

Signalling boxes



Use

These boxes enable the display of binary alarm, level or presence information. They clearly display an engraved message. The size and luminosity enable reading at a comfortable distance.

Advantages

They enable simple information to be combined mixing text and colour. The colours usually indicate a level of operation (colourless, green, orange, red, fixed or flashing), the text or the logo (international language) indicate the detail of the information. It can be a signal repeater, requiring positive acknowledgement by the operator to confirm the information. Luminous boxes are especially suitable for displaying information complementary to supervision. The simplicity of operation linked to security of display (double bulb or LED) allow direct connection to a PLC output or supply by auxiliary contacts. For equipment subject to vibration we recommend using BA9s bayonet bases.

Operation

One or two long life bulbs, or LEDs, light a lens from behind to enable a text to be read; the message is reinforced by a colour.

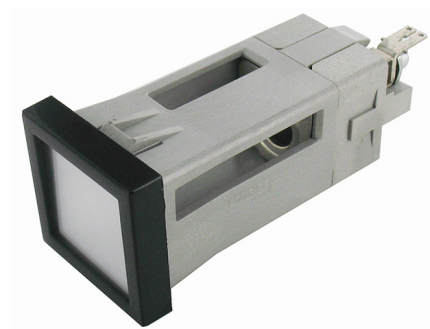
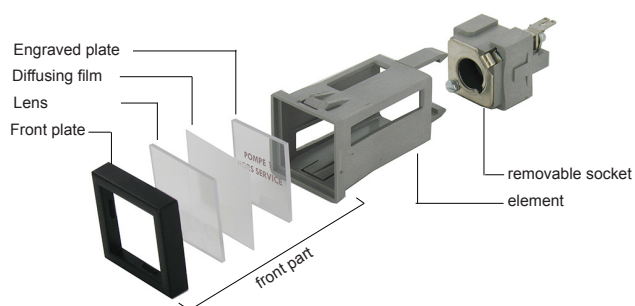
General points

A unit that locks into the thickness of the support. Connection to terminals.

Normal units are fitted with bulb sockets; it is possible to install incandescent bulbs or LEDs on the sockets. The incandescent bulbs that we propose are long life bulbs; however excessive temperature, impacts or vibrations may reduce their service life.

LED units are fitted with a LED panel lamp; they are particularly suitable for revamping. They contain electronic regulation requiring a minimum inrush current.

AO1 bulb unit (36 x 36)



Technical specifications

ENGRAVING

Dimensions of the plate for engraving	30.5 x 30.5 mm
Plate dimensions available for engraving	27 x 27 mm
1 signalling message	4 lines of 10 letters, 3 mm high
2 signalling messages	2 lines of 10 letters, 3 mm high

DIMENSIONS/FIXING

Front face stand proud	8 mm
Rear stand proud excluding wiring	84 mm
Lens	37 x 37 mm
Drilling	31 x 31 mm R= 1 mm
Mounting support thickness	2 to 3 mm
Mounting	self-clipping from the front

