

# P725LO and DF30 Series Lamp Box Displays

A variety of display formats for alarm and status indication

**A range of display types, sizes and configurations**

**Lamp or LED illumination**

**Modular construction so displays can be matched to your exact requirements**

**All units available in six window colors**

**All units supplied complete and ready to panel mount**

**Low installed depth**

Designed to complement the RTK Instruments range of Alarm Annunciators and instrumentation products the Lamp Box Displays provide a range of cost effective products to show alarm and plant status in the clearest possible way.

There are three main ranges that cover different applications and industries, all are modular in construction so can be configured to suit the exact shape and size requirements.

Various window sizes and styles are available, all back-lit by either conventional filament lamps or “fit and forget” ultra-bright LED assemblies to provide the clearest possible display to operators.

Alarm text is provided in the form of laser printed film legends, which allows changes to be easily made as plant needs evolve.



# P725LO Lamp Box Displays

This is a lamp-only version of the best selling 725 Series Alarm Annunciator. Using the same modular construction, frame assembly and illumination method means these displays will match exactly the full annunciator system.



## Window Details

The P725LO is available in three different window sizes, small, medium and large:  
 Small 1.18" x 1.18" (30 x 30mm)  
 Medium 2.36" x 1.18" (60 x 30mm) (W x H)  
 Large 2.36" x 2.36" (60 x 60mm)

The display is built up from multiple cells; each cell has dimensions of 2.36" x 2.36" (60 x 60mm) and can be configured as a single large window, two medium windows or four small windows.

## Display Size

Almost any size and format can be constructed using the basic cell structure, with a window size being selected from above or if required intermixed windows can be supplied. The maximum overall size either vertically or horizontally is 30 cells.

## Window Colors

All three window sizes are available in the following six colors for both LED and filament lamp illumination

- ▶ Red
- ▶ Amber
- ▶ Yellow
- ▶ White
- ▶ Green
- ▶ Blue

## Supply Voltage

24VDC is normally used to power the illuminated windows but alternative voltages such as 12 or 48VDC can be supplied to special order.

Standard systems are supplied with a positive common linked internally. This allows externally switched 0V signals to initiate each channel as required.

As an option, systems with a common 0V can be used instead, allowing +24VDC switched inputs to be used. This must be specified at the time of ordering.

## Integral Components

As these Displays are used for alarm indication it is often necessary to include pushbuttons and audibles within the display itself to acknowledge and reset alarms. These are normally fitted in the bottom right hand cell.

## Window Marking

Displays can be configured with the required filter colors and film legends to suit the exact customer's requirements or alternatively RTK can supply a template to allow users to create their own legends locally.

## Connections

The standard display has rear mounted rising clamp terminals suitable for solid or stranded wire up to 12 AWG (2.5mm<sup>2</sup>). There is a single terminal for each window and a common return to simplify the system wiring.

## Technical Specification

### Lamp Version

28V 50mA 0.39" (10mm) glass wedge  
 14,000 hour design life

Small window	45mA
Medium window	90 mA
Large window	180 mA

### LED Version

"Fit and forget" ultra-bright removable LED assemblies (4 LEDs per assembly) that plug into the standard 0.39" (10mm) wedge lamp socket

Small window	20 mA
Medium window	40 mA
Large window	80 mA

### Environment

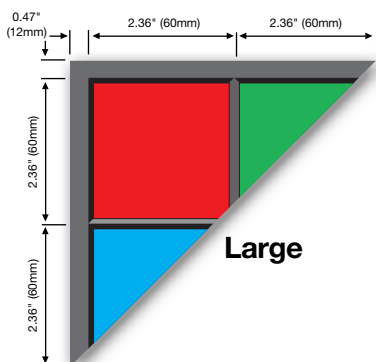
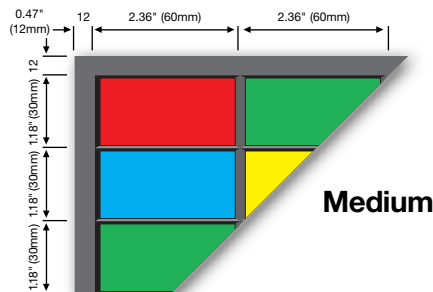
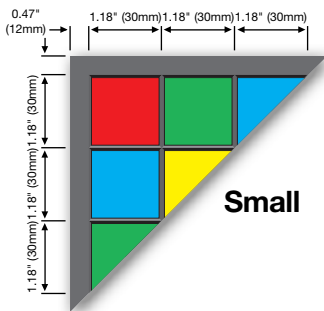
Operating temperature:  
 -4 to 122°F (-20 to 50°C) (lamp version)  
 -4 to 140°F (-20 to 60°C) (LED version)  
 Storage temperature:  
 -4 to 176°F (-20 to 80°C)  
 Humidity: 0-95% RH non condensing

