

## L0NT0301 Obelix Proportional Solenoid I/O Module 24VDC Type C

The L0NT 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 L0NT Solenoid Module utilizes industrial connectors that are unique when configured for use with the Obelix 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, L0NT0101 is allocated prefixes A26-A, A26-B whilst L0NT0201 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)

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**LONT Solenoid Module  
Connector A26C (Bottom) – Klippon  
12 Pin Female**

Pin	Description	Signal
1	Solenoid #17A Supply	24VDC Output
3	Solenoid #17A Return	24VDC Return
5	Solenoid #18A Supply	24VDC Output
7	Solenoid #18A Return	24VDC Return
9	Solenoid #19A Supply	24VDC Output
11	Solenoid #19A Return	24VDC Return
13	Solenoid #1A Proportional Supply	24VDC PWM Output
15	Solenoid #1A Proportional Return	24VDC PWM Return
17	Solenoid #2A Proportional Supply	24VDC PWM Output
19	Solenoid #2A Proportional Return	24VDC PWM Return
21	Solenoid #3A Proportional Supply	24VDC PWM Output
23	Solenoid #3A Proportional Return	24VDC PWM Return

**LONT Solenoid Module  
Connector A26C (Top) – Klippon  
12 Pin Female**

Pin	Connector A26B (Top) – Klippon	Signal
2	Solenoid #17B Supply	24VDC Output
4	Solenoid #17B Return	24VDC Return
6	Solenoid #18B Supply	24VDC Output
8	Solenoid #18B Return	24VDC Return
10	Solenoid #19B Supply	24VDC Output
12	Solenoid #19B Return	24VDC Return
14	Solenoid #1B Proportional Supply	24VDC PWM Output
16	Solenoid #1B Proportional Return	24VDC PWM Return
18	Solenoid #2B Proportional Supply	24VDC PWM Output
20	Solenoid #2B Proportional Return	24VDC PWM Return
22	Solenoid #3B Proportional Supply	24VDC PWM Output
24	Solenoid #3B Proportional Return	24VDC PWM Return

<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.

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### 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

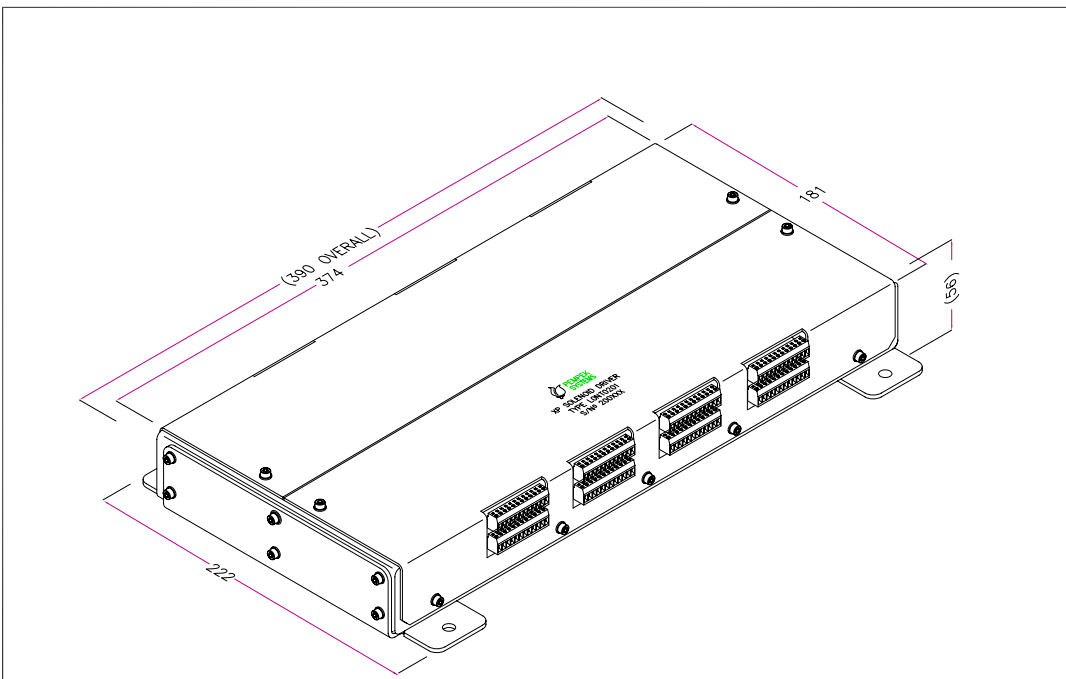
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### Electrical Characteristics

#### Environmental

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

### Mechanical Characteristics



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

#### Notes

- All dimensions are in millimetres.

#### Material

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

#### Fasteners

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

#### Mass

- 3.5kg (7.7lb)