



Starkstrom

MEMBRANE TOUCHSCREEN THEATRE CONTROL PANELS REF. eTCP



- Infection control friendly and easy to clean with complete integral membrane with high IP rating - 54
- Small and compact requiring little additional expense to support the panel in the wall
- Can incorporate low IP rated equipment in separate membrane panel which does not have the full integrity of the main panel
- Matching x-ray viewers available.
- Flexibility to accommodate late changes in the specification by way of software changes
- Easy to upgrade to accommodate new theatre innovations, by way of software changes only. Minimum theatre downtime to carry out upgrades
- Touchscreen could be linked to BMS for easy access to theatre environment
- Touchscreens can be personalized to the hospital
- No approval process to allow manufacture
- Proven reliability with Allen Bradley touchscreens/PLCs, with much fewer points of failure than sTCP.
- Modern appearance complementing today's high tech theatres
- Maximum panel depth of 150mm enabling easier installation in standard wall depths. No need to build walls to suit panel depth
- No need for certain pieces of free issue equipment traditionally associated with panels, like temperature/humidity indicators

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Starkstrom eTCP Theatre Control Panel

Technical Data

SUPPLY VOLTAGE

Supply Voltage	230 ... 240VAC
Supply Voltage Tolerance	-15%, +10%
Frequency Range	47 ... 63 Hz
Power Supply Usage	500VA
Supply Disconnect Switch Rating	100A
Max. Supply Cable CSA	25.0mm

INTERNAL CONTROL VOLTAGE POWER SUPPLY

Manufacturer	Allen Bradley
Series	1606
Model	1606-XLP100E
Supply Voltage	85 ... 264VAC
Output Voltage	24 ... 28VDC
Output Current	4.2A
Short Circuit Current @ 25°C	7.1A
Efficiency	90%
PFC Harmonics	EN 61000-3-2
Parallel Operation	Possible
MTBF	500,000 hrs

TOUCH SCREEN

Manufacturer	Allen Bradley
Series	Panel View Plus Compact 1000
Model	2711PC-T10C4D1
Size	10.4"
Screen Type	Colour Active Matrix
Touch Type	Analogue Resistive
Resolution	640x480
Active Image Area	211x158mm
Ports	Serial / Ethernet / USBx2
Brightness	300cd/m2 Nits
Number of Colours	18bit
Programming Software	RS View Studio
Supply Voltage	18 ... 30VDC
Power Supply Usage	70W (2.9A @ 24VDC)

LOGIC CONTROLLER

Manufacturer	Allen Bradley
Series	MicroLogix 1200
Model	1762-L40BWAR (Twin Port Model)
Onboard Inputs (0 ... 1kHz)	20 Digital Inputs (24VDC)
Onboard Fast Count Inputs (0 ... 20kHz)	4 Fast Count Digital Inputs (24VDC)
Onboard Outputs	16 Relay Outputs (Volt Free)
EMC Immunity	EN 50082-2
EMC Emission	EN 50081-2
Comms. Protocols – Channel 0	DH-485 / DF1 Full Duplex / DF1 Half Duplex DF1 Radio Modem / Modbus Master and Slave / ASCII
Comms. Protocols – Channel 1	DF1 Full Duplex Only
Fieldbus – Modbus (Optional)	Yes, with add-on Allen Bradley 1761-NET-AIC
Fieldbus – Modbus	RTU Master or RTU Slave
Fieldbus – DeviceNet (Optional)	Yes, with add-on Allen Bradley 1761-NET-DNI
Programming Software	RS Logix 500 / 5000
Power Supply	85 ... 264VAC
Power Supply Frequency	47 ... 63 Hz
Power Supply Inrush	120VAC: 25A for 8ms, 240VAC: 40A for 4ms
Heat Dissipation	22.0 W
Power Supply Usage	82VA
Shock Operating / Relay / Non-Op.	30G / 7G / 40G
Connection Type	Finger Safe Screw Terminals
Cross Sections Solid / Stranded	#14 to #22 AWG / #16 to #22 AWG
Screw Terminal Torque	0.791 Nm

ANALOGUE INPUTS

Manufacturer	Allen Bradley
Series	MicroLogix 1200
Model	1762-IF2OF2
Format	Expansion Card
Type	0-10V or 4-20mA Selectable
Voltage Input Protection	±30VDC
Current Input Protection	±32mA
Common Mode Voltage Range	±27V
Input Impedance Voltage / Current	200kΩ / 250Ω
Electrical Isolation	500VAC or 707VDC for 1 minute
Resolution	12 bits
Repeatability	±0.1%
Typical Conversion Time	2.5ms
Recommended Cable	Belden 8761 (Screened)

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Manufacturer	Allen Bradley
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Format	Expansion Card
Type	0-10V or 4-20mA Selectable
Voltage Input Protection	±30VDC
Current Input Protection	±32mA
Common Mode Voltage Range	±27V
Electrical Isolation	500VAC or 707VDC for 1 minute
Resolution	12 bits
Repeatability	±0.1%
Typical Conversion Time	4.5ms
Recommended Cable	Belden 8761 (Screened)

DIGITAL INPUTS

Format	Main Unit Integrated / Expansion Available
Signal Voltage (0)	0 ... 5V
Signal Voltage (1)	10 ... 24V
On State Current	7.3 ... 8.9mA @ 24VDC
Off State Leakage Current	1.5mA min.
Input Resistance	2.7 ... 3.3kΩ

DIGITAL OUTPUTS

Format	Main Unit Integrated / Expansion Available
Interface Relays	Omron G2R1 24VDC Plug-In
Output Type	Volt Free Clean Contact
Max. Switching Current	10A AC-1
Turn On / Turn Off Time	10msec min. ScanTD

BUZZER

Buzzer Message	Acknowledge to mute
Buzzer Sound Level	92db
Buzzer Frequency	2.8±0.5kHz
Buzzer Repetition	Programmable

TERMINAL CONNECTIONS

Manufacturer	Weidmuller
Series	WDU / WPE
Input Terminals	4.0mm Single
Output Terminals	4.0mm Twin
Analogue Terminals	2.5mm Triple
Power Terminals	6.0mm Single min.

ENVIRONMENTAL REQUIREMENTS

Operating Temperature	0 ... 55°C
Operating Humidity	5 ... 95%RH NonCon
Storage Temperature	-40 ... +85°C