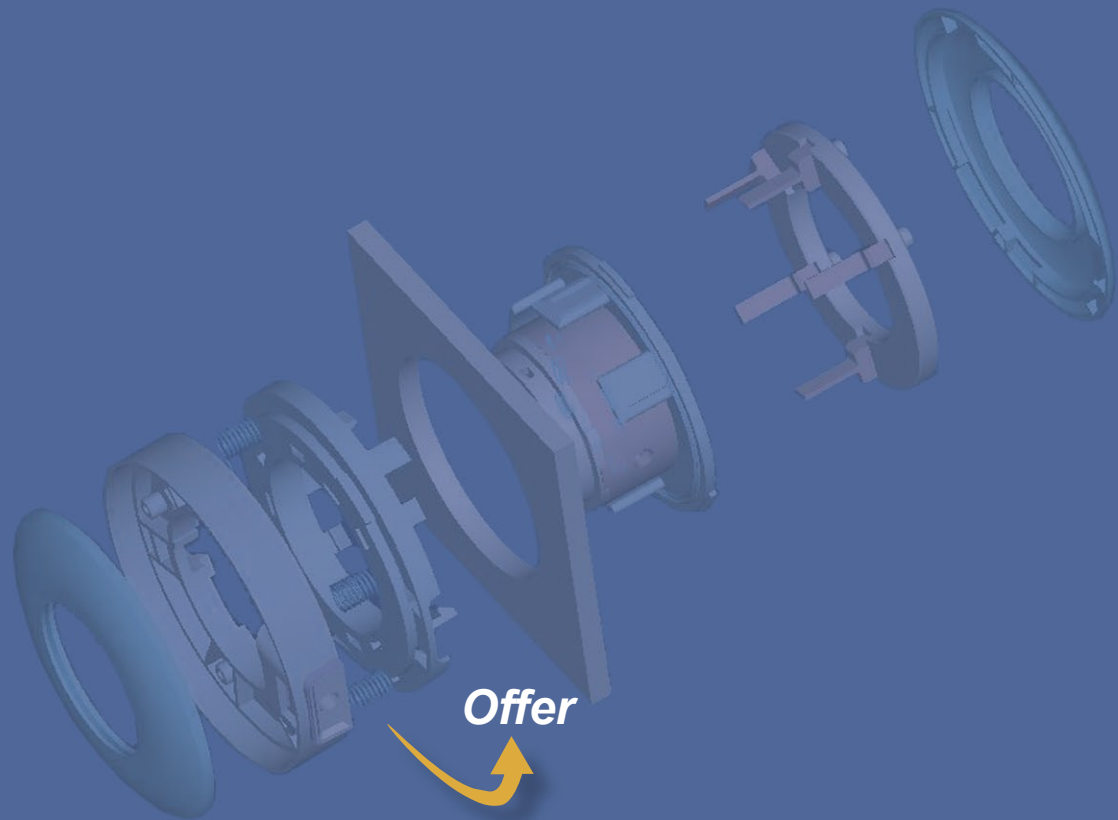


Display and Signalling

Contents

Select your chapter

- Illuminated message displays/signs
- Level Indicators



Message and fault displays



LED caption unit

Display modules consisting of lighting blocks which plug into printed circuits.

