988-10274-001

SIMRAD

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CDI80, CD100A
Installation guide

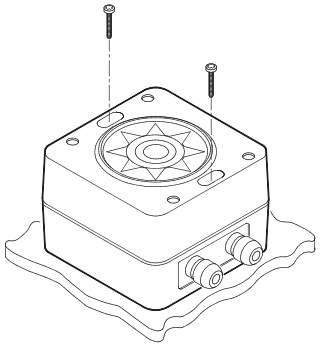
CE N2584

General

CDI80 Course Detector Interface is designed for reading heading from a magnetic compass by use of a Simrad CD100A Course Detector, and transmit it on the autopilot CAN bus.

CDI80 has automatic gain adjustment, hence it can be used with a wide range of compass types.

CD100A is a fluxgate type detector, reading the magnetic field from the compass card.



Installation

CDI80

CDI80 can be mounted in any orientation by using the two screws through the slots of the unit.

The unit must be mounted within the reach of the 7 m cable from the CD100A.

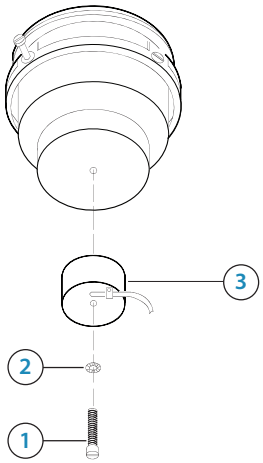
Use the supplied mounting kit and drill holes through the centre of the slots.

CD100A

→ ***Note:*** The compass used for mounting the CD100A must be fully gimballed.

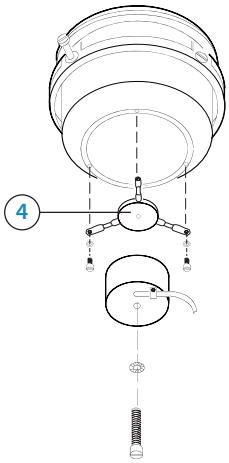
The CD100A course detector can be attached to the compass either by the 6 mm screw to the (flat) bottom of the compass bowl, or by using the tri-pod holder to a reflector type compass. See illustrations.

→ ***Note:*** Take care when drilling and tapping the 6 mm hole in the center of the compass bowl, there is normally only a few mm distance to the inner liquid container!



Secure the 6 mm screw through the center hole of the CD100A. Make sure the cable does not prevent the compass from moving freely in the gimbals.

The distance between the CD100A and the compass card is not critical (since CDI80 has automatic gain adjustment), but is typical 70-90 mm.

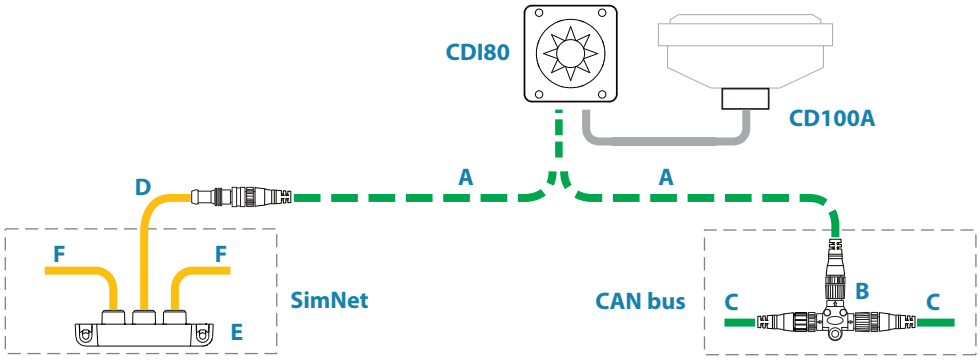


Item	Description
1	Screw M6x25mm, non magnetic
2	Washer, non magnetic
3	Course detector
4	Tripod holder

→ ***Note:*** Lock nut on mounting screw (pos. 1) for transportation only. To be removed before mounting.

