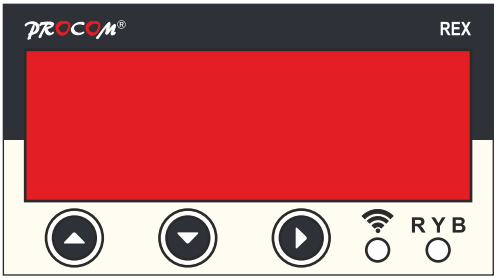
PROCOM®

REX Series-Multifunction Din Rail Meter



Installation Guide
Rev.-01

1.0 Introduction :

REX series meters are compact digital power meter, equipped with customized 6 digit, 1 row alphanumeric display. Three navigator keys & alphanumeric digits simplifies Display & configuration of meter. REX series are available with accuracy class of 1.0 IEC 62053-21/(Optational 0.5,0.2 IEC- 62053-22) Modbus Communication On RS 485 or Rs232.

2.0 Features :

- Simultaneous Display of Measured Quantity & Parameter
- Multi color LED(Red,Yellow,Blue) for indication of types of lines on display.
- Auto scaling of Kilo Giga, Mega and decimal Point
- Password protection for user programmable parameters
- Modbus Communication on RS - 485
- Meter / Wiring configuration is field programmable as Three Phase / Single Phase connection.
- Accuracy Class 1.0 IEC 62053 - 21/ (Optional 0.5;0.2 IEC 62053-22)
- Selectable auto & manual scroll of display
- Poly carbonate body
- IP 65 from front

3.0 Model Selection :

Measurements	Parameters	REX 1100	REX 1200	REX 1300	REX 1400	REX 1500	REX 1900
Voltage	VLL,VLN	□	□	□	□	□	
Current	IR,IY,IB	□	□	□	□	□	
Frequency	HZ	□	□	□	□	□	
Average	I		□	□	□	□	
Neutral Current	IN		□	□	□	□	
Unbalance	%1 %V					□	
Phase Angle	PA					□	
Apparent Power	VA,VA1,VA2,VA3		□	□	□	□	□
Active Power	W,W1,W2, W3		□		□	□	□
Power Factor	PF			□	□	□	□
Reactive Power	VAR,VAR1, VAR2,VAR3					□	□
Active Energy	Wh						
Reactive Energy	± Varh						
Power Energy	Vah						
Run Hour	RnHr						
Load Hour	LdHr						
Interrupts	Nos.						
OLD							
Active Energy	Wh						
Reactive Energy	± Varh						
Power Energy	Vah						
Run Hour	RnHr						
Load Hour	LdHr						
Interrupts	Nos.						

Measurements	Parameters	REX 2140	REX 2330	REX 2440	REX 2411	REX 2550	REX 2551
Voltage	VLL,VLN	□	□	□	□	□	□
Current	IR,IY,IB	□	□	□	□	□	□
Frequency	HZ	□	□	□	□	□	□
Average	I		□	□	□	□	□
Neutral Current	IN		□	□	□	□	□
Unbalance	%1 %V		□	□	□	□	□
Phase Angle	PA		□	□	□	□	□
Apparent Power	VA,VA1,VA2,VA3		□	□	□	□	□
Active Power	W,W1,W2, W3			□	□	□	□
Power Factor	PF		□	□	□	□	□
Reactive Power	VAR,VAR1, VAR2,VAR3					□	□
Active Energy	Wh	□		□	□	□	□
Reactive Energy	± Varh		□			□	□
Power Energy	Vah	□		□		□	□
Run Hour	RnHr	□		□	□	□	□
Load Hour	LdHr	□		□	□	□	□
Interrupts	Nos.			□	□	□	□
OLD							
Active Energy	Wh				□		□
Reactive Energy	± Varh						□
Power Energy	Vah						□
Run Hour	RnHr				□		□
Load Hour	LdHr				□		□
Interrupts	Nos.				□		□

