IOLBOX

AN IOLINK SLAVE DEVICE AND MODBUS RTU GATEWAY FOR MECHATRONIC GRIPPERS

A unique design for several products

IO-LINK INTERFACE

Using the IOLink technology the IOLINK master communicates with **IOLBOX** sharing both process data and parameters.

Process Data
- Actuator commands (opening, closing, braking, etc...)
- Force reference value (gripping force limitation)

Parameters
- Actuator status (fully opened, fully closed, object gripped, error, etc...)
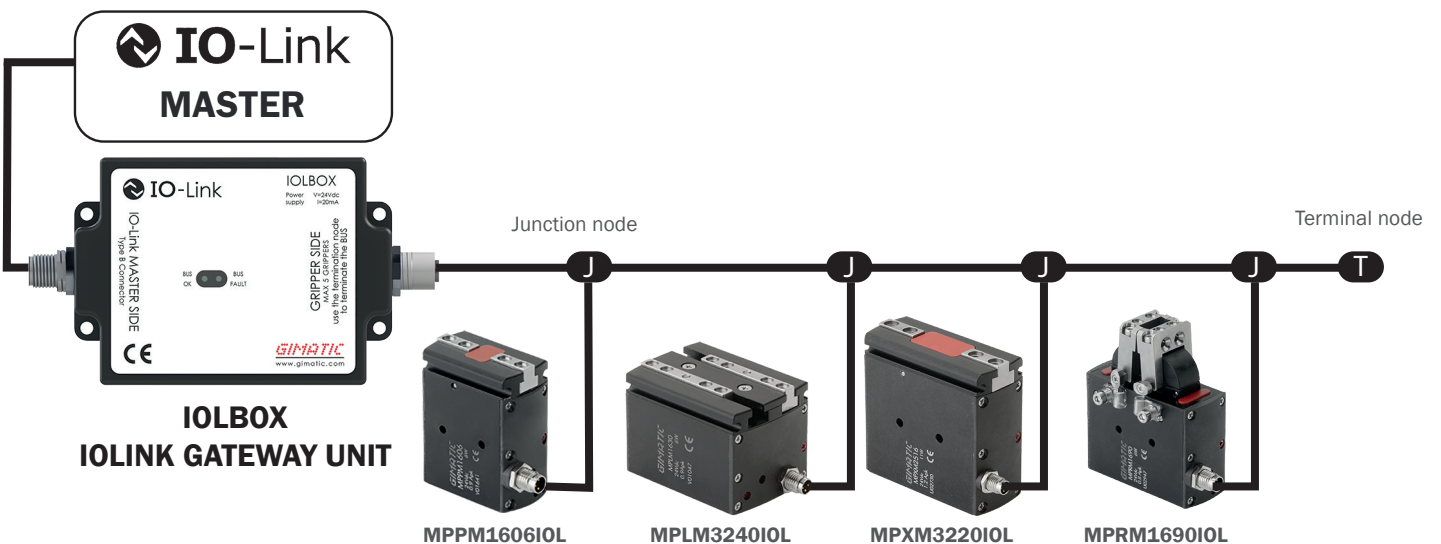- Position of the jaws

> Up to 5 grippers.

> Simple installation and configuration of the device.

> Monitoring of the status of the device.

> Advanced diagnosis functionalities.

> Easily replace a device with another of the same type.

> Suitable for all gripper sizes (16, 25, 32).

> No electricity consumption when engaged.

> 10 milion cycle maintenance-free.

> Position retention guaranteed in event of blackout.

> Modbus RTU over RS-485 gateway.

> Force and position controlled cyclically.

> Exchanged parameters with data and maintenance information.

> Slave ID settable to create the grippers network.

