2012 | March

MITSUBISHI ELECTRIC

Changes for the Better

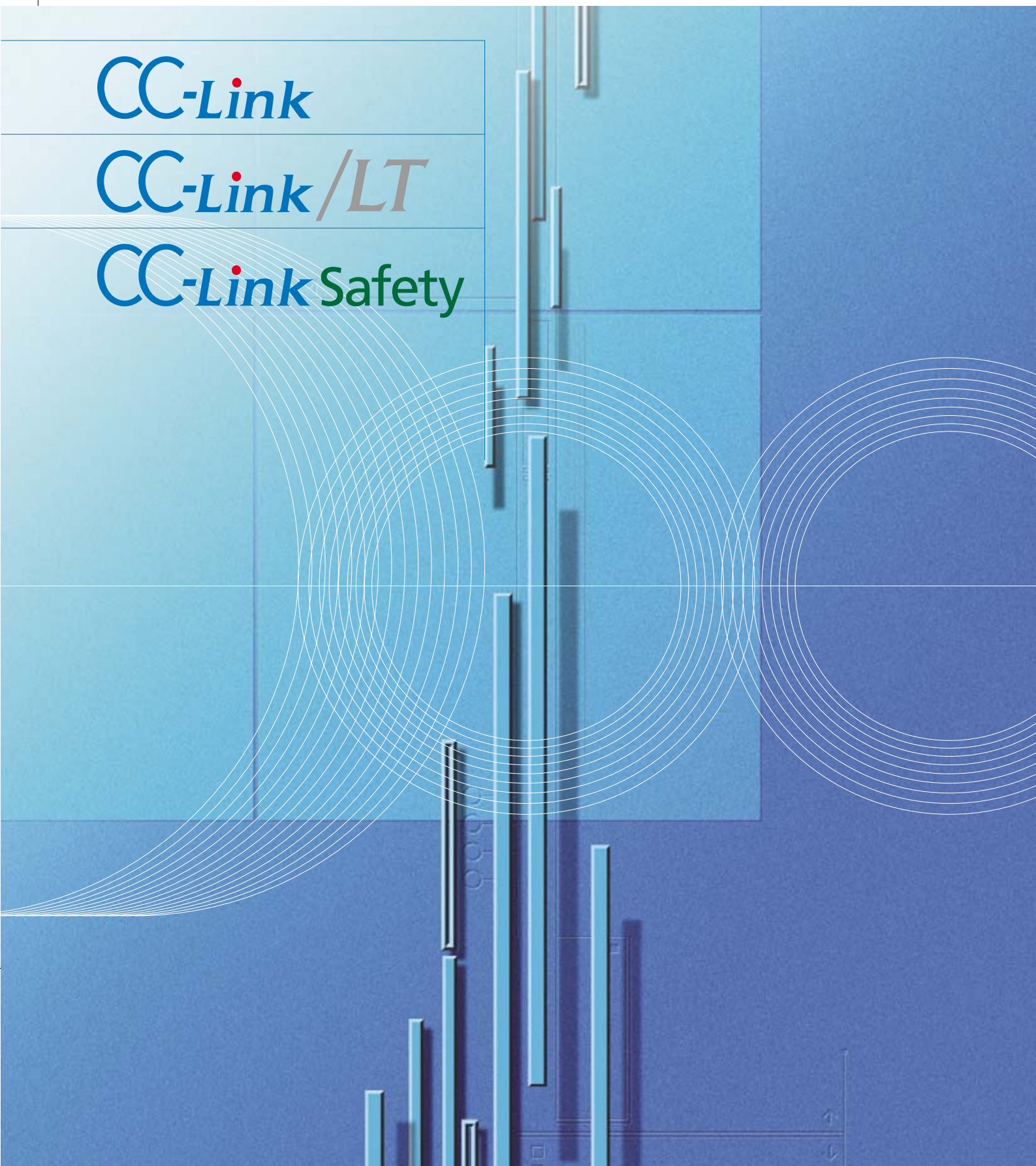
for a greener tomorrow eco Changes

Open Field Network CC-Link Compatible Product Catalog

CC-Link

CC-Link/LT

CC-Link Safety



Strategic Network, CC-Link, CC-Link/LT & CC-Link Safety.

Strong Manufacturers Stay One Step Ahead of Others with CC-Link, CC-Link/LT & CC-Link Safety.

CC-Link
CC-Link/LT
CC-Link Safety

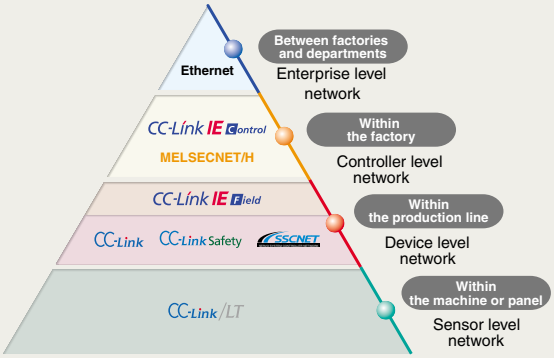
Let's Start Powerful Factory Automation.
Let's Connect with Powerful Networks.

INDEX

Opening up the Future of FA Networks and Focusing on what's

We provide total support in constructing seamless networks in all scenes, from offices to production sites, under a consistent design philosophy. With flexible approaches backed by "Ethernet," "MELSECNET/H" and "CC-Link", a SEMI-certified, world standard field network originated in Japan, and "CC-Link/LT", a sensor level network adhering to the design concept of CC-Link, we propose a network-based FA environment, fit for your needs.

Seamless integration of the network over all layers



[Within line] Device level network CC-Link

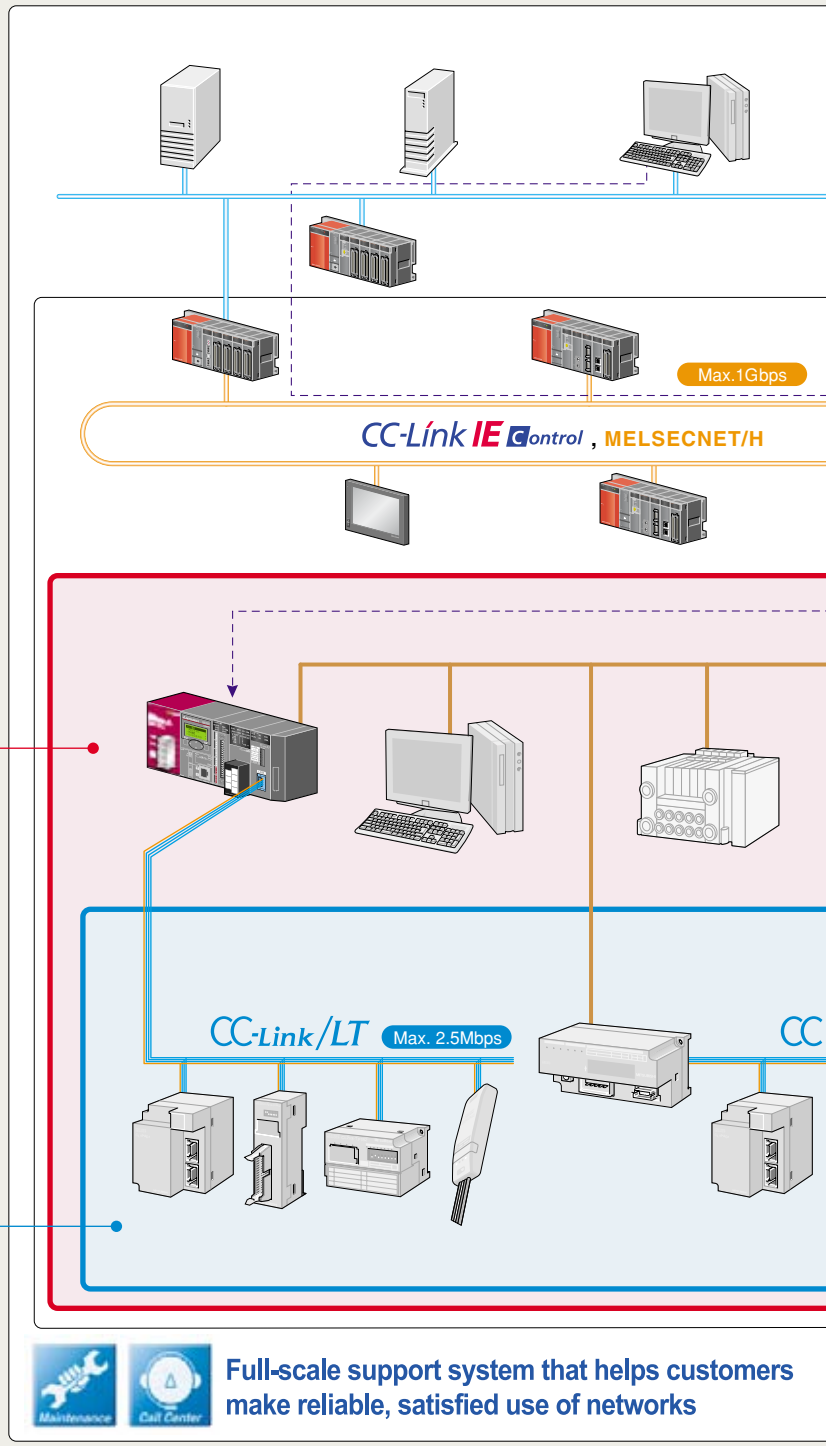
CC-Link is a high-speed field network capable of controlling the system and handling information at the same time, and offers high-speed, reliable input/output response and highly flexible expandability. This distinguished performance the network earned SEMI certification. A Japanese-origin, world standard open field network, CC-Link holds a large market share and has been winning the confidence of customers.

- High-speed communication at a maximum baud rate of 10 Mbps
- Remote input/output (RX, RY): 8,192 points each
  Remote register (RWw) : 2,048 words
  (RWr) : 2,048 words
  (when CC-Link Ver. 2.0 is used)
- Integration with 3rd party manufacture products

[Within panel and devices] Sensor level network CC-Link/LT

CC-Link/LT is a sensor level network designed so that all production sites are free from complicated wiring or incorrect wiring. It inherits openness, high speed, and noise resistance from the CC-Link family and at the same time ensures reduced wiring because of its simple setting and easy installation.

- Easy installation using dedicated connectors
- The adoption of point number modes (four points, eight points, 16 points) permits effective use of I/O points.
- The maximum number of link points is 1,024 in 16-point mode.



Full-scale support system that helps customers make reliable, satisfied use of networks

to come. Changes for the better - Mitsubishi Electric

100/10Mbps
Ethernet

[Between factory departments]
Enterprise level network
Ethernet

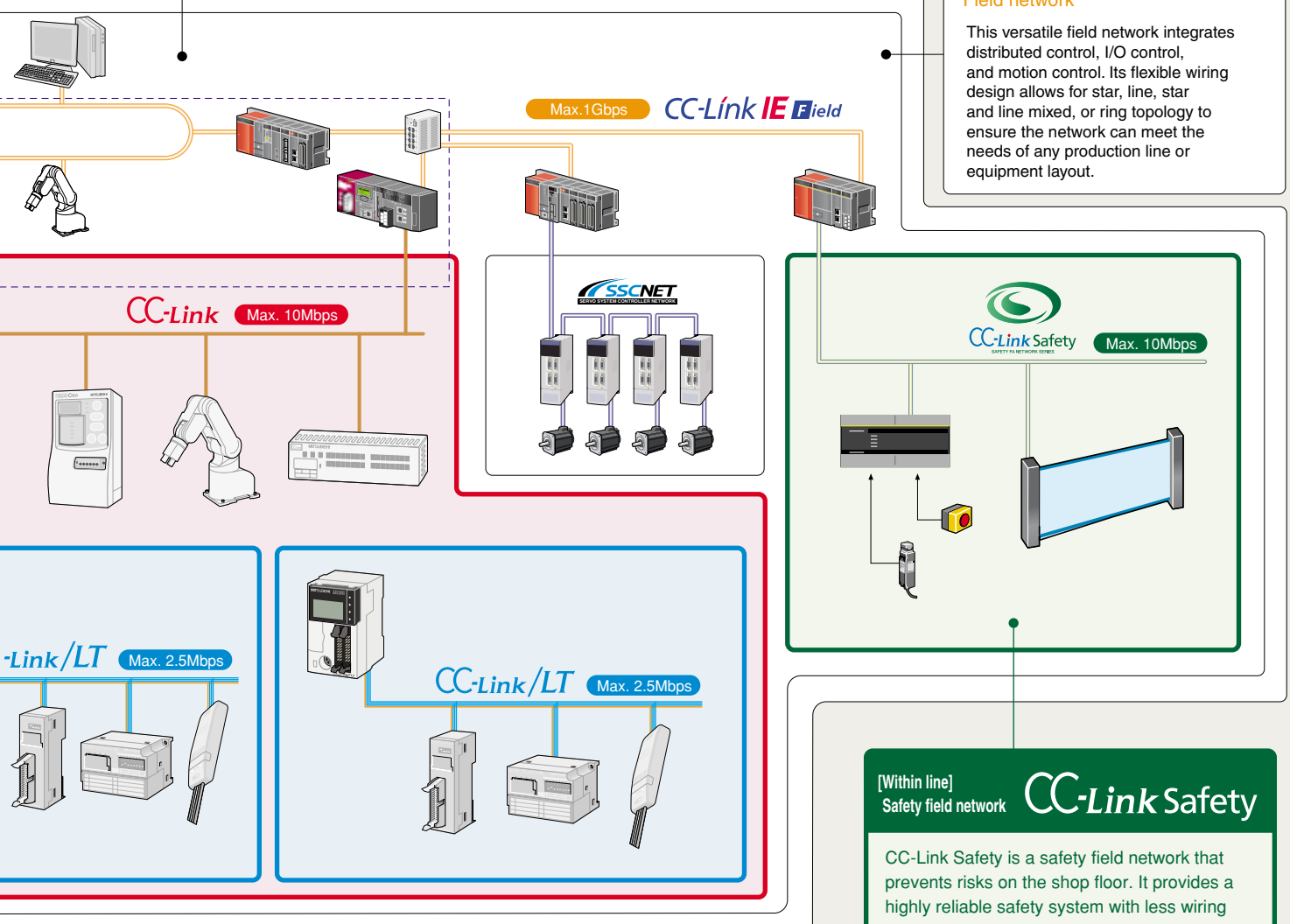
The top layer of the Network hierarchy. It contributes to higher production efficiency through the collection and management of various production information around a plant.

[Within factory]
Controller network

This highly-reliable control network is designed to transfer large amounts of data at real-time speeds between PLCs. The CC-Link IE Control network includes a variety of functions and allows seamless communications among other CC-Link networks.

[Within factory]
Field network

This versatile field network integrates distributed control, I/O control, and motion control. Its flexible wiring design allows for star, line, star and line mixed, or ring topology to ensure the network can meet the needs of any production line or equipment layout.

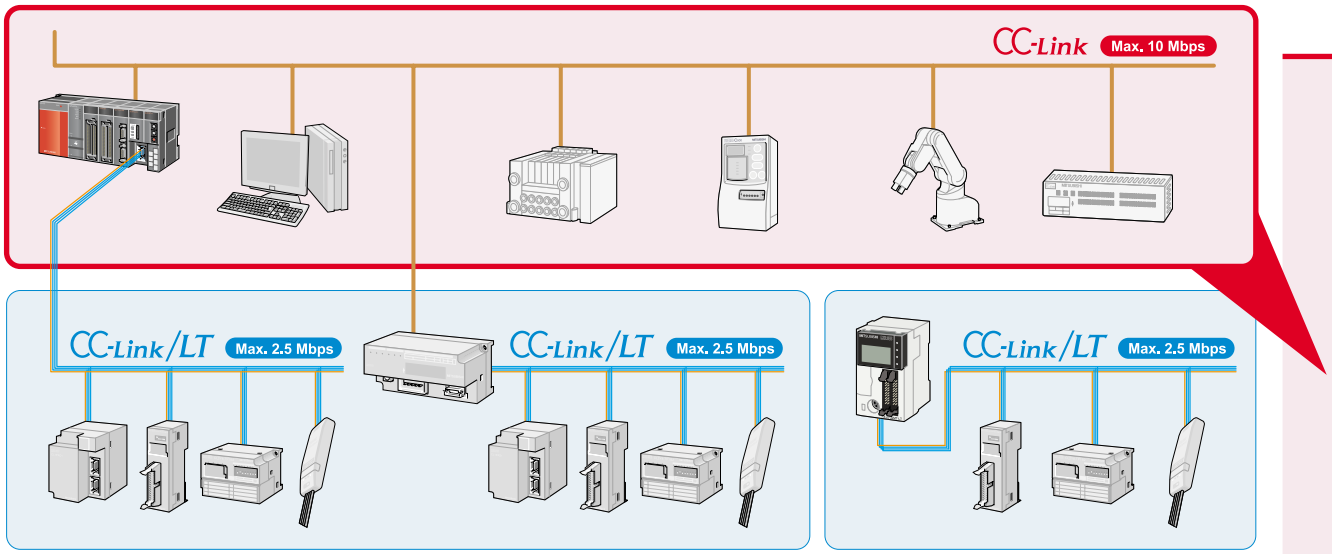


We provide customers all over the world total support for FA networks, including CC-Link and CC-Link/LT, through our "Mitsubishi Global FA Center"s for overseas production support.

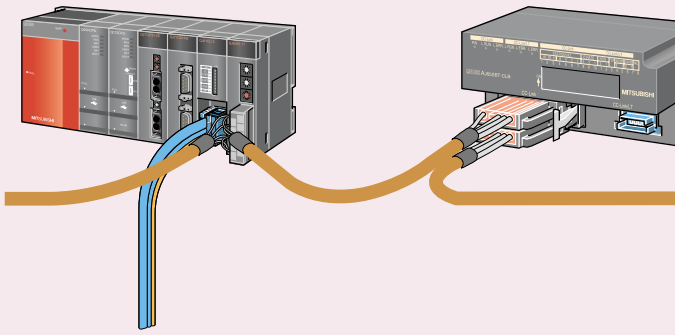
[Within line]
Safety field network
CC-Link Safety

CC-Link Safety is a safety field network that prevents risks on the shop floor. It provides a highly reliable safety system with less wiring and realizes a maximum of 10 Mbps high-speed communication while enhancing transmission reliability with RAS functions.

CC-Link - Proceeding toward a World Standard Network

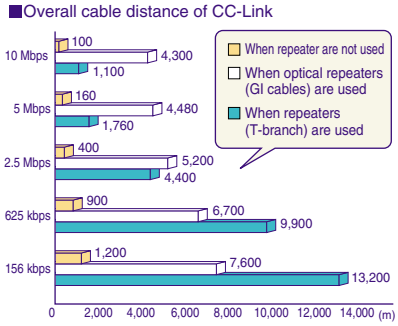


	CC-Link	CC-Link/LT
Control methods	I/O control + intelligent distribution	I/O control
Cable	Dedicated fixed cable, dedicated flexible cable, built-in power cable	Dedicated flat cable, VCTF (Vinyl Cabtire Code), dedicated flexible cable
Maximum number of link points	RX,RY: 8192 points each, RWr: 2048 words, RWw: 2048 words (Ver2.0)	RX,RY: 1024 points each
I/O Module Line-up	Screw terminal block, spring terminal block, e-CON, Push-in connector, waterproof connector, 40-pin connector	Screw terminal block, spring terminal block, e-CON, MIL connector, cable connector
Max. cable distance	1200 m (at 156 kbps) Extendable up to 13.2 km when repeater is used	Trunk: 500 m Branch: 200 m (at 156 kbps)
Parameter setup	GX Developer, GX Works2	Not required
Number of link points per station	<Ver1.0> RX,RY: 32 points each, RWr: 4 words, RWw: 4 words <Ver2.0> RX,RY: 128 points each, RWr: 32 words, RWw: 32 words	Max, 16 points (in 16-point mode)
Network topology	Bus topology T-branch topology Star topology	T-branch topology



Large-scale applications from Factory Automation through building management [Max. cable length of 13.2 km]

The total distance covered by the CC-Link network can be increased up to 1.2km (at 156 kbps). Additionally, the transmission distance can be further extended through the use of T-branch repeater modules. Optical repeaters can also be used so that CC-Link deal with various large-scale facilities.



For improved setup efficiency [Simple parameter setup]

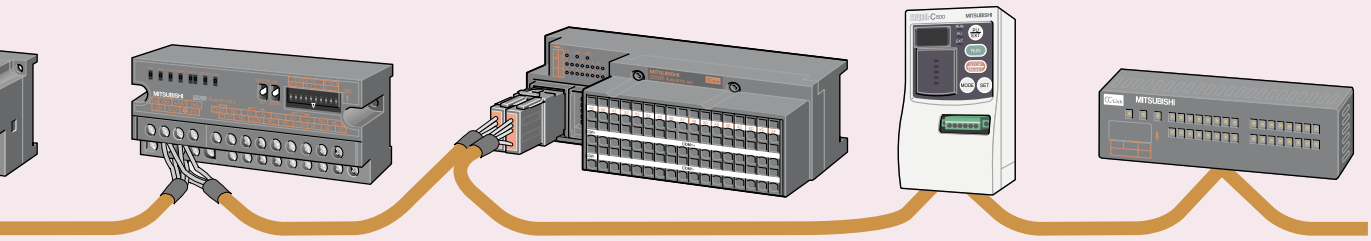
You can set parameters on CC-Link using only the MELSEC total programming tool "GX Developer." You can significantly reduce program size and efficiently set parameters.

For achieving complex control, high-mix low-volume production [High-speed, high-capacity transmission]

CC-Link is a high-performance network that utilizes high-speed communications (10 Mbps -top level in the industry-), in order to allow transmission of bit data and word data at high-speed and maximum capacity.

For a simple and cost effective network [Reduced-wiring network]

CC-link realizes simple and cost-effective network, and it is designed to relieve production lines from complicated wiring.



CC-Link Max. 10 Mbps

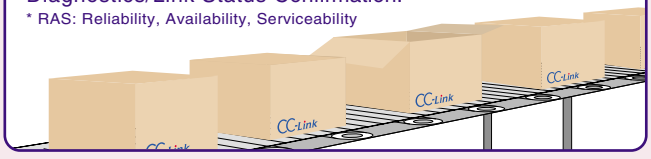
A diverse range of products from partner manufacturers [Multi-vendor system]

More than 900 types of products are supplied from more than 1000 companies worldwide.

For non-stop operation [RAS functions]

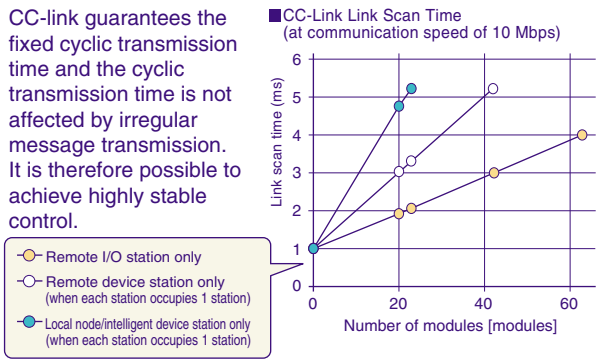
CC-Link equips full RAS functionality by functions like Standby Master, Automatic Return, Slave Station Isolation and Diagnostics/Link Status Confirmation.

* RAS: Reliability, Availability, Serviceability

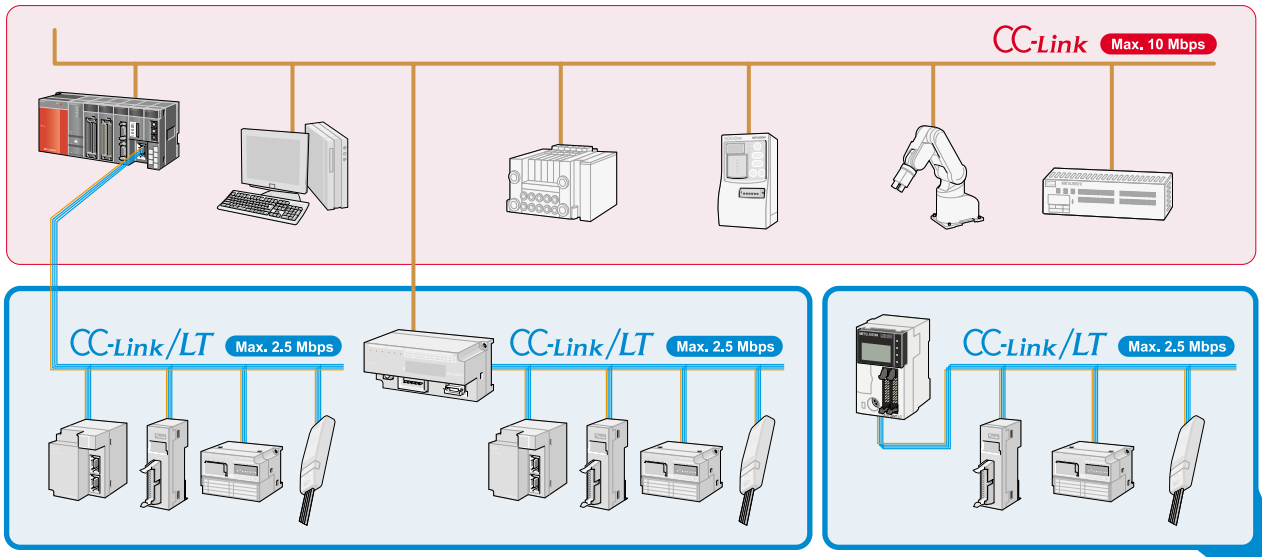


For improved network reliability [Consistent network communication time]

CC-link guarantees the fixed cyclic transmission time and the cyclic transmission time is not affected by irregular message transmission. It is therefore possible to achieve highly stable control.