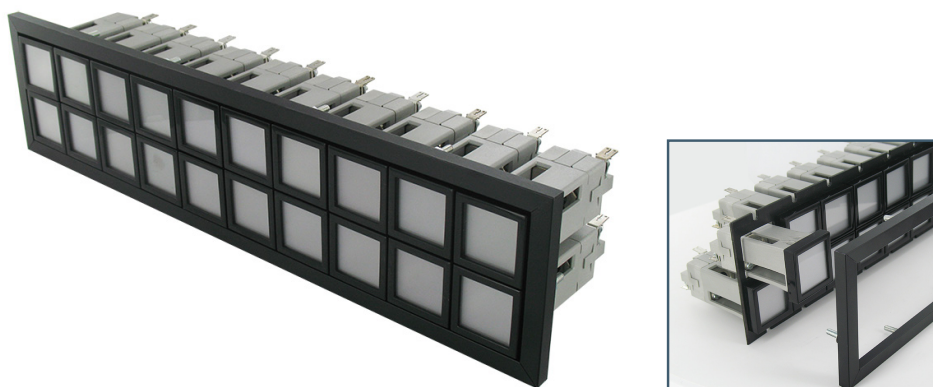
GENERAL SPECIFICATIONS

Front plate	smooth black
Lens	smooth colourless
Lens protection index	IP41
Rear face protection index	IP00
Storage temperatures	-40°C to +80°C
Working temperatures	-40°C to +50°C
Continuously dissipatable power	6 W maximum
Colours available	colourless, yellow, green, red
Text	the text appears in black when the light is on
Acceptable sockets	1 x E10.2 x E10 1 x BA9S.2 x BA 9S
Bulb voltage available	

CONNECTION

Universal connection	
Screwed under keyboard	2 x 2.5 mm ²
Soldered	1 x 1.5 mm ²
Fast-On/Clips	1 x 6.35 (conductor 1 to 2.5 mm ²)
Fast-On/Clips	2 x 2.8 x 0.8 (conductor 0.3 to 1.5 mm ²)

A12 type simplified multiple boxes for AO1



Use

For installing and fixing a set of A12 type display boxes

Advantages

Avoids the need for precision cutting in the metal panel and enables the box to be prewired on a bench.
Suitably thick plate (2 mm) and a surrounding profile section of 8 x 10 mm ensure a rigid assembly.

Operation

Precision cut-outs in the metal plate enable simple boxes to be factory fitted. This grid is surrounded by an aluminium section held by weld screws that strengthens the whole assembly.

General points

Use of this product greatly simplifies installation and especially cutting out of the support beyond that for the two boxes.

BO1 bulb unit (53 x 36)



Technical specifications

ENGRAVING

Size of the plate for engraving	47.5 x 30.5 mm
Plate dimensions available for engraving	27 x 27 mm
1 signalling message	4 lines of 13 letters, 3 mm high
2 signalling messages	2 lines of 14 letters, 3 mm high

DIMENSIONS/FIXING

Front face stand proud	8 mm
Rear stand proud excluding wiring	84 mm
Lens	54 x 37 mm
Drilling	48 x 31 mm R= 1 mm
Mounting support thickness	2 to 3 mm
Mounting	self-clipping from the front

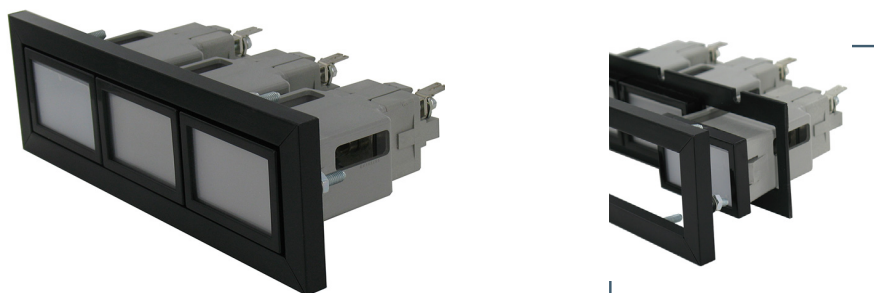
GENERAL SPECIFICATIONS

Front plate	smooth black
Lens	smooth colourless
Lens protection index	IP41
Rear face protection index	IP00
Storage temperatures	-40°C to +80°C
Working temperatures	-40°C to +50°C
Continuously dissipatable power	6 W maximum
Colours available	colourless, yellow, green, red
Text	the text appears in black when the light is on
Acceptable sockets	1 x E10.2 x E10 1 x BA9S.2 x BA 9S
Bulb voltage available	

CONNECTION

Universal connection	
Screwed under keyboard	2 x 2.5 mm ²
Soldered	1 x 1.5 mm ²
Fast-On/Clips	1 x 6.35 (conductor 1 to 2.5 mm ²)
Fast-On/Clips	2 x 2.8 x 0.8 (conductor 0.3 to 1.5 mm ²)

B12 type simplified multiple boxes for BO1



Use

For installing and fixing a set of B12 type display boxes.

