



XDi 144/192 Navi

Advanced Heading indicators



Library owner: DEIF STANDARD NAV

Library number: 1

Library version: 2008

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Library description :


This library contains a collection of advanced heading indicators.

IMPORTANT: When NMEA data (IEC 61162-1) is used as input then make sure data is available on input RX1 or RX3 and run a NMEA setup as the last step in the setup wizard.

RX/TX 2 (RS485) may be used as input but is not opto-isolated according to IEC 61162-1 and must be manually selected after input scanning is completed.


The default bit rate is 4.8 kbps this can be changed for COM-port 1, 2 or 3 on the NX2 module on either Slot 2 (default) or Slot 1.


Library status symbols :

 Released & Locked

 Approved

 Pending

 Draft

 Not approved

Library Specification

Library owner no. : 000003
Library owner name : DEIF STANDARD NAV
Product type : XDi 144/192
Performance class : Navi
Library number : 1
Library name : Advanced Heading indicators
Library orientation : Landscape
Library status : Released & Locked
Library version : 2008

Last changed : 23-12-2021 15:12:55

Library default settings :

180 display rotation : False
CAN NodeID : 40

Library notes :

23-12-2021 / JOL, ver.2008: New indicators VI006, 007, 008, 009 010 and 011 are added to the library.

(23-12-2021 / JOL, ver.2007: Error in PDF picture, this version was not released for sales.)

07-04-2020 / JOL, ver.2006: This update support the new display colour adjust function located in the USER NEMU. This function makes it possible to adjust XDi displays to look the same.




Product profiles (PP)







Default settings of product and system related parameters, as dimmer and CANbus settings are stored in a product profile.

Timestamp 23-12-2021 15:13:03

PP No.	PP Name	Description	Status	Notes
1	PP01 Front dimmer	<p>Dimming from front</p> <p>Dimmer from front buttons Default: Dim gr1. Auto Day/Night at 70%. RX/TX dimmer value on XDi-net.</p> <p>Supported NMEA sentences: Heading: HDG, HMR, VHW, HTD, HMR, VHW, HTD, THS and HDT. MagVar; HMR, RMC and HDG Rate of turn: ROT Default: COM1 or 3 at 4.8 kbps</p> <p>Shares selected NMEA data on XDi-net</p>		<p>In an XDi-net system any XDi in a group can control the groups dimmer level when it uses this product profile.</p> <p>In the user menu the VI day/night mode can be set to fixed night mode, this can be useful for some VI types, where day night shift is not needed.</p>
2	PP02 Analogue	<p>Analogue dimmer</p> <p>AX1 module required on Slot 1 Dimmer potentiometer from Vref (term.3) to 0V (term.1) and wiper to term. 2.</p> <p>Default: Dim gr1. Auto Day/Night at 70%, Dim value shared on XDi-net</p> <p>Supported NMEA sentences: Heading: HDG, HMR, VHW, HTD, HMR, VHW, HTD, THS and HDT. MagVar; HMR, RMC and HDG Rate of turn: ROT Default: COM1 or 3 at 4.8 kbps</p> <p>Shares selected NMEA data on XDi-net</p>		<p>In an XDi-net system one XDi with analogue dimmer input (AX1) can control the groups dimmer level Other Xdi units in the group should use PP03 (Default Gr.1. but can be changed).</p>
3	PP03 NMEA Gr.1	<p>NMEA dimmer Gr.1</p> <p>NX2 module is required for NMEA dimming Without NX2 dimming is via XDi-net.</p> <p>DIMMER GR. 1 Auto Day/Night at 70%, Dim value shared on XDi-net</p> <p>Supported NMEA sentences: Heading: HDG, HMR, VHW, HTD, HMR, VHW, HTD, THS and HDT. MagVar; HMR, RMC and HDG Rate of turn: ROT Dimmer: DDC Default: COM1 or 3 at 4.8 kbps</p> <p>Shares selected NMEA data on XDi-net</p>		<p>In an XDi-net system any XDi in group 1 can control the groups dimmer level when it uses this product profile.</p>

