W3 Lightbar

Safety

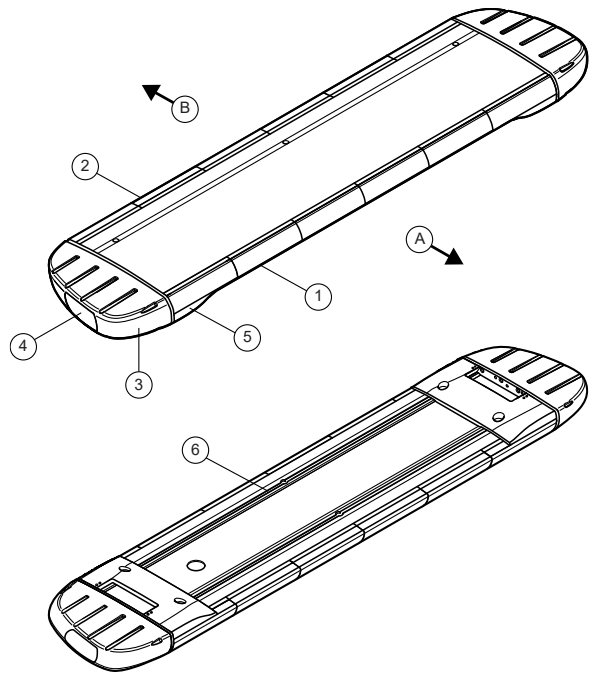
WARNING

This product contains high intensity LED devices. To prevent eye damage, do not look into the light beam at close range.

Technical Data

Attribute	Units
Lens	Polycarbonate
Color, lens	Clear or blue
Color, LED, End modules	Blue, amber, red or blue/amber
Color, LED, Inboard modules	Blue/amber, blue/red. Blue/white, white/amber, blue/green, red/empty, white/empty, empty/amber, blue/empty or red/amber
Cable	4.5 m
Voltage	12- 24 V DC
Power consumption	20 A with peak at 30 A for less than 50 ms
Length	930, 1100, 1270, 1440, 1600, 1770 or 1940 mm
Height	Corner module: 65 mm Inboard module: 47 mm
Width	280 mm
Interface	CAN bus (Standby Control System) or Break Out Box (BOB)
Operating temperature	-40°C – +85°C
Approvals	ECE R6, ECE R7, ECE R10, ECE R65, ICAO

Parts Overview

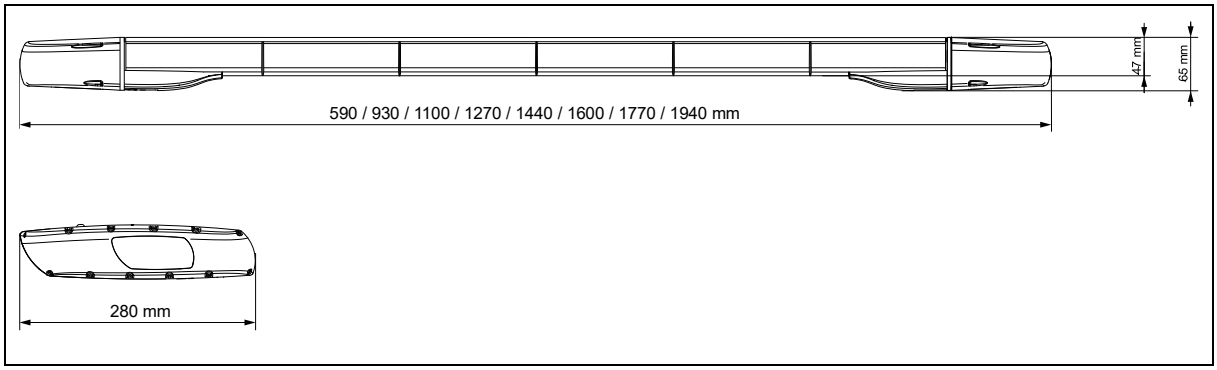


A. Front
B. Rear

1. Front module
2. Rear module
3. Corner module
4. Alley light
5. Aerodynamic cover
6. T-rail

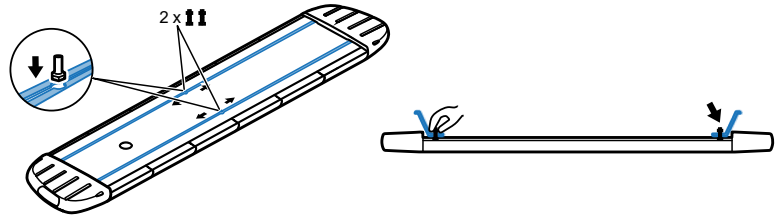
4.5 m power cable and CAN cable or Cannon connector