Advantages

Avoids the need for precision cutting in the metal panel and enables the box to be prewired on a bench. Suitably thick plate (2 mm) and a surrounding profile section of 8 x 10 mm ensure a rigid assembly.

Operation

Precision cut-outs in the metal plate enable simple boxes to be factory fitted. This grid is surrounded by an aluminium section held by weld screws that strengthens the whole assembly. This black painted profile section provides perfect finishing for the assembly.

General points

Use of this product greatly simplifies installation and especially cutting out of the support beyond that for the two boxes.

BO8 type LED unit (53 x 36)



Technical specifications

ENGRAVING

Sizes of the plate for engraving	26 x 42 mm
Plate dimensions available for engraving	26 x 42 mm
1 signalling message	4 lines of 13 letters, 3 mm high

DIMENSIONS/FIXING

Front face stand proud	6 mm
Rear stand proud excluding wiring	89 mm
Lens	37 x 37 mm
Drilling	48 (+0.2/0) x 33 mm (+0.2/0) - R= 1 mm
Mounting support thickness	1 to 4 mm
Mounting	self-clipping from the front

GENERAL SPECIFICATIONS

Front plate	Granite grey
Lens	colourless non-reflective
Lens protection index	IP41
Rear face protection index	IP20
Storage temperatures	-30°C to +80°C
Working temperatures	0°C to +40°C (maximum)
Continuously dissipatable power	6 W (maximum)
Colours available	white, yellow, green, red
Text	the text appears in black when the light is on

Electrical specifications

Rated voltage	24 or 48 +/- 20%
Rated current	25 mA min., 35 mA max.

Built-in protection against polarity reversal

Built-in protection against occasional overvoltage by TVS diode

Supply to LEDs by a current generator circuit ensuring constant luminosity within min/max. supply voltage limits.

Safe operation; two-generator system feeding 2 different LED circuits ensuring that the warning light lights, even in the event of the failure of a LED.

CONNECTION

Fast-On/Clips	1 x 6.35 (conductor 1 to 2.5 mm ²) or 2 x 2.8 x 0.8 (conductor 0.3 to 1.5 mm ²)
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B18 type simplified multiple boxes for B08

Use

For installing and fixing a set of B08 type display boxes.

Advantages

Avoids the need for precision cutting in the metal panel and enables the box to be prewired on a bench.
Suitably thick plate (2 mm) and a surrounding profile section of 8 x 10 mm ensure a rigid assembly.

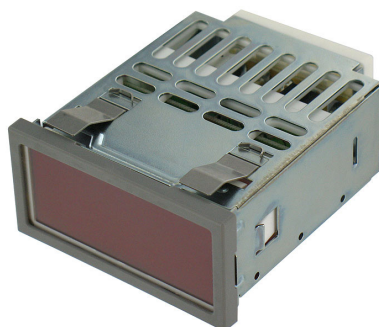
Operation

Precision cut-outs in the metal plate enable simple boxes to be factory fitted.
This grid is surrounded by an aluminium section held by weld screws that strengthens the whole assembly.
This black painted profile section provides perfect finishing for the assembly.

General points

Use of this product greatly simplifies installation and especially cutting out of the support beyond that for the two boxes.

Separate DIN type LED unit (72 x 36)



Technical specifications

ENGRAVING

Size of the plate for engraving	26 x 61 mm
Plate dimensions available for engraving	26 x 61 mm
1 signalling message	4 lines of 20 letters, 3 mm high

DIMENSIONS/FIXING

Front face stand proud	6 mm
Rear stand proud excluding wiring	89 mm
Lens	37 x 37 mm
Drilling	68 (+0.2/0) x 33 mm (+0.2/0) - R= 1 mm
Mounting support thickness	1 to 4 mm
Mounting	self-clipping from the front

GENERAL SPECIFICATIONS

Front plate	Granite grey
Lens	colourless non-reflective
Lens protection index	IP41
Rear face protection index	IP20
Storage temperatures	-30°C to +80°C (maximum)
Working temperatures	0°C to +40°C (maximum)
Colours available	white, yellow, green, red
Text	the text appears in black when the light is on
Monobloc LED light, removable from the front	

ELECTRICAL SPECIFICATIONS

Rated voltage	24 or 48 +/- 20%
Rated current	25 mA min., 35 mA max.