4.0 Specification :

Accuracy	: Class 1.0 IEC 62053 - 21/ (Optional 0.5;0.2 IEC 62053-22)
Input Voltage	: Vr, Vy, Vb, Vn
Input Voltage Range	: 18-520V (L-L) / 10V-300V (L-N)
Isolation Voltage	: 2000V
Input Current	: Ir, Iy, Ib
Input Current	: 50mA-6A (Accuracy range)
Starting Current	: 1-200mA (programmable)
CT Burden	: 0.2VA max. per phase
Current with stand	: 10A continuous, 50A for 1 Second
Input Frequency	: 40 to 70Hz
Auxiliary Supply	: 35-300V AC/DC
Auxiliary supply burden	: <4VA
Display	: 1Row 6 Digit (LED)
Display Scrolling	: Automatic/Manual
Pulse Output Contact Rating	: 50mA(Optional,Max. Pulse width 250+-50ms 24VDC
Communication	: Modbus Comm. on RS-485
CT Primary setting	: 1A to 999kA
CT Secondary setting	: 1A to 10A
PT Primary setting	: 50V to 999kV
PT Secondary setting	: 50V to 999 V

5.0 Integer flow :

V.PRIxA.PRI x1.732	Max Reading	Max Time to Reset the Integrator in Run Hours	Max Time to Overflow Energy at Full Scale
1VA to 100KVA	999999.999K	100 Years	1.3 Years
100KVA to 100MVA	999999.999M	100 Years	1.3 Years
>100MVA	999999.999G	100 Years	Depends Upon Setting

6.0 Auxiliary Supply :

SMPS Supply with input range 35-300V AC/DC. Burden on auxiliary supply is less than 4VA.

7.0 PT Supply :

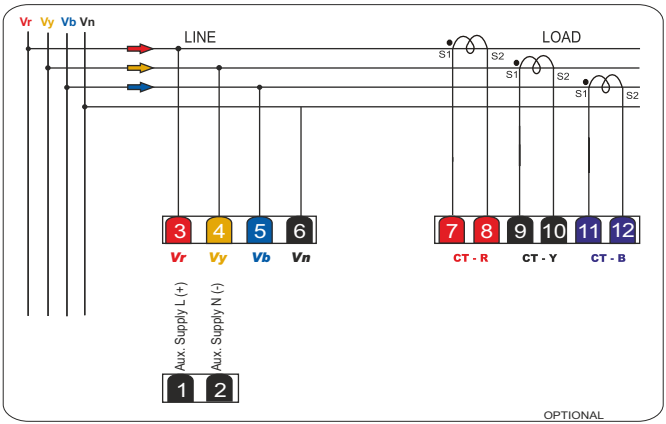
REX can withstand maximum voltage of upto 1000V. Meter can be configured for 3P-4Wire/1Phase connection. Maximum Burden on PT is Less than 0.1VA.

8.0 CT Connection :

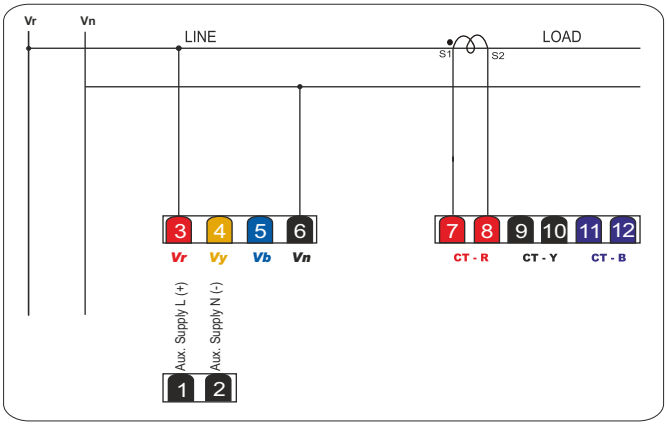
Nominal Current of REX Meter is 6 Amp. Maximum Continuous Current is 10Amp & Current with stand is 50A for 1 Second. Burden on ct less than 0.2VA.

