DIN 12S 24V – Specification Rev 1

Supply voltage: 19.2 – 28.8 V ac 47-63 Hz
21.6 – 26.4 V dc

Fusing: 5x20mm F 1A

Output x 1: Supply voltage @ 500mA.

Inputs x 2 : 5V dc 5mA to volt free contacts

Status LEDs : 3 x yellow, 2 x tri-colour.
LED 1: Power/un-commissioned.
LED 2: Output on
LED 3: Limit switch status
LED 6: Data transmit
LED 7: Data receive

Communications driver protection: 3kV ESD protected, Short circuit proof, Thermal shutdown

Timers: Damper opening 60s Damper closing 60s Comms fault watchdog 45s

Enclosure dimensions: 180x110x60mm

Material: Polystyrene

Flammability rating: Self-extinguishing to UL 94

Colour: Light grey with smoked transparent lid

IP rating: 56

Environment: 0-70° C ambient
80% RH non-condensing

Cable entry: 6 x cable glands fitted for cable dia. 5-10mm

Installation

The DIN 12S 24V should be fixed to a flat surface using at least 2 screws and appropriate wall fixings via the corner mounting holes using M4 (No:8) screws.

24V power flex should be sized according to the total load on the 24V circuit supplying the DIN 12S 24V's, each DIN 12S 24V draws a maximum of 0.5A depending on actuator type controlled. If the cable outside dia. is less than 5mm additional strain relief must be used inside the enclosure.

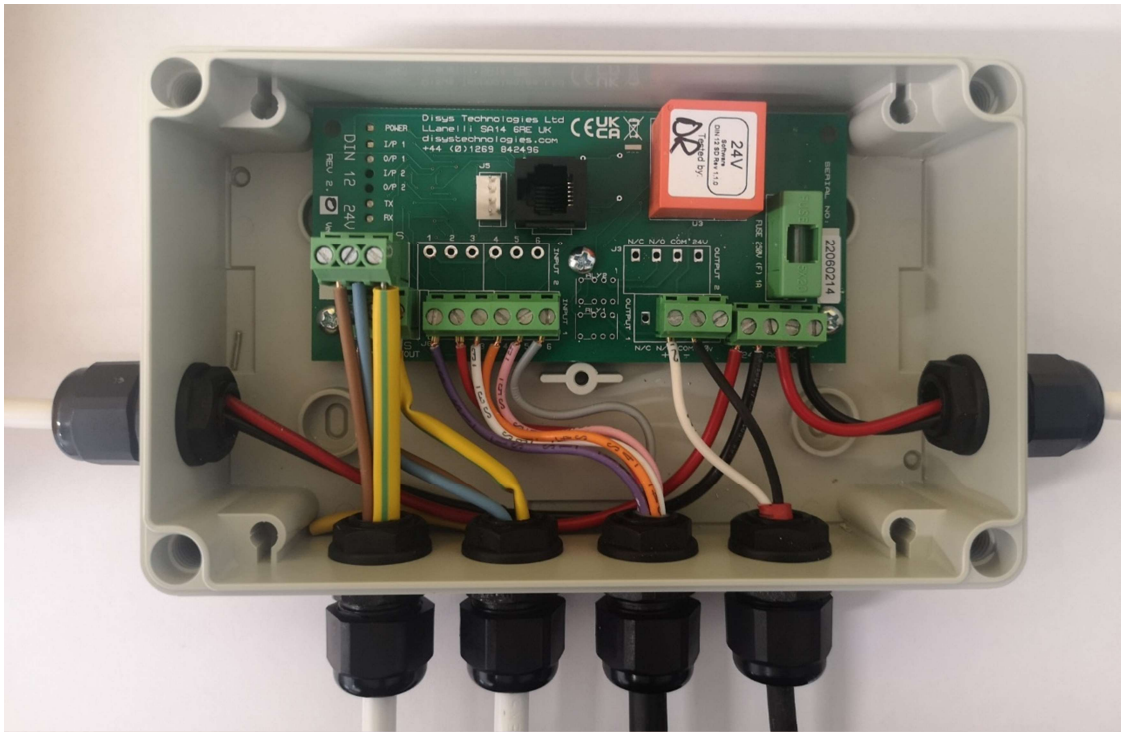
Where double insulated Belimo actuators are being used a two core 24V power flex is sufficient. A local earth may be required for damper/actuator types requiring a safety ground.

