SABIK
a **Carmanah** company

VSU-29

25NM @ 0.74T
40NM @ 0.85T

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 sync pulse can be delayed to create various, synchronisation effects**

- **All Vega LED lights can be used with the VSU-29**

- **Internal GPS sync options are available for VLB-36X and VLB-5X beacons, VLS-46 sector lights and VRL-74 range lights**

- **Comes as a pole-mount unit**

- **Optional mounting arrangement 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**

Functionaltity and Features VSU-29

Operation

In each case the start of the character or fixed period is synchronised with the GPS start time.The VSU-29 can be operated in three ways:

- **Flash Character:** Same flash character is programmed in the VSU-29 as is programmed in the light

- **Flash Character Generator:** VSU-29 acts as a flash generator for a light

- **Fixed Period:** 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.

Compatibility

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

Programming

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.
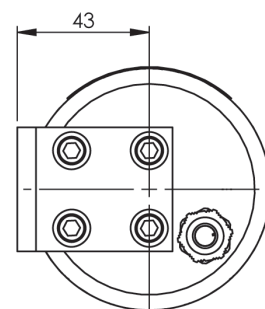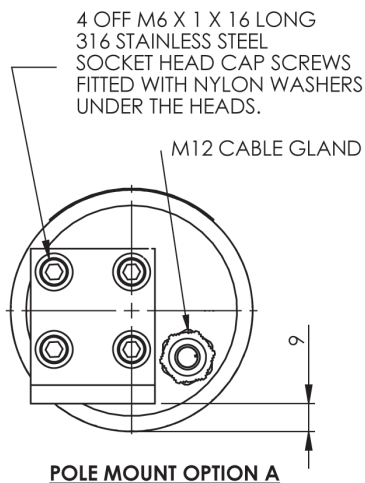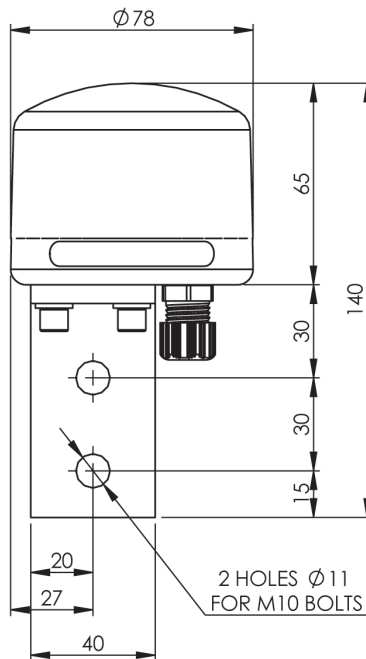
Programming

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, default reference or GPS epoch.

- An LED inside the VSU-29 provides positive programming feedback. The LED can also be used to show when the sync pulse is occurring

Application

- 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.

Technical Specification VSU-29

Ø78

65
140
30
30
15

20
27
40

2 HOLES Ø11
FOR M10 BOLTS

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

9

POLE MOUNT OPTION A

43

POLE MOUNT OPTION B
(BRACKET ROTATED 90°)

Programming specification

Flash character	246 IALA flash characters Programmable custom character
Fixed period pulsing	0.5s to 99.9s in 0.1s increments
Sync pulse width	Adjustable to 500m/s
Sync pulse delay	0s to 9.9s in 0.1s increments

Mechanical specification

Material	PVS and acrylic
Degree of Protection	IP68
Temperature	-30°C to 60°C
Weight	355g

Electrical specification

Input voltage	12V (10 - 20VDC)
Reverse polarity protection	Yes
Sync output	2 open collector transistor: 10 - 18VDC @ 20mA 1 positive & 1 negative
Power consumption	0.150Ah/day at default

Order Overview VSU-29

Option matrix

VSU-29	GPS sync unit
129-065	Mounting kit for VLB-44