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PRELIMINARY OPERATIONS

Mounting Instructions

It is recommended that you attach the cables to a wall box. The position selected for mounting the box must satisfy the requirements for the mounting area and allow the space necessary for opening the box (see Figure 1). In addition, there must be sufficient space to the right and rear of the unit to allow access to the box with a screwdriver.

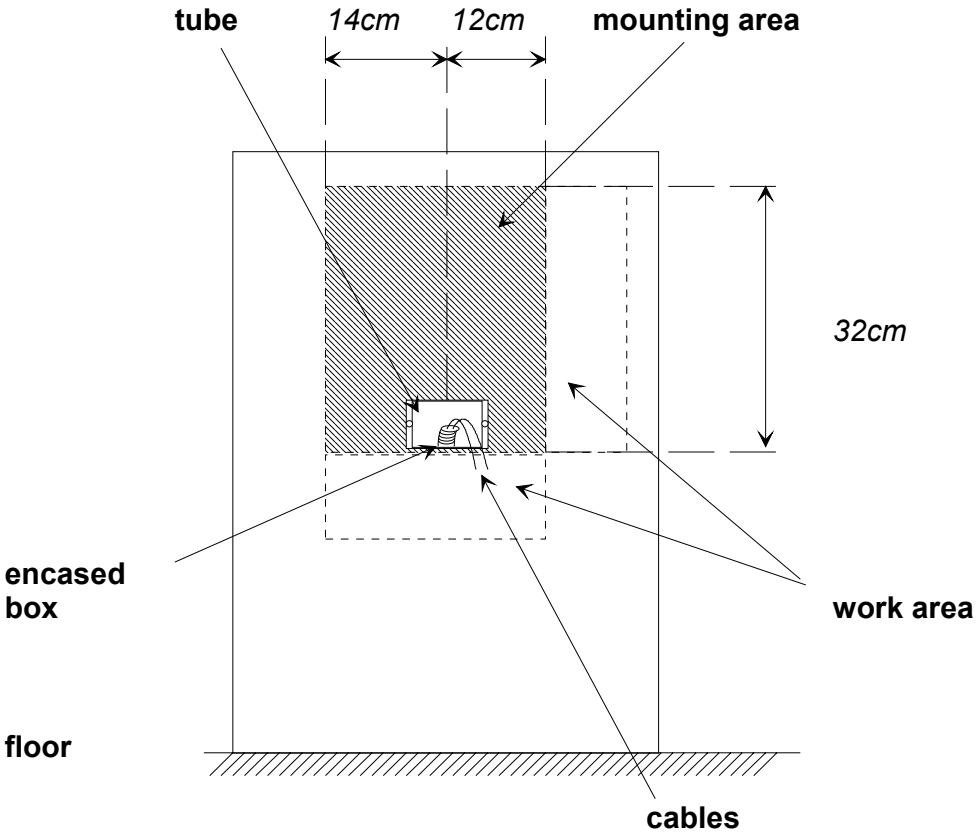


Figure 1. Space Requirements for Mounting

Electrical Connections

The TemaServer is powered at low voltage ($12V_{AC/DC}$).

AC supply: by means of a transformer (TRN-01 Option) connected to the 230V 50Hz network. A switch must be positioned prior to the Trasformer. The cables connecting the transformer and the TemaServer must be at least AWG20 and no more than 10m long (see Figure 2).

- **TRN-01 Installation on floor and/or ceiling panels**

  Use three plastic dowels to attach the transformer (option TRN-01, 100mm x ∅70mm) directly to the wall, floor, or ceiling, taking care to avoid moveable surfaces. Connect the cables to the terminal box located on the module.

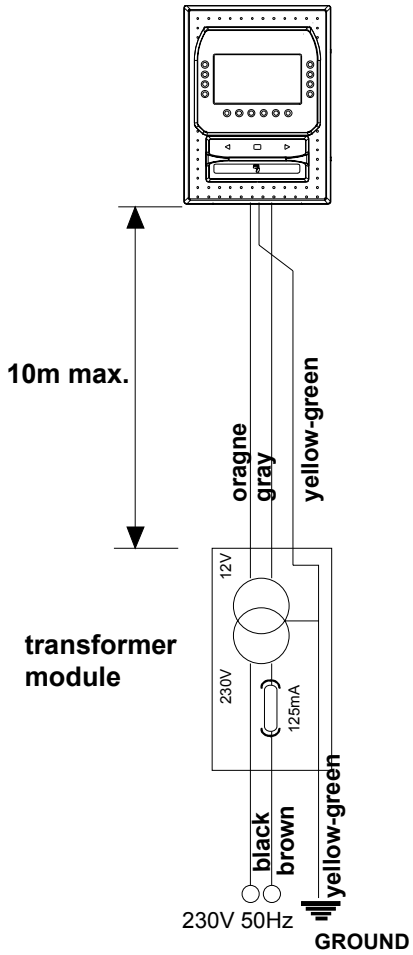


Figure 2. Electrical Connections

Transformer TRN-01

To mount the TRN-01 transformer, follow these steps:

1. Use the three plastic dowels and M4 screws to attach the support plate to the wall and mount the transformer module.
2. Attach the entry wire ($230V_{AC}$) to the entry connector (next to the fuse) and the output wire ($12V_{AC}$) to the other connector (see Figure 3). The maximum diameter allowed is $2.5mm^2$ for both entry wires (230V) and output wires (12V).
3. Use an isolated connector to connect the ground wires together.
4. Use the cable clamp to fasten the wires together.
5. Screw the cover onto the transformer module and bind the cables together at the base of the transformer module.

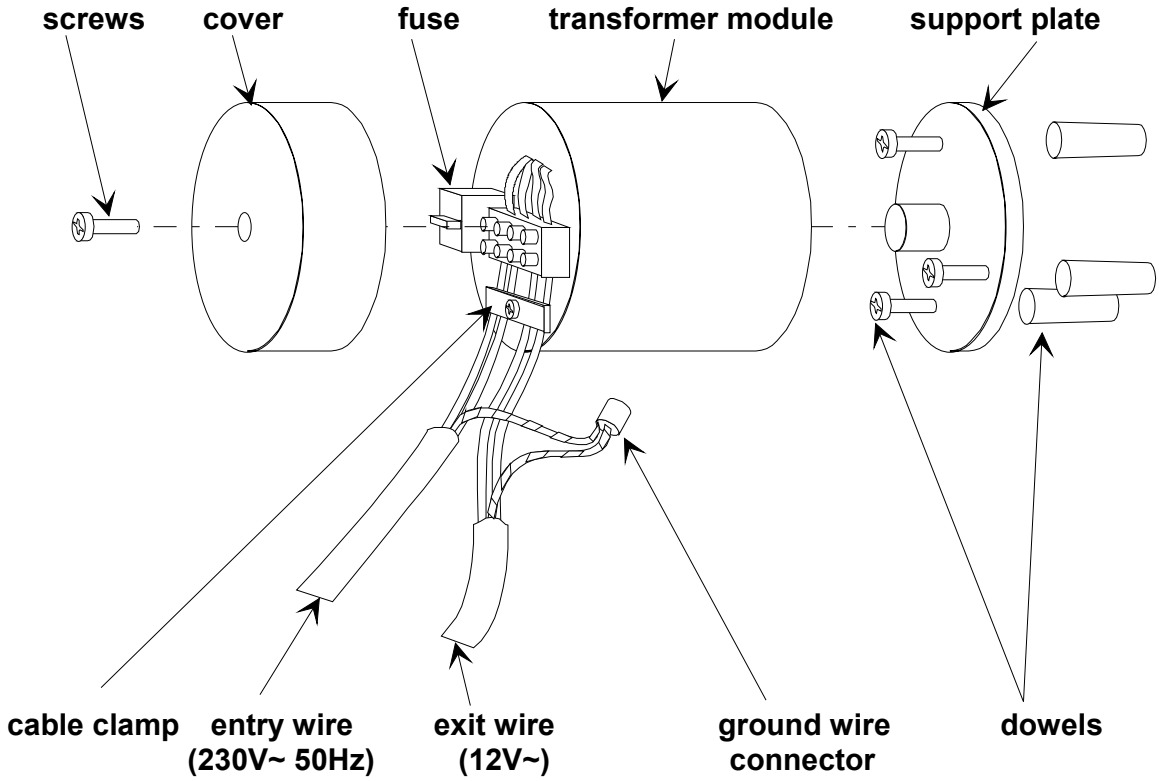


Figure 3. TRN-01 Transformer

- DC supply: Voltage $12V_{DC}$±15% 600mA

  Note: The connection to CTU is not polarized

Cabling Arrangements

It is recommended that you attach the cables to a wall box. **The box must be placed <u>120cm</u> from the ground** (see Figure 4).

It is strongly recommended that you run the LAN cable into a tube separate from the one used for the 12V~ power cable. If you wish to keep the LAN cable and the 12V~ power cable together, make sure that the 12V~ cable is shielded. You must not **for any reason** attempt to route the LAN cable and the primary power cable (230V~) together.

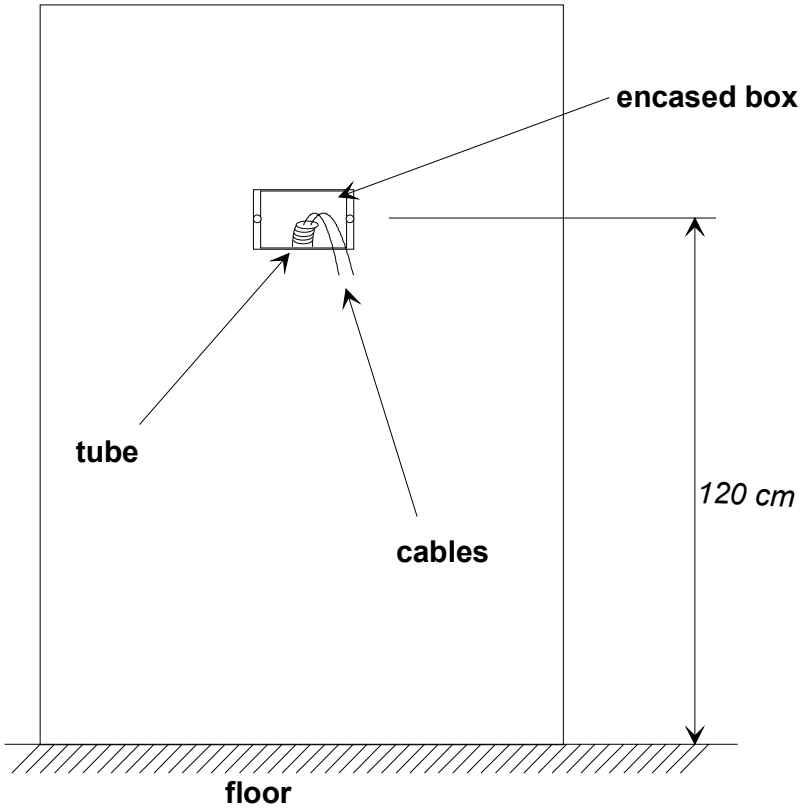


Figure 4. Cabling Arrangements

INSTALLATION

Attaching the Terminal Support Plate

To attach the terminal support plate, drill two holes into the wall, into which to introduce the plastic dowels that are to hold up the support plate (see Figure 5). **Make sure that the box attached to the wall is aligned with the niche on the lower part of the support plate** (use a ∅ 6mm parallel tip flat head screwdriver).

