

Outboard pilot, Cable steer pack Installation Guide

ENGLISH



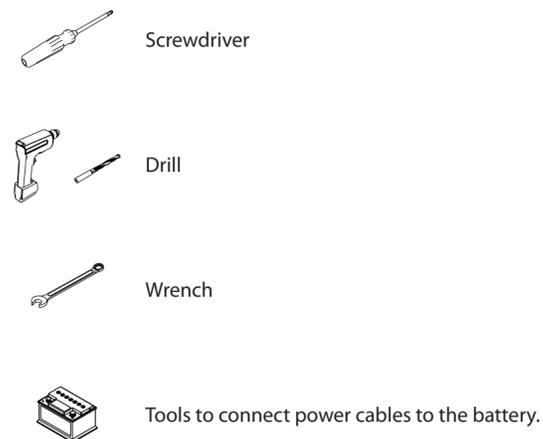
Technical specifications

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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)

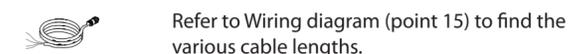
PLANNING: Tools needed

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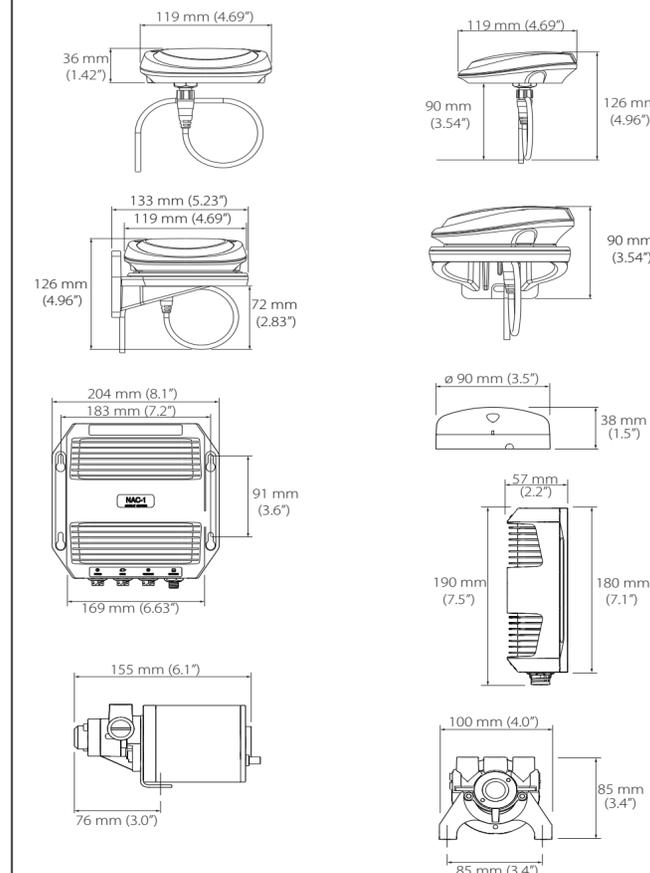
PLANNING: Cable lengths

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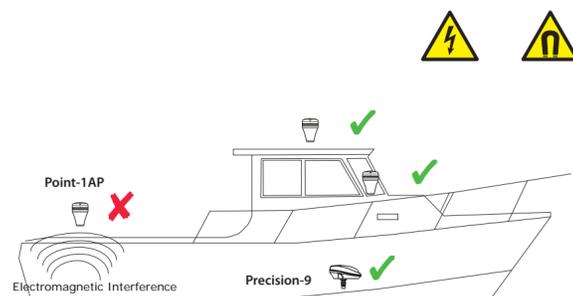
PLANNING: Dimensions

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

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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 information

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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 and Teleflex SSC52 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**

