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): 160 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
EN 50581
EXTERNAL VIEW

 STATUS INDICATOR LED

 COMMUNICATION CONNECTOR

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. TXD+ Network (Slave, transmission +)
4. TXD– Network (Slave, transmission –)
5. RXD+ Network (Master, transmission +)
6. RXD– 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
Set the terminator on the last terminal of slave unit.
This HLS master module includes internal terminator.

**DIMENSIONS unit: mm (inch)**

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

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HLS1
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<td>NC</td>
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<td>RXD–(TR–)</td>
<td>TXD+ (NC)</td>
<td>TXD–(NC)</td>
<td>NC</td>
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HLS2
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<tbody>
<tr>
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<td>NC</td>
<td>RXD+ (TR+)</td>
<td>RXD–(TR–)</td>
<td>TXD+ (NC)</td>
<td>TXD–(NC)</td>
<td>NC</td>
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*SLD is connected to FG terminal of the MP2200 / MP2300/MP3300 series machine controllers.

**SYSTEM DESCRIPTIONS**

YASKAWA Electric
MP2200/MP2300/MP3300 SERIES
MACHINE CONTROLLER
MPHLS-01

YASKAWA Electric
INTEGRATED ENGINEERING TOOL
MPE720

Remote I/O R7F4DH, R7HL
Max. number of connections: 32
Rt: Terminator

Remote I/O R7F4DH, R7HL
Max. number of connections: 31

Note: For MP3200, the MPHLS is available to use by attaching MP2000 option base unit.
Specifications are subject to change without notice.