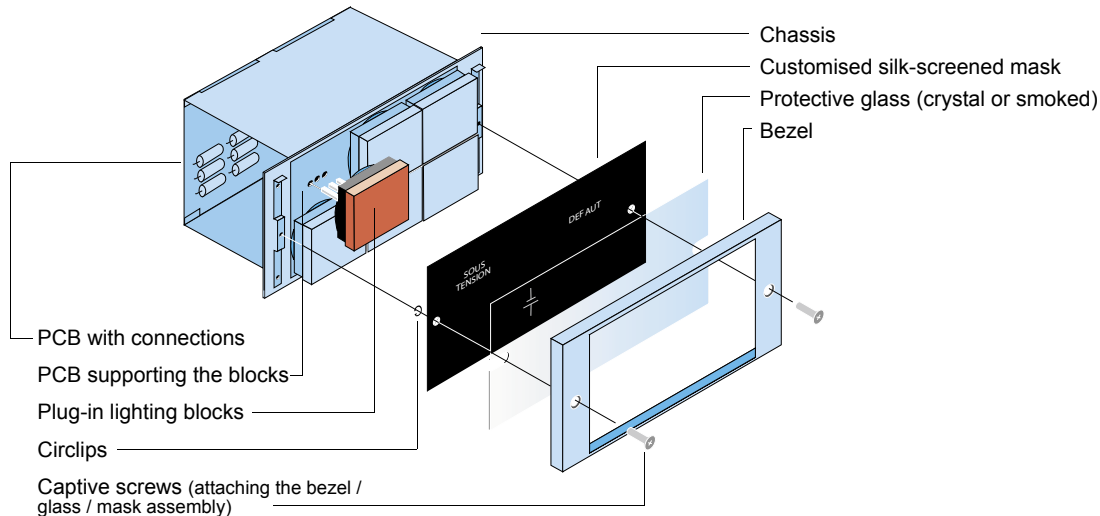
Environmental characteristics

Storage temperature	- 40° C to + 70° C
Operating temperature	- 25° C to + 70° C
Degree of protection	IP 41
Vibration resistance	As per IEC and NF EN 61373
Fire resistance	As per NF F 16 102

Electrical and mechanical characteristics

Chassis	Dichromate galvanised metal housing and black satin paint
Number of LEDs per block	12 or 14 SMD LEDs (standard)
Power supply voltage	24V - 72V - 110V DC
Current consumption	5 mA to 17 mA per block
Dielectric strength	500 V
Connection	Per specification : 6.35 mm or 5 mm tabs, screw terminal block, SUB-D ...
Service life	Better than 100 000 hours
Attachment	By screws (a panel cutout must be prepared to install the unit)

LED caption unit - Basic principle

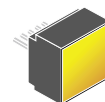


LED lighting blocks

Description	Nbr of SMD LEDs	Nbr of pin	Pitch
18 x 18 blocks	12	5	2.54
26.5 x 26.5 blocks	14	3	3.96
26.5 x 23.5 blocks	14	3	3.96

Colours : green, red, yellow, orange, white, violet.

Dimensions in mm.

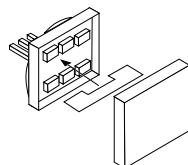


26.5 x 26.5 mm blocks
26.5 x 23.5 mm blocks

18 x 18 mm blocks

Separators

All the lighting blocks can be fitted with a separator to define two separate lighting zones on any one block.



Light reflector

The 18 x 18 mm lighted block displays can be fitted with a reflector to channel the light rays.

Display with reflector



CONTENTS

OFFER

Message and fault displays

Examples of some customised productions

Message and fault displays ensure that information is notified to a central point by means of illuminated pictograms. (settings displayed in the cab on rolling stock : trains, underground/subway, tramways...)

Comply with the main international standards.

					
<p>Front panel dimensions : 250 x 120 x 7 mm Depth 125 mm. Nbr of lighting blocks : 12 + 3 each fitted with 2 micro-switches. Connection : Souriau 48-pin connector.</p>	<p>Front panel dimensions : 150 x 110 x 17 mm Depth 100 mm. Nbr of lighting blocks : 30 Connection : 6.35 mm Fastons on PCB</p>	<p>Front panel dimensions : 145 x 95 x 7 mm Depth 125 mm Nbr of lighting blocks : 15 Connection : 25-pin Sub-D</p>	<p>Front panel dimensions : 145 x 55 x 17 mm Depth 45 mm Nbr of lighting blocks : 13 + 1 indicator light Connection : 25-pin Sub-D</p>	<p>Front panel dimensions : 180 x 35 x 17 mm Depth 40 mm Nbr of lighting blocks : 6 Connection : 6.35 mm Fastons on PCB</p>	<p>Other technology : assembly comprising 6 soldered lighting blocks, 4 ø 22 mm control components i.e., 3 tumblers - 1 momentary pushbutton. Front panel dimensions : 220 x 95 mm Depth 40 mm Connection : 6.35 mm Fastons on PCB and on auxiliaries.</p>
					

Other configurations are possible per customer specification.

- Functions, dimensions, connection (special connectors, terminal blocks...)
- Digital block for displaying various data.
- Pushbutton to test the lamps.
- Displays integrated in the instrument panel (silk-screened front panels)



Railway instrument panel traditional technology with display module.



Railway instrument panel new technology, with integrated displays.

