RENU FP2043 SERIES Analog Resistive Touch Screen User Guide

August 20, 2025

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FP2043 SERIES

QUICK START GUIDE

Product Code

FP2043T-V2: 4.3″, 480 x 272 pixels, WQVGA color TFT with 4-wire analog resistive touch screen with 2 serial ports#, one USB Type C, one USB Host port.

FP2043TN-V2: 4.3″, 480 x 272 pixels, WQVGA color TFT with 4-wire analog resistive touch screen with 2 serial ports#, one USB Type C port, one USB Host port, 1 Ethernet port.

FP2043T-E: 4.3″, 480 x 272 pixels, WQVGA color TFT with 4-wire analog resistive touch screen with 2 serial ports#, one USB Type C, one USB Host port. It supports 1 expansion module.

FP2043TN-E: 4.3″, 480 x 272 pixels, WQVGA color TFT with 4-wire analog resistive touch screen with 2 serial ports#, one USB Type C port, one USB Host port, 1 Ethernet port. It supports 1 expansion module.

[**# Note:** For more information about #, please refer specifications section.]

GETTING STARTED

User should follow the given sequence to configure and use any FlexiPanels series unit:

1. Install FlexiSoft Software.
2. Create a PZM application using FlexiSoft software.
3. Connect programming cable.
4. Download Firmware i.e. driver for the HMI.

5. Download application.
6. Now FP unit is ready to use in the system.

For More Information, Visit

https://www.renuelectronics.com

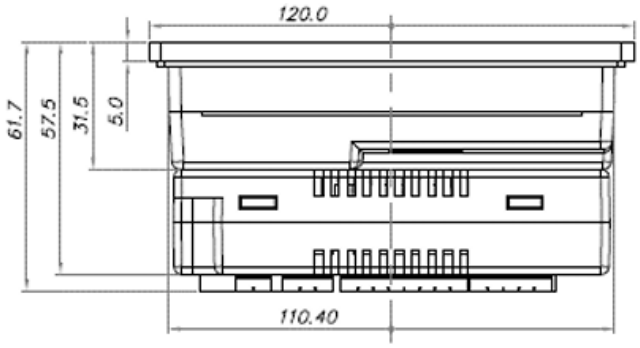
SPECIFICATIONS

Power (Base)	24VDC(+20%,) @130mA, 3.12W (T-V2 module) 24VDC (+20%,) @150mA, 3.6W (TN-V2 module)
Power (With Expansion)	24VDC(+20%) @160mA, 3.84W (T-E module) 24VDC (+20%,) @180mA, 4.32W (TN-E module)
Display	4.3″, 480 x 272 pixels, WQVGA color TFT with 4-wire analog resistive touch screen
LEDs	1
RAM	16MB max.
User Application	8MB
FLASH	16MB
Ladder Memory	2MB
Alarm Memory	1350 Alarms
Retentive Memory	8000Words
Data Log	4MB

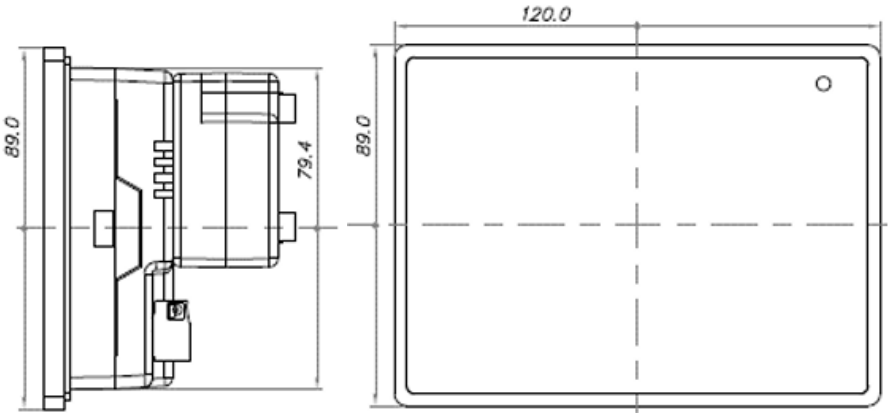
Keep Memory Registers	1000Words
Panel Cutout	80(H) x 111(W)mm
Dimensions	89(H) x 120(W) x 31.5(D)mm
Weight	Approx. 200gm
Communication	
Serial Port	(1 x RS232) + (1 x RS485#)
USB Ports	1 USB Type C & 1 USB Host 1
Ethernet	Ethernet Port
SD Card	Micro SD [High Capacity (4GB to 32GB)] Speed Class: ②④⑥⑩① [While inserting and removing SD card, please make sure to TURNOFF the power to the unit.]
Expansion*	Supports 1 Expansion slot
Environment & Approvals	
Operating Temperature	0°C to 50°C
Storage Temperature	-30°C to 85°C
Humidity	10 to 90% (Noncondensing)
Shock	25g, 11ms, 6 shocks per axis, Total 18 shocks (X, Y, Z)
Vibration	5~150Hz, 3g peak, (X, Y, Z) IP66
Protection	Front panel-IP66, Rare panel-IP20
APPROVALS	CE, UL (Class 1 DIV 2), UKCA, REACH & RoHS

