TCP – Touch Control Panel

Alarm and control panel for operating theatres
and medically or none medically used areas

Touch Control Panel

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Features

- Easy-to-use, touch-sensitive control system for medical technology and other applications
- Extremely straightforward user guidance for intuitive operation
- Supplementary information for medical and technical personnel
- Clear menu structure with self explanatory images and screen elements
- Clearly labelled safety-related functions
- No noise emission due to fan less operation
- High quality images with excellent contrast, high resolution and a wide optional viewing angle
- Possibility of graphical integration of building floor plans or photo-quality status displays
- Smooth integration of external equipment, such as operating theatre table control system and intercoms
- Any Non PLC compatible controls are mounted behind the membrane, within the overall panel fascia, adjacent to the touch screen. No additional panels are required and no exclusions or hidden costs are raised after order placement.
- Bender surgeons panels (SCP) can accommodate fully integrated PACS viewers, PC and medical keyboard
- Closed panel glass surface or unique life-long antibacterial foil surface
- Screw less mounted front plate
- Easy retrofitting and expansion, with minimal service interruptions and system down time

Description

In terms of the human/machine interface, alarm indicator and operator panels play a vital role. Their task is to take system information and transform it into clear instructions particularly in the event of critical operating situations. The flexible TCP Touch Panel provides a solution that meets the demands of both modern medical equipment and industrial and functional buildings.

For example: In the hospital environment, they can be programmed to provide clear, user friendly information with respect to critical operating theatre systems. Clinical staff is presented with all controls and indicators at their fingertips allowing them to maintain the optimal theatre environment without disruption to medical procedures.

The touch screens are used for:

- Displaying and visualizing system status, warning and alarm messages
- Control and parameterize equipment from a central location
- Output of visible and audible alarms
- Display of actual values and programming of limit values for the purpose of monitoring
- Communication to facility management systems via:

Typical examples of touch screen panel controls and indicators:

- Equipments for supplying medical gases
- Air conditioning and ventilation systems
- Room lighting
- Communication equipment
- Operating theatre tables
- Electrical IT systems monitoring
- Special safety power supply source (UPS)
- and other equipment from various manufacturers.

The integration of all the technical equipment in a single panel allows the creation of a kind of "technical control centre" in the appropriate room. Every control panel is individually designed. Suited to the individual specification and requirements as well as to the individual medical equipment.

Touch Panel

With the touch-sensitive monitor (which can be operated directly at the touch of a finger), operating and monitoring of technical equipment in medical locations and other areas couldn't be simpler. The graphical interface is capable of displaying all kinds of complex topologies. The status and command information/follow-up action information is presented in a manner that is well-structured and clear.

The integrated I/O system provides numerous options for integrating digital and analogue I/Os with different voltage ratings, power ratings, measuring signals and special functions in the same alarm indicator and operator panel. The end result is an overall system that is both modular and flexible, enabling it to be adapted or expanded, or to accommodate new technologies.

Technical data

Supply

Supply voltage	AC 230V
Frequency range	50…60 Hz
Internal voltage	DC 12/24 V
Power consumption	≤ 30 VA

Touch monitor

15" Touch Monitor

Diagonal	15" (38cm)
Format	4:3
Pixel	0.297 x 0.297 mm
Resolution	max. 1024 x 768 px
Visible area	304 x 228 mm
Brightness	328 cd/m² min.
Contrast	700:1
Viewing angle	hor./ver.: 80°/70°
Background light	Top/Bottom edge side LED type
Colours	16,2 Millionen
Response time	25 ms
LED background	MTBF > 50.000 h (50% brightness)
Touch Technology	resistive, single touch

21.5" Touch Monitor

Diagonale	21.5" (54,6cm)
Format	16:9
Resolution	max. 1920 x 1080 px
Visible area	477 x 268 mm
Brightness	246 cd/m² min.
Contrast	5000:1
Viewing angle	hor./ver.: 89°/89°
Background light	Top/Bottom edge side LED type
Colours	16,7 Millionen
Response time	16 ms
LED background	MTBF > 50.000 h (50% brightness)
Touch Technology	resistive, single touch

Computer

COM710

CPU	Intel® System on a Chip
Chipset	Atom ™ Quad Core 1.91Ghz, E3845
RAM Memory	4GB
	MTBF > 2Mio h
Mass memory	16GB, CFast™ memory card (optional SSD/HDD)
Flash Type	SLC (Single Level Cell)
	MTBF >3 Mio h
Operating System	Windows 7 Embedded Standard (Optional: Win7Pro)
Monitor interface	VGA, DVI
Interfaces	4xUSB 2.0, 1x USB 3.0
	2x RJ45 Gbit Ethernet
	2xRS485 isolated 2.5kV
	1xRS232 isoliert 2.5kV
	Line-in, Line-out
COM710	MTBF >100.000 h

Different computer and specifications optional on request.

I/O system

Ethernet controller

Qty of controllers w/ a master	accord. to ETHERNET specs
Wiring	Twisted Pair S-UTP 100 Ω Cat 5
max. cable length	100 m between hub and controller; max. network length limited accord. to ETHERNET specs
Speed	10/100 Mbit/s
Connection	2 x RJ-45
Protocols	Modbus TCP (UDP), ETHERNET/IP, HTTP, BootP, DHCP, DNS, SNTP, FTP, SNMP
Programming	WAGO-I/O-PRO CAA IEC 61131-3 AWL, KOP, FUP, ST, AS

0…10 V analogue inputs

Max. input voltage	40 V
Signal voltage	0…10 V
Internal resistance	> 100 kΩ
Electrical isolation	500 V system to supply
Resolution	12 bit

0…10 V analogue outputs

Max. input voltage	40 V
Signal voltage	0…10 V
Burden, Load	> 5 kΩ
Electrical isolation	500 V system to supply
Resolution	12 bit

DC 24 V digital inputs

Signal voltage (0)	DC -3 V … +5 V
Signal voltage (1)	DC 15…30 V
Input current	2.8 mA
Electrical isolation	500 V system to supply

DC 24 V digital outputs

Voltage across contacts	DC 24 V (-25%…+30 %)
Load	ohmic, inductive, lamp load
Output current	max. 0.5 A short circuit proof
Electrical isolation	500 V system to supply

General data of I/Os

Connection type	cage clamp
Wire cross section	0.08…2.5mm²/AWG 28…14
Wire stripping length	8…9 mm

Bezel frame dimensions

Bezel width	min. 615…950 mm
Bezel height	min. 400…650 mm
Wall box depth	min.150 mm
Bezel frame depth adjustment	max. +20 mm

Wall box dimensions

Wall box width	Bezel width minus 26 mm
Wall box height	Bezel height minus 26 mm
Mounting accord. to dwg#	9800510E, 9800267E

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