User Manual

RS PRO DIGITAL PANEL METERS

Stock number: 179-7572

EN

rspro.com

1. FEATURES

- STAR (Wye)/ DELTA/1 phase programmable
- Universal Auxiliary (80 - 300 VAC / DC) supply
- PT ratio / CT ratio programmable including CT secondary
- User configurable (editable) password
- Simultaneous sampling of Volts & Amps
- True RMS measurement
- Universal Voltage Input (50 - 550 VAC) and Current Secondary (0.05 to 6A)

2. UNIQUE FEATURES

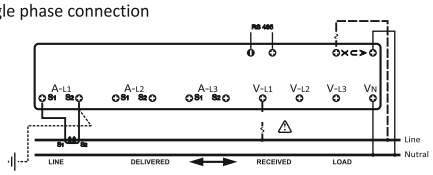
- Optional Programmable relay output maximum 2 (up to 6 threshold parameters) and tripping time up to180 seconds.
- Clearance & creepage distance meets UL61010.
- 3 row, 4 digit display for better readability.
- Auto-scaling of kilo & mega, decimal point.
- Compact size and weight

3. KEY FUNCTIONS

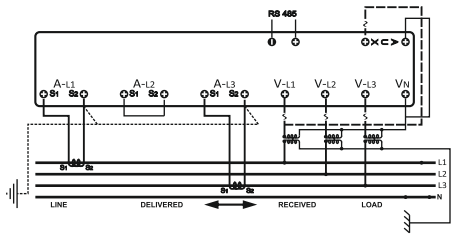
Key	In SET (Programming) mode	In RUN (Measurement) mode
Right/UP	To select the value and accept the value (it act as a Right key in programming mode)	To scroll pages in UPWARD direction and view different parameters
DOWN	To edit the value/system type down-ward in edit mode and scroll through the parameters.	To scroll pages in DOWNWARD direction and view different parameters

4. WIRING DIAGRAM

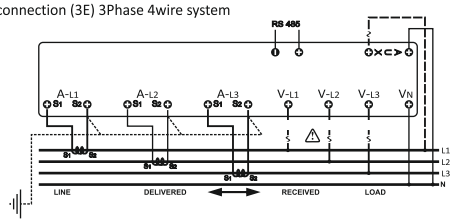
Single phase connection



Delta connection (2E) 3Phase 3 wire system



Star connection (3E) 3Phase 4wire system



5. ENTERING CONFIGURATION (SETUP) MODE

To configure the setup parameters through front panel, the following steps can be followed.

Step	Actions	Display Reads	Range/Options/Comments
1	Press UP & DOWN keys together to enter SETUP	0000 / SEtP — Row 1: 0000 with first digit "0" blinking. Row 2:SEtP (SETUP)	
2	Press DOWN key to decrement the first digit to "9" sequentially come to digit "1"	1000 / SEtP — Row 1: 1000 with first digit "1" blinking. Row 2:SEtP (SETUP)	If any other password is already set move up and down key to reach the right password