Built-in protection against overvoltage and polarity reversal

Supply to LEDs by a current generator circuit ensuring constant luminosity within main/max. of supply voltage limits.

Safe operation; two-generator system feeding 2 different LED circuits ensuring that the warning light lights, even in the event of the failure of a LED.

CONNECTION

Fast-On/Clips	1 x 6.35 (conductor 1 to 2.5 mm ²) or 2 x 2.8 x 0.8 (conductor 0.3 to 1.5 mm ²)
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DIN type simplified multiple boxes 72 x 36)

Use

For installing and fixing a set of 72 x 36 type display boxes.

Advantages

Avoids the need for precision cutting in the metal panel and enables the box to be prewired on a bench.
Suitably thick plate (2 mm) and a surrounding profile section of 8 x 10 mm ensure a rigid assembly.

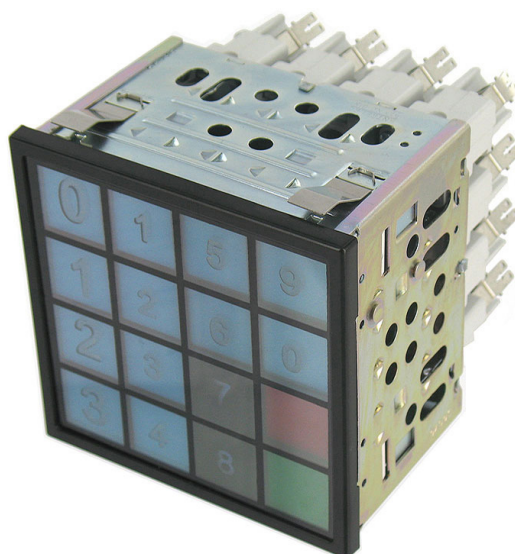
Operation

Precision cut-outs in the metal plate enable simple boxes to be factory fitted.
This grid is surrounded by an aluminium section held by weld screws that strengthens the whole assembly.
This black painted profile section provides perfect finishing for the assembly.

General points

Use of this product greatly simplifies installation and especially cutting out of the support beyond that for the two boxes.

Single DIN type unit



Use

Display of information assisting the control of complex installations. The size and luminosity provide easy reading from a convenient distance.

Advantages

DIN format dimensions facilitate the installation in drilling and external equipment formats used for instrumentation. Luminous boxes are especially suitable for displaying information complimentary to supervision. The simplicity of operation linked to security of display (double bulb or LED) allow direct connection to a PLC output or supply by auxiliary contacts.

- . Ease and speed of fitting
- . Multiplicity of signalling sizes
- . Socket protection covers

Operation

A long life bulb or LED backlights a lens displaying a text; the colour reinforces the message.

General points

A unit that locks into the thickness of the support. Connection to terminals.

Standard units are fitted with bulb bases; it is possible to install incandescent bulbs or LEDs on these bases. E10 or Ba9s bases.

The incandescent bulbs that we propose are long life bulbs; however, excessive temperature, impacts or vibrations may reduce their service life.

Limits of use

To avoid overheating the sum of the power of the bulbs alight at any one time and permanently should not exceed the values below.

Dim	72 x 72	96 x 96	144 x 72	144 x 144	192 x 96	288 x 144
P Max	20 W	15 W	30 W	30 W	40 W	40 W

The use of LEDs instead of bulbs eliminates this problem.

