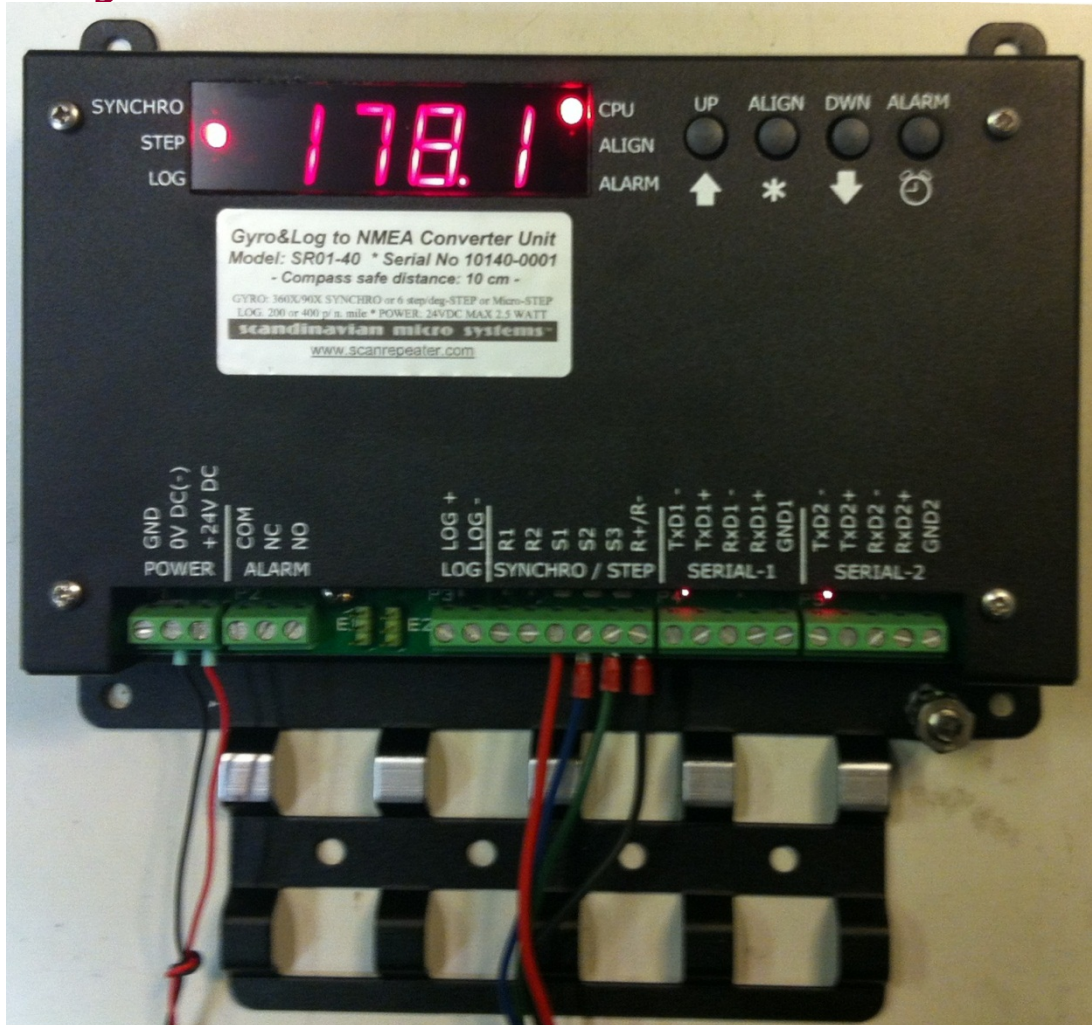


## Gyro & LOG to NMEA Converter



### Model SR01-40

(3<sup>rd</sup> generation "Lehmkuhl Repeater")

