vSCALE E2
User-friendly HMI for mobile machines

Applications

- Mobile Cranes
- Lifting Applications
- Road Construction Machinery
- Earth Moving Machinery
- Concrete Machinery
- Agricultural Machinery

vSCALE E2 HMI

Special Features

- User-friendly HMI for mobile machinery
- Ergonomic design
- Color graphic LCD with 5″ display diagonal and LED backlight
- IP66 protection rating
- TFT touch display
- Various interfaces
- Numerous mounting options

Description

User-friendly operation and visualization are the key benefits of the vSCALE E2 HMI. Application examples include the display of service reports, error reports, and statistical entry of data for work processes via the device's control elements. The console also provides visual and acoustic warning in the event of critical operating conditions and visualization of process sequences.

The vSCALE E2 console is characterized by its robust construction, and it has been developed especially for use under harsh conditions in mobile machinery. Installation options include In-Dash or On-Dash mounting and landscape or portrait orientation.

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We reserve the right to make technical changes without prior notice. The individual specifications in this data sheet are warranted properties if they are expressly confirmed by us in writing in the respective case.

Technical Specifications

vSCALE E2	
Display	
Type	TFT color graphic LCD with LED backlight
Size	5“, 108 mm (W) x 64.8 mm (H)
Resolution	800 x 480 px (WVGA), 15:9
Colors	16.7 Mio.
Brightness	typ. 800 cd/m2
Contrast ratio	typ. 700:1
Touch display	Capacitive Touch
Indicators and sensors	Light sensor 1 multicolor LED
Electronics	
CPU	Freescale i.MX6®, 800 MHz
Mass storage	4 GB (minus space for OS & application)
RAM	512 MB
RTC	Buffered by gold cap Buffered for 2 weeks at Tambien Deviation max. 1s/day
Speakers	Up to 90 dB @ 10 cm distance (max. @ ~8kHz)
Audio	1 x Audio output (left, right, GND) AC97 compatible Output power: approx. 50mW
Operating voltage	8…36 V DC
Interfaces	
CAN Bus	2x CAN-Interface according to ISO 11898, CAN-specification 2.0 B active, up to 1 Mbit/s
RS232	1x RS232-Interface, Type: EIA232 (only RXD, TXD, GND) Speed: max. 115.200 Kbps
USB	Host 2.0 Side connector: 1 x Type A High speed, guaranteed 900 mA @ 5V Back connector: 1 x Type A High speed, guaranteed 900 mA @ 5V
Ethernet interface	1x 10/100 Mbit/s Base T
Video interface	1x analog video input, 1Vss Camera control output (open drain) for special functionality (mirror, shutter, heating etc.) Camera supply output guaranteed 300mA @ 12VDC

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WIKA MOBILE CONTROL

Technical Specifications

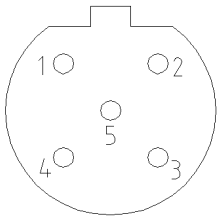
vSCALE E2	
Connectors	
Main	Typo-AMP 1437288-6 Mating connector (customer) Typo-AMP 3-1437290-7 Mating crimp contact (customer) Typo-AMP 3-1447221-4 Dummy Plug (customer) Typo-AMP 4-1437284-3
Video connector	M12 round connector, female, 5-pole, B-coded acc. to EN 61076-2-101
Ethernet connector	M12 round connector, female, 4-pole, D-coded acc. to EN 61076-2-101
Software	
Operating system	Linux Kernel 4.14.0 or higher
Application programming	CoDeSys 3.5 and C/C++
Environmental conditions	
EMC	according to: EN 61000-6-2: 2005 EN 61000-6-4: 2007 EN 50498 EN 13309 EN ISO 14982
Temperature	Operating temperature -30…+75°C Storage temperature -40…+85°C
Protection class	IP66 according to ISO 20653
Housing	Die cast aluminum, powder coated
Mounting	Landscape or portrait, standalone, in-dash (Dashboard installation only in conjunction with an installation kit (not yet available))

Pin Assignment

Video connector

Round connector, 5 pins, M12

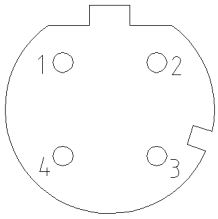
1	VidSig+
2	Switch
3	Power 12V
4	Power GND
5	VidSig GND



