YASKAWA

# Data sheet
## IM 053ML - MECHATROLINK-III (053-1ML00)

### Technical data

| Order no. | 053-1ML00 |
|---|---|
| Type | IM 053ML - MECHATROLINK-III |
| Module ID | - |
| **General information** | |
| Note | - |
| Features | MECHATROLINK according to IEC 61158, IEC 61784<br>Up to 64 peripheral modules<br>Supports standard I/O profile (16byte and 64byte mode)<br>Multi slave node with max. 9 stations<br>Max. 492byte input and 492byte output data<br>Integrated DC 24V power supply for power and electronic section supply of the periphery modules<br>Integrated Web server<br>Configuration is done via software tool respectively Web server |
| **Technical data power supply** | |
| Power supply (rated value) | DC 24 V |
| Power supply (permitted range) | DC 20.4...28.8 V |
| Reverse polarity protection | yes |
| Current consumption (no-load operation) | 95 mA |
| Current consumption (rated value) | 0.95 A |
| Inrush current | 3.9 A |
| $I^2t$ | 0.14 $A^2s$ |
| Max. current drain at backplane bus | 3 A |
| Max. current drain load supply | 10 A |
| Power loss | 3 W |
| **Status information, alarms, diagnostics** | |
| Status display | yes |
| Interrupts | yes, parameterizable |
| Process alarm | yes, parameterizable |
| Diagnostic interrupt | yes, parameterizable |
| Diagnostic functions | yes, parameterizable |
| Diagnostics information read-out | possible |
| Supply voltage display | green LED |
| Service Indicator | yellow LED |
| Group error display | red SF LED |
| Channel error display | none |
| **Hardware configuration** | |
| Racks, max. | 1 |
| Modules per rack, max. | 64 |
| Number of digital modules, max. | 64 |
| Number of analog modules, max. | 64 |
| **Communication** | |
| Fieldbus | MECHATROLINK-III |
| Type of interface | Ethernet 100 MBit |
| Connector | 2 x RJ45 |


© by Yaskawa Europe GmbH, Philipp-Reis-Str. 6, 65795 Hattersheim, Germany
All data with reservation and subject to change.
Publish date: 12.04.2024

| | |
|---|---|
| Topology | Line |
| Electrically isolated | yes |
| Number of participants, max. | - |
| Node addresses | - |
| Transmission speed, min. | 100 Mbit/s |
| Transmission speed, max. | 100 Mbit/s |
| Address range inputs, max. | 492 Byte |
| Address range outputs, max. | 492 Byte |
| Number of TxPDOs, max. | - |
| Number of RxPDOs, max. | - |
| Supported profile | Standard I/O profiles |
| Supported transfer cycle | 125us, 250us, 500us, 750us, 1ms.... 8ms (every 500us) |
| Cyclic data size per node | 16byte (slave), 64byte (peripheral) |
| Max. Number of nodes | 9 (00h : for slave, 01h-08h for modules) |
| Supported communication method | Cyclic, Event driven, Message |
| Supported command "Cyclic" | NOP, ID_RD, CONFIG, ALM_RD, ALM_CLR, SYNC_SET, CONNECT, DISCONNECT, DATA_RWA, DATA_RWS |
| Supported command "Event driven" | NOP, ID_RD, CONNECT, DISCONNECT |
| Supported command "Message" | Memory read , Read max message size, Download request, Download data, Download complete |
| **Datasizes** | |
| Input bytes | 492 |
| Output bytes | 492 |
| Parameter bytes | - |
| Diagnostic bytes | - |
| **Housing** | |
| Material | PPE / PPE GF10 |
| Mounting | Profile rail 35 mm |
| **Mechanical data** | |
| Dimensions (WxHxD) | 48.5 mm x 109 mm x 76.5 mm |
| Net weight | 160 g |
| Weight including accessories | 160 g |
| Gross weight | 175 g |
| **Environmental conditions** | |
| Operating temperature | 0 °C to 60 °C |
| Storage temperature | -25 °C to 70 °C |
| **Certifications** | |
| UL certification | yes |
| KC certification | yes |
| UKCA certification | yes |
| ChinaRoHS certification | yes |


© by Yaskawa Europe GmbH, Philipp-Reis-Str. 6, 65795 Hattersheim, Germany
All data with reservation and subject to change.
Publish date: 12.04.2024