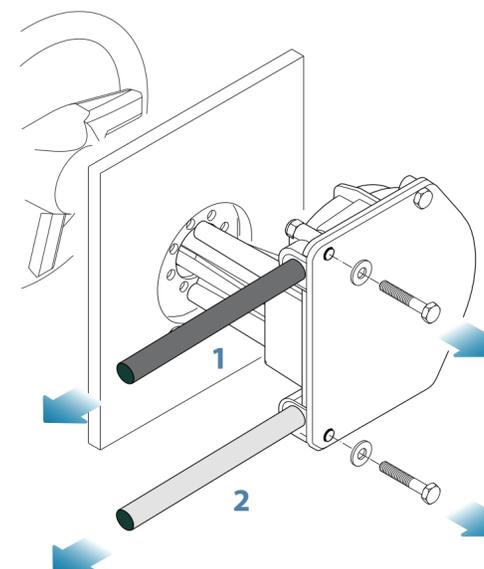
A cable adapter must be fitted to the cable before installing the drive.

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 Morse 304411 or Teleflex SSC52.

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 kgm of torque. If the steering wheel input torque exceeds this figure it is recommended that a hydraulic linear actuator drive system is used.

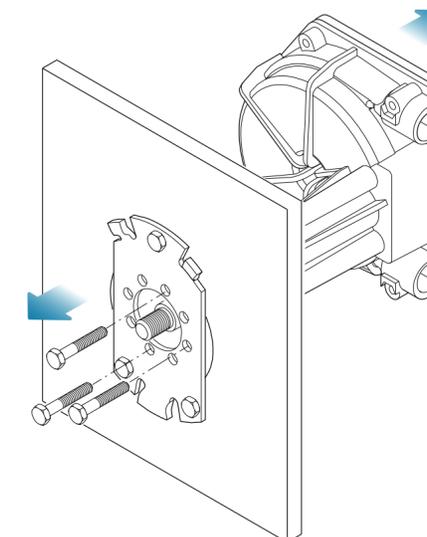
Remove steering cable (1) and cable tube (2) from existing manual helm

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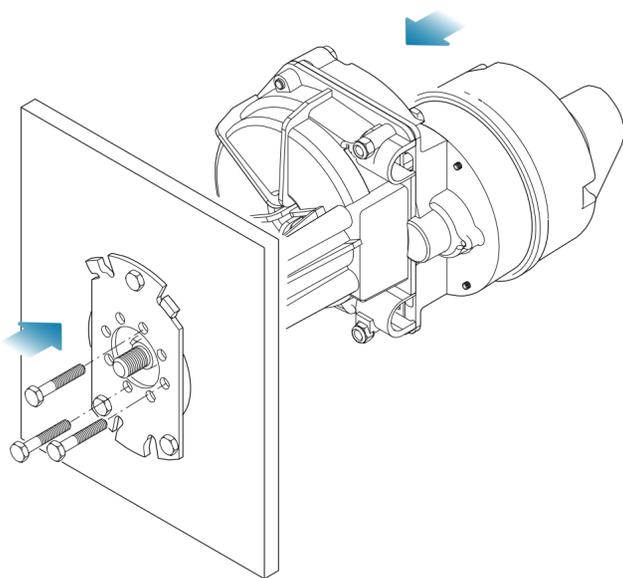
Remove existing manual helm from dashboard

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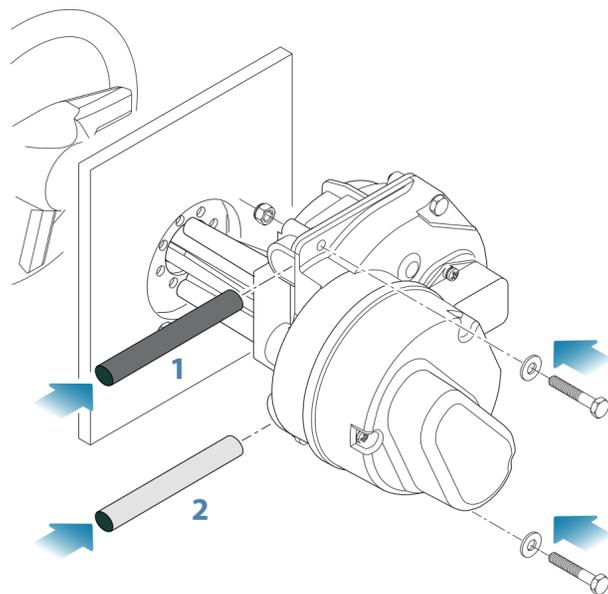
Install Helm-1 to dashboard

