

LOWRANCE

SIMRAD

Outboard pilot,  
Cable steer pack  
Installation Guide

ENGLISH



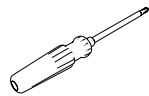
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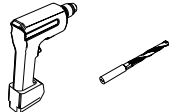
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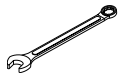
Technical specifications1

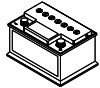
|                       |                                                    |
|-----------------------|----------------------------------------------------|
| NAC-1                 |                                                    |
| Operating temperature | -25°C to +55°C (13°F to 131°F)                     |
| Protection            | Splashproof, IPx5                                  |
| Weight                | 0.6 kg (1.3 lbs)                                   |
| Power supply/Load     | 9-16 V DC/140 mA + drive unit load                 |
| Performance           | Drive: 8 A cont., 16 A for 1 s                     |
| Point-1AP             |                                                    |
| Operating temperature | -25°C to +60°C (13°F to 140°F)                     |
| Protection            | Watertight, IPx7                                   |
| Weight                | 0.14 kg (0.31 lbs)                                 |
| Power supply/Load     | 9-16 V DC/<100 mA @ 12 V DC                        |
| Performance           | Heading: +/- 3°, Horiz. accuracy: 3 m (9.8 ft)     |
| Compass safe distance | 1 m (3.3 ft)                                       |
| Auto/Standby button   |                                                    |
| Operating temperature | -25°C to +55°C (13°F to 131°F)                     |
| Protection            | Splashproof, IPx5                                  |
| Weight                | 0.04 kg (0.09 lbs) (including cable)               |
| Helm-1                |                                                    |
| Operating temperature | -15°C to +75°C (5°F to 167°F)                      |
| Protection            | Splashproof, IPx5                                  |
| Weight                | 4.6 kg (10.14 lbs)                                 |
| Load                  | Motor: 1.3 A (no load), max 5 A, Clutch: 0.8 A     |
| Performance           | HO-HO 15 s (no load), Max thrust 1.300 N (290 lbs) |
| Precision-9           |                                                    |
| Operating temperature | -25 to +65 °C (-13 to +149 °F)                     |
| Protection            | IPx7                                               |
| Weight                | 165 g (5.8 oz) + 130 g (4.6 oz) (Bracket)          |
| Power supply/Load     | 8-16 V/1.4 W                                       |
| Accuracy              | ± 2 degrees after calibration                      |
| Compass safe distance | 0.5 m (1.7 ft)                                     |

