

DF30 & DFR30 Display Facias

Description

The DF30 range of display facias has been designed to complement the RTK Instruments range of alarm annunciators and instrumentation products. These provide a visual indication of alarm and plant status information in the clearest and brightest possible way.

The DF30 range is modular in design and can be supplied in any overall size comprising different window sizes. Switches, pushbuttons and audible sounders can also be integrated to provide a complete solution for plant status monitoring.

Two different frame types are also available. These are standard small black, or larger grey to match the Series 725 alarm annunciator. (type DFR30)

Both frame types are designed for panel mounting and are supplied with suitable clamps.

The standard version is fitted with bulb illumination rated at 28VDC @ 40mA per bulb. A 48VDC version is also available.

For low current applications, a DF30LC unit is available utilising ultra-high brightness LED illumination.

Installation

DF30 units are supplied with either one terminal and a common, or two terminals per window if specified at the time of order.

Bulb illumination with separate terminals

Each bulb will have two terminals marked X1 and X2. These can be connected to the rated supply voltage either way round. Windows which require more than one bulb such as medium and large will be connected so the bulbs for that individual window are connected in parallel.

Bulb illumination with common connection

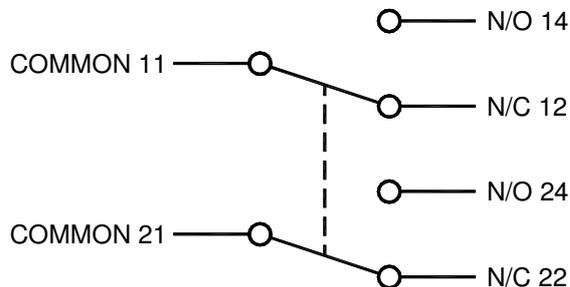
Each bulb will have two terminals as before however one terminal on each bulb will be connected together by means of a busbar. To illuminate a window, connect a power source of the rated voltage to the common connection, and one to the window to be illuminated. Polarity can be either way round

Refer to page 3 for individual connection diagrams depending on window size

Switches, pushbuttons and audible sounders

If specified at the time of ordering, the unit can be supplied with DPDT pushbuttons, DPDT switches or audible sounders, and these are normally fitted in the bottom right hand corner of the unit. To connect refer to the diagrams below.

Pushbuttons and switches:



Audible sounders:

Connect 24VDC to terminal X1 and 0V to terminal X2.

Specification

Window size

Small: 30x30mm
Medium: 30x60mm
Large: 60x60mm

Bulb illumination

28VDC bulb rated at 40mA per bulb (24VDC units)
48VDC bulb rated at 50mA per bulb (48VDC units)
14,000 hours life
Small windows have 1 bulb
Medium windows have 2 bulbs in parallel
Large windows have 4 bulbs in parallel

Environmental

Operating temperature: -20°C to 50°C
Storage temperature: -20°C to 80°C
Humidity: 0-95% RH non-condensing
Protection: IP41

Connection

Rear mounted screw terminals suitable for 2.5mm² solid or stranded cable for bulbs or LED's and 1.25mm² for switches and pushbuttons
Recommended torque:
0.6 to 1.0Nm (M3.5 Switches and pushbuttons)
1.0 to 1.3Nm (M3 Bulb and LED holders)

Pushbuttons and switches

Maximum switch voltage: 250VAC/DC
Thermal current: 5A
Operating voltage / and current (resistive load):
125VAC/3A, 250VAC/2A
30VDC/2A, 125VDC/0.4A
Contact type: Silver
Insulation resistance: 100MΩ min (500VDC megger)
Dielectric strength: 2500VAC for 1 minute (Between terminals of the same pole: 1000VAC for 1 minute)

Audible module

Sound level: 95dB @ 30cm at 24VDC
Frequency: 3.3kHz
Current consumption: 25mA at 24VDC

Overall dimensions and panel cut-out

Small DF30:
Height = 12 + (rows x 30)
Width = 12 + (columns x 30)

Medium DF30:
Height = 12 + (rows x 30)
Width = 12 + (columns x 60)

Large DF30:
Height = 12 + (rows x 60)
Width = 12 + (columns x 60)

For cut-out size, subtract 7mm from each dimension

Small DFR30:
Height = 24 + (rows x 30)
Width = 24 + (columns x 30)