CC-Link/LT - in pursuit of benefits through wire saving.



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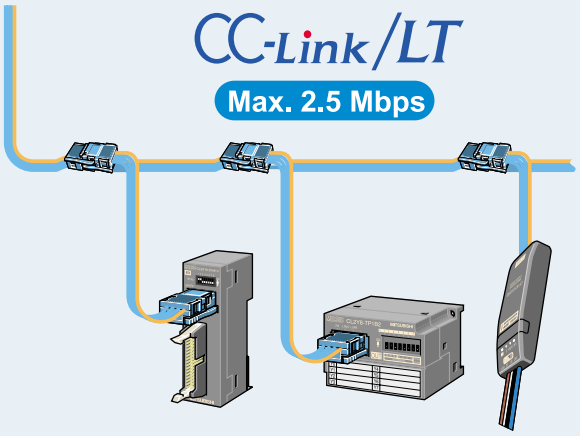
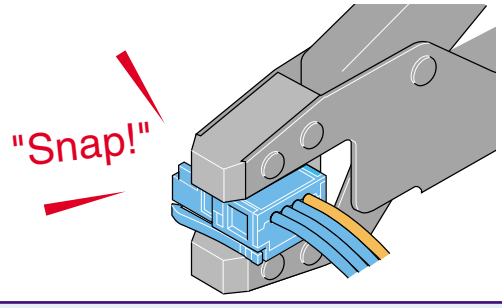


For rapid startup of systems [easy installation]

◎Using dedicated connectors and cables can reduce wiring works.
◎Communication connectors are a male/female integrated type and available for all trunk and branch lines.



For Easy usage
[No need of parameter settings]

Troublesome network parameter setting is unnecessary.
The communication speed setting is required for the master module only.

For High noise-resistance [Complying with EMC Directives]

CC-Link/LT also inherits the feature of CC-Link, complies with EMC directives for noise-resistance.

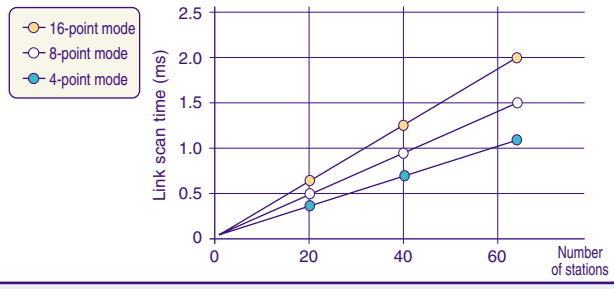
For Efficient use of I/O points [No wasting surplus I/O points]

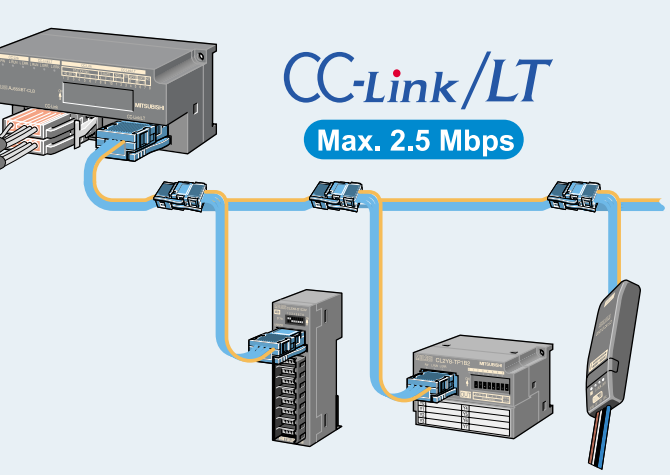
The adoption of the point mode (4, 8, 16 points) enables I/O assignment that makes full utilization of the available number of points.

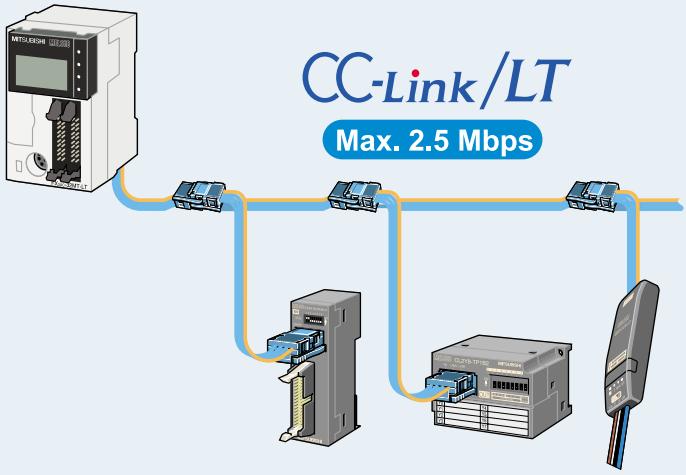
For high-speed control [fast response]

When 64 stations are connected, link scan time is a maximum of 1.2 ms(at 2.5Mbps), achieving excellent fast response performance.

■CC-Link/LT Link Scan Time (at communication speed of 2.5 Mbps)

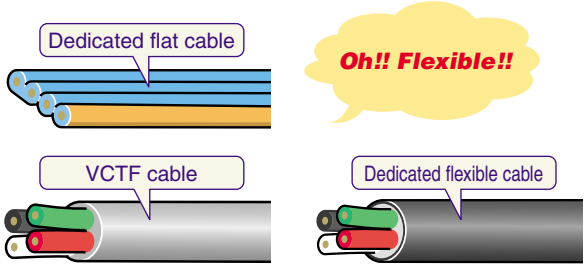






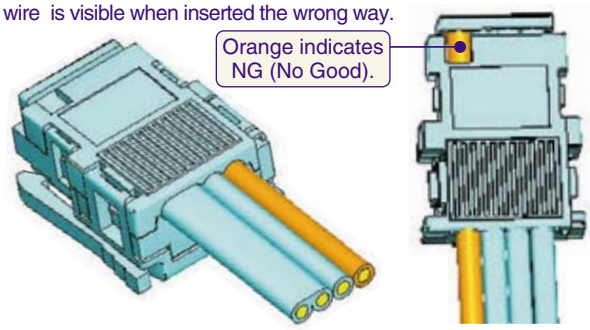
Cable specific to application requirements [extensive lineup of cables]

Dedicated flat cable, VCTF cable and Dedicated flexible cable.



Improving reliability [prevention of miswiring]

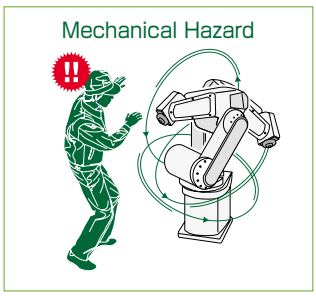
Dedicated cable shape is designed to prevent miswiring. The orange wire is visible when inserted the wrong way.



Innovation in shop floor safety, CC-Link Safety

A safety field network "CC-Link Safety" has been developed to reduce risks on the shop floor and to realize a safe work environment. By connecting "safety devices," which detect errors in the production line, and the "safety programmable controller," which stops the production line by signals from the safety devices, with simple wiring, accidents can be prevented during operation. In addition, CC-Link Safety can greatly reduce wiring for the safety system.

Hazards of production lines



Enclosing hazards in a safety guard is not good enough. Also, worker mistakes and machine failures are unpredictable. That is why configuring a system with a "safety solution" which always prevents accidents is necessary.

Safety solution example

World wide safety [International safety standards compliant]

Conforms to the international safety standards IEC61508 SIL3 and EN954-1/ISO13849-1 Category 4 to meet safety needs at global production sites.

Safety assurance and wiring reduction [Inherited CC-Link functions]

Transmission speed of 10 Mbps equivalent to CC-Link is realized, allowing use of the same CC-Link cables and connection of standard CC-Link stations.

Reliable safety control [Enhanced RAS functions]

Detects communication errors such as communication delays and lost of messages and then stops the system completely.

Centralized error/failure information management [Error/failure logs]

With the RAS functions, the safety master station logs error information of safety remote stations, enabling effective troubleshooting. The system is completely stopped upon communication error detection.

Provision for troubles [Identifying the communication target station]

By setting the model name or product information of safety remote stations with the network parameters, the system can detect mismatch communication targets.

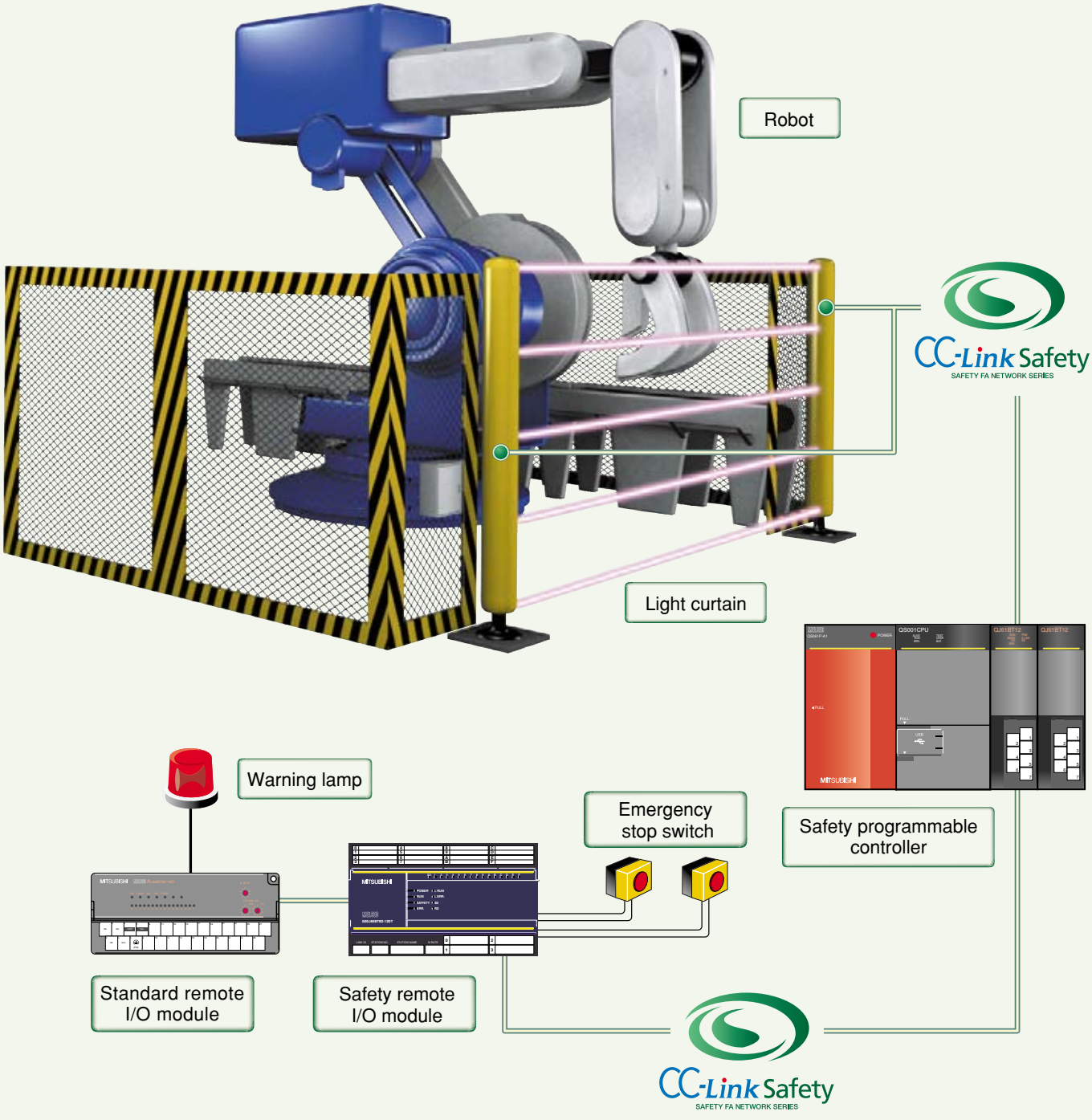
Flexible system configuration and wiring [Distributed safety remote stations]

Safety remote I/O stations can be spread out, minimizing wiring for I/O. Expanding I/O is also easy.

A large choice of safety system configuration [Various compatible products]

Mitubishi Electric and many other CLPA partners provide a variety of compatible products including a programmable controller, light curtains, and warning lamps. Moreover, the same CC-Link cables and standard CC-Link stations can be used.

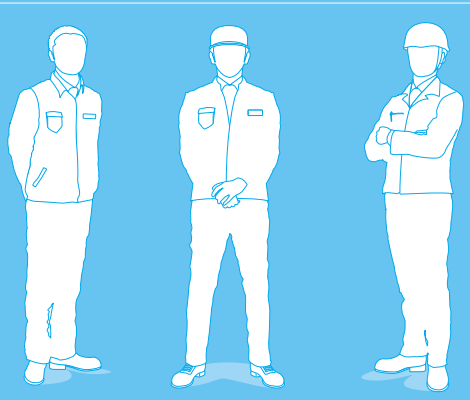
■CC-Link Safety system configuration example
（Automotive welding line）



For hose in design, production and maintenance

CC-Link & CC-Link/LT Responds

CC-Link & CC-Link/LT
provide solutions
for each challenge in the field.



Each person in charge of engineering, production and maintenance has his/her own challenge.
CC-Link and CC-Link/LT responds to each challenge with a solution.
CC-Link is an establishined open field network originated from Japan.
Fully inheriting the CC-Link concept, CC-Link/LT is specifically designed as a sensor level network.
"I want this."
"I need this."
CC-Link & CC/Link/LT provides a function for each challenge on the network.

More functions...

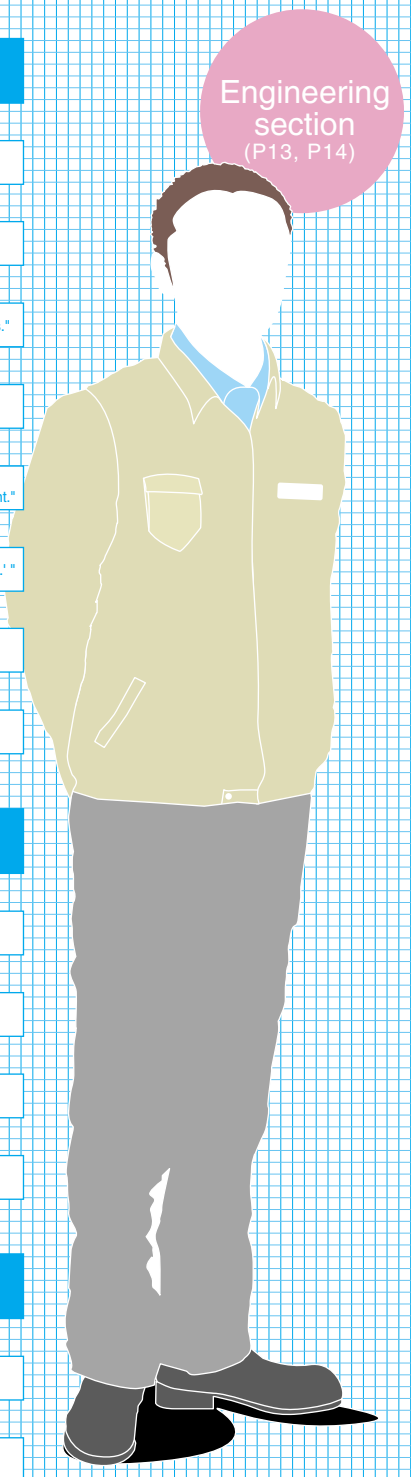
- CC-Link: "I want a flexible production system."
- CC-Link: "I need complex control features."
- CC-Link: "I want to connect lots of analog devices."
- CC-Link: "I want a distributed control system."
- CC-Link: "I want to connect between lines." "I want a network for building management."
- CC-Link: "I want to connect HMIs and 'ANDONs.' "
- CC-Link: "I want to connect drives and servos."
- CC-Link/LT: "I need high-speed sensor inputs."

More simple...

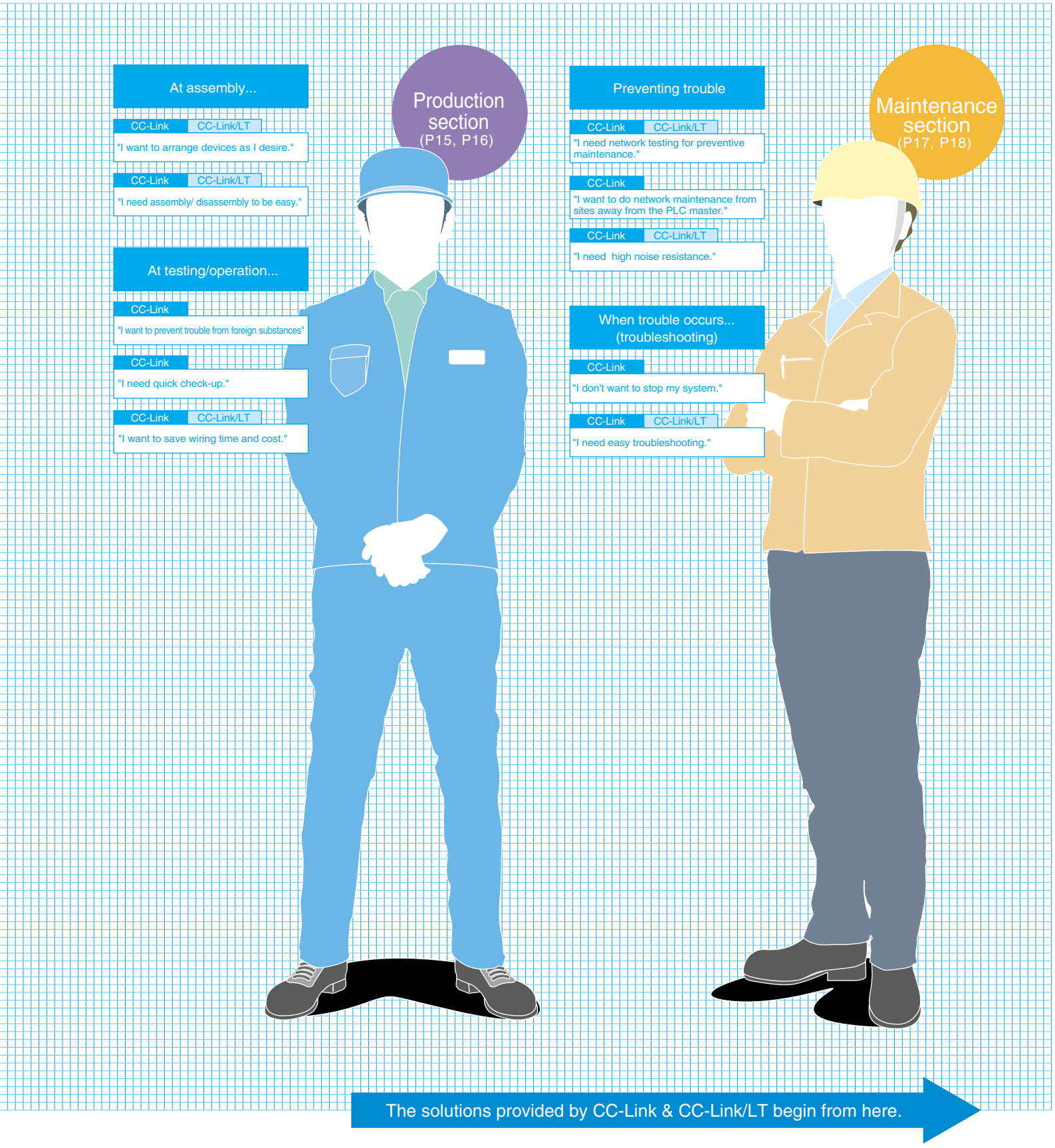
- CC-Link: "I want to connect lots of devices."
- CC-Link: "I need an easy network."
- CC-Link/LT: "I want to use remote I/O."
- CC-Link/LT: "I need widely used cables."

More secure...

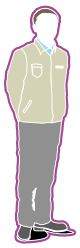
- CC-Link: "I need high noise resistance."
- CC-Link: "I need various devices on a single network."
- CC-Link: "I want to export our facilities and machinery overseas."



to Your Requests



The solutions provided by CC-Link & CC-Link/LT begin from here.



Requests from the Engineering section: "Want to CC-Link & CC-Link/LT meets even more requests

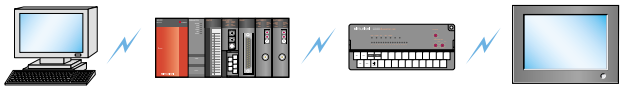
CC-Link ensures...

"I want a flexible production system."

►CC-Link is a high-speed and high-capacity network.

CC-Link is a high speed field network that can handle both control and information together.

■High-speed/High-capacity data transmission



<High-capacity Cyclic Transmission Data>

Data capacity

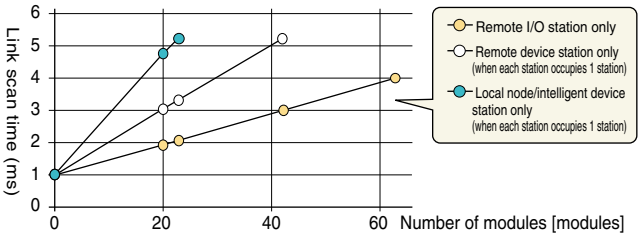
Remote I/O (RX, RY)=8192 points each
Remote register (RWw)=2048 words
(RWr)=2048 words (when Ver2.0 is used)

"I need complex control features."

►CC-Link guarantee consistent communication time.

The cyclic transmission time is not affected by irregular message transmission to the HMI products. It is possible to achieve highly stable control.

■CC-Link Link Scan Time (at communication speed of 10 Mbps)



"I want to connect lots of analog devices."

►CC-Link V2 supports an extra broader range of needs.

CC-Link Ver.2 can control maximum eight times the data capacity compared with earlier CC-Link compatible products. CC-Link Ver.2 compatible analog modules are applicable to process control.

■CC-Link Ver2.0-compatible analog module

CC-Link Ver 1.0 — Up to 21 modules can be connected.

CC-Link V2 has double the module connection capacity

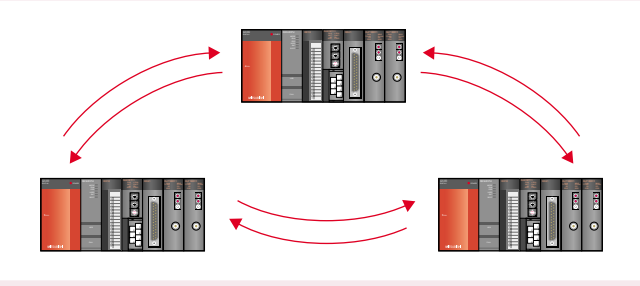
CC-Link V2 — Up to 42 modules can be connected.

"I want a distributed control system."

►CC-Link realizes simple distributed control.

CC-Link provides highly stable cyclic transmission, which enables N:N communication between controller masters or local stations. This N:N communication method between controllers realizes a distributed control system for each system.

■Simple controller communication



CC-Link/LT ensures...

"I need high-speed sensor inputs."

►CC-Link/LT provides fast response.

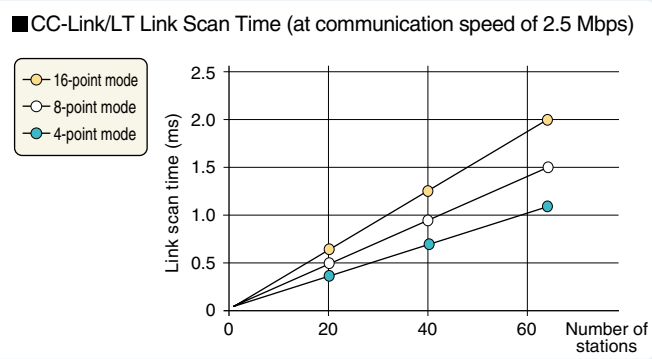
When 64 stations are connected, the link scan time is a maximum of 1.2ms (at 2.5Mbps). Select 2.5Mbps, 625kbps or 156kbps depending on the transmission distance.

"I want to use remote I/O."

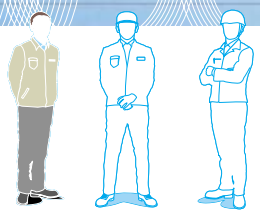
►CC-Link/LT is not required to make parameter setting.

Troublesome network parameter setting is unnecessary. The communication speed setting is required for the master module only. There is no need to set the communication speed on the remote station.

■CC-Link/LT Link Scan Time (at communication speed of 2.5 Mbps)



develop a flexible manufacturing system!" from engineers



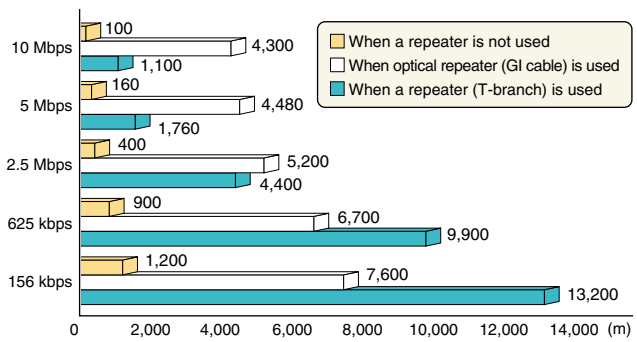
"I want to connect between lines."
"I want a network for building management."

▶ The total extended distance of the CC-Link cable is 1,200 m, and can be extended up to 13.2 km when repeaters are used.

CC-Link total extended distance can be as long as 1.2 km*. The transmission distance can be extended up to 13.2 km* when T-branch repeaters are used.

