The Obelix Mining PLC I.S. I/O Module provides intrinsically safe (Group I Ex ib) input and output resources in a single, compact unit.

A unique fiber-optic communications interface means that the module and dedicated I.S power supply can be conveniently segregated into its isolated zone.

The fibre-optic link between the module and an Obelix processor module provides real-time control and monitoring of all I/O points.

This solution is ideal for mobile mining equipment where limited installation space must be managed.

Uniquely Keyed Type Connectors to prevent incorrect machine installation.

The module is Dual Obelix Type which complies with AS/NZS 4240 standard.

As per standard every output includes two switches A&B in series with monitoring feedbacks from both.

Extra safety is achieved by using two potted boards where each includes main and watchdog processors monitoring correctness of executed main software code.

Module Primary board - D25\_B0MQP Module Secondary board – D19\_D20\_B0L3J

# **Specifications**

- Module Type: Intrinsically Safe Input / Output with Display
- Supply: 12VDC (+/- 10%) / 20 Watts (Max) from Approved I.S. Power Supply
- Data Communications: CAN interface over Obelix Fibre
- **Operating Temperature:** -20°<sup>c</sup> to +85°<sup>c</sup> all industrial components
- Inputs 1: 24 x I.S. Digital Inputs (12VDC)
- Inputs 2: 16 x I.S. Analog Inputs (4-20 mA)
- Inputs 3: 16 x I.S. Namur Inputs
- **Outputs:** 4 x Danfoss Proportional Solenoid Outputs (Supply 12VIS/650mA, Control 3-9V)
- Connector 1: Obelix Fibre
- Connector 2: Obelix D25 (12VDC I.S. Supply and Danfoss Proportional Solenoid Outputs)
- Connector 3: Obelix D19 (12VDC I.S. Supply and Namur Inputs)
- **Connector 4:** Obelix D20 (Digital Inputs and Analog Inputs)

### Heavy Duty Enclosure

- Electroless Nickel Plated
- Rugged Construction

# Mass

• 6.5kg (14.3lb)

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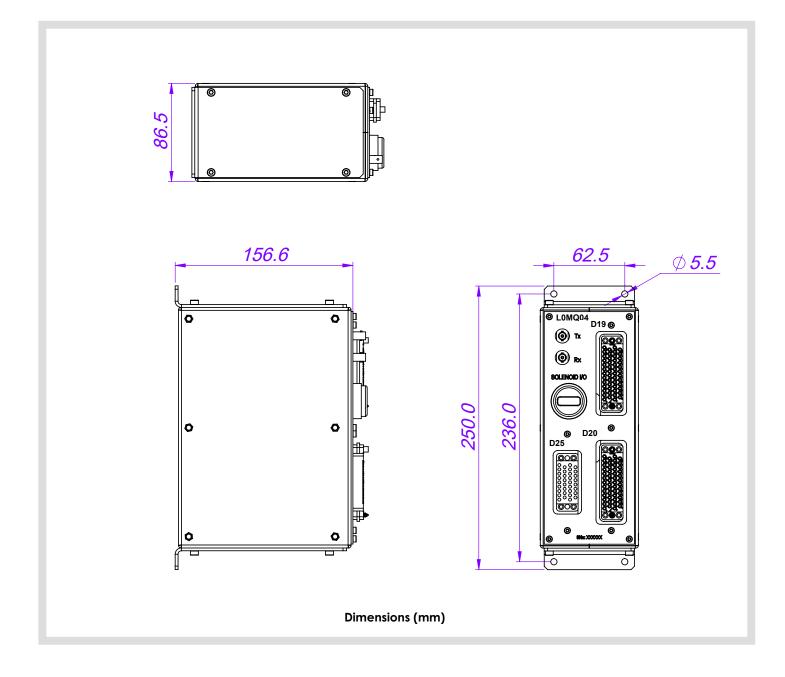
Mounting options can vary depending on customer requirements.



nade for mining

Datasheet-LOMQ0401





Datasheet-L0MQ0401

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# **Display Diagnostics**

The integral 4 characters LED Matrix display provides the end-user with some basic diagnostics as to the operation of the module. These messages are as follows:

