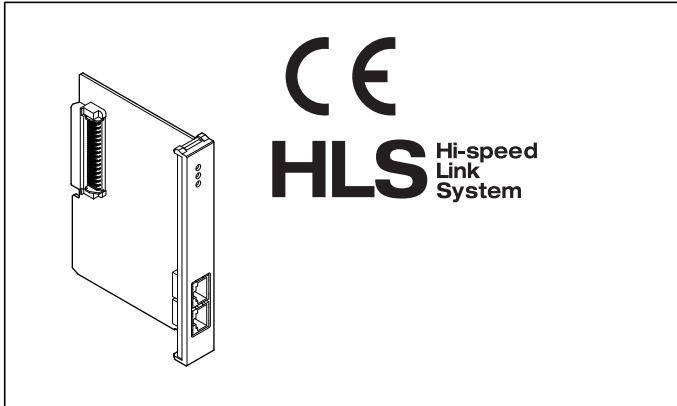


Remote I/O MP Series

HLS MASTER MODULE

(For MP2200/MP2300/MP3300 series use)



MODEL: MPHLS-01

ORDERING INFORMATION

- Code number: MPHLS-01

I/O TYPE

01: HLS function module 1

FUNCTIONS & FEATURES

HLS Master Module is optional module for MP2200/MP2300/MP3300 series machine controllers made by YASKAWA Electric Corp. operating as master unit to connect analog I/O and discrete I/O with HLS(Hi-speed Link System).

HLS is the abbreviation for “Hi-speed Link System” of Step Technica Co., Ltd.

RELATED PRODUCTS

- MP2200/MP2300 series machine controller (YASKAWA Electric Corp.) Ver.2.84 or later
Software for programming device: MPE720
Ver.6.36 or later OR Ver.7.22 or later
- MP3300 series machine controller (YASKAWA Electric Corp.) Ver.1.12 or later
Software for programming device: MPE720
Ver.7.28 or later

GENERAL SPECIFICATIONS

Terminating resistor: Built-in 100Ω
Current Consumption (at 5 V DC): 180 mA

HLS COMMUNICATION

Communication mode*: Full-duplex or half-duplex

Transmission distance*: 12 Mbps: 100 meters (328 ft)

6 Mbps: 200 meters (656 ft)

3 Mbps: 300 meters (984 ft)

Number of slaves*: 1 - 63

Hop count*: 0 - 7 hop

* Configured with MPE720. Refer to the instruction manual for details.

Network cable

shield cable:

ZHY262PS and ZHT262PS (Shinko Seisen Industry Co., Ltd.)

Dual-shield cable:

ZHY262PBA (Shinko Seisen Industry Co., Ltd.)

Status indicator: RUN, CHK1, CHK2

(Refer to the instruction manual for details.)

INSTALLATION

Operating temperature: 0 to 55°C (32 to 131°F)

Storage temperature: -25 to +85°C (-13 to +185°F)

Operating humidity: 30 to 95 %RH (non-condensing)

Storage humidity: 5 to 95 % RH (non-condensing)

Atmosphere: No corrosive gas or heavy dust

Mounting: MP2200/MP2300/MP3300 Series

Weight: 70 g (2.5 oz)

PERFORMANCE

Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength: 1500 V AC @ 1 minute

(Internal circuit to HLS)

STANDARDS & APPROVALS

Refer to the manuals to comply with the standards.

EU conformity:

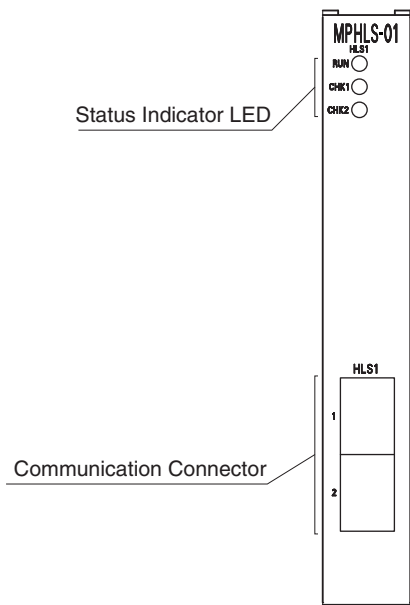
EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

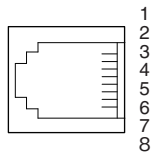
EXTERNAL VIEW



CONNECTION DIAGRAMS

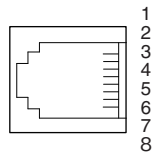
■ Recommended cable connector: TM21P-88P (Hirose Electric)
(Not included in the package)

Full-duplex communication



- | | |
|---------|---------------------------------|
| 1. NC | No connection |
| 2. NC | No connection |
| 3. RXD+ | Network (Slave, transmission +) |
| 4. RXD- | Network (Slave, transmission -) |
| 5. TXD+ | Network (Master, transmission+) |
| 6. TXD- | Network (Master, transmission-) |
| 7. NC | No connection |
| 8. SLD1 | Shield |