* Maximum transmission distance when transmission speed is set to 156 kbps.

■Overall cable distance of CC-Link



"I want to connect lots of devices."

▶ CC-Link V2 can control up to 8192 points and 4096 words.

CC-Link Ver2.0 can transmit a maximum of eight times the data capacity compared with earlier CC-Link compatible products.

■Comparison of communication data

CC-Link Ver 1.0	Remote I/O ---------- (RX, RY) = 2048 points each Remote register ------ (RWw) = 256 words (RWr) = 256 words
CC-Link V2	Remote I/O ---------- (RX, RY) = 8192 points each Remote register ------ (RWw) = 2048 words (RWr) = 2048 words

"I want to connect HMIs and 'ANDONs.' "

▶ CC-Link can connect HMIs and ANDONs by transient transmission.

CC-Link simplifies data transfer to HMIs and ANDON with transient transmission (up to 960 bytes) and cyclic transmission.

"I need an easy network."

▶ CC-Link parameter setting can be done with only GX Developer.

The total programming tool "GX Developer" with improved operability. Makes full use of the advantages of Windows® and enables you to set CC-Link parameters without a program.

"I need a reliable network."

▶ CC-Link achieves high reliability with dedicated cables.

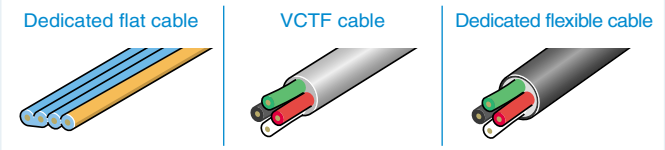
CC-Link uses dedicated cables that support high-speed transmission up to 10 Mbps. These cables are also highly noise-resistant.

■CC-Link dedicated cable

"I need widely used cables."

▶ CC-Link/LT specifies cables to application requirements.

Dedicated flat cable, VCTF cable and dedicated flexible cable are available.



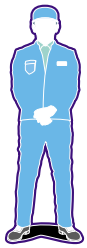
CC-Link also lets you...

"I want to connect drives and servos."
▶ CC-Link allows GX Configurator-CC to read and write drives and servo parameters without a program, and perform monitoring and testing.

"I need various devices on a single network."
▶ Diverse range of products supplied from many partner manufacturers.

"I want to export our facilities and machinery overseas."
▶ CC-Link complies with various safety standards including UL standards.

* For details, refer to MELFANSweb.

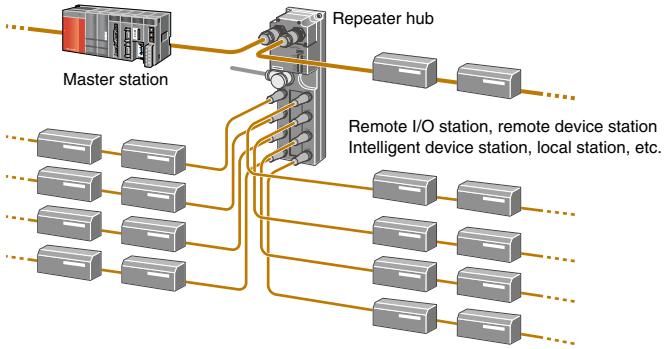


Requests from the production section: "Want to improve CC-Link & CC-Link/LT provide various useful functions.

I want to arrange devices as I desire.

▶CC-Link allows flexible installation.

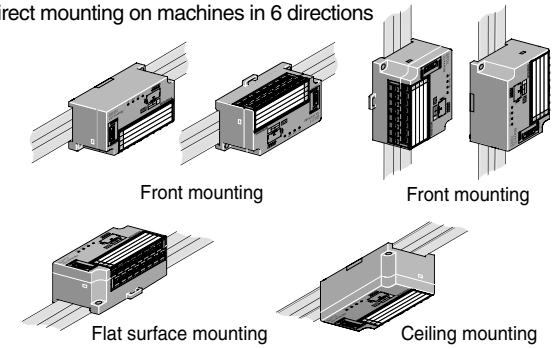
T-branch repeaters, wireless optical repeaters, optical repeaters, and repeater hubs are available with CC-Link. They enhance the freedom of application even at 10 Mbps.



▶CC-Link family remote I/O modules occupy a small footprint.

Compact type remote I/O modules with 32, 16, 8, 4, and 2 I/O points are available. They can be mounted in six different directions, including ceiling mounting, front mounting, and flat surface mounting, and selected according to the environment where they are to be mounted and the application.

■Direct mounting on machines in 6 directions

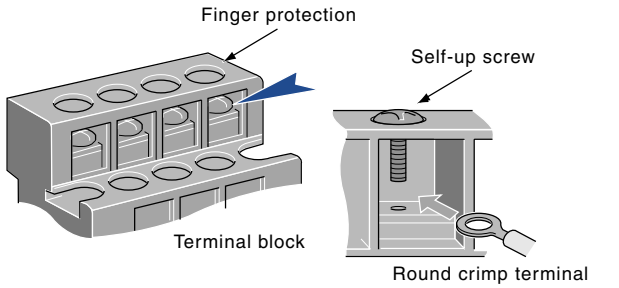


I want to save wiring time and cost.

Dedicated connectors of CC-Link family are designed to reduce wiring works, cost and wiring mistakes.

Screw terminal block type

CC-Link CC-Link/LT

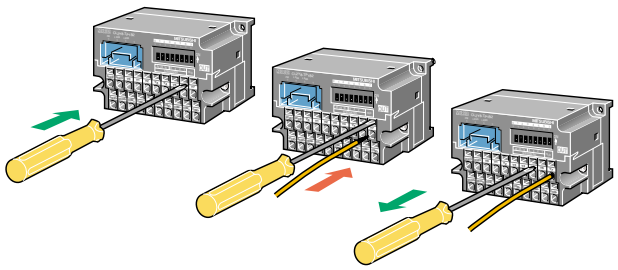


The round crimp terminal can be directly connected with the self-up screw by simply unfastening the terminal block screw.

* The specifications depend upon a product.

Spring clamp terminal block type

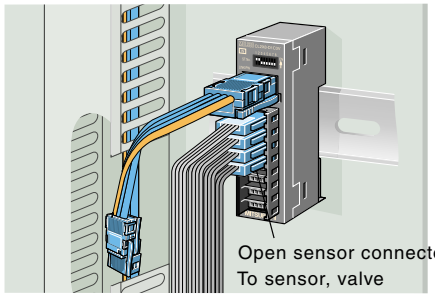
CC-Link CC-Link/LT



Spring clamps allows for quick and easy connectivity.

Sensor connector (e-CON) type

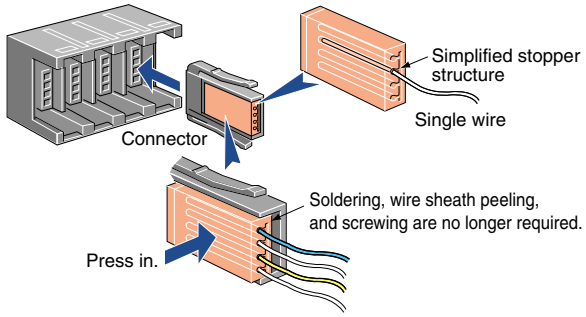
CC-Link CC-Link/LT



Utilizing the industry-standard e-CON, sensors can be replaced individually.

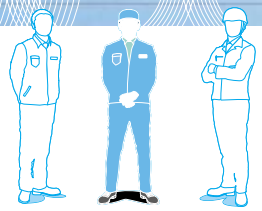
Push-in connector type

CC-Link



This connector adopts a lock mechanism that is easy to lock and unlock. You can connect single wires by simply pushing in the connector.

and increase productivity!"

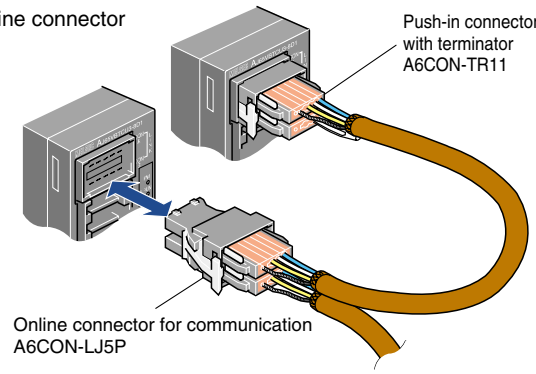


I need assembly/ disassembly to be easy.

▶CC-Link family products allows easy connection.

By using online connectors for communication and power supply, it is possible to replace modules without stopping the communication.

■Online connector



I want to prevent trouble from foreign substances

▶CC-Link protective cover protects I/O terminals.

The protective cover can be easily attached and removed. The transparent material allows you to check the LEDs and wiring conditions.

I need quick check-up.

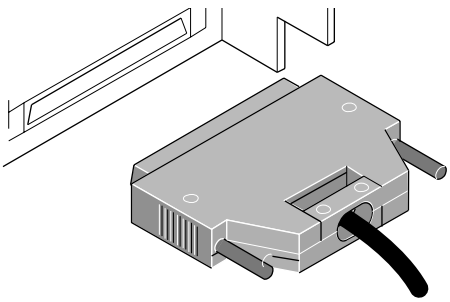
▶CC-Link ensures easy setup and startup.

CC-Link's auto-startup function allows you to start up the network without the need to set network parameters.

▶ Specific connection to application requirements

40-pin connector type

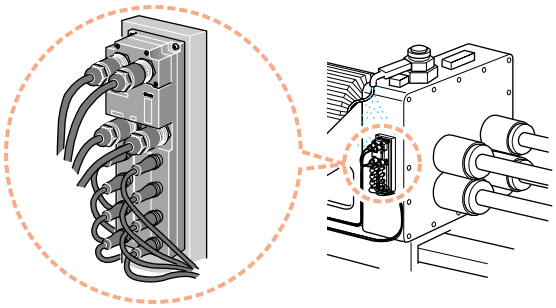
CC-Link



This type provides an easy and economical way of wiring.

Waterproof connector type (M12)

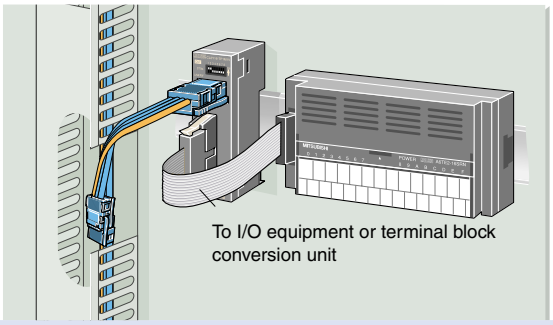
CC-Link



The waterproof type remote I/O module is housed in a protective structure conforming IP67. therefore it can be used without worry in an environment where water is present.

MIL connector type

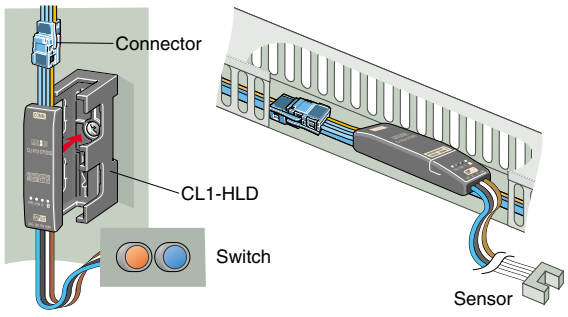
CC-Link/LT



This is the industry's smallest connector in its class, and can be easily connected to a relay terminal or terminal block conversion module.

Cable type

CC-Link/LT



This is the industry's smallest connector in its class. Suited to fit compactly into main trunking ducts.

Requests from the maintenance section: "Don't want to
CC-Link & CC-Link/LT supports the maintenance work with

Before trouble occurs... (preventive maintenance)

"I need network testing for preventive maintenance."

▶ CC-Link family products provides one-step-ahead preventive maintenance.

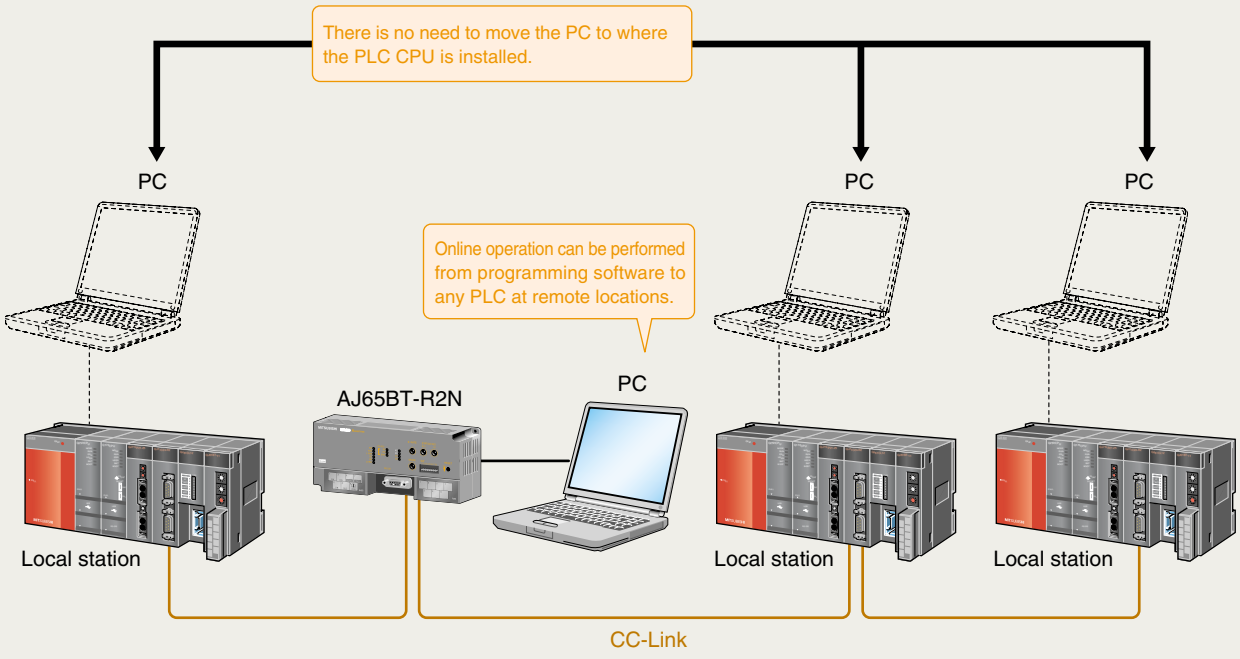
It is possible to check the data link status using special relays and registers. Hardware and line connection can be tested via offline tests.

"I want to do network maintenance from sites away from the PLC master."

▶ CC-Link provides remote operation functions.

By using the RS-232 interface module (AJ65BT-R2N) into the CC-Link system, it is possible to do network maintenance from sites away from PLC master.

■Network maintenance from sites away from PLC master.

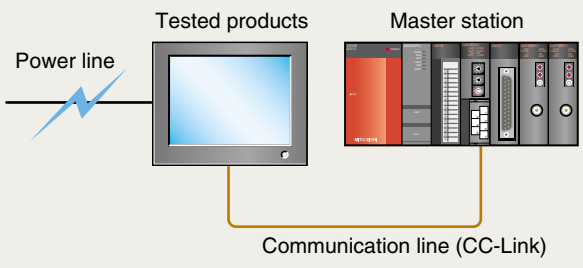


"I need high noise resistance."

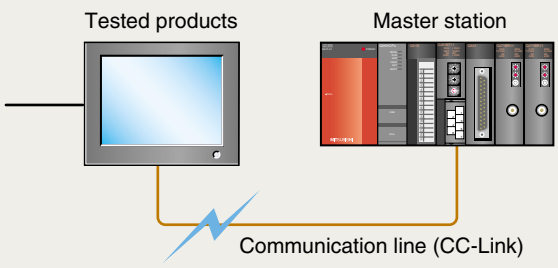
▶ CC-Link family compatible products are highly noise resistant guaranteed by conformance testing.

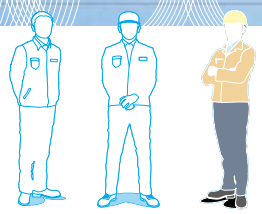
A conformance test is conducted for all products sold by CLPA partners. the test includes a power supply noise test and a bundle noise test.

■Power supply noise test (AC/DC)



■Bundle noise test





stop system and keep high operating rates!!"
secure functions.

When trouble occurs... (troubleshooting)

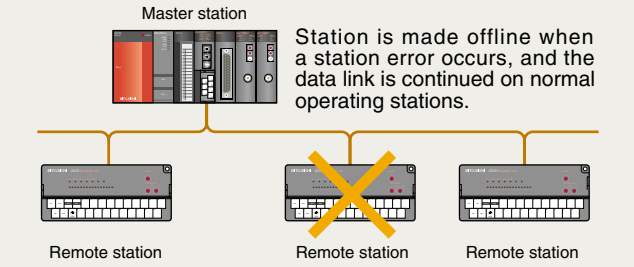
"I don't want to stop my system."

▶ CC-Link provides enhanced RAS functions.

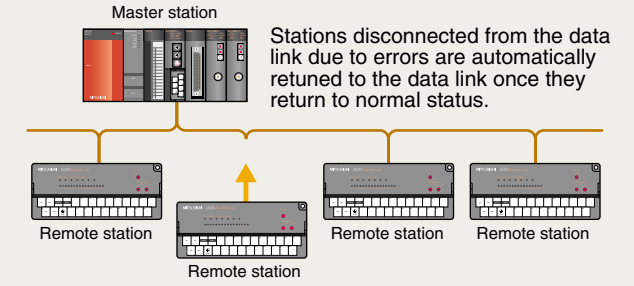
CC-link realizes minimal system shutdowns by "error invalid station setting," "slave station isolation," "automatic return," "standby master station," and "2-piece terminal block".

<Error invalid station setting>
In the online mode, this setting temporarily prevents modules specified on GX Developer from being treated as data link faulty stations.

■Slave station isolation

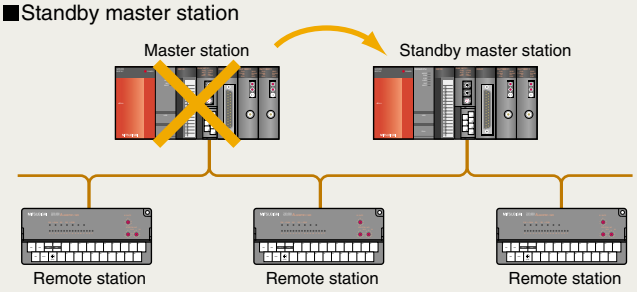


■Automatic return



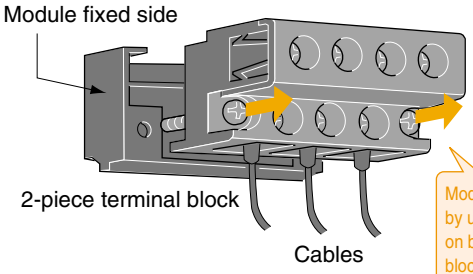
* When connecting offline stations on CC-Link/LT, make sure that the PLC CPU is in a STOP status.

■Standby master station



By setting a local station as a standby master station, the data link can be continued even if an error occurs in the master station.

■The "2-piece terminal block" allows modules to be replaced without stopping the CC-Link system.

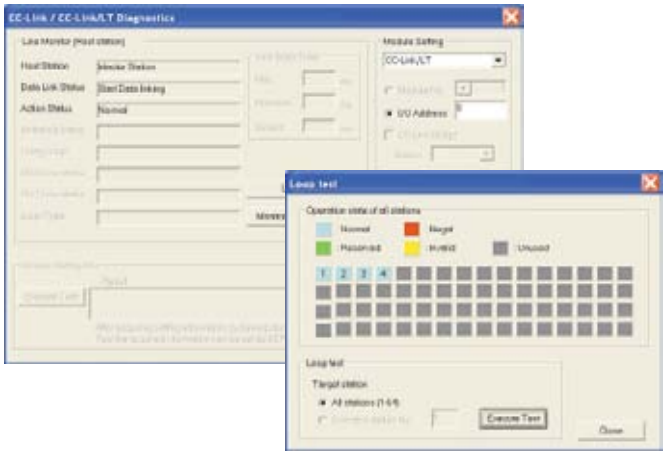


Modules can be separated by unfastening the screws on both edges of the terminal block with the cable still connected.

"I need easy troubleshooting."

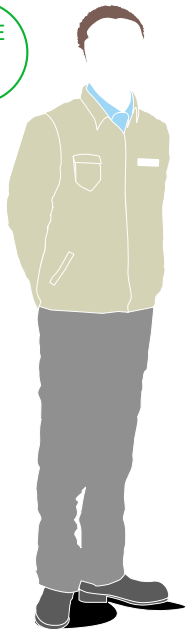
▶ CC-Link family Networks can be easily checked by GX Developer or GX Works2.

The status of the CC-Link and CC-Link/LT networks can be monitored by GX Developer or GX Works2.



Case Study "CC-Link is superior to existing networks" Realize the advantages of CC-Link.

CASE 1



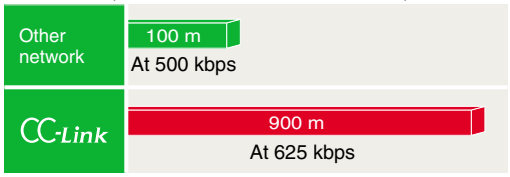
Mr. A from the engineering section

"My current network distance is limited to 100m, and the transmission speed is unstable."

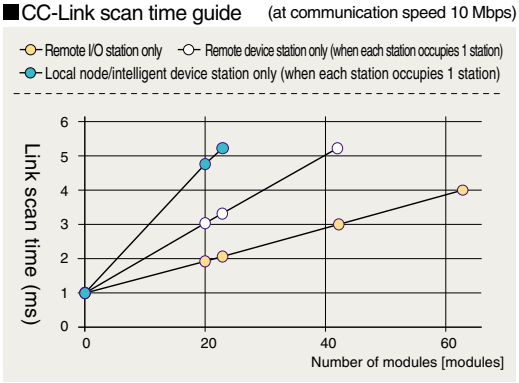
Mr. A plans to expand his factory. The first challenge is total cable distance and communication stability. What interested him is that the network distance covered by the CC-Link network can be increased up to 900m at 625kbps, and transmission time is stable as well.

Feature 1 CC-Link is high-speed network and total cable distance is long distance.
Feature 2 CC-Link is a consistent network.

■Transmission speeds and overall Network distance of other companies' networks



■CC-Link scan time guide (at communication speed 10 Mbps)



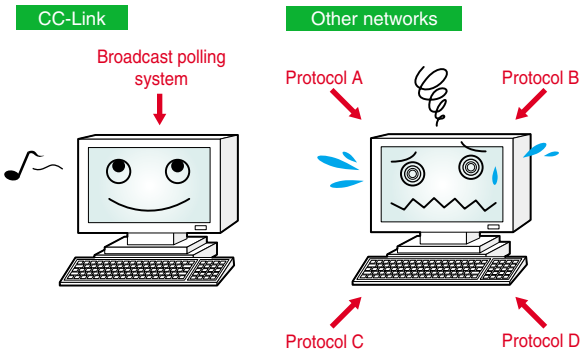
"Our factory's networks are complex because they use various protocols. How about CC-Link?"

CC-Link eliminates the need to use different protocols.

Feature 3

CC-link is a single protocol.

■Protocol comparison



"It takes too long to reconnect network stations."

Regarding this issue, Mr. A learned that CC-Link compatible products quickly return to the network, and began to feel more attraction to CC-Link.

Feature 4

CC-Link offers quick return to the network system.

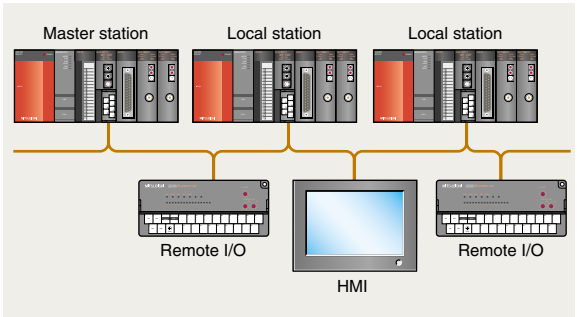
"I also need distributed control."

Also, using CC-Link, he easily realized "distributed control by establishing communication between controllers".

Feature 5

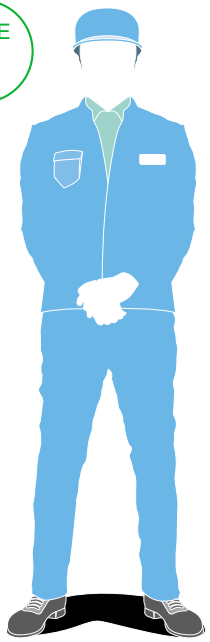
CC-Link is simple control level network.

■Distributed control by simple inter-controller network



"That's why we

CASE 2



Mr. B from the production section

"Trunk cables and branch cables in the current network are different. Furthermore, trunk cables are expensive."

Mr. B is in charge of production engineering. He has been worried about utilization and high cost of the existing network. Therefore, he collected CC-Link information and compared it with other networks.

Feature 1 CC-Link is flexible to install.

Feature 2 CC-Link is reasonably priced.

■Cable comparison

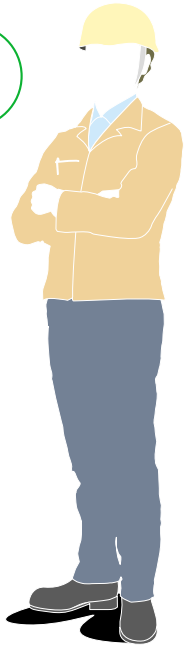
Item	CC-Link	Other network	
Cable diameter	7 mm	Thick cable: 12 mm	Thin cable: 7 mm
Trunk/ Branch	Trunk and branch	Trunk	Branch
Total cable length (no repeater)	Max. 1200 m (156 kbps)	Max. 500 m (125 kbps)	Max. 100 m (125 kbps) (250 kbps) (500 kbps)

"It is stressful to design the necessary power supply capacity of a network."