# **Message Explanation Result**

### ON

Omni Flashing Indicates nominal operation and signifies that CAN communications have been established with a host. Normal Operation Permitted

### CAN

This indicates CAN Communication has not been established or has been lost. Outputs Disabled

### FEBK

This indicates that internal is NOT congruent with requested outputs. This typically occurs when output has been requested but has failed to operate indicating a supply failure or wiring error. Outputs Disabled

### SHRT

This indicates that a short-circuit condition has been detected as a requested output. This short-circuit could be external (most probable) or internal Outputs Disabled

### OPEN

This indicates that the requested output is not drawing sufficient current to operate as expected indicating that the solenoid coil is an open circuit. Outputs Disabled



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# **CONNECTOR D19**

| Number     Unit / PCB<br>Boord Mount<br>PIN     L0MQ0401       0     A     SUPPLY-PROX-SW-1       2     B     ANALOG-1       3     C     SUPPLY-PROX-SW-2       4     D     ANALOG-2       5     E     SUPPLY-PROX-SW-3       6     F     ANALOG-3       7     H   |        |                               |                  |
|--|--------|-------------------------------|------------------|
| Image: Non-Supply-PROX-SW-1       2     B     ANALOG-1       3     C     SUPPLY-PROX-SW-2       4     D     ANALOG-2       5     E     SUPPLY-PROX-SW-3       6     F     ANALOG-3       7     H   | Number | GMCT50F Female<br>Board Mount | LOMQ0401         |
| 2     B     ANALOG-1       3     C     SUPPLY-ROX-SW-2       4     D     ANALOG-2       5     E     SUPPLY-PROX-SW-3       6     F     ANALOG-3       7     H  |        |                               |                  |
| 3     C     SUPPLY-PROX-SW-2       4     D     ANALOG-2       5     E     SUPPLY-PROX-SW-3       6     F     ANALOG-3       7     H  |        |                               | SUPPLY-PROX-SW-1 |
| 4     D     ANALOG-2       5     E     SUPPLY-PROX-SW-3       6     F     ANALOG-3       7     H   | 2      | В                             | ANALOG-1         |
| 5     E     SUPPLY-PROX-SW-3       6     F     ANALOG-3       7     H       8     J       9     K     SUPPLY-PROX-SW-4       10     L     ANALOG-4       11     M     Image: Supply-Prox-SW-5       12     N     Image: Supply-Prox-SW-5       14     R     ANALOG-5       15     S     Image: Supply-Prox-SW-6       14     R     ANALOG-5       15     S     Image: Supply-Prox-SW-6       16     T     Image: Supply-Prox-SW-6       17     U     SUPPLY-PROX-SW-7       18     V     ANALOG-6       19     W     SUPPLY-PROX-SW-7       20     X     ANALOG-7       21     Y     SUPPLY-PROX-SW-8       22     Z     ANALOG-8       23     G     Image: Supply-Prox-SW-9       24     b     Image: Supply-Prox-SW-10       30     j     ANALOG-10       31     k     Image: Supply-Prox-SW-11 <t< td=""><td>3</td><td>С</td><td>SUPPLY-PROX-SW-2</td></t<>   | 3      | С                             | SUPPLY-PROX-SW-2 |
| 6     F     ANALOG-3       7     H       8     J       9     K     SUPPLY-PROX-SW-4       10     L     ANALOG-4       11     M     Image: Mark Stresson Stresso  | 4      | D                             | ANALOG-2         |
| 7   H     8   J     9   K   SUPPLY-PROX-SW-4     10   L   ANALOG-4     11   M   Image: State | 5      | E                             | SUPPLY-PROX-SW-3 |
| 8     J       9     K     SUPPLY-PROX-SW-4       10     L     ANALOG-4       11     M       12     N       13     P     SUPPLY-PROX-SW-5       14     R     ANALOG-5       15     S       16     T       17     U     SUPPLY-PROX-SW-6       18     V     ANALOG-6       19     W     SUPPLY-PROX-SW-7       20     X     ANALOG-6       19     W     SUPPLY-PROX-SW-7       20     X     ANALOG-7       21     Y     SUPPLY-PROX-SW-8       22     Z     ANALOG-7       21     Y     SUPPLY-PROX-SW-8       22     Z     ANALOG-7       24     b  | 6      | F                             | ANALOG-3         |
| 9     K     SUPPLY-PROX-SW-4       10     L     ANALOG-4       11     M  | 7      | Н                             |                  |
| 9     K     SUPPLY-PROX-SW-4       10     L     ANALOG-4       11     M  | 8      | J                             |                  |