Dimensions



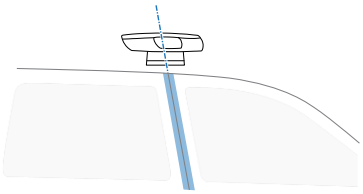
Installation

Table 1. Installation – General recommendations

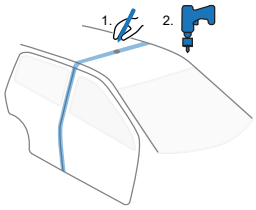


1. Use fixing screws, by hand, to attach the roof brackets on the t-rails of the lightbar bottom. Do not tighten.

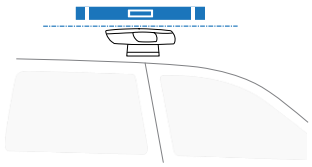
2. Pre-install lightbar with the brackets on the vehicle roof rails.



3. Adjust the position of the lightbar for minimal wind noise.



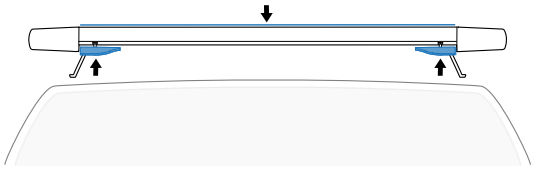
4. Cabling preparations:
   1. Mark a suitable location for the lightbar cables access hole.
   2. Pre-drill its center.



5. Pre-install the lightbar and brackets on the vehicle roof rails. Make sure that the lightbar top line is horizontal.

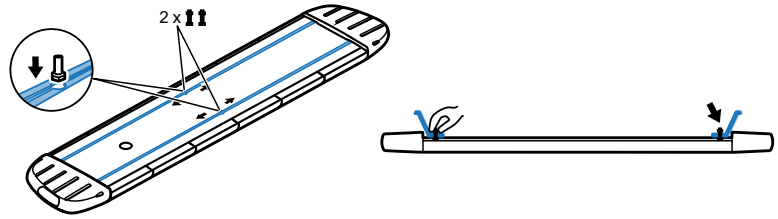
6. Adjust and tighten the fixing screws (brackets and lightbar).

7. Feed the lightbar cables through the vehicle roof.



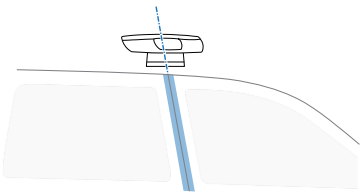
8. Mount the aerodynamic covers.

Table 2. Installation – Cannon connector as an option

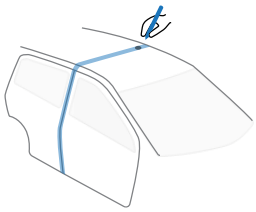


1. Use fixing screws, by hand, to attach the roof brackets on the t-rails of the lightbar bottom. Do not tighten.

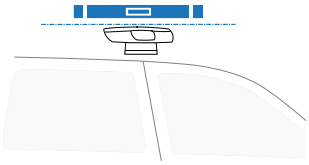
2. Pre-install lightbar with the brackets on the vehicle.



3. Adjust the position of the lightbar for minimal wind noise.

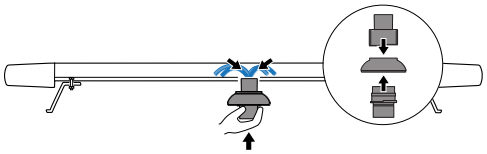


4. Cabling preparations:
   1. Mark the location for the cable connector cables access hole center.
   2. Pre-drill its center.