Mr. B used to be bothered by complicated calculations for the required power capacity.
He soon learned that such bothersome calculation was not necessary.

Feature 3 CC-Link frees you from the need of calculation of the power supply capacity.

CASE 3

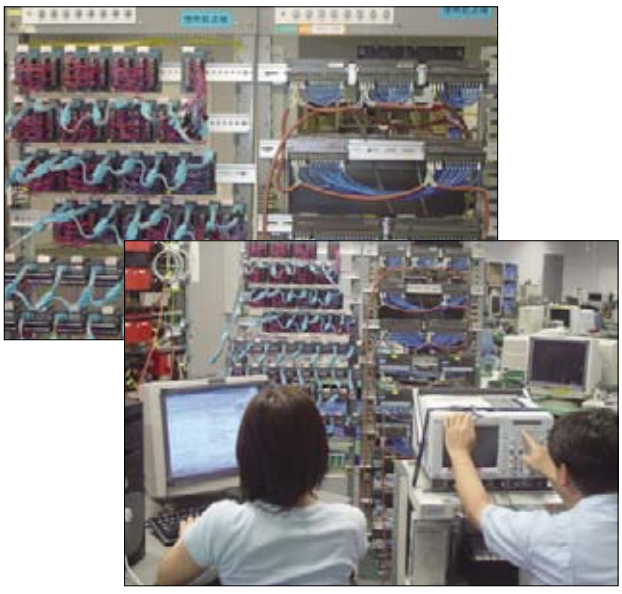


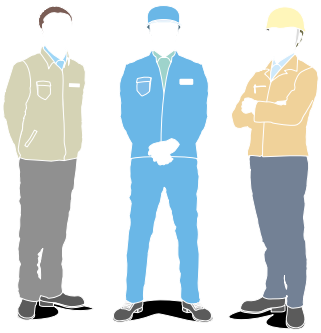
Mr. C from the maintenance section

"It concerns me that conformance testing is not mandatory in my current network."

Reliability is the most important for him. He was pleased that the conformance test guaranteed the high noise resistance of CC-Link.

CC-Link is reliable because the conformance test is mandatory.



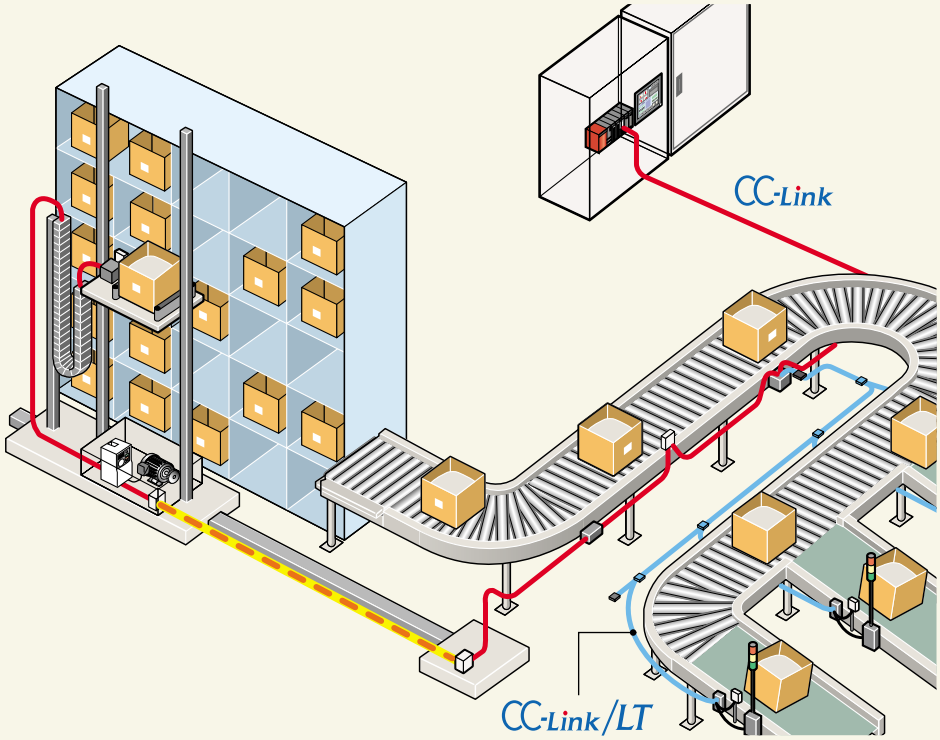


chose CC-Link!"

Networks is a key factor in various business applications.

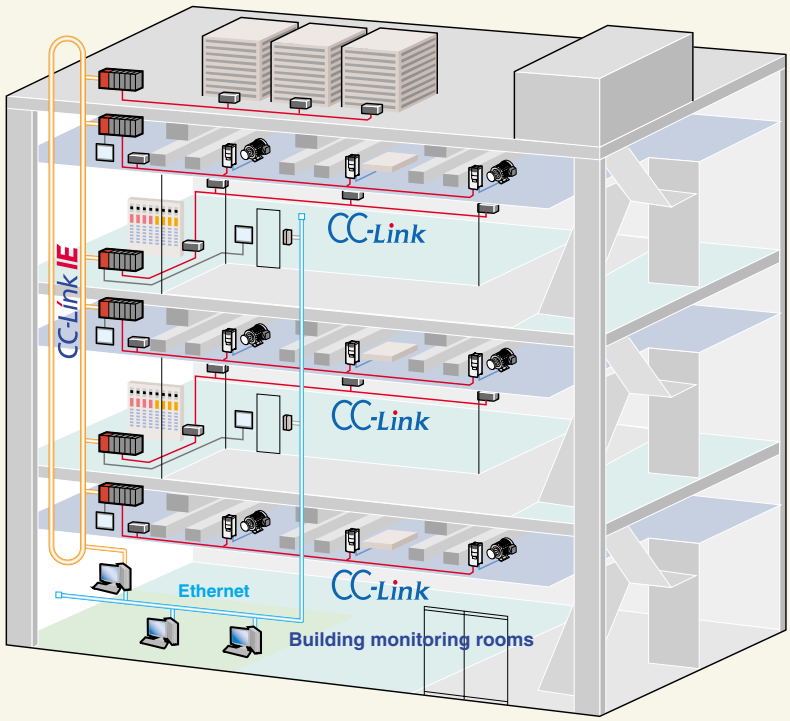
Material handling application

- Improved workability by repeaters — CC-Link
- Connection of various devices (Inverter, HMI) — CC-Link
- Cable specific to the application requirement. — CC-Link, CC-Link/LT
- Seamless communication using bridges — CC-Link/LT



Building management application

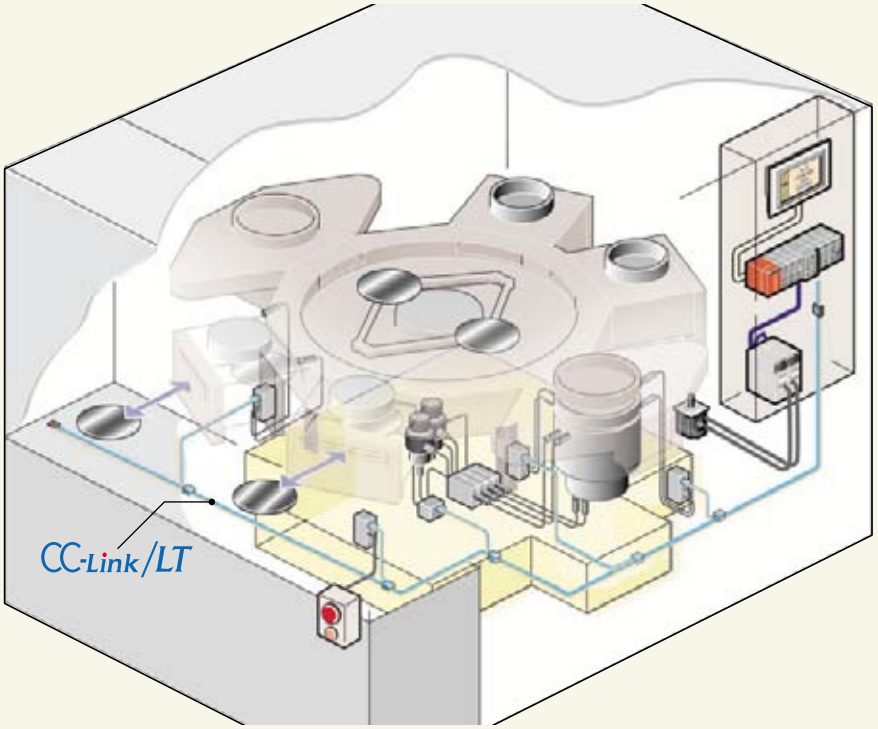
- The total cable distance up to 13.2 km by using repeaters — CC-Link
- Distributed control — CC-Link
- Seamless communication between Ethernet, CC-Link IE Controller Network and CC-Link — CC-Link



The CC-Link family is the best solution.

Semiconductor production application

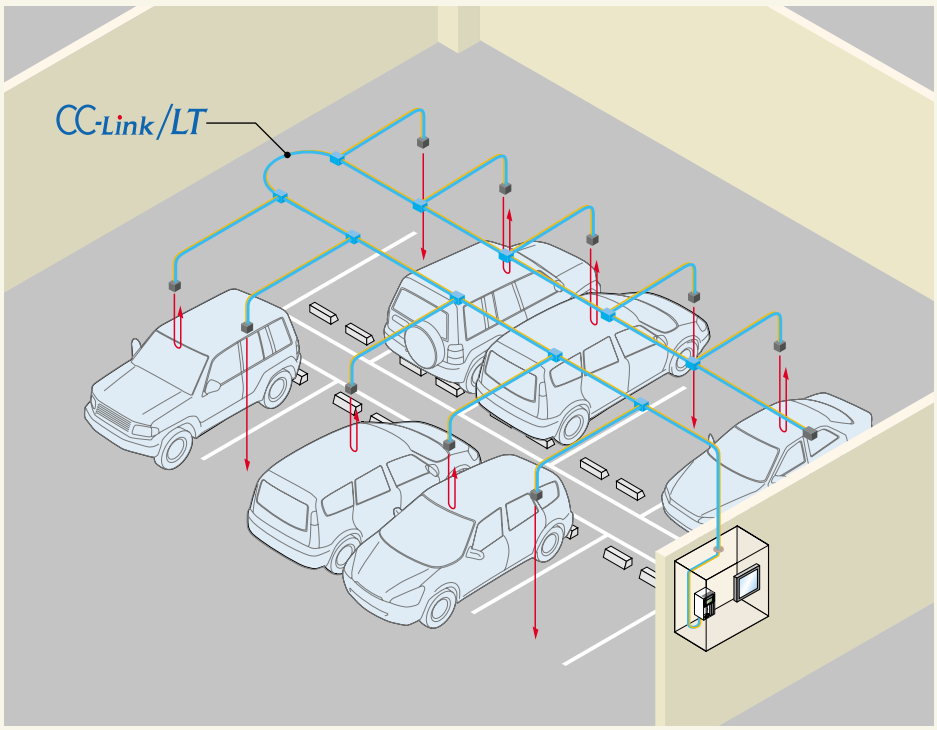
- High-speed transmission — CC-Link/LT
- High noise resistance — CC-Link
- Wire saving Small footprint — CC-Link/LT
- Compliant to EES. — CC-Link



Parking lot application

<FX3UC and CC-Link/LT combination>

- High speed transmission — CC-Link/LT
- Wire saving Small footprint — CC-Link/LT
- Parameter-free setup work — CC-Link/LT
- Easy installation and setting up — CC-Link/LT



Master/local modules

For Q series

QJ61BT11N

Number of occupied I/O points: 32

Number of occupied stations (at local station):
1 to 4*1 (can be set arbitrarily)

L series CPU with master/local function

L26CPU-BT(Sink output type)
L26CPU-PBT(Source output type)

Number of occupied I/O points: 32

Number of occupied stations (at local station):
1 to 4*2 (can be set arbitrarily)

(CPU part)

Number of I/O points:4096 points

Number of I/O device points:8192 points
program size:260k steps

For L series

LJ61BT11

Number of occupied I/O points: 32

Number of occupied stations (at local station):
1 to 4*2 (can be set arbitrarily)

For FX series

FX2N-16CCL-M

Number of occupied I/O points: 8

Can be used only as a master station.

For QnAS series

A1SJ61QBT11

Number of occupied I/O points: 32

Number of occupied stations (at local station):
1 to 4*2 (can be set arbitrarily)

For AnS series

A1SJ61BT11

Number of occupied I/O points: 32

Number of occupied stations (at local station):
1 to 4*2 (can be set arbitrarily)

*1 The number of occupied stations at a local station is set by a parameter in GX Developer or GX Works2.
*2 The number of occupied stations at a local station is set by the "condition setting switch" on the front face of the modules.

Remote I/O modules

▶Terminal block type

Screw terminal block type — AJ65SBTB□-□

Features

◎From the lineup including a variety of products, you can select the most suitable type to match the connection method and I/O specifications of external devices.

◎The protector covering the terminal block prevents the user from touching charged parts, allowing direct installation to a target machine.

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
AJ65SBTB2N-8A	AC	-	100VAC/7mA	8	20ms or less	2-wire type
AJ65SBTB2N-16A	AC	-	100VAC/7mA	16	20ms or less	2-wire type
AJ65SBTB1-8D	DC	Positive/Negative common	24VDC/7mA	8	1.5ms or less	1-wire type
AJ65SBTB3-8D	DC	Positive/Negative common	24VDC/7mA	8	1.5ms or less	3-wire type
AJ65SBTB1-16D	DC	Positive/Negative common	24VDC/7mA	16	1.5ms or less	1-wire type
AJ65SBTB1-16D1	DC	Positive/Negative common	24VDC/5mA	16	0.2ms or less	1-wire type
AJ65SBTB3-16D	DC	Positive/Negative common	24VDC/7mA	16	1.5ms or less	3-wire type
AJ65SBTB3-16D5	DC	Positive/Negative common	5VDC/4mA	16	1.5ms or less	3-wire type
AJ65SBTB3-16KD	DC	Positive/Negative common	24VDC/7mA	16	0.2ms or less,1.5ms or less,5ms or less,10ms or less	3-wire type
AJ65SBTB1-32D	DC	Positive/Negative common	24VDC/7mA	32	1.5ms or less	1-wire type
AJ65SBTB1-32D1	DC	Positive/Negative common	24VDC/5mA	32	0.2ms or less	1-wire type
AJ65SBTB1-32D5	DC	Positive/Negative common	5VDC/4mA	32	1.5ms or less	1-wire type
AJ65SBTB1-32KD	DC	Positive/Negative common	24VDC/7mA	32	0.2ms or less,1.5ms or less,5ms or less,10ms or less	1-wire type

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65SBTB1-8T	Transistor	Sink type	12/24VDC 0.5A	8	0.25mA or less	Yes	1-wire type
AJ65SBTB1-8T1	Transistor	Sink type	12/24VDC 0.5A	8	0.1 mA or less	No	1-wire type
AJ65SBTB2-8T	Transistor	Sink type	12/24VDC 0.5A	8	0.25mA or less	Yes	2-wire type
AJ65SBTB2-8T1	Transistor	Sink type	12/24VDC 0.5A	8	0.1 mA or less	No	2-wire type
AJ65SBTB1-16T	Transistor	Sink type	12/24VDC 0.5A	16	0.25mA or less	Yes	1-wire type
AJ65SBTB1-16T1	Transistor	Sink type	12/24VDC 0.5A	16	0.1 mA or less	No	1-wire type
AJ65SBTB2-16T	Transistor	Sink type	12/24VDC 0.5A	16	0.25mA or less	Yes	2-wire type
AJ65SBTB2-16T1	Transistor	Sink type	12/24VDC 0.5A	16	0.1 mA or less	No	2-wire type
AJ65SBTB1-32T	Transistor	Sink type	12/24VDC 0.5A	32	0.25mA or less	Yes	1-wire type
AJ65SBTB1-32T1	Transistor	Sink type	12/24VDC 0.5A	32	0.1 mA or less	No	1-wire type
AJ65SBTB1-8TE	Transistor	Source type	12/24VDC 0.1A	8	0.1 mA or less	Yes	1-wire type
AJ65SBTB1-16TE	Transistor	Source type	12/24VDC 0.1A	16	0.1 mA or less	Yes	1-wire type
AJ65SBTB1B-16TE1	Transistor	Source type	12/24VDC 0.5A	16	0.1 mA or less	No	1-wire type
AJ65SBTB1-32TE1	Transistor	Source type	12/24VDC 0.5A	32	0.1 mA or less	No	1-wire type
AJ65SBTB2N-8R	Relay	-	24VDC, 240VAC 2A	8	-	No	2-wire type
AJ65SBTB2N-16R	Relay	-	24VDC, 240VAC 2A	16	-	No	2-wire type
AJ65SBTB2N-8S	Triac	-	100 to 240VAC 0.6A	8	1.5mA or less (100VAC)/3mA or less (200VAC)	No	2-wire type
AJ65SBTB2N-16S	Triac	-	100 to 240VAC 0.6A	16	1.5mA or less (100VAC)/3mA or less (200VAC)	No	2-wire type

I/O combined modules

Model name	Input format		Rated input voltage /current	Number of input points	Input response time	Output type		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65SBTB32-8DT	DC	Positive common	24VDC/ 7mA	4	1.5ms or less	Transistor	Sink type	24VDC 0.5A	4	0.25mA or less	Yes	3-wire type/2-wire type
AJ65SBTB32-8DT2	DC	Positive common	24VDC/ 7mA	4	1.5ms or less	Transistor	Sink type	24VDC 0.5A	4	0.1mA or less	No	3-wire type/2-wire type
AJ65SBTB1-16DT	DC	Positive common	24VDC/ 7mA	8	1.5ms or less	Transistor	Sink type	24VDC 0.5A	8	0.25mA or less	Yes	1-wire type/1-wire type
AJ65SBTB1-16DT1	DC	Positive common	24VDC/ 5mA	8	0.2ms or less	Transistor	Sink type	24VDC 0.5A	8	0.25mA or less	Yes	1-wire type/1-wire type
AJ65SBTB1-16DT2	DC	Positive common	24VDC/ 7mA	8	1.5ms or less	Transistor	Sink type	24VDC 0.5A	8	0.1mA or less	No	1-wire type/1-wire type
AJ65SBTB1-16DT3	DC	Positive common	24VDC/ 5mA	8	0.2ms or less	Transistor	Sink type	24VDC 0.5A	8	0.1mA or less	No	1-wire type/1-wire type
AJ65SBTB32-16DT	DC	Positive common	24VDC/ 7mA	8	1.5ms or less	Transistor	Sink type	24VDC 0.5A	8	0.25mA or less	Yes	3-wire type/2-wire type
AJ65SBTB32-16DT2	DC	Positive common	24VDC/ 7mA	8	1.5ms or less	Transistor	Sink type	24VDC 0.5A	8	0.1mA or less	No	3-wire type/2-wire type
AJ65SBTB32-16DR	DC	Positive/Negative common	24VDC/ 7mA	8	1.5ms or less	Relay	-	24VDC/240VAC 2A	8	-	No	3-wire type/2-wire type
AJ65SBTB32-16KDT2	DC	Positive common	24VDC/ 7mA	8	0.2ms or less,1.5ms or less,5ms or less,10ms or less	Transistor	Sink type	24VDC 0.5A	8	0.1mA or less	No	3-wire type/2-wire type
AJ65SBTB32-16KDT8	DC	Positive common	12VDC/11mA	8	0.2ms or less,1.5ms or less,5ms or less,10ms or less	Transistor	Sink type	12VDC 0.5A	8	0.1mA or less	No	3-wire type/2-wire type
AJ65SBTB32-16KDR	DC	Positive/Negative common	24VDC/ 7mA	8	0.2ms or less,1.5ms or less,5ms or less,10ms or less	Relay	-	24VDC/240VAC 2A	8	-	No	3-wire type/2-wire type
AJ65SBTB1-32DT	DC	Positive common	24VDC/ 7mA	16	1.5ms or less	Transistor	Sink type	24VDC 0.5A	16	0.25mA or less	Yes	1-wire type/1-wire type
AJ65SBTB1-32DT1	DC	Positive common	24VDC/ 5mA	16	0.2ms or less	Transistor	Sink type	24VDC 0.5A	16	0.25mA or less	Yes	1-wire type/1-wire type
AJ65SBTB1-32DT2	DC	Positive common	24VDC/ 7mA	16	1.5ms or less	Transistor	Sink type	24VDC 0.5A	16	0.1mA or less	No	1-wire type/1-wire type
AJ65SBTB1-32DT3	DC	Positive common	24VDC/ 5mA	16	0.2ms or less	Transistor	Sink type	24VDC 0.5A	16	0.1mA or less	No	1-wire type/1-wire type
AJ65SBTB1-32DTE1	DC	Positive/Negative common	24VDC/ 7mA	16	1.5ms or less	Transistor	Source type	24VDC 0.5A	16	0.1mA or less	No	1-wire type/1-wire type
AJ65SBTB1-32KDT2	DC	Positive common	24VDC/ 7mA	16	0.2ms or less,1.5ms or less,5ms or less,10ms or less	Transistor	Sink type	24VDC 0.5A	16	0.1mA or less	No	1-wire type/1-wire type
AJ65SBTB1-32KDT8	DC	Positive common	12VDC/11mA	16	0.2ms or less,1.5ms or less,5ms or less,10ms or less	Transistor	Sink type	12VDC 0.5A	16	0.1mA or less	No	1-wire type/1-wire type

Screw/2-piece terminal block type

AJ65BTB□-□

Features

◎The I/O terminal block is removable.

◎The 2-piece structure allows easy servicing as the module can be replaced without rewiring.

The terminal block can be removed.

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
AJ65BTB1-16D	DC	Positive/Negative common	24VDC/7mA	16	10ms or less	1-wire type
AJ65BTB2-16D	DC	Positive/Negative common	24VDC/7mA	16	10ms or less	2-wire type

Output modules

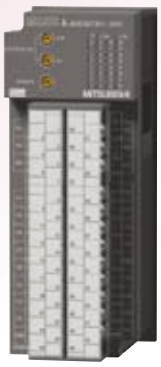
Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65BTB1-16T	Transistor	Sink type	12/24VDC 0.5A	16	0.1mA or less	No	1-wire type
AJ65BTB2-16T	Transistor	Sink type	12/24VDC 0.5A	16	0.1mA or less	No	2-wire type
AJ65BTB2-16R	Relay	-	24VDC/240VAC 2A	16	-	No	2-wire type

I/O combined modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65BTB1-16DT	DC	Positive common	24VDC/7mA	8	10ms or less	Transistor	Sink type	12/24VDC 0.5A	8	0.1mA or less	No	1-wire type/1-wire type
AJ65BTB2-16DT	DC	Positive common	24VDC/7mA	8	10ms or less	Transistor	Sink type	12/24VDC 0.5A	8	0.1mA or less	No	2-wire type/2-wire type
AJ65BTB2-16DR	DC	Positive common/ Negative common	24VDC/7mA	8	10ms or less	Relay	-	24VDC/ 240VAC 2A	8	-	No	2-wire type/2-wire type

Screw/2-piece/dustproof terminal block type

AJ65DBTB□-32□



Features

◎The I/O terminal block is removable.

◎The modules are mountable in six orientations.

◎The 2-piece structure allows easy servicing as the module can be replaced without rewiring.

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
AJ65DBTB1-32D	DC	Positive/Negative common	24VDC/5mA	32	10ms or less	1-wire type

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65DBTB1-32T1	Transistor	Sink type	12/24VDC 0.5A	32	0.1mA or less	No	1-wire type
AJ65DBTB1-32R	Relay	-	24VDC/240VAC 2A	32	-	No	1-wire type

I/O combined modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65DBTB1-32DT1	DC	Positive common	24VDC/5mA	16	10ms or less	Transistor	Sink type	12/24VDC 0.5A	16	0.1mA or less	No	1-wire type/1-wire type
AJ65DBTB1-32DR	DC	Positive/Negative common	24VDC/5mA	16	10ms or less	Relay	-	24VDC /240VAC 2A	16	-	No	1-wire type/1-wire type

Spring clamp teminal block push-in type AJ65ABTP3-16D AJ65ABTP3-16DE

Features

◎Wiring time can be reduced using push-in type terminal blocks.
◎Wire disconnections or short-circuits can be checked.
◎Wiring errors from external power supply can be checked.
◎The 2-piece structure allows easy servicing as the module can be replaced without rewiring.

* These modules are used as remote device stations.

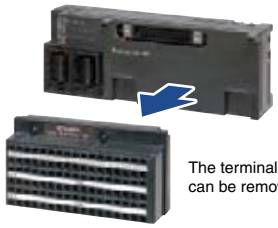
Input modules with diagnostic functions

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
AJ65ABTP3-16D NEW	DC	Positive common	24VDC/6mA	16	1.5ms or less	3-wire type
AJ65ABTP3-16DE NEW	DC	Negative common	24VDC/6mA	16	1.5ms or less	3-wire type

Spring clamp terminal block type AJ65VBTS□-□

Features

◎Wiring time can be reduced because no screw tightening and retightening are required.
◎The 2-piece structure allows easy servicing as the module can be replaced without rewiring.
◎DIN rail or screw mounting is selectable.
◎The 3-wire sensor can be connected.