| 11   M     12   N     13   P   SUPPLY-PROX-SW-5     14   R   ANALOG-5     15   S     16   T     17   U   SUPPLY-PROX-SW-6     18   V   ANALOG-6     19   W   SUPPLY-PROX-SW-7     20   X   ANALOG-7     21   Y   SUPPLY-PROX-SW-8     22   Z   ANALOG-8     23   a   |        | K                             | SUPPLY-PROX-SW-4 |
| 11   M     12   N     13   P   SUPPLY-PROX-SW-5     14   R   ANALOG-5     15   S     16   T     17   U   SUPPLY-PROX-SW-6     18   V   ANALOG-6     19   W   SUPPLY-PROX-SW-7     20   X   ANALOG-7     21   Y   SUPPLY-PROX-SW-8     22   Z   ANALOG-8     23   a   | 10     |                               |                  |
| 12   N     13   P   SUPPLY-PROX-SW-5     14   R   ANALOG-5     15   S     16   T     17   U   SUPPLY-PROX-SW-6     18   V   ANALOG-6     19   W   SUPPLY-PROX-SW-7     20   X   ANALOG-7     21   Y   SUPPLY-PROX-SW-8     22   Z   ANALOG-8     23   a  |        |                               |                  |
| 13   P   SUPPLY-PROX-SW-5     14   R   ANALOG-5     15   S     16   T     17   U   SUPPLY-PROX-SW-6     18   V   ANALOG-6     19   W   SUPPLY-PROX-SW-7     20   X   ANALOG-7     21   Y   SUPPLY-PROX-SW-8     22   Z   ANALOG-8     23   a   -     24   b   -     25   C   SUPPLY-PROX-SW-9     26   d   ANALOG-9     27   e   -     28   f   -     29   h   SUPPLY-PROX-SW-10     30   j   ANALOG-10     31   k   -     32   m   -     33   n   SUPPLY-PROX-SW-11     34   p   ANALOG-11     35   r   SUPPLY-PROX-SW-12     36   s   ANALOG-13     39   v   -     40   w   -     41   x </td <td></td> <td></td> <td></td>  |        |                               |                  |
| IA     R     ANALOG-5       15     S       16     T       17     U     SUPPLY-PROX-SW-6       18     V     ANALOG-6       19     W     SUPPLY-PROX-SW-7       20     X     ANALOG-7       21     Y     SUPPLY-PROX-SW-8       22     Z     ANALOG-7       24     D   |        |                               |                  |
| 15   S     16   T     17   U   SUPPLY-PROX-SW-6     18   V   ANALOG-6     19   W   SUPPLY-PROX-SW-7     20   X   ANALOG-7     21   Y   SUPPLY-PROX-SW-8     22   Z   ANALOG-8     23   a   |        | •                             |                  |
| 16   T     17   U   SUPPLY-PROX-SW-6     18   V   ANALOG-6     19   W   SUPPLY-PROX-SW-7     20   X   ANALOG-7     21   Y   SUPPLY-PROX-SW-8     22   Z   ANALOG-8     23   a  |        |                               | / (() (200 0     |
| 17   U   SUPPLY-PROX-SW-6     18   V   ANALOG-6     19   W   SUPPLY-PROX-SW-7     20   X   ANALOG-7     21   Y   SUPPLY-PROX-SW-8     22   Z   ANALOG-8     23   a   |        |                               |                  |
| 18   V   ANALOG-6     19   W   SUPPLY-PROX-SW-7     20   X   ANALOG-7     21   Y   SUPPLY-PROX-SW-8     22   Z   ANALOG-8     23   a     24   b     25   C   SUPPLY-PROX-SW-9     26   d   ANALOG-9     27   e     28   f     29   h   SUPPLY-PROX-SW-10     30   j   ANALOG-10     31   k   |        |                               |                  |
| IP     W     SUPPLY-PROX-SW-7       20     X     ANALOG-7       21     Y     SUPPLY-PROX-SW-8       22     Z     ANALOG-8       23     a   |        |                               |                  |
| 20     X     ANALOG-7       21     Y     SUPPLY-PROX-SW-8       22     Z     ANALOG-8       23     a   |        |                               |                  |
| 21   Y   SUPPLY-PROX-SW-8     22   Z   ANALOG-8     23   a     24   b     25   c   SUPPLY-PROX-SW-9     26   d   ANALOG-9     27   e     28   f     29   h   SUPPLY-PROX-SW-10     30   j   ANALOG-10     31   k     32   m     33   n   SUPPLY-PROX-SW-11     34   p   ANALOG-10     31   k   SUPPLY-PROX-SW-11     34   p   ANALOG-11     35   r   SUPPLY-PROX-SW-12     36   s   ANALOG-12     37   t   SUPPLY-PROX-SW-13     38   u   ANALOG-13     39   v   40     41   x   SUPPLY-PROX-SW-14     42   y   ANALOG-14     43   z   40     44   AA   41     45   B8   SUPPLY-PROX-SW-15     46   CC   ANALOG-15   |        |                               |                  |