### Protection

Front of panel IP41  
 Rear of panel IP20

### Compliance

Immunity to EN61000-6-2:2001  
 Emissions to EN61000-6-4:2001  
 LVD to EN61010-1:1993



**Small:** Height = 0.94" + (rows x 1.18")  
 Width = 0.94" + (columns x 1.18")  
**Medium:** Height = 0.94" + (rows x 1.18")  
 Width = 0.94" + (columns x 2.36")  
**Large:** Height = 0.94" + (rows x 2.36)  
 Width = 0.94" + (columns x 2.36)  
 Cutout: subtract 0.39" (10mm) from each dimension



# DF30 Lamp Box Display

## Window Details

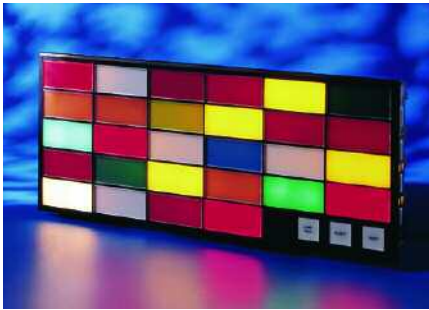
The DF30 is available in three different window sizes, small, medium and large as listed below.

Small 1.18" x 1.18" (30 x 30mm)

Medium 2.36" x 1.18" (60 x 30mm) (W x H)

Large 2.36" x 2.36" (60 x 60mm)

Any combination of these window sizes can be supplied in any format, mixed as required in a single display to make up the appropriate matrix required.



## Display Size

The display can be any format from a single small window 1.18" x 1.18" (30 x 30mm) to a maximum of 20 ways wide and 20 ways high giving a total display size of 400 small windows. If larger window sizes are required then this maximum is reduced accordingly, i.e. 200 medium windows 1.18" x 2.36" (30 x 60mm) and 100 large windows 2.36" x 2.36" (60 x 60mm).

## Window Colors

All three window sizes are available in the following six colors:

- ▶ Red      ▶ Yellow      ▶ Amber
- ▶ Green    ▶ White      ▶ Blue

## Incandescent or LED Illumination

The standard display is supplied with dual filament lamps but backlit LED illumination is available for all window sizes and colors. These displays are comparable in brightness to the lamp displays but are virtually maintenance free.

## Supply Voltage

The standard systems are supplied ready to connect directly to 24VDC. Systems can also be supplied for 6, 12 or 48VDC or using the integral transformer adapter directly to 110, 240, 380 or 440VAC.

## Integral Components

To complete the display package, the DF30 is available fitted with integral pushbuttons, selector switches and audibles. Both pushbuttons and audibles take up a single small window 1.18" x 1.18" (30 x 30mm).

Any number of pushbuttons and selector switches can be fitted and the position of these is totally flexible.



## Window Marking

Display units can be supplied with all windows engraved or fitted with film legends. In the standard display the color and text is visible at all times but windows can be supplied which are visible only when lit or which have illuminated text only on a black background.

## Connections

The standard display has rear mounted screw terminals suitable for 12 AWG (2.5mm<sup>2</sup>) solid or stranded wire. Two terminals are available for each window. If required one terminal from each window can be commoned together to reduce the customer's wiring requirements.

## Technical Specification

### Lamp Version

28V 40mA BA9S Bayonet lamp  
 14,000 hour design life  
 Small window 40mA  
 Medium window 80mA  
 Large window 160mA

### LED Version

"Fit and forget" ultra-bright removable LED assemblies (array of SMT LEDs per assembly)  
 Small window 20mA  
 Medium window 40mA  
 Large window 80mA

