

Space optical repeater unit for CC-Link

SOT-MS102 MS202 series

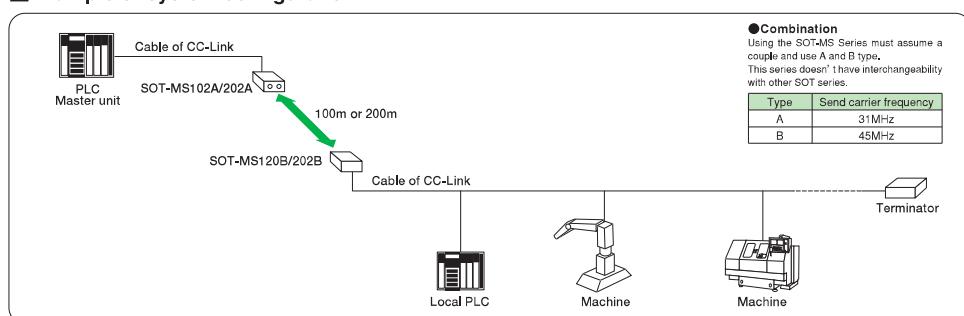


Correspond to CC-Link ver 1.10/ver 2.00.

It is possible to use it as a space optical of CC-Link. The data of CC-Link is transmitted because of light (Near-infrared rays). The cable of CC-Link can be replaced with an optical, wireless communication. Because an optical receiving level can be transmitted to the master of CC-Link, the optical axis adjustment can be easily done. The transmission rate corresponds to 10M, 5M, 2.5M, and 625Kbps.



Example of system configuration



The main specification of CC-Link

Application PLC	Made of Mitsubishi Electric A series/QuA series/Q series etc.,
Application Master unit	AJ61BT11, A1Sj61BT11, AJ61QBT11, A1Sj61QBT11, QJ61BT11 etc.,
Communication method	Control & Communication Link (CC-Link)
Transmission route	Bus
Transmission format	HDLC
Connection	Connector terminal block
Transmission speed	10M, 5M, 2.5M, 625Kbps Either is selected

The main specification of space optical transfer unit

Model	SOT-MS102□	SOT-MS202□
Use environment	CC-Link Ver.1.10/Ver.2.00	
Transmission speed	10M, 5M, 2.5M, 625Kbps	
Power supply voltage	Rated voltage : DC24V Power supply ripple 10% or less Working voltage : DC18V~30v within 30V in peak voltage including ripple	
Current consumption	Less than 150mA	
Interface	RS-485 conforming	
Transmission method	Half-duplex, bi-directional	
Communication control method	Bit forward	
Number of occupation station	When monitor function is used, 1 station. When the monitor function unused, 0 station.	
Transmission distance	0.2~100m	0.2~200m
Directivity	1.2 degrees	
Modulation method	FSK	
Lighting element	Near infrared light emitting diode (light emitting wavelength 870nm)	
Receiving element	Photo diode	
Auxiliary output	CDO : "ON" when communication is permitted. ALM : "OFF" when the reception level is low. Photo coupler isolated NPN open collector outputs. Output rating : DC30V 50mA MAX	
Connection	For CC-Link 4-points connector terminal block (Phoenix contact: FKCT 2.5/4-STF-5.08) For power/aux. output : 5-points connector terminal block (Phoenix contact: FKCT 2.5/5-STF-5.08)	
Check terminal	DC voltage corresponding to the reception level is provided. (Use the DC voltage range with a 10kΩ/V or higher tester.)	
Operating ambient illumination	Solar beam : 10,000lx or less. Fluorescent, incandescent lamps : 3,000lx or less No externally disturbed light shall directly enter the receiver.	
Operating ambient temperature	-10~+50°C No freezing allowed	
Operating ambient humidity	10~85%RH No condensation allowed	

※ A of the send carrier frequency type or B enters for □.
※ It is necessary to give measure to the connected per-device to suit EMC instruction the entire CC-Link system.

Explanation of monitor lamp

POW : Power (RED)	It lights by the power supply.	RD2 : Optical side receiving lamp (GREEN)	It lights to the optical side by the data receive.
LRUN : Monitor normality lamp (GREEN)	When the monitor function is used, it lights by a normal communication.	↓ CDO : Receiving lamp for this station (RED)	When becoming an amount of light received to be able to communicate this station, it lights.
LERR : Monitor abnormality lamp (RED)	When the monitor function is used, it lights because of an abnormal communication.	↑ LEVEL : This station LEVEL : Receiving light level (GREEN)	It lights according to a receiving light level of this station.
ERR : Communication abnormality lamp (RED)	It lights because of an abnormal communication of CC-Link.	↑ CDO : Receiving lamp for other station (RED)	When becoming an amount of light received to be able to communicate other station, it lights.
SD1 : Cable side transmission lamp (RED)	It lights to the cable side by the data transmission.	↑ LEVEL : Other station LEVEL : Receiving light level (GREEN)	It lights according to a receiving light level of other station.
SD2 : Optical side transmission lamp (RED)	It lights to the optical side by the data transmission.		
RD1 : Cable side receiving lamp (GREEN)	It lights to the cable side by the data receive.		

Setting of switch

Configuration switch

①Content of setting

設定内容
SW1 : Transmission speed setting
SW2 : Transmission speed setting
SW3 : Unused (Use it by turning off.)
SW4 : Unused (Use it by turning off.)

②Transmission speed setting (SW1,2)

SW1	SW2	Transmission speed
OFF	OFF	625Kbps
ON	OFF	2.5Mbps
OFF	ON	5Mbps
ON	ON	10Mbps

Factory setting is "625Kbps".

Station number configuration switch

①Content of setting

設定内容
X10 : The station number's place of ten is set.
X1 : The station number's place of one is set.
00 : Monitor function unused
01 ~ 64 : Station number setting when monitor function is used.
65 ~ 99 : It is not possible to set it.

The factory setting is "00".

②If the previous station doesn't exist, the setting of the station number when the monitor function is used is made "01". If the previous station exists, it makes it to "Number of occupation station of units + previous station".
(For example, when the previous station number is a unit that occupies two stations by "01", the station number becomes "03".)

Outside dimensions