PP No.	PP Name	Description	Status	Notes
4	PP04 NMEA Gr.2	<p>NMEA dimmer Gr.2 NX2 module is required for NMEA dimming Without NX2 dimming is via XDi-net.</p> <p>DIMMER GR. 2 Auto Day/Night at 70%, Dim value shared on XDi-net</p> <p>Supported NMEA sentences: Heading: HDG, HMR, VHW, HTD, HMR, VHW, HTD, THS and HDT. MagVar; HMR, RMC and HDG Rate of turn: ROT Dimmer: DDC Default: COM1 or 3 at 4.8 kbps</p> <p>Shares selected NMEA data on XDi-net</p>		In an XDi-net system any XDi in group 2 can control the groups dimmer level when it uses this product profile.
5	PP05 NMEA Gr.3	<p>NMEA dimmer Gr.3 NX2 module is required for NMEA dimming Without NX2 dimming is via XDi-net.</p> <p>DIMMER GR. 3 Auto Day/Night at 70%, Dim value shared on XDi-net</p> <p>Supported NMEA sentences: Heading: HDG, HMR, VHW, HTD, HMR, VHW, HTD, THS and HDT. MagVar; HMR, RMC and HDG Rate of turn: ROT Dimmer: DDC Default: COM1 or 3 at 4.8 kbps</p> <p>Shares selected NMEA data on XDi-net</p>		In an XDi-net system any XDi in group 3 can control the groups dimmer level when it uses this product profile.
6	PP06 NMEA Gr.4	<p>NMEA dimmer Gr.4 NX2 module is required for NMEA dimming Without NX2 dimming is via XDi-net.</p> <p>DIMMER GR. 4 (to 6) Auto Day/Night at 70%, Dim value shared on XDi-net</p> <p>Supported NMEA sentences: Heading: HDG, HMR, VHW, HTD, HMR, VHW, HTD, THS and HDT. MagVar; HMR, RMC and HDG Rate of turn: ROT Dimmer Gr. 4 to 6: DDC Default: COM1 or 3 at 4.8 kbps</p> <p>Shares selected NMEA data on XDi-net</p>		<p>In an XDi-net system any XDi in group 4 can control the groups dimmer level when it uses this product profile.</p> <p>You can setup NMEA control of Dimmer gr. 4, 5 and 6 in the NMEA input menu.</p> <p>In the user menu you can also change the dimmer group controlling this XDi unit.</p>

PP No.	PP Name	Description	Status	Notes
7	PP07 NMEA Gr.1DC	<p>NMEA dimmer / colour Gr.1 NX2 module is required for NMEA dimming Without NX2 dimming is via XDi-net.</p> <p>DIMMER GR. 1 NMEA dimmer and Day/Night control Dim and Day/Night shared on XDi-net</p> <p>Supported NMEA sentences: Heading: HDG, HMR, VHW, HTD, HMR, VHW, HTD, THS and HDT. MagVar; HMR, RMC and HDG Rate of turn: ROT Dimmer and Day/Night colour: DDC Default: COM1 or 3 at 4.8 kbps</p> <p>Shares selected NMEA data on XDi-net</p>		In an XDi-net system any XDi in group 1 can control the groups dimmer level and Day/Night when it uses this product profile.
8	PP08 NMEA Gr.2DC	<p>NMEA dimmer / colour Gr.2 NX2 module is required for NMEA dimming Without NX2 dimming is via XDi-net.</p> <p>DIMMER GR. 2 NMEA dimmer and Day/Night control Dim and Day/Night shared on XDi-net</p> <p>Supported NMEA sentences: Heading: HDG, HMR, VHW, HTD, HMR, VHW, HTD, THS and HDT. MagVar; HMR, RMC and HDG Rate of turn: ROT Dimmer and Day/Night colour: DDC Default: COM1 or 3 at 4.8 kbps</p> <p>Shares selected NMEA data on XDi-net</p>		In an XDi-net system any XDi in group 2 can control the groups dimmer level and Day/Night, when it uses this product profile.
9	PP09 NMEA Gr.3DC	<p>NMEA dimmer / colour Gr.3 NX2 module is required for NMEA dimming Without NX2 dimming is via XDi-net.</p> <p>DIMMER GR. 3 NMEA dimmer and Day/Night control Dim and Day/Night shared on XDi-net</p> <p>Supported NMEA sentences: Heading: HDG, HMR, VHW, HTD, HMR, VHW, HTD, THS and HDT. MagVar; HMR, RMC and HDG Rate of turn: ROT Dimmer and Day/Night colour: DDC Default: COM1 or 3 at 4.8 kbps</p> <p>Shares selected NMEA data on XDi-net</p>		In an XDi-net system any XDi in group 3 can control the groups dimmer level and Day/Night when it uses this product profile.

PP No.	PP Name	Description	Status	Notes
10	PP10 NMEA Gr.4DC	<p>NMEA dimmer / colour Gr.4 NX2 module is required for NMEA dimming Without NX2 dimming is via XDi-net.</p> <p>DIMMER GR. 4 (to 6) NMEA dimmer and Day/Night control Dim and Day/Night shared on XDi-net</p> <p>Supported NMEA sentences: Heading: HDG, HMR, VHW, HTD, HMR, VHW, HTD, THS and HDT. MagVar; HMR, RMC and HDG Rate of turn: ROT Dimmer and Day/Night colour, Gr. 4 to 6: DDC Default: COM1 or 3 at 4.8 kbps Shares selected NMEA data on XDi-net</p>		<p>In an XDi-net system any XDi in group 4 can control the groups dimmer level and Day/Night when it uses this product profile. You can setup NMEA control of Dimmer gr. 4, 5 and 6 in the NMEA input menu. In the user menu you can also change the dimmer group controlling this XDi unit.</p>

Virtual Indicators (VI)



The VI contains the graphical layout of and indicator and defines all data types that are presented on the indicator.