| 22   Z   ANALOG-8     23   a     24   b     25   c   SUPPLY-PROX-SW-9     26   d   ANALOG-9     27   e     28   f     29   h   SUPPLY-PROX-SW-10     30   j   ANALOG-10     31   k     32   m     33   n   SUPPLY-PROX-SW-11     34   p   ANALOG-11     35   r   SUPPLY-PROX-SW-12     36   s   ANALOG-13     37   t   SUPPLY-PROX-SW-12     38   u   ANALOG-13     39   v   V     40   w   V     41   x   SUPPLY-PROX-SW-14     42   y   ANALOG-14     43   z   V     44   AA   V     45   BB   SUPPLY-PROX-SW-15     46   CC   ANALOG-15     47   DD   SUPPLY-PROX-SW-16     48   EE   ANALOG-16 <t< td=""><td></td><td></td><td></td></t<>  |        |                               |                  |
| 23   a     24   b     25   c   SUPPLY-PROX-SW-9     26   d   ANALOG-9     27   e   |        |                               |                  |
| 24     b       25     c     SUPPLY-PROX-SW-9       26     d     ANALOG-9       27     e  |        |                               | ANALUG-8         |
| 25     c     SUPPLY-PROX-SW-9       26     d     ANALOG-9       27     e   |        |                               |                  |
| 26     d     ANALOG-9       27     e       28     f       29     h     SUPPLY-PROX-SW-10       30     j     ANALOG-10       31     k   |        |                               |                  |
| 27   e     28   f     29   h   SUPPLY-PROX-SW-10     30   j   ANALOG-10     31   k     32   m     33   n   SUPPLY-PROX-SW-11     34   p   ANALOG-11     35   r   SUPPLY-PROX-SW-12     36   s   ANALOG-11     35   r   SUPPLY-PROX-SW-12     36   s   ANALOG-12     37   t   SUPPLY-PROX-SW-13     38   u   ANALOG-13     39   v   40     41   x   SUPPLY-PROX-SW-14     42   y   ANALOG-14     43   z   44     44   AA     45   BB   SUPPLY-PROX-SW-15     46   CC   ANALOG-15     47   DD   SUPPLY-PROX-SW-16     48   EE   ANALOG-16     49   FF   OVIS   |        |                               |                  |
| 28   f     29   h   SUPPLY-PROX-SW-10     30   j   ANALOG-10     31   k     32   m     33   n   SUPPLY-PROX-SW-11     34   p   ANALOG-11     35   r   SUPPLY-PROX-SW-12     36   s   ANALOG-12     37   f   SUPPLY-PROX-SW-13     38   u   ANALOG-13     39   v   V     41   x   SUPPLY-PROX-SW-14     42   y   ANALOG-14     43   z   V     44   AA   V     45   BB   SUPPLY-PROX-SW-15     46   CC   ANALOG-15     47   DD   SUPPLY-PROX-SW-16     48   EE   ANALOG-16     49   FF   OVIS  |        |                               | ANALOG-9         |
| P     h     SUPPLY-PROX-SW-10       30     j     ANALOG-10       31     k       32     m       33     n     SUPPLY-PROX-SW-11       34     p     ANALOG-11       35     r     SUPPLY-PROX-SW-12       36     s     ANALOG-11       35     r     SUPPLY-PROX-SW-12       36     s     ANALOG-13       38     u     ANALOG-13       39     v     40       41     x     SUPPLY-PROX-SW-14       42     y     ANALOG-14       43     z     44       44     AA       45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS   |        |                               |                  |
| 30     j     ANALOG-10       31     k       32     m       33     n     SUPPLY-PROX-SW-11       34     p     ANALOG-11       35     r     SUPPLY-PROX-SW-12       36     s     ANALOG-11       35     r     SUPPLY-PROX-SW-12       36     s     ANALOG-12       37     t     SUPPLY-PROX-SW-13       38     u     ANALOG-13       39     v        40     w        41     x     SUPPLY-PROX-SW-14       42     y     ANALOG-14       43     z        44     AA        45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS   |        |                               |                  |
| 31   k     32   m     33   n   SUPPLY-PROX-SW-11     34   p   ANALOG-11     35   r   SUPPLY-PROX-SW-12     36   s   ANALOG-12     37   f   SUPPLY-PROX-SW-13     38   u   ANALOG-13     39   v   V     40   w     41   x   SUPPLY-PROX-SW-14     42   y   ANALOG-14     43   z     44   AA     45   BB   SUPPLY-PROX-SW-15     46   CC   ANALOG-15     47   DD   SUPPLY-PROX-SW-16     48   EE   ANALOG-16     49   FF   OVIS  |        |                               |                  |
| 32   m     33   n   SUPPLY-PROX-SW-11     34   p   ANALOG-11     35   r   SUPPLY-PROX-SW-12     36   s   ANALOG-12     37   f   SUPPLY-PROX-SW-13     38   u   ANALOG-13     39   v   V     40   w   V     41   x   SUPPLY-PROX-SW-14     42   y   ANALOG-14     43   z   V     44   AA   V     45   BB   SUPPLY-PROX-SW-15     46   CC   ANALOG-15     47   DD   SUPPLY-PROX-SW-16     48   EE   ANALOG-16     49   FF   OVIS   |        | •                             | ANALOG-10        |