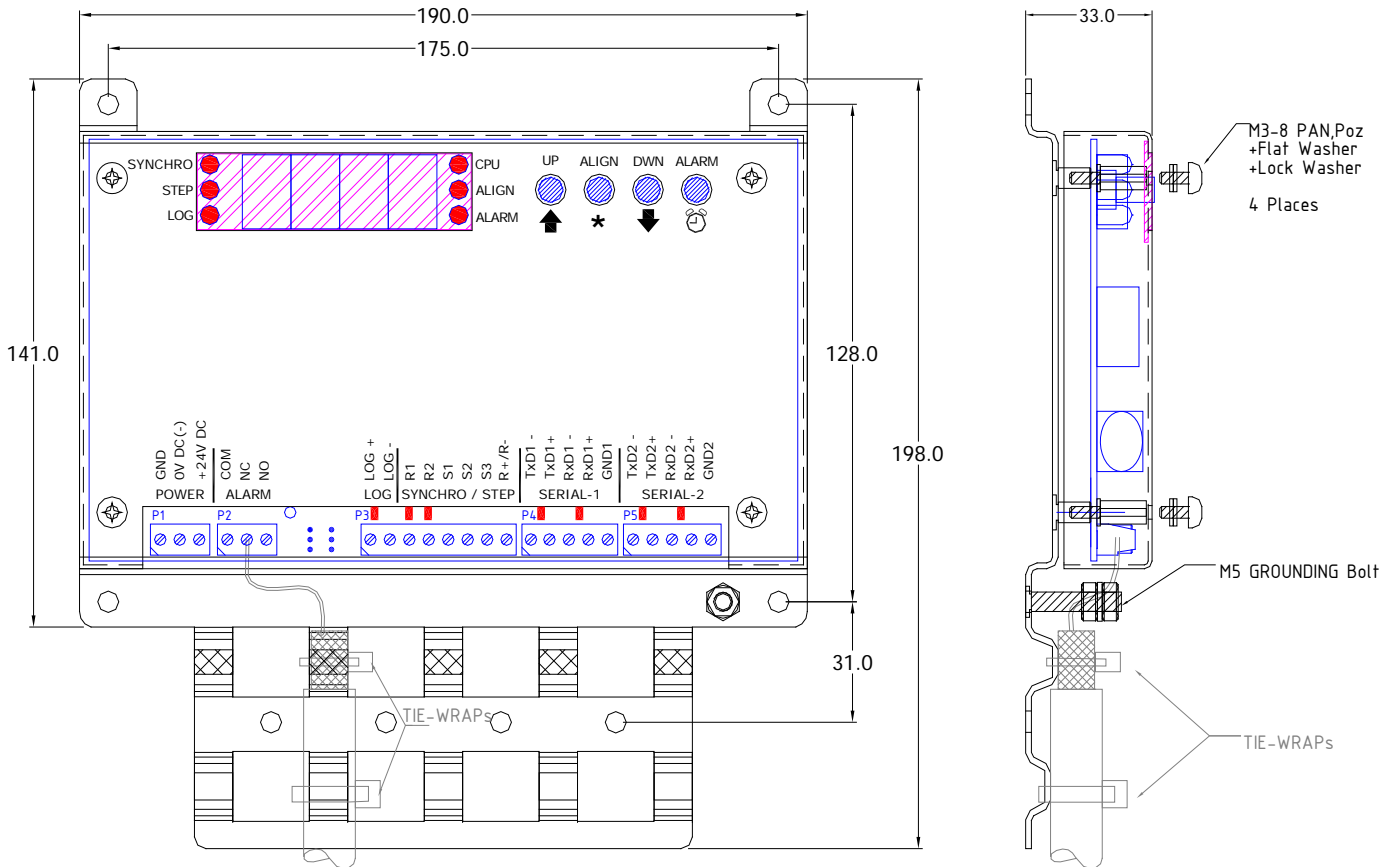
- **Gyro Signal Converter "LR40"**  
... converts old type Gyro signals such as Synchro 360X and 90X, "Sperry Step" 6-step per deg., AnschützMicro Step and C.Plath(Sperry) Micro Step.
- **Speed LOG to NMEA Converter**  
... converts 200 or 400 pulses per n. mile to NMEA Speed sentence.
- **NMEA HEADING & ROT OUTPUT**  
... HEADING data output as NMEA or as Course Bus, Tokimek, Yokogawa, "Lehmkuhl" LR22/40/60, Robertson SKR80/82 formats.
- **ALARM Signals**  
... SR01-40 has ALARM relay output: Normally Open (NO) and Normally Closed (NC) Relay Contacts and the option for NMEA alarm communication.

**SR01-40 can drive several SR01-02 Digital Heading & ROT Display units**

**scandinavian micro systems™**

[www.ScanRepeater.com](http://www.ScanRepeater.com) E-Mail: [sales@ScanRepeater.com](mailto:sales@ScanRepeater.com)

Fort Lauderdale, FL - USA \* Kolbotn (Oslo) – Norway \* London - UK



### MAINS POWER

24V DC +30%, - 20% \* Max 2 Watt  
The SR01-40 has no ON/OFF switch.