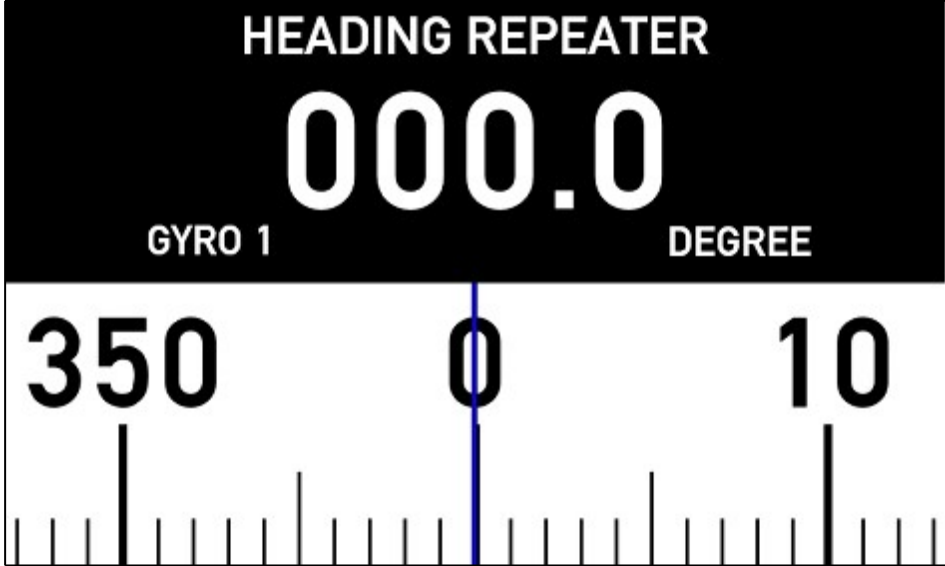
Each VI has at least one VI-setup profile (VS) that defines the input types and default parameter settings.


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VI No.	Name	VI-setup profiles (VS)	MED Approval	Status
001	Tape Rep.	1		
002	Heading	1		
003	Tape Rep. ROT	1		
004	Heading w. ROT	1		
005	Heading	1		
006	Tape Rep. 2sc	2		
007	Tape Rp. ROT 2sc	2		
008	Digital 1sc	1		
009	Digital w. ROT	1		
010	Digital 2sc	2		
011	Digi w.ROT 2sc	2		


VI 001	Tape Rep.
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Screen 1 Mode 1



Description :	Heading Tape Repeater Heading presentation with 0.1 deg With selectable headline and automatic source name presentation
Status :	
VI Notes :	Alternative UNIT text can be selected from menu

VI-setup profiles (VS) for VI001

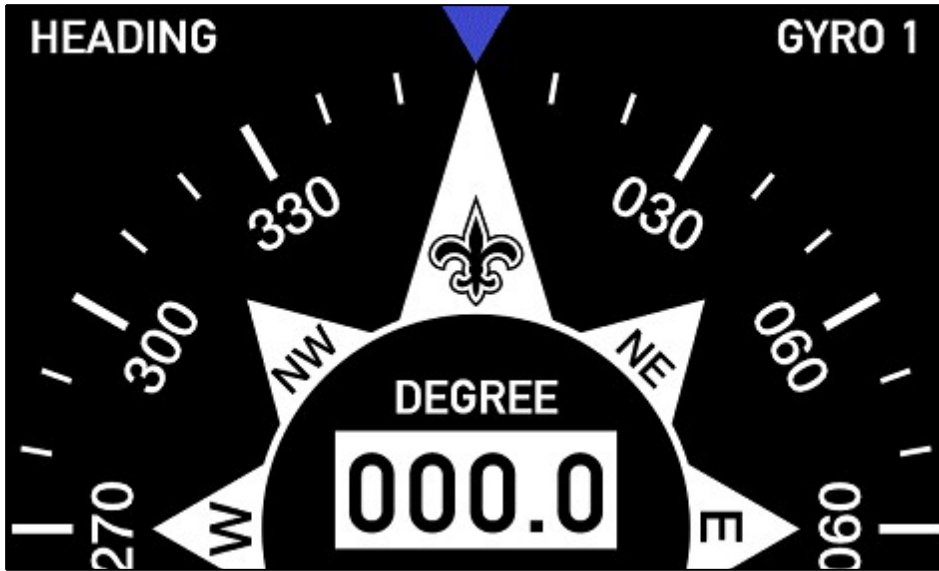
VS No.	Name	Description	Status	Notes
1	VS01 NMEA/XDi-net	Input NMEA or XDi-net Heading input via NMEA (Requires NX2) or XDi-net via CAN1 or 2 Fall-back function: 1. Gyro 1 (Heading True 1) 2. Gyro 2 (Heading True 2) 3. MAG. COMPASS (Heading Mag 1) Default settings can be changed from menu. Source priority can be changed or one source can be locked.		