PLANNING: Tools needed2

Screwdriver

Drill

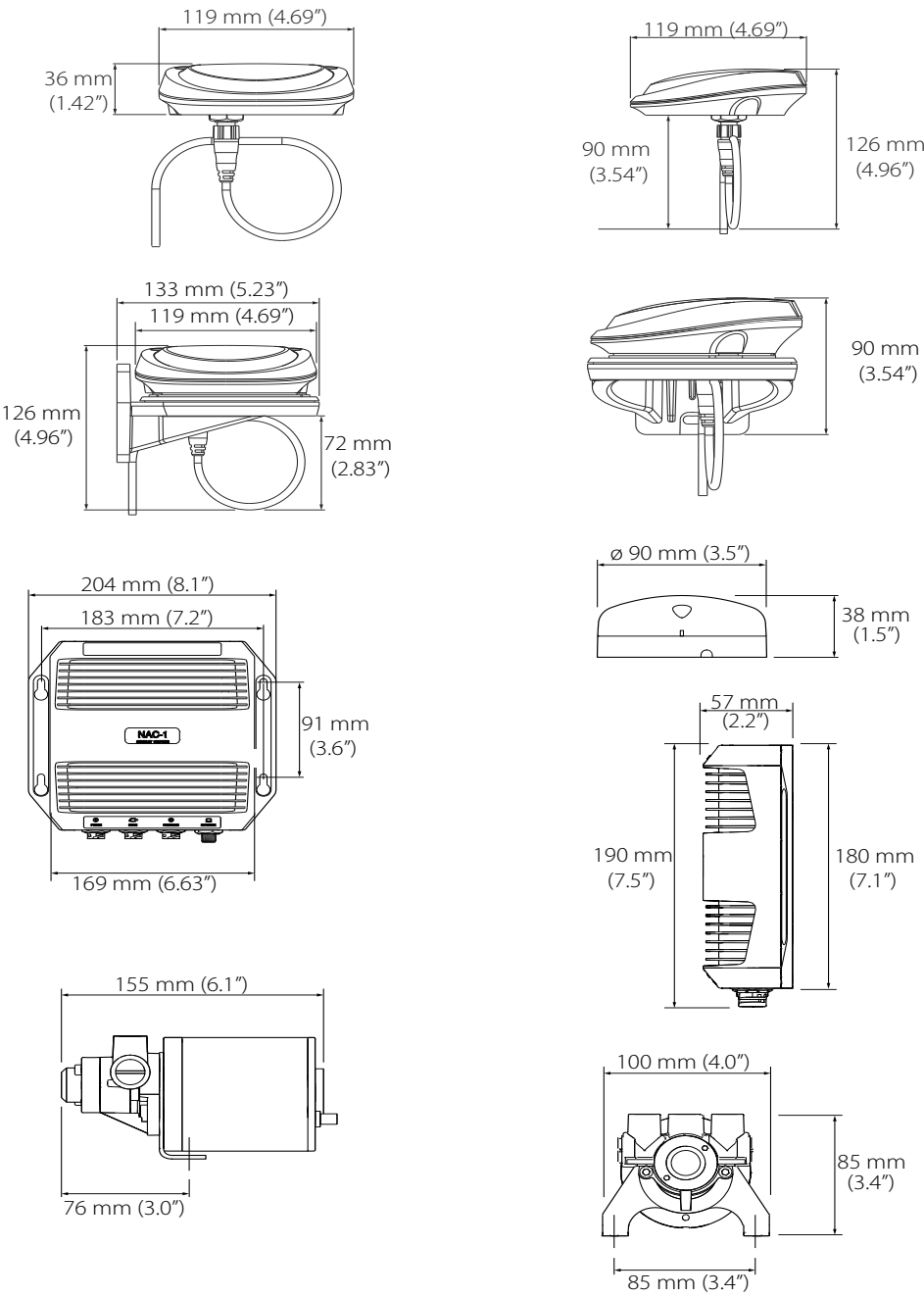
Wrench

Tools to connect power cables to the battery.

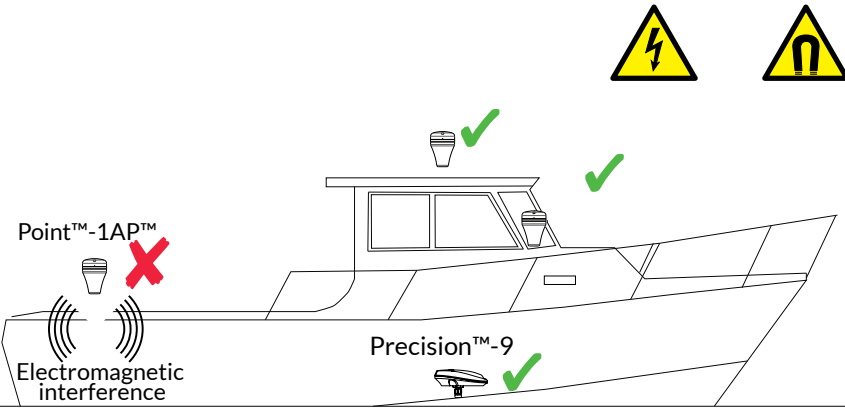
PLANNING: Cable lengths3

Refer to Wiring diagram (point 15) to find the various cable lengths.

