MECHATRONICS

GIMATIC
A business of BARNES GROUP INC

IO-LINK INTERFACE

IO-Link

IOLBOX
A UNIQUE DESIGN FOR SEVERAL PRODUCTS

IOLBOX FEATURES
- Up to 5 grippers.
- Simplify installation and configuration of the device.
- Monitor the status of the device.
- Allow advanced diagnosis functionalities.
- Easily replace a device with another of the same type.
- Suitable for all 16 size grippers (25,32).

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.

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

IOLINK GATEWAY UNIT

Junction node

Terminal node

PLUG & PLAY
No programming required

SEVERAL DIFFERENT PLUG & PLAY GRIPPERS CAN BE CONNECTED TO THE SAME IOLBOX

NEW

IO-LINK INTERFACE
Communication Details

◉ **IO**-Link

PLC

→ **Fieldbus, Ethernet, Profibus, Profinet, ecc...**

◉ **IO**-Link
MASTER
Fieldbus GATEWAY
Port Type B

→ **IO-Link Protocol**

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

IOLBOX
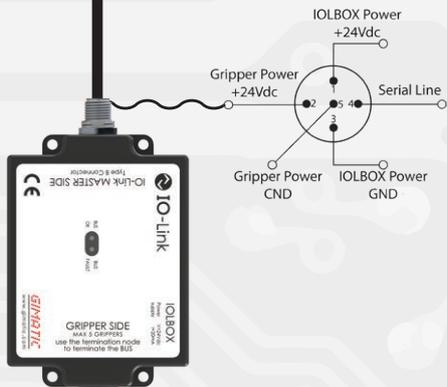
Data Exchanged (for each gripper)

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

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

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

**Ordering Code
CM12CF12-4-15**

✱The slave ID is the identifier for each gripper. All the grippers receive the messages 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.

→ **RS-485 Modbus**

Junction
node **J**

+24 Vdc

BU

B BK
A WH

BN

- 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.

**Ordering Code
CM12CF12CF8T4**

**Ordering Code
CM1200400TERM**

Terminal
node **T**

NEW