Marine Electric Clock System (MCS-970)

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GENERAL DESCRIPTION

Marine Electric Clock System is a device for indicating precise time and date to the analogue/digital slave clocks as well as recording and monitoring the operation data of the vessel. By using a 10.000MHz TCXO crystal oscillator to compensate temperature, the MCS-970 system excels in safety and precision as the system has 0.1 second error per month. These systems are manufactured to be shock and vibration proof, as well as are protected from air pressure and salt. The system was tested at the IEC60945 standard and approved for CE.

System Features
1. Power Source: AC110/220V, 10, 50/60 Hz
2. Emergency Power: AC or DC 24V (Ripple less than 5%)
3. Power Consumption: AC, less than 5VA
   DC, less than 1.5A (At 24V DC)
4. Automatically switch to DC when AC power causes failure
5. Certification: DIN CE
6. Temperature: -10°C ~ +45°C
7. Humidity: Less than 90%
8. Net Weight: 0.828kg
9. Painting Color: 5# PB 2.8 / 3.0 (Dark Blue)
10. Dimension: 364(H) x 310(W) x 110(D)
11. Mount Type: Flush Mount (Manufacturer Standard)

Capacity & function of the System
1. Crystal Oscillation Frequency: 10.000MHz (TCXO)
2. Accuracy: Within ±1.0 sec per month
3. Dual Clocks in Main Unit:
   - Master (UTC): Three Hands, 0.3sec, Leap, Ø60mm Dial
   - Slave (UTC): Two / Three Hands, 0.3sec Leap, Ø60mm Dial
4. Output Signal Form:
   - For 0.3sec Slave Clock: DC 24V, 0.3sec Polaced Pulse
   - For 0.3sec Slave Clock: DC 24V, 0.3sec Polaced Pulse
   - Time Signal for Engine Telegraph Logger: DC 24V, 0.3sec Polaced Pulse (ADV / REV)
5. Slave Clock: Up to 60ova
6. Battery Slave Clock (Optional)
7. Digital Slave Clock (Optional)
8. Built-in Lighting control system (Dimmer)
9. Fully protects: Power source and slave line circuit
10. Robot mechanism architecture and excellent stability
11. Easy time control: CW and CCW direction for slave clocks
12. High speed time setup

Control Panel of Main Unit
1. UT (Universal Time)
2. LT (Local Time)
3. Mounting Holes
4. Hinge
5. Display & Control
6. Name Plate
7. Front Panel Mount

Detailed Description of each part
1. 30-sec Time adjust switch
2. “TIME”: Stopping time of all clocks for a while
3. “DIMMER” : Adjust illumination of back (BL) light
4/5. AC / DC Power Fuse: 1.5A / 5.5A
6/7. 655 / 380 Out Fuse: 1.0A / 1.0A
8/9. DC / AC Power Switch

[ Wiring Diagram of Marine Electric Clock (MCS-970) System ]