

Free Space Optical Communication

1. Network Communication Products

CC-Link Support Type SOT-MQ Series

Feature

A factory-automation network solution: backbone communications with CC-Link support, offering a high degree of freedom in network configuration. CC-Link communication can also be replaced with a high-speed wireless optical (infrared) communication system, enabling fantastic reduction of wiring.

- Optically transmit CC-Link data.

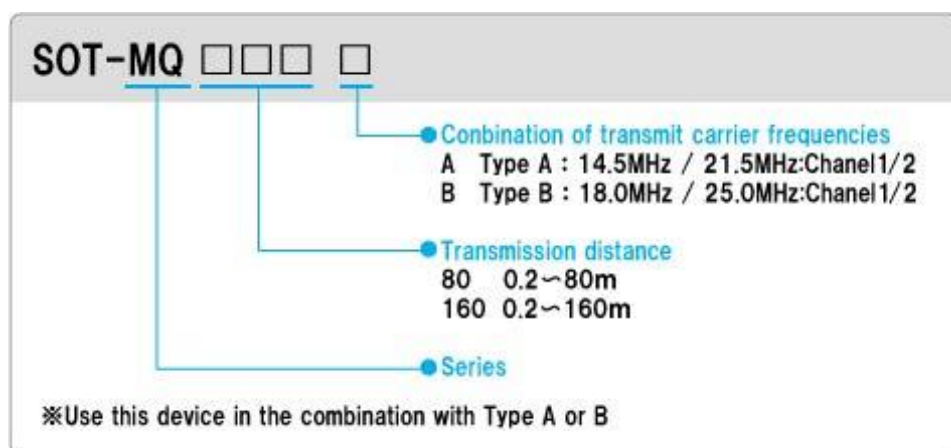
The CC-Link cable can be replaced with wireless optical communication.

- Wireless reception can be transmitted to a master unit, facilitating optical-axis adjustment and improving maintainability.

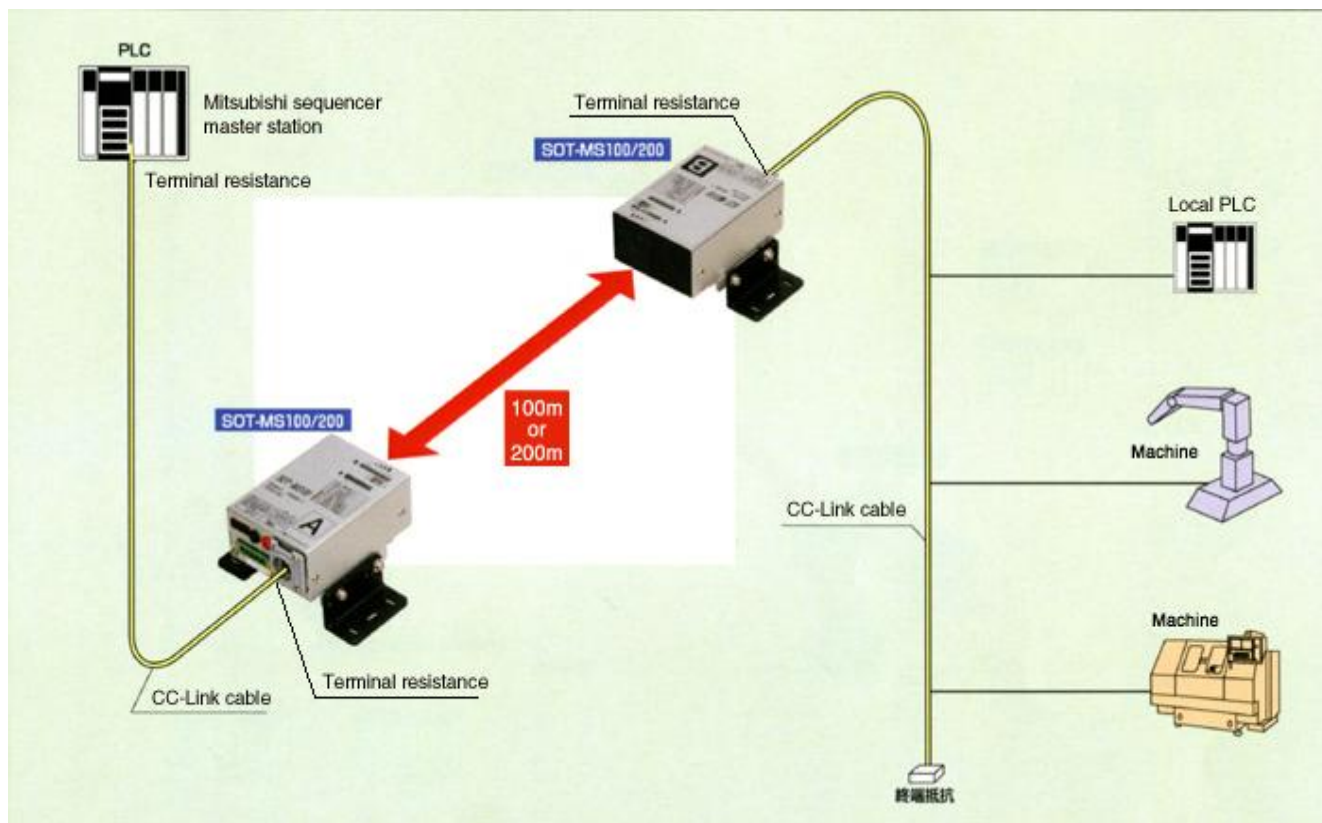
- Communication speeds of 156 k, 652 k, and 2.5 Mbps supported.