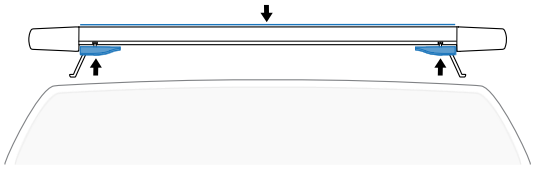


5. Pre-install the lightbar and brackets on the vehicle. Make sure that the lightbar top line is horizontal.

6. Adjust and tighten the fixing screws (brackets and lightbar).

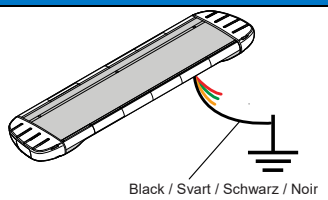
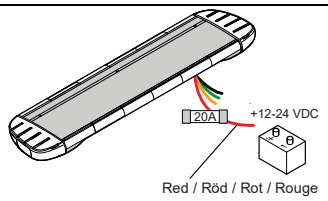
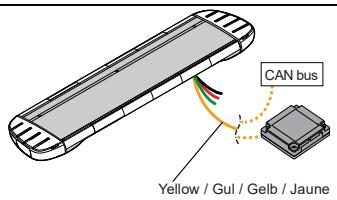
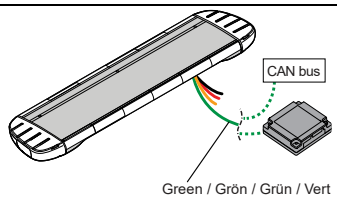


7. Mount the Cannon connector. Bring the connector up through the lightbar bottom hole. Attach the four cables from the lightbar to the connector.



8. Mount the aerodynamic covers.

Connections

Wire	Functions	Connect to	
Black	Ground	Good and suitable ground	
Red	Power supply	12-24 V DC via a 20 A fuse	
Yellow	CAN High	CAN bus of a Standby Control System or break out box	
Green	CAN Low	CAN bus of a Standby Control System or break out box	

Break out box connection to W3 Lightbar

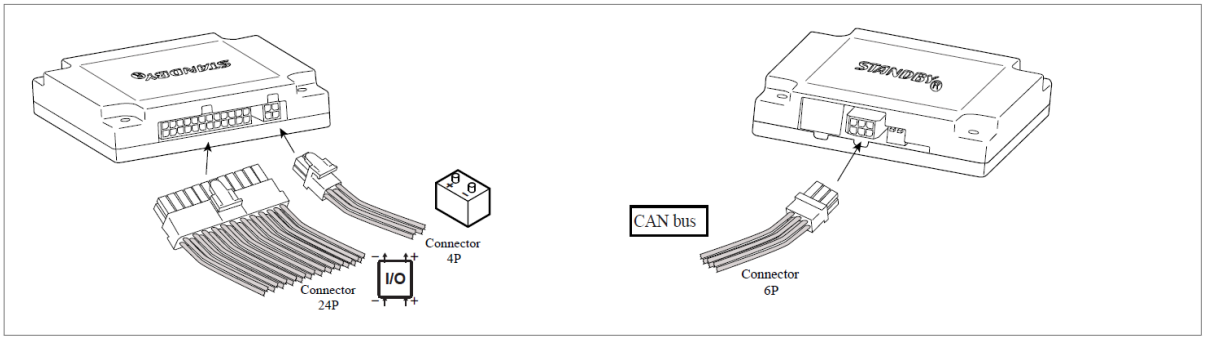
Break out box (BOB) is used when a Standby Control Systems is not installed.

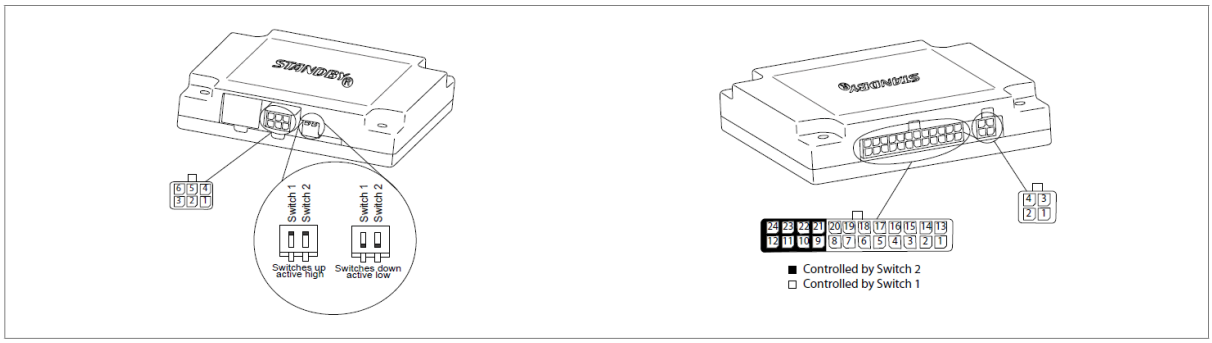
(It converts from CAN bus to traditional electrical signals)

Following Break Out Boxes are available as an option:

- BOB with ID26 for a front Lightbar
- BOB with ID27 for a rear Lightbar

Connections





- When the switch is in up-position, inputs that are connected to that switch are active high. The input is active above 8,0VDC.
- When the switch is in down-position, inputs that are connected to that switch are active low. The input is active below 1,5VDC.