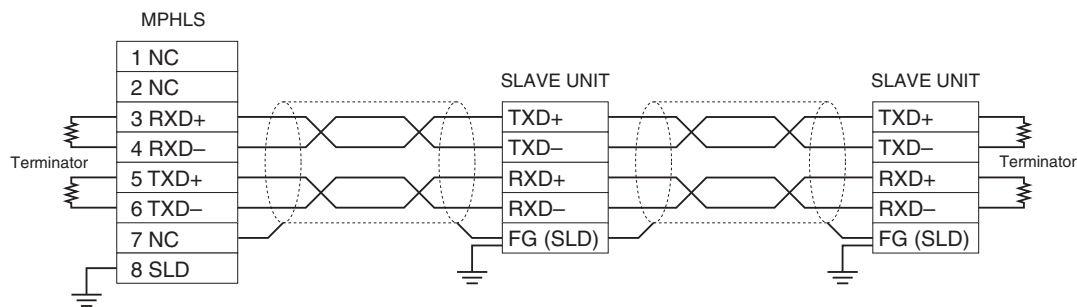
Half-duplex communication



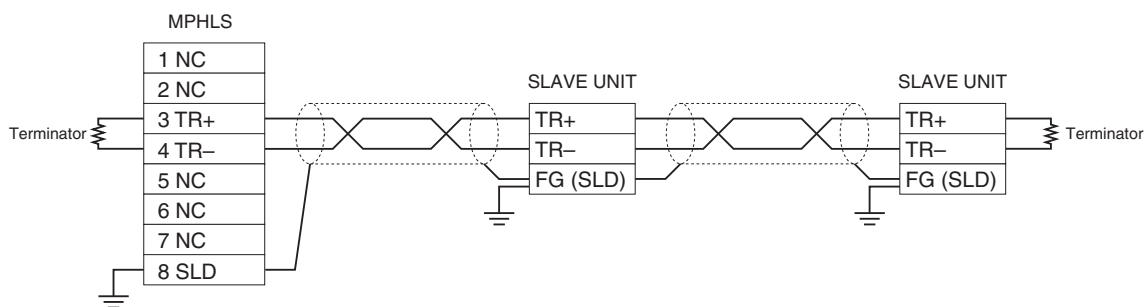
- | | |
|---------|---------------|
| 1. NC | No connection |
| 2. NC | No connection |
| 3. TR+ | Network (+) |
| 4. TR- | Network (-) |
| 5. NC | No connection |
| 6. NC | No connection |
| 7. NC | No connection |
| 8. SLD1 | Shield |