Model No. Descriptions



Sample System Configuration



Specifications

Model	SOT-MQ160A/B	SOT-MQ80A/B
Environment	CC-Link	
Transmission rate	156k, 625k, 2.5Mbps	
Power voltage	Rated voltage:24VDC Power ripples:10% or less Voltage:18-30VDC Peak voltage including ripples: Within 30V	
Current consumption	Less than 150mA(at 24VDC input)	
Interface	RS485 compliant	
Transmission method	Half duplex	
Communication control method	Bit forward	
Num. stations occupied	When monitor function used: 1 When monitor function not used : 0	
Transmission distance	0.2 - 160m	0.2 - 80m
Directivity	1 degrees (both horizontal and vertical)	
Modulation method	FSK	
Lighting element	Near infrared light emitting diode(light emitting wavelength 870nm)	
Receiving element	Photodiodes	
Setting switches	4-pin dip switch SW1,2 : Communication speed setting Communication speeds 156k, 625k, 2.5M Cannot be set SW3 : Not used Use with this set to "off" SW4 : Switch transmission carrier frequency OFF CH1 ON CH2	
Auxiliary output	CDO : "ON" when communication is permitted	

	ALM : "OF" when the reception level is low
Photocoupler insulation NPN open collector output	Output rating : 30VDC 50mA MAX
Connection	For signal :4-pole connector terminal block For power/auxiliary output: 5-pole connector terminal block
Check terminals	DC voltage corresponding to the reception level is provided. (Use the DC voltage range with a 10kOhm /V or higher tester)
Code setting switch	Two rotary switches 00 : Monitor function not used 01 to 64 : Code setting when monitor function used 65 to 99 : Cannot be set
Terminal resistance switch: Three-position slide switch	ON1 : 110 Ohm OFF : Open ON2 : 130 Ohm
Ambient operating illumination	Solar beam: 10,000 lx or less Fluorescent, incandescent lamps: 3,000 lx or less No externally disturbed light shall directly enter the receiver.
Ambient operating temperature	-10 – +55 °C No Freezing allowed
Ambient operating humidity	10 – 85% RH No condensation allowed
Weight (Main body)	350g
Accessories	Fixture (1 Set), screws for fixture (4 pcs.). Signal plug (1 pc), power/aux. output plug (1 pc).