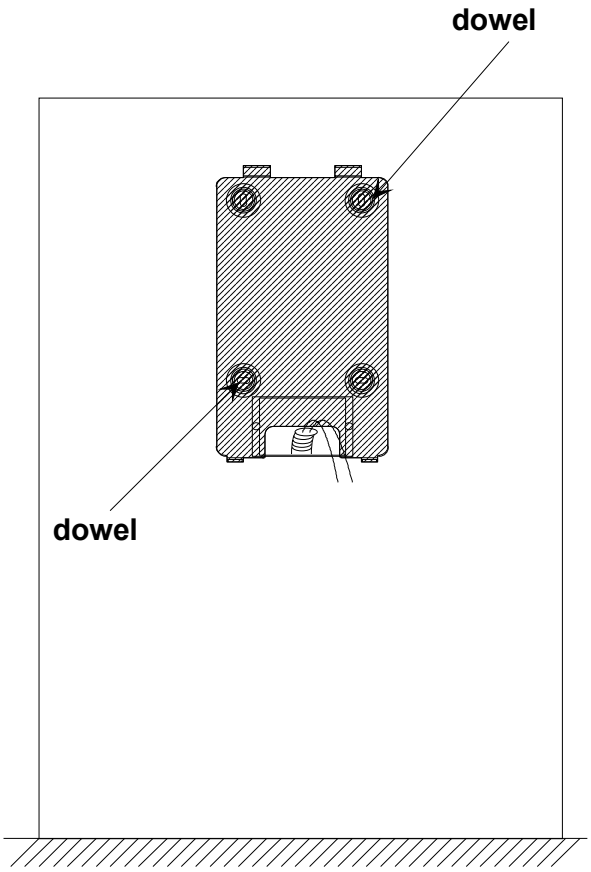


Figure 5. Terminal Support Plate

Hooking Up the Terminal

To hook up the terminal, follow the steps described below (see Figure 6):

1. Attach the upper part of the terminal to the upper hooks on the support plate.
2. Insert the cables into the terminal through the specified openings.
3. Tighten the two screws that secure the terminal to the support plate (use a ∅ 6mm parallel tip flat head screwdriver).

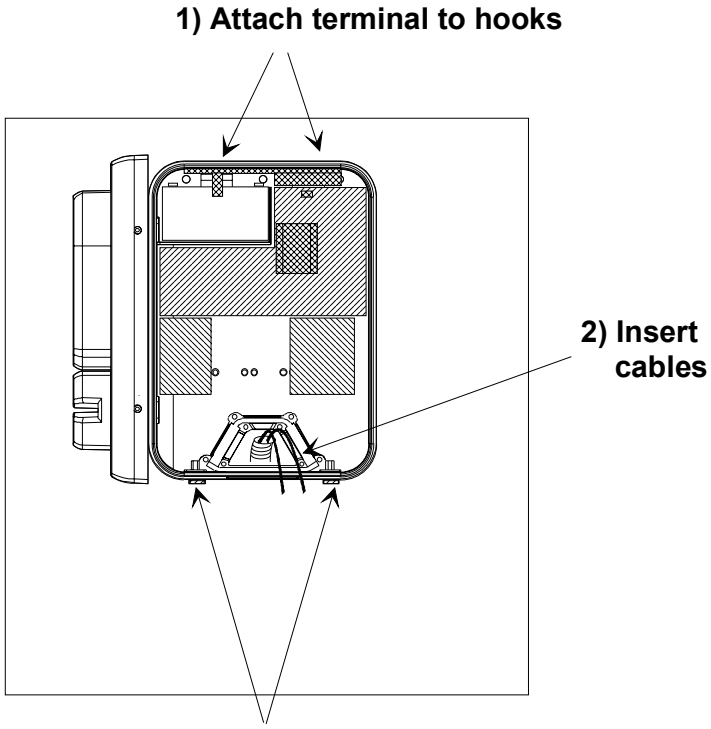


Figure 6. Hooking Up the Terminal

Connecting the Cables

To connect the cables, follow these steps:

WARNING

Do not press on the anti-opening tamper during installation or maintenance of the unit.

1. Line up the cables with the grooves at the back of the terminal (see Figure 7) and screw in the small plate that serves as a cable clamp (use a ∅ 5mm Philips head screwdriver).

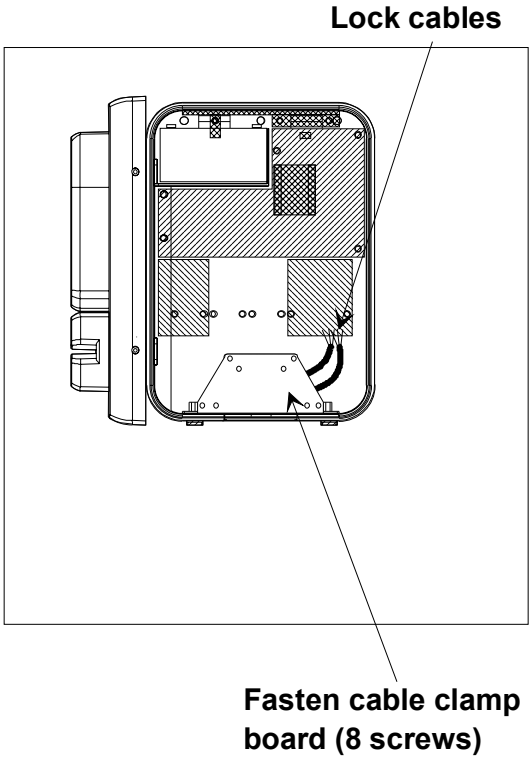


Figure 7. Connecting the Cables

2. Attach the wire pin connectors to the terminals located on the lower part of the terminal unit (use a ∅ 3mm flat head screwdriver).
3. Insert the cable into the corresponding connector (see Figure 8) to complete the connection to the LAN Ethernet 10BaseT (twisted-pair).
4. The F1 fuse for the battery is normally switched off; switch on at time of activation.

When 12V of electric current is enabled (see Figure 9), the terminal commences operation and the green “RUN” LED lights up (see Figure 8).

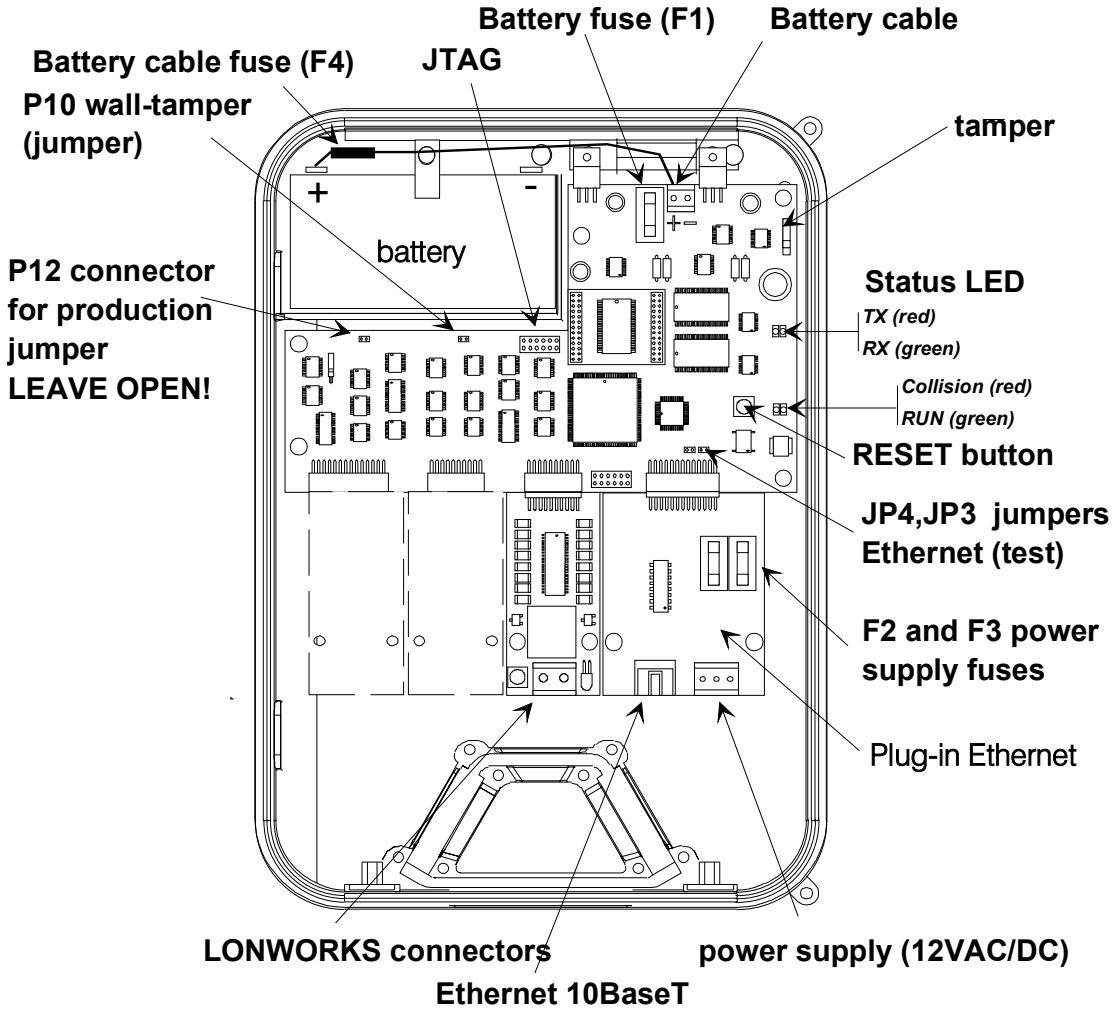


Figure 8. Main Circuit Components

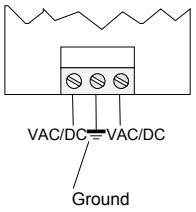


Figure 9. Close-Up View of the 12VAC/DC Supply

Notes: The VDC is not polarized

The Ground wire is mandatory for the respects of EMS (Electro Magnetic Susceptiblity) regulations

Jumpers

For normal operations, the jumpers on the main board should be configured in accordance with Table 1, below.

Jumper	Function	Default status
P10	auxiliary tamper	inserted
P12	auto-update firmware	open
JP3	Full duplex Ethernet	open
JP4	Loopback Ethernet	inserted

Table 1: Jumper Configuration for Main Board

Display Handler Board

The CTUx can operate with two different versions of display handler boards:

a) Display handler board positioned on the front of the CTUKx, with cold cathode back-lighting lamp.

