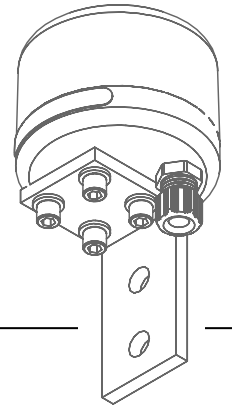




GPS SYNC UNIT

VSU-29

STAND-ALONE GPS MODULE



The VSU-29 GPS Sync Unit uses the GPS time signal to synchronise the operation of navigation lights. Two sync wires are provided: one positive transition and the other a negative transition. This allows the VSU-29 to be used with most brands of navigation lights. Vega lights synchronise with a negative transition sync pulse. The VSU-29 can be operated in three ways:

- Flash Character : where the same flash character is programmed in the VSU-29 as is programmed in the light
- Flash Character Generator : where the VSU-29 acts as a flash generator for a light
- Fixed Period : where pulses are sent at a fixed period. This mode is used to synchronise lights with different flash periods. The fixed period must be a common value where multiple flashes from all the lights being synchronised occur within the fixed time period.

In each case the start of the character or fixed period is synchronised with the GPS start time.

The sync pulse can be delayed by 0.1 to 9.9 seconds if required, to create various, synchronisation effects. All Vega LED lights can be used with the VSU-29. Note however that internal GPS sync options are available for VLB-36 and VLB-5X beacons, VLS-46 sector lights and VRL-74 range lights.

The VSU-29 comes as a pole-mount unit. An optional mounting arrangement is available to fit directly onto Vega VLB-44 beacons.

Timing accuracy is maintained using a GPS time signal. No positioning information is generated from the GPS unit.

EASY PROGRAMMING

The VSU-29 GPS Sync Unit is programmed using the Vega infrared programmer. Program functions include:

- Time period between synchronising with the GPS time clock
- Selection of operation mode of fixed period, flash character or flash generator
- Sync pulse width
- Sync pulse delay (the delay can either be done in the sync unit or the navigation light if the specific beacon supports a sync delay)
- Optional time zero reference for determining the start of a flash character, Vega GPS reference (default) or GPS epoch.



The VSU-29 mounting option for a Vega VLB-44 beacon includes the mounting ring.

OUTPUTS

Positive and negative transition pulse outputs are available from the VSU-29. Multiple lanterns can be connected to a single VSU-29 unit. Cabling distance between VSU-29 and any beacon is recommended to be under 5 metres. The VSU-29 pole-mount model is shipped with a standard 1.5 metre cable.

APPLICATION CONSIDERATIONS

- The VSU-29 needs to be mounted where the unit can acquire the satellite signal
- Mount within 5 metres of any beacon
- Do not obstruct visibility of the beacon with any wiring.

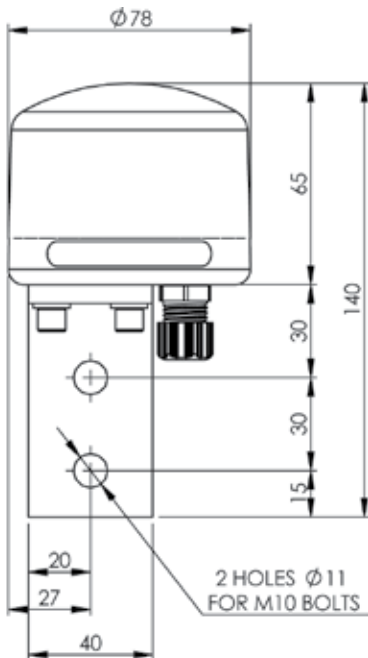
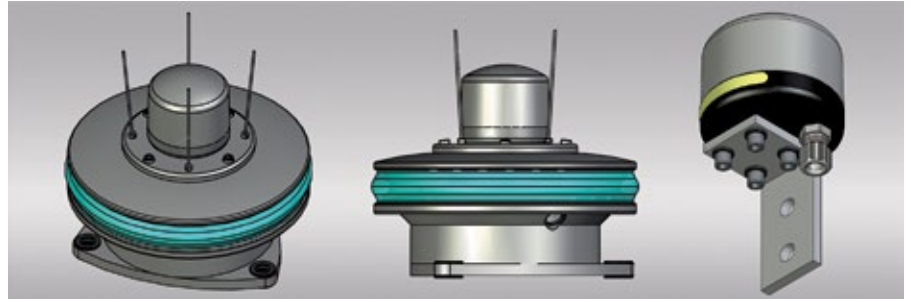


