

SPECIFICATIONS OF MULTI FUNCTION DISPLAY TZZ16X

1 DISPLAY FUNCTION

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|-----|----------------|--|
| 1.1 | Screen | 15.6- inch wide touch-panel TFT display, 1920 x 1080 (FHD) |
| 1.2 | Brightness | 900 cd/m ² typical |
| 1.3 | Display colors | 16,770,000 colors (plotter), 64 colors for radar/sounder echo |
| 1.4 | View angle | 85° typical |
| 1.5 | Language | Bulgarian, Chinese, Danish, English (UK/US), Finnish, French, German, Greek, Italian, Japanese, Norwegian, Portuguese, Russian, Spanish, Swedish |

2 PLOTTER FUNCTION

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|-----|--------------------------|--|
| 2.1 | Display mode | Course plot, NAV data (includes instrument and engine data) |
| 2.2 | Projection | Mercator |
| 2.3 | Useable area | 85° latitude or below |
| 2.4 | Memory capacity | Track: 100,000 points, Point/MOB: 30,000 points
Route: 200 courses w/500 points each
ARPA: 100 targets (for DRS-NXT series), AIS: 1000 targets |
| 2.5 | Alarm | Anchor watch, XTE, Own ship alarm zone (external data required) |
| 2.6 | GPS receiver | |
| | Receiving frequency | 1575.42 MHz |
| | Number of channels | GNSS: 72 ch (GPS, SBAS, QZSS) |
| | Accuracy | GNSS: 10 m (2drms, HDOP<4), WAAS: 3 m (2drms, HDOP<4)
MSAS: 7 m (2drms, HDOP<4) |
| | Ship's speed range | 500 m/s max. (all satellites at -130 dBm) |
| | Position update interval | 0.1 s |

3 RADAR FUNCTION

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|-----|------------------|---|
| 3.1 | Orientation mode | Head-up, North-up (heading data required) |
| 3.2 | Echo trail | 15/30 s, 1/3/6/15/30 min. or continuous |
| 3.3 | Alarm | Guard-zone, CPA/TCPA, Trigger, Video, Azimuth, Heading line |

4 SOUNDER FUNCTION

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|-----|--------------------------------|---|
| 4.1 | Frequency | |
| | Under scan | CW: 50/200 kHz, CHIRP: 40 to 225 kHz |
| | Side scan | 230/455 kHz |
| 4.2 | Output power | |
| | Under scan | CW: 300/600 W, 1 kW |
| | Side scan | 150 W |
| 4.3 | Depth range | |
| | Under scan | 2 to 1200 m, Shift: 2 to 1200 m |
| | Side scan | 4 to 500 m |
| 4.4 | Display mode (under scan only) | ACCU-FISH™, A-scope, Estimation for bottom composition, Temperature graph |
| 4.5 | Alarm (under scan only) | School of fish, School of fish for bottom lock |

5 OTHER FUNCTIONS

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|-----|-----------------------|---|
| 5.1 | AIS information | AIS receiver required |
| 5.2 | DSC display | 20 targets max., target data required |
| 5.3 | Camera monitor | NTSC/PAL data required |
| 5.4 | Instrument indication | Instrument data required |
| 5.5 | Information | Facsimile/NAVTEX, Weather information (external data required) |
| 5.6 | Alarm | Wind speed, Depth, Water temperature, Sea surface temperature, Speed, Low fuel (external data required) |

6 INTERFACE

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|-----|--------------------|--|
| 6.1 | Number of ports | |
| | HDMI input | 1 port, FHD/HD/SXGA/XGA, non-interlaced |
| | HDMI output | 1 port, FHD |
| | Video input | 1 port, NTSC/PAL (composite) |
| | LAN | 1 port, Ethernet 1000Base-T |
| | Serial | 1 port, NMEA0183 output |
| | NMEA2000 | 1 port |
| | USB | 2 ports, USB3.0/2.0 for control unit/ touchscreen monitor |
| | Contact closure | 2 ports, event switch and external power switch |
| | External buzzer | 1 port, w/12VDC power output |
| | External KP | 2 ports, input 5-12V (positive), output 12V (positive) |
| | SD card slot | 1 port, micro-SDXC |
| 6.2 | Wireless LAN | IEEE802.11b/g/n |
| | Transmit frequency | 2.412 to 2.462 GHz |
| | Output power | 11 dBm max. |
| 6.3 | Data sentences | NMEA0183 |
| | Output | AAM, APB, BOD, GGA, GLL, GNS, GSA, GSV, RMB, RMC, RTE, TTM, VTG, WPL, XTE, ZDA |

6.4 NMEA2000 PGN

Input	059392, 059904, 060160, 060416, 060928, 061184, 065240, 065280, 126208, 126464, 126720, 126992, 126996, 126998, 127237, 127245, 127250, 127251, 127252, 127257, 127258, 127488, 127489, 127493, 127498, 127503, 127505, 127506, 127508, 128259, 128267, 129025, 129026, 129029, 129033, 129038, 129039, 129040, 129041, 129291, 129538, 129540, 129793, 129794, 129795, 129797, 129798, 129801, 129802, 129808, 129809, 129810, 130306, 130310, 130311, 130312, 130313, 130314, 130316, 130576, 130577, 130578, 130817, 130818, 130820, 130822, 130823, 130826, 130827, 130828, 130845, 130846, 130848, 130880
Output	059392, 059904, 060928, 061184, 065287, 126208, 126464, 126720, 126992, 126993, 126996, 126998, 127250, 127251, 127257, 127258, 128259, 128267, 128275, 129025, 129026, 129029, 129033, 129283, 129284, 129285, 130306, 130310, 130312, 130313, 130314, 130316, 130821, 130822, 130823, 130827, 130841

7 POWER SUPPLY

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|-----|----------------------------------|------------------------------------|
| 7.1 | Multi function display | 12-24 VDC (10.8-31.2 V): 4.0-2.0 A |
| 7.2 | AC/DC power supply unit (option) | |
| | PR-241 | 100-230 VAC, 1 phase, 50-60Hz |

8 ENVIRONMENTAL CONDITIONS

- 8.1 Ambient temperature -15°C to +55°C
- 8.2 Relative humidity 93% or less at +40°C
- 8.3 Degree of protection IP56
- 8.4 Vibration IEC 60945 Ed.4

9 UNIT COLOR

N1.0