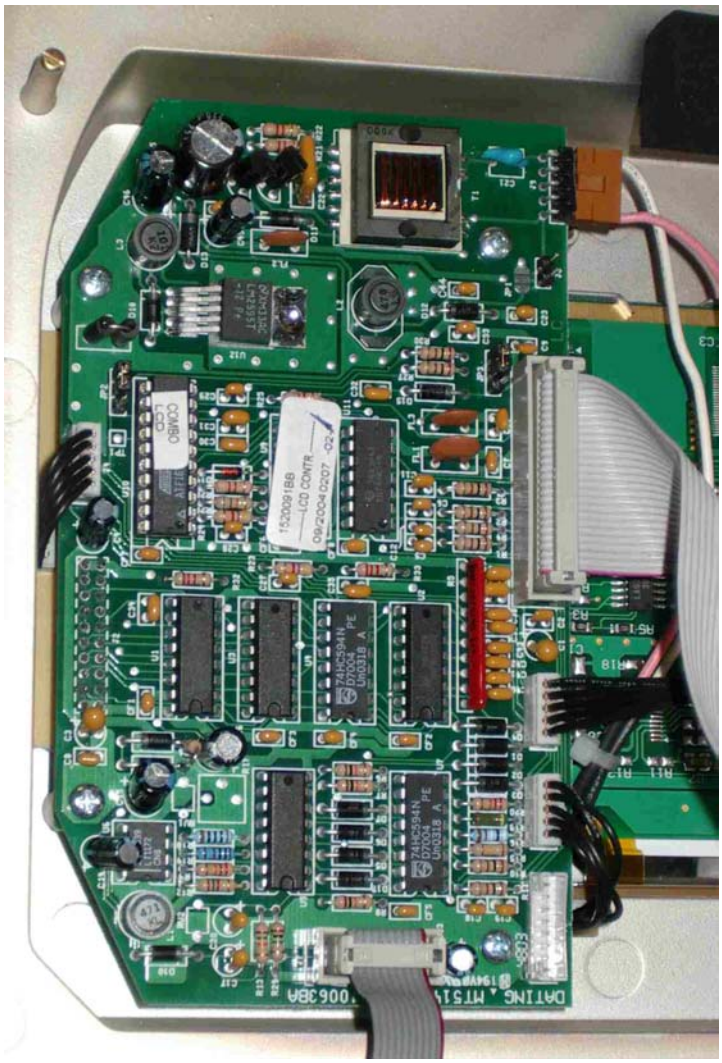


Figure 10: Display Handler "a" LCD Board

Figure 11 shows the connections and default arrangements of jumpers JP2 and JP3 on the Display Handler Board. Normally, both jumpers are left inserted in position 1-2, as indicated in Figure 11 (MAG-TEK interface), unless CTUK07 - K08 is being used, in which case the jumpers are inserted in position 2-3.

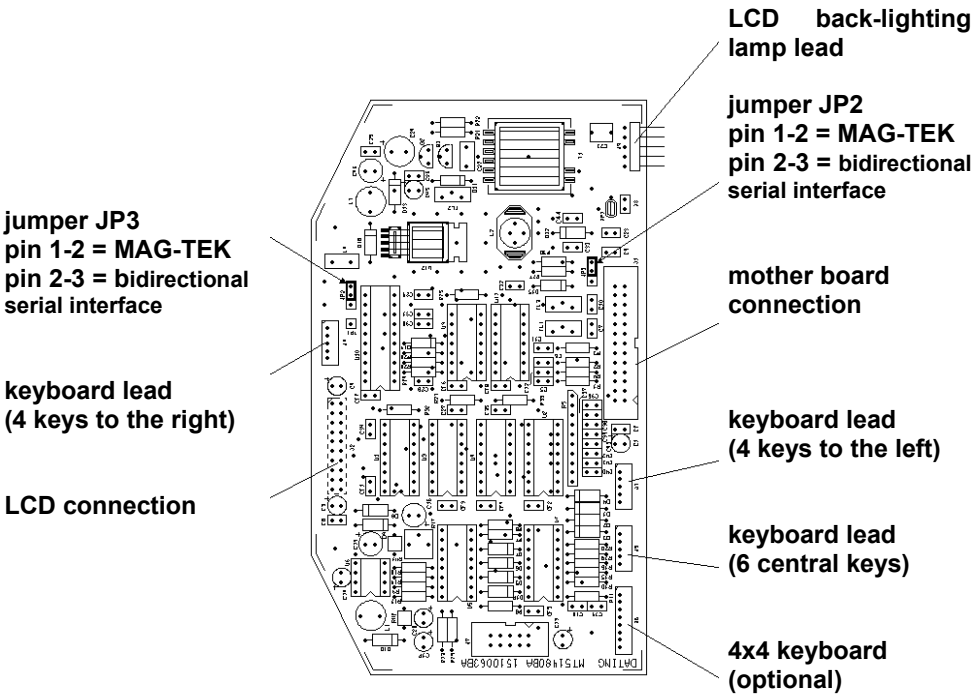


Figure 11: Display Board "a" Detail

The jumpers on display board "a" should be configured in accordance with Table 2, below.

Jumper	Function	Default status
JP2	Magtek / serial	Inserted between pins 1 and 2
JP3	Magtek / serial	Inserted between pins 1 and 2
Note: in position 2-3 when using CTUK07 or CTUK08		

Table 2: Jumper configuration for Display Baord "a"

b) Board connected directly to the CTU board for display handling, with white LED back-lighting lamp.

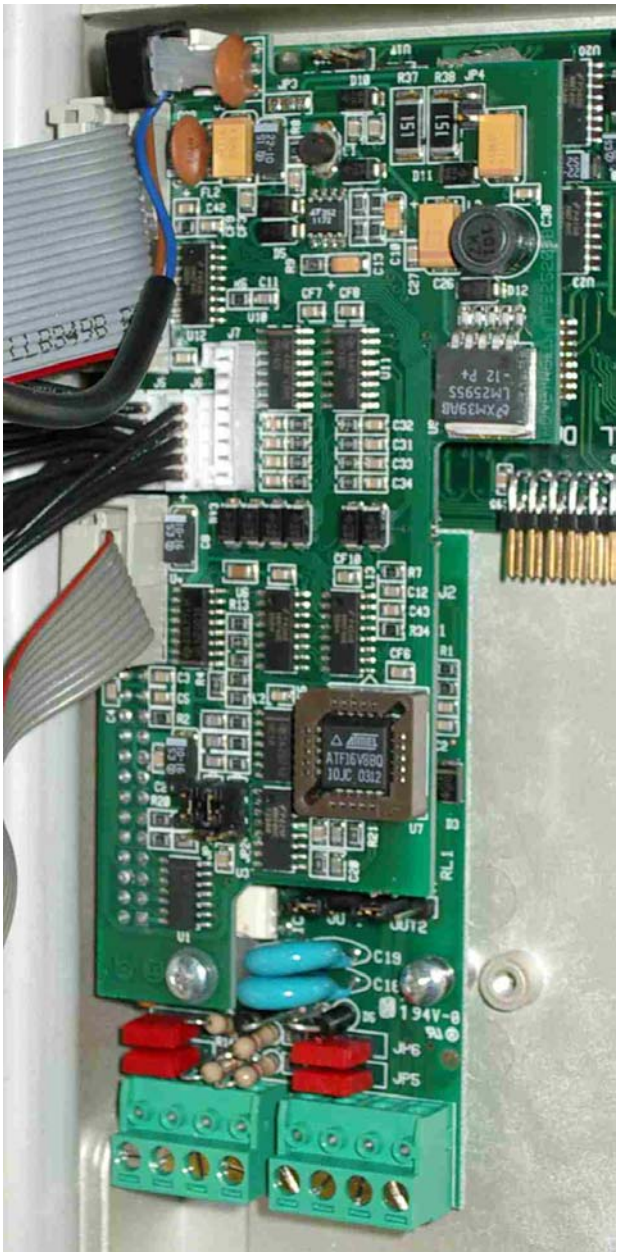


Figure 12: Display Handler Board "b"

Figure 13 shows the connections and the default arrangements of jumpers JP1 and JP2 on Display Control Board "b". Both jumpers are normally left inserted at position 1-2, as indicated in Figure 11 (MAG-TEK interface), unless using: CTUK07 – K08, in which case the jumpers must be in position 2-3.

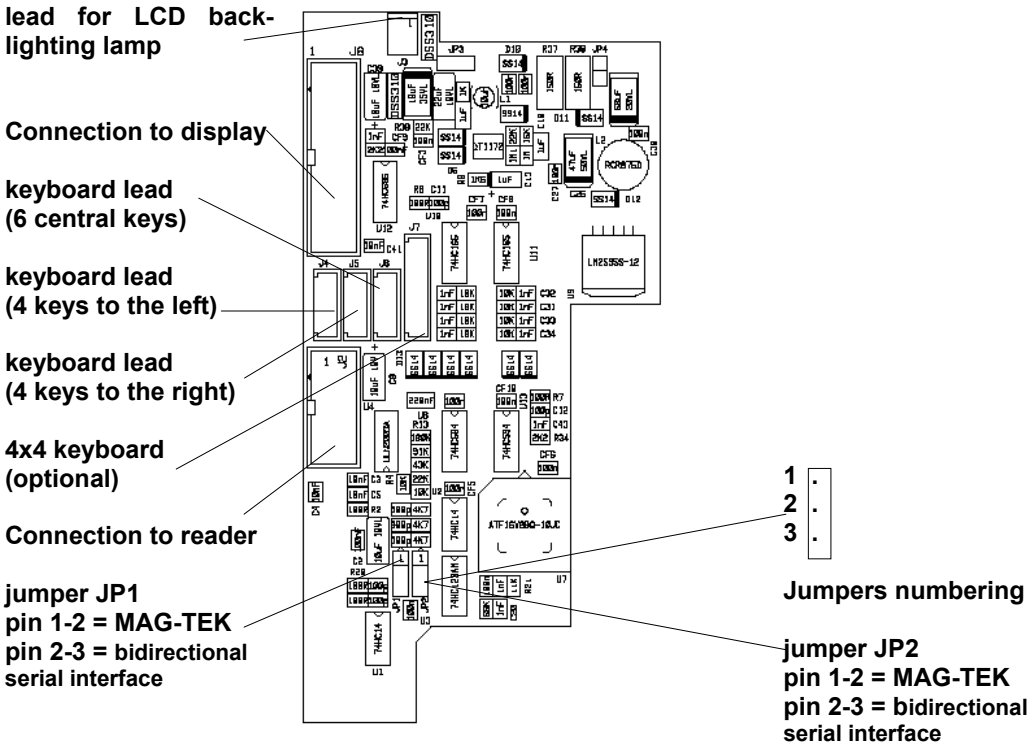


Figure 13: Detail: Display Board "b"

The jumpers on display board "b" are to be configured in accordance with Table 2.