Max. number of slave station
HLS1-1 port: 32, HLS1-2 port: 31

■ SLAVE UNIT WIRING
Full-duplex communication

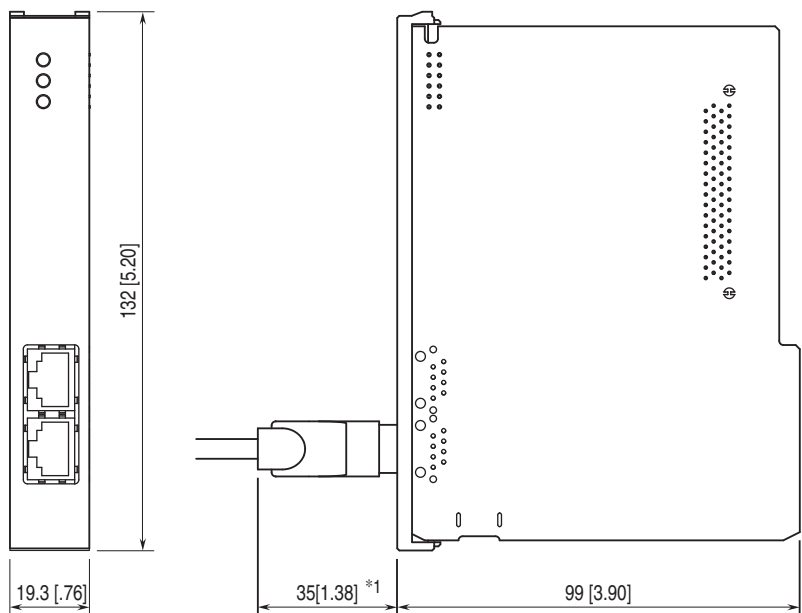


Half-duplex communication



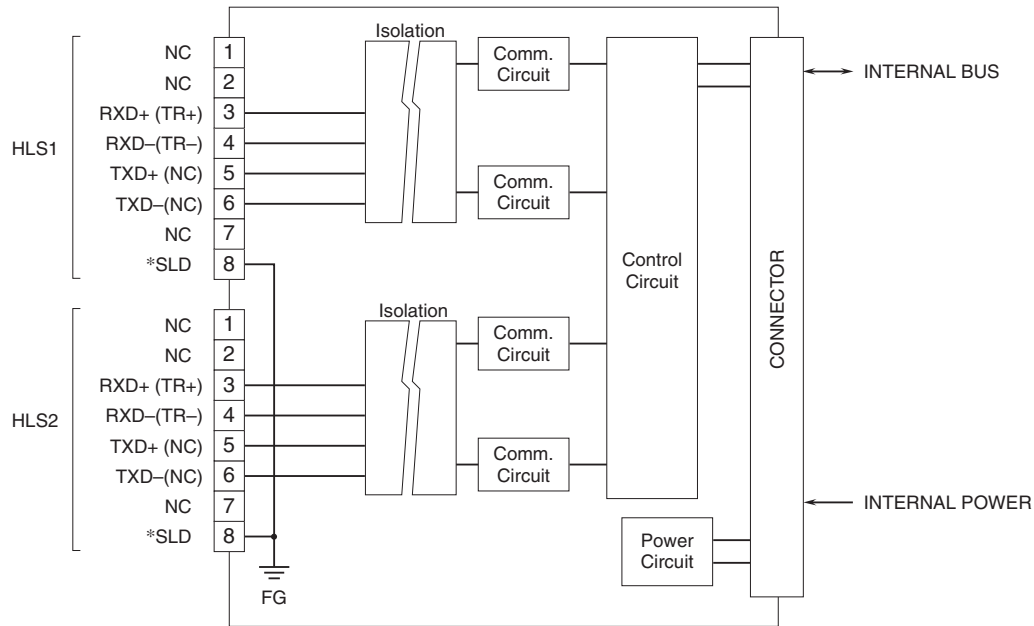
Set the terminator on the last terminal of slave unit.
This HLS master module includes internal terminator.

EXTERNAL DIMENSIONS unit: mm [inch]



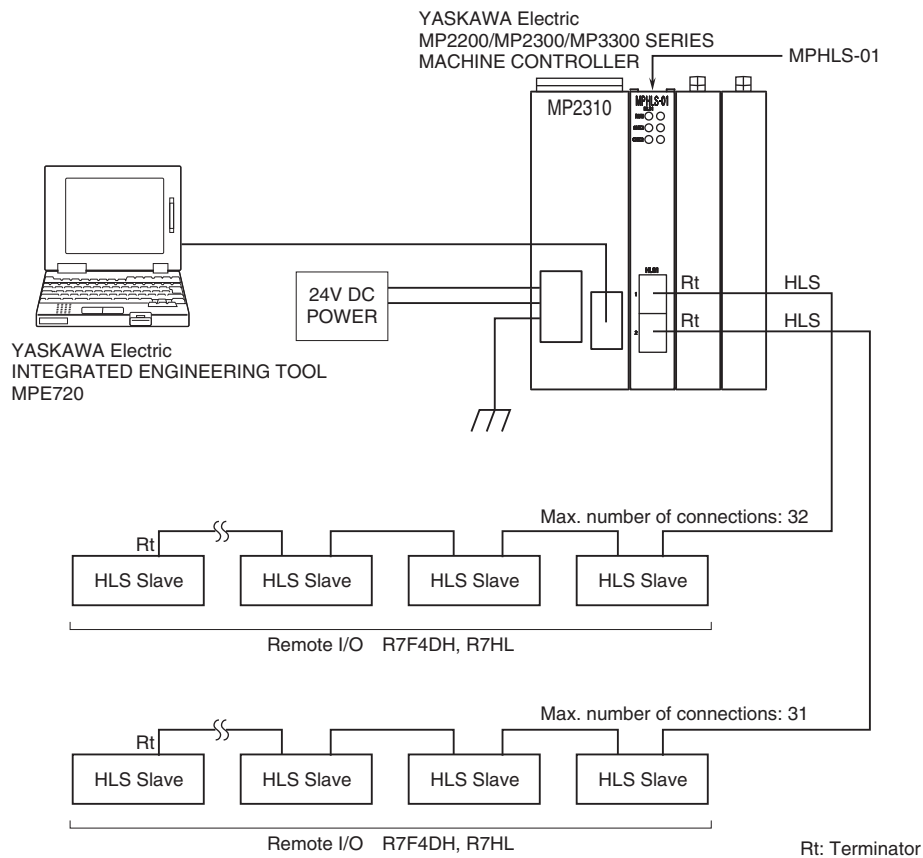
*Recommended cable connector: TM21P-88P (Hirose Electric)

SCHEMATIC CIRCUITRY



*SLD is connected to FG terminal of the MP2200 / MP2300/MP3300 series machine controllers.

SYSTEM DESCRIPTIONS



Note: For MP3200, the MPHLS is available to use by attaching MP2000 option base unit.



Specifications are subject to change without notice.