The terminal block can be removed.

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
AJ65VBTS3-16D	DC	Positive common	24VDC/5mA	16	1.5ms or less	3-wire type
AJ65VBTS3-32D	DC	Positive common	24VDC/5mA	32	1.5ms or less	3-wire type

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65VBTS2-16T	Transistor	Sink type	12/24VDC 0.5A	16	0.1mA or less	No	2-wire type
AJ65VBTS2-32T	Transistor	Sink type	12/24VDC 0.5A	32	0.1mA or less	No	2-wire type

I/O combined modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65VBTS32-16DT	DC	Positive common	24VDC/5mA	8	1.5ms or less	Transistor	Sink type	24VDC 0.5A	8	0.1mA or less	No	3-wire type/2-wire type
AJ65VBTS32-32DT	DC	Positive common	24VDC/5mA	16	1.5ms or less	Transistor	Sink type	12/24VDC 0.5A	16	0.1mA or less	No	3-wire type/2-wire type

▶Sensor connector type

e-CON type　AJ65VBTCE□-□

Features

◎Industry-standard e-CON has been adopted.
◎Easy wiring with sensor connectors
◎DIN rail or screw mounting is selectable.
◎The 3-wire sensor can be connected.

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
AJ65VBTCE3-8D	DC	Positive common	24VDC/5mA	8	1.5ms or less	3-wire type
AJ65VBTCE3-16D	DC	Positive common	24VDC/5mA	16	1.5ms or less	3-wire type
AJ65VBTCE3-32D	DC	Positive common	24VDC/5mA	32	1.5ms or less	3-wire type
AJ65VBTCE3-16DE	DC	Negative common	24VDC/5mA	16	1.5ms or less	3-wire type
AJ65VBTCE3-32DE	DC	Negative common	24VDC/5mA	32	1.5ms or less	3-wire type

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65VBTCE2-8T	Transistor	Sink type	12/24VDC 0.1A	8	0.1mA or less	Yes	2-wire type
AJ65VBTCE2-16T	Transistor	Sink type	12/24VDC 0.1A	16	0.1mA or less	Yes	2-wire type
AJ65VBTCE3-16TE NEW	Transistor	Source type	12/24VDC 0.1A	16	0.1mA or less	Yes	3-wire type

I/O combined modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65VBTCE32-16DT	DC	Positive common	24VDC/5mA	8	1.5ms or less	Transistor	Sink type	24VDC 0.1A	8	0.1mA or less	Yes	3-wire type/2-wire type
AJ65VBTCE3-16DTE NEW	DC	Negative common	24VDC/5mA	8	1.5ms or less	Transistor	Source type	24VDC 0.1A	8	0.1mA or less	Yes	3-wire type
AJ65VBTCE32-32DT	DC	Positive common	24VDC/5mA	16	1.5ms or less	Transistor	Sink type	24VDC 0.1A	16	0.1mA or less	Yes	3-wire type/2-wire type
AJ65VBTCE3-32DTE NEW	DC	Negative common	24VDC/5mA	16	1.5ms or less	Transistor	Source type	24VDC 0.1A	16	0.1mA or less	Yes	3-wire type

One-touch connector type　AJ65SBTC□-□　AJ65VBTCU□-□

Features

◎Easy wiring with sensor connectors
◎The modules are mountable in six orientations.

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
AJ65VBTCU3-8D1	DC	Positive common	24VDC/5mA	8	0.2ms or less	3-wire type
AJ65VBTCU3-16D1	DC	Positive common	24VDC/5mA	16	0.2ms or less	3-wire type
AJ65SBTC4-16DN	DC	Positive common	24VDC/5mA	16	1.5ms or less	4-wire type
AJ65SBTC4-16DE	DC	Negative common	24VDC/5mA	16	1.5ms or less	4-wire type
AJ65SBTC1-32D	DC	Positive/Negative common	24VDC/5mA	32	1.5ms or less	1-wire type
AJ65SBTC1-32D1	DC	Positive/Negative common	24VDC/5mA	32	0.2ms or less	1-wire type

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65VBTCU2-8T	Transistor	Sink type	12/24VDC 0.1A	8	0.1 mA or less	Yes	2-wire type
AJ65VBTCU2-16T	Transistor	Sink type	12/24VDC 0.1A	16	0.1 mA or less	Yes	2-wire type
AJ65SBTC1-32T	Transistor	Sink type	12/24VDC 0.1A	32	0.25mA or less	Yes	1-wire type
AJ65SBTC1-32T1	Transistor	Sink type	12/24VDC 0.1A	32	0.1 mA or less	No	1-wire type

I/O combined modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65SBTC4-16DT	DC	Positive common	24VDC/5mA	8	1.5ms or less	Transistor	Sink type	24VDC 0.5A	8	0.25mA or less	Yes	4-wire type
AJ65SBTC4-16DT2	DC	Positive common	24VDC/5mA	8	1.5ms or less	Transistor	Sink type	24VDC 0.5A	8	0.1 mA or less	No	4-wire type
AJ65SBTC1-32DT	DC	Positive common	24VDC/5mA	16	1.5ms or less	Transistor	Sink type	24VDC 0.1A	16	0.25mA or less	Yes	1-wire type/1-wire type
AJ65SBTC1-32DT1	DC	Positive common	24VDC/5mA	16	0.2ms or less	Transistor	Sink type	24VDC 0.1A	16	0.25mA or less	Yes	1-wire type/1-wire type
AJ65SBTC1-32DT2	DC	Positive common	24VDC/5mA	16	1.5ms or less	Transistor	Sink type	24VDC 0.1A	16	0.1 mA or less	No	1-wire type/1-wire type
AJ65SBTC1-32DT3	DC	Positive common	24VDC/5mA	16	0.2ms or less	Transistor	Sink type	24VDC 0.1A	16	0.1 mA or less	No	1-wire type/1-wire type

40-pin connector type (FCN connector type)

AJ65SBTCF□-□ AJ65VBTCF□-□

Features

◎The 40-pin connector (FCN connector type) allows connection of various devices.

◎The modules are mountable in six orientations.

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
AJ65SBTCF1-32D	DC	Positive/Negative common	24VDC/5mA	32	1.5ms or less	1-wire type

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65SBTCF1-32T	Transistor	Sink type	12/24VDC 0.1A	32	0.1mA or less	Yes	1-wire type

I/O combined modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65SBTCF1-32DT	DC	Positive/Negative common	24VDC/5mA	16	1.5ms or less	Transistor	Sink type	12/24VDC 0.1A	16	0.1mA or less	Yes	1-wire type
AJ65VBTCF1-32DT1	DC	Positive/Negative common	24VDC/5mA	16	0.2ms or less	Transistor	Sink type	12/24VDC 0.1A	16	0.1mA or less	Yes	1-wire type
AJ65VBTCFJ1-32DT1	DC	Positive common	24VDC/5mA	16	0.2ms or less	Transistor	Sink type	24VDC 0.1A	16	0.1mA or less	Yes	1-wire type

Waterproof connector type

AJ65FBTA□-16□

Features

◎Waterproof type modules are compliant with the IP67 standard for water resistance.

◎Modules can be replaced without stopping the system.

◎Easy connection without using any tool reduces wiring time.

◎Built-in terminating resistor (selected by 110Ω/130Ω switch)

◎The modules are mountable in six orientations.

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
AJ65FBTA4-16D	DC	Positive common	24VDC/7mA	16	1.5ms or less	2 to 4-wire type
AJ65FBTA4-16DE	DC	Negative common	24VDC/7mA	16	1.5ms or less	2 to 4-wire type

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65FBTA2-16T	Transistor	Sink type	12/24VDC 0.5A	16	0.25mA or less	Yes	2-wire type
AJ65FBTA2-16TE	Transistor	Source type	12/24VDC 1.0A	16	0.30mA or less	Yes	2-wire type

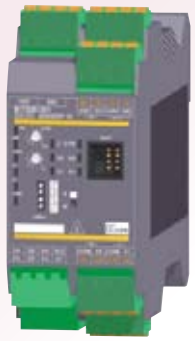
I/O combined modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	Output format		Rated load voltage /current	Number of output points	Leakage current at OFF	Output protection function	External connection
AJ65FBTA42-16DT	DC	Positive common	24VDC/7mA	8	1.5ms or less	Transistor	Sink type	24VDC 0.5A	8	0.25mA or less	Yes	2 to 4-wire type
AJ65FBTA42-16DTE	DC	Negative common	24VDC/7mA	8	1.5ms or less	Transistor	Source type	24VDC 1.0A	8	0.30mA or less	Yes	2 to 4-wire type /2-wire type

Safety relay modules

▶Terminal block type

Spring clamp terminal block type　QS90SR2SP-CC　QS90SR2SN-CC



Features

◎The safety system can be added easily.
Independent safety functions (Category 4 of EN954-1 , PL e of ISO13849-1) can be added by simply connecting the existing CC-Link cable.

◎Reduced wiring with the CC-Link connection
The special wiring to monitor the status of the safety relay module is not required.
The cables are nicely organized inside/outside of the control panel.

◎Safety status visibility
The cause of the safety system activation can be easily investigated since the status of safety outputs/inputs and internal relays are monitored.

Item		QS90SR2SP-CC	QS90SR2SN-CC
Safety standard		Category 4 of EN954-1, PL e of ISO13849-1	
Number of safety input points		1 point (2 inputs)	
Number of start-up input points		1 point	
Input format		P type (positive common/positive common)	N type (positive common/negative common)
Number of safety output points		1 point (3 outputs)	
Rated load current		Category 4: 3.6A/point　Category 3: 5.0A/point (250VAC/30VDC)	
Response time	Output OFF	20ms or less (safety input OFF → safety output OFF)	
	Output ON	50ms or less (safety input ON → safety output ON)	
Module power supply		20.4 to 26.4VDC (ripple ratio: within 5%)	
Safety power supply		20.4 to 26.4VDC (ripple ratio: within 5%)	
Number of extension modules		Up to three extension safety relay modules can be connected.	
External connection method		Two-piece spring clamp terminal block	
Relay life	Mechanical	Five million times or more	
	Electrical	One hundred thousand times or more	

Safety controller

▶Terminal block type

Spring clamp terminal block type　WS0-GCC100202

Features

◎The safety controller CC-Link module enables communication between a CC-Link master station and the safety controller MELSEC-WS series. (It provides remote access to devices.)

◎Communication settings are simple to make using the safety controller engineering software. In addition, communication data points can be given user labels that allow programs to be easily understood.

◎The transmission speed auto-tracking function allows the module to match the speed of the master station without the need for any settings.

◎Spring clamp terminals help to minimize man hours spent wiring CC-Link cable.

◎Rewriting parameters is unnecessary when changing out modules.

◎Connect to the safety controller using the monitor tool to configure settings and check the error history.

Item	WS0-GCC100202
Data transmission speed	156kbps/625kbps/2.5Mbps/5Mbps/10Mbps(autosensing)
Station number	1 to 64
Number of occupied stations	1 station (RX/RY 32 points each, RWw/RWr 4 points each)/ 2 stations (RX/RY 64 points each, RWw/RWr 8 points each)/ 3 stations (RX/RY 96 points each, RWw/RWr 12 points each)/ 4 stations (RX/RY 128 points each, RWw/RWr 16 points each) (The last 16 points of RX/RY are for system use (reserved).)
External connection method	2-piece spring clamp terminal block
Power consumption	1.4W

Analog modules

▶Connector type

Analog input modules

One-touch connector type

CC-Link V2

AJ65VBTCU-68ADVN
AJ65VBTCU-68ADIN

Voltage input module

Model name	Number of channels	Number of occupied points	Station type
AJ65VBTCU-68ADVN	8	1/3*3	Remote device

Current input module

Model name	Number of channels	Number of occupied points	Station type
AJ65VBTCU-68ADIN	8	1/3*3	Remote device

*3: Three stations are occupied in Ver. 1 mode, or one station is occupied in Ver. 2 mode.

Analog output modules

One-touch connector type

CC-Link V2

AJ65VBTCU-68DAVN

Voltage output module

Model name	Number of channels	Number of occupied points	Station type
AJ65VBTCU-68DAVN	8	1/3 *3	Remote device

▶Terminal block type

Analog input modules

Screw terminal block type

AJ65SBT-64AD
AJ65SBT2B-64AD
(High accuracy, high resolution, high speed, 2-piece terminal block type)

Voltage/current input module

Model name	Number of channels	Number of occupied points	Station type
AJ65SBT-64AD	4	1	Remote device
AJ65SBT2B-64AD	4	1	Remote device

Analog output modules

Screw terminal block type

AJ65SBT-62DA
AJ65SBT2B-64DA
(High resolution, high speed, 2-piece terminal block type)

Voltage/current output module

Model name	Number of channels	Number of occupied points	Station type
AJ65SBT-62DA	2	1	Remote device
AJ65SBT2B-64DA	4	1	Remote device

Analog input modules

Screw/2-piece terminal block type

AJ65BT-64AD

Voltage/current input module

Model name	Number of channels	Number of occupied points	Station type
AJ65BT-64AD	4	2	Remote device

Analog output modules

Screw/2-piece terminal block type

AJ65BT-64DAV
AJ65BT-64DAI

Voltage output module

Model name	Number of channels	Number of occupied points	Station type
AJ65BT-64DAV	4	2	Remote device

Current output module

Model name	Number of channels	Number of occupied points	Station type
AJ65BT-64DAI	4	2	Remote device

Temperature input modules

Screw/2-piece terminal block type

AJ65SBT2B-64RD3
AJ65SBT2B-64TD

RTD input module

Model name	Number of channels	Number of occupied points	Station type
AJ65SBT2B-64RD3	4	1	Remote device

Thermocouple temperature input module

Model name	Number of channels	Number of occupied points	Station type
AJ65SBT2B-64TD	4	1	Remote device

Temperature input modules

Screw/2-piece terminal block type

AJ65BT-68TD
AJ65BT-64RD3
AJ65BT-64RD4

Thermocouple temperature input module

Model name	Number of channels	Number of occupied points	Station type
AJ65BT-68TD	8	4	Remote device

Platinum resistance temperature sensor Pt 100 temperature input modules

Model name	Number of channels	Number of occupied points	Station type
AJ65BT-64RD3	4	4	Remote device
AJ65BT-64RD4	4	4	Remote device

High-speed counter modules

AJ65BT-D62
AJ65BT-D62D
AJ65BT-D62D-S1

Item	AJ65BT-D62	AJ65BT-D62D	AJ65BT-D62D-S1
Pulse input	DC input	Differential input	Differential input
Preset input	DC input	DC input	Differential input
Counting range	0 to 16777215 (24-bit binary)	0 to 16777215 (24-bit binary)	0 to 16777215 (24-bit binary)
Number of occupied stations	4	4	4
Station type	Remote device	Remote device	Remote device

Positioning module

AJ65BT-D75P2-S3

Item	AJ65BT-D75P2-S3
Description	2 axes (independent, linear and circular interpolation at the same time), 400 kbps, pulse count from -2147483648 to 2147483647
Number of occupied stations	4
Station type	Intelligent device

RS-232 interface module

AJ65BT-R2N

Item	AJ65BT-R2N
Description	RS-232 1 channel, DC input 2 points/transistor output 2 points
Number of occupied stations	1
Station type	Intelligent device

FX Series interface block

FX3U-64CCL

Features

◎Interface block for connecting Mitsubishi micro-programmable controllers FX3G, FX3U, FX3UC Series as CC-Link intelligent device stations

Item	FX3U-64CCL
Description	FX series interface block
Number of occupied stations	1 to 4
Station type	Intelligent device station
Applicable programmable controller	Mitsubishi micro-programmable controllers • FX3G, FX3U, FX3UC Series (FX2NC-CNV-IF or FX3UC-1PS-5V required)

FX2N-32CCL

Features

◎Interface block for connecting Mitsubishi micro-programmable controllers FX0N, FX1N, FX2N, FX1NC, FX2NC, FX3UC Series as CC-Link remote device stations

Item	FX2N-32CCL
Description	FX series interface block
Number of occupied stations	1 to 4
Station type	Remote device station
Applicable programmable controller	Mitsubishi micro-programmable controllers • FX1N, FX2N, FX3UC • FX1NC, FX2NC, FX3UC Series (connector conversion module required)

Interface board for personal computer

Q80BD-J61BT11N
Q81BD-J61BT11

Features

◎Personal computers equipped with a PCI or PCI Express bus can be incorporated into the CC-Link system.
◎Can be used as a CC-Link Ver. 2 compatible master station, standby master station or local station.
◎Drivers compatible with each of the following OS are included.
(Windows 7®(32bit), Windows Vista®, Windows® XP, Windows® 2000, Windows® NT ver 4.0)

Item	Q80BD-J61BT11N	Q81BD-J61BT11
Description	PC PCI bus slot (half size)	PC PCI Express X1, X2, X4, X8, X16 slot (half size)
Number of occupied stations	1 to 4	1 to 4
Station type	Master station, standby master station or local station	Master station, standby master station or local station

ECP-CL2BD

Mitsubishi Electric Engineering Corporation

Features

◎Control and monitor CC-Link devices using compact PCI bus interface (cPCI) compatible industrial computers.
◎The CC-Link Industrial PC interface board can operate as a master or local station and is compatible with CC-Link version 2.
◎Configure CC-Link parameters using the included software.
◎Function libraries are available to help create user programs.

Item	ECP-CL2BD
Description	CC-Link V2 compatible Master/local interface board for FA computer (CompactPCI bus slot 3U size)
Number of occupied stations	1 to 4
Station type	Master station, standby master station or local station

* Microsoft Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

Repeater modules

Repeater module

AJ65FBTA-RPH
AJ65SBT-RPS/RPG
AJ65BTS-RPH
AJ65BT-RPI-10A/10B
AJ65SBT-RPT

AJ65BT-RPI-10A
AJ65BT-RPI-10B

AJ65BTS-RPH

AJ65SBT-RPT

AJ65SBT-RPS
AJ65SBT-RPG

AJ65FBTA-RPH

Features

◎The following 5 types are available for various applications.
◎Thin, waterproof type repeater hub module:
Star topology, trunk line extension, waterproof structure
◎Spring clamp terminal block type repeater hub module:
Star topology, trunk line extension, spring clamp terminal block type
◎Repeater module (T-branch):
T-branch, trunk line extension
◎Optical repeater module:
Wiring in high noise environment, trunk line extension
◎Space optical repeater module:
Communications on linear mobile systems

Product name	Model name	Description	Number of occupied points	Station type
Thin, waterproof type repeater hub module	AJ65FBTA-RPH	Start wiring of up to 8 branches. Wiring of max. length matched to transmission speed is possible for each branch. Waterproof (IP67) structure	-	-
Spring clamp terminal block type repeater hub module	AJ65BTS-RPH	Start wiring of up to 8 branches. Wiring of max. length matched to transmission speed is possible for each branch. Spring clamp terminal block type	-	-
Repeater module (T-branch)	AJ65SBT-RPT	Maximum number of connected levels: 10, T-branch wiring is possible.	-	-
Optical repeater modules	AJ65SBT-RPS	For SI/QSI-type optical fiber cables (Use two modules as a set). Maximum number of connected levels: 3, maximum transmission distance: 500m (SI)/1000m (QSI)	-	-
	AJ65SBT-RPG	For GI-type optical fiber cables (Use two modules as a set). Maximum number of connected levels: 2, maximum transmission distance: 2000m	-	-
Space optical repeater modules	AJ65BT-RPI-10A	Use AJ65BT-RPI-10A and AJ65BT-RPT-10B as a set. Transmission speeds of 156kbps, 625kbps and 2.5Mbps are supported.	-/1	Remote I/O station when occupying one station
	AJ65BT-RPI-10B	Wireless transmission distances from 0 to 100 m via infrared light. Optical communication status monitor function	-/1	Remote I/O station when occupying one station

Optional parts for I/O modules

One-touch connector plug

A6CON-P214 (20pcs)
A6CON-P220 (20pcs)
A6CON-P514 (20pcs)
A6CON-P520 (20pcs)

◎Applicable models
AJ65SBTC☐-☐ remote I/O module
AJ65VBTCU☐-☐ remote I/O module
AJ65VBTCU-☐ analog module

One-touch connector plug for communication

A6CON-L5P (10pcs)

◎Applicable models *4

One-touch connector plug for power supply and FG

A6CON-PW5P (10pcs)
A6CON-PW5P-SOD (10pcs)

◎Applicable models *5

One-touch connector plug with terminating resister

A6CON-TR11 (1pc)

◎Applicable models *4

Online connector for communication

A6CON-LJ5P (5pcs)

◎Applicable models *4

Online connector for power supply

A6CON-PWJ5P (5pcs)

◎Applicable models *5

Protective cover for sensor connector type (e-CON) module

A6CVR-VCE8 (10pcs)
A6CVR-VCE16 (10pcs)

◎Applicable models
AJ65VBTCE☐-8☐ remote I/O module
AJ65VBTCE☐-16☐ remote I/O module

Protective cover

A6CVR-8 (10pcs)
A6CVR-16 (10pcs)
A6CVR-32 (10pcs)

◎Applicable models
AJ65SBTB☐-☐ remote I/O module
AJ65SBTC☐-☐ remote I/O module

40-pin connector (FCN connector)

A6CON1 (1pc)
A6CON2 (1pc)
A6CON3 (1pc)
A6CON4 (1pc)

◎Applicable models
AJ65SBTC☐-☐ remote I/O module
AJ65BTCF☐-☐ remote I/O module
AJ65VBTCF-☐ remote I/O module

Protective cap for unused connector

A6CAP-WP2 (20pcs)

◎Applicable models
AJ65FBTA☐-☐ remote I/O module

*4: AJ65VBTS☐-☐ remote I/O module, AJ65VBTCE☐-☐ remote I/O module, AJ65VBTCU☐-☐ remote I/O module, AJ65ABTP☐-☐ remote I/O module, AJ65VBTCU-☐ analog module, AJ65SBT-CLB CC-Link to CC-Link/LT bridge module

*5: AJ65VBTS☐-☐ remote I/O module, AJ65VBTCE☐-☐ remote I/O module, AJ65VBTCU☐-☐ remote I/O module, AJ65ABTP☐-☐ remote I/O module, AJ65VBTCU-☐ analog module

Memo

CC-Link Safety

Master module

For QS series

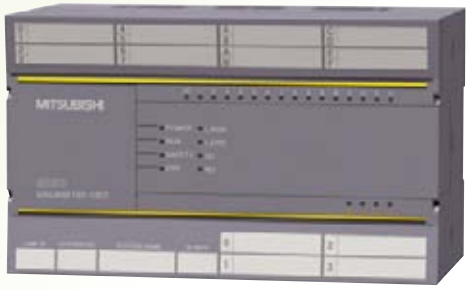
QS0J61BT12

Internal current consumption : 0.46A
(5VDC, supplied from programmable controller)
Weight : 0.12kg

Remote I/O modules

▶Terminal block type

Screw terminal block type　QS0J65BTB2-12DT



Features

◎The system complying with Category 3 or Category 4 of EN954-1 can be configured by the combination of wiring and parameters.

◎The fail-safe function is equipped. When a failure occurs inside the module, the self-diagnostics function detects the failure and turns OFF the output.

◎A dark test (contact stuck diagnostics) enables an error diagnostics including external safety devices.

I/O combined module

Model name	Input format		Rated input voltage/current	Number of input points	Output format		Rated load voltage /current	Number of output points	Leakage current at OFF	Output protection function	External connection
QS0J65BTB2-12DT	DC	Negative common	24VDC/4.6mA	8/16	Transistor	Source + sink/ Source + source type	24VDC/0.5A	4/2	0.5mA or less	Yes	2-wire type

Spring clamp terminal block type　QS0J65BTS2-8D　QS0J65BTS2-4T

Features

◎The remote I/O module which has obtained the highest safety level applicable to programmable controllers, and the safety-related system with high security can be configured.

◎The system complying with Category 3 or Category 4 of EN954-1 can be configured by the combination of wiring and parameters.

Input module

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
QS0J65BTS2-8D	DC	Negative common	24VDC/5.9mA	8/16	11.2ms or less	2-wire type

Output module

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
QS0J65BTS2-4T	Transistor	Source + sink/Source + source type	24VDC/0.5A	4/2	0.5mA or less	Yes	2-wire type

Master/bridge modules

For Q series

QJ61CL12

Current consumption : 130mA (5VDC, supplied from programmable controller),
28mA (24VDC, supplied from power adapter)
Current at start-up : 70mA (24VDC, supplied from power adapter)
Weight : 0.09kg

For L series

LJ61CL12

Current consumption : 160mA (5VDC, supplied from programmable controller),
30mA (24VDC, supplied from power adapter)
Current at start-up : 70mA (24VDC, supplied from power adapter)
Weight : 0.12kg

For FX3UC series

FX3UC-32MT-LT (-2)

Current consumption : 7W (main module only)
Built-in power supply : 24VDC 350mA (for CC-Link/LT network)
Weight : 0.25kg
* CC-Link/LT parameters for FX3UC-32MT-LT-2 can be configured with GX Works2, GX Developer or display modules.