[***Note:** Applicable only for FP2043Tx-E models.] [**# Note:** FP2043Tx-E support one DB9 port that supports RS232 and RS485 levels on different pins. “Y” type cable can be used for separate RS232 and RS485 levels simultaneously.]
(REPL Part# EC-Y-FP)

PANEL CUTOUT DIMENSIONS

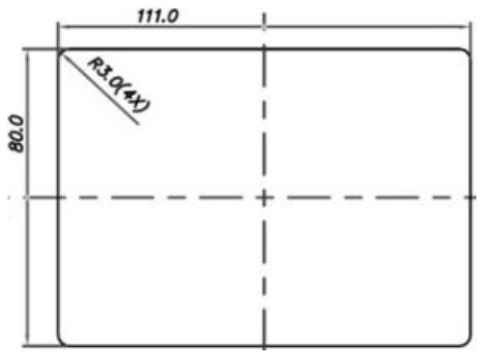


FRONT VIEW



RIGHT SIDE VIEW TOP VIEW

PANEL CUTOUT DIMENSIONS



Pautout Dimensions: 80.00(H) x 111.00(W)mm

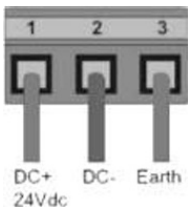
Panel Thickness: Maximum 6mm

Mounting Clamps: 2

Tighten the mounting screws evenly to a torque between 0.4N/m to maintain water and dust resistance.

Earthing

The optimum method for Earthing electronic equipment is to earth it separately from other high-power systems, to earth more than one unit of electronic equipment with a single-point earth. The Earthing marked terminal (see below) is provided on the unit.



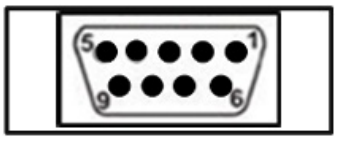
[**Note:** Do not use an earth that has an unstable impedance, such as painted screws or earth subject to vibration.]

COMMUNICATION

This section provides information regarding communication interfaces supported by this product.

Serial Port

1 Physical Port : COM1-RS232, COM2-RS485

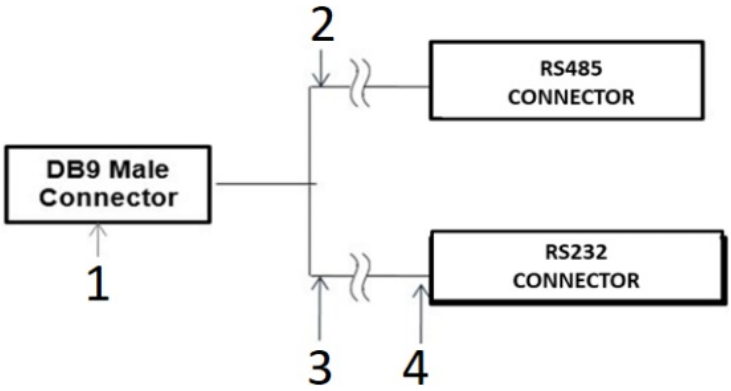


Pin number	**Signal**
1	TX+(RS422/RS485)
2	TXD(RS232)

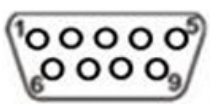
3	RXD(RS232)
4	RX+(RS422/RS485)
5	GND
6	NC
7	NC
8	TX-(RS422/RS485)

Y Type Cable

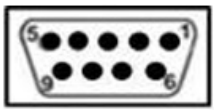
Special “Y” cable for FP unit (two communication levels on one port).



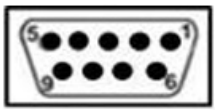
1. Connect to **Panel** (HMI)
2. Cable length 9″
3. Cable length 6″
4. Connect to **Third Party** devices



(DB9 Male Connector)



(RS485 Female Connector)



(RS232 Female Connector)

Pin number	Signal		Pin number(RS485)
1	TX+	→	1

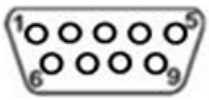
2	TXD		2
3	RXD		3
4	RX+	→	4
5	SG	→	5
6	NC		6
7	NC		7
8	TX-	→	8
9	RX-	→	9

Pin number	**Signal**		**Pin number(RS232)**
1	TX+		1
2	TXD	→	2
3	RXD	→	3
4	RX+		4
5	SG	→	5
6	NC		6
7	NC		7
8	TX-		8
9	RX-		9

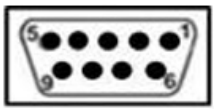
Cable Diagram :

RS232 pinout

RS232 MALE



RS232 FEMALE



Pin number	Signal		Pin number	Signal
2	TXD		2	RXD
3	RXD		3	TXD
5	GND		5	GND

2-wire RS485 pinout

Signal		Pin number	Signal
A (TX+ / RX+)		1	TX+
		4	RX+
GND		5	GND and Shield
B (TX- / RX-)		8	TX-
		9	RX-

4-wire RS485 pinout

Pin number	Signal		Pin number	Signal
YELLOW	TX+		1	TX+
GREEN	RX+		4	RX+
BLACK	GND		5	GND and Shield
WHITE	TX-		8	TX-

BLUE	RX-	[redacted]	9	RX-

USB Type C Port

1. USB Type C, compliant with USB 2.0 specification, self-powered device.
2. Connector used: Micro USB Type C Female connector.