Single DIN type units

Type	Number of signals	Number of sockets per signalling message	Type of bulbs	Reference	Size of plates for engraving (?)
72 x 72	6	1	E10	412 281 17	30,4 x 20,3
			Ba9s	412 282 10	30,4 x 20,4
	9		E10	412 301 23	20,3 x 20,3
			Ba9s	412 302 24	20,3 x 20,4
144 x 72	6	1	E10	412 521 07	40,6 x 30,4
			Ba9s	412 522 00	
	8		E10	412 541 13	30,4 x 30,4
			Ba9s	412 542 14	
	6		E10	412 581 04	60,8 x 20,3
			Ba9s	412 582 05	
	12		E10	412 621 13	30,4 x 20,3
			Ba9s	412 622 14	
144 x 144	16	1	E10	412 881 01	30,5 x 30,5
			Ba9s	412 882 02	
	24		E10	412 961 10	30,4 x 20,3
			Ba9s	412 962 11	
288 x 144	32	1	E10	412 721 10	33,2 x 30,5
			Ba9s	413 722 11	
	48		E10	413 801 12	33,2 x 20,3
			Ba9s	413 802 13	
96 x 96	6	1	E10	411 381 12	42 x 28
			Ba9s	411 382 13	
	9		E10	411 401 17	28 x 28
			Ba9s	411 402 10	
	8		E10	411 441 16	42 x 21
			Ba9s	411 442 17	
	12		E10	411 461 12	28 x 21
			Ba9s	411 462 13	
	16		E10	411 481 07	21 x 21
			Ba9s	411 482 00	
			E10	411 971 11	
			Ba9s	411 972 12	
192 x 96	12	1	E10	411 721 16	42 x 28
			Ba9s	411 722 17	
			E10	411 781 13	28 x 28
			Ba9s	411 782 14	
	16		E10	411 801 10	42 x 21
			Ba9s	411 802 11	
	18		E10	411 769 06	28 x 21
			Ba9s	411 789 23	
	32		E10	411 841 17	21 x 21
			Ba9s	411 842 10	

Single DIN type units



Unit dimensions	Drilling (DIN 43700)				Frame (DIN 43718)					Depth	
	a'	tolerance	b'	tolerance	a	b	c	d	e	1	2
72 x 72	68	+ 0,7-0	68	+ 0,7-0	72	72	4	R2	5	11	125
144 x 72	138	+ 1,0-0			144		144	5	R2,5	8	
144 x 144	138		138	+ 1,0-0		288		4			
288 x 144	282	+ 1,3-0			92		+ 0,8-0		96	96	5
96 x 96	92	+ 0,8-0	92	+ 0,8-0		96		96	5		
192 x 96	186	+1,1-0			192						

Note :
 • Depth 1 is given without mounting
 • Depth 2 is given with a DIN mounting, for a maximum support thickness of 40 mm.

Technical specifications

MOUNTING

Standard mounting by Entrelec springs	Thickness 1 to 4 mm
DIN mounting to order	Thickness 1 to 40 mm
Mounting	self-clipping from the front

GENERAL SPECIFICATIONS

Front plate	Black
Lens	Transparent
Lens protection index	IP41
Rear face protection index	IP20 (or P20 with optional cover)
Storage temperatures	-30°C to +80°C (maximum)
Working temperatures	-0°C to +40°C (maximum)
Colours available	white, yellow, green, red
Text	the text appears in black when the light is on

CONNECTION

Universal connection	
Screwed under jumper	2 x 2.5 mm ²
Soldered	1 x 1.5 mm ²
	1 x 6.35 (conductor 1 to 2.5 mm ²)
Fast-On/Clips	2 x 2.8 x 0.8 (conductor 0.3 to 1.5 mm ²)

ENGRAVING

Standard engraving:

3 mm high letters and figures for plates < 40 mm and 4 mm high for plates > 40 mm
 These sizes available for engraving are determined taking into account the "dimensions of the plate for engraving" column minus 2 mm round the whole of the circumference.
 Distance necessary between each line of characters: 6 mm (3 mm character) – 8.5 (4 mm character)
 Distance necessary between each character: 2.5 mm (3 mm character) – 3.5 (4 mm character)

Caution:

- Letters M and W count for one and a half letters, I for half a letter.
- Spaces and punctuations count for one letter.
- Figures count for one letter.

For other types of engraving (height, letters, symbols, etc.) please contact us.