Marine Electric Clock System (MCS-980)

Marine Electric Clock System (MCS-980) with GPS Interface and NTP Server

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 connecting to GPS and other devices, the MCS-980 system receives data from the National Marine Electronics Association (NMEA) and the Internet protocols (LAN) to automatically renew and synchronize the precise local time. 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: 1 AC 110/220V, 1B, 50/60 Hz
2. Emergency Power: AC or DC 24V (Ripple less than 5%)
3. Power Consumption: AC, less than 0.2VA
   DC, less than 15A (AC 24V DC)
4. Automatically switch to DC when AC power causes failure
5. Certification: DNV CE Submitted

Capacity & function of the System

1. Crystal Oscillation Frequency: 10.000 MHz (TCXO)
2. Accuracy (b/w GPS): Synchronizing from GPS automatically
3. Dual Clocks in Main Unit:
   - Master (UTC): Two Hands, 0.5Sec, Leap, 60mm Dial
   - Slave (UTC): Two / Three Hands, 30Sec, Leap, 60mm Dial
   - LCD Display: UT, LT, Year / Month / Day / Hour / Minute / Second 16 Character 2-Line, Back Light
4. Output Signal Form:
   - For 0.5Sec Slave Clock: DC 24V, 6Sec Pulsed Pulse
   - For 30Sec Slave Clock: DC 24V, 30Sec Pulsed Pulse
   - Time Signal for Engine Telegraph Logger: DC 24V, 30Sec Pulsed Pulse (APW / REV)
5. NMEA-0183 Signal: Time & Date (IEC1161-1, RS-422, ZDA)
6. There are 3 set Output Port for NMEA-0183
7. Baud Rate Setup (NMEA-0183): Setup, 1200 / 2400 / 4800 / 9600
8. ±20 ~ 20 Minute Control (Optional)
9. Slave Clock: Up to 800s
10. Battery Slave Clock (Optional)
11. Built-in lighting control system (Dimmer)
12. Fully protects: Power source and slave line circuit
13. Robust mechanism architecture and excellent stability
14. Easy time control: CW and CCW direction for slave clocks
15. High speed time setup
16. NTP Server (Network Time Protocol, Option)

Display of Control Panel of Main Unit

1. UTC / LT: Universal Time / Local Time
2. Synchronizing from GPS signal automatically

NMEA-0183, Serial Interface Protocol

1. (RJ11) Out (3) NMEA-0183, IEC1161-1, RS-422 (Compatible, SPFDZA)
2. Baud Rate Pre set: 4800BPS (1200 / 2400 / 4800 / 9600 Compatible)
3. Standard Data Format: 1600-N-8-1 (8/Bit Data-Parity-Stop), ZDA

Wiring Diagram of Marine Electric Clock (MCS-980) System

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