Pin number	**Signal**
1	VCC
2	D-
3	D+
4	NC
5	GND

USB Host Port

1. USB Host, compliant with USB 2.0 specification.
2. USB Host can handle only USB memory stick devices and can source current up to 150mA only.
3. Connector used: Standard USB Type a Female connector.

Pin number	**Signal**
1	VCC
2	D-
3	D+
4	GND

Ethernet Port

1. Fully compliant with IEEE 802.3 / 802.3u standards.
2. 10/100 Mbps support.
3. Connector used: Standard shielded RJ-45 female jack with in-built speed and link activity indication LEDs.

Default IP Address: 192.168.0.254

Default Subnet Activity Mask: 255.255.255.0

Pin number	**Signal**
1	TX+
2	TX-
3	RX+
4	NC
5	NC
6	RX-
7	NC
8	NC

REVISION HISTORY

CONTROL DRAWING N v O# CNTL/DWG/FP2043/0318 VER.NO.: 1.00

Hazardous Location **Non-Hazardous Location**

Class I Division 2 Groups A B C and D

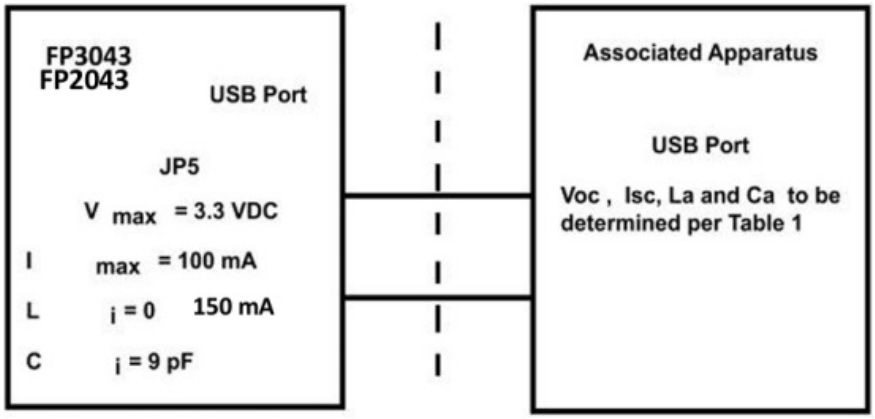


TABLE 1:

Nonincendive. Equipment		Associated Apparatus
V max (or Ui)	=	Voc or Vt (or Uo)
I max (or Ii)	: ≥	Isc ot It (or Io)
Ci + Ccable	: ≥	Ca (or Co)
Li + Lcable	: ≤	La (or Lo)

Capacitance and inductance of t≦ wiring from the nonincendive equipment to the associated apparatus shall be calculated and must be included in the system calculations as shown in Table 1

Where the cable capacitance and inductance per foot are not known, the following values shall be used: Caable = 60 pF/ft., Lcable = 0.2 µH/ft

Wiring method must be in accordance with ANSI/NFPA70

WARNING: DO NOT REMOVE OR REPLACE WHILE BE FREE OF IGNITIBLE CONCENTRATIONS OF FLAMMABLE SUBSTANCES.

This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D or non-hazardous locations only.

WARNING – EXPLOSION HAZARD – Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous.

WARNING – EXPLOSION HAZARD – Substitution of components may impair suitability for Class I, Division 2.

A recommendation for the user to periodically inspect the sealed devices used, for any degradation of properties and replace if degradation is found.

REVISION HISTORY

Rev.	Description	Date
1.0	First Draft	14/08/2020
1.1	Added Website Information	27/08/2020
1.2	Updated Communication Information	07/09/2020
1.3	Updated Power supply port position	06/01/2020
1.4	Updated IP rating	02/06/2021
1.5	Replaced USB type from Micro to Type C	11/10/2021
1.6	Added SD card Information	15/04/2022
1.7	Logo updated	20/09/2022
1.8	Specification updated	09/06/2025

RENU Electronics Pvt. Ltd® reserves the right to change or discontinue specifications and features without prior notice.
To view the latest and updated datasheets/manuals, please visit **www.renuelectronics.com**.

Documents / Resources

	RENU FP2043 SERIES Analog Resistive Touch Screen [pdf] User Guide FP2043 SERIES Analog Resistive Touch Screen, FP2043 SERIES, Analog Resistive Touch Screen, Resistive Touch Screen, Touch Screen

References

- User Manual

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Analog Resistive Touch Screen, FP2043 SERIES, FP2043 SERIES Analog Resistive Touch Screen, renu, Resistive Touch Screen, Touch Screen

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