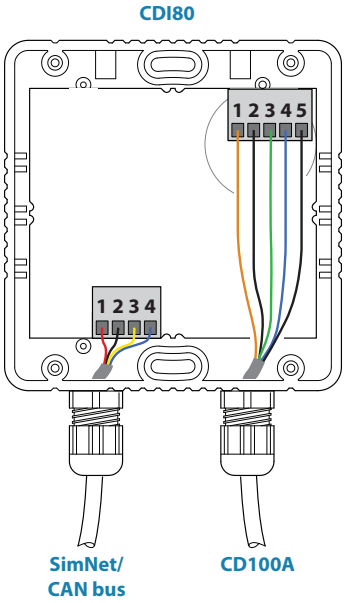
Wiring

CDI80 has a 6 m drop cable that connects to an IEC 61162-3 CAN bus or SimNet backbone as shown below. The unit is powered by the CAN bus and will operate as long as bus voltage is present.



Item	Description
A	Micro-C drop cable, 6 m (19.7 ft)
B	Micro-C T-connector
C	CAN-bus backbone
D	SimNet to Micro-C (female) cable. 0.5 m (1.64 ft)
E	SimNet T-joiner (3p) or SimNet Multi-joiner (7p)
F	SimNet Backbone

For connecting the cable from the CD100A Course Detector, loosen the four top cover screws, open the unit, pull the cable through the spare cable gland, connect it to the terminal list as shown in figure, tighten the cable gland and remount the top cover. Make sure the black gasket is located with the same side up as when the unit was opened.



Pin	Color		Signal
		Old cable type	
1	Orange	White	LO
2	Black *	Brown	HI
3	Green	Green	Vref
4	Blue	Grey	COS
5	Black **	Yellow	SIN

The black wires are pin numbered from factory. If you need to identify them, measure 8 - 12 ohm between Orange and Black *, and 6 - 10 ohm between Green and Black **.

The third black wire is not used.

➔ ***Note:*** The SimNet/CAN bus cable is pre-connected from factory.

Calibration

Before use, calibration and offset adjustment has to be done as described in the autopilot installation manual. Note that calibration has to be done at sea and requires one or two 360° turns of the vessel (two turns when automatic gain adjustment is required due to low or high field strength from the compass).

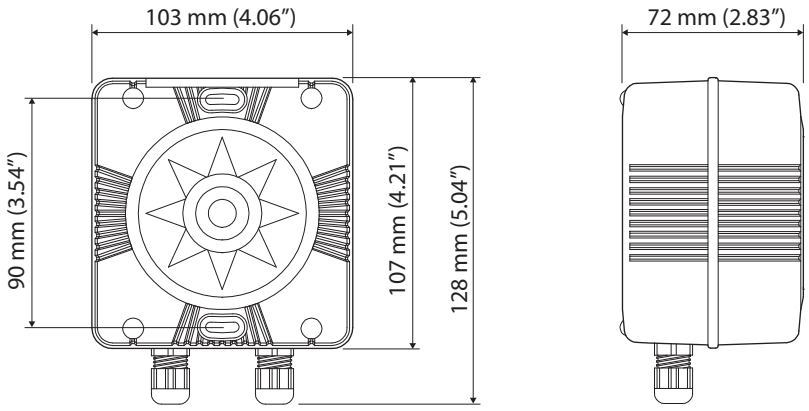
Technical specifications

➔ ***Note:*** For updated technical specifications, compliance and certifications, refer to our web sites.

	CDI80	CD100A
CAN bus supply	9-16V DC	
NMEA 2000 load Equivalent number (50mA)	2	
Temperature, operation	-25°C to +55°C (-13°F - 131°F)	-25°C to +55°C (-13°F - 131°F)
Temperature, storage	-30°C to +70°C (-22°F - 158°F)	-30°C to +70°C (-22°F - 158°F)
Protection	IPx6	IPx6
Weight	0.9 kg (1.98 lbs)	0.3 kg (0.66 lbs) incl. cable
Mounting	Any orientation	Fixed to magnetic compass by center screw (M6 or tripod holder
Material	ABS	ABS and aluminum
Color	Black	Black plastic and natural aluminum
Cable, mounted	6 m (19.68") drop cable	7 m (22.97"), 5 wires
Cable inlet	2 cable glands for cable diameter 2.5 – 6.5 mm	
Notified compliance	CE (2004-108 EC EMC Directive) C-Tick	

Dimensions

CDI80



CD100A