VI 002

Heading

Screen 1

Large



Description : **Heading Repeater**

w/digital readout res. 0.1 deg

With auto source fallback function,
source name and selectable headline

Status :



VI Notes : Alternative UNIT text can be selected from menu

VI-setup profiles (VS) for VI002

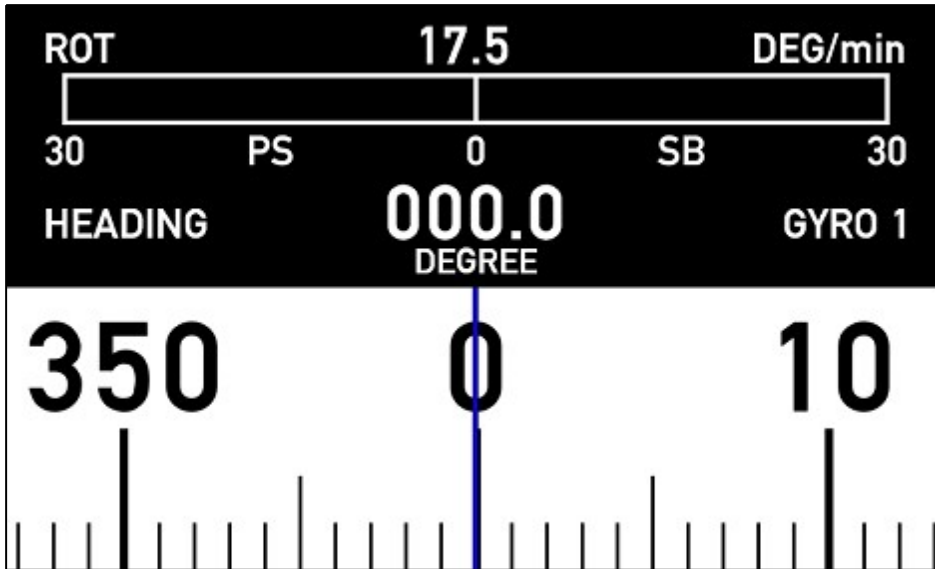
VS No.	Name	Description	Status	Notes
1	VS01 NMEA/XDi-net	<p>Input NMEA or XDi-net</p> <p>Heading input via NMEA (Requires NX2) or XDi-net via CAN1 or 2</p> <p>Fall-back function: 1. Gyro 1 (Heading True 1) 2. Gyro 2 (Heading True 2) 3. MAG. COMPASS (Heading Mag 1)</p> <p>Default settings can be changed from menu. Source priority can be changed or one source can be locked.</p>		

VI 003

Tape Rep. ROT

Screen 1

Mode 1



Description : Heading Tape Rep. w/ROT

Heading presentation with 0.1 deg
ROT_+30deg/min bar with digital readout

With selectable headline and
automatic source name presentation

Status :



VI Notes :

VI-setup profiles (VS) for VI003

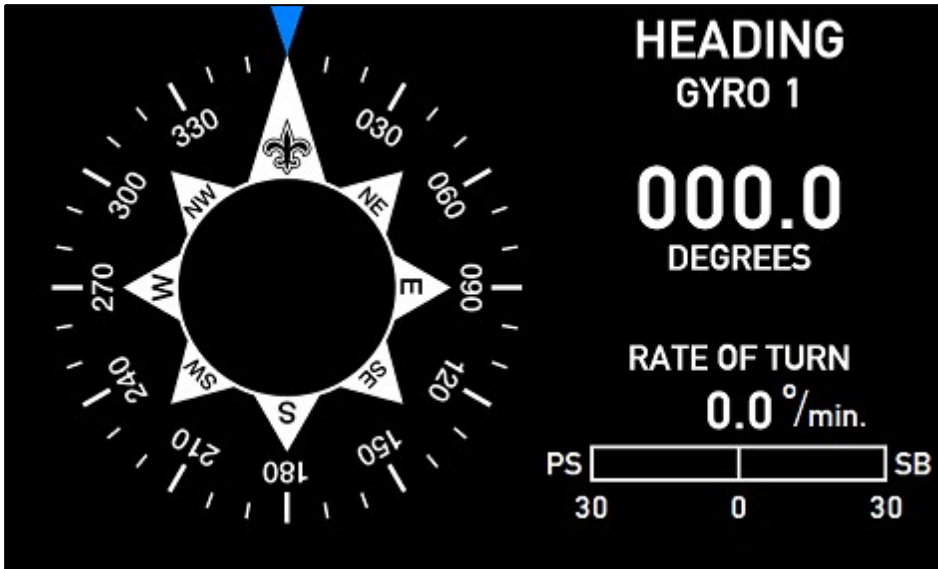
VS No.	Name	Description	Status	Notes
1	VS01 NMEA/XDi-net	Input NMEA or XDi-net Heading + ROT via NMEA (Requires NX2) or XDi-net via CAN1 or 2 Fall-back function Heading: 1. Gyro 1 (Heading True 1) 2. Gyro 2 (Heading True 2) 3. MAG. COMPASS (Heading Mag 1) Fall-back function ROT: 1. ROT Instance 1 2. ROT Instance 2 Max digital ROT: +/-300 DEG/min Default settings can be changed from menu. Source priority can be changed or one source can be locked.		