9.0 Wiring Diagrams :

9.1 3-Phase 4-wire connection



9.2 Single Phase Connection



10.0 Key Functions :

KEY	In EDIT Mode	In Measurement Mode
▲ Inrement	Increment the value of selected parameters.	Long push (for 3sec approx for Scroll ON/OFF
▼ Decrement	Decrement the value of selected parameters.	----------
▶ Next	Scrolling to the next parameter in EDIT mode	Scrolling between different measurements parameters.

11. Meter Measurement Scrolling :

Display can be set as auto scroll/Manual scroll Scrolling mode can be changes from auto to manual & vice versa by long press (for 3 sec) of increment key.

In auto scroll the measurement display changes to next page automatically while in manual mode (scroll) measurement page can be selected by pressing Next key.

12.0 KVA Measurement Method :

3d :Recommended method of measurement in case of distorted/ unbalance load condition.

Arthematic :Conventional method of measurement.

13.0 Edit Mode :

Parameter	Description	Min Value	Max Value	Default Value
PTPR	PT Primary	50	999	415
DEC	PT Decimal	415	4.15	415
UNIT	PT Unit	415	K 415	415
PTSR	PT Secondary	50	999	415
CTPR	CT Primary	1	999	5
DEC	CT Decimal	415	4.15	415
UNIT	CT Unit	415	K 415	415
SYS	Sytem configuration	3P4W,1P,3P3W		3P4W
KVA	KVA Type	3D, ARTH		3D
STRT	Starting Current	1	200	5
DEV	Device ID	1	247	1
BAUD	Baud Rate	1200, 2400, 4800, 9600,19200		9600
PARI	Parity	NONE, EVEN, ODD		NONE
STOP	Stop Bit	1, 2		2
ENDI	Endian Type	LIT, BIG		BIG

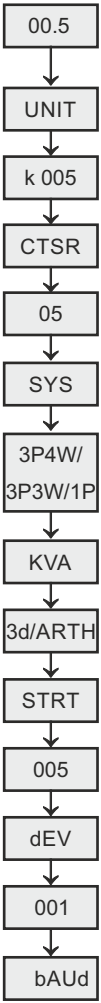
14.0 Setting/Configuration Modes

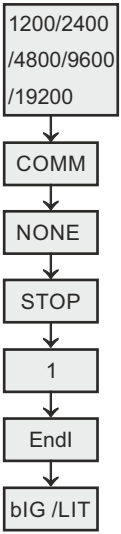
14.1 EDIT Mode :

Parameter values can be changed in ‘EDIT’ mode, ‘EDIT’ mode is password protected both in communication and on Device. In communication the password is valid for 30 seconds, after that we need to re-enter the password to modify the edit parameters.

Press V and > Keys Together

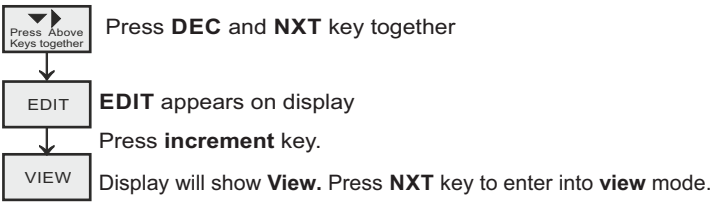
EdiT	EDIT appears on display. Press > key.
C PASS	Current Password appears on display. Press > key
001	Password appears on display. Press ^ or V key to reach the set password. Default 123. Press > key
OK	If password matches OK is displayed else NOK. Press > key
PTPR	Primary PT Voltage Value displayed. Press > key
415	To Change the Voltage Value , press ^ or V key. Press > key
dEC	To set the decimal point in Primary PT voltage value. Press > key
4.15	To change the position of decimal point , press ^ or V key. Press > key
UNIT	To set the Unit in Primary PT voltage value. Press > key
k 415	To change the unit of Primary PT voltage, press ^ or V key. Press > key
415	To Change the Voltage Value , press ^ or V key. Press > key
CTPR	Primary CT Value displayed. Press > key
005	To Change the CT Value , press ^ or V key. Press > key
dEC	To set the decimal point in Primary CT value. Press > key


