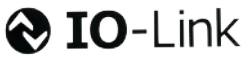# IO-Link Master DR-8-PNIO

Part Number: 99592-0

KEY FEATURES AND BENEFITS

- Eight port IO-Link Master to PROFINTE IO with additional digital inputs on every port allowing for a possible 10 DI ports with the two dedicated DI/DO ports
- PROFINET Certification
- Screw terminal connectors for IO-Link, Power, and Digital IO
- IP20 DIN rail mount enclosure
- Wide operating temperature (-40° to +70°C)
- LEDs for device, network, and port status
- Powerful web GUI for configuration and diagnostics, including: IO-Link device management using the IO-Link device manufacturers IODD file for easy device configuration, Automatic data storage (upload and download), Manual data storage (upload and download), Device validation, and Data validation.
- IO-Link V1.0 and V1.1 compatibility
- IO-Link COM1, COM2 and COM3 support (230K baud rate)
- Write-to-Tag/File, Read-from-Tag/File
- PLC access to IO-Link ISDU blocks without complex programming
- Quality of Services Agreement
- Accredited IO-Link Test Center

PRODUCT DESCRIPTION

Comtrol's IO-Link Master DR-8-PNIO combines the benefits of the IO-Link standard with the popular industrial PROFINET IO protocol by providing a gateway that's a streamlined bridge between the field level sensor network and the industrial PROFINET IO backbone, making retrofitting or expansion simple.

The IO-Link Master easily installs on a standard DIN rail and incorporates two Fast Ethernet ports, eight IO-Link ports, two DI/DO ports and two DI ports. This product is designed with industrial grade components and redundant power inputs to make it exceptionally reliable for critical applications. The IO-Link Master is easily integrated into a system network, and is compatible with existing and new industrial Ethernet environments.

IO-LINK MASTER SPECIFICATIONS

HARDWARE

Network Interfaces 10/100BASE-TX
Enclosure
  Polyamide, UL94V-0
Ingress Protection Rating IP20
Installation and Grounding Method DIN rail
Network Protocols PROFINET IO
Connectors
  DI/DO, Ethernet, IO-Link, Power
Channels
  IO-Link - 8
  Fixed Digital Input - 10
  Configurable Digital Input / Output - 2
LED Indicators
  Power, Module Status, Network Status, IO-Link, DI, DIO states, and
  Ethernet Port Status
Dimensions (L x W x H)
  3.9" x 4.5" x 1.8"
  100 x 115 x 45 mm
Product Weight
  10 oz
  285 g

IO-LINK INTERFACE SPECIFICATIONS

Connector Type
  Screw Terminal
Number of Ports 8
IO-Link Version Supports V1.0 and V1.1
Configurations per port
  IO-Link: = 1
  DI (SIO mode) = 1
  DO (SIO mode) = 1
  DI (dedicated) = 1
IO-Link Mode Transfer Rates
  4.8K (COM1)
  38.4K (COM2)
  230.4K (COM3)
Baud Rate Recognition Automatic
Output Current on IO-Link Connectors (Ports 1-8)
  C/Q on Pin 4   200mA (Maximum)
                   200mA (Maximum)
Cable Length (Max.) 20m

DIGITAL INPUTS C/Q (SIO Mode Using IO-Link Ports)

Sensor Current Load (Maxium) 200mA
Input Characteristics
  IEC 61131-2 Type 1 and Type 3 Compliant
Short-Circuit and Overload protection Yes
Short-Circuit proof Yes
Input Current Limitation Yes
C/Q Input Threshold
  Low: 8.0 - 11.5V
  High: 10.5 - 13.0V
Cable Length (Max.) 30m

DIGITAL OUTPUTS C/Q (SIO Mode Using IO-Link Ports)

Actuator Current Load (Maxium) 200mA
Input Characteristics
  IEC 61131-2 Type 1 and Type 3 Compliant
Short-Circuit and Overload protection Yes
Short-Circuit proof Yes
Input Current Limitations Yes
Output Function PNP/NPN
Cable Length (Max.) 30m

DIGITAL INPUTS C/Q (DI and DIO Pin)

Sensor Current Load (Maxium) 200mA
Input Characteristics
  IEC 61131-2 Type 1 and Type 3 Compliant
Short-Circuit and Overload protection Yes
Short-Circuit proof Yes
Input Current Limitation Yes
C/Q Input Threshold
  Low: 5.2 - 6.4V
  High: 6.8 - 8.0V
Cable Length (Max.) 30m