### PHYSICAL SECIFICATION

Temp. (operational): -15 deg C / +55 deg C  
Physical Protection: IP22

### GENERAL DESCRIPTION

The SR01-40 is a low cost, high quality unit for converting old type Gyrocompass and Speed LOG signals to NMEA.

SR01-04 also computes Rate of Turn (ROT) and you can elect to output the NMEA ROT sentence in addition to the NMEA HEADING sentence

The SR01-40 can also be used as a *Protocol and Baude Rate Converter*.

### HEADING / LOG DISPLAY

The display shows the Gyro Heading or the LOG speed as read exported on NMEA by the SR01-40.

NOTE that the SR01-40 must be Aligned to the Gyro Compass Heading.

### OPERATION CONTROL

#### UP (↑) and DOWN (↓)

These are used for Brilliance Control and for Aligning the Heading Display value

#### BRILLIANCE CONTROL:

Press the UP ARROW (↑) to increase brilliance or the DOWN ARROW (↓) to decrease brilliance.

### ALIGN BUTTON

A separate Button is provided to put the unit in ALIGN Mode. Then each digit can be adjusted up or down by the arrow buttons. Align Button and the UP ARROW (↑) and the DOWN ARROW (↓).

### ALARM BUTTON

SR01-40 has a dedicated ALARM REST button for acknowledging and re-setting any alarms

### ALARMS

Alarms are displayed by activating the ALARM LED, the ALARMA RELAY and by Flashing an Alarm Code in main Display.

The ALARM Relay has one Normally Open Contact (NO) and one Normally Closed (NC) contact. NMEA ALARM communication is also available. SR01-40 has NO sound alarm.

### SET-UP PROGRAMMING

Set-Up is done on 3 DIL Switches located under the lid. However as noted below, the SR01-40 will adjust automatically to the applied Gyro Compass Signal voltage levels and Frequencies.

### GYRO COMPASS INPUT SIGNALS

Synchro Signals: All 360X and 90 X Synchro Signals. SR01-40 adjusts Automatically to the signal level applied.

For 1X, 2X, 11X and 36X Synchro Signals please use SR01-60.

6-Step per degree: ("Sperry Step") 24, 35, 50 & 70 volts. Positive or Negative Reference. SR01-40 adjusts Automatically to the signal level applied.

Anschütz Micro Step is decoded

C. Plath (Sperry) Micro Step is decoded.

### LOG INPUT

SR01-40 accepts 200 or 400 pulses per nautical mile and converts to NMEA Speed output.

### DATA (NMEA) INPUT / OUTPUT

The SR01-40 has two independent Full Duplex Communication Channels. NOTE: Both data INPUT and OUTPUT are fully isolated.

### NMEA PROTOCOLS supported

\$HEHDT,xxx.x,a\*hh<CR><LF>  
\$--THS,xxx.x,a\*hh<CR><LF>  
\$--HDM,xxx.x,a\*hh<CR><LF>  
\$--ROT,x,x,a\*hh<CR><LF>

### Speed protocol (Output):

\$--VBW,x,x,A,,,,,\*hh  
\$--VHW,x,x,T,x,x,M,x,x,N,x,x,K\*hh<CR><LF>

### Sperry proprietary protocol:

\$PPLAN,,,,,a\*hh<CR><LF>.

### Yokogawa old NMEA protocol:

\$HEHRCxxxxx,-xxx\*hh<CR><LF>

### Tokimec / Robertson RGC11 protocol

STX K xxx.x L xx.x ETX.

### Anschütz, Course Bus Protocol

STX <b1><b2> ..<b11><b12> .. CS ETX

### Lehmkuhl LR40 Binary Protocol

- With Alarm data

### APPROVALS

Type Approval will be provided later.

### DIMENSIONS in mm

Width:190 x Height: 198 x Depth: 33

### WEIGHT

Unit Net weight: 0.8 kg.  
Gross Weight for Shipping: 1.0 kg

## SCANDINAVIAN MICRO SYSTEMS Contact Page

Scandinavian Micro Systems provides a range of Navigation Instruments such as SR01-02 Digital Heading & ROT Repeater, SR01-40 and SR01-60 Step & Synchro to NMEA and SR03-01Mk2 Universal NMEA to analog Step or Synchro Drive unit.

SR01-60 is ideal for use with our New Heading & ROT Repeater;  
SR01-02 (see picture below)



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