

PELANGI

Application Note 30841

South Gare Lighthouse

Lighthouse History :

The existing cast iron Lighthouse was originally installed with a 4th order 12 panel prismatic lens driven by clockwork mechanism, and lit by paraffin wick lamp which the keeper maintained. Later the clock work drive was electrified with 2 x 110 volt AC motors and the light changed to an LC15 lampchanger with 2 x 500 watt tungsten filament lamps. The original Diesel generator was converted to UPS backup to drive the Radar and Coastguard station when mains was installed.



Project Requirement:

The project aim was to retain the existing range of 20 miles White and 17 miles on the red sector and character of FL 12 sec (1.5 sec flash) with existing glass prismatic lens and pedestal drive motors. Existing lamp changer was to be replaced with new lampchanger capable of being driven from a DC power source and linked into a new radio remote monitoring scheme connected on a standalone basis.

Our Technical Solution:

1. 20 miles range requires an effective intensity of 150,000cds. In order to achieve this we selected a single 35 watt cdmt lamp mounted inside the existing lens reducing the flash length to 0.5 sec with a far greater defined eclipse increasing its ease of Identification.
2. Since mains was required to drive the pedestal motors, mains ballasts were selected for the lamp drivers. Switching between duty and standby motors was provided locally, but status of each motor provided to telemetry.

3. Pedestal motor drive circuit was incorporated into the main control cubicle monitored by our Standard PRL600 speed monitor board.



4. The existing LC15 lamp changer was replaced with a PA2 lamp changer with 2 x 35 watt cdmt clear envelope lamps to permit remote resetting and to improve sector definition on the lanternhouse sector.