Plug & Play

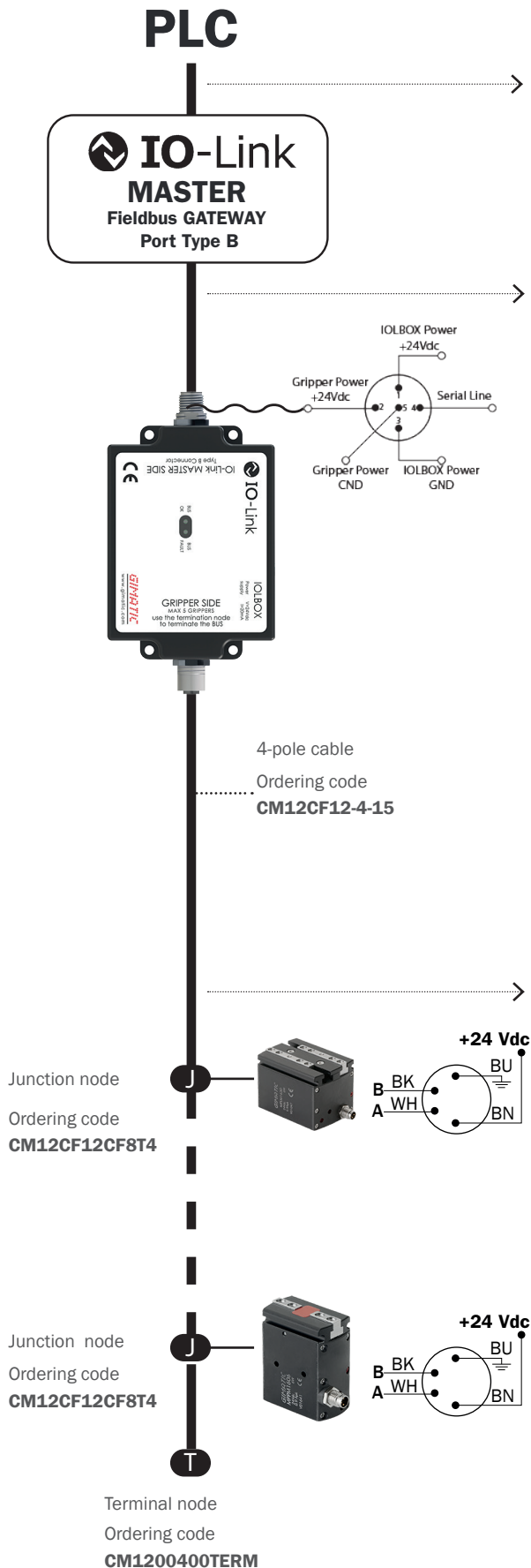## Network of grippers: several different Plug & Play grippers can be connected to the same IOLBOX

The user can create a network of grippers where the **IOLBOX** is the unique IOLink device that uses only one node of the external IOLink master.
The **IOLBOX** behaves as an IOLink gateway toward a special digital version of Gimatic's standard electric grippers.

IO-Link **MASTER**

IOLBOX
IOLINK GATEWAY UNIT

Junction node

Terminal node

| MPPM1606IOL | MPLM3240IOL | MPXM3220IOL | MPRM1690IOL |

All Gimatic grippers can be ordered in IO-LINK version by adding 'IOL' to the normal code.

PLC

Fieldbus: Ethernet, Profibus, Profinet, ecc...

IO-Link MASTER
Fieldbus GATEWAY
Port Type B

IO-Link Protocol

Data Exchanged (for each gripper)

Cyclic Data Input
- Open/ Close
- Force (%)

Cyclic Data Output
- Virtual Proximity Switch Position
- Jaws stroke (0.1mm resolution)

Acyclic Parameters
- Slave ID*
- Code
- Batch
- Serial Number
- Firmware Edition
- Max Force (N)
- Device Stroke (0.1mm resolution)
- Mass (g)
- Max Frequency (0.1 Hz)
- Number of Cycles Performed

* The slave ID is the identifier for each gripper. All the grippers receive the messanges from the IOLBOX but only the one with the same slave ID will responde/ execute the command. It must be set during istallation, but it can still be modified for any need.

IOLBOX Power +24Vdc

Gripper Power +24Vdc

Serial Line

Gripper Power CND

IOLBOX Power GND

IO-Link MASTER SIDE type B Connector

GRIPPER SIDE
MAX 5 GRIPPERS
use the termination node to terminate the BUS

4-pole cable
Ordering code
CM12CF12-4-15

RS-485 Modbus
- Baud Rate 9600.
- Differential A and B Channel.
- **IOLBOX** sends the cyclic data to each gripper cyclically, using the varius Slave ID according to the grippers connected.
- The time to handle five grippers is about 400ms.
- Acyclic Parameters were read at time of the gripper connection.

Junction node
Ordering code
CM12CF12CF8T4

+24 Vdc

B BK   BU

A WH   BN

Junction node
Ordering code
CM12CF12CF8T4

+24 Vdc

B BK   BU

A WH   BN

Terminal node
Ordering code
CM1200400TERM

Catalogue

GIMATIC™

A business of **BARNES**

Via Enzo Ferrari, 2/4
25030 Roncadelle (BS) ITALY

tel. +39 030 2584655
fax +39 030 2583886

info@gimatic.com
www.gimatic.com

Sales Network