Medium DFR30:
Height = 24 + (rows x 30)
Width = 24 + (columns x 60)

Large DFR30:
Height = 24 + (rows x 60)
Width = 24 + (columns x 60)

For cut-out size, subtract 10mm from each dimension

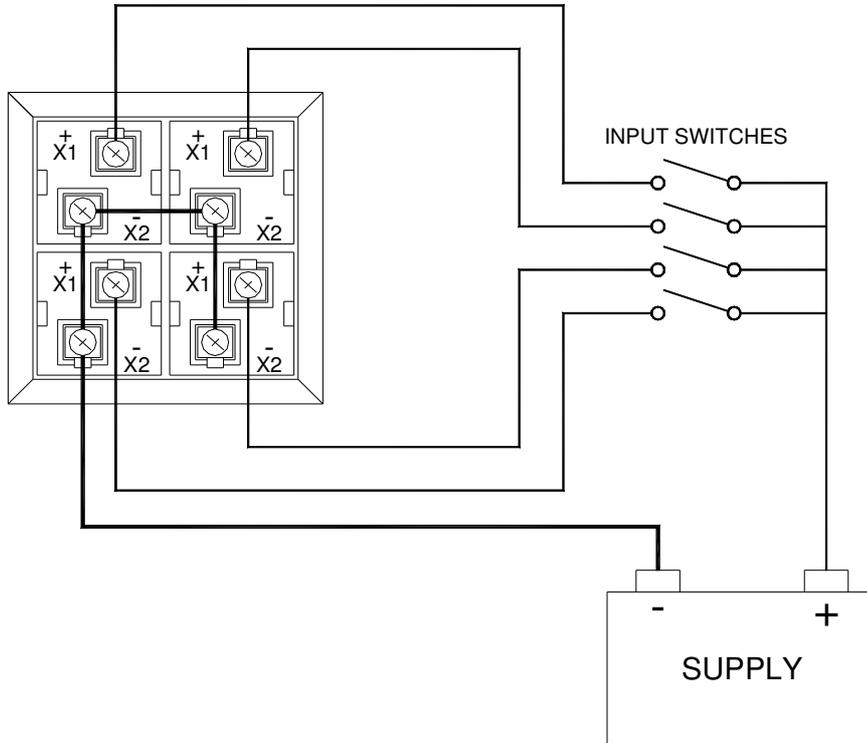
Operating Instructions

After installation and testing, the unit may be operated according to the wiring configuration. Please ensure all the switches and windows are fully tested in all conditions prior to use, to eliminate any potential wiring faults.