DIGITAL OUTPUTS DIO PIN

Actuator Current Load (Max.) 200mA
Short-Circuit and Overload protection Yes
Short-Circuit proof Yes
Input Current Limitation Yes
Output Function PNP, NPN
Cable Length (Max.) 30m

DEDICATED DIGITAL IO PORTS (Digital Input Mode)

Connector Type Screw Terminal
Number of Ports 2 (D1 & D3)
Cable Length (Max.) 30m

DIGITAL INPUTS/OUTPUTS

Connector Type Screw Terminal
Number of Ports 2 (D2 & D4)
Configurations per port
  DI/DO (configurable) = 1
  DI (dedicated) = 1
Cable Length (Max.) 30m

DIGITAL OUTPUTS

Actuator (Sensor) Current Load (Max.) 200mA
Lamp Load (Max.) 4W
Over Load and Short Circuit Protection Yes
Switching Output PNP, NPN

ETHERNET INTERFACE SPECIFICATIONS

Connector Type RJ45
Number of Ports 2
Ethernet Specification 10/100BASE-TX
Standards
  IEEE802.3: 10BASE-T
  IEEE 802.3u: 100BASE-TX
Auto-MD/MDI-X Yes
Auto-Negotiation Yes
Link Distance 100m
Cable Types
  Unshielded or Shielded twisted pair
IPv4 Addressing Yes

PROFINET IO

Web Page Configuration
  PROFINET IO Device Name
  IOL_CALL Function Block Timeout (1-20)
Diagnostics Yes
GSD Files Yes

DR-8-PNIO FEATURES

Data Storage
  Automatic or Manual - Upload and/or Download
Device Validation Yes
Data Validation Yes
Powerful Web Interface
  Provides the following capabilites:
    Firmware upgradable
    Password protected with Admin, Operator, and User accounts
    ISDU batch handling
    Load IODD files to configure the IO-Link device
    IODD Handler parses xml files making them readable and
    configurable
    Log files
Upgradable Firmware
  Yes (Web page or using PortVision DX)
Remote Parameterization Yes
Mobile App Support
  Simplify monitoring of control system Process and Service Data
  using simple standard clients available for free in Google Play and
  Apple App Store

ELECTRICAL SPECIFICATIONS

DC Input Voltage Range 18-30VDC
Current Consumption (Max.) 4.3A @ 24VDC
Current Consumption (w/out devices) 100mA
Current Consumption (with load) 4.04A
Power Consumption (w/out load) 2.4W
Power Connectors Screw terminal

ENVIRONMENTAL SPECIFICATIONS

Air Temperature
  System On   -40ºC to +70ºC
  System Off   -40ºC to +70ºC
Operating Humidity (non-condensing) 10% to 95%
Storage Humidity (non-condensing) 10% to 95%
Shock/Vibrations
  EN60068-2-6
  EN60068-2-27
Environmental / Mechanical Approvals
  IEC 61131-2
  IEC 60529

EXPORT INFORMATION

Package Weight
  1.1 lbs
  481.94 g
Package Dimensions
  9.2" x 7.25" x 2.5"
  233 x 184 x 64 mm
Country of Origin USA
ECCN 5A992
Schedule B Number 8517.62.0050

REGULATORY APPROVALS

Immunity
  European Standard 61000-6-2
  International Standard IEC 61000-6-2
  IEC 61131-2
  IEC 1000-4-2/EN 61000-4-2: Electrostatic Discharge (ESD)
  IEC 1000-4-3/EN 61000-4-3: Radiated, Radio-Frequency (RF)
  IEC 1000-4-4 /EN 61000-4-4: Fast Transient/Burst
  IEC 1000-4-5/EN 61000-4-5: Surge
  IEC 1000-4-6/EN 61000-4-6: Conducted disturbance
  IEC 1000-4-8/EN 61000-4-8: Magnetic Field
  IEC 1000-4-11/EN 61000-4-11: Dips and Voltage Variations
Emmisions
  European Standard EN 61000-6-4
  International Standard IEC 61000-6-4
  AS/NZS CISPR-11
  FCC Part15 Subpart B: Class A limit
  Canadian EMC requirements ICES-001
Safety
  CSA C22.2 No. 61010-1-12 / CSA C22.2 No. 61010-1-201
  UL 61010-1/UL 61010-1-201
Other
  Ingress Protection rating IP@) (IEC 60529)
  Environmental & Mechanical testing pre IEC/EN 61131-2
  European Standard: 2011/65/EU (RoHS2) Directive.
Regulatory Approval Symbols

CE FC cULus

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