Jumper	Function	Default Status
JP1	Magtek / serial	Inserted between pins 1 and 2
JP2	Magtek / serial	Inserted between pins 1 and 2
Note: in position 2-3 when using CTUK07 or CTUK08		

Table 3: Jumper configuration for Display Board "b"

Contrast Adjustment and Basic Information

You can make adjustments to the contrast for the display by making use of a special screen. The screen is activated by pressing the 3 upper keys to the right (see figure below).

The contrast is then regulated by utilizing the keys associated with the two arrows appearing to the right.

In order to save a new setting and exit the screen, press the top key to the right, which is associated with the door icon.

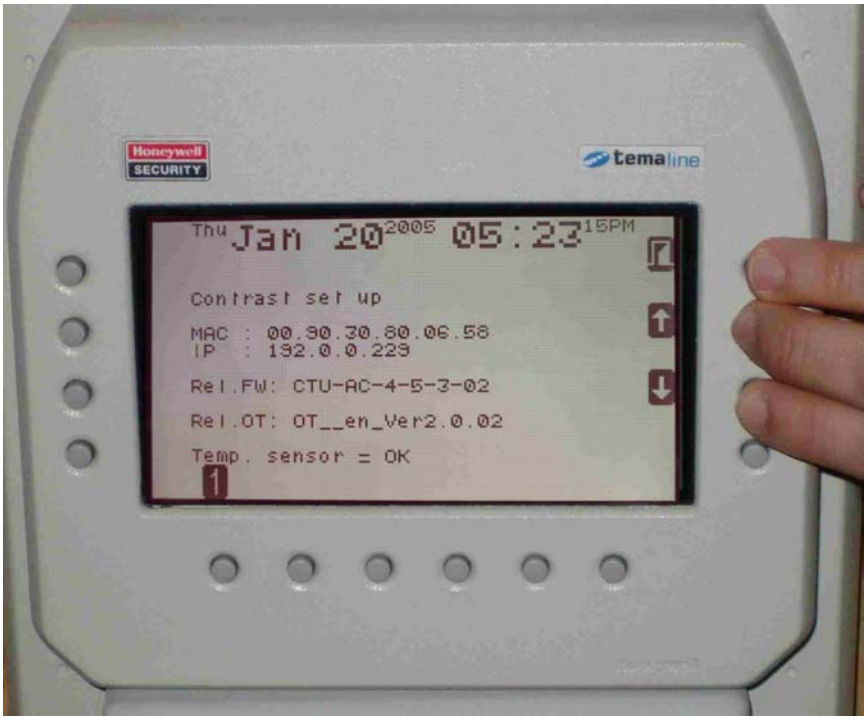


Figure 14: Screen for Contrast Regulation and Basic Information

The same screen also shows basic information regarding:

- MAC = MAC ADDRESS
- IP = IP ADDRESS
- FW Rel. = Firmware release being used
- Rel. OT = Release of the localization file being used (language)
- Temp. Sensor = Operational status of the internal temperature sensor (used for automatic regulation of the contrast when the temperature is less than 0 degrees). OK – operating correctly | KO - Malfunction.

Auxiliary Connections

On the I/O plug-in board there is a terminal board with 2 optically isolated inputs and two relay outputs. The relative connections are indicated in Figure 15.

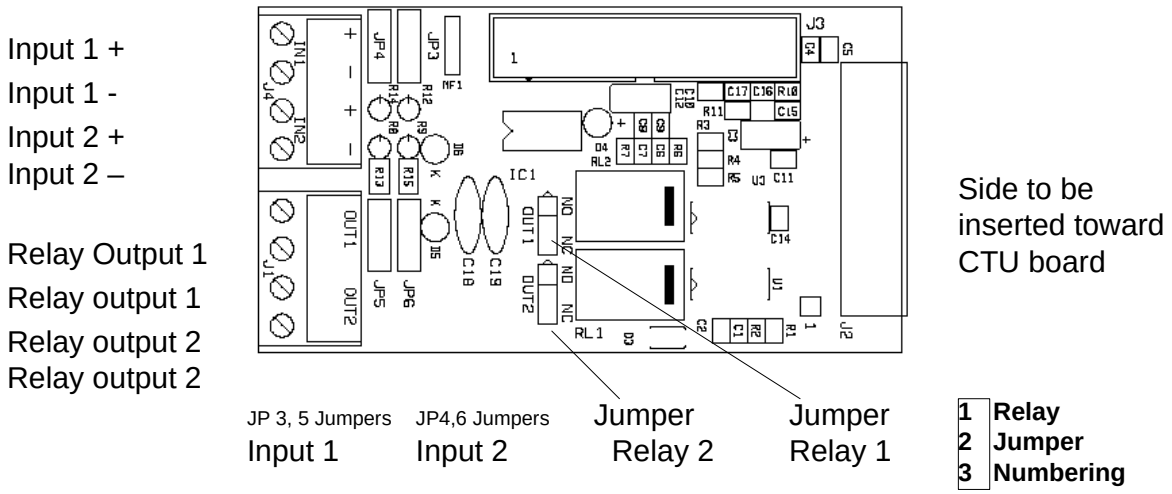


Figure 15: Auxiliary Connections

Note: When the cables extend externally, you must use shielded cables, the braiding for which must be connected to the ground clamp.

You can define the operational mode for each relay by positioning the appropriate jumpers as follows:

- Jumper «OUT1» between 12 (NO) for relay 1 normally open
- Jumper «OUT1» between 23 (NC) for relay 1 normally closed
- Jumper «OUT2» between 12 (NO) for relay 2 normally open
- Jumper «OUT2» between 23 (NC) for relay 2 normally closed

You can define the operational mode for each input by positioning the appropriate jumper pair as follows:

- Jumpers J3 and J5 «IN1» closed for input 1 on clean contact
- Jumpers J3 and J5 «IN1» open for input 1 on contact with power supply
- Jumpers J4 and J6 «IN2» closed for input 2 on clean contact
- Jumpers J4 and J6 «IN2» open for input 2 on contact with power supply

Connecting the RS232 Board (option TS-OP05)

- Mount the RS232 board (TS-OP05) in slot 1 (or in slot 2 at the base of the 3-pin connector).
- Connect cable RS232 to the front connection board as illustrated in Figure 16.
- Attach the cable shield to the CGND clamp on the *RS232 plug-in board*, leaving the other end of the cable shield disconnected.
- The connector is a removable PCB terminal connector; to disconnect the cables, simply pull the connector off.

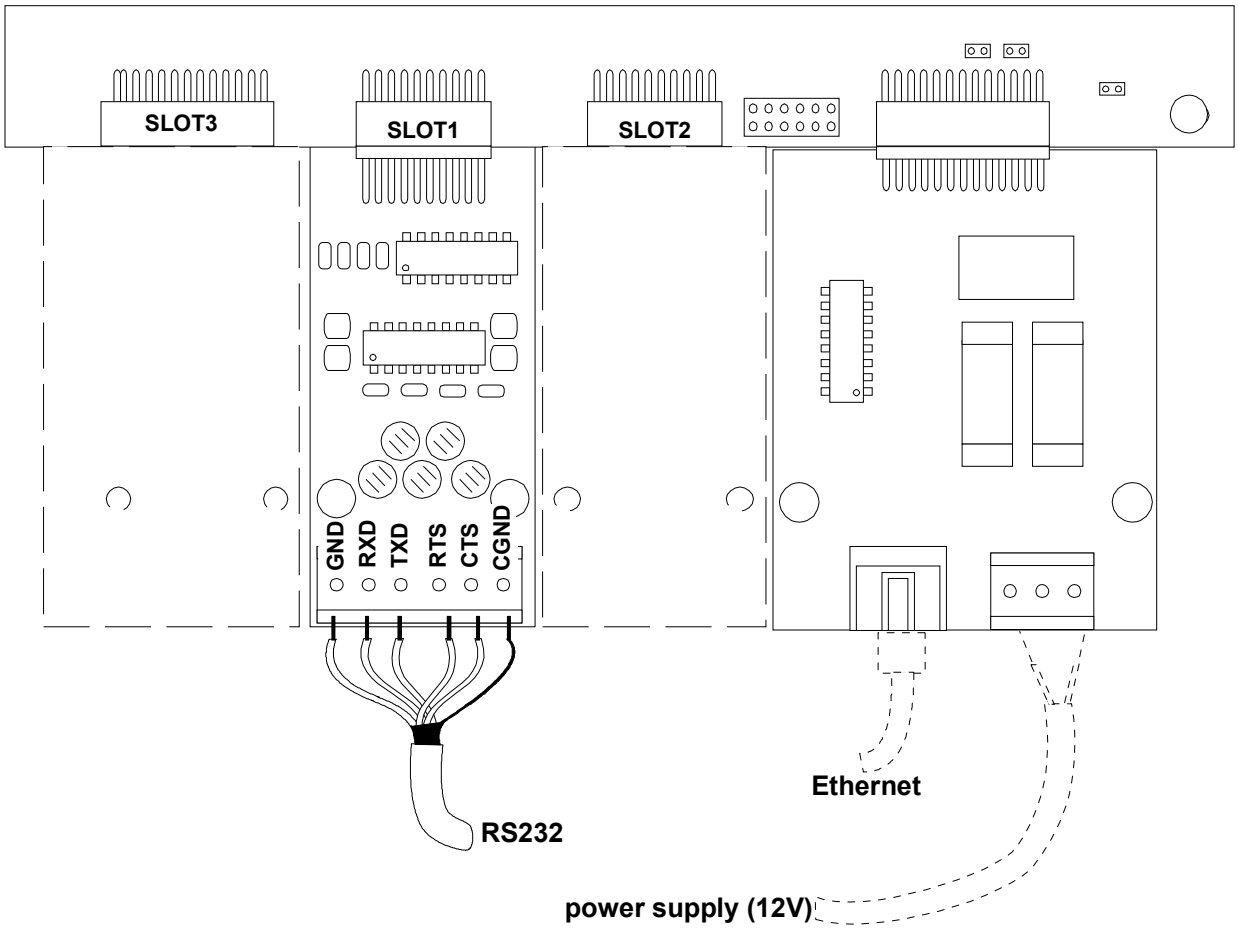


Figure 16. RS232 Board Connection (optional)

Connecting the RS485 Board (option TS-OP04)

- Mount the RS485 board (TS-OP04) in slot 2 (at the base of the 3-pin connector) or in slot 1.
- Connect cable RS485 to the front connection board as illustrated in Figure 17.
- Attach the cable shield to the CGND clamp on the *RS485 plug-in board*, leaving the other end of the cable shield disconnected.
- If you are connecting the board to one of the two ends of the bus, the line termination must be enabled by closing jumpers JP2, JP3, JP4. If this is not the case, leave the three jumpers open.
- The connector is a removable PCB terminal connector; to disconnect the cables, simply pull the connector off.