Connector 4P

PIN	FUNCTION
1	Power Supply +10-30 VDC
2	Ignition ON, +10-30 VDC
3	Fault out
4	Ground

Connector 24P

PIN	FUNCTION
1-24	Input X1-X24 (see table below)

Connector 6P

PIN	FUNCTION
1	CAN High 1
2	CAN Termination to pin 5
3	CAN High 2
4	CAN Low 1
5	CAN Termination to pin 2
6	CAN Low 2

Note

Input X18 is only used during configuration and should always be set back to 0 when configuration is done.

Colour explanations:

- Blue/Amber Lightbar: Colour 1 =Blue, Colour 2 = Amber
- Red/Amber Lightbar: Colour 1 =Red, Colour 2 = Amber

Input 24P	Additional Input	Cable color	Function
X01	X18=0	Blue/White	Day/Night (night mode when active)
	X18=1	Blue/White	Reset changeable functions to default
X02		Green/White	360° Colour 1 Front Corner light
X03		Grey	360° Colour 1 Rear Corner light
X04		Black	Front Colour 1 Emergency light (inboard modules)
X05		Light green	Rear Colour 1 Emergency light (inboard modules)
X06		Brown/White	360° Colour 2 Corner light
X07		Purple	Front Colour 2 Warning light
X08	X18=0	White	Rear Colour 2 Warning light
	X18=1	White	Change behaviour if colour 1&2 are activated at the same time. Mode 0-1-2
X09		Black/White	Turn Signal Left
X10		Grey/White	Turn Signal Right
X11	X22=1	Purple/White	Running light Left
	X22=0	Purple/White	Red Brake light
X12	X22=1	Pink/White	Running light Right
	X22=0	Pink/White	Position light
X13	X18=0	Blue	Green Warning light (Front & Rear) /Police Stop inc Takedown
	X18=1	Blue	Change function on X13 between Green(default) & Police Stop
X14		Green	Take Down (White Front Light)
X15		Yellow	Alley light Left
X16		Orange	Alley light Right
X17		Red	Work light Rear
X18		Pink	Enable Config mode
X19		Red/White	Airport Mode (ICAO) ***
X20	X18=0	Brown	Red Warning light (Front & Rear)
	X18=1	Brown	Special vehicle configuration (on negative edge): Police SE
X21	X22=1	Yellow/White	Running light Center
X22		Orange/White	Enable Running light
X23	X18=1	Red/Black	Flash Configuration (on negative edge) mode 0-1-2-3-4-5
	X22=1 & X18=0	Red/Black	Warning Light (running light)
X24	X18=1	Light green/White	Flash Pattern select (on negative edge) Triple-Double-Single-Custom-ICAO
	X18=0	Light green/White	Cruise Light (on selected modules)

Maintenance

Note

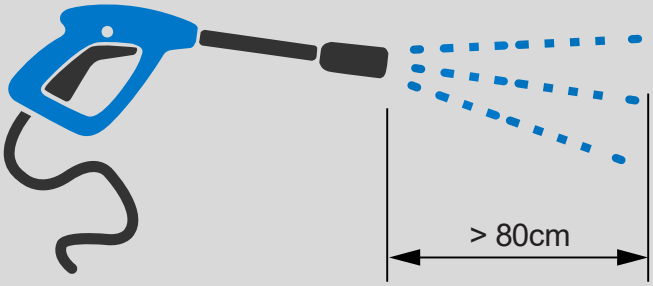
Use a mild car wash shampoo and a sponge that is gentle/appropriate to the lightbar surface as well as the vehicle surface.

CAUTION

When using high-pressure cleaner:

Water pressure at a maximum of 80 bar.

Minimum distance of 80 cm between the gun and the lightbar.



Direct the gun so that the spray pattern hits the surface at a 90° angle.

Always thoroughly rinse with clean water after a high-pressure wash.

Follow the steps above to avoid negative impacts on packing seal, logos and decals.

Caution

Do not use degreaser.

Caution

Machine wash with brushes is acceptable, as long as the brushes are clean. However this will increase the risk of the plastic becoming matte and scratchy.