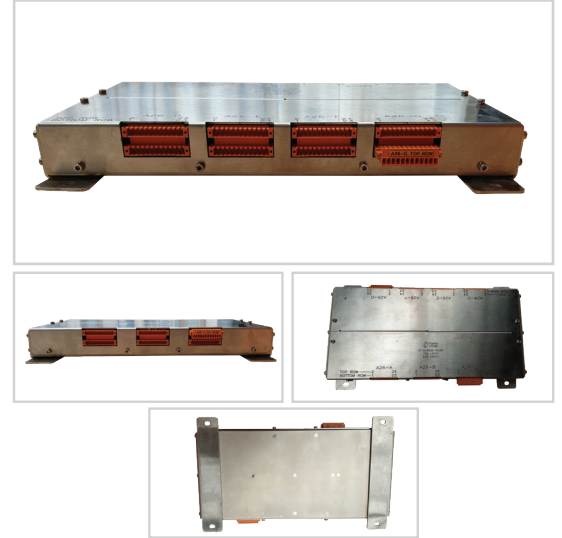


## LONT0401 Pempek OBP Proportional Solenoid I/O Module 24VDC Type D

The LONT Industrial Solenoid I/O Module range is designed to directly support 24VDC Solenoid applications together with a range of other I/Os. Additional analogue and digital input support make for a highly integrated I/O module.

- Embedded 24VDC Solenoid Outputs
  - 30 x Discreet Outputs with feedback output voltage monitoring.
  - 6 x Proportional Outputs with feedback current monitoring
  - Switched Coil Supply & Return
  - Multi-Stage Diagnostic Monitoring
  - Sequential Switching Redundancy
  - Microprocessor Controlled
- Embedded Proximity Inputs
  - 15 x 24VDC Proximity Inputs
  - Microprocessor Sampling
- Embedded Counters Inputs
  - 4 x Counter Inputs
  - 2 x Configurable Count Inputs
  - 20Hz to 6.5KHz
  - Quadrature Configurable.
- Embedded Analog Inputs
  - 12 x 4-20mA Inputs
  - Microprocessor Sampling
- Embedded Digital Inputs
  - 8 x 110VAC Digital Inputs
  - Microprocessor Sampling
- CAN Network
  - Opto-Coupler Isolation
  - CAN 2.0B Compatible
- Operates -10°C to +85°C
  - All industrial components
- Heavy Duty Enclosure
  - Electroless Nickel Plated
  - Rugged Construction



### Typical Applications

- Continuous Bolter/Miners
- Continuous Haulage
- Long Wall Shearers
- Mobile Bolters
- Mobile Roof Supports
- Remote Control Scoops
- Remote Control Loaders
- Any industrial switching application

### Interface Description

The Type LONT Solenoid Module utilizes industrial connectors that are unique when configured for use with the Pempek OBP Control System. 7x24(12 A-BOTTOM, 12 B-TOP) way connectors.

Each module in the series is allocated a unique connector prefix for schematic reference purposes. For example, LONT0101 is allocated prefixes A26-A, A26-B whilst LONT0201 has B26-A and B26-B etc.

Plugs are marked as X26A, .. X26G (where X is module type A, B, C, D, E, F, G, H)

## LONT0401 Pempek OBP Proportional Solenoid I/O Module 24VDC Type D

### LONT Solenoid Module Connector A26D (Bottom) – Klippon 12 Pin Female

| Pin | Description            | Signal            |
|-----|------------------------|-------------------|
| 1   | Counter Supply (1 & 2) | 24VDC Supply      |
| 3   | Counter 1              | 0Hz - 5KHz Pulses |
| 5   | Counter 2              | 0Hz - 5KHz Pulses |
| 7   | Counter Supply (3 & 4) | 24VDC Supply      |
| 9   | Counter 3              | 0Hz - 5KHz Pulses |
| 11  | Counter 4              | 0Hz - 5KHz Pulses |
| 13  | CAN Low                | Communications    |
| 15  | CAN Low                | Communications    |
| 17  | CAN High               | Communications    |
| 19  | CAN High               | Communications    |
| 21  | Termination Link       | Communications    |
| 23  | Termination Link       | Communications    |