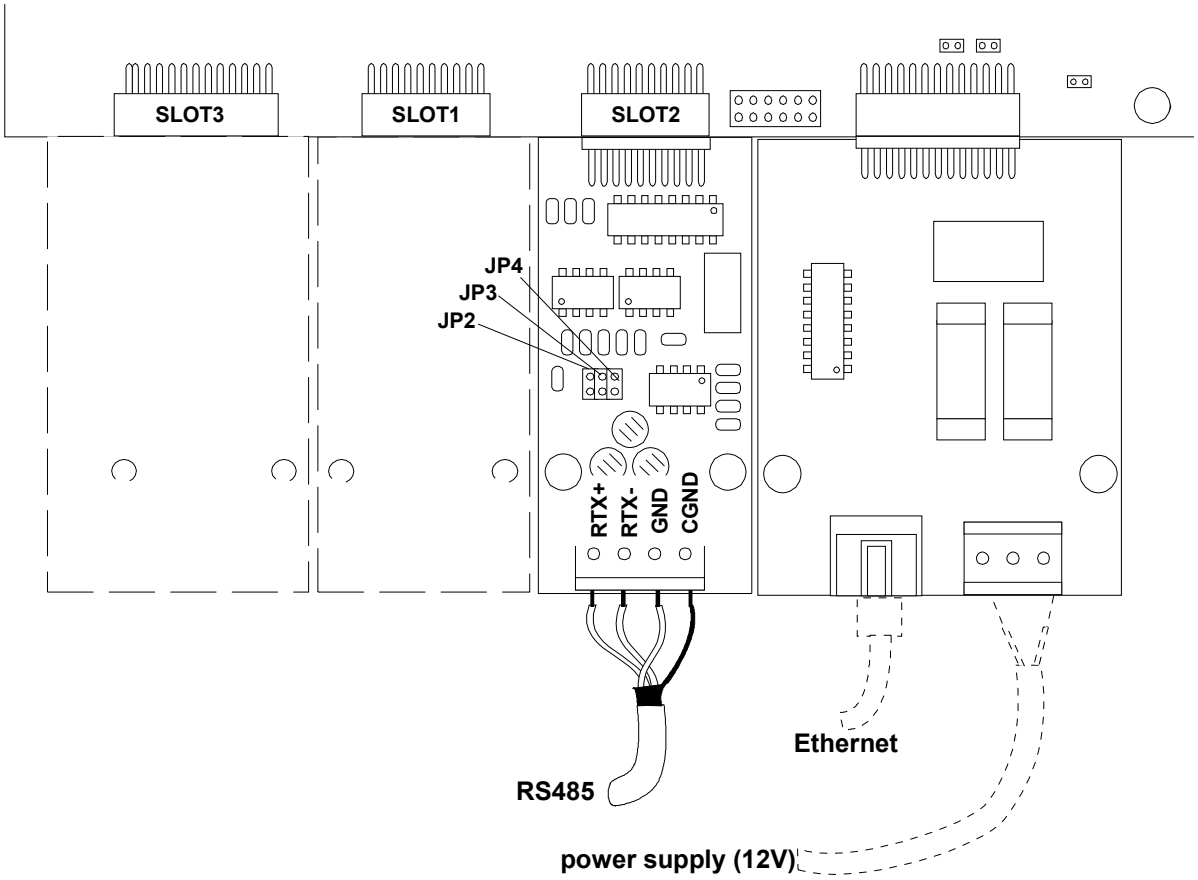


Figure 17. RS485 Board Connection (optional)

Connecting the Modem PSTN Board (option TS-OP11)

- The MODEM board (TS-OP11) occupies two slots and is mounted in slots 1 and 2 (on the two bottom rows of pins) or on slots 1 and 3 (note: slot 1 is the center connection).
- The telephone cable is connected as shown in Figure 18.
- The board also comes with an auxiliary RS232 port. Cable connection is shown in Figure 18.
- The RS232 port connector is a PCB terminal connector; to disconnect the wires, pull off the terminal connector from the board with the wires still connected to it.
- The RS232 cable shield is fastened and connected to the GND screw only at one end of the cable, the other end is not connected.

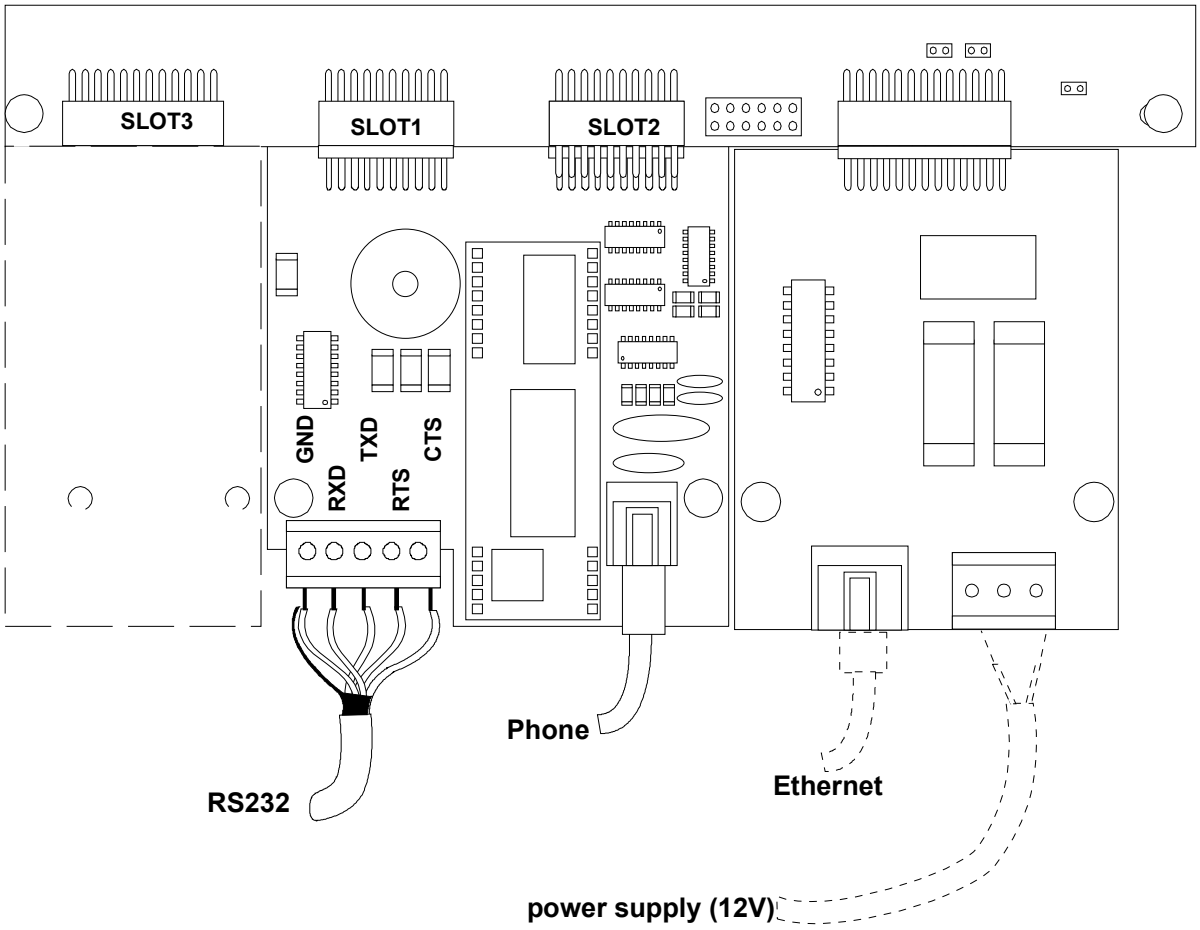


Figure 18. Connecting Modem and RS232 (option) Cables

Connection to the expansion memory RMC03 board (Option TS-RMC03) (8Mbytes Flash memory + 2Mbyte RAM memory)

Remove the RMC01 board and insert the RMC03 board into the socket, as shown in the figure below.

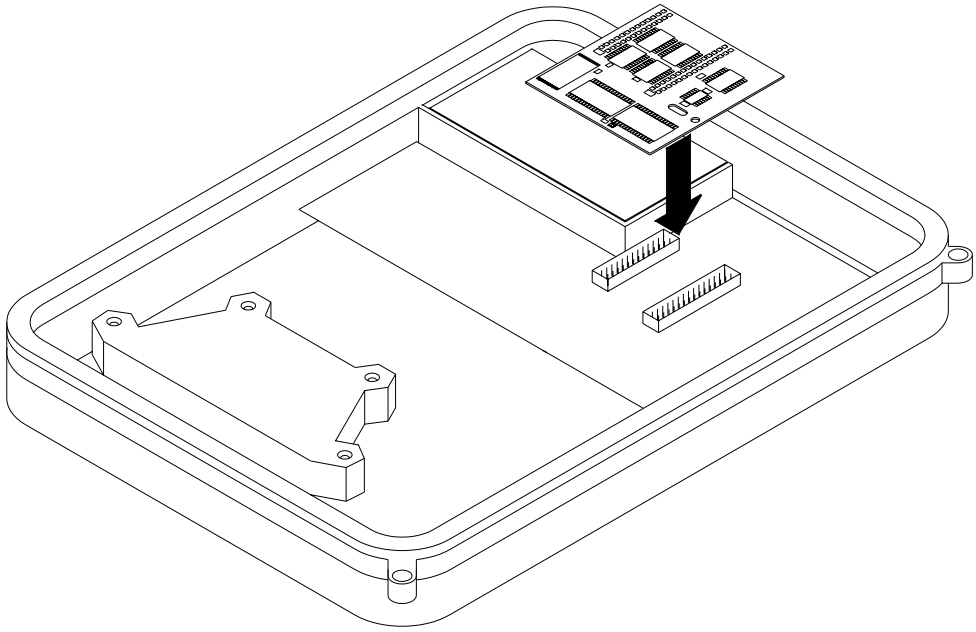


Figure 19: RMC03 Board connection

Closing the Terminal

To close the terminal, follow these steps:

1. Connect both contacts of the battery cable to the battery.
2. Make sure that the rubber gasket is correctly positioned.
3. Close the terminal cover by rotating it.
4. Fasten the cover with the two special screws (see Figure 20) located on the side of the terminal (use a TORX anti-tamper TX10 screwdriver).