| 33     n     SUPPLY-PROX-SW-11       34     p     ANALOG-11       35     r     SUPPLY-PROX-SW-12       36     s     ANALOG-12       37     f     SUPPLY-PROX-SW-13       38     u     ANALOG-13       39     v     -       40     w     -       41     x     SUPPLY-PROX-SW-14       42     y     ANALOG-14       43     z     -       44     AA     -       45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS  |        |                               |                  |
| 34     p     ANALOG-11       35     r     SUPPLY-PROX-SW-12       36     s     ANALOG-12       37     f     SUPPLY-PROX-SW-13       38     U     ANALOG-13       39     v        40     w        41     x     SUPPLY-PROX-SW-14       42     y     ANALOG-14       43     z        44     AA        45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS   |        |                               |                  |
| 35     r     SUPPLY-PROX-SW-12       36     s     ANALOG-12       37     f     SUPPLY-PROX-SW-13       38     U     ANALOG-13       39     v        40     w        41     x     SUPPLY-PROX-SW-14       42     y     ANALOG-14       43     z        44     AA        45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS  |        |                               |                  |
| 36     s     ANALOG-12       37     †     SUPPLY-PROX-SW-13       38     U     ANALOG-13       39     v        40     w        41     x     SUPPLY-PROX-SW-14       42     y     ANALOG-14       43     z        44     AA        45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS   |        |                               |                  |
| 37     f     SUPPLY-PROX-SW-13       38     U     ANALOG-13       39     v       40     w       41     X     SUPPLY-PROX-SW-14       42     y     ANALOG-14       43     z       44     AA       45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS  |        |                               |                  |
| 38     U     ANALOG-13       39     v       40     w       41     x     SUPPLY-PROX-SW-14       42     y     ANALOG-14       43     z       44     AA       45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS   |        |                               |                  |
| 39     v       40     w       41     x     SUPPLY-PROX-SW-14       42     y     ANALOG-14       43     z       44     AA       45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS  |        |                               |                  |
| 40     w       41     x     SUPPLY-PROX-SW-14       42     y     ANALOG-14       43     z       44     AA       45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS   |        |                               | ANALOG-13        |
| 41     x     SUPPLY-PROX-SW-14       42     y     ANALOG-14       43     z       44     AA       45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS  |        |                               |                  |
| 42     y     ANALOG-14       43     z       44     AA       45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS   |        |                               |                  |
| 43 z   44 AA   45 BB SUPPLY-PROX-SW-15   46 CC ANALOG-15   47 DD SUPPLY-PROX-SW-16   48 EE ANALOG-16   49 FF OVIS  |        |                               |                  |
| 44     AA       45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS   |        |                               | ANALOG-14        |
| 45     BB     SUPPLY-PROX-SW-15       46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS   |        |                               |                  |
| 46     CC     ANALOG-15       47     DD     SUPPLY-PROX-SW-16       48     EE     ANALOG-16       49     FF     OVIS   |        |                               |                  |
| 47DDSUPPLY-PROX-SW-1648EEANALOG-1649FFOVIS   |        |                               |                  |
| 48     EE     ANALOG-16       49     FF     OVIS   |        |                               |                  |
| 49 FF 0VIS   |        |                               |                  |
|  |        |                               |                  |
| 50 HH 12VIS  |        |                               |                  |
|  | 50     | HH                            | I 2VIS           |