### Environment

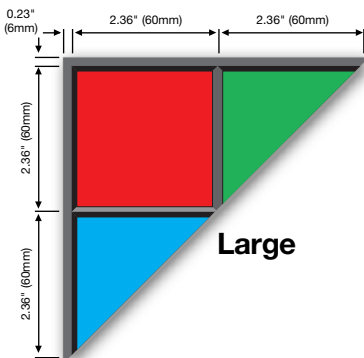
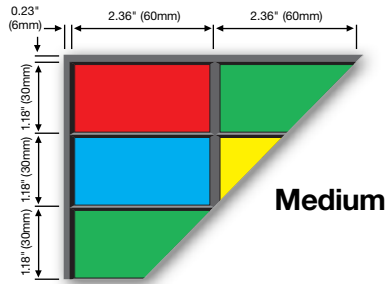
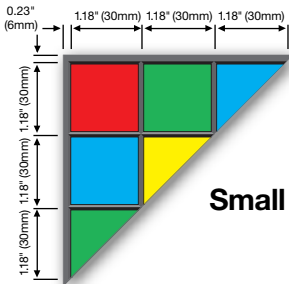
Operating temperature:  
 -4 to 122°F (-20 to 50°C) (lamp version)  
 -4 to 140°F (-20 to 60°C) (LED version)  
 Storage temperature:  
 -4 to 176°F (-20 to 80°C)  
 Humidity: 0-95% RH, non condensing

### Protection

Front of panel IP41  
 Rear of panel IP20

### Compliance

Immunity to EN61000-6-2:2001  
 Emissions to EN61000-6-4:2001  
 LVD to EN61010-1:1993



Small: Height = 0.47" + (rows x 1.18")  
 Width = 0.47" + (columns x 1.18")  
 Medium: Height = 0.47" + (rows x 1.18")  
 Width = 0.47" + (columns x 2.36")  
 Large: Height = 0.47" + (rows x 2.36")  
 Width = 0.47" + (columns x 2.36")  
 Cutout: subtract 0.28" (7mm) from each dimension

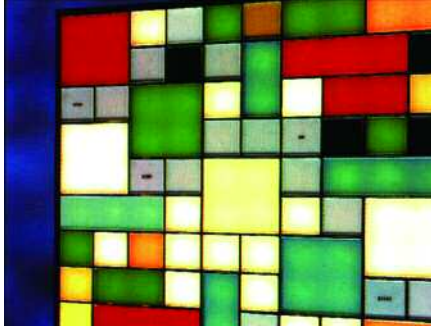


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## DF30 Specials

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In addition to the standard DF30 Lamp Box Display there are a number of specials that are supplied to suit particular applications, these include the following:



### DFR30 Version

This is the same as the DF30 Display but has the wider, larger frame to match the 725 Series Annunciator. Overall and cut-out dimensions are the same as the P725LO product.

### DF30LC Version

This is a lower cost LED illuminated display that can be connected directly to 48 or 110VDC. The rear terminal board includes an efficient DC/DC converter to drive the LEDs from the higher voltage. Available in blocks of 4 wide by 2 high small windows.

### DF40 Version

The same display type and features but based on a 1.57" (40mm) grid structure giving window sizes of 1.57" x 1.57" (40 x 40mm), 3.15" x 1.57" (80 x 40mm) and 3.15" x 3.15" (80 x 80mm).

### DFR30IS Version

This unit is an Intrinsically Safe backlit display which can be mounted in any Zone 1 or Zone 2 hazardous area. See separate datasheet for full details.

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## IP65 Displays

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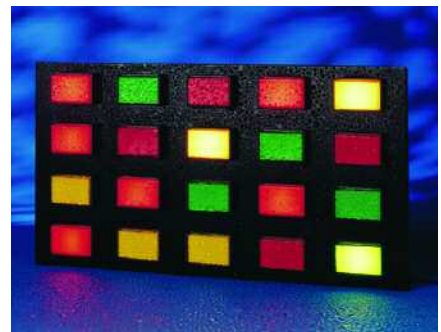
### Display Details

The IP65 displays are custom built using backlit LED display windows of two different sizes, either 0.95" x 0.71" (24 x 18mm) or 1.42" x 0.95" (36 x 24mm). Both are backlit by multichip LEDs to maintain the security and provide a maintenance free display.

Arrays of almost any shape and size can be manufactured to suit the exact display requirements.

The LEDs are available in red, amber and green. These can be combined with IP65 sealed, matching pushbuttons to provide the standard controls for Lamp Test, Accept and Reset.

All the display modules are pre-wired to a row of terminals making connection a simple task. The units are also supplied with a matching gasket to provide the seal to the mounting surface.



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



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