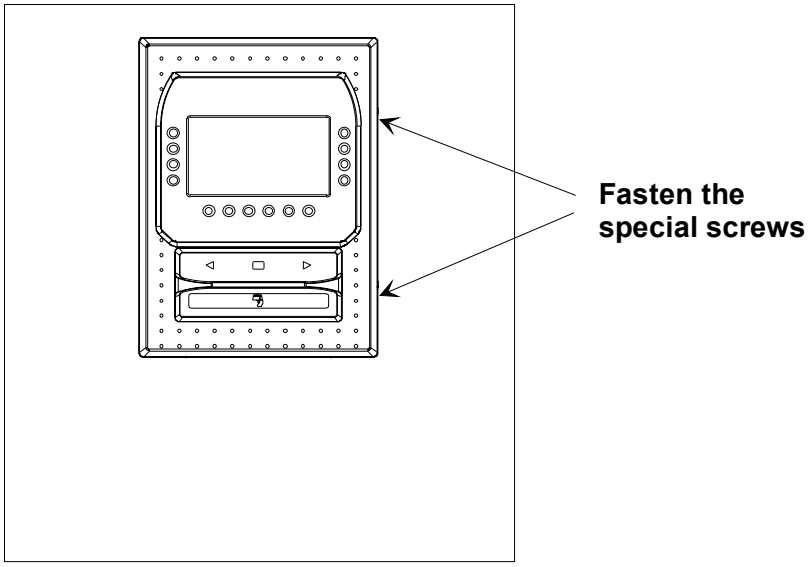
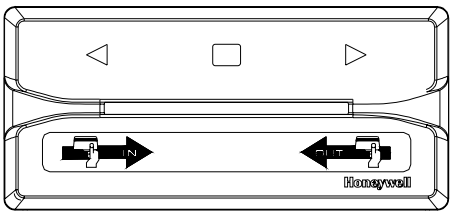


Figure 20. Closing the Terminal

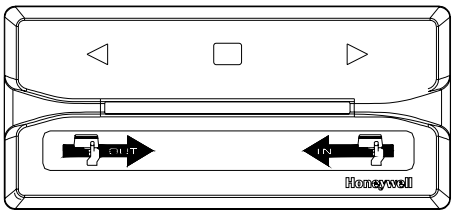
Applying the Entry/Exit Labels

Apply the two entry/exit labels to the magnetic reader according to the pre-configured transit directions. Make sure that you place the labels into their appropriate hollows (TS-TAx1: see details in Figure 21 and Figure 22; TS-TAx2/TS-TAx3: see details in Figure 23 and Figure 24).



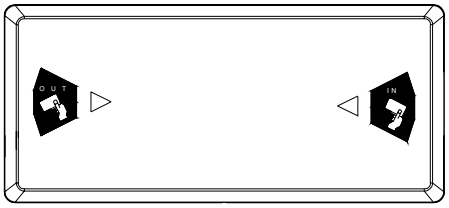
← EXIT **ENTRY →**

Figure 21. Entry/Exit Labels



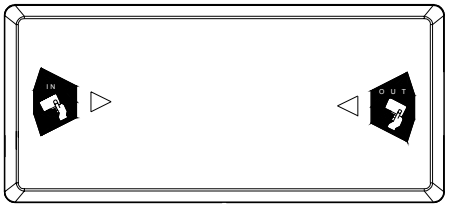
← ENTRY **EXIT →**

Figure 22. Entry/Exit Labels



← EXIT **ENTRY →**

Figure 23. Entry/Exit Labels



← ENTRY **EXIT →**

Figure 24. Entry/Exit Labels

Factory Default IP Address

The CTUKx is initially identified with the following IP address:

160.221.230.127

After the first connection, the address must be changed so as to give all of the CTUs on the Ethernet network different addresses.

See page 18 for procedures on how to display the IP address as currently set.

TECHNICAL SPECIFICATIONS

TemaServer TS_TAx1 (CTU-K01 code 1500062xxx)

FCC NOTICE

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, these is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

Canadian Compliance Statement

This Class B Digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numerique de la classe B respecte les exigences du Reglement sur le material broilleur du Canada.

Parameter	Value
DC power supply	$12V_{DC}$±15% 500mA nominal (6W) 600mA max. (for fast battery recharge)
AC power supply	$12V_{AC}$±15% 50Hz 500mA (nominal) 600mA max (for fast battery recharge)
Power supply via TRN01 Transformer	$230V_{AC}$ ±15% 50Hz 30mA nominal (7VA) 40mA max. (for fast battery recharge)
Weight (including frame)	3.5 kg (+ TRN01 transformer= 500g)
Size	220x305x80 mm
IP Protection Rating	IP55 (except IP31 magnetic pickup module)
Environmental temperature for correct operation	a) with display with CCFL backlighting 0÷50 °C b) with display with LED backlighting -5÷50 °C note: the terminal must always remain on note: the terminal has been found operational even at temperatures as low as –20°C, but this data is not certifiable

Storage temperature	-10°C÷40°C
Storage humidity	0÷70% without condensation
Magnetic pickup	Magnetic ISO 7811 tracks 2 5.000.000 scans
LAN Ethernet connection	10BaseT standard cable on RJ45
Expansions	2 slots for two 1-unit plug-in cards (or for one 2-unit plug-in card)
Relay outputs	Number of outputs: 2 Max. load allowed: 30VDC 1A
Inputs	Number of inputs: 2 • opto-coupled mode resistance: 2.2 Kohm logic level high: >4 V_{DC} (max. positive +18 V_{DC}) logic level low: <1 V_{DC} (max. negative –0.5 V_{DC}) • self-powered mode (for dry contacts) open contact: > 2Kohm closed contact: < 100 ohm (10mA)
Compliance with Regulations	CE Directive EMC 89/336/EEC, 92/31/EEC, Directive Low Voltage 72/23/EEC, 93/68/EEC: EN60950, EN55024, EN55022, EN61000-3-2/3
	FC **This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.** Only for code 1500062xxU
	12 Vdc/ac ±15% 7 W c UL US LISTED UL60950 E197303 Honeywell International Inc Model: CTU-K01 Manufacturer: Meg Italia S.R.L. Only for code 1500062xxU

Spare Parts

Fuses	F1 : 2A 250V delayed F2 : 1A 250V delayed F3 : 1A 250V delayed F4: 3A 250V delayed (5x15 UL omega (Bussmann) PN CT515230) inserted into the "+" toward the battery
Battery	6V 1.2 Ah code 1801026 **Note: average lifetime of the battery is 3 years at 25°C room temperature; when the temperature is increased, the average life diminishes(35°C = 2 years)**

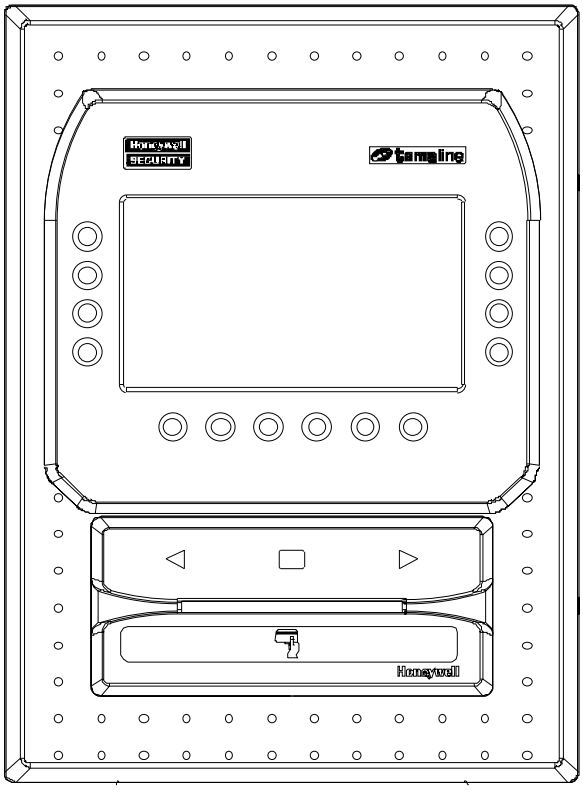


Figure 25. TemaServer TS_TAx1

TemaServer TS_TAx2 (CTU-K02 code 1500082xx)

Parameter	Value
DC power supply	$12V_{DC}$±15% 500mA nominal (6W) 600mA max (for fast battery recharge)
AC power supply	$12V_{AC}$±15% 50Hz 500mA (nominal) 600mA max (for fast battery recharge)
Power supply via TRN01 Transformer	$230V_{AC}$ ±15% 50Hz 30mA nominal (7VA) 40mA max. (for fast battery recharge)
Weight (including frame)	3.5 kg (+ TRN01 transformer = 500g)
Size	220x305x80 mm
IP Protection Rating	IP55
Storage temperature	-10°C÷40°C
Storage humidity	0÷70% without condensation
Environmental temperature for correct operation	0…50 °C
LAN Ethernet connection	10BaseT standard cable on RJ45
Proxy antennae	Double antenna 125KHz for Unique cards Read distance 0÷50mm
Expansions	2 slots for two 1-unit plug-in cards (or for one 2-unit plug-in card)
Relay outputs	Number of outputs: 2 Max. load allowed: 30VDC 1A

Inputs	Number of inputs: 2 • opto-coupled mode resistance: 2.2 Kohm logic level high: >4 V_{DC} (max. positive +18 V_{DC}) logic level low: <1 V_{DC} (max. negative –0.5 V_{DC}) • self-powered mode (for dry contacts) open contact: > 2Kohm closed contact: < 100 ohm (10mA)
Compliance with Regulations	CE Directive EMC 89/336/EEC, 92/31/EEC, Directive Low Voltage 72/23/EEC, 93/68/EEC: EN60950, EN55024, EN55022, EN61000-3-2/3, EN 300 330

Spare Parts

Fuses	F1 : 2A 250V delayed F2 : 2A 250V delayed F3 : 2A 250V delayed F4: 3A 250V delayed (5x15 UL omega (Bussmann) PN CT515230) inserted into the "+" toward the battery
Battery	6V 1.2 Ah code 1801026 **Note: average lifetime of the battery is 3 years at 25°C room temperature; when the temperature is increased, the average life diminishes(35°C = 2 years)**

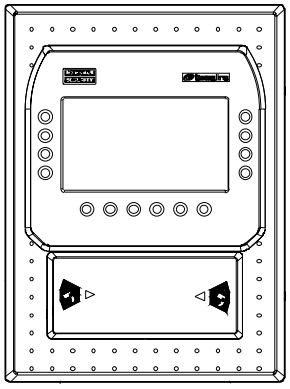


Figure 26. TemaServer TS_TAx2

FCC NOTICE

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, these is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

Canadian Compliance Statement

This Class B Digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numerique de la classe B respecte les exigences du Reglement sur le material broilleur du Canada.

