block,		•		_	
	Small		rated input/output voltage/current, input 24 V DC/3.5 mA, output 24 V DC/100 mA/point, 400 mA/common 8 output points. NPN method. Euro terminal block.		_	Н		
		BL296PB-08F-11	rated output voltage/current, 24 V DC/100 mA/point, 800 mA/common		•		_	
	terminal	BL296SB-08FS	8 input points, PNP method, screw-type terminal block, rated input voltage/current, 24 V DC/3.5 mA/point 4 input points 4 output points, PNP method, screw-type terminal block,	_	•	-	_	_
	NEW	BL296XB-08FS	rated input/output voltage/current, input 24 V DC/3.5 mA, output 24 V DC/100 mA/point, 400 mA/common	_	•		_	_
TETUVIIIVAE		BL296PB-08FS BL296SB-08FS-3	8 output points, PNP method, screw-type terminal block, rated output voltage/current, 24 V DC/100 mA/point, 800 mA/common 8 input points, PNP method, spring terminal block, rated input voltage/current, 24 V DC/3.5 mA/point		•		_	-
			4 input points, PNP method, spring terminal block, rated input voltage/current, 24 v bc/3.5 mA/point				_	F
		BL296XB-08FS-3	rated input/output voltage/current, input 24 V DC/3.5 mA, output 24 V DC/100 mA/point, 400 mA/common	_	•		_	_
		BL296PB-08FS-3	8 output points, PNP method, spring terminal block, rated output voltage/current, 24 V DC/100 mA/point, 800 mA/common	_	•	$\left -\right $	_	-
		BL296SB-08FS-11	8 input points, PNP method, Euro terminal block, rated input voltage/current, 24 V DC/3.5 mA/point	_	•		_	_
		BL296XB-08FS-11	4 input points 4 output points, PNP method, Euro terminal block, rated input/output voltage/current, input 24 V DC/3.5 mA, output 24 V DC/100 mA/point, 400 mA/common	_	•	-	_	_
		BL296PB-08FS-11	8 output points, PNP method, Euro terminal block,	_				
	DIM roil adeates	DL2301 D-001 O-11	rated output voltage/current, 24 V DC/100 mA/point, 800 mA/common				_	F
	for fitting ASLINKTERMINAL (small terminal block type)	ADP-108 NEW	DIN rail adaptor for AnyWireASLINK small terminal block type terminal installation (incl. 1 set)	_	_	_	_	_
		B289SB-01AF-CAM20-V	1 input point, ASLINKAMP master module (red light)	•	_		•	
For fiber	B289SB-01AF-CAS-V AFT-1	1 input point, ASLINKAMP slave module (red light) Fiber head, M3, bending R 20	-		•	•	•	
	head	AFT-1-1	Fiber head, M3, bending R 20, heat-resistance 100°C				=	_
ASLINKAMP		AFT-2	Fiber head, M3, bending R 25	_	_		_	-
ASLINKAMP ASLINKAMP TERMINAL DIN rail adaptor for fitting ASLINKTERMIN\(small terminal block type) For fiber head For proximit head Photoelectr sensor ASLINK Proximity sensor Cylinder sense photo interrupt Address writer Address writer remote head Address writer remote head Committee the proximit sensor in	Ear photoglactric	AFT-4	Fiber head, M4, bending R 30 1 input point, ASLINKAMP master module, compatible head: general-purpose head	•			•	•
		B289SB-01AP-CAS	1 input point, ASLINKAMP slave module, compatible head: general-purpose head	•			•	•
	For proximity		1 input point, ASLINKAMP master module, compatible head: general-purpose head	•	_		•	•
	head	B289SB-01AK-CAS B283SB-01-1KC	1 input point, ASLINKAMP slave module, compatible head: general-purpose head 1 input point, transmission type, optical receiver module	•	_		•	•
	District	B283SB-01-1KP	1 output point, transmission type, optical transmitter module	•			•	•
Photoelectric sensor	B283SB-PC-SET	Set of B232SB-01-1KC and B283SB-01-1KP	•	_		_	E	
		B283SB-01-1KR-V B283SB-01-1KS	1 input point, regression reflection type (red LED) 1 input point, diffuse reflection type	•	_		•	•
		B284SB-01-1KPP30	1 input point, gauge pressure range: positive pressure 01000 kPa, M5 port (internal-thread)	•	_		Ť	_
