



EN60945

ABS

KR

# iX T7BR

## Proven to the extremes

**Operating in extreme environments** is tough stuff. So we designed the rugged iX HMI operator panel to give you a long and productive service life, no matter how rough it gets. Software and hardware always function smoothly, whether hit by wind, snow and rain, working on heavy duty motors in remote locations, or in a steamy offshore engine room.

The iX T7BR is certified by major classification societies for hazardous environments (UL, IECEx, ATEX) as well as to marine standards (ABS, DNV, GL, LR, KR) for use on vessels and off-shore installations. The panel is designed to NEMA 4X and IP66 standards with a high-resolution touch-screen.

The iX HMI software is another reason to love our hardware. It empowers you with unique tools to communicate by combining top-class vector graphics and smarter functions, providing intuitive operation on the spot. Not to mention the almost limitless connectivity to your other equipment through the extensive list of drivers.



- Bright 7", 800 × 480 pixel, LED lighted, TFT color display (500 or 1,000 cd/m<sup>2</sup> sunlight viewable)
- Extended environmental capabilities including operating temperature rating of -30 to 70 °C
- NEMA 4X/IP66 sealing
- Operates in high vibration environments
- Hazardous area and marine certifications
- 2 × Ethernet, 2 × serial, 3 × USB standard, 2 × CiX CAN ports optional
- iX HMI software with universal connectivity with your automation equipment



iX T7BR	
<b>Display</b>	
Type	800 × 480, TFT color LCD
Size	7"
Backlight	White LED
Brightness	500 cd/m <sup>2</sup> or 1,000 cd/m <sup>2</sup>
Backlight lifetime	70,000 hrs
Dimming	Maritime optimized to less than 1 cd/m <sup>2</sup>
<b>Touch screen</b>	
Type	Analog-resistive (matte)
<b>Interfaces</b>	
Ethernet	1 × 10/100Base-T, 1 × 10/100/1000Base-T
Serial	1 × RS232, 1 × RS422/485 (isolated)
USB	3 × USB 2.0 high speed
Audio	Headphone or speaker connector
Communication modules	CiX CAN module (optional): 2 × galvanically isolated ports
<b>Processor</b>	
Type	Intel® Atom (1.0 or 1.6 GHz)
<b>Memory</b>	
RAM	1 GB DDR2
Flash	4 GB SLC NAND
External storage media	One SD card slot
<b>Realtime clock</b>	
Standard	Battery-backed
<b>Power</b>	
Input voltage	12 or 24 VDC (10-32 VDC)
Consumption	15.8 W typical @ 24 VDC
<b>Mechanical</b>	
Type	Panel-mount
Size W×H×D	204 × 143 × 73 mm
Cut-out dimensions W×H	188 × 127 mm
Mass	1.4 kg
Housing material	Powder-coated aluminum
<b>Environmental</b>	
Ingress protection	IP66, NEMA 4X front panel
Temperature	Operating: -30° to 70° C; storage: -40 to 85° C
Vibration/shock	4 g RMS / 40 g 11 ms half sine
<b>Certifications</b>	
UL	UL/cUL 61010 (UL508 replacement) UL50E Type 4X Outdoor
Marine	DNV, GL, ABS, LR, KR
Hazardous	UL/cUL 12.12.01 (UL1604 replacement) Class I Div 2, ATEX (Zone 2), IECEx (Zone2)
CE	EN61000-6-4, EN61000-6-2
<b>Software</b>	
Development environments	iX Developer
Runtime environments	iX HMI Software

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# Certifications

## The iX T7BR carries certifications for the environments in which it is designed to function. Industrial certifications

**UL/cUL 61010 (UL508 replacement)** This UL listing mark on an industrial control panel provides evidence of third party certification for safety for industrial control equipment. iX HMI Rugged is listed for both US and Canadian operation.

**UL 50E Type 4X Outdoor** This is an additional UL listing for panel safety that assures the panel will meet the environmental requirements for intended operation.

**CE** iX HMI Rugged panels have been tested by a NRTL to show compliance with the CE mark requirements for industrial panels, which allows the product to be sold within the European Economic Area (EEA). iX HMI Rugged has been tested and shown to meet safety, emissions and susceptibility requirements including EN61000-6-4 and EN61000-6-2.



### Hazardous area certifications

iX HMI Rugged panels also have certifications to allow operation in hazardous environments - specifically areas or zones where hazardous gases and vapors may be present.

**UL Class I Div 2** is the North American directive.

**ATEX Zone 2** is the European directive.

**IECEx Zone 2** is similar to the ATEX directive but used by additional countries outside North America and Europe.

### Marine certifications

Additionally the iX T7BR has been tested and certified to meet marine standards that are established to ensure that ships and their equipment are constructed safely. Since the design of the iX T7BR allows operation in extreme

environmental conditions the unit can meet extended classes of marine certifications not normally carried by marine HMIs. Having both marine and the above mentioned hazardous location certifications is also a unique feature of this terminal.

There are dozens of certifying agencies around the world. The following apply to the iX T7BR.



**DNV (Det Norske Veritas)** is a Norwegian certification.

Temperature: Class D

Humidity: Class B

Vibration: Class B

EMC: Class B

Enclosure: Class B

**GL (Germanischer Lloyd)** is a German certification.

Environmental category D and G, EMC1

**ABS - American Bureau of Shipping** is a North American certification.

Certified according to iX HMI Rugged specifications

**Lloyd's Register** is a UK certification.

ENV1, ENV2, ENV3, ENV4, ENV5

**Korean Register of Shipping** is a Korean shipping, shipbuilding and industrial services classification society.

**EN60945** Conforming to this standard allows the HMI to be used on the bridge of a ship within a specified distance from the compass system (ECDIS) along with other criteria.

We perform extensive testing to ensure our line of rugged terminals meet environmental standards and to guarantee reliable operation in most environments. We test in three areas: qualification testing, acceptance testing and sustaining testing.

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