Parameter	Value
DC power supply	$12V_{DC}$±15% 500mA nominal (6W) 600mA max (for fast battery recharge)
AC power supply	$12V_{AC}$±15% 50Hz 500mA (nominal) 600mA max (for fast battery recharge)
Power supply via TRN01 Transformer	$230V_{AC}$ ±15% 50Hz 30mA nominal (7VA) 40mA max. (for fast battery recharge)
Weight (including frame)	3.5kg (+ transformer TRN01 = 500g)
Size	220x305x80 mm
IP Protection Rating	IP55
Environmental temperature for correct operation	a) with display with CCFL backlighting 0÷50 °C b) with display with LED backlighting -5÷50 °C note: the terminal must always remain on note: the terminal has been found operational even at temperatures as low as –20°C, but this data is not certifiable
Storage temperature	-10°C÷40°C

Storage humidity	0÷70% without condensation
LAN Ethernet connection	10BaseT standard cable on RJ45
Proxy antennae	Double antenna 125KHz for HID cards (HID "Prox Point Cod 4068A" controller inside) Read distance 0…50mm
Expansions	2 slots for two 1-unit plug-in cards (or for one 2-unit plug-in card)
Relay outputs	Number of outputs: 2 Max. load allowed: 30VDC 1A
Inputs	Number of inputs: 2 • opto-coupled mode resistance: 2.2 Kohm logic level high: >4 V_{DC} (max. positive +18 V_{DC}) logic level low: <1 V_{DC} (max. negative –0.5 V_{DC}) • self powered mode (dry contacts) open contact: > 2Kohm closed contact: < 100 ohm (10mA)
Compliance with Regulations	CE Directive EMC 89/336/EEC, 92/31/EEC, Directive Low Voltage 72/23/EEC, 93/68/EEC: EN60950, EN55024, EN55022, EN61000-3-2/3, EN 300 330
	FC **FCC-ID = HS9-CTU-K03** This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Only for code 1500064xxU
	12 Vdc/ac ±15% 7 W c UL US LISTED UL60950 E197303 Honeywell International Inc Model: CTU-K03 Manufacturer: Meg Italia S.R.L. Only for code 1500064xxU

Spare Parts

Fuses	F1 : 2A 250V delayed F2 : 1A 250V delayed F3 : 1A 250V delayed F4: 3A 250V delayed (5x15 UL omega (Bussmann) PN CT515230) inserted into the "+" toward the battery
Battery	6V 1.2 Ah code 1801026 **Note: average lifetime of the battery is 3 years at 25°C room temperature; when the temperature is increased, the average life diminishes(35°C = 2 years)**

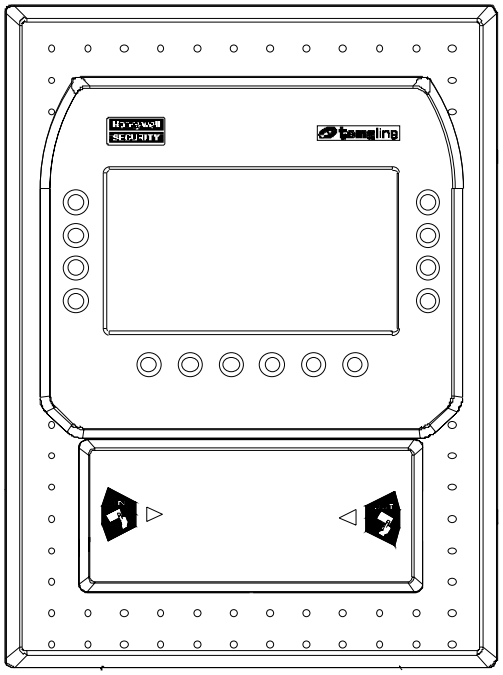


Figure 27. TemaServer TS_TAx3

FCC NOTICE

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, these is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

Canadian Compliance Statement

This Class B Digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numerique de la classe B respecte les exigences du Reglement sur le material broilleur du Canada.

Parameter	Value
DC power supply	$12V_{DC}$±15% 500mA nominal (6W) 600mA max (for fast battery recharge)
AC power supply	$12V_{AC}$±15% 50Hz 500mA (nominal) 600mA max (for fast battery recharge)
Power supply via TRN01 Transformer	$230V_{AC}$ ±15% 50Hz 30mA nominal (7VA) 40mA max. (for fast battery recharge)
Weight (including frame)	3.5kg (+ transformer TRN01 = 500g)
Size	220x305x80 mm
IP Protection Rating	IP55
Environmental temperature for correct operation	0…50 °C
Storage temperature	-10°C÷40°C

Storage humidity	0÷70% without condensation
LAN Ethernet connection	10BaseT standard cable on RJ45
Proxy antenna	Antenna 139KHz for WSE cards (WSE DR4201 reader inside) Read distance 0…30mm
Expansions	2 slots for two 1-unit plug-in cards (or for one 2-unit plug-in card)
Relay outputs	Number of outputs: 2 Max. load allowed: 30VDC 1A
Inputs	Number of inputs: 2 • opto-coupled mode resistance: 2.2 Kohm logic level high: >4 V_{DC} (max. positive +18 V_{DC}) logic level low: <1 V_{DC} (max. negative –0.5 V_{DC}) • self powered mode (dry contacts) open contact: > 2Kohm closed contact: < 100 ohm (10mA)
Compliance with Regulations	CE Directive EMC 89/336/EEC, 92/31/EEC, Directive Low Voltage 72/23/EEC, 93/68/EEC: EN60950, EN55024, EN55022, EN61000-3-2/3, EN 300 330
	FC **Contains FCC-ID : C4P DR4201** This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Only for code 1500087xxU
	c UL us LISTED UL60950 E197303 12 Vdc/ac ±15% 7 W Honeywell International Inc Model: CTU-K04 Manufacturer: Meg Italia S.R.L. Only for code 1500087xxU

Spare Parts

Fuses	F1 : 2A 250V delayed F2 : 1A 250V delayed F3 : 1A 250V delayed F4: 3A 250V delayed (5x15 UL omega (Bussmann) PN CT515230) inserted into the "+" toward the battery
Battery	6V 1.2 Ah code 1801026 **Note: average lifetime of the battery is 3 years at 25°C room temperature; when the temperature is increased, the average life diminishes(35°C = 2 years)**

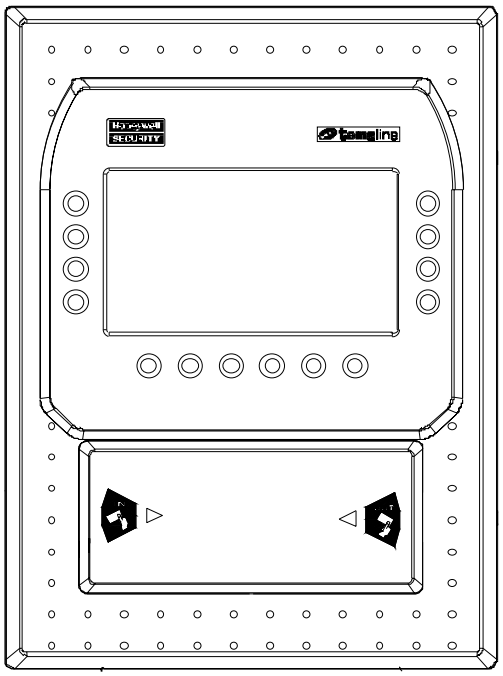


Figure 28. TemaServer TS_TAx4

FCC NOTICE

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, these is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

Canadian Compliance Statement

This Class B Digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numerique de la classe B respecte les exigences du Reglement sur le material broilleur du Canada.

Parameter	Value
DC power supply	$12V_{DC}$±15% 500mA nominal (6W) 600mA max (for fast battery recharge)
AC power supply	$12V_{AC}$±15% 50Hz 500mA (nominal) 600mA max (for fast battery recharge)
Power supply via TRN01 Transformer	$230V_{AC}$ ±15% 50Hz 30mA nominal (7VA) 40mA max. (for fast battery recharge)
Weight (including frame)	3.5kg (+ transformer TRN01 = 500g)
Size	220x305x80 mm
IP Protection Rating	IP55
Environmental temperature for correct operation	0…50 °C
Storage temperature	-10°C÷40°C

Storage humidity	0÷70% without condensation
LAN Ethernet connection	10BaseT standard cable on RJ45
Proxy antenna	Antenna 125KHz for ASP Motorola cards (OMR-705+ ASP Motorola reader inside) Read distance 0…30mm
Expansions	2 slots for two 1-unit plug-in cards (or for one 2-unit plug-in card)
Relay outputs	Number of outputs: 2 Max. load allowed: 30VDC 1A
Inputs	Number of inputs: 2 • opto-coupled mode resistance: 2.2 Kohm logic level high: >4 V_{DC} (max. positive +18 V_{DC}) logic level low: <1 V_{DC} (max. negative –0.5 V_{DC}) • self powered mode (dry contacts) open contact: > 2Kohm closed contact: < 100 ohm (10mA)
Compliance with Regulations	CE Directive EMC 89/336/EEC, 92/31/EEC, Directive Low Voltage 72/23/EEC, 93/68/EEC: EN60950, EN55024, EN55022, EN61000-3-2/3, EN 300 330
	FC **FCC-ID = HS9-CTU-K05** This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Only for code 1500114xxU
	c UL US LISTED UL60950 E197303 Honeywell International Inc Model: CTU-K05 Manufacturer: Meg Italia S.R.L. 12 Vdc/ac ±15% 7 W Only for code 1500114xxU

Spare Parts

Fuses	F1 : 2A 250V delayed F2 : 1A 250V delayed F3 : 1A 250V delayed F4: 3A 250V delayed (5x15 UL omega (Bussmann) PN CT515230) inserted into the "+" toward the battery
Battery	6V 1.2 Ah code 1801026 **Note: average lifetime of the battery is 3 years at 25°C room temperature; when the temperature is increased, the average life diminishes(35°C = 2 years)**

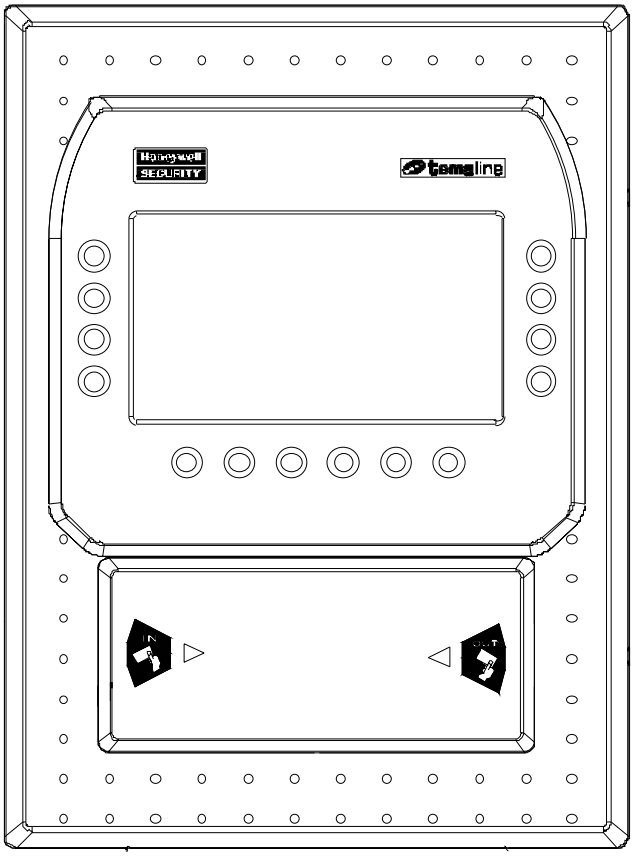


Figure 29. TemaServer TS_TAx5

TemaServer TS_TAx6 (CTU-K06 code 1500130xx)

