

Unitech Engineers(India)

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ENERGY METERS



Unique features:	Specification:
<ol style="list-style-type: none"> 6-digit one row 7-segment display. True RMS measurement and perfect linear response. Two switches for onsite setting. CT/PT ratio programmable. Compact size and light weight. ABS dust-proof rugged casing. Touch proof voltage & current terminals. Password protection. 	<p>Auxiliary Supply: Universal Auxiliary(80-300V AC) Supply.</p> <p>Accuracy: 0.5% (class 0.5)</p> <p>Inputs: Voltage (upto 500V) Current secondary(5A).</p> <p>Dimension: 96x96x57 mm.</p> <p>Panel Cutout: 92⁺²mm x 92⁺²mm.</p> <p>Standards: IP-20</p>

PROGRAMING KEYS DETAIL



Key	In Set (programming)mode	In RUN (Auto) mode	In RUN (Manual)mode
← I ENTER	To select the value and to accept the value	NO action	NO action
↓ SCROLL DOWN	To edit the value down-ward in edit mode and scroll through the parameters.	NO action	To scroll down the page to look at different parameters.

- To change Auto mode to Manual mode or vice versa press ENTER key for 4 second continually.
- Use DOWN key to navigate next parameters.

Wh ⇒		PF(R) ⇒	
PF(Y) ⇒		PF(B) ⇒	
PF(Total) ⇒		Watt(R) ⇒	
Watt(Y) ⇒		Watt(B) ⇒	
Watt(Total) ⇒		Old Wh ⇒	
Voltage(R) ⇒		Voltage(Y) ⇒	
Voltage(B) ⇒		Voltage(Average of three phase) ⇒	
Line Voltage(RY) ⇒		Line Voltage(YB) ⇒	
Line Voltage(BR) ⇒		Line Voltage(Average of three line voltages) ⇒	
Current(R) ⇒		Current(Y) ⇒	
Current(B) ⇒		Current(Average of three phases) ⇒	
frequency(HZ) ⇒		Run hour()⇒	
Revolution per minute(RPM) ⇒		• Wh...	

ON STARTUP DISPLAY











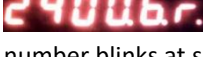




Steps	Display Shows	Comments
1	Display se.v 105	se.v 105-version of software
2	Display En.3132	En.3132- model no of device





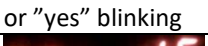

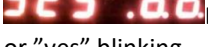


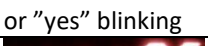


3	 Display Manual	Manual-scrolling mode of parameter
	 Display Auto	Auto- scrolling mode of parameter

ENTERING CONFIGURATION (SETUP) MODE

Note:- Parameter only can be edit after removing load and PT/CT ratio can be changed when both energy (EB/DG)are cleared.

Follow the following steps to configure the setup parameters through front panel key.

Steps	Actions	Display Reads	Comments
1	Press DOWN keys first then ENTER key together for 2 sec, to enter programming mode	 P.S. with first digit "0" blinking.	
2	Press DOWN Key till the first digit read "1"	 PASSWORD =1000 (default/factory set).	Default is 1000
3	Press the ENTER Key to shift the blink digit to right (here, 4 times)	 Display "YES":if password correct -----  Display "no" if password wrong	<u>if password correct:</u> you can edit saved parameter. ----- <u>if password wrong:</u> you can only see saved parameter.
4	Press DOWN key	 Display P.P.	P.P.- PT. primary
5	Press ENTER key to set the PT primary.	P.P.=415.0(For PT) (Default/factory set).	Indicate the last set value. Programmable range: 100V-999kV (For PT)
6	Press ENTETR key to edit value	Editable digit blinks.	
7	Press DOWN key to change	Changed digit blinks.	Select required value.
8	Press DOWN key	 Display P.S.	P.S.- PT secondary
9	Press ENTER key to set the PT secondary.	P.S. =415.0(For PT)	Indicate the last set value. Programmable range: 100V-999kV (For PT)
10	Press DOWN key	 Display C.P.	C.P.- CT primary
11	Press ENTER key to set the CT primary.	C.P.=5.000(For CT)	Indicate the last set value. Programmable range: 1A-50kA(For CT)
12	Press DOWN key	 Display C.S.	C.S.- CT secondary
13	Press ENTER key to set the CT secondary.	C.S.=415.0(For CT)	Indicate the last set value. Programmable range: 1A-50kA(For CT)
14	Press DOWN key	 Display b.r.	b.r.- Baud rate
15	Press ENTER key to set the Baud rate	  Four digit number blinks at same time	Select value between 9600,4800,2400,19200,
16	Press down key to change Baud rate	 Display kilo led glows	Kilo led glows when measurement reached in kilo range
17	Press DOWN key	 Display P.r.	P.r.- Parity
18	Press ENTER key to set the Parity	 Default set even	Select parity even, odd,non
19	Press DOWN key	 Display I.d.	I.d.-Device id
20	Press ENTER key to set the Device id	Default set 020	