### LONT Solenoid Module Connector A26D (Top) – Klippon 12 Pin Female

| Pin | Connector A26B (Top) – Klippon | Signal       |
|-----|--------------------------------|--------------|
| 2   | Analog Input 1                 | 4-20mA Input |
| 4   | Analog Input 2                 | 4-20mA Input |
| 6   | Analog Input 3                 | 4-20mA Input |
| 8   | Analog Input 4                 | 4-20mA Input |
| 10  | Analog Input 5                 | 4-20mA Input |
| 12  | Analog Input 6                 | 4-20mA Input |
| 14  | Analog Input 7                 | 4-20mA Input |
| 16  | Analog Input 8                 | 4-20mA Input |
| 18  | Analog Input 9                 | 4-20mA Input |
| 20  | Analog Input 10                | 4-20mA Input |
| 22  | Analog Input 11                | 4-20mA Input |
| 24  | Analog Input 12                | 4-20mA Input |

<sup>2</sup> Solenoids Designated xA / xB can only be operated exclusively. For example, outputs 9A or 9B can be energised independently but not simultaneously.

## LONT0401 Pempek OBP Proportional Solenoid I/O Module 24VDC Type D

### Electrical Characteristics

#### Supply

|                              |                          |
|------------------------------|--------------------------|
| Voltage <sup>Module</sup>    | 24VDC <sup>Nominal</sup> |
| Wattage <sup>MIN</sup>       | 5W                       |
| Wattage <sup>MAX</sup>       | 12W                      |
| Voltage <sup>Solenoids</sup> | 24VDC <sup>Nominal</sup> |
| Wattage <sup>MIN</sup>       | 0W                       |
| Wattage <sup>MAX</sup>       | 240W                     |

#### Solenoid Outputs

|                 |                          |
|-----------------|--------------------------|
| Installed       | 30 Redundant Discreet    |
| Voltage         | 24VDC                    |
| Minimum Voltage | 24VDC                    |
| Maximum Voltage | 24 <sup>VDC</sup>        |
| Installed       | 6 Redundant Proportional |
| Voltage         | 24VDC                    |
| Minimum Voltage | 24VDC                    |
| Maximum Voltage | 24VDC                    |

#### Proximity Inputs

|                 |       |
|-----------------|-------|
| Installed       | 15    |
| Voltage         | 24VDC |
| Minimum Voltage | 24VDC |
| Maximum Voltage | 24VDC |

#### Digital Inputs

|                 |        |
|-----------------|--------|
| Installed       | 8      |
| Voltage         | 110VAC |
| Minimum Voltage | 75VAC  |
| Maximum Voltage | 130VAC |

#### Analog Inputs

|                 |        |
|-----------------|--------|
| Installed       | 12     |
| Type            | 4-20mA |
| Scale           | 10-Bit |
| Maximum Voltage | 5VDC   |

#### Communications

|             |                            |
|-------------|----------------------------|
| Interface   | CAN 2.0B                   |
| Throughput  | 500kbs (Supports Autobaud) |
| Protocol(s) | Message Oriented           |
| Medium      | Copper                     |

## Electrical Characteristics

|                       |                     |
|-----------------------|---------------------|
| Operating Temperature | Minus 20°C to +85°C |
| Humidity              | T.B.A.              |
| MTBF                  | 12,000 hours        |

Isometric view of the 10-Port Gigabit Ethernet Switch. Dimensions are indicated in millimeters:

- Overall length: 380 (374)
- Overall width: 222
- Overall height: 56
- Mounting bracket width: 181

The switch features 10 RJ45 ports (5 on each side) and a power jack. A label on the front panel reads: "10-Port Gigabit Ethernet Switch".

| Dimension | Measurement | Description           |
|-----------|-------------|-----------------------|
| A         | 222         | Mounting Flange Width |
| B         | 390         | Length                |
| C         | 181         | Width                 |
| D         | 60          | Height                |

- All dimensions are in millimetres.

- Enclosure is Electroless nickel plated mild steel.
- Facia is stainless steel.
- Mounting brackets are stainless steel.

- M5 x 10mm x 4
- M4 x 10mm x 24

- 3.5kg (7.7lb)