Parameter	Value
DC power supply	$12V_{DC}$±15% 500mA nominal (6W) 600mA max (for fast battery recharge)
AC power supply	$12V_{AC}$±15% 50Hz 500mA (nominal) 600mA max (for fast battery recharge)
Power supply via TRN01 Transformer	$230V_{AC}$ ±15% 50Hz 30mA nominal (7VA) 40mA max. (for fast battery recharge)
Weight (including frame)	3.5kg (+ transformer TRN01 = 500g)
Size	220x305x80 mm
IP Protection Rating	IP55
Environmental temperature for correct operation	0…50 °C
Operational temperature	0÷50 °C
Storage temperature	-10°C÷40°C
Storage humidity	0÷70% without condensation
Proxy antenna	Antenna 13.56MHz Legic cards (Baltech Reader Type BSM2-LEG-232-HC inside) Read distance 0÷25mm - Standard reading of the card number - Optional reading of the internal sectors using specific programming cards
LAN Ethernet connection	10BaseT standard cable on RJ45
Proxy antenna	Antenna 13.56MHz for Mifare cards Read distance 0…30mm
Expansions	2 slots for two 1-unit plug-in cards (or for one 2-unit plug-in card)
Relay outputs	Number of outputs: 2

	Max. load allowed: 30VDC 1A
Inputs	Number of inputs: 2 • opto-coupled mode resistance: 2.2 Kohm logic level high: >4 V_{DC} (max. positive +18 V_{DC}) logic level low: <1 V_{DC} (max. negative –0.5 V_{DC}) • self powered mode (dry contacts) open contact: > 2Kohm closed contact: < 100 ohm (10mA)
Compliance with Regulations	CE Directive EMC 89/336/EEC, 92/31/EEC, Directive Low Voltage 72/23/EEC, 93/68/EEC: EN60950, EN55024, EN55022, EN61000-3-2/3, EN 300 330

Spare parts

Fuses	F1 : 2A 250V delayed F2 : 1A 250V delayed F3 : 1A 250V delayed F4: 3A 250V delayed (5x15 UL omega (Bussmann) PN CT515230) inserted into the "+" toward the battery
Battery	6V 1.2 Ah code 1801026 **Note: average lifetime of the battery is 3 years at 25°C room temperature; when the temperature is increased, the average life diminishes(35°C = 2 years)**

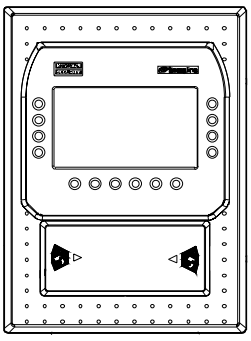


Figure 30. TemaServer TS_TAx6

FCC NOTICE

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, these is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

Canadian Compliance Statement

This Class B Digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numerique de la classe B respecte les exigences du Reglement sur le material broilleur du Canada.

Parameter	Value
DC power supply	$12V_{DC}$±15% 500mA nominal (6W) 600mA max (for fast battery recharge)
AC power supply	$12V_{AC}$±15% 50Hz 500mA (nominal) 600mA max (for fast battery recharge)
Power supply via TRN01 Transformer	$230V_{AC}$ ±15% 50Hz 30mA nominal (7VA) 40mA max. (for fast battery recharge)
Weight (including frame)	3.5kg (+ transformer TRN01 = 500g)
Size	220x305x80 mm
IP Protection Rating	IP55
Environmental temperature for correct operation	0…50 °C
Storage temperature	-10°C÷40°C
Storage humidity	0÷70% without condensation
LAN Ethernet connection	10BaseT standard cable on RJ45

Proxy antenna	13.56MHz receiver/transmitter for MIFARE cards (ISO14443-2A) (MFCM200 Philips controller inside) Read distance 0÷15mm
Expansions	2 slots for two 1-unit plug-in cards (or for one 2-unit plug-in card)
Relay outputs	Number of outputs: 2 Max. load allowed: 30VDC 1A
Inputs	Number of inputs: 2 • opto-coupled mode resistance: 2.2 Kohm logic level high: >4 V_{DC} (max. positive +18 V_{DC}) logic level low: <1 V_{DC} (max. negative –0.5 V_{DC}) • self powered mode (dry contacts) open contact: > 2Kohm closed contact: < 100 ohm (10mA)
Compliance with Regulations	CE Directive EMC 89/336/EEC, 92/31/EEC, Directive Low Voltage 72/23/EEC, 93/68/EEC: EN60950, EN55024, EN55022, EN61000-3-2/3, EN 300 330
	FCC-ID = HS9-CTU-K07 This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Only for code 1500118xxU
	12 Vdc/ac ±15% 7 W c UL US LISTED UL60950 E197303 Honeywell International Inc Model: CTU-K07 Manufacturer: Meg Italia S.R.L. Only for code 1500118xxU

Spare Parts

Fuses	F1 : 2A 250V delayed F2 : 1A 250V delayed F3 : 1A 250V delayed F4: 3A 250V delayed (5x15 UL omega (Bussmann) PN CT515230) inserted into the "+" toward the battery
Battery	6V 1.2 Ah code 1801026 **Note: average lifetime of the battery is 3 years at 25°C room temperature; when the temperature is increased, the average life diminishes(35°C = 2 years)**

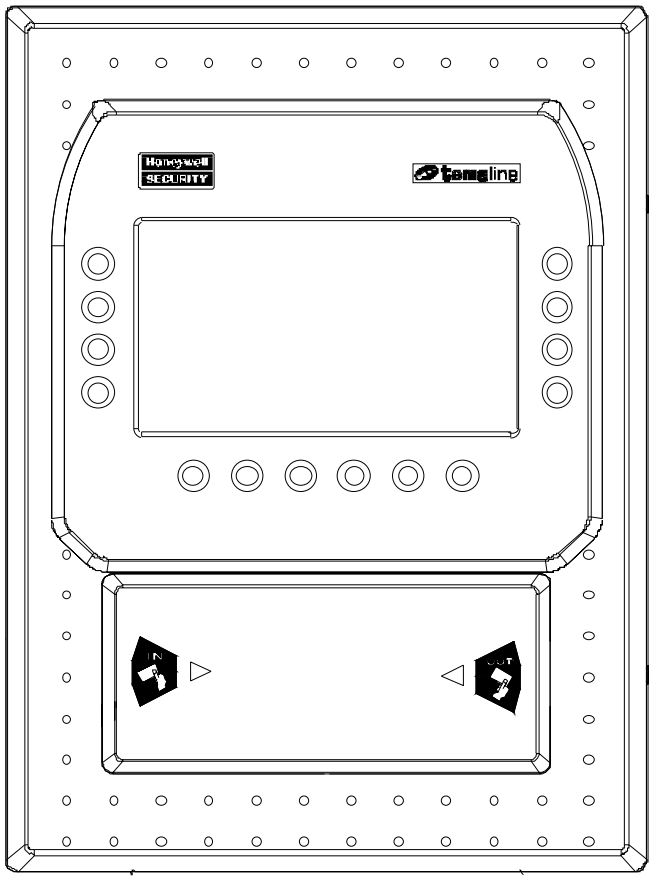


Figure 31. TemaServer TS_TAx7

TemaServer TS_Tax8 (CTU-K08 code 1500135xx)

Parameter	Value
DC power supply	$12V_{DC}$±15% 500mA nominal (6W) 600mA max (for fast battery recharge)
AC power supply	$12V_{AC}$±15% 50Hz 500mA (nominal) 600mA max (for fast battery recharge)
Power supply via TRN01 Transformer	$230V_{AC}$ ±15% 50Hz 30mA nominal (7VA) 40mA max. (for fast battery recharge)
Weight (including frame)	3.5kg (+ transformer TRN01 = 500g)
Size	220x305x80 mm
IP Protection Rating	IP55 (except IP31 smartcard pickup module)
Environmental temperature for correct operation	0…50 °C
Storage temperature	-10°C÷40°C
Storage humidity	0÷70% without condensation
LAN Ethernet connection	10BaseT standard cable on RJ45
Smartcard pick-up	contact smartcard ISO 7816-4 200.000 insertions
Expansions	2 slots for two 1-unit plug-in cards (or for one 2-unit plug-in card)
Relay outputs	Number of outputs: 2 Max. load allowed: 30VDC 1A

Inputs	Number of inputs: 2 • opto-coupled mode resistance: 2.2 Kohm logic level high: >4 V_{DC} (max. positive +18 V_{DC}) logic level low: <1 V_{DC} (max. negative –0.5 V_{DC}) • self powered mode (dry contacts) open contact: > 2Kohm closed contact: < 100 ohm (10mA)
Compliance with Regulations	CE Directive EMC 89/336/EEC, 92/31/EEC, Directive Low Voltage 72/23/EEC, 93/68/EEC: EN60950, EN55024, EN55022, EN61000-3-2/3,

Spare Parts

Fuses	F1 : 2A 250V delayed F2 : 1A 250V delayed F3 : 1A 250V delayed F4: 3A 250V delayed (5x15 UL omega (Bussmann) PN CT515230) inserted into the "+" toward the battery
Battery	6V 1.2 Ah code 1801026 **Note: average lifetime of the battery is 3 years at 25°C room temperature; when the temperature is increased, the average life diminishes(35°C = 2 years)**

Figure 32. TemaServer TS_Tax8

Optional Parts

TORX TX10 screwdriver	Code 1500108AA
TS-OP04 plug-in board RS485	Code 1520128xx
TS-OP05 plug-in board RS232	Code 1520127xx
TS-OP11 plug-in board Modem & RS232	Code 1520137xx
TS-RMC03 Memory expansion	Code 1520179xx

TS-OP04 Plug-in Board RS485

Interface type	• half duplex RS485 • -7V to +12V Common-Mode Input Voltage Range • Floating ground (Max 500V from main ground)
Configuration	• Line termination with jumpers

TS-OP05 Plug-in Board RS232

Interface type	• EIA/TIA-232E (V.28) • Max input range -18V to +18V • Fixed ground (common to TemaServer gound)
Signals	• RXD (receive data) • TXD (transmit data) • RTS (request to send) • CTS (clear to send)

TS-OP11 Plug-in Board Modem PSTN & RS232

Telephone line

Interface type	• V.32bis/14.4K
RJ11 signals	• 1 NC • 2 NC • 3 TIP • 4 RING • 5 NC • 6 NC

RS232

Interface type	• EIA/TIA-232E (V.28) • Max input range -18V to +18V • Fixed ground (common to TemaServer ground)
Signals	• RXD (receive data) • TXD (transmit data) • RTS (request to send) • CTS (clear to send)

TS-RMC03 Memory expansion board

Interface type	• TTL in 16bit bus wide
Memory dimensions	• 8 Mbytes of FLASH AMD type memory • 2 Mbytes static RAM memory

Notes:

Recycling

In application of directive 2002/96/EC regarding waste electrical and electronic apparatus, effective beginning 13 August 2005, Honeywell commits, when requested by the customer, to the collection, treatment, recovery, and disposal of the apparatus produced.