		B284SB-01-1KNP30 B284SB-01-1KLP30	1 input point, gauge pressure range: negative pressure 0100 kPa, M5 port (internal-thread)	•	_		_	<u> </u>
	Pressure	B284SB-02-1KPP30	1 input point, gauge pressure range: compound pressure -100100 kPa, M5 port (internal-thread) 2 input points, gauge pressure range: positive pressure 01000 kPa, M5 port (internal-thread)	•	_		_	- -
	sensor	B284SB-02-1KNP30	2 input points, gauge pressure range: negative pressure 0100 kPa, M5 port (internal-thread)	•	_	囯	_	_
SENSOR	NEW	B284SB-02-1KLP30	2 input points, gauge pressure range: compound pressure -100100 kPa, M5 port (internal-thread)	•	_		_	_
		B284SB-J1-1KPP30 B284SB-J1-1KNP30	16 input points (analog 10 bit), gauge pressure range: positive pressure 01000 kPa, M5 port (internal-thread) 16 input points (analog 10 bit), gauge pressure range: negative pressure 0100 kPa, M5 port (internal-thread)	•			Ξ	=
		B284SB-J1-1KLP30	16 input points (analog 10 bit), gauge pressure range: compound pressure -100100 kPa, M5 port (internal-thread)	•	_	囯	=	Ξ
	Dunasimaita	B295SB-01-1K24 NEW B295SB-01-1K25	1 input point, shielded type, M8 full threads 1 input point, shielded type, M12 full threads	•	_		_	_
	, ,	B295SB-01-1K26	1 input point, shielded type, M12 full threads				Ξ	
		B295SB-01-1K27 NEW	1 input point, shielded type, M30 full threads	•	_	囯	Ξ	_
		B285SB-01-1K1 NEW B297SB-01-1K40	1 input point, SMC cylinder, corresponding to cylinder round groove 1 input point, standard type	•	_		•	•
ASLINKMONIT		B287-74DP01-C20	Display device for the sensing level (analog raw data)	•	_		_	_
		ARW-03	Address and parameter write/read tool	_	_		•	•
		ARW-04 NEW	For pressure sensors (upward compatibility with ARW-03) Optional address writer tool for setting narrow places	_	_		=	E
			Transmission waveform rectifying module	•	•		Ξ	_
		FK2-125-100	Wire diameter 1.25sq, 2-core, 100 m coil	•	_		=	Ξ
ASLINK SENSOR Proximity sensor Cylinder sensor Photo interrupter ASLINKMONITOR NEW Address writer Address writer remote head Terminator (for transmission line)	FK2-075-100 FK4-125-100	Wire diameter 0.75sq, 2-core, 100 m coil Wire diameter 1.25sq, 4-core, 100 m coil	•	<u> </u>		Ξ	=	
		FK4-075-100	Wire diameter 1.25sq, 4-core, 100 m coil		•			
	- "	LP2-BR-10P	For wire diameter 1.25sq, 2-core flat cable, sheath outer diameter φ2.54 mm	•	_	囯	Ξ	E
		LP2-BK-10P LP4-WR-10P	For wire diameter 0.75sq, 2-core flat cable, sheath outer diameter ϕ 2.54 mm For wire diameter 1.25sq, 4-core flat cable, sheath outer diameter ϕ 2.54 mm (claw-breaking prevention type)	•	<u> </u>		Ξ	
I.D		LP4-WH-10P	For wire diameter 1.23sq, 4-core flat cable, sheath outer diameter ϕ 2.54 mm (claw-breaking prevention type)	_	•			=
LP connector (for		LP2-YEG-10P	For wire diameter 0.5sq, 2-core cabtyre cable, sheath outer diameter ϕ 1.82.1 mm	•	_	E	Ξ	l—
transmission		LP2-PWH-10P LP4-OR-10P	For wire diameter 0.3sq, 2-core cabtyre cable, sheath outer diameter φ1.41.7 mm For wire diameter 0.75sq, 4-core cabtyre cable, sheath outer diameter φ2.12.4 mm	•	-		=	_
line)	For cabtyre	LP4-YE-10P	For wire diameter 0.75sq, 4-core cablyre cable, sheath outer diameter \$\phi 1.82.1 mm	_	•		_	
,	Cable	LP4-ORG-10P	For wire diameter 0.5sq, 4-core cabtyre cable, sheath outer diameter ϕ 2.12.4 mm	_	•	囯	Ξ	Ξ
		LP4-YEG-10P	For wire diameter 0.5sq, 4-core cabtyre cable, sheath outer diameter φ1.82.1 mm	_	•		_	-
			For wire diameter 0.3cg. A-core cabture cable, shooth outer diameter 41.1.1.4 mm		_	1 - '	_	1.
LP connector press	sure welding tool	LP4-WW-10P	For wire diameter 0.3sq, 4-core cabtyre cable, sheath outer diameter ϕ 1.11.4 mm Dedicated tool for LP connector press welding	•	•		$\overline{/}$	-
LP connector press		LP4-WW-10P LP-TOOL					<u>-</u>	