For FX series

FX2N-64CL-M

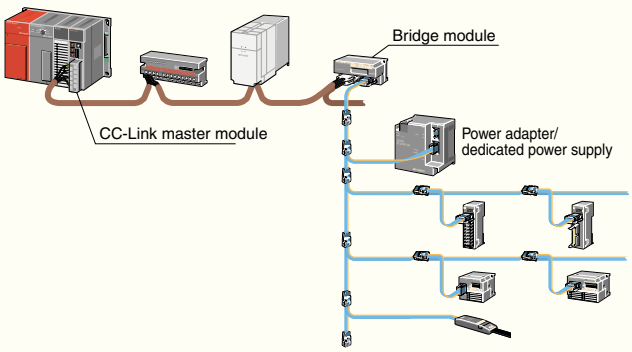
Current consumption : 190mA (5VDC, supplied from programmable controller),
25mA (2VDC, supplied from power adapter)
Current at start-up : 35mA (24VDC, supplied from power adapter)
Weight : 0.15kg

CC-Link to CC-Link/LT bridge module

AJ65SBT-CLB

Current consumption : 75mA (24VDC, supplied from power adapter)
Current at start-up : 165mA (24VDC, supplied from power adapter)
Weight : 0.09kg

■Configuration example of bridge module



Remote I/O modules

▶Terminal block type

Screw terminal block type

CL1X4-D1B2 CL2X8-D1B2 CL1Y4-T1B2 CL1Y4-R1B2
CL1Y4-R1B1 CL2Y8-TP1B2 CL1XY4-DT1B2 CL1XY4-DR1B2
CL1XY8-DT1B2 CL1XY8-DR1B2

Features

◎The industry's most compact size
◎Terminal block cover with nameplate showing connected devices
◎Input modules with positive/negative common shared
◎Terminal block structure enabling simple connection of 2-wire sensors or other loads
◎The modules are mountable in six orientations.

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
CL1X4-D1B2	DC	Positive/Negative common	24VDC/4mA	4	0.5ms/1.5ms or less	2-wire type
CL2X8-D1B2	DC	Positive/Negative common	24VDC/4mA	8	0.5ms/1.5ms or less	2-wire type

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
CL1Y4-T1B2	Transistor	Sink type	12/24VDC 0.1A	4	0.1mA or less	No	2-wire type
CL2Y8-TP1B2	Transistor	Sink type	12/24VDC 0.1A	8	0.1mA or less	Yes	2-wire type
CL1Y4-R1B2	Relay	-	30VDC/250VAC 2A	4	-	No	2-wire type
CL1Y4-R1B1	Relay	-	30VDC/250VAC 2A	4	-	No	1-wire type

I/O combined modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	Output format		Rated load voltage /current	Number of output points	Leakage current at OFF	Output protection function	External connection
CL1XY4-DT1B2	DC	Positive/Negative common	24VDC/4mA	2	1.5ms	Transistor	Sink type	12/24VDC 0.1A	2	0.1mA or less	No	2-wire type
CL1XY8-DT1B2	DC	Positive/Negative common	24VDC/4mA	4	1.5ms	Transistor	Sink type	12/24VDC 0.1A	4	0.1mA or less	No	2-wire type
CL1XY4-DR1B2	DC	Positive/Negative common	24VDC/4mA	2	1.5ms	Relay	-	30VDC/250VAC 2A	2	-	No	2-wire type
CL1XY8-DR1B2	DC	Positive/Negative common	24VDC/4mA	4	1.5ms	Relay	-	30VDC/250VAC 2A	4	-	No	2-wire type

Spring clamp terminal block type

CL1X4-D1S2 CL1Y4-T1S2 CL2X8-D1S2
CL2Y8-TP1S2 CL2Y8-TPE1S2

Features

◎Retightening is not required. The applicable wire size is 0.3 to 1.5mm² (AWG22 to 16).
◎Two-piece structure (The terminal block section is removable.)
◎Input modules with positive/negative common shared
◎Source type output module (8 points) is available.
◎The modules are mountable in six orientations.

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
CL1X4-D1S2	DC	Positive/Negative common	24VDC/4mA	4	0.5ms/1.5ms	2-wire type
CL2X8-D1S2	DC	Positive/Negative common	24VDC/4mA	8	0.5ms/1.5ms	2-wire type

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
CL1Y4-T1S2	Transistor	Sink type	12/24VDC 0.1A	4	0.1mA or less	No	2-wire type
CL2Y8-TP1S2	Transistor	Sink type	12/24VDC 0.1A	8	0.1mA or less	Yes	2-wire type
CL2Y8-TPE1S2	Transistor	Source type	12/24VDC 0.1A	8	0.1mA or less	Yes	2-wire type

Connector type

Sensor connector type (e-CON)

CL1X4-D1C3 CL1Y4-T1C2 CL2X8-D1C3V CL2Y8-TP1C2V CL2X16-D1C3V CL2Y16-TP1C2V CL2XY16-DTP1C5V

Features

◎The industry's most compact size
◎DIN rail or screw mounting is selectable.
◎The 3-wire sensor can be connected.

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
CL1X4-D1C3	DC	Positive common	24VDC/4mA	4	0.5ms/1.5ms or less	3-wire type
CL2X8-D1C3V	DC	Positive common	24VDC/4mA	8	0.5ms/1.5ms or less	3-wire type
CL2X16-D1C3V	DC	Positive common	24VDC/4mA	16	0.5ms/1.5ms or less	3-wire type

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
CL1Y4-T1C2	Transistor	Sink type	24VDC 0.1A	4	0.1mA or less	No	2-wire type
CL2Y8-TP1C2V	Transistor	Sink type	24VDC 0.1A	8	0.1mA or less	Yes	2-wire type
CL2Y16-TP1C2V	Transistor	Sink type	24VDC 0.1A	16	0.1mA or less	Yes	2-wire type

I/O combined modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	Output format		Rated load voltage /current	Number of output points	Leakage current at OFF	Output protection function	External connection
CL2XY16-DTP1C5V	DC	Positive common	24VDC/4mA	8	0.5ms/1.5ms or less	Transistor	Sink type	24VDC 0.1A	8	0.1mA or less	Yes	3-wire type/ 2-wire type

MIL connector type

CL2X16-D1M1V CL2X16-D1MJ1V CL2Y16-TP1M1V CL2Y16-TPE1M1V CL2Y16-TP1MJ1V

Features

◎The industry's most compact size
◎MIL connector used for easy connection to relay terminals, terminal block conversion modules, solenoid valves, and others.
◎Simple module replacement by only removing the connector
◎Modules with a shared power supply for module and I/O parts are available. (CL2X16-D1MJ1V and CL2Y16-TP1MJ1V) No external power supply for I/O part saves cost and space.

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
CL2X16-D1M1V	DC	Positive common	24VDC/4mA	16	0.5ms/1.5ms or less	1-wire type
CL2X16-D1MJ1V	DC	Positive common	24VDC/4mA	16	0.5ms/1.5ms or less	1-wire type

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
CL2Y16-TP1M1V	Transistor	Sink type	12/24VDC 0.1A	16	0.1mA or less	Yes	1-wire type
CL2Y16-TPE1M1V	Transistor	Source type	12/24VDC 0.1A	16	0.1mA or less	Yes	1-wire type
CL2Y16-TP1MJ1V	Transistor	Sink type	24VDC 0.1A	16	0.1mA or less	Yes	1-wire type

▶Cable type

Cable type　CL1X2-D1D3S　CL1Y2-T1D2S　CL1XY2-DT1D5S

Features

◎The industry's most compact size

◎The remote I/O module can be stored in a duct with cables.

◎Integration of communication cables and external device connection cables for easy wiring

◎Cables (50cm) provided to both communication and I/O sides

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	External connection
CL1X2-D1D3S	DC	Positive common	24VDC/4mA	2	0.5ms/1.5ms or less	3-wire type

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function	External connection
CL1Y2-T1D2S	Transistor	Sink type	24VDC 0.1A	2	0.1mA or less	No	2-wire type

I/O combined modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	Output format		Rated load voltage /current	Number of output points	Leakage current at OFF	Output protection function	External connection
CL1XY2-DT1D5S	DC	Positive common	24VDC/4mA	1	1.5ms or less	Transistor	Sink type	24VDC 0.1A	1	0.1mA or less	No	3-wire type/ 2-wire type

Analog modules

▶Terminal block type

Analog input module

Screw terminal block type　CL2AD4-B

Features

◎Efficient usage of I/O points (number of occupied stations) is available because the points can be changed by the preset conversion-enabled channel.

(The number of occupied stations changes depending on the setting of the channel for which conversion is enabled.)

◎The dedicated flat cable (50cm) is directly connected to a module.

Voltage/current input module

Model name	Number of channels	Number of occupied stations
CL2AD4-B	4	16-point mode 4 stations occupied

Analog output module

Screw terminal block type　CL2DA2-B

Features

◎Efficient usage of I/O points (number of occupied stations) is available because the points can be changed by the preset conversion-enabled channel.

(The number of occupied stations changes depending on the setting of the channel for which conversion is enabled.)

◎The dedicated flat cable (50cm) is directly connected to a module.

Voltage/current output module

Model name	Number of channels	Number of occupied stations
CL2DA2-B	2	16-point mode 2 stations occupied

Dedicated power supply

Dedicated power supply CL1PSU-2A

Features

◎Power supply dedicated to the CC-Link/LT system with built-in 2A power supply

Item		CL1PSU-2A
Input	Rated voltage	100/120/200/230/240VAC
	Allowable voltage range	85 to 264VAC
	Rated frequency	50/60Hz
	Power fuse	3.15A
	Inrush current	Max. 60A/200VAC
Output	Output voltage	24VDC +10%/-5%
	Output current	0.01A to 2A derating according to ambient temperature and line voltage [Use so that the current consumption does not exceed 2A when power is supplied (excluding immediately after power ON).]
	Ripple noise	500mVp-p or less
External connection method		Module power supply: terminal block 3 pins (M3 screws) Power supply for supplying power to communication line/module: CC-Link/LT dedicated connector (4-pin) x 2
Weight (kg)		0.40

Power supply adapter

Power supply adapter CL1PAD1

Features

◎Ensuring a stable power supply from the external power source (optional) to the CC-Link/LT system

Item	CL1PAD1
Voltage input range	Depending on connected model. Max. 28.8VDC
Max. rated current	5.0A *5
Isolation resistance	Across all external terminals and ground terminal 500VDC, 10MW by insulation resistance tester
External connection method	Module power supply: terminal block 3 pins (M3 screws) Power supply for supplying power to communication line/module: CC-Link/LT dedicated connector (4-pin) x 2
Weight (kg)	0.26

*5 In regular operation, use the adapter so that the max. rated current is not exceeded.

Optional parts

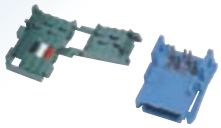
Connector for dedicated flat cable

CL9-CNF-18

Mitsubishi Electric System & Service Co.,Ltd.

Connector for VCTF cable

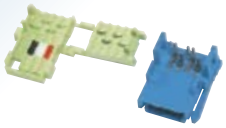
CL9-CNR-23



Mitsubishi Electric System & Service Co.,Ltd.

Connector for flexible cable

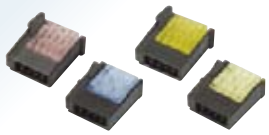
CL9-CNR-20



Mitsubishi Electric System & Service Co.,Ltd.

Open sensor connector (e-CON)

ECN-****



Mitsubishi Electric System & Service Co.,Ltd.

Joint shield/Dust shield

ECN-CVR4**

Mitsubishi Electric System & Service Co.,Ltd.

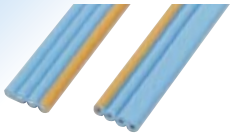
Terminating resistor

CL9-TERM

Mitsubishi Electric System & Service Co.,Ltd.

Dedicated flat cable

CL9-FL4-18



Mitsubishi Electric System & Service Co.,Ltd.

Dedicated flexible cable

CL9-MV4-075

Mitsubishi Electric System & Service Co.,Ltd.

Tool for spring clamp terminal block

KD-5339

Mitsubishi Electric System & Service Co.,Ltd.

IDC tool for communication connector

L-TOOL-N

Mitsubishi Electric System & Service Co.,Ltd.

IDC tool for open sensor connector

e-TOOL-N

Mitsubishi Electric System & Service Co.,Ltd.

Screw terminal block Common terminal block

CL2TE-5

Mitsubishi Electric Corporation

Spring clamp terminal block Common terminal block

CL2TE-10S

Mitsubishi Electric Corporation

Holder

CL1-HLD

Mitsubishi Electric Corporation

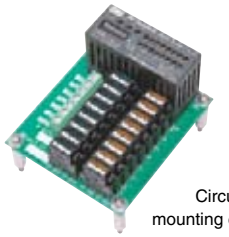
Embedded modules

Embedded I/O adapter

AJ65MBTL1N-16D AJ65MBTL1N-32D AJ65MBTL1N-16T AJ65MBTL1N-32T AJ65MBTL1N-16DT

Features

Mounting this product to your circuit board allows easy development of remote I/O stations.



Circuit board mounting example

Input modules

Model name	Input format		Rated input voltage/current	Number of input points	Input response time
AJ65MBTL1N-16D	DC	Positive common	24VDC/4mA	16	1.5ms or less
AJ65MBTL1N-32D	DC	Positive common	24VDC/4mA	32	1.5ms or less

Output modules

Model name	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function
AJ65MBTL1N-16T	Transistor	Sink type	12/24VDC 0.1A	16	0.1mA or less	Yes
AJ65MBTL1N-32T	Transistor	Sink type	12/24VDC 0.1A	32	0.1mA or less	Yes

I/O combined module

Model name	Input format		Rated input voltage/current	Number of input points	Input response time	Output format		Rated load voltage/current	Number of output points	Leakage current at OFF	Output protection function
AJ65MBTL1N-16DT	DC	Positive common	24VDC/7mA	8	1.5ms or less	Transistor	Sink type	24VDC 0.1A	8	0.1mA or less	Yes

CC-Link Ver.2 embedded interface board

Q50BD-CCV2 CC-Link V2

Features

◎Sub-circuit board compatible with CC-Link Ver.2. Adding on this to a main circuit board enables development of master, local and intelligent device stations.

Model name	Description
Q50BD-CCV2	CC-Link Ver.2 embedded interface board

Object development

MFP1N Device kit CC-Link V2

The actual modules may slightly differ in shapes from the photo shown.

Features

◎The MFP1N device kit enables development of master, local and intelligent device stations.

Product name	MFP1N		Device kit
Ordering model name	A6GA-CCMFP1NN60F	A6GA-CCMFP1NN300F	Q6KT-NPC2OG51
Package unit	60pcs	300pcs	40pcs
Application	Master station・local station・intelligent device station		Network circuit

MFP:Mitsubishi Field-network Processor

Dedicated communication LSI

MFP2N MFP2AN MFP3N

The actual modules may slightly differ in shapes from the photo shown.

Features

◎CC-Link compatible devices can be developed easily without worrying about the communication protocol.

Product name	MFP2AN		MFP2N		MFP3N	
Ordering model name	A6GA-CCMFP2ANN 60F	A6GA-CCMFP2ANN 300F	A6GA-CCMFP2NN 60F	A6GA-CCMFP2NN 300F	A6GA-CCMFP3NN 60F	A6GA-CCMFP3NN 300F
Package unit	60pcs	300pcs	60pcs	300pcs	60pcs	300pcs
Application	Remote I/O station		Remote I/O station		Remote device station	

MFP:Mitsubishi Field-network Processor

Dedicated communication LSI

CLC13 CLC21 CLC31

The actual modules may slightly differ in shapes from the photo shown.

Features

◎CC-Link/LT compatible devices can be developed easily without worrying about the communication protocol.

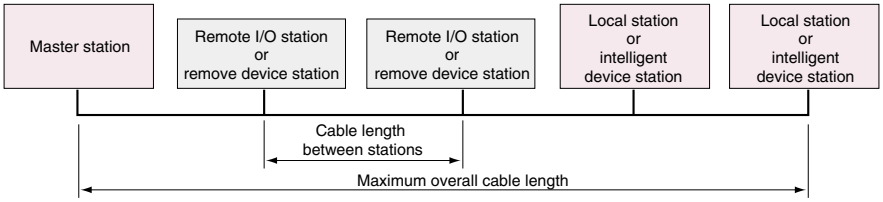
Product name	CLC13	CLC21		CLC31
Ordering model name	CL2GA13-60	CL2GA21-60	CL2GA21-300	CL2GA31-60
Package unit	60pcs	60pcs	300pcs	60pcs
Application	Master station	Remote I/O station		Remote device station

CLC:CC-Link/LT Controller

*For the development of CC-Link products that use MFP, "Open Field Network CC-Link, CC-Link/LT Compatible Product Development Guidebook (L(NA)-08052E-A)" is available.
*For details or lead-free/RoHS compatible products, contact the Open System Center.

You are requested to become a member of the CC-Link Partner Association (CLPA) to purchase these embedded modules.

CC-Link (Ver.1.10) specifications

	Item	Specifications
Control specifications	Maximum number of link points	Remote I/O (RX,RY) :2048 points each Remote register (RWw) :256 points Remote register (RWr) :256 points
	Number of link points per station	Remote I/O (RX,RY) :32 points each Remote register (RWw) :4 points Remote register (RWr) :4 points
Communication specifications	Transmission speed	10M/5M/2.5M/625k/156kbps
	Communication method	Broadcast polling method
	Synchronization method	Flag synchronous method
	Encoding method	NRZI method
	Transmission path	Bus type (conforms to EIA RS-485)
	Transmission format	Conforms to HDLC
	Error control system	CRC ($X^{16} + X^{12} + X^5 + 1$)
	Number of connectable modules	64 modules. However, the following conditions must be satisfied. $(1 \times a) + (2 \times b) + (3 \times c) + (4 \times d) \leq 64$ a: Number of modules occupying 1 station, b: Number of modules occupying 2 stations, c: Number of modules occupying 3 stations, d: Number of modules occupying 4 stations $(16 \times A) + (54 \times B) + (88 \times C) \leq 2304$ A: Number of remote I/O stations ---------- Max. 64 modules B: Number of remote device stations ---------- Max. 42 modules C: Number local stations, standby master stations and intelligent device stations ------- Max. 26 modules
	Remote station number	1 to 64
	Maximum overall cable length and cable length between stations	 Ver.1.10 compatible CC-Link dedicated cable (terminating resistor of 110Ω used)
	Connection cable	CC-Link Ver.1.10 compatible cable ・Use the dedicated cable certified by CC-Link Partnership Association. ・Please note that operation will not be guaranteed if the other cable is used. ・Cables from different manufacturers can be used together if they support Ver.1.10. ・For the specifications of the CC-Link dedicated cable or the contact information on them, refer to the partner product catalogs published by CC-Link Partner Association or visit its web site at http://www.cc-link.org. ・The CC-Link dedicated cables, the high-performance CC-Link dedicated cables and Ver.1.10-compatible CC-Link dedicated cables cannot be used together.

Transmission speed	Cable length between stations	Maximum overall cable length
156kbps	20cm or longer	1200m
625kbps		900m
2.5Mbps		400m
5Mbps		160m
10Mbps		100m

When Ver.1.10 modules and Ver.1.00 modules are mixed, the Maximum overall cable length and the station-to-station cable length conform to the Ver1.00 specifications.

Function

Automatic refresh function*1	Remote I/O network mode*1
RAS functions	Scan synchronous function
(Standby master function, Automatic return function, Slave station cut-off function,	Automatic CC-Link startup*2
error detection by link special relays/registers, test/monitor)	Reserved station function
	Error invalid station setting function
	Support for duplex function*2

*1 May not be supported depending on CPUs to be used together.
*2 This function is available only for the Q Series.

Remarks

If relay terminal blocks or relay connectors are used for the CC-Link cable installation, the communication error may occur depending on the system.
Connect cables directly to each CC-Link module, or consider using the CC-Link repeater modules.
For the recommended connection condition of CC-Link cable relay connector, refer to the table below.

		156kbps	625kbps	
Transmission speed				10Mbps, 5Mbps, and 2.5Mbps are not applicable
Cable length between stations	Cable length between master/local station or intelligent device station and adjacent station	1m or more		For the system configuration of only remote I/O stations and remote device stations.
		2m or more		For the system configuration consisting of local stations and intelligent device stations.
	Cable length between remote I/O stations or remote device stations (shortest cable)	30cm or more		–
Maximum transmission distance		500m	100m	–
Relay connector spacing		No limitation		–

Differences between CC-Link Ver.2 and Ver.1

With CC-Link Ver. 2, the cyclic data size can be increased through extended cyclic setting.

CC-Link Ver.1 specifications

Item		Specifications		
Maximum number of link points		Remote I/O (RX, RY): 2048 points each	Remote register (RWw): 256 points	Remote register (RWr): 256 points
Number of link points per station		Remote I/O (RX, RY): 32 points each	Remote register (RWw): 4 points	Remote register (RWr): 4 points
Number of link points for each number of occupied stations	Occupied 1 station	Remote I/O (RX, RY): 32 points each	Remote register (RWw): 4 points	Remote register (RWr): 4 points
	Occupied 2 station	Remote I/O (RX, RY): 64 points each	Remote register (RWw): 8 points	Remote register (RWr): 8 points
	Occupied 3 station	Remote I/O (RX, RY): 96 points each	Remote register (RWw): 12 points	Remote register (RWr): 12 points
	Occupied 4 station	Remote I/O (RX, RY): 128 points each	Remote register (RWw): 16 points	Remote register (RWr): 16 points
Number of connectable modules		1) Total number of stations (1 x a) + (2 x b) + (3 x c) + (4 x d) ≤ 64 a: Number of modules 1 occupied station, b: Number of modules 2 occupied stations, c: Number of modules 3 occupied stations, d: Number of modules 4 occupied stations 2) Number of connectable modules (16 x a) + (54 x b) + (88 x c) ≤ 2304 A: Number of remote I/O stations ---------- Max. 64 modules B: Number of remote device stations ---------- Max. 42 modules C: Number of local stations, standby master stations and intelligent device stations ---------- Max. 26 modules		

CC-Link Ver.2 specifications

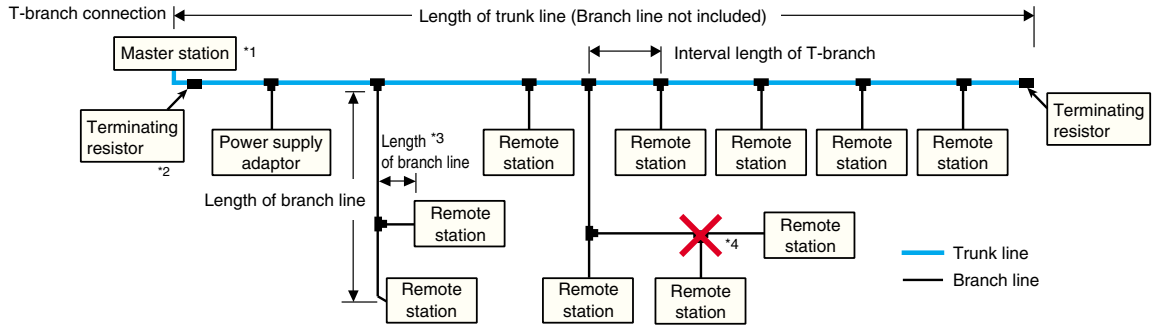
Item			Specifications			
Maximum number of link points			Remote I/O (RX, RY): 8192 points each, Remote register (RWw): 2048 points, Remote register (RWr): 2048 points			
Expanded cyclic setting			Single	Double	Quadruple	Octuple
Number of link points per station		Remote I/O (RX, RY)	32 points each	32 points each	64 points each	128 points each
		Remote register (RWw)	4 points	8 points	16 points	32 points
		Remote register (RWr)	4 points	8 points	16 points	32 points
Number of link points for each number of occupied stations	Occupied 1 station	Remote I/O (RX, RY)	32 points each	32 points each	64 points each	128 points each
		Remote register (RWw)	4 points	8 points	16 points	32 points
		Remote register (RWr)	4 points	8 points	16 points	32 points
	Occupied 2 station	Remote I/O (RX, RY)	64 points each	96 points each	192 points each	384 points each
		Remote register (RWw)	8 points	16 points	32 points	64 points
		Remote register (RWr)	8 points	16 points	32 points	64 points
	Occupied 3 station	Remote I/O (RX, RY)	96 points each	160 points each	320 points each	640 points each
		Remote register (RWw)	12 points	24 points	48 points	96 points
		Remote register (RWr)	12 points	24 points	48 points	96 points
	Occupied 4 station	Remote I/O (RX, RY)	128 points each	224 points each	448 points each	896 points each
		Remote register (RWw)	16 points	32 points	64 points	128 points
		Remote register (RWr)	16 points	32 points	64 points	128 points
Number of connected modules			1) Total number of stations (a + a2 + a4 + a8) + (b + b2 + b4 + b8) x 2 + (c + c2 + c4 + c8) x 3 + (d + d2 + d4 + d8) x 4 ≤ 64 2) Number of input/output points of all remote stations (a x 32 + a2 x 32 + a4 x 64 + a8 x 128) + (b x 64 + b2 x 96 + b4 x 192 + b8 x 384) + (c x 96 + c2 x 160 + c4 x 320 + c8 x 640) + (d x 128 + d2 x 224 + d4 x 448 + d8 x 896) ≤ 8192 3) Number of all remote register points (a x 4 + a2 x 8 + a4 x 16 + a8 x 32) + (b x 8 + b2 x 16 + b4 x 32 + b8 x 64) + (c x 12 + c2 x 24 + c4 x 48 + c8 x 96) + (d x 16 + d2 x 32 + d4 x 64 + d8 x 128) ≤ 2048 a : The total number of ver.1 compatible slave stations that occupy 1 station, and ver.2 compatible slave stations that occupy 1 station which are set to "Single". b : The total number of ver.1 compatible slave stations that occupy 2 stations, and ver.2 compatible slave stations that occupy 2 stations which are set to "Single". c : The total number of ver.1 compatible slave stations that occupy 3 stations, and ver.2 compatible slave stations that occupy 3 stations which are set to "Single". d : The total number of ver.1 compatible slave stations that occupy 4 stations, and ver.2 compatible slave stations that occupy 4 stations which are set to "Single". a2 : The number of ver.2 compatible stations that occupy 1 station which are set to "Double". b2 : The number of ver.2 compatible stations that occupy 2 stations which are set to "Double". c2 : The number of ver.2 compatible stations that occupy 3 stations which are set to "Double". d2 : The number of ver.2 compatible stations that occupy 4 stations which are set to "Double". a4 : The number of ver.2 compatible stations that occupy 1 station which are set to "Quadruple". b4 : The number of ver.2 compatible stations that occupy 2 stations which are set to "Quadruple". c4 : The number of ver.2 compatible stations that occupy 3 stations which are set to "Quadruple". d4 : The number of ver.2 compatible stations that occupy 4 stations which are set to "Quadruple". a8 : The number of ver.2 compatible stations that occupy 1 station which are set to "Octuple". b8 : The number of ver.2 compatible stations that occupy 2 stations which are set to "Octuple". c8 : The number of ver.2 compatible stations that occupy 3 stations which are set to "Octuple". d8 : The number of ver.2 compatible stations that occupy 4 stations which are set to "Octuple". 4) Number of connectable modules 16 x A+54 x B+88 x C ≤ 2304 A: Number of remote I/O stations ---------- Max. 64 modules B: Number of remote device stations ---------- Max. 42 modules C: Number of local stations, standby master stations and intelligent device stations ---------- Max. 26 modules			

* 2) and 3) are Ver. 2 mode only; calculation is necessary.
* There is no change in the cable and wiring specification for CC-Link Ver. 2. Use Ver. 1 cable for the connection of Ver. 2 devices.

