Clairitec

HMI Solution & Graphic Products



Specifications

Intelligent Display 3.5”

P/CAP Touchscreen

Contents

CHAPTER 1: VERSIONS HISTORY 2

CHAPTER 2: GENERAL DESCRIPTION 3

CHAPTER 3: SPECIFICATION OF THE INTELLIGENT DISPLAY 3

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS 3
FUNCTIONAL CHARACTERISTICS 3

CHAPTER 4: DESCRIPTION OF CONNECTIONS 4

CONNECTOR N°1: USB 4
CONNECTOR N°2: RS232 TTL OR CAN 5
CONNECTOR N°3: RS232 PC 5

CHAPTER 5: MECHANICAL DESCRIPTION 6

CHAPTER 6: CLAIRITEC'S CONTACT 7

Chapter 1: Versions history

Reference	Modifications	Date
DOC-20141125-1A-UK	Creation	25/11/2014
DOC-20141125-1B-UK	Number of colors modification	28/02/2017
DOC-20141125-1C-UK	Add inrush current and update power supply	25/08/2017
DOC-20141125-1D-UK	Company and contact information	27/08/2017
DOC-20141125-1E-UK	Colors number modification	17/09/2018

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Chapter 2: General description

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

It consists of a TFT-LCD 3.5" QVGA (320 x 240 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	3.5'' Diagonal
Resolution	320 x RGB x 240 dots (QVGA)
Viewing direction	6 o'clock
Viewing area	73.7 (W) x 55.3 (H) mm
Horizontal / Vertical flip	Not available
Backlight	White LED
Brightness	450 cd/m^2
Viewing angle (typ.)	140° Vertical / 160° Horizontal
Touch screen	P/CAP
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	95.8 (W) x 64.5 (H) x 16.1 (D) mm
Weight	119 g. for stainless steel protective cover

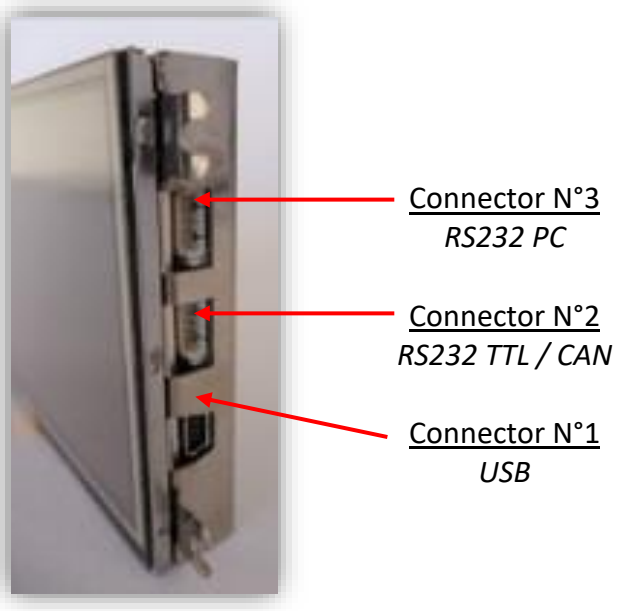
FUNCTIONAL CHARACTERISTICS

Item	Specifications
Color LCD Management	From 4096 to 65k colors / 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 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	1.3W

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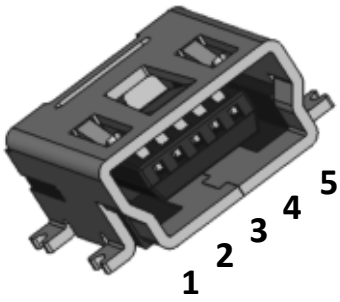
Chapter 4: Description of connections

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



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. It 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

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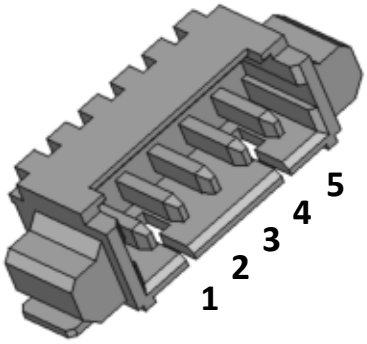
CONNECTOR N°2: RS232 TTL OR CAN

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: Wurth: 653105131822
Molex: 53261-0571

Matting model: Wurth: 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

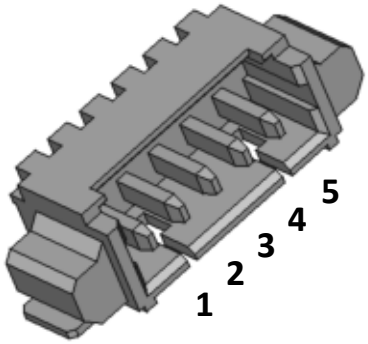
CONNECTOR N°3: RS232 PC

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: Wurth: 653105131822
Molex: 53261-0571