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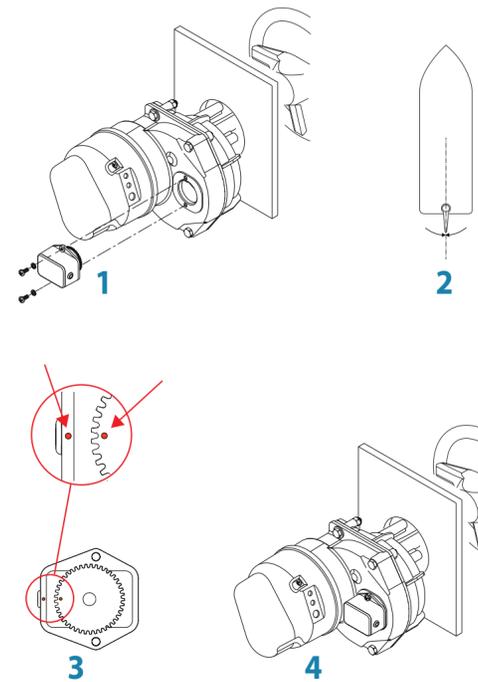
Install steering cable (1) and cable tube (2) to Helm-1

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Helm-1, Rudder feedback calibration

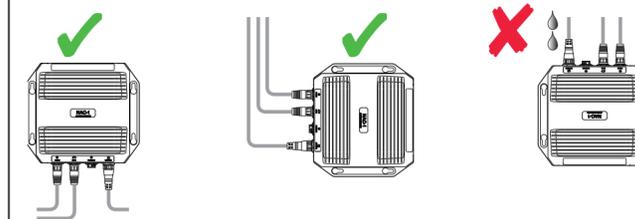
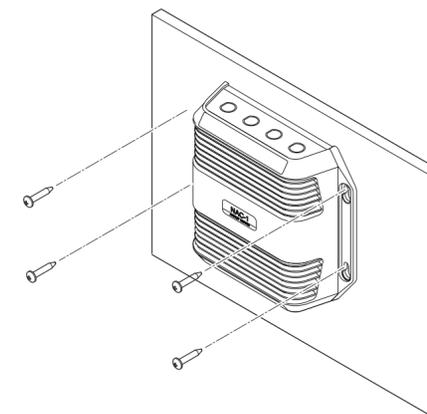
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1. Remove the rudder feedback sensor from the drive unit
2. Centre the steering
3. Align the 2 red dots
4. Fit the rudder position sensor to the drive unit.