VI 004

Heading w. ROT

Screen 1

Mode 1



Description : Heading indicator w/ROT

Heading presentation with 0.1 deg
ROT_+30deg/min bar with digital readout

With selectable headline and
automatic source name presentation

Status :



VI Notes :

VI-setup profiles (VS) for VI004

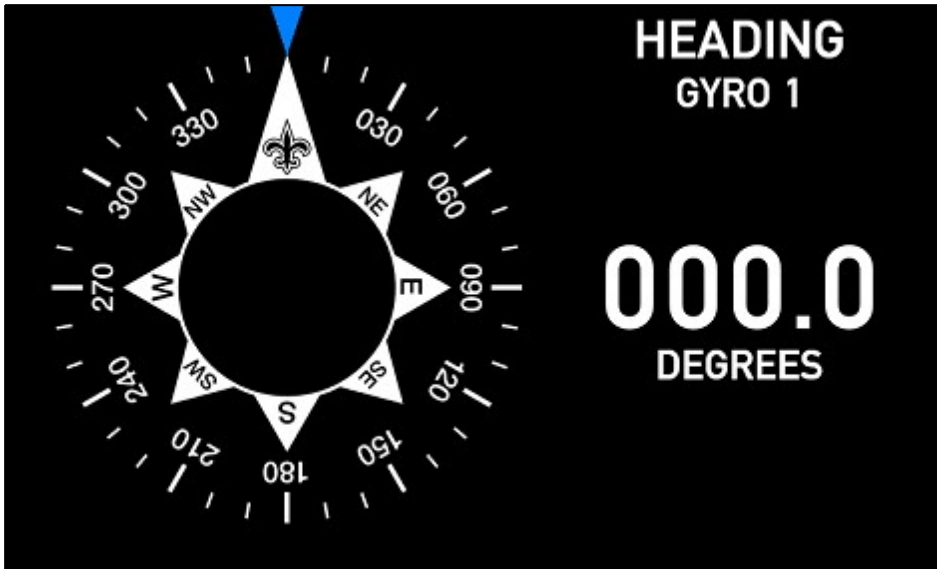
VS No.	Name	Description	Status	Notes
1	VS01 NMEA/XDi-net	<p>Input NMEA or XDi-net</p> <p>Heading + ROT via NMEA (Requires NX2) or XDi-net via CAN1 or 2</p> <p>Fall-back function Heading: 1. Gyro 1 (Heading True 1) 2. Gyro 2 (Heading True 2) 3. MAG. COMPASS (Heading Mag 1)</p> <p>Fall-back function ROT: 1. ROT Instance 1 2. ROT Instance 2 Max digital ROT: +/-300 DEG/min Default settings can be changed from menu. Source priority can be changed or one source can be locked.</p>		

VI 005

Heading

Screen 1

Mode 1



Description : Heading indicator

Heading presentation with 0.1 deg

With selectable headline and automatic source name presentation

Status :



VI Notes : Alternative heading and unit text can be selected from menu.

VI-setup profiles (VS) for VI005

VS No.	Name	Description	Status	Notes
1	VS01 NMEA/XDi-net	<p>Input NMEA or XDi-net</p> <p>Heading + ROT via NMEA (Requires NX2) or XDi-net via CAN1 or 2</p> <p>Fall-back function Heading: 1. Gyro 1 (Heading True 1) 2. Gyro 2 (Heading True 2) 3. MAG. COMPASS (Heading Mag 1)</p> <p>Default settings can be changed from menu. Source priority can be changed or one source can be locked.</p>		

Screen 1

Mode 1



Screen 2

Mode 2



Description : Heading Tape Repeater

2 screens for heading 1 and 2
Heading presentation with 0.1 deg
With selectable headline and
automatic source name presentation



Status :



VI Notes :