PLANNING: Dimensions4



PLANNING: Point-1AP and Precision-9 Compass, Mounting location5



Point-1AP and Precision-9

The compasses contain a magnetic heading sensor and should not be mounted close to any potential magnetic source, and as close to the vessel's centre of roll and pitch as possible. Refer to technical specifications.

Potential sources for magnetic/electromagnetic interference include:

- Electrical Motors/Magnets/Moving Metal items
- Outboard Engines
- High current electrical sources such as main power cables, batteries, distribution panels etc.

The Point-1AP compass also comes with a GPS antenna and should be mounted as far as possible away from disturbing magnetic/ electromagnetic interferences.

Compatibility information6

The drive unit either replaces or is used in conjunction with common brands of mechanical rotary and rack and pinion steering helm units. The drive is based on the Morse 290 rotary helm unit and accepts Morse 304411, Teleflex SSC52, and Dometic Sea Star SSC290 rotary cables without modification.

If the boat is fitted with any of the following systems:

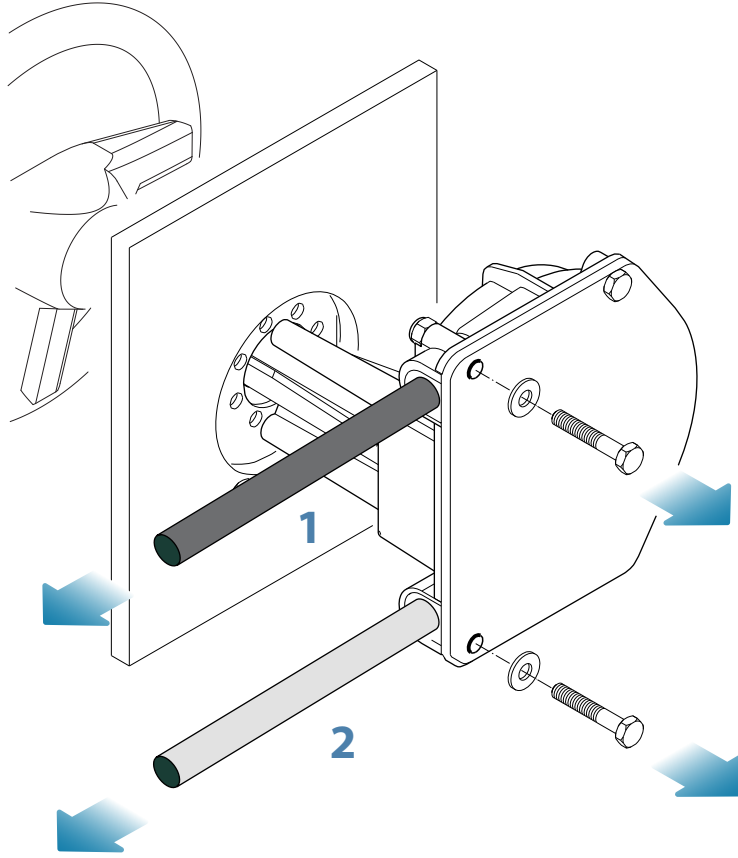
**Teleflex Safe T or Teleflex Big T Uflex T71 Uflex T73NR or Uflex T81**

A cable adapter must be fitted to the cable before installing the drive.

If the boat has a rack and pinion type steering system (or other brands of rotary system), the drive can be used, but the steering cable must also be replaced with a Dometic Sea Star SSC290.

The drive is designed to produce a maximum cable push/pull of 136 kg, which makes it suitable for the vast majority of cable steered boats. However, some boats fitted with push-pull cable steering systems have very stiff steering or steering which is heavily loaded in one direction due to hull design and engine considerations. Generally speaking, the drive will steer boats that do not require more than a 7 kg force on the rim of a 35 cm diameter steering wheel to hold a course, this equals 1.2 kg-m of torque. If the steering wheel input torque exceeds this figure it is recommended that a hydraulic linear actuator drive system is used.

Remove steering cable (1) and cable tube (2) from existing manual helm7



Remove existing manual helm from dashboard8