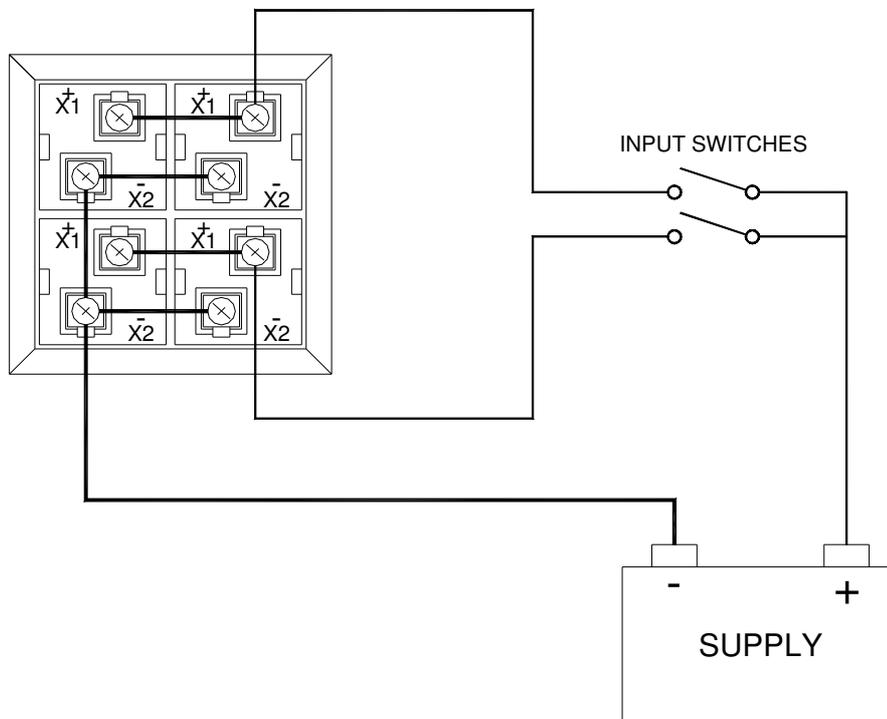
Connection Diagrams

Example connection diagrams are shown below for all three window sizes. A common connection is provided to link bulbs together. The input switches may be of any type according to the application. The supply may be connected either way round.

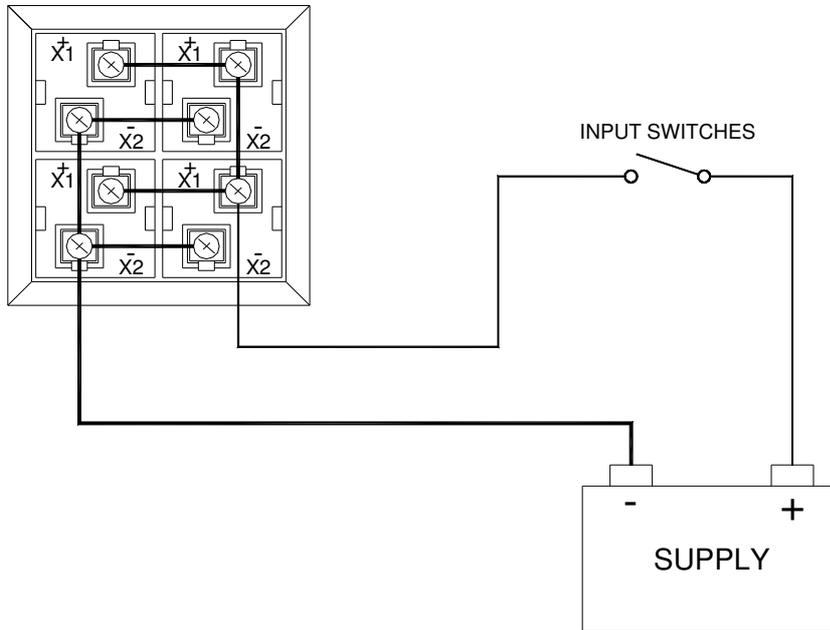
Small Windows



Medium windows

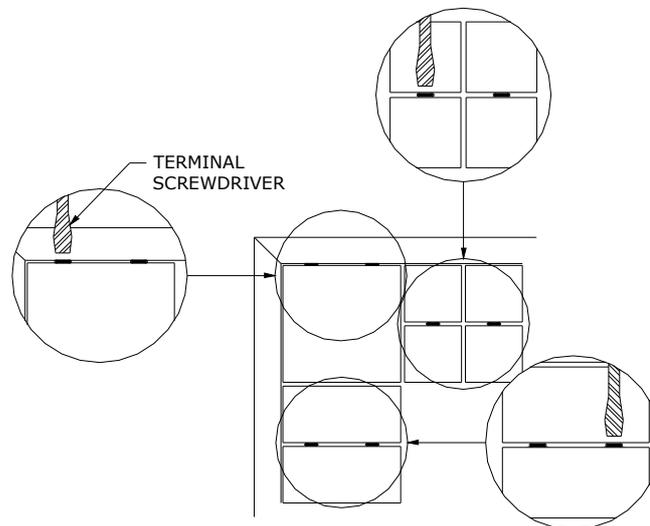


Large Windows



Maintenance

For DF30 types with bulb illumination it is important to ensure all the bulbs are in working order. If the unit incorporates a lamp-test function, it should be used periodically. Any bulbs found to be defective should be replaced by carefully levering out the corresponding window and removing the bulb using a bulb extractor tool. Refer to the diagram below.



Recommended Spares

For bulb illumination it is recommended that 10% of the total number of bulbs in the system are kept as spares. No other spare parts are recommended.

Part number: LP-28V-010 a 28VDC bulb sold in packs of 10 (for 24VDC units)

Due to our policy of continuous product development, we reserve the right to amend these specifications without notice.