Image depict coding pins required

Datasheet-LOMQ0401

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### **CONNECTOR D20**

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| CONNECTOR D20 |  |                  |  |  |
|---------------|--|------------------|--|--|
| Number        | Unit / PCB<br>GMST50F Female<br>Board Mount<br>PIN | L0MQ0401<br>Name |  |  |
|               |  |                  |  |  |
| 1             | A  | INP1             |  |  |
| 2             | В  | INP2             |  |  |
| 3             | С  | INP3             |  |  |
| 4             | D  | INP4             |  |  |
| 5             | E  | INP5             |  |  |
| 6             | F  | INP6             |  |  |
| 7             | Н  | INP7             |  |  |
| 8             | J  | INP8             |  |  |
| 9             | K  | INP9             |  |  |
| 10            | L  | INP10            |  |  |
| 11            | Μ  | INP11            |  |  |
| 12            | Ν  | INP12            |  |  |
| 13            | Р  | INP13            |  |  |
| 14            | R  | INP14            |  |  |
| 15            | S  | INP15            |  |  |
| 16            | T  | INP16            |  |  |
| 17            | U  | INP17            |  |  |
| 18            | V  | INP18            |  |  |
| 19            | W  | INP19            |  |  |
| 20            | Х  | INP20            |  |  |
| 21            | Y  | INP21            |  |  |
| 22            | Z  | INP22            |  |  |
| 23            | a  | INP23            |  |  |
| 24            | b  | INP24            |  |  |
| 25            | C  |                  |  |  |
| 26            | d  | MODULE SELECT-4  |  |  |
| 27            | e  |                  |  |  |
| 28            | f  | MODULE SELECT-3  |  |  |
| 29            | h  |                  |  |  |
| 30            | i  | MODULE SELECT-2  |  |  |
| 31            | ,<br>k   |                  |  |  |
| 32            | m  | MODULE SELECT-1  |  |  |
| 33            | n  | AN17             |  |  |
| 34            |  | AN18             |  |  |
| 35            | p  | AN19             |  |  |
| 36            | r<br>s   | AN17<br>AN20     |  |  |
|               |  |                  |  |  |
| 37            | t  | AN21<br>AN22     |  |  |
| 38<br>39      | U  | AN22<br>AN23     |  |  |
|               | V  | AN25<br>AN24     |  |  |
| 40            | W  |                  |  |  |
| 41            | X  | AN25             |  |  |
| 42            | У  | AN26             |  |  |
| 43            | Z  | AN27             |  |  |
| 44            | AA   | AN28             |  |  |
| 45            | BB   | AN29             |  |  |
| 46            | CC   | AN30             |  |  |
| 47            | DD   | AN31             |  |  |
| 48            | EE   | AN32             |  |  |
| 49            | FF   |                  |  |  |
| 50            | HH   | OVIS             |  |  |
|               |  |                  |  |  |





