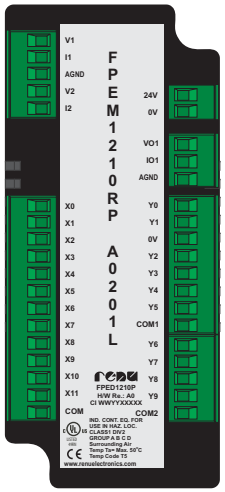
Models:
FPEM-1212RP-A0200L
FlexiPanels FP3 series expansion models

INSTRUCTION SHEET

Thank you for purchasing FlexiPanels series analog expansion model FPEM-1212RP-A0200L. Please read the instruction sheet and thoroughly familiarize yourself with the functions and characteristics of the products before use.
For more information, please refer user manual which will be available in FlexiSoft software help and/or you can download from REPL website.

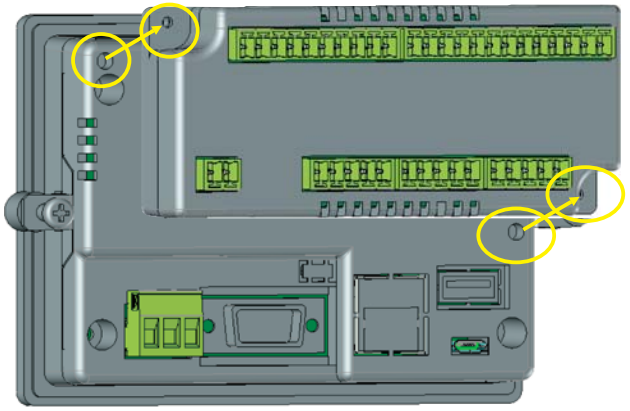


Specifications:

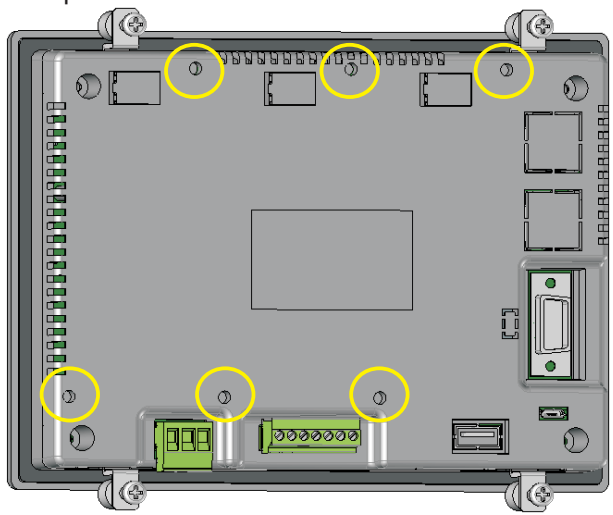
Power Supply	
Voltage Rating:	24 VDC +/-15%, 12V from base
Power Rating:	Input/ Channel: 5mA, 24VDC
Output/ Channel:	250mA @ 24VDC (PNP type) 2A @ 24VDC & 230VAC (Relay type)
Approvals:	CE, UL
Digital Inputs:	12 Inputs Bi-directional Type (Within which 2 pairs are high speed)
Input Design:	According to EN 61131-2 Type 1
Min. ON Voltage	15 VDC
Max. ON Voltage	30 VDC
Min.OFF Voltage	-3VDC
Max. OFF Voltage	5 VDC
Nominal input voltage	24 VDC
Nominal input current	5mA typical
Isolation	Optically isolated from internal circuit., High isolation voltage (BV= 3.7KV)
Input Impedance	3k Ohm
Turn OFF time	10msec
Turn ON time	10msec
High Speed Inputs:	
No. of HS inputs:	2 pairs, X0-X1, X2-X3
Max. i/p frequency:	200kHz
Max. i/p count:	42949672965
Digital Outputs:	2 PNP type transistor outputs (2 PWM o/p) and 10 Relay type outputs
Min. ON o/p Voltage:	22VDC
Max. ON o/p Voltage:	30VDC
Min. OFF o/p Voltage:	0.2VDC
Max. OFF o/p Voltage:	1VDC
Nominal Output voltage:	30VDC
Nominal o/p current	300mA Typ./channel
Isolation	Optically isolated from internal circuit., High isolation voltage (BV = 3.7 KV)
Short Circuit protection	Yes
Nominal load	96ohms/6W (resistive) @ 24VDC 6VA (inductive, unity power factor)
High Speed Outputs:	
No. Of HS outputs:	2, Y0 and Y1
Normal PWM Mode:	1 KHz
Fixed Pulse Mode:	5 KHz
PWM duty cycle:	0 to100%
Duty cycle step:	1%
Analog Inputs:	2 Input Channels
Voltage Input:	0 - 10 V, 0 - 5 V;
Current Input:	0-20mA, 4-20mA
Resolution:	16-bit
Accuracy:	0.2% of full scale@ 25°C
General:	
Operating Temperature:	**0 to 60°C.
Storage Temperature:	-20 to 85°C.
Operating Humidity:	10% to 90% (Non condensing)
Mechanical Dimension:	48mm x 108mm x 41mm (W x H x D)
Weight:	