Ethernet connector

100Base-Tx
Round connector, 4 pins, M12

1	TD+
2	RD+
3	TD-
4	RD-



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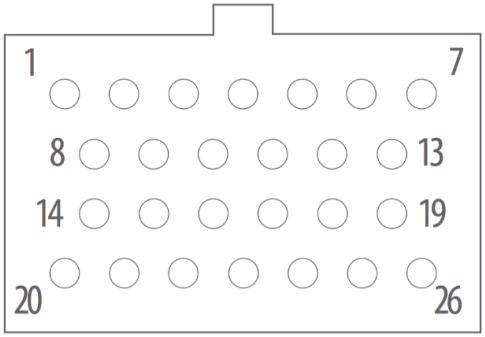
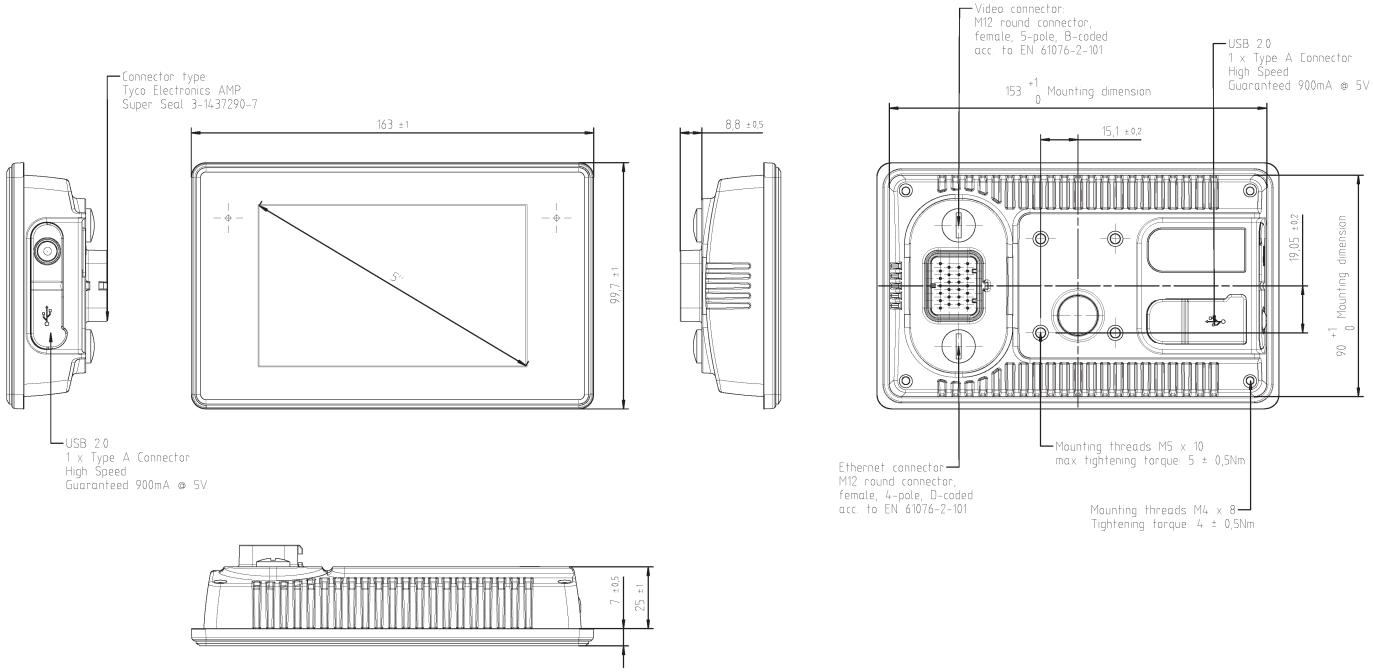
Main connector

Pin No.	Assignment	Description
1	VCC	supply voltage +; terminal 30
2	Ignition Input	ignition input; terminal 15
3	GND	supply voltage -; terminal 31
4	Wake	Wake Input, “Doorswitch”
5	Audio Out L	Audio line out, Stereo
6	Audio Out R	Audio line out, Stereo
7	Audio GND	Audio line out, Ground
8	CAN1H	CAN 1 high
9	CAN1L	CAN 1 low
10	CAN2H	CAN 2 high
11	CAN2L	CAN 2 low
12	USB_VCC	Connected
13	USB_GND	Connected
14	USB_D-	Connected
15	USB_D+	Connected
16	RS232 RxD	RS232 receive data
17	RS232 TxD	RS232 transmit data
18	RS232 GND	RS232 GND
19	A/DI3	Not connected
20	A/DI1	Not connected
21	A/DI2	Not connected
22	A/DI4	Not connected
23	SERV_EN	service enable
24	DO3	Not connected
25	DO1	Not connected
26	DO2	Not connected



Dimensions



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