CC-Link/LT specifications

Item				4-point mode	8-point mode	16-point mode
Control specifications	Maximum number of link points (When the same I/O address is used)			256 points (512 points)	512 points (1024 points)	1024 points (2048 points)
	Number of link points per station (When the same I/O address is used)			4 points (8 points)	8 points (16 points)	16 points (32 points)
	Link scan time	When 32 stations connected	Number of points	128 points	256 points	512 points
			2.5Mbps	0.7ms	0.8ms	1.0ms
			625kbps	2.2ms	2.7ms	3.8ms
			156kbps	8.0ms	10.0ms	14.1ms
		When 64 stations connected	Number of points	256 points	512 points	1024 points
			2.5Mbps	1.2ms	1.5ms	2.0ms
			625kbps	4.3ms	5.4ms	7.4ms
			156kbps	15.6ms	20.0ms	27.8ms
Communication specifications	Transmission speed			2.5Mbps/625kbps/156kbps		
	Communication protocol			BITR (Broadcastpolling + Interval Timed Response)		
	Transmission path			T-branch type		
	Error control system			CRC		
	Number of connectable modules			64		
	Remote station number			1 to 64		
	Maximum number of connectable stations per branch line			8		
	Distance between stations			No limit		
	T-branch interval			No limit		
	Master station position			End of trunk line		
	RAS function			Network diagnosis, Internal loopback diagnosis, Station detach function, Automatic return function		
	Connection cable			Dedicated flat cable (0.75mm^2 x 4), VCTF cable, high flexible cable		

CC-Link/LT network wiring specifications



Item	Specifications			Remarks
Transmission speed	2.5Mbps	625kbps	156kbps	-
Distance between stations	No limit			-
Maximum Number of stations on a trunk line	8 modules			-
Length of trunk line	35m	100m	500m	Cable length between 2 terminating resistors (Branch line length not included)
T-branch interval	No limit			-
Maximum length of branch line	4m	16m	60m	Cable length per branch line
Overall length of branch lines	15m	50m	200m	Total length of all trunk lines

*1 Always install the master module at one end of the trunk line.
*2 Install a terminating resistor near the master module (within 20cm).
*3 The length of a line branched from a branch line is also included in the max. branch line length and overall branch line length.
*4 Cables cannot be connected between branch lines.

Precautions when mixed cables are used

1. *Different types of cables cannot be used together on the trunk line.*
2. *Dedicated flat cables, VCTF cables and flexible cables can be used together for branch lines.*
   * The wiring specifications do not change according to on the used cables and mixed use of cables.
3. *Different types of cables cannot be used together on the same branch line.*
   * When the module with cable (e.g. CL1Y2-T1D2S) is used, it can be connected to a different type of cable by making sure the dedicated cables are within 20 cm.

General specifications

<table>
<tr><td rowspan="2">Item</td><td colspan="6">Specifications</td></tr>
<tr><td colspan="3">CC-Link</td><td colspan="3">CC-Link/LT</td></tr>
<tr><td>Operating ambient temperature</td><td colspan="3">0 to 55˚C *3</td><td colspan="3">0 to 55˚C *4</td></tr>
<tr><td>Storage ambient temperature</td><td colspan="3">-20 to 75˚C *3</td><td colspan="3">-25 to 75˚C *4</td></tr>
<tr><td>Operating ambient humidity</td><td colspan="3">10 to 90%RH, non-condensing *5
(The waterproof type remote I/O modules conform to the IP67 standard. *6)</td><td colspan="3">5 to 95% RH, no condensation allowed
(conforming to JIS B 3502, IEC 61131-2, level RH-2)</td></tr>
<tr><td>Storage ambient humidity</td><td colspan="3">10 to 90%RH, non-condensing *6</td><td colspan="3">5 to 95% RH, no condensation allowed
(conforming to JIS B 3502, IEC 61131-2, level RH-2)</td></tr>
<tr><td rowspan="5">Vibration resistance</td><td rowspan="5">Conforming to
JIS B 3502,
IEC 61131-2</td><td></td><td>Frequency</td><td>Acceleration</td><td>Amplitude</td><td>Number of sweeps</td></tr>
<tr><td rowspan="2">Under
intermittent vibration</td><td>5 to 8.4Hz</td><td>-</td><td>3.5mm</td><td rowspan="4">10 times each
in X, Y and Z directions
(for 80minutes)</td></tr>
<tr><td>8.4 to 150Hz</td><td>9.8m/s^2</td><td>-</td></tr>
<tr><td rowspan="2">Under
continuous vibration</td><td>5 to 8.4Hz</td><td>-</td><td>1.75mm</td></tr>
<tr><td>8.4 to 150Hz</td><td>4.9m/s^2</td><td>-</td></tr>
<tr><td>Shock resistance</td><td colspan="6">Conforming with JIS B 3502, IEC 61131-2 (147m/s^2, 3 times in each of 3 directions X, Y and Z)</td></tr>
<tr><td>Operating ambience</td><td colspan="6">No corrosive gases</td></tr>
<tr><td>Operating altitude</td><td colspan="6">2000m (6562ft) or lower *7</td></tr>
<tr><td>Installation location</td><td colspan="6">Inside control panel</td></tr>
<tr><td>Overvoltage category *1</td><td colspan="6">II or lower</td></tr>
<tr><td>Pollution degree *2</td><td colspan="6">2 or lower</td></tr>
</table>

*1: It indicates the device is to be connected to which power distribution part, within the area from the public electricity network to machinery on the premises.
Category II applies to devices to which power is supplied from fixed installations.
The surge voltage withstand for devices rated up to 300V is 2500V.

*2: This is an index showing the degree of the conductive pollution that can occur in the environment where the device is used.
In Pollution degree 2, only nonconductive pollution occurs.
Occasionally, however, temporary conductivity caused by condensation can be expected.

*3: The table below shows the operating ambient temperature and storage ambient temperature for the AJ65FBTA-RPH type waterproof remote I/O modules and Q Series master module.

Item		AJ65FBTA-RPH	Q Series Master module
Operating ambient temperature		0 to 45˚C	0 to 55˚C
Storage ambient temperature	Not wired (standalone product)	-25 to 75˚C	-25 to 75˚C

*4: The ambient operating/storage temperatures satisfy requirements in excess of the JIS B 3502, IEC61131-2 standards.

*5: Use the master module for the Q Series within an ambient operating humidity of 5 to 95%.

*6: This is applicable to conditions where waterproof connectors are used for all modules or waterproof caps are placed in unused through-pipes.

*7: Do not operate or store the programmable controller at altitude 0m or more in a pressurized environment. It may malfunction if it is operated.
Contact us when operating in a pressurized state.

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Area covered: Thailand

CC-Link - Open and Global !
CLPA is supporting the spread of CC-Link.

Exhibiting in trade shows, conducting conformance tests, sending out the latest information... Through these and other popularization activities, CLPA is extending the possibilities of CC-Link.

The Japan-original open field network, CC-Link. CLPA (CC-Link Partner Association), in which Mitsubishi Electric also participates, was established with a view to spreading CC-Link to the world. Through vigorous activities such as planning and running trade shows and seminars, conducting conformance tests, and providing information by catalogs, pamphlets, and the Internet, the number of CLPA partner manufacturers and CC-Link compatible products is increasing steadily, and the CLPA is becoming a driving force for the globalization of CC-Link.

CC-Link Partner Association

This web site provides the latest CC-Link information.

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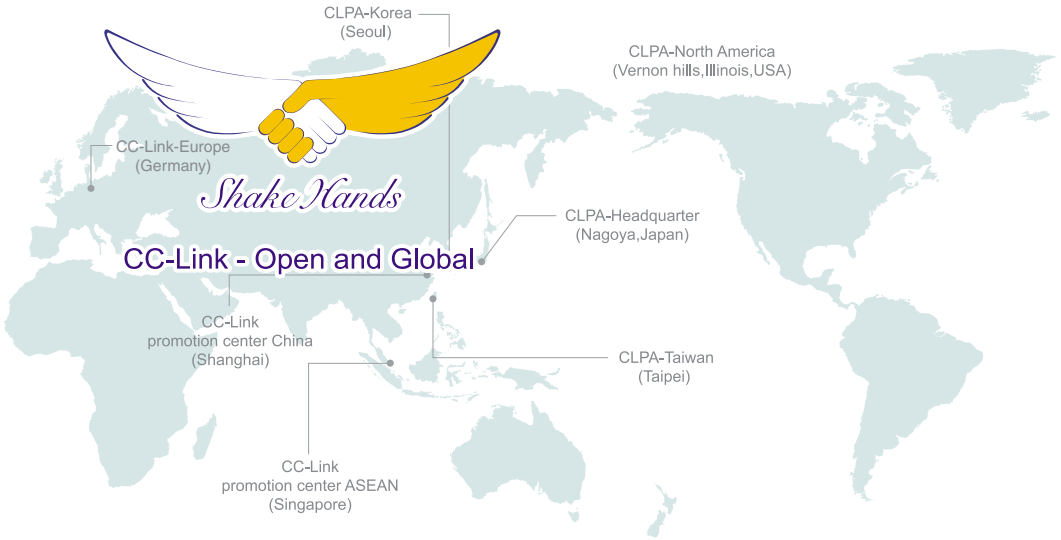
TEL : +81-52-919-1588 / FAX :+81-52-916-8655
URL: http://www.cc-link.org E-mail: info@cc-link.org

■ Conformance tests support the rapid increase of compatible products.

■ Exhibitions and seminars are held to recruit new partner members.

CC-Link - Open and Global!
CC-Link is accelerating toward a global network.

CLPA has established CLPA offices all over the world in order to spread CC-Link to Japanese and overseas manufacturers. Through positive activities such as exhibiting in trade shows in the major cities and setting up conformance test organizations, CLPA sends out information designed to expand the potential of CC-Link and increasing the number of CLPA partners.



CC-Link Related Product Model Names

Mitsubishi Electric Corporation

Module type		Model name	Specifications	Protection level
Master/local module		QJ61BT11N	Master/local module for Q Series CC-Link Ver.2-compatible	-
		L26CPU-BT	CPU with master/local function for L Series CC-Link Ver.2-compatible Sink output type	-
		L26CPU-PBT	CPU with master/local function for L Series CC-Link Ver.2-compatible Source output type	-
		LJ61BT11	Master/local module for L Series CC-Link Ver.2-compatible	-
		FX2N-16CCL-M	Master block for FX Series (FX1N/FX2N/FX3U/FX1NC/FX2NC/FX3UC)	-
		A1SJ61QBT11	Master/local module for QnAS/QnASHCPU	-
		A1SJ61BT11	Master/local module for AnS/AnSH/AnUS/AnUSHCPU	-
Remote I/O module	Screw terminal block type	AJ65SBTB2N-8A	Input 8 points: 100 to 120VAC 2-wire type Response time 20ms Terminal block type	IP1X
		AJ65SBTB2N-16A	Input 16 points: 100 to 120VAC 2-wire type Response time 20ms Terminal block type	IP1X
		AJ65SBTB1-8D	Input 8 points: 24VDC (positive/negative common shared) 1-wire type Terminal block type Response time 1.5ms	IP2X
		AJ65SBTB3-8D	Input 8 points: 24VDC (positive/negative common shared) 3-wire type Terminal block type Response time 1.5ms	IP2X
		AJ65SBTB1-16D	Input 16 points: 24VDC (positive/negative common shared) 1-wire type Terminal block type Response time 1.5ms	IP2X
		AJ65SBTB1-16D1	Input 16 points: 24VDC (positive/negative common shared) 1-wire type High-speed response Terminal block type Response time 0.2ms	IP2X
		AJ65SBTB3-16D	Input 16 points: 24VDC (positive/negative common shared) 3-wire type Terminal block type Response time 1.5ms	IP2X
		AJ65SBTB3-16D5	Input 16 points: 5VDC (positive/negative common shared) 3-wire type Terminal block type Response time 1.5ms	IP2X
		AJ65SBTB3-16KD	Input 16 points: 24VDC (positive/negative common shared) 3-wire type Terminal block type Response time 0.2/1.5/5/10ms switching type	IP2X
		AJ65SBTB1-32D	Input 32 points: 24VDC (positive/negative common shared) 1-wire type Terminal block type Response time 1.5ms	IP2X
		AJ65SBTB1-32D1	Input 32 points: 24VDC (positive/negative common shared) 1-wire type High-speed response Terminal block type Response time 0.2ms	IP2X
		AJ65SBTB1-32D5	Input 32 points: 5VDC (positive/negative common shared) 1-wire type Terminal block type Response time 1.5ms	IP2X
		AJ65SBTB1-32KD	Input 32 points: 24VDC (positive/negative common shared) 1-wire type Terminal block type Response time 0.2/1.5/5/10ms switching type	IP2X
		AJ65SBTB1-8T	Output 8 points: 12/24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type	IP2X
		AJ65SBTB1-8T1	Output 8 points: 12/24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB2-8T	Output 8 points: 12/24VDC (0.5A) Transistor output (sink type) 2-wire type Terminal block type	IP2X
		AJ65SBTB2-8T1	Output 8 points: 12/24VDC (0.5A) Transistor output (sink type) 2-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB1-16T	Output 16 points: 12/24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type	IP2X
		AJ65SBTB1-16T1	Output 16 points: 12/24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB2-16T	Output 16 points: 12/24VDC (0.5A) Transistor output (sink type) 2-wire type Terminal block type	IP2X
		AJ65SBTB2-16T1	Output 16 points: 12/24VDC (0.5A) Transistor output (sink type) 2-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB1-32T	Output 32 points: 12/24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type	IP2X
		AJ65SBTB1-32T1	Output 32 points: 12/24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB1-8TE	Output 8 points: 12/24VDC (0.1A) Transistor output (source type) 1-wire type Terminal block type	IP2X
		AJ65SBTB1-16TE	Output 16 points: 12/24VDC (0.1A) Transistor output (source type) 1-wire type Terminal block type	IP2X
		AJ65SBTB1B-16TE1	Output 16 points: 12/24VDC (0.5A) Transistor output (source type) 1-wire type Terminal block type	IP2X
		AJ65SBTB1-32TE1	Output 32 points: 12/24VDC (0.5A) Transistor output (source type) 1-wire type Terminal block type	IP2X
		AJ65SBTB2N-8R	Output 8 points: 24VDC/240VAC (2A) Relay output 2-wire type Terminal block type	IP1X
		AJ65SBTB2N-16R	Output 16 points: 24VDC/240VAC (2A) Relay output 2-wire type Terminal block type	IP1X
		AJ65SBTB2N-8S	Output 8 points: 100 to 240VAC (0.6A) Triac output 2-wire type Terminal block type	IP1X
		AJ65SBTB2N-16S	Output 16 points: 100 to 240VAC (0.6A) Triac output 2-wire type Terminal block type	IP1X
		AJ65SBTB32-8DT	Input 4 points: 24VDC (positive common) 3-wire type Response time 1.5ms Output 4 points: 24VDC (0.5A) Transistor output (sink type) 2-wire type Terminal block type	IP2X
		AJ65SBTB32-8DT2	Input 4 points: 24VDC (positive common) 3-wire type Response time 1.5ms Output 4 points: 24VDC (0.5A) Transistor output (sink type) 2-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB1-16DT	Input 8 points: 24VDC (positive common)1-wire type Response time 1.5ms Output 8 points: 24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type	IP2X
		AJ65SBTB1-16DT1	Input 8 points: 24VDC (positive common)1-wire type High-speed response Response time 0.2ms Output 8 points: 24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type	IP2X
		AJ65SBTB1-16DT2	input 8 points: 24VDC (positive common) 1-wire type Response time 1.5ms Output 8 points: 24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB1-16DT3	Input 8 points: 24VDC (positive common) 1-wire type High-speed response Response time 0.2ms Output 8 points: 24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB32-16DT	Input 8 points: 24VDC (positive common) 3-wire type Response time 1.5ms Output 8 points: 24VDC (0.5A) Transistor output (sink type) 2-wire type Terminal block type	IP2X
		AJ65SBTB32-16DT2	Input 8 points: 24VDC (positive common) 3-wire type Response time 1.5ms Output 8 points: 24VDC (0.5A) Transistor output (sink type) 2-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB32-16KDT2	Input 8 points: 24VDC (positive common) 3-wire type Response time 0.2/1.5/5/10ms switching type Output 8 points: 24VDC (0.5A) Transistor output (sink type) 2-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB32-16KDT8	Input 8 points: 24VDC (positive common) 3-wire type Response time 0.2/1.5/5/10ms switching type Output 8 points: 12VDC (0.5A) Transistor output (sink type) 2-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB32-16KDR	Input 8 points: 24VDC (positive/negative common shared) 3-wire type Response time 0.2/1.5/5/10ms switching type Output 8 points: 24VDC/240VAC (2A) Relay output 2-wire type Terminal block type	IP1X
		AJ65SBTB1-32DT	Input 16 points: 24VDC (positive common) 1-wire type Response time 1.5ms Output16 points: 24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type	IP2X
		AJ65SBTB1-32DT1	Input 16 points: 24VDC (positive common) 1-wire type High-speed response Response time 0.2ms Output16 points: 24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type	IP2X
		AJ65SBTB1-32DT2	Input 16 points: 24VDC (positive common) 1-wire type Response time 1.5ms Output16 points: 24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB1-32DT3	Input 16 points: 24VDC (positive common) 1-wire type High-speed response Response time 0.2ms Output16 points: 24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB1-32DTE1	Input 16 points: 24VDC (negative common) 1-wire type High-speed response Response time 1.5ms Output16 points: 24VDC (0.5A) Transistor output (source type) 1-wire type Terminal block type	IP2X
		AJ65SBTB32-16DR	Input 8 points: 24VDC (positive/negative common shared) 3-wire type Response time 1.5ms Output 8 points: 24VDC/240VAC (2A) Relay output 2-wire type Terminal block type	IP1X
		AJ65SBTB1-32KDT2	Input 16 points: 24VDC (positive common) 1-wire type Response time 0.2/1.5/5/10ms switching type Output16 points: 24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65SBTB1-32KDT8	Input 16 points: 12VDC (positive common) 1-wire type Response time 0.2/1.5/5/10ms switching type Output16 points: 12VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type (low-leakage current type)	IP2X

Module type		Model name	Specifications	Protection level
Remote I/O module	Screw/2-piece terminal block type	AJ65BTB1-16D	Input 16 points: 24VDC (positive/negative common shared) 1-wire type Terminal block type Response time 10ms	IP2X
		AJ65BTB2-16D	Input 16 points: 24VDC (positive/negative common shared) 2-wire type Terminal block type Response time 10ms	IP2X
		AJ65BTB1-16T	Output 16 points: 12/24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type	IP2X
		AJ65BTB2-16T	Output 16 points: 12/24VDC (0.5A) Transistor output (sink type) 2-wire type Terminal block type	IP2X
		AJ65BTB2-16R	Output 16 points: 24VDC/240VAC (2A) Relay output 2-wire type Terminal block type	IP1X
		AJ65BTB1-16DT	Input 8 points: 24VDC (positive common) Response time 10ms Output 8 points: 12/24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type	IP2X
		AJ65BTB2-16DT	Input 8 points: 24VDC (positive common) Response time 10ms Output 8 points: 12/24VDC (0.5A)Transistor output (sink type) 2-wire type Terminal block type	IP2X
		AJ65BTB2-16DR	Input 8 points: 24VDC (positive/negative common shared) Response time 10ms Output 8 points: 24VDC/240VAC (2A) Relay output 2-wire type Terminal block type	IP1X
	Screw/2-piece terminal block Dustproof type	AJ65DBTB1-32D	Input 32 points: 24VDC (positive/negative common shared) 1-wire type Terminal block type Response time 10ms	IP2X
		AJ65DBTB1-32T1	Output 32 points: 12/24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type (low-leakage current type)	IP2X
		AJ65DBTB1-32R	Output 32 points: 24VDC/240VAC (2A) Relay output 1-wire type Terminal block type	IP1X
		AJ65DBTB1-32DT1	Input 16 points: 24VDC (positive common) Response time 10ms Output 16 points: 12/24VDC (0.5A) Transistor output (sink type) 1-wire type Terminal block type	IP2X
		AJ65DBTB1-32DR	Input 16 points: 24VDC (positive/negative common shared) Response time 10ms Output 16 points: 24VDC/240VAC (2A) Relay output 1-wire type Terminal block type	IP1X
	Spring clamp terminal block push-in type	AJ65ABTP3-16D NEW	Input 16 points: 24VDC/6mA (positive common) 3-wire type Response time 1.5ms *1	IP1XB
		AJ65ABTP3-16DE NEW	Input 16 points: 24VDC/6mA (negative common) 3-wire type Response time 1.5ms *1	IP1XB
	Spring clamp terminal block type	AJ65VBTS3-16D	Input 16 points: 24VDC/5mA (negative common) 3-wire type Response time 1.5ms	IP1XB
		AJ65VBTS3-32D	Input 32 points: 24VDC/5mA (negative common) 3-wire type Response time 1.5ms	IP1XB
		AJ65VBTS2-16T	Output 16 points: 12/24VDC (0.5A) Transistor output (sink type) 2-wire type	IP1XB
		AJ65VBTS2-32T	Output 32 points: 12/24VDC (0.5A) Transistor output (sink type) 2-wire type	IP1XB
		AJ65VBTS32-16DT	Input 8 points: 24VDC/5mA (positive common) 3-wire type Response time 1.5ms Output 8 points: 24VDC (0.5A) Transistor output (sink type) 2-wire type	IP1XB
		AJ65VBTS32-32DT	Input 16 points: 24VDC/5mA (positive common) 32-wire type Response time 1.5ms Output 16 points: 12/24VDC (0.5A) Transistor output (sink type) 2-wire type	IP1XB
	Sensor connector type	AJ65VBTCE3-8D	Input 8 points: 24VDC/5mA (positive common) 3-wire type Response time 1.5ms	IP1XB
		AJ65VBTCE3-16D	Input 16 points: 24VDC/5mA (positive common) 3-wire type Response time 1.5ms	IP1XB
		AJ65VBTCE3-32D	Input 32 points: 24VDC/5mA (positive common) 3-wire type Response time 1.5ms	IP1XB
		AJ65VBTCE3-16DE	Input 16 points: 24VDC/5mA (negative common) 3-wire type Response time 1.5ms	IP1XB
		AJ65VBTCE3-32DE	Input 32 points: 24VDC/5mA (negative common) 3-wire type Response time 1.5ms	IP1XB
		AJ65VBTCE2-8T	Output 8 points: 12/24VDC (0.1A) Transistor output (sink type) 2-wire type	IP1XB
		AJ65VBTCE2-16T	Output 16 points: 12/24VDC (0.1A) Transistor output (sink type) 2-wire type	IP1XB
		AJ65VBTCE3-16TE NEW	Output 16 points: 12/24VDC (0.1A) Transistor output (source type) 3-wire type	IP1XB
		AJ65VBTCE32-16DT	Input 8 points: 24VDC/5mA (positive common) 3-wire type Response time 1.5ms Output 8 points: 24VDC (0.1A) Transistor output (sink type) 2-wire type	IP1XB
		AJ65VBTCE3-16DTE NEW	Input 8 points: 24VDC/5mA (negative common) 3-wire type Response time 1.5ms Output 8 points: 24VDC (0.1A) Transistor output (source type) 3-wire type	IP1XB
		AJ65VBTCE32-32DT	Input 16 points: 24VDC/5mA (positive common) 3-wire type Response time 1.5ms Output 16 points: 24VDC (0.1A) Transistor output (sink type) 2-wire type	IP1XB
		AJ65VBTCE3-32DTE NEW	Input 16 points: 24VDC/5mA (negative common) 3-wire type Response time 1.5ms Output 16 points: 24VDC (0.1A) Transistor output (source type) 3-wire type	IP1XB
	One-touch connector type	AJ65VBTCU3-8D1	Input 8 points: 24VDC (positive common) 3-wire type Response time 0.2ms One-touch connector type	IP1XB
		AJ65VBTCU3-16D1	Input 16 points: 24VDC (positive common) 3-wire type Response time 0.2ms One-touch connector type	IP1XB
		AJ65SBTC4-16DN	Input 16 points: 24VDC (positive common) 4-wire type Response time 1.5ms One-touch connector type	IP2X
		AJ65SBTC4-16DE	Input 16 points: 24VDC (negative common) 4-wire type Response time 1.5ms One-touch connector type	IP2X
		AJ65SBTC1-32D	Input 32 points: 24VDC (positive/negative common shared) 1-wire type One-touch connector type (plug: sold separately) Response time 1.5ms	IP2X
		AJ65SBTC1-32D1	Input 32 points: 24VDC (positive/negative common shared) 1-wire type High-speed response One-touch connector type (plug: sold separately) Response time 0.2ms	IP2X
		AJ65VBTCU2-8T	Output 8 points: 12/24VDC (0.1A) Transistor output (sink type) 2-wire type One-touch connector type	IP1XB
		AJ65VBTCU2-16T	Output 16 points: 12/24VDC (0.1A) Transistor output (sink type) 2-wire type One-touch connector type	IP1XB
		AJ65SBTC1-32T	Output 32 points: 12/24VDC (0.1A) Transistor output (sink type) 1-wire type One-touch connector type (plug: sold separately)	IP2X
		AJ65SBTC1-32T1	Output 32 points: 12/24VDC (0.1A) Transistor output (sink type) 1-wire type One-touch connector type (low-leakage current type)	IP2X
		AJ65SBTC4-16DT	Input 8 points: 24VDC (positive common) 4-wire type (for 8 sensors) Response time 1.5ms Output 8 points: 24VDC (0.5A) Transistor output (sink type) 4-wire type One-touch connector type (plug: sold separately)	IP2X
		AJ65SBTC4-16DT2	Input 8 points: 24VDC (positive common) 4-wire type Response time 1.5ms Output 8 points: 24VDC (0.5A) Transistor output (sink type) 4-wire type One-touch connector type (plug: sold separately) (low-leakage current type)	IP2X
		AJ65SBTC1-32DT	Input 16 points: 24VDC (positive common) 1-wire type Response time 1.5ms Output 16 points: 24VDC (0.1A) Transistor output (sink type) 1-wire type One-touch connector type (plug: sold separately)	IP2X
		AJ65SBTC1-32DT1	Input 16 points: 24VDC (positive common) 1-wire type High-speed response Response time 0.2ms Output 16 points: 24VDC (0.1A) Transistor output (sink type) 1-wire type One-touch connector type (plug: sold separately)	IP2X
		AJ65SBTC1-32DT2	Input 16 points: 24VDC (positive common) 1-wire type Response time 1.5ms Output 16 points: 24VDC (0.1A) Transistor output (sink type) 1-wire type One-touch connector type (plug: sold separately) (low-leakage current type)	IP2X
		AJ65SBTC1-32DT3	Input 16 points: 24VDC (positive common) 1-wire type High-speed response Response time 0.2ms Output 16 points: 24VDC (0.1A) Transistor output (sink type) 1-wire type One-touch connector type (plug: sold separately) (low-leakage current type)	IP2X
	40-pin connector type (FCN connector type)	AJ65SBTCF1-32D	Input 32 points: 24VDC (positive/negative common shared) 1-wire type Response time 1.5ms FCN connector type (40-pin connector)	IP2X
		AJ65BTC1-32D	Input 32 points: 24VDC (positive/negative common shared) 1-wire type Response time 10ms FCN connector type (40-pin connector)	IP2X
		AJ65SBTCF1-32T	Output 32 points: 12/24VDC (0.1A) Transistor output (sink type) 1-wire type FCN connector type (40-pin connector)	IP2X
		AJ65BTC1-32T	Output 32 points: 12/24VDC (0.1A) Transistor output (sink type) 1-wire type FCN connector type (40-pin connector)	IP2X
		AJ65SBTCF1-32DT	Input 16 points: 24VDC (positive/negative common shared) 1-wire type Response time 1.5ms Output 16 points: 12/24VDC (0.1A) Transistor output (sink type) 1-wire type FCN connector type (40-pin connector)	IP2X
		AJ65VBTCF1-32DT1	Input 16 points: 24VDC (positive/negative common shared) 1-wire type Response time 0.2ms Output 16 points: 12/24VDC (0.1A) Transistor output (sink type) 1-wire type FCN connector type	IP1XB
		AJ65VBTCFJ1-32DT1	Input 16 points: 24VDC (positive common) 1-wire type Response time 0.2ms Shared power supply for module and I/O parts Output 16 points: 24VDC (0.1A) Transistor output (sink type) 1-wire type FCN connector type	IP1XB