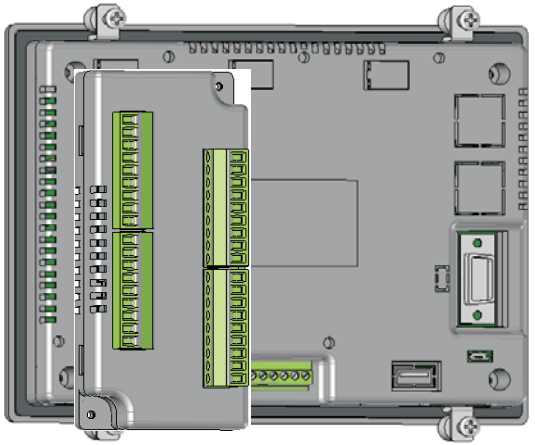
***Operating temperature: For UL 0 to 50 °C.*

Mounting Details:
Mounting with base models:
With the expansions, while unpacking the unit, user will find 2 screws already attached with base bottom case. Fix the expansion with the HMI as shown below with these screws. Expansion connector will also be fixed with the expansion female connector given on base HMI.
Apply torque 0.1Nm while fixing with base unit.
Mounting with FP3043TN-E and FP3043T-E models:

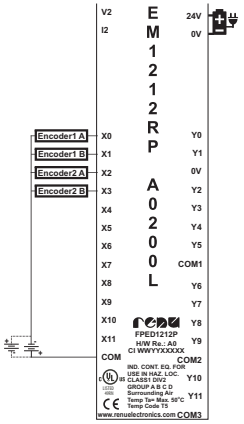


For 7” and 10.2” HMI models, the procedure of mounting expansions is same. Only instead of horizontal mounting, expansions will mount in vertical directions.
Hence accordingly these base are having facility to add 3 and 5 expansions at a time respectively. Example is shown here.

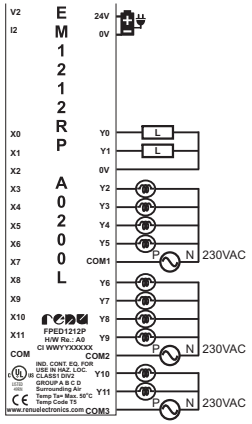




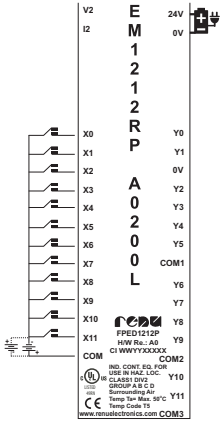
Quadrature:



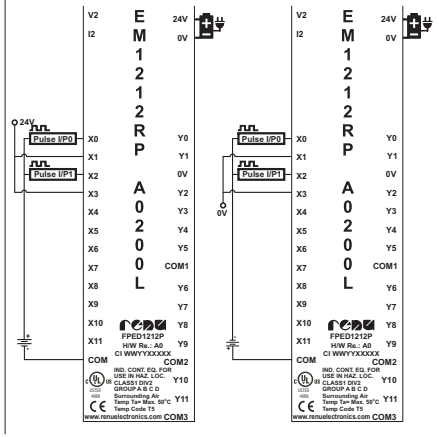
Digital output:



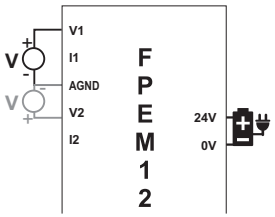
Wiring Diagram:
Digital Inputs:



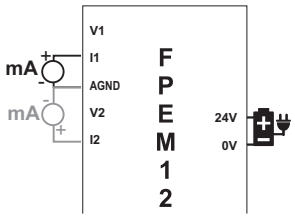
HSC Single phase up counter



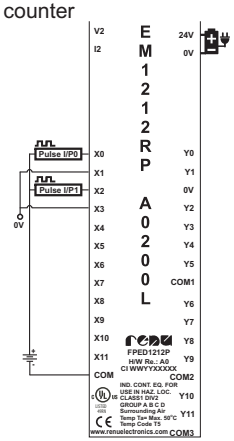
Analog Inputs:
Voltage



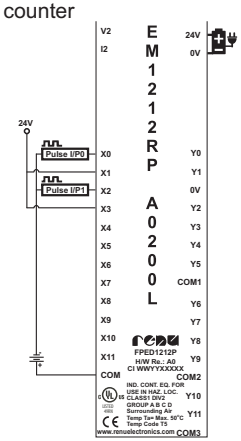
Current:



HSC Single phase down counter



HSC Single phase down counter



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.

WARNING - CAUTION, Battery May Explode If Mistreated. Do Not Recharge, Disassemble Or Dispose Of In Fire.

The list of materials used in the construction of these devices with name of sealed device - generic name of the material and the supplier's name and type designation.

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

Technical Support:

For Technical support please contact factory along with the unit serial number and revision number written on the address sticker of the unit.
Also provide information of the application used. Usually, including your application also provides a lot of help. If possible e-mail the application to factory.

MANUAL REVISIONS:

Rev. No.	Date	Description
1.00	31/01/17	First Draft
1.00A	24/07/2020	PWM related frequency revised