

# TRB-400

## MaxLumina® Rotating Beacon

A compact, stand-alone, major light station beacon equipped with uniquely designed injection moulded acrylic dioptric fresnel lenses, the TRB-400 MaxLumina® Rotating Beacon is electric powered and lends itself to DC storage battery operation that can maintain a proper charge level through photovoltaic recharging from solar panels. Lens carousel, lampchanger and flasher, gearless direct drive motor and electronic control module are contained in a weather tight aluminum housing (IP65) with cast acrylic glazing and stainless-steel fasteners. Mounted on a light tower of proper height, the TRB-400 gives coastal shipping a 24NM range light.



### CHARACTERISTICS

- CHOICE OF 6- OR 8-LENS CAROUSEL – Lens carousels are rotated counterclockwise. Simple or complex flash characters are provided by insertion of blanking panels and selected rotation period programmed into the electronic control module. Lenses are available in all IALA colours.
- CHOICE OF TWO LAMPCHANGERS – Available are the LC-70 lampchanger using Metal Halide lamps and TF-3B flasher using Quartz Halogen lamps. Each holds three standard lamps and eliminate shadowing of the operating lamp for maximum intensity and 360° visibility.
- REMOTE MONITOR AND REPORT STATUS – The TRB-400 is operated with the use of the MicroPower OMNIBUS® II circuit. A general-purpose light beacon controller that monitors and reports status of the following: status of operating lamp, number of available lamps, battery voltage (loaded and unloaded), sunswitch status, lamp fuse status, rotation period, lamp current and controls: enabling or disabling flash sequence, override or restore sunswitch control, recount good lamps, communication with a standby lantern.
- SWITCHOVER FROM MAIN TO STANDBY LANTERN – A standby lantern equipped with MicroPower OMNIBUS II circuit is normally disabled but is automatically enabled if the main lantern is not operating within specifications. Switchover from main to standby lantern is affected via a command and control communication protocol between the MicroPower OMNIBUS II circuits in the two lanterns.
- GEARLESS DIRECT DRIVE SYSTEM – Provides for life of 25 years with no scheduled maintenance for the life of the motor. Drive motor is a 12-pole brushless DC motor designed for smooth operation over the range of 6 to 120 seconds rotation period. Commutation sensors and speed encoder are integrated into the motor. Motor bearings have a maximum rated speed of 4800RPM. Maximum rotation speed of the TRB-400 is 10RPM, minimising stress. Sixteen preprogrammed rotation periods are available, controllable in the field.
- JUNCTION BOXES – One of two available junction boxes is supplied with each rotating beacon:
  - JB-1 DC, for use with DC input power, has a moulded fiberglass NEMA-4X enclosure, UL-508 listed, with overall dimensions of 228mm (9.0") long x 121mm (4.8") wide x 134mm (5.3") high. Included are the cables with connectors to plug into the receptacles on the beacon, sunswitch sensing element, and terminals for field connection of input DC power, standby beacon, and monitor and control input/ output.
  - JB02 AC, for use with AC mains input power, has a 16-gauge stainless steel NEMA-4X enclosure, UL-508 listed, with overall dimensions of 394mm (15.5") long x 329mm (12.9") wide x 152mm (6.0") high. Included are the cables with connectors to plug into the receptacles on the beacon, sunswitch sensing element, and terminals for field connection of input AC power, standby beacon, and monitor and control input/output. Also contained within the enclosure is a universal input AC to DC converter.



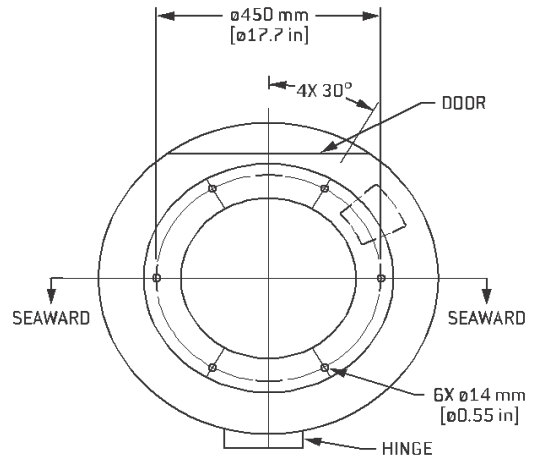
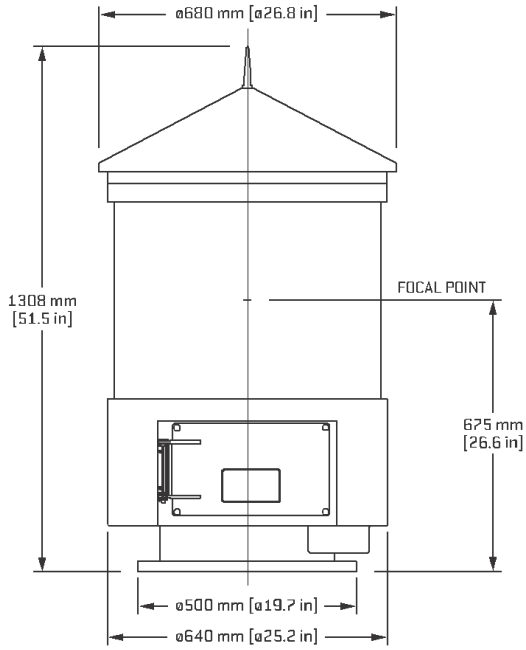
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Technical Details	
Power Consumption	
Lamp	As specified
Motor	Average 2.5W
Lens	Choice of 6-lens carousel or 8-lens carousel with moulded acrylic lenses in clear (for white), red, green, or yellow; Black aluminum panels for blanking
Focal Distance	200mm
Focal Diameter	400mm
Lamps	
Standard Marine Lamps	12VDC, 10 to 110W
Metal Halide Lamps	75W
Vertical Divergence	Variable with choice of lamps (see Effective Intensity Tables)
Input	
DC	9 to 36VDC
AC	120 or 240VAC, 50/60Hz
Rotation Periods	16 rotation periods, field selectable
Standard Periods	120, 90, 72, 60, 48, 30, 24, 20, 15, 12, 10, 9, 8, 7, and 6 seconds per revolution
Accuracy	± 1 %
Sunswitch	External
Environment	IP65
Temperature Range (ambient)	-40° C to +55° C
Height	1308mm (51.5")
Diameter	680mm (26.8")
Weight	110kg (238lb)
Recommended Service Intervals for the following:	
Drive Assembly (Motor) Bearings	25 years
Optional	Blank or transparent lenses are available for replacements or for special configurations

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