Message and fault displays



Liquid crystal display

Compact display, designed to comply with standard IEC 60571 and CEI and NF EN 50155 EN 50 155.
 Liaison modes : CANOpen, RS232, RS485 networks.
 Pictograms can be configured via CANOpen network
 (we can design your pictograms)
 LCD screen with a wide selection of colours blue, white, amber, red, green, yellow...
 The user can ask for a "keyboard" (with the electronic card, you can controlled a keypad 8 keys,
 8 indicator lights)



Environmental characteristics

Storage temperature	- 40° C to + 70° C
Operating temperature	- 20° C to + 70° C
Degree of protection	IP 41 (for the front panel)
Vibration resistance	As per IEC and NF EN 61373
Fire protection	As per NF F 16 102

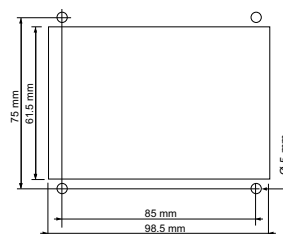
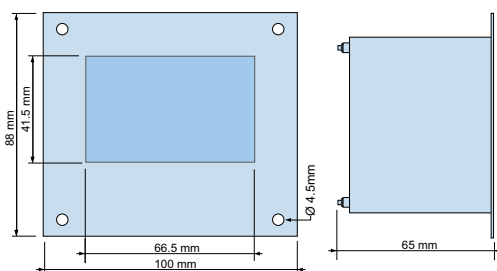
Electrical and mechanical characteristics

Power supply voltage	Min 16.8 V - Max 75 V DC	
Current consumption	1.5 W	
Dielectric strength	700 V DC between power supply and mechanical ground	
Connection	CAN liaison : Sub-d 9 Connector RS 232 / 485 liaison : Molex 53398 Connector Power supply : Wago 3-pin Connector	
Chassis	Metal housing with black satin paint	
Attachment	By screws (a panel cutout must be prepared to install the unit)	
Screen colour	White liquid crystals :	Blue screen background
	Black liquid crystals :	ARRAY-type screen background red, amber, yellow / green EDGE-type screen background blue, green, white, yellow.
Software	Latin or cyrillic alphabet	
Options	Scrolling symbols Dynamic symbols Time display	



Description	Colour	Part number	Weight kg
LCD message and fault display Version with latin alphabet	Red	YSN 1301 2 1	0.425
	Amber	YSN 1301 3 1	
	Pure yellow	YSN 1301 4 1	
	Pure green	YSN 1301 5 1	
	Blue mode	YSN 1301 6 1	
	Blue	YSN 1301 7 1	
	Yellow / green	YSN 1301 8 1	
	White	YSN 1301 9 1	
		Example : YSN 1301 9 2	
	Option : 2 = Cyrillic alphabet		

Dimensions - Cutouts



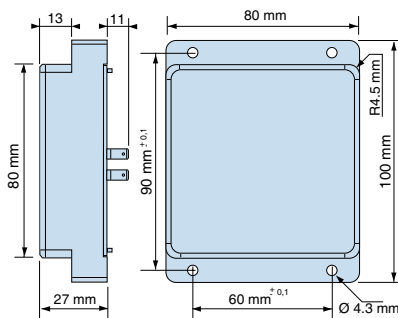
Modular illuminated display

- SMD LED technology - Service life 50 000 hrs
- Connection by tabs for 6.35 mm lugs
- Customised pictograms
- Steady or flashing display
- IP 40 for the front panel

Description	Voltage	Colour	Part number	Weight kg
79 x79 mm illuminated block	72 V	Red	YSP 1293A1	0.10



Dimensions - Cutouts



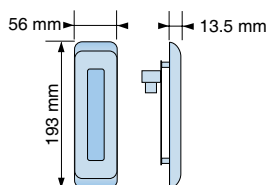
Illuminated strips with fixed text

- Access indicator, mounted inside the coach
- LED technology - Service life 50 000 hrs
- Connection : Connector
- IP 40 for the front panel.

Description	Voltage	Colour	Part number	Weight kg
«EXIT» display	110V	Red	YSP1176A1	0.15



Dimensions



Illuminated signs

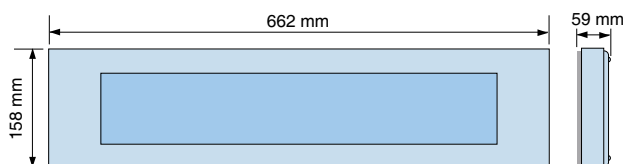
Illuminated strips with fixed text

- Unit designed to be mounted outside the coach
- LED technology - Service life 50 000 hrs
- Connection : Connector.
- IP 65 for the front panel.
- **Contact us for your text**
- Also exists in flush-mounted version



Description	Voltage	Colour	Part number	Weight kg
External illuminated strip	72 V	Red	YSP1253	4.67