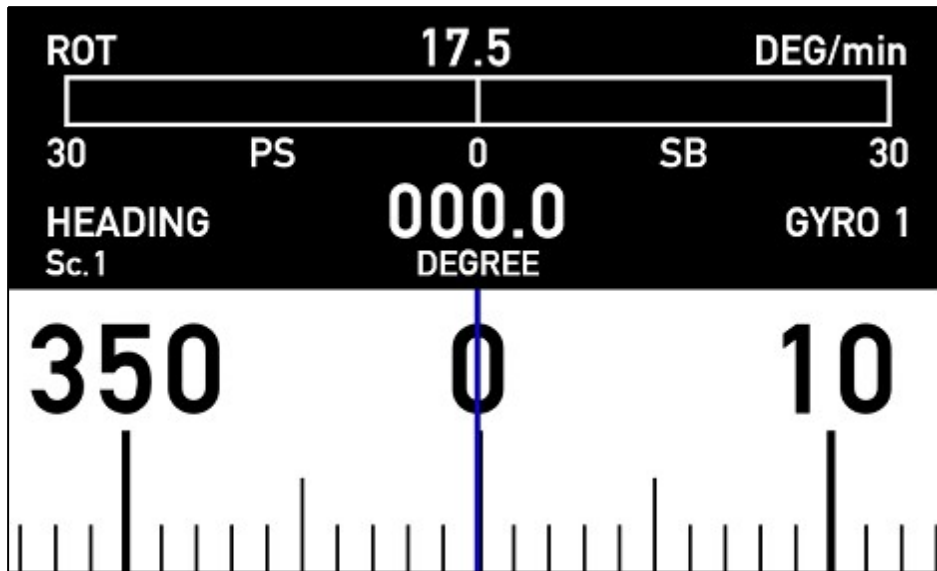
This indicator can toggle between two screens presenting respectively main and secondary heading. It can automatically make a fall-back to a second or even a third heading source if the higher priority source is lost.

VI-setup profiles (VS) for VI006

VS No.	Name	Description	Status	Notes
1	VS01 NMEA/XDi-net	Input NMEA or XDi-net Heading input via NMEA (Requires NX2) or XDi-net via CAN1 or 2 Screen 1: Gyro 1 (Heading True 1) Screen 2: Gyro 2 (Heading True 2) Default settings can be changed from menu.		It is possible to change the source selection via the XDi installation menu / adjust input. For example select to have a magnetic compass presented on screen 2 instead of a 2nd Gyro.
2	VS02 NMEA/XDi-net	Input NMEA or XDi-net Heading input via NMEA (Requires NX2) or XDi-net via CAN1 or 2 Screen 1: Fall-back function 1. Gyro 1 (Heading True 1) 2. Gyro 2 (Heading True 2) 3. MAG. COMPASS (Heading Mag 1) Screen 2 : Fall-back function 1. Gyro 2 Heading true 2 2. MAG. COMPASS (Heading Mag 1) Default settings can be changed from menu. Source priority can be changed or one source can be locked.		If two gyro compasses and 1 magnetic is connected. Screen 1 will use Gyro1 on and fall back to Gyro2 if available and fall back to magnetic compass if no gyro is available. Screen 2 will use Gyro 2 and can fall back to magnetic if Gyro 2 is not available.

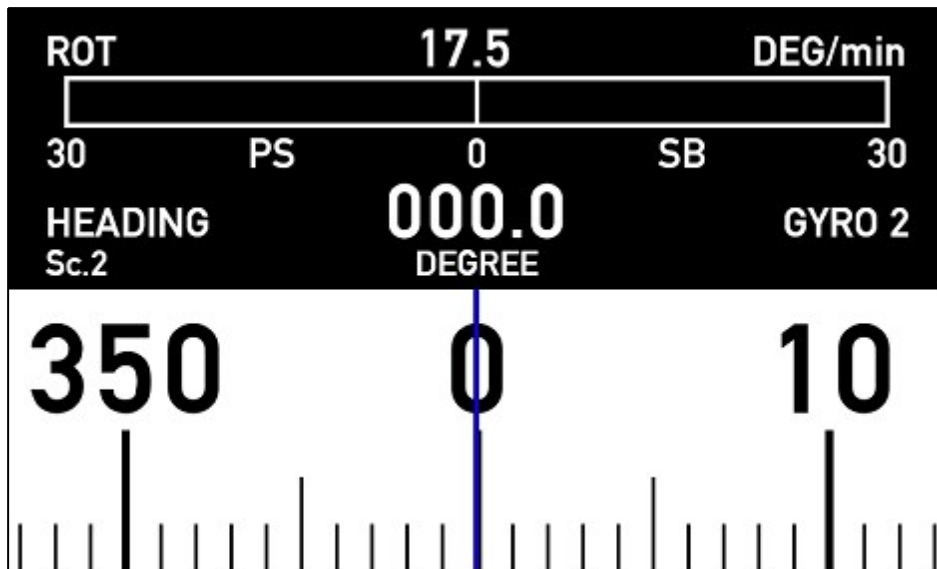
Screen 1

Mode 1



Screen 2

Mode 2



Description : Heading Tape Rep. w/ROT

2 screens for heading 1 and 2
 Heading presentation with 0.1 deg
 ROT +30deg/min bar with digital readout
 With selectable headline and
 automatic source name presentation