Image depict coding pins required

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CONNECTOR D25 - 4 x Danfoss Proportional Solenoid Outputs (Supply 12VIS/650mA , Control 3-9V)

| CONNECTOR | D25 - 4 x Danfoss             | Proportional Solenoid Outputs (Supply |
|-----------|-------------------------------|---------------------------------------|
| Number    | Unit / PCB<br>VMCT-34F Female | L0MQ0401                              |
|           | Board Mount<br>PIN            | Name                                  |
| 1         | А                             |                                       |
| 2         | В                             | 12VIS Supply Solenoid 1               |
| 3         | С                             |                                       |
| 4         | D                             | OVIS                                  |
| 5         | E                             |                                       |
| 6         | F                             | Control Solenoid 1_3V-9V              |
| 7         | Н                             |                                       |
| 8         | J                             | OVIS                                  |
| 9         | К                             |                                       |
| 10        | L                             | 12VIS Supply Solenoid 2               |
| 11        | М                             | MODULE SELECT-1                       |
| 12        | Ν                             | OVIS                                  |
| 13        | Р                             |                                       |
| 14        | R                             | Control Solenoid 2_3V-9V              |
| 15        | S                             | MODULE SELECT-2                       |
| 16        | T                             | OVIS                                  |
| 17        | U                             |                                       |
| 18        | V                             | 12VIS Supply Solenoid 3               |
| 19        | W                             | MODULE SELECT-3                       |
| 20        | Х                             | OVIS                                  |
| 21        | Υ                             |                                       |
| 22        | Z                             | Control Solenoid 3_3V-9V              |
| 23        | AA                            | MODULE SELECT-4                       |
| 24        | BB                            | OVIS                                  |
| 25        | СС                            |                                       |
| 26        | DD                            | 12VIS Supply Solenoid 4               |
| 27        | EE                            |                                       |
| 28        | FF                            | O∨IS                                  |
| 29        | НН                            |                                       |
| 30        | JJ                            | Control Solenoid 4_3V-9V              |
| 31        | КК                            |                                       |
| 32        | LL                            | OVIS                                  |
| 33        | MM                            | OVIS Supply                           |
| 34        | NN                            | 12VIS Supply                          |
|           |                               |                                       |



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Image depict coding pins required

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### Fibre Optic Patch Cables

| Part Number | Description                          |
|-------------|--------------------------------------|
| H0LW0401    | Fibre Optic Patch ST-ST Multi-Mode   |
| H0M10101    | Connector Assembly Fibre 8 way 7m    |
| H0M10201    | Connector Assembly Fibre 8 way 10m   |
| H0M10301    | Connector Assembly Fibre 8 way 1m    |
| H0M10401    | Connector Assembly Fibre 8 way 4m    |
| H0M10801    | Connector Assembly Fibre 8 way 8m    |
| H0M10901    | Connector Assembly Fibre 8 way 11m   |
| H0M11001    | Fibre Optic Patch Assembly 8 way 3m  |
| H0M11201    | Connector Assembly Fibre 8 way 12.5m |
|             |                                      |

### **Specifications**

- Product Type: Pre-manufactured cable assembly
- Construction: Flbre Optic with ST terminations
- **Connector 1** : Fibre Optic Tx
- Connector 2: Fibre-optic Rx
- Pin Type: ST Fibre Plugs
- Conductor Type: Multi-mode Fibre-optic
- Insulation Rating: N/A
- Temperature Rating: -40°C to 85°C

#### **Connector Assembly**

| Part Number | Description            |
|-------------|------------------------|
| H0MQ1201    | Connector Assembly D25 |
| H0MQ1301    | Connector Assembly D19 |
| H0MQ1401    | Connector Assembly D20 |

### **Specifications**

- Product Type: Pre-manufactured cable assembly
- **Construction:** Connector with flying leads (pigtail)
- Pin Type: Male (Gold-plated)
- Conductor Type: PVDF Tinned Stranded Wire
- Insulation Rating: 600 volts
- Temperature Rating: -65 to 105 C
- Recommended Tools: PVDF / Teflon Insulation Stripping Tool

Cable options can vary depending on customer requirements.



Image above Fibre Optic Patch ST-ST Multi-Mode



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