VSU-29 includes a 1.5-metre cable and mounting bracket.



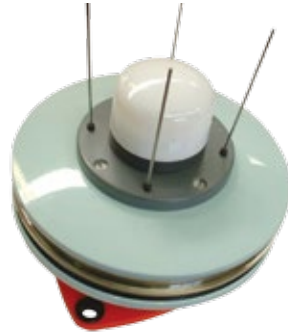
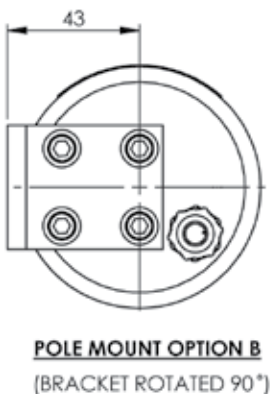
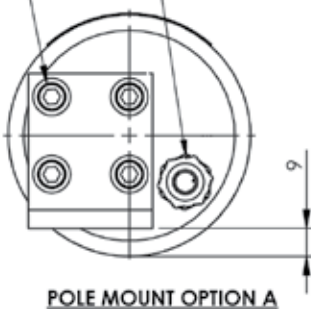
PARTS FOR ORDERING

DESCRIPTION	CODE
GPS Sync Unit with pole-mount kits	VSU-29
Mounting Kit for use on VLB-44 beacons	129-065



4 OFF M6 X 1 X 16 LONG 316 STAINLESS STEEL SOCKET HEAD CAP SCREWS FITTED WITH NYLON WASHERS UNDER THE HEADS.

M12 CABLE GLAND



SPECIFICATIONS

COMPATIBLE VEGA PRODUCTS

- VLB-2 Beacon*
- VLB-3 Beacon*
- VLB-5X Beacon *
- VLB-36 Beacon *
- VLL-43 Lead Light
- VLB-44 Beacon
- VLS-46 Sector Light*
- VSL-73 360° Sector Light
- VRL-91 Range Light*
- VLB-92 Long Range Beacon
- VRL-74 Range Light *

* These products can have a factory option of an integral GPS Sync Unit as a factory option.

PROGRAMMING

- Vega TVIR programmer
- An LED inside the VSU-29 provides positive programming feedback. The LED can also be used to show when the sync pulse is occurring
- Time zero reference: default is Vega GPS reference
- GPS time acquisition period: 5 mins to 16 hours (20 mins recommended). At power up, the initial time for acquisition may take up to 30 minutes. Thereafter the time lock will typically be achieved in less than 2 minutes
- Operation options of fixed period, fixed character or flash character generator

- 246 IALA flash characters (fixed character mode only)
- Programmable custom character
- Up to 20 factory set custom characters (fixed character mode only)
- Fixed period pulsing from 0.5 to 99.9 seconds in 0.1-second increments
- Pulse width 1 to 500 msec. Default is 10 m/sec
- Sync delay 0 to 9.9 seconds in 0.1 second increments

ELECTRICAL

- Input voltage 12 Volts (10 - 20VDC)
- Reverse polarity protection
- 2 open collector transistor sync outputs 10 to 18VDC @ 20mA. One positive and one negative transition
- GPS acquisition current 17mA
- Other operation current 5mA
- Power consumption is typically 0.148 Ah/day at default acquisition setting of 20 minutes.

MECHANICAL

- Material PVC and acrylic
- Immersion rating IP68
- Temperature -30° to +60°C
- Weight 355g.



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