Status :



VI Notes :

This indicator can toggle between two screens presenting respectively main and secondary heading / ROT.
 It can automatically make a fall-back to a backup heading source if the higher priority source is lost.

VI-setup profiles (VS) for VI007

VS No.	Name	Description	Status	Notes
1	VS01 NMEA/XDi-net	<p>Input NMEA or XDi-net Heading + ROT via NMEA (Requires NX2) or XDi-net via CAN1 or 2</p> <p>Screen 1: Gyro 1 (Hdg True 1), ROT 1</p> <p>Screen2: Gyro 2 (Hdg True 2), ROT 2 (or ROT 1 if 2 is not available)</p> <p>Max digital ROT: +/-300 DEG/min Default settings can be changed from menu. Source priority can be changed or one source can be locked.</p>		<p>It is possible to change the source selection via the XDi installation menu / adjust input.</p> <p>For example select to have a magnetic compass presented on screen 2 instead of a 2nd Gyro.</p>
2	VS02 NMEA/XDi-net	<p>Input NMEA or XDi-net Heading + ROT via NMEA (Requires NX2) or XDi-net via CAN1 or 2</p> <p>Screen 1: Fall-back function 1. Gyro 1 (Hdg True 1), ROT1 2. Gyro 2 (Hdg True 2), ROT2 3. MAG. COM (Hdg Mag 1) ROT1(2)</p> <p>Screen2: Fall-back function 1. Gyro 2 (Hdg True 2), ROT2(1) 2. MAG. COM (Heading Mag.1) ROT2(1)</p> <p>Max digital ROT: +/-300 DEG/min Default settings can be changed from menu. Source priority can be changed or one source can be locked.</p>		

VI 008

Digital 1sc

Screen 1

Mode 1




Description : Digital Heading Repeater

Heading presentation with 0.1 deg
 (One screen)
 With selectable headline and
 automatic source name presentation

Status : 

VI Notes : This indicator can show data from a single heading source at a time. It can automatically make a fall-back to a second or even a third heading source if the higher priority source is lost.

VI-setup profiles (VS) for VI008

VS No.	Name	Description	Status	Notes
1	VS01 NMEA/XDi-net	<p>Input NMEA or XDi-net Heading input via NMEA (Requires NX2) or XDi-net via CAN1 or 2</p> <p>Fall-back function 1. Gyro 1 (Heading True 1) 2. Gyro 2 (Heading True 2) 3. MAG. COMPASS (Heading Mag 1)</p> <p>Default settings can be changed from menu. Source priority can be changed or one source can be locked.</p>		If two gyro compasses and one magnetic is connected. Then the indicator will use Gyro1 if available and will fall back to Gyro2 if gyro 1 is lost and fall back to magnetic compass if no gyro is available.

VI 009

Digital w. ROT

Screen 1

Mode 1



Description : Digital Heading Rep. w/ROT


Heading presentation with 0.1 deg
ROT_+30deg/min bar w/digital readout

With selectable headline and
automatic source name presentation

Status : 

VI Notes : This indicator can show data from a single heading and ROT source at a time. It can automatically make a fall-back to a backup source if the higher priority source is lost.

VI-setup profiles (VS) for VI009

VS No.	Name	Description	Status	Notes
1	VS01 NMEA/XDi-net	<p>Input NMEA or XDi-net Heading + ROT via NMEA (Requires NX2) or XDi-net via CAN1 or 2</p> <p>Fall-back function Heading: 1. Gyro 1 (Heading True 1) 2. Gyro 2 (Heading True 2) 3. MAG. COMPASS (Heading Mag 1)</p> <p>Fall-back function ROT: 1. ROT Instance 1 2. ROT Instance 2 Max digital ROT: +/-180 DEG/min Default settings can be changed from menu. Source priority can be changed or one source can be locked.</p>		

Screen 1

Mode 1



Screen 2

Mode 2





Description : 2 sc. Digital Heading Repeater

2 screens for heading 1 and 2
Heading presentation with 0.1 deg
With selectable headline and
automatic source name presentation

Status : 

VI Notes : This indicator can toggle between two screens presenting respectively main and secondary heading. It can automatically make a fall-back to a second or even a third heading source if the higher priority source is lost.