* Positive common: sink type, negative common: source type

*1: These modules are used as remote device stations.

Module type			Model name	Specifications	Protection level
Remote I/O module	Waterproof connector type		AJ65FBTA4-16D	Input 24VDC (positive common) 4-wire type Thin, waterproof type Response time 1.5ms	IP67
			AJ65FBTA4-16DE	Input 24VDC (negative common) 4-wire type Thin, waterproof type Response time 1.5ms	IP67
			AJ65FBTA2-16T	Output 16 points: 12/24VDC (0.5A) Transistor output (sink type) 2-wire type Thin, waterproof type	IP67
			AJ65FBTA2-16TE	Output 16 points: 12/24VDC (1.0A) Transistor output (source type) 2-wire type Thin, waterproof type	IP67
			AJ65FBTA42-16DT	Input 8 points: 24VDC (positive common) 4-wire type Response time 1.5ms Output 8 points: 24VDC (0.5A)Transistor output sink type 2-wire type Thin, waterproof type	IP67
			AJ65FBTA42-16DTE	Input 8 points: 24VDC (negative common) 4-wire type Response time 1.5ms Output 8 points: 24VDC (1.0A) Transistor output (source type) 2-wire type Thin, waterproof type	IP67
Safety relay module	Spring clamp terminal block type		QS90SR2SP-CC	For CC-Link Safety input: 1 point (2 inputs) P type (positive common/positive common input) Safety output: 1 point (3 outputs)	IP1X
			QS90SR2SN-CC	For CC-Link Safety input: 1 point (2 inputs) N type (positive common/negative common input) Safety output: 1 point (3 outputs)	IP1X
Safety Controller	Spring clamp terminal block type		WS0-GCC100202	CC-Link interface module for WS series	-
Analog module	Screw terminal block type	Voltage/current input	AJ65SBT-64AD	4-channel voltage/current input A/D conversion module (analog input module)	IP2X
			AJ65SBT2B-64AD	4-channel voltage/current input A/D conversion module (analog input module) High accuracy, high resolution, high speed	IP2X
			AJ65BT-64AD	4-channel voltage/current input A/D conversion module (analog input module) Screw/2-Piece terminal block type	IP2X
		Temperature input	AJ65BT-64RD3	4-channel Pt100 (3-wire type) input Platinum RTD Pt100 temperature input	IP2X
			AJ65BT-64RD4	4-channel Pt100 (4-wire type) input Platinum RTD Pt100 temperature input	IP2X
			AJ65SBT2B-64TD	4-channel thermocouple input Thermocouple temperature input module	IP2X
			AJ65BT-68TD	8-channel thermocouple input Thermocouple temperature input module	IP2X
			AJ65SBT2B-64RD3	4-channel RTD input module	IP2X
		Voltage/current output	AJ65SBT-62DA	2-channel voltage/current output D/A conversion module (analog output module)	IP2X
			AJ65SBT2B-64DA	4-channel voltage/current output D/A conversion module (analog output module)	IP2X
		Voltage output	AJ65BT-64DAV	4-channel voltage output D/A conversion module (analog output module)	IP2X
		Current output	AJ65BT-64DAI	4-channel current output D/A conversion module (analog output module)	IP2X
	One-touch connector type	Voltage input	AJ65VBTCU-68ADVN	8-channel voltage input A/D conversion module (analog input module) CC-Link Ver.2-compatible	IP1XB
		Current input	AJ65VBTCU-68ADIN	8-channel current input A/D conversion module (analog input module) CC-Link Ver.2-compatible	IP1XB
		Voltage output	AJ65VBTCU-68DAVN	8-channel voltage output D/A conversion module (analog output module) CC-Link Ver.2-compatible	IP1XB
High-speed counter module			AJ65BT-D62	DC input Preset DC input	IP2X
			AJ65BT-D62D	Differential input Preset DC input	IP2X
			AJ65BT-D62D-S1	Differential input Preset differential input	IP2X
Positioning module			AJ65BT-D75P2-S3	2 axes (independent, with/ linear and circular interpolation)	IP2X
RS-232 interface module			AJ65BT-R2N	RS-232 1-channel, with/ DC input 2 points Transistor output 2 points	IP2X
Interface board for personal computer			Q80BD-J61BT11N	CC-Link interface board for an IBM PC/AT compatible PC (for PCI bus slot: master station, standby master station or local station)	-
			Q81BD-J61BT11	CC-Link interface board for an IBM PC/AT compatible PC (for PCI Express bus slot: master station, standby master station or local station)	-
FX Series interface block			FX3U-64CCL	Interface block for FX3G, FX3U, FX3UC Series	-
			FX2N-32CCL	Interface block for FX1N, FX2N, FX3U, FX1NC, FX2NC, FX3UC Series	-
Repeater module	Thin, waterproof type repeater hub module		AJ65FBTA-RPH	8-port star wiring hub module with repeater function, IP67-compatible	IP67
	Spring clamp terminal block type repeater hub module		AJ65BTS-RPH	8-port star wiring hub module with repeater function, Spring clamp terminal block type	-
	Repeater module (T-branch)		AJ65SBT-RPT	T-branch module with repeater function	IP2X
	Optical repeater module		AJ65SBT-RPS	For SI/QSI type fiber cable (Use 2 modules as a set)	IP2X
			AJ65SBT-RPG	For GI type fiber cable (Use 2 modules as a set)	IP2X
	Space optical repeater module		AJ65BT-RPI-10A	AJ65BT-RPI-10A and AJ65BT-RPI-10B used as a pair, 156k/625k/2.5Mbps supported	IP2X
			AJ65BT-RPI-10B		IP2X
Embedded type I/O module			AJ65MBTL1N-16D	Input 16 points : 24VDC (positive common) Pin header type 44-pin (2 rows) Embedded type Response time 1.5ms	-
			AJ65MBTL1N-16T	Output 16 points : 12/24VDC (0.1A) Transistor output (sink type) Pin header type 44-pin (2 rows) Embedded type	-
			AJ65MBTL1N-16DT	Input 8 points : 24VDC (positive common) Response time 1.5ms Output 8 points : 24VDC (0.1A) Transistor output (sink type) Pin header type 44-pin (2 rows) Embedded type	-
			AJ65MBTL1N-32D	Input 32 points : 24VDC (positive common) Pin head type 62-pin (2 rows) Embedded type Response time 1.5ms	-
			AJ65MBTL1N-32T	Output 32 points : 12/24VDC (0.1A) Transistor output (sink type) Pin head type 62-pin (2 rows) Embedded type	-
Embedded type interface board			Q50BD-CCV2	Master/local/intelligent device station CC-Link Ver.2 compatible	-
Object development	MFP1N		A6GA-CCMFP1NN60F	Communication LSI for lead-free/RoHS compatible master/local/intelligent device station (60pcs)	-
			A6GA-CCMFP1NN300F	Communication LSI for lead-free/RoHS compatible master/local/intelligent device station (300pcs)	-
	Device kit		Q6KT-NPC2OG51	For network circuit (Flash ROM x 1pc, SPLD x 2pcs)	-
Dedicated communication LSI	MFP2AN		A6GA-CCMFP2ANN 60F	Communication LSI for lead-free/RoHS compatible remote I/O station (16 points) (60pcs)	-
			A6GA-CCMFP2ANN 300F	Communication LSI for lead-free/RoHS compatible remote I/O station (16 points) (300pcs)	-
	MFP2N		A6GA-CCMFP2NN 60F	Communication LSI for lead-free/RoHS compatible remote I/O station (32 points) (60pcs)	-
			A6GA-CCMFP2NN 300F	Communication LSI for lead-free/RoHS compatible remote I/O station (32 points) (300pcs)	-
	MFP3N		A6GA-CCMFP3NN 60F	Communication LSI for lead-free/RoHS compatible remote device station (60pcs)	-
			A6GA-CCMFP3NN 300F	Communication LSI for lead-free/RoHS compatible remote device station (300pcs)	-

* Positive common: sink type, negative common: source type

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Module type	Model name	Specifications	Protection level
CompactPCI compatible interface board	ECP-CL2BD	CC-Link interface board for FA computer (CompactPCI bus slot 3U size: master station, standby master station or local station)	-

Optional parts for I/O modules

■ One-touch connector plugs

Product name	Model name	Specifications		
		Plug color	Applicable cable core (mm)	Applicable cable outside diameter (mm)
One-touch connector plug (20pcs)	A6CON-P214	Transparent	0.14 to 0.2 (AWG #26 to 24)	1.0 to 1.4 dia.
	A6CON-P220	Yellow		1.4 to 2.0 dia.
	A6CON-P514	Red	0.3 to 0.5 (AWG #22 to 20)	1.0 to 1.4 dia.
	A6CON-P520	Blue		1.4 to 2.0 dia.
One-touch connector plug for communication (10pcs)	A6CON-L5P	One-touch connector plug for communication 5-pin [transmission circuit terminal (IDC type)] Applicable cable: FANC-110SBH (made by Kuramo Denko Co., Ltd.) CS10 (made by Daiden Co., Ltd.)		
One-touch connector plug for power supply and FG (10pcs)	A6CON-PW5P	One-touch connector plug for power supply and FG 5-pin [module power supply terminal, I/O power supply terminal, FG terminal (IDC type)] Applicable wire size: 0.66 to 0.98mm^2 (AWG#18) [2.2 to 3.0mm dia.] Strand diameter 0.16mm or more		
	A6CON-PW5P-SOD	One-touch connector plug for power supply and FG 5-pin [module power supply terminal, I/O power supply terminal, FG terminal (IDC type)] Applicable wire size: 0.66 to 0.98mm^2 (AWG#18) [2.0 to 2.3mm dia.] Strand diameter 0.16mm or more		
One-touch connector plug with terminating resistor (1pc)	A6CON-TR11	One-touch connector plug for communication with terminating resistor (110Ω) When the connector type remote I/O is used for the end station, be sure to use this.		

■ Online connector

Product name	Model name	Specifications
Online connector for communication (5pcs)	A6CON-LJ5P	Online connector for communication 5-pole (10-pin)
Online connector for power supply and FG (5pcs)	A6CON-PWJ5P	Online connector for power supply and FG 5-pole (10-pin)

■ Protective cover for remote I/O module

Product name	Model name	Applicable module
Protective cover for 8-point module (10pcs)	A6CVR-8	AJ65SBTB1-8D, AJ65SBTB1-8T, AJ65SBTB1-8TE, AJ65SBT-RPT, AJ65SBTB1-8T1
	A6CVR-VCE8	AJ65VBTCE3-8D, AJ65VBTCE2-8T
Protective cover for 16-point module (10pcs)	A6CVR-16	AJ65SBTB1-16D, AJ65SBTB1-16D1, AJ65SBTC1-32D, AJ65SBTC1-32D1, AJ65SBTB3-8D, AJ65SBTB2-8A, AJ65SBTB2N-8A, AJ65SBTB1-16T, AJ65SBTB1-16T1, AJ65SBTC1-32T, AJ65SBTB2-8T, AJ65SBTB1-16TE, AJ65SBTB2-8R, AJ65SBTB2N-8R, AJ65SBTB2-8S, AJ65SBTB2N-8S, AJ65SBTC1-32DT, AJ65SBTC1-32DT1, AJ65SBTC4-16D, AJ65SBTC4-16DT, AJ65SBTB1-16DT, AJ65SBTB1-16DT1, AJ65SBTB32-8DT, AJ65SBT-RPG, AJ65SBT-RPS, AJ65SBTC4-16DN, AJ65SBTC4-16DE, AJ65SBTB2-8T1, AJ65SBTB1-16DT2, AJ65SBTC1-32DT2, AJ65SBTC1-32DT3, AJ65SBTC4-16DT2, AJ65SBTB1-16DT3, AJ65SBTB32-8DT2
	A6CVR-VCE16	AJ65VBTCE3-16D, AJ65VBTCE2-16T, AJ65VBTCE32-16DT, AJ65VBTCE3-16DE, AJ65VBTCE3-16TE, AJ65VBTCE3-16DTE
Protective cover for 32-point module (10pcs)	A6CVR-32	AJ65SBTB1-32D, AJ65SBTB1-32D1, AJ65SBTB3-16D, AJ65SBTB2-16A, AJ65SBTB2N-16A, AJ65SBTB1-32T, AJ65SBTB1-32T1, AJ65SBTB2-16T, AJ65SBTB2N-16R, AJ65SBTB2-16S, AJ65SBTB2N-16S, AJ65SBTB1-32DT, AJ65SBTB1-32DT1, AJ65SBTB32-16DT, AJ65SBTB2N-16R, AJ65SBTB2-16T1, AJ65SBTB1-32DT3, AJ65SBTB32-16DT2, AJ65SBTB1-32DT2

■ Protective cap for unused connector

Product name	Model name	Specifications
Waterproof cap (20pcs)	A6CAP-WP2	For protective cover for unused connector, waterproof protective structure: IP67-compatible, applicable for AJ65FBTA□-□ I/O module

■ 40-pin connector (FCN connector)

Product name	Model name	Specifications
40-pin connector (FCN connector) (1pc)	A6CON1	Solder type (straight-out type)
	A6CON2	Crimp type (straight-out type)
	A6CON3	IDC type (flat cable type)
	A6CON4	Solder type (straight-out/diagonal-out type)

CC-Link Safety Related Product Model Names

Mitsubishi Electric Corporation

Module type		Model name	Specifications	Protection level
Master module		QS0J61BT12	Maximum number of stations: 64 stations (maximum of 42 safety stations) Safety station information management	IP2X
Remote I/O module	Screw/2-piece terminal block type	QS0J65BTB2-12DT	Safety input: 8 points (dual input), 16 points (single input) Safety output: 4 points (source + sink type), 2 points (source + source type)	IP2X
	Spring clamp terminal block type	QS0J65BTS2-8D	Safety input: 8 points (dual input), 16 points (single input)	IP2X
		QS0J65BTS2-4T	Safety output: 4 points (source + sink type), 2 points (source + source type)	IP2X

CC-Link/LT Related Product Model Names

Mitsubishi Electric Corporation

Module type			Model name	Specifications	Protection level
Master module			QJ61CL12	CC-Link/LT master module for Q Series	-
			LJ61CL12	CC-Link/LT master module for L Series	-
			FX2N-64CL-M	CC-Link/LT master module for FX1N, FX2N, FX3N, FX1NC, FX2NC, and FX3NUC	-
			FX3UC-32MT-LT (-2)*1	FX3UC series CC-Link/LT programmable controller (built-in master function)	-
Bridge module			AJ65SBT-CLB	CC-Link - CC-Link/LT bridge module	IP2X
Remote I/O module	Screw terminal block type		CL1X4-D1B2	Input 4 points: 24VDC (positive/negative common shared)	IP2X
			CL2X8-D1B2	Input 8 points: 24VDC (positive/negative common shared)	IP2X
			CL1Y4-T1B2	Output 4 points: 12/24VDC (sink type) 0.1A Transistor output	IP2X
			CL2Y8-TP1B2	Output 8 points: 12/24VDC (sink type) 0.1A Transistor module (with output protection function)	IP2X
			CL1Y4-R1B2	Output 4 points: 30VDC , 250VAC or less 2A Relay output	IP1X
			CL1Y4-R1B1	Output 4 points: 30VDC , 250VAC or less 2A Relay output 1 point 1 common (independent)	IP1X
			CL1XY4-DT1B2	Input 2 points: 24VDC (positive/negative common shared) Output 2 points: 12/24VDC (sink type) 0.1A Transistor output	IP2X
			CL1XY8-DT1B2	Input 4 points: 24VDC (positive/negative common shared) Output 4 points: 12/24VDC (sink type) 0.1A Transistor output	IP2X
			CL1XY4-DR1B2	Input 2 points: 24VDC (positive/negative common shared) Output 2 points: 30VDC , 250VAC or less (sink type) 2A Relay output	IP1X
			CL1XY8-DR1B2	Input 4 points: 24VDC (positive/negative common shared) Output 4 points: 30VDC , 250VAC or less 2A Relay output	IP1X
	Spring clamp terminal block type		CL1X4-D1S2	Input 4 points: 24VDC (positive/negative common shared)	IP2X
			CL2X8-D1S2	Input 8 points: 24VDC (positive/negative common shared)	IP2X
			CL1Y4-T1S2	Output 4 points: 12/24VDC (sink type) 0.1A Transistor output	IP2X
			CL2Y8-TP1S2	Output 8 points: 12/24VDC (sink type) 0.1A Transistor output (output protection function)	IP2X
			CL2Y8-TPE1S2	Output 8 points: 12/24VDC (source type) 0.1A Transistor output (output protection function)	IP2X
	Sensor connector type (e-CON)		CL1X4-D1C3	Input 4 points: 24VDC (positive common)	IP2X
			CL2X8-D1C3V	Input 8 points: 24VDC (positive common)	IP2X
			CL2X16-D1C3V	Input 16 points: 24VDC (positive common)	IP2X
			CL1Y4-T1C2	Output 4 points: 24VDC (sink type) 0.1A Transistor output	IP2X
			CL2Y8-TP1C2V	Output 8 points: 24VDC (sink type) 0.1A Transistor module (output protection function)	IP2X
			CL2Y16-TP1C2V	Output 16 points: 24VDC (sink type) 0.1A Transistor module (output protection function)	IP2X
			CL2XY16-DTP1C5V	Input 8 points: 24VDC (positive common) Output 8 points: 24VDC (sink type) 0.1A Transistor module (output protection function)	IP2X
	MIL connector type		CL2X16-D1M1V	Input 16 points: 24VDC (positive common)	IP2X
			CL2X16-D1MJ1V	Input 16 points: 24VDC (positive common) Shared power supply for module and I/O parts	IP2X
			CL2Y16-TP1M1V	Output 16 points: 12/24VDC (sink type) 0.1A Transistor module (output protection function)	IP2X
			CL2Y16-TP1MJ1V	Output 16 points: 24VDC (sink type) 0.1A Transistor module (output protection function) Shared power supply for module and I/O parts	IP2X
			CL2Y16-TPE1M1V	Output 16 points: 12/24VDC (source type) 0.1A Transistor module (output protection function)	IP2X
	Cable type		CL1X2-D1D3S	Input 2 points: 24VDC (positive common)	IP2X
			CL1Y2-T1D2S	Output 2 points: 24VDC (sink type) 0.1A Transistor output	IP2X
			CL1XY2-DT1D5S	Input 1 points: 24VDC (positive common) Output 1 points: 24VDC (sink type) 0.1A Transistor output	IP2X
Analog module	Screw terminal block type	Voltage/current input	CL2AD4-B	4-channel voltage/current input A/D conversion module (analog input module)	IP2X
		Voltage/current output	CL2DA2-B	2-channel voltage/current output D/A conversion module (analog output module)	IP2X
Dedicated power supply			CL1PSU-2A	CC-Link/LT dedicated power supply (2A)	IP1X
Power supply adapter			CL1PAD1	Power supply adapter (5A) for CL1PAD1 CC-Link/LT	-
Communication LSI for master station	CLC13		CL2GA13-60	Communication LSI for lead-free/RoHS compatible master station (60pcs)	-
Communication LSI for remote I/O station	CLC21		CL2GA21-60	Communication LSI for lead-free/RoHS compatible remote I/O station (60pcs)	-
			CL2GA21-300	Communication LSI for lead-free/RoHS compatible remote I/O station (300pcs)	-
Communication LSI for remote device station	CLC31		CL2GA31-60	Communication LSI for remote device station (60pcs)	-
Accessories	Common terminal block		CL2TE-5	Common terminal block for screw terminal block type modules (applicable model: CL2X8-D1B2, CL2Y8-TP1B2, CL2AD4-B)	-
			CL2TE-10S	Common terminal block for spring clamp terminal block type modules (applicable model : CL2X8-D1S2)	-
	Holder		CL1-HLD	Holder for cable type mounting (5pcs)	-

*1 CC-Link/LT parameters for FX3UC-32MT-LT-2 can be configured with GX Works2, GX Developer or display modules.

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Module type		Model name	Specifications	Protection level
Accessories	Connector	CL9-CNF-18	Connector for CC-Link/LT dedicated flat cable	-
		CL9-CNR-23	Connector for CC-Link/LT dedicated VCTF cable	-
		CL9-CNR-20	Connector for CC-Link/LT dedicated flexible cable	-
	Cable	CL9-FL4-18	CC-Link/LT dedicated flat cable	-
		CL9-MV4-075	CC-Link/LT dedicated flexible cable	-
	Terminating resistor	CL9-TERM	Terminating resistor for dedicated flat, VCTF, and flexible cables	-
	Open sensor connector (e-CON)	ECN-******	I/O connector for sensor connector type modules *: The model name differs according to the color and wire diameter.	-
	Joint shield/Dust shield	ECN-CVR4****	Protection shields for relay part of open sensor connectors, sensor connectors, and empty slots of remote I/O module	-
	Tool	L-TOOL-N	IDC tool for connector	-
		e-TOOL-N	IDC tool for open sensor connector	-
		KD-5339	Tool for spring clamp terminal block	-

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Open Field Network CC-Link Compatible Product Catalog

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L(NA)08038E-G 1203(MDOC)

New publication effective Mar. 2012.
Specifications subject to change without notice.