00.5
To change the position of decimal point ,
press ^ or V key. Press > key
UNIT
To set the Unit in Primary CT value. Press > key
k 005
To change the unit of Primary CT, press ^ or V key. Press > key
CTSR
Secondary CT Value displayed. Press > key
05
To Change the CT Value , press ^ or V key. Press > key
SYS
System Configuration displayed . Press > key
3P4W/
3P3W/1P
To change the system configuration, press ^ or V key. Press > key
KVA
KVA Type displayed, Press > key
3d/ARTH
To change the KVA type , press ^ or V key. Press > key
STRT
Start Current displayed, Press > key
005
To change the start current , press ^ or V key. Press > key
dEV
Device ID displayed, Press > key
001
To set the device ID , press ^ or V key. Press > key
bAUd
Baud Rate displayed, Press > key



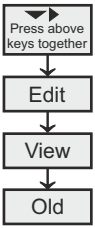
14.2 VIEW Mode:

User can view all set values in this mode without entering password Change of values is not permitted in this mode.



Each press of NXT key user view next parameter

14.3 View Old Mode :



Press **DEC** and **NXT** key together

EdIT appears on display

Press **increment** key.

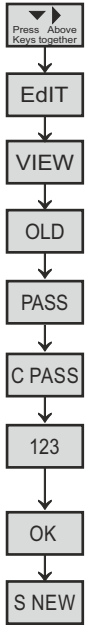
Display will show **View**

Press **increment** key

Display will show **OLd** Press **NXT** key to enter the **OLD** mode.

Each press of NXT key. To view old integrated parameter i.e KWH, KVAH, run hour, load hour, interruption which is model dependent

14.4 RST Password :



Press **DEC** and **NXT** key together

EdIT appears on screen

Press increment key

Display will show view

Press increment key

Display will show VIEW OLD

Press increment key

Display will show PASS

Press increment key

Current Password appears on display. Press > key

Press increment key

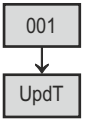
Password appears on display. Press ^ or V key to reach the set password. Default 123. Press > key

Press increment key

If password matches OK is displayed else NOK. Press > key

Press increment key

Set New Password displayed. Press > key

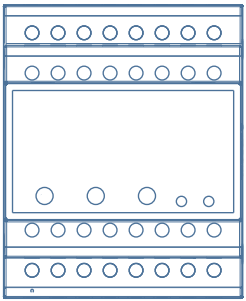


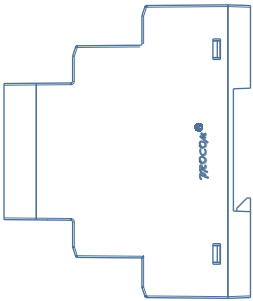
Press ^ or V key to set password. Press > key

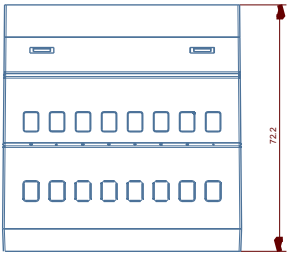
Press increment key

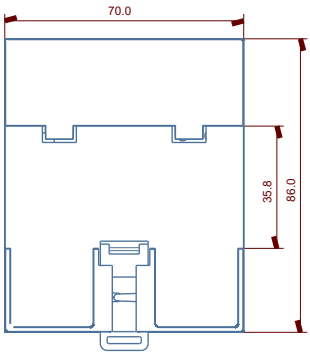
Password updated displayed. Press > key

15.0 Dimensions details:









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