VI-setup profiles (VS) for VI010

VS No.	Name	Description	Status	Notes
1	VS01 NMEA/XDi-net	Input NMEA or XDi-net Heading input via NMEA (Requires NX2) or XDi-net via CAN1 or 2 Screen 1: Gyro 1 (Heading True 1) Screen 2: Gyro 2 (Heading True 2) Default settings can be changed from menu.		It is possible to change the source selection via the XDi installation menu / adjust input. For example select to have a magnetic compass presented on screen 2 instead of a 2nd Gyro.
2	VS02 NMEA/XDi-net	Input NMEA or XDi-net Heading input via NMEA (Requires NX2) or XDi-net via CAN1 or 2 Screen 1: Fall-back function 1. Gyro 1 (Heading True 1) 2. Gyro 2 (Heading True 2) 3. MAG. COMPASS (Heading Mag 1) Screen 2 : Fall-back function 1. Gyro 2 Heading true 2 2. MAG. COMPASS (Heading Mag 1) Default settings can be changed from menu. Source priority can be changed or one source can be locked.		

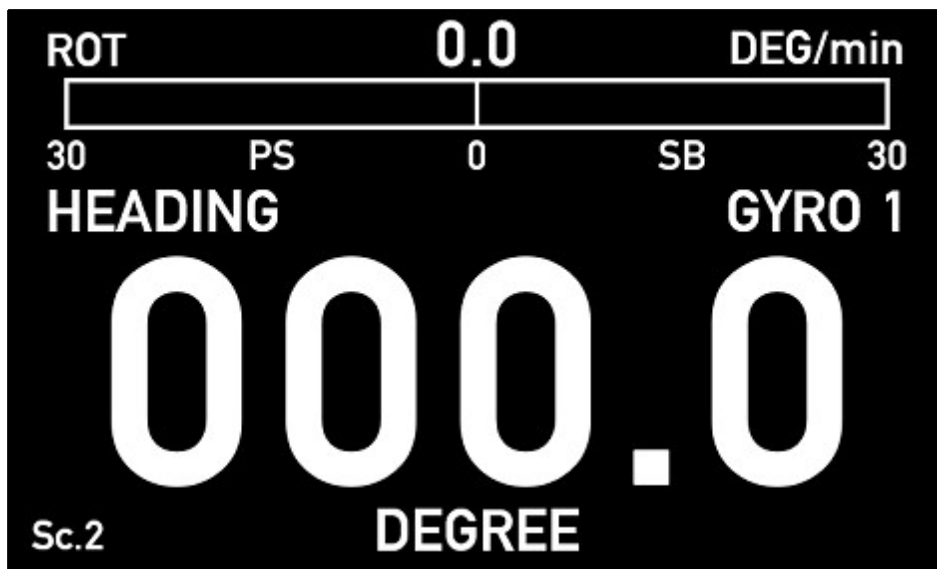
Screen 1

Mode 1



Screen 2

Mode 2



Description : 2 sc. Digital Hdg. Rep. w/ROT

2 screens for Heading/ROT 1 and 2
ROT_+30deg/min bar w/digital readout

With selectable headline and
automatic source name presentation

Status :




VI Notes :

This indicator can toggle between two screens presenting respectively main and secondary heading / ROT.

It can automatically make a fall-back to a backup heading source if the higher priority source is lost.

VI-setup profiles (VS) for VI011

VS No.	Name	Description	Status	Notes
1	VS01 NMEA/XDi-net	<p>Input NMEA or XDi-net Heading + ROT via NMEA (Requires NX2) or XDi-net via CAN1 or 2</p> <p>Screen 1: Gyro 1 (Hdg True 1), ROT 1</p> <p>Screen2: Gyro 2 (Hdg True 2), ROT 2 (or ROT 1 if 2 is not available)</p> <p>Max digital ROT: +/-300 DEG/min Default settings can be changed from menu. Source priority can be changed or one source can be locked.</p>		<p>It is possible to change the source selection via the XDi installation menu / adjust input.</p> <p>For example select to have a magnetic compass presented on screen 2 instead of a 2nd Gyro.</p>
2	VS02 NMEA/XDi-net	<p>Input NMEA or XDi-net Heading + ROT via NMEA (Requires NX2) or XDi-net via CAN1 or 2</p> <p>Screen 1: Fall-back function 1. Gyro 1 (Hdg True 1), ROT1 2. Gyro 2 (Hdg True 2), ROT2 3. MAG. COM (Hdg Mag 1) ROT1(2)</p> <p>Screen2: Fall-back function 1. Gyro 2 (Hdg True 2), ROT2(1) 2. MAG. COM (Heading Mag.1) ROT2(1)</p> <p>Max digital ROT: +/-300 DEG/min Default settings can be changed from menu. Source priority can be changed or one source can be locked.</p>	