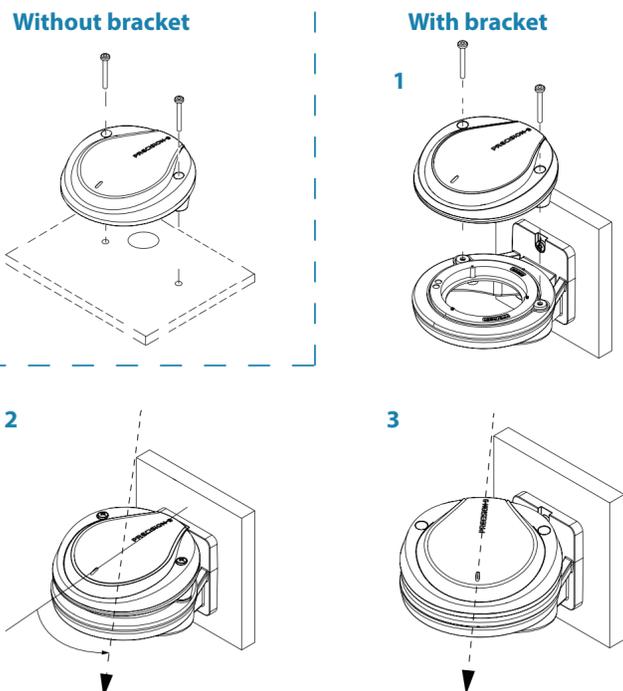
MOUNTING: NAC-1

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MOUNTING: Precision-9

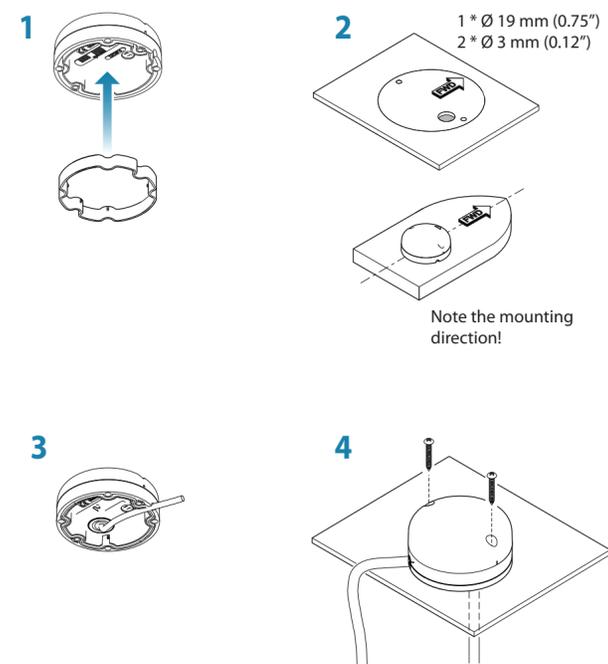
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For more details about mounting Precision-9, refer to the Precision-9 Mounting Template and Installation Guide. available for download on:
www.simrad-yachting.com
www.lowrance.com
www.bandg.com

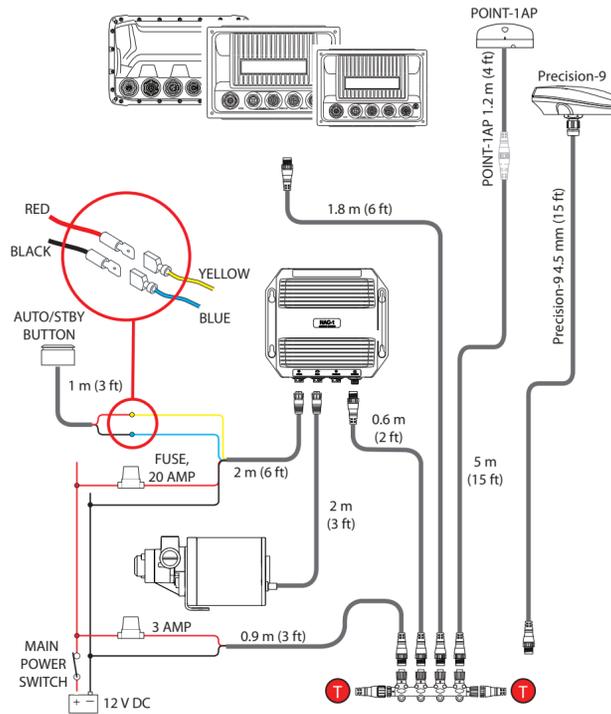
MOUNTING: Point-1AP

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WIRING: Wiring diagram

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Configuration and reference

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Refer to your Autopilot controller's documentation for setup instructions.



For more details about Helm-1, refer to the Straight Shaft Helm Drive manual, available for download on:
www.simrad-yachting.com

Compliance Statements

- The Outboard pilot, Cable steer pack:
- Complies with CE under EMC directive 2004/108/EC
 - Complies with the requirements of level 2 devices of the Radiocommunications (Electromagnetic Compatibility) standard

The relevant Declaration of Conformity is available on the following websites under model documentation section:
www.simrad-yachting.com
www.lowrance.com

