



HMI Solution & Graphic Products



Specifications

Intelligent Display 7"

P/CAP Touchscreen

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Chapter 1: Versions history

| Reference | Modifications | Date |
|------------------------------------|---|------------|
| DOC-20140620-1A-UK | Creation | 20/06/2014 |
| DOC-20140620-1B-UK | Add inrush current and update power supply | 25/08/2017 |
| DOC-20140620-1C-UK | Company and contact information | 27/08/2017 |
| DOC-20141125-1D-UK | Add video connectors reference for real time video versions | 10/04/2019 |
| | | |
| | | |

Chapter 2: General description

The Intelligent Display is a "Plug & Play" graphic display module developed & produced in France.

It consists of a TFT-LCD 7 "WVGA (800 x 480 pixels) touchscreen display with integrated HMI board from CLAIRITEC and a metal protective cover.

The Intelligent Display is EMC compliant and withstands a temperature range from -20°C to +70°C.

It can fit easily into electronic equipment thanks to its 4 fixing points.

Chapter 3: Specification of the intelligent display

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

| Item | Specifications |
|----------------------------|---|
| Size | 7" Diagonal |
| Resolution | 800 x RGB x 480 dots (WVGA) |
| Viewing direction | 6 o'clock |
| Viewing area | 155.3 (W) x 94.3 (H) mm |
| Horizontal / Vertical flip | Not available |
| Backlight | White LED |
| Brightness | 425 cd/m ² |
| Viewing angle (typ.) | 120° Vertical / 140° Horizontal |
| Touch screen | Capacitive / Minimum of 50 million touch times by finger |
| Operating temperature | -20°C ~ +70°C |
| Storage temperature | -30°C ~ +80°C |
| EMC compliant | NF-EN55022 class B (Frequency range 150 kHz to 2 GHz) NF-EN61000-4-2 (8 kV contact discharge / 15 kV air discharge) NF-EN61000-4-3 (Frequency range : 30 MHz to 1 GHz – 10 V/m) |
| Outline dimension | 186.8 (W) x 104.4 (H) x 17.7 (D) mm |
| Weight | 400 g. for stainless steel protective cover |

FUNCTIONAL CHARACTERISTICS

| Item | Specifications |
|----------------------------------|--|
| Color LCD Management | 262k colors (display) – 16M (controller) TFT transmissive active matrix |
| Touchscreen Management | Advanced clicking area processing |
| Graphic Engine | Advanced display algorithms |
| Graphic pages Management | Two pages dynamically managed |
| Storage Memory | 32 Mb |
| Graphical Layout Management | GraphConverter ^{®3} software tool enables you to build your HMI's graphic library and upload it in the board flash memory |
| Communication Bus | RS232 serial (9600bds to 355Kbds) CAN 2.0B (100Kbds to 500Kbds) USB |
| Power Supply | 5V (+/-2%) or 6-36V +/- 5% |
| Inrush current (5V version only) | 1.5A / 500us |
| Maximum Consumption | 4.5W |

Chapter 4: Description of connections

The Clairitec Intelligent Display has three communication connectors as shown in the photo below:



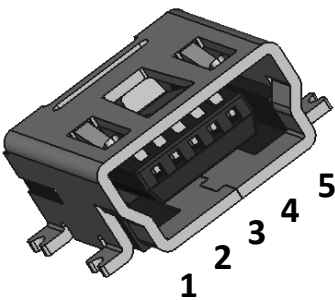
Connector N°1
USB

Connector N°2
RS232 TTL / CAN

Connector N°3
RS232 PC

CONNECTOR N°1: USB

This connector allows you to update firmware, and the graphics chart via a computer or a USB key. Thanks to its transfer via USB, the loading time is decreased. Requires a standard adapter USB -> mini USB, available in the starter kit.



| Pin number | I/O | Description |
|------------|-------|------------------------------|
| 1 | Power | Power Supply +5V / 500mA max |
| 2 | I/O | USB - |
| 3 | I/O | USB + |
| 4 | - | Reserved |
| 5 | Power | GND |

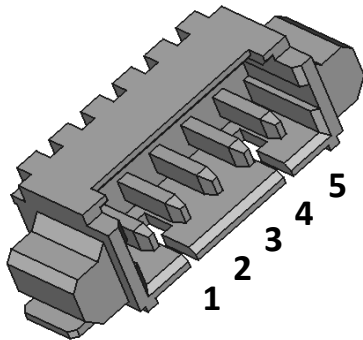
CONNECTOR N°2: RS232 TTL OR CAN

Connection Interface for serial communication EIA / RS232E or CAN2.0B between the Clairitec HMI board and your application board.

- Update the firmware with the RS232 SpiderGraph protocol,
- Update your graphic chart with the RS232 SpiderGraph protocol,
- Send and receive commands with the RS232 or Can2.0B SpiderGraph protocol.

PCB base reference: Würth: 653105131822
Molex: 53261-0571

Matting model: Würth: 653005113322
Molex: 51021-0500



| Pin number | I/O | Description |
|------------|-------|-----------------------|
| 1 | Power | Power Supply +12V |
| 2 | Power | GND |
| 3 | I/O | RS232 TTL TX or CAN H |
| 4 | I/O | RS232 TTL RX or CAN L |
| 5 | Power | GND |

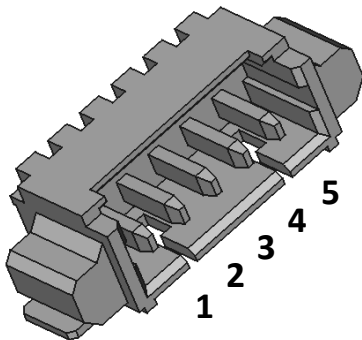
CONNECTOR N°3: RS232 PC

Connection Interface for serial communication EIA / RS232E between the Clairitec HMI board and your application board.