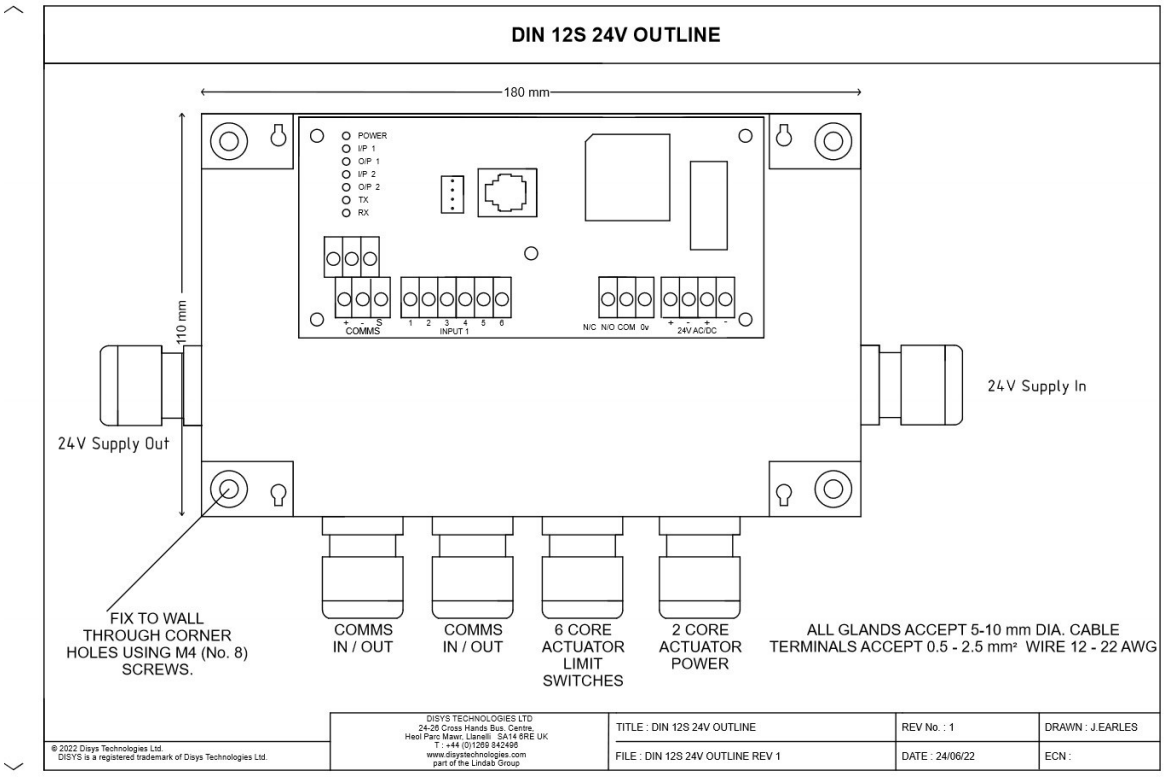
The actuator power cable black core must be connected into the N-Com terminal and the brown live core into the L2A-N/O.

The typical Belimo six core actuator status (limit switch) cable has cores numbered one to six, these are fitted to their respective terminals on input 1 connector. For other actuator types eg four core limit switch cable, please ask for connection drawings.

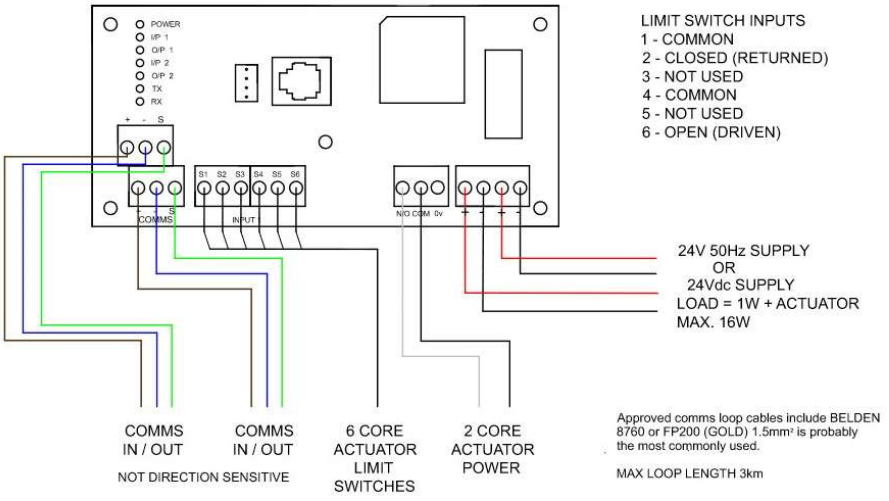
The comms cable in/out is not direction sensitive. (Either cable gland and set of terminals may be used for in and out.) DO NOT CONNECT COMMS SCREEN TO EARTH. Use the 'S' terminal provided.