21	Press DOWN key	 Display r.L.	r.L.-reverse lock
22	Press ENTER key to change reverse lock	 Default set no	Select yes/no
23	Press DOWN key	 Display E.8.	E.8.-energy clr
24	Press ENTER key to clear the energy	 Display "no" or "yes" blinking	Yes to clear energy No to remains in same
25	Press DOWN key	 Display d.6.	d.6.-Energy for diesel generator
26	Press ENTER key to clear the energy	 Display "no" or "yes" blinking	Yes to clear energy No to remains in same
27	Press DOWN key	 Display r.H.	r.H.-run hour
28	Press ENTER key to clear the run hour	 Display "no" or "yes" blinking	Yes to clear run hour No to remains in same
29	Press DOWN key	 Display "P.S"	P.S.-Password
30	Press ENTER key to change the password	 Display "0000" with first zero blinking	To change press UP/DOWN key and for move next digit press ENTER key
31	Press DOWN key	 Display "Yes" Blinking to save  Display no to unchanged	Yes to save the setting otherwise no
32	Press ENTER key to memorize the changed parameters	Display returns to home page (measurement mode)	

1. If entered password is wrong, in this case user can only see the previously saved parameters and not authorized to edit any of them.
2. Previously saved parameter can only be change if user save the value by pressing ENTER key while display showing "SAVE YES" (YES Blinking) in configurations mode.
3. If password other than the default is set, then memorize it. Meter will reject the programming if tried with wrong passwords. In such case meter will have to be reset and calibrated in factory only.
4. Run Hour, Energy can only be reset trough password protective program setting.

LED INDICATION

'KILO' ON	Kilo
'MEGA' ON	Mega
'KILO & MEGA ' ON	Giga
'KILO & MEGA ' OFF	Direct reading
'-' ON	Lag/minus
'-' OFF	Lead/plus
'COM' ON	Communication
'REV' ON	Ct circuit reversed

DISPLAY OF PARAMETER

$\pi\rho$	Power factor R
$\Pi\psi$	Power factor Y
$\Pi\beta$	Power factor B
$\Pi\tau$	Power factor Average
$\Omega\rho$	Watts R phase
$\Omega\psi$	Watts Y phase
$\Omega\beta$	Watts B phase
$\omega\tau$	Watts Average
ρ	Voltage R to neutral
ψ	Voltage Y to neutral
β	Voltage B to neutral
$\rho\pi$	Revolution per minute

Δv	Average voltage phase to neutral
$P\psi$	Voltage RY phase
$\Psi\beta$	Voltage YB phase
$B\rho$	Voltage BR phase
$\Delta\Delta$	Voltage line to line
$A\rho$	Current R phase
$\alpha\psi$	Current Y phase
$\alpha\beta$	Current B phase
$\Delta\Delta$	Current Average
HZ	Frequency

B Voltage B to neutral