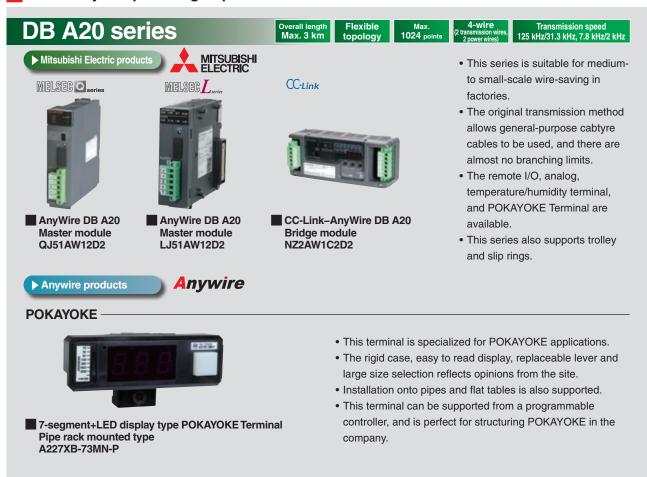
^{*}For further information on the products above, please contact below:

Anywire Corporation

Headquarters: 1 Babazusho, Nagaokakyo-shi, Kyoto 617-8550 JAPAN E-mail: info_e@anywire.jp URL: http://www.anywire.jp

*For information on selecting the wiring and models, refer to the "Digital Link Sensor AnyWireASLINK System Catalog" published by Anywire Corporation.

Other Anywire product groups In addition to AnyWireASLINK, a variety of products specialized for applications are available.





Overall length Max. 100 m

Flexible topology

Max. 512 points

2-wires (power superimpose Transmission speed 27.0 kHz

- This series is suitable for small-scale wire-saving such as in control panels and systems.
- The power is superimposed on the transmission line, so sensors and valves, etc., can be controlled and the load power can be supplied just by laying a 2-wire transmission line.
- The remote I/O and POKAYOKE Terminal are available.
- This series also supports slip rings.

► Anywire products

Anywire

POKAYOKE



■ LED display type POKAYOKE Terminal Pipe rack mounted type A027XB-02G2-P

- This terminal is specialized for POKAYOKE applications.
- The rigid case, easy to read display, replaceable lever and large size selection reflects opinions from the site.
- Installation onto pipes and flat tables is also supported.
- This terminal can be supported from a programmable controller, and is perfect for structuring POKAYOKE in the company.

Mapping



Mapping Terminal

- This terminal is specialized for FPD glass detection.
- Modules equipped with infrared detection and transmission functions are connected in serial to constitute one mapping
- Different pitches and number of channels are supported, and the setup can be customized by adding modules.

Related product catalogs

[Mitsubishi Electric product]



iQ Sensor Solution L(NA)16029



iQ Platform Graphic Operation Terminal GOT2000 Series L(NA)08274



iQ Platform Programmable Controller MELSEC-Q series [QnU] L(NA)08101



Mitsubishi Graphic Operation Terminal GOT1000 Series L(NA)08054



Programmable Controllers MELSEC-L series L(NA)08159



iQ Platform Graphic Operation Terminal Screen Design Software MELSOFT GT Works3 L(NA)08170



iQ Platform Compatible Programmable Controller Engineering Software MELSOFT GX Works2 L(NA)08122

[Anywire product]



Digital Link Sensor AnyWireASLINK system



eco Sho-Haisen System AnyWire DB A20 series

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This publication explains the typical features and functions of the products herein and does not provide restrictions and other information related to usage and module combinations. Before using the products, always read the product user manuals. Mitsubishi Electric will not be held liable for damage caused by factors found not to be the cause of Mitsubishi Electric; opportunity loss or lost profits caused by faults in Mitsubishi Electric products; damage, secondary damage, or accident compensation, whether foreseeable or not, caused by special factors; damage to products other than Mitsubishi Electric products; and to other duties.

♠ For safe use

- To use the products given in this publication properly, always read the relevant manuals before use.
- The products have been manufactured as general-purpose parts for general industries, and have not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.
- Before using the products for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi.
- The products have been manufactured under strict quality control. However, when installing the products where major accidents or losses could occur if the products fail, install appropriate backup or fail-safe functions in the system.

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Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO 14001 (standards for environmental management systems) and ISO 9001 (standards for quality assurance management systems).



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