FP200 1.5mm^2 or BELDEN 9760 are the most commonly used comms cable, however the system will operate using virtually any 2 core screened cable. If using a thin cable eg BELDEN 9841, 70001E, or equivalent, then additional strain relief may be required at the cable entry. Ferrules should be used on the ends of the wires if the wire size is less than 0.5mm or 22 AWG.


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DIN 12 24V
POWER
I/P 1
O/P 1
I/P 2
O/P 2
TX
RX
24V
22060214

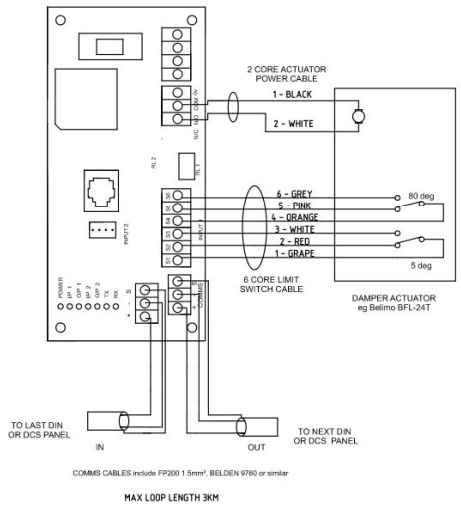

DIN 12S 24V OUTLINE
180 mm
110 mm
POWER
I/P 1
O/P 1
I/P 2
O/P 2
TX
RX
COMMS
INPUT 1
N/C N/O COM 0v
24V AC/DC
24V Supply In
24V Supply Out
FIX TO WALL THROUGH CORNER HOLES USING M4 (No. 8) SCREWS.
COMMS IN / OUT
COMMS IN / OUT
6 CORE ACTUATOR LIMIT SWITCHES
2 CORE ACTUATOR POWER
ALL GLANDS ACCEPT 5-10 mm DIA. CABLE
TERMINALS ACCEPT 0.5 - 2.5 mm² WIRE 12 - 22 AWG
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part of the Lindab Group
TITLE : DIN 12S 24V OUTLINE
REV No. : 1
DRAWN : J.EARLES
FILE : DIN 12S 24V OUTLINE REV 1
DATE : 24/06/22
ECN :

DIN 12S 24V TYPICAL INSTALLATION WIRING



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		FILE : DIN 12S 24V TYPICAL WIRING REV 1	DATE : 21/06/2022	ECN :

DIN 12S 24V ACTUATOR CONNECTIONS



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		FILE : DIN 12S 24V ACTUATOR CONNECTIONS	DATE : 24/06/2022	ECN :

Principles of operation

1. Prior to commissioning

The DIN 12S 24V will upon power being applied energise the output. The actuator should then drive the damper to its open or closed position according to the damper type. This can enable airflow balancing to be undertaken prior to damper control commissioning. If the un-powered state is required, then power can be removed.

The un-commissioned state of the DIN 12S 24V is indicated by the power LED flashing amber.

2. Commissioning

The unit is configured through local programming via the programming port with parameters including the unit address, damper type, membership of zones and override groups.

3. Operation

Providing the DIN 12S 24V receives a constant stream of 'no fire' messages the output will remain in its normal state i.e. output energized. On receipt of the 'fire' message the output is switched off. Failure to receive a 'fire' or 'no fire' message for 8 seconds will always result in the output being turned off (failsafe).

Two inputs are provided for the driven and un-driven limit switches on the actuator. The DIN 12S 24V transmits a message to the panel indicating the status of these switches. The panel will then display this as 'open' or 'closed' accordingly. If the limit switches are not made after the timeout period the DIN 12S 24V will transmit a fault message to the panel.

Damper types:	1 driven open, spring closed
	2 driven closed, spring open
Drive types:	Drive in normal state
	Drive in alarm state

4. Indicators

Five LEDs are provided on the DIN 12S 24V.
The first is the red power on LED, which will flash amber when the DIN 12S is in the un-commissioned state.
The second LED indicates the limit switch status of the actuator. Green for open, flashing green for opening, flashing red for closing and red for closed. If both limit switches are made a fault is indicated by this LED showing amber.
The third yellow LED indicates that the output to the actuator has been energized.
The fourth and fifth LEDs are not fitted on the DIN 12S 24V.
The sixth LED will flash briefly when the DIN 12S 24V transmits a message on the comms loop.
The seventh LED will flash briefly when the DIN 12S 24V receives a valid message.