SyncMaster

T I D E L A N D • S I G N A L

Tideland Signal's SyncMaster is a universal marine signal lantern flash synchronising controller enabling two or more lanterns to flash in unison without running cables or installing additional radio links between the lights. It is ideal for use in range lanterns where geographical separation makes hard wiring of lanterns together impossible. It is also excellent for buoy lanterns where delineating a marine channel or harbour entrance, and breakwaters or piers with multiple lanterns, all timed to flash in sync, clearly defining a lighted marker line.

Utilising the Universal Time Coordinated (UTC) generated by the Global Positioning System (GPS) satellite network, the SyncMaster GPS receiver outputs a repeating 1-second synchronising pulse based on time codes transmitted by GPS satellites. Tideland's SyncMaster incorporates a GPS antenna receiver with a modified OMNIBUS® II flasher controller circuit and software. The GPS receiver 1-second signal is fed into the SyncMaster, resulting in a universally standardised synchronising method, ensuring every lantern will start its flash sequence at precisely the same time.

The SyncMaster is designed to be used in Tideland Signal's full range of marine signal lanterns and is compatible with signal lanterns of other manufacturers. When using a lampchanger, the SyncMaster replaces Tideland's standard TF-3B OMNIBUS II flasher/control circuitry. When using Tideland's MLED-120 diode array (LED) lantern, the SyncMaster is used in addition to the standard DA-65 flasher.

Reduced Power Requirements

The advantage of synchronising marine signal lanterns allows the operator to significantly reduce the power requirements of the lanterns. Historically, lanterns were operated in 'Fixed Flash' mode so mariners could see multiple lanterns simultaneously. By flashing, the lantern's power consumption is reduced by 50% or more while still allowing the lanterns to be seen at the same time during their synchronised ON state. Power savings are also realized by the elimination of radio circuitry.

Buoy Lanterns

Sea Lane and Channel Marker Buoys equipped with the SyncMaster will flash in unison, giving mariners a clearly distinguishable centreline or perimeter line(s) along a sea lane or channel passageway, making it safer and easier to navigate.

Breakwater and Pier Lanterns

With all lights along the breakwater or pier flashing in unison, the mariner can easily distinguish the 'solid' line he must navigate around, rather than the confusing visual image presented by multiple lanterns flashing randomly along the hazard boundary.

Tideland's SyncMaster will flash synchronise two or more marine signal lanterns. SyncMaster can be used as a flasher/lampchanger (shown above) or can be used with the new diode array "LED" technology (shown below). SyncMaster features a modified OMNIBUS II circuit and comes with its own GPS antenna and installation cable.

SPECIFICATIONS

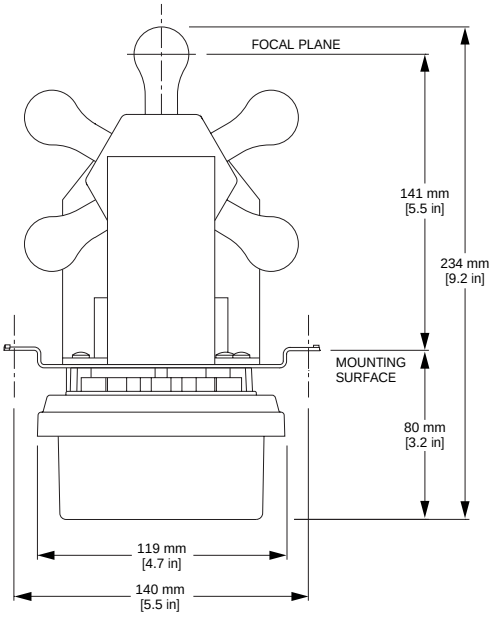
Power

Input Voltage	9 to 36 VDC
Input Voltage with Optional Transformer	110-120/220-240 VAC
Quiescent Current	20 mA maximum (12 V)
Sync Pulse	ASCII
Timing Error	+0.1% or ±50 msec. (whichever is larger) maximum
Enclosure	Housed inside lantern with an IP66 rating
Temperature	-40° C to +70° C

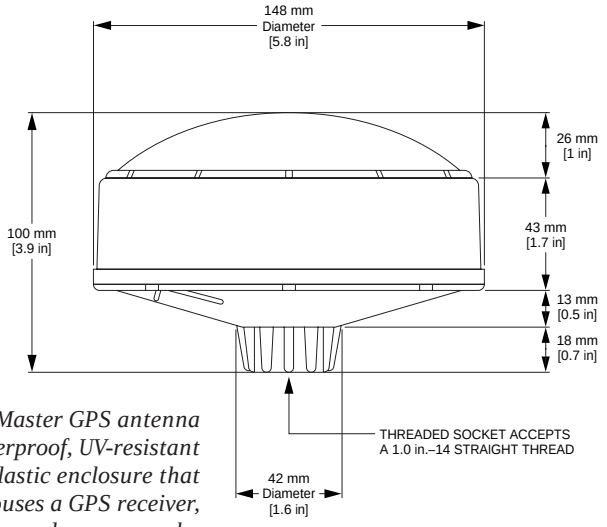
GPS Antenna

Power Consumption	250 mA @ 12 VDC, 3.0 W
Input Voltage	9 to 36 VDC
Input Voltage with Optional Lantern Transformer Noted Above	110-120/220-240 VAC
Mounting	Standard Marine Radio Antenna 1 inch by 14 threads/inch

CE



Drawing illustrates a TF-3B lampchanger configuration.



SyncMaster GPS antenna is a waterproof, UV-resistant plastic enclosure that houses a GPS receiver, antenna and power supply.

ISO 9001
Certificate Number: 30061

Tideland Signal Corporation maintains ISO 9001 accreditation. It is company policy to provide products and services that meet the highest standards of quality in the industry.

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