- Update the firmware with the RS232 SpiderGraph protocol,
- Update your graphic chart with the RS232 SpiderGraph protocol,
- Send and receive commands with the RS232 SpiderGraph protocol.

PCB base reference: Würth: 653105131822
Molex: 53261-0571

Matting model: Würth: 653005113322
Molex: 51021-0500



| Pin number | I/O | Description |
|------------|-------|--------------------|
| 1 | Power | Power Supply +12V |
| 2 | Power | GND |
| 3 | O | RS232 TX (EIA/232) |
| 4 | I | RS232 RX (EIA/232) |
| 5 | Power | GND |

CONNECTOR N°4: ONLY FOR REAL TIME VIDEO VERSIONS

Connection interface for real time analog video streaming (NTSC or PAL).



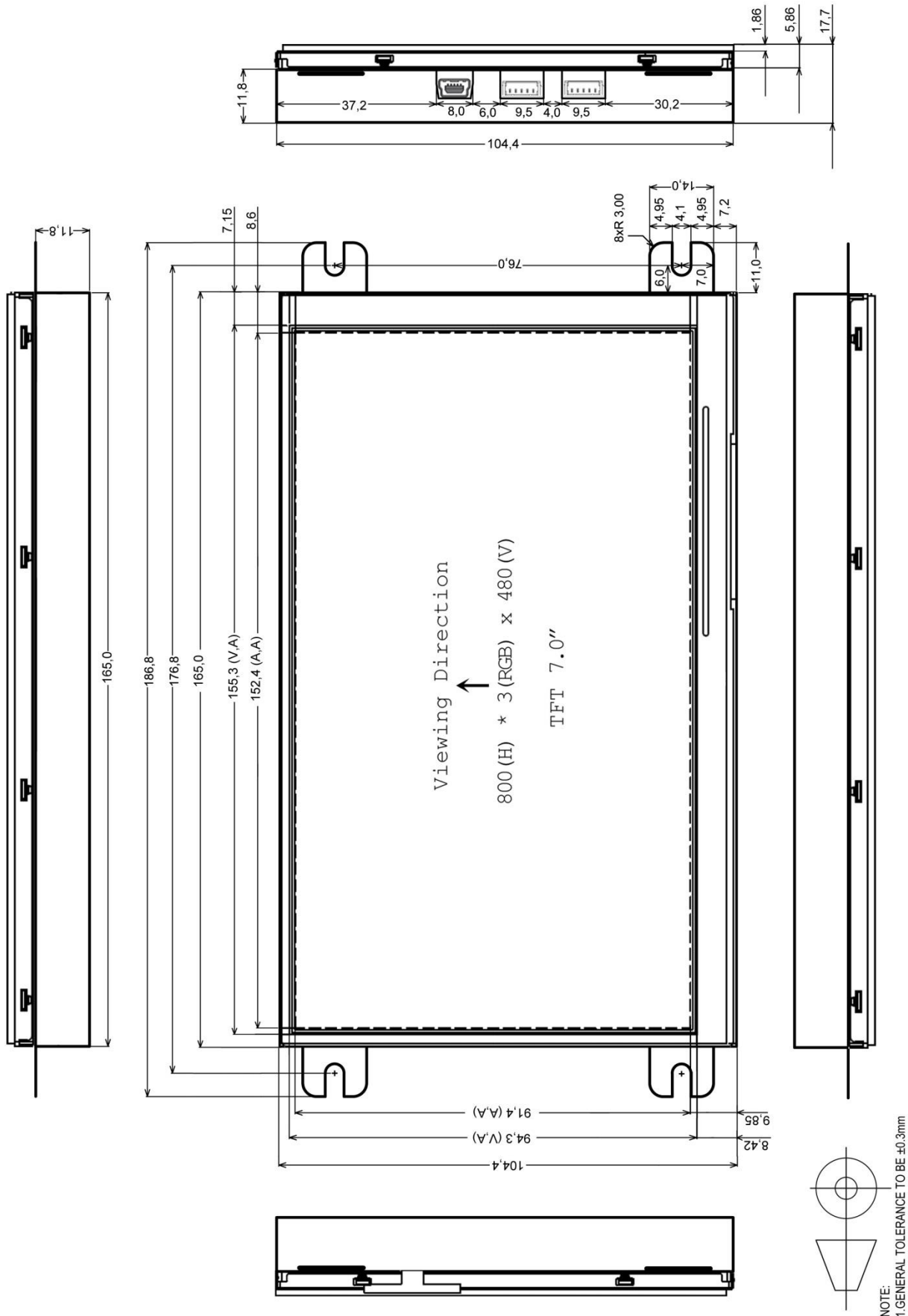
PCB base reference: Samtec: MCX7-J-P-H-ST

Matting model: Samtec: RF179 + 75 ohm cable

<https://www.samtec.com/products/rf179>

Chapter 5: Mechanical description

Unit: mm



Chapter 6: Clairitec's contact

Clairitec

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33700 Mérignac
FRANCE

Website: www.clairitec.com

Clairitec services

Customer relation service: contact@clairitec.com

Technical support service: support@clairitec.com

Non-contractual pictures



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