



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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| 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 |