Matting model: Wurth: 653005113322
Molex: 51021-0500

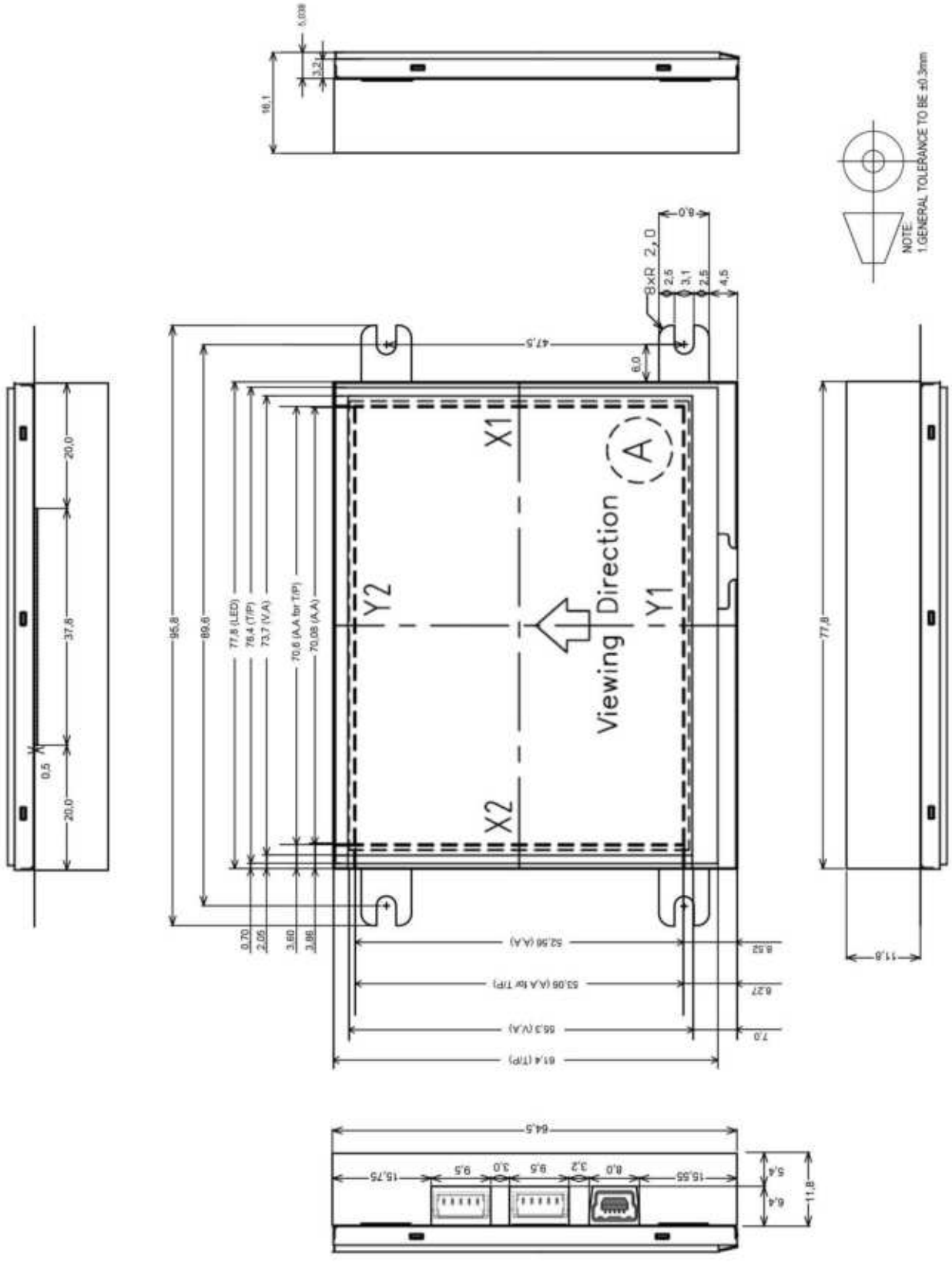


Pin number	I/O	Description
1	Power	Power Supply +12V
2	Power	GND
3	O	RS232 TX (EIA/232)
4	I	RS232 RX (EIA/232)
5	Power	GND

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Chapter 5: Mechanical description

Unit: mm



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Chapter 6: Clairitec's contact

Clairitec

CLAIRITEC
11 avenue Henri Becquerel
33700 Mérignac
FRANCE

Web site: www.clairitec.com

Clairitec's services

Customer relation service: contact@clairitec.com

Technical support service: support@clairitec.com

Non-contractual pictures

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Clairitec

11, avenue Henri Beauerel - 33700 - MERIGNAC - FRANCE

Email: contact@clairitec.com
www.clairitec.com