Dimensions



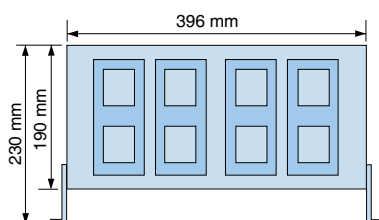
Train number display

- External or internal digital display, 1 to 4 characters
- SMD LED technology - Service life 50 000 hrs
- Standard colour : yellow (contact us for other colours)
- Legible up to 150 m, at a viewing angle of 110°
- Display managed by electronic encoding wheel.
- Connection : Connector.
- IP 65 for the front panel



Description	Voltage	Colour	Part number	Weight kg
Train number display 4 characters	rated voltage 72 V (50 to 900 V DC)	Yellow	YSZ1063	1.7
			Cable Encoding wheel	

Dimensions



Level indicators



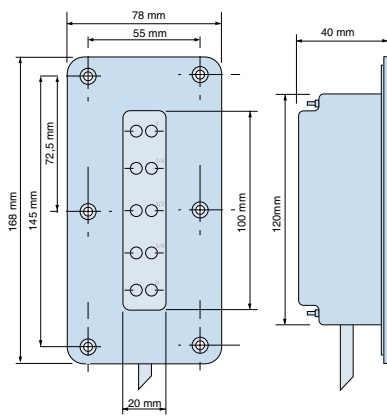
LED level indicator

- Plate in stainless steel - Plastic protective cover with levels overmoulded - 10 LEDs
- Power consumption : 15 mA max.
- Cable with «6.35 series, fastin / faston» connector
- Front panel gasket - IP 66 for the front panel

Description	Voltage	Colour	Part number	Weight kg
Compact level indicator	rated voltage 127V DC (90 to 150V)	Red	YSZ 1042	0.393



Dimensions - Cutouts



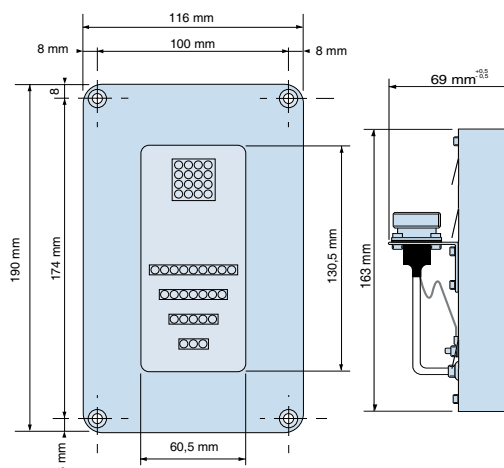
Level indicator with used water warning light

- Plate in painted steel - Protective cover in safety glass with red diffusing panel.
- 4 level bars and "used water" warning light - 40 LEDs
- Connection : Connectron FRB
- Flat gasket on front panel - IP 66 for the front panel

Description	Colour	Part number	Weight kg
Level indicator with used water warning light	Red	YSZ 1003	1.119



Dimensions - Cutouts



Level indicators

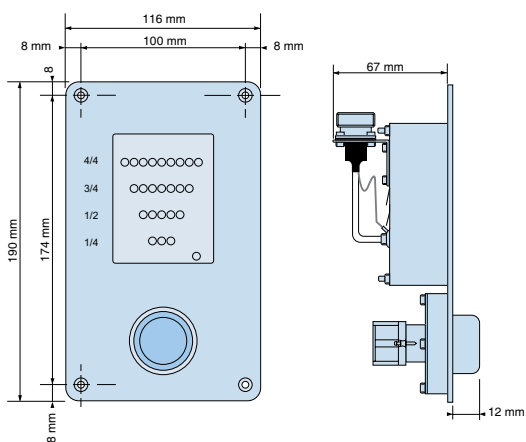
LED level indicator

- Plate in stainless steel, with engraved markings - Protective cover in safety glass with red diffusing panel.
- 4 level bars and test button - 24 LEDs
- Connection : Connectron FRB
- Flat gasket on front panel - IP 66 for the front panel

Description	Voltage	Colour	Part number	Weight kg
LED level indicator with test button	110 V DC	Red	YSZ 1016	0.974



Dimensions



LED level indicator

- Plate stainless steel, with engraved markings - Protective cover in tempered glass.
- 4 LED status lamps ø 16 mm (3 green ,1 red) - Levels and test button - 24 LEDs
- Connection : Connectron FRB
- Flat gasket on front panel - IP 66 for the front panel.

Description	Voltage	Colour	Part number	Weight kg
Level indicator with status lights and test button	rated voltage 110 VDC (77 to 135 VDC)	Green, red	YSZ 1045	1.309



Dimensions

