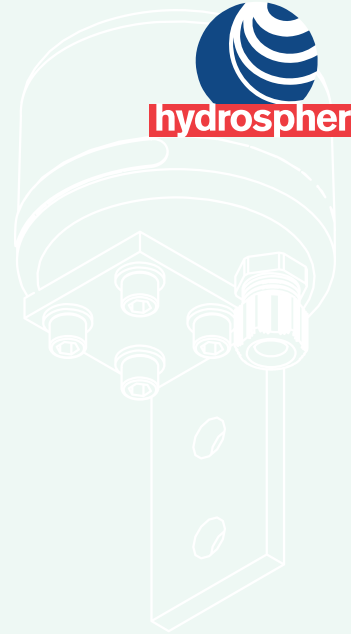




Vega *guides the way*



VSU-29 GPS SYNC UNIT

STANDALONE GPS MODULE



**VSU-29 includes
1.5m cable and
mounting bracket.**

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 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 two modes, flash character, or fixed period. The flash character is the normal mode where the VSU-29 is controlling a light or multiple lights with the same flash period. The fixed period mode allows lights with different flash character to be synchronised. The fixed period must be a common value where multiple flashes from all the lights being synchronised occurs within the fixed time period.

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 the VLB-36 and VLB-67 beacons, and VLS-46 Sector Light.

The VSU-29 comes in two forms, a pole mount option, and a mount option that fits directly on the Vega VLB-44 Beacons.

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

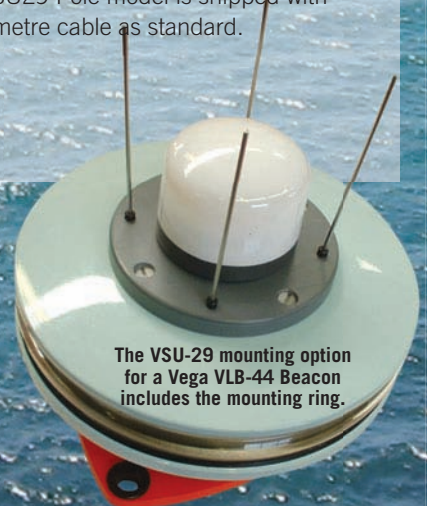
EASY PROGRAMMING

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

- Time interval between synchronising with the GPS time clock
- Selection of operation mode of fixed period or flash character
- Flash character in flash character mode
- 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)
- Option to use GPS time or UTC time (GPS time is default)

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 be under 5 metres. The VSU29 Pole model is shipped with a 1.5 metre cable as standard.



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



ISO 9001

BUREAU VERITAS
Certification



APPLICATION CONSIDERATION

- 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
- Use GPS time sync where possible in order to avoid longer satellite acquisition times

SPECIFICATIONS

Compatible Vega Products

- VLB-2 Beacon
- VLB-42 Beacon
- VLB-36 Beacon *
- VLL-43 Lead Light
- VLB-44 Beacon
- VLS-46 LED Sector Light*
- VLB-67 Beacon *
- VSL-73 All Around LED Sector Light
- VRL-91 LED Range Light
- VLB-92 Long Range Beacon
- VRL-74 Mini-array and Mini-solo *
- VRL-74 Mini-tile

* These products can have a factory option of an integral GPS sync unit.

Programming

- Vega IR programmer
- A Led inside the VSU29 provides positive feedback of programming.
The LED is also used in test mode to show when the sync pulse is occurring.

- GPS or UTC time standard
- 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.
- Option of fixed period or fixed character synchronisation.
- 246 IALA flash characters (fixed character mode only).
- Up to 20 factory set custom characters (fixed character mode only).
- Fixed period pulsing from 1 to 600 sec in 1 sec increments.
- Pulse width 1 to 500 msec. Default is 10 msec.
- Sync delay 0 to 9.9 seconds in 0.1 second increments.

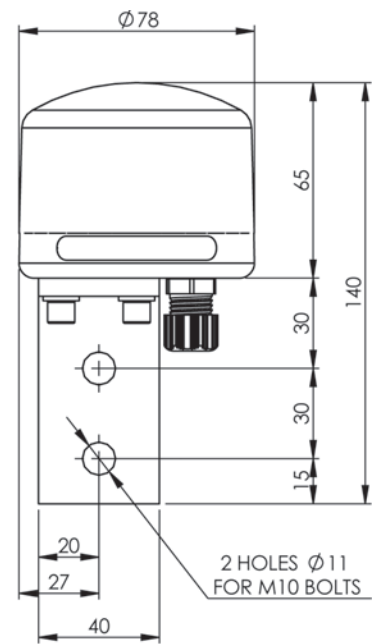
Electrical

- 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 0.108 Ah/day at default acquisition setting of 20 minutes.

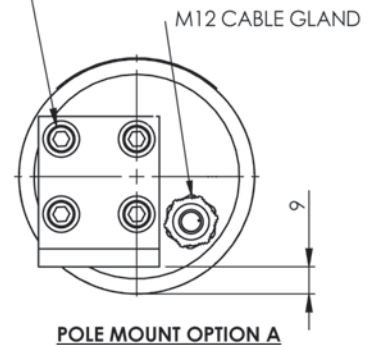
Mechanical

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

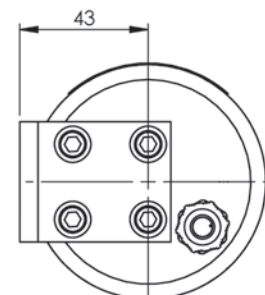
DIMENSIONS



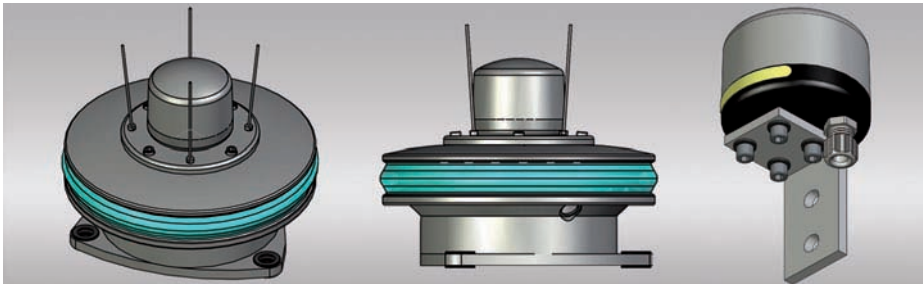
4 OFF M6 X 1 X 16 LONG 316 STAINLESS STEEL SOCKET HEAD CAP SCREWS FITTED WITH NYLON WASHERS UNDER THE HEADS.



POLE MOUNT OPTION A



POLE MOUNT OPTION B
(BRACKET ROTATED 90°)



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