SETUP MODE

6	Press DOWN key	1000 / SEtP	
7	Press UP key four times to accept the password.	StAr / ELEn — Row 1: StAr Row 2: ELEm (ELEMENT)	Defines the power system configuration. Options: STAR /DELTA/ SINGLE PHASE
8	Press UP key to select STAR/DELTA/1. PHASE	StAr / ELEn — Row 1: StAr/ dELt/ 1.Phase Row 2: ELEm Options can be changed by pressing DOWN key.	selected system blinks
9	Press UP key to accept the selected mode	StAr / ELEn — Row 1: StAr/ dELt/ 1.Phase Row 2: ELEm	Selected system stabilizes
10	Press DOWN key	415.0 / P.Pr1 — Row 1: xxxx (415.0 -default /factory set) Row 2: P. Pri(PT Primary)	
11	Press UP key to set the PT primary value	415.0 / P.Pr1 — Row 1: First digit blinks.Edit the digit using DOWN key. Row 2 : P. Pri (PT Primary)	
12	Press UP key to accept the edited value for first digit.	415.0 / P.Pr1 — Row 1: Second digit blinking, can be edited using DOWN key. Press UP key to accept the edited value. Continue the same method till fourth digit. Row 2 : P. Pri (PT Primary)	Program Range for PT Primary : 100V to 999kV Comment: If value set is above the limit, display returns to maximum PT Pri value.
13	Press UP key.	415.0 / P.Pr1 — Row 1: Decimal point blinking. Can be set at appropriate location using DOWN key. Ascertain the correct scale (Kilo/Mega) is selected by Letter K/M. Press UP key to accept the edited value. Row 2 : P. Pri (PT Primary)	E.g.: To set 11.00kV Set first four digits (1100) as explained above keep pressing DOWN key to place decimal point at appropriate location. Letter K/M will indicate the Kilo/ Mega.
14	Press DOWN key	415.0 / P.SEC — Row 1: xxxx (415.0 -default /factory set) Row 2: P.SEC (PT Secondary). Follow the procedure as described in steps 7 to 13.	Range: 50V to 550V If value set is above the limit, display returns to the maximum PT sec value.
15	Press DOWN key	5.000 / C.Pr1 — Row 1: xxxx (5.000-default/ factory set) Repeat steps 7 to 13 to change the settings. Row 2 : C. Pri (CT Primary)	Program Range for CT Primary 0.5A to 99kA
16	Press DOWN key	5.000 / C.SEC — Row 1: xxxx (5.000 –default / factory set) Row 2: C.SEC (CT Secondary). Repeat steps 7 to 13.	Range: 0.5A to 6A
17	Press DOWN key	d5bL. / d1.Pr	1st digital output parameter Options: Over (VLL, A, Freq) Under(VLL, A, Freq)
18	Press UP key to select the required parameter	d5bL. / d1.Pr	The required parameter can be set using DOWN key. Press UP key to accept the edited value.
19	Press Down key	1000. / d1.th	Digital output parameter1 threshold value. Range :0.001 to 999.9M
20	Press Down key	d5bL. / d2.Pr	2nd digital output parameter Options: Over (VLL, A, Freq) Under (VLL, A, Freq)
21	Press UP key to select the required parameter	d5bL. / d2.Pr	The required parameter can be set using DOWN key. Press UP key to accept the edited value.
22	Press Down key	1000. / d2.th	Digital output parameter threshold value. Range :0.001 to 999.9M
23	Press Down key	3.000 / d.dEL — Row 1: x.xxx (3.000 default/ factory set) Row 2: d.dEL (digital output trip delay time)	Range: 1 to 180 seconds
24	Press Down key	9600. / bAUd — Row 1: xxxx (9600 default /factory set) Row 2: bAUd (baud rate) communication speed.	Defines the baud rate. Option:2400,4800,9600, 19.20k

25	Press Down key	EUEn / PrtY	EUEn (even)/odd(odd)/no (no parity) Internal communication error check
26	Press Down key	1.000 / dWId	Defines the (ID) communic-ations identification number. Option:1 to 247
27	Press Down key	---- / PWd — Row 1: ---- Row 2: PWd (Password user definable). **CAUTION**: memorize the Password. Use the same Password for next time. Instruments will reject other Passwords.	Range: 1000-9999. CAUTION: Password can be reset only at the factory.
28	Press DOWN key	4.000 / POLS — Row 1: 4.000 Row 2: POLS (POLES)	Range: 1-28 (FOR RPM).
29	Press DOWN key	15.00 / USUP — Row 1: 15.00 Row 2: voltage suppression	Range: 10-80.
30	Press DOWN key	SAVE / Y — Row 1: S A V E Row 2: "Y" blinking	If "n"(no) is selected then Meter enters into RUN mode without affecting any edited Values in the setup

31	Press DOWN key	Row 1 : xxxx Row 2 : xxxx Row 3 : xxxx	

Once the required parameter is programmed press the DOWN key continuously till it reaches SAVE page directly.

6. The List of parameters can be configured and the range is given below

Sl.No.	Parameter	Default setup	Range / Options
1	Connection mode(ELEm)	STAR	STAR/ DELTA/ 1.Phase
2	PT Primary (P.Pri)	415.0	100V- 999kV
3	PT Secondary (PT SEC)	415.0	50V - 550V
4	CT Primary (C.Pri)	5.000	0.5A - 99kA
5	CT Secondary (C.SEC)	5.000	0.5A - 6A
6	1st Digital Output parameter (d1.Pr)	dSbL	Over (VLL, A, Freq), Under (VLL, A, Freq)
7	1st Digital Output threshold Value (d1.th)	1000.	0.001 t0 999.9K
8	2nd Digital Output parameter (d1.Pr)	dSbL	Over (VLL, A, Freq), Under (VLL, A, Freq)
9	2nd Digital Output threshold Value (d2.th)	1000.	0.001 t0 999.9K
10	Digital output trip delay (d.dEL)	3.000	1.000 to 180.0 Sec
11	Baud rate (bAUd)	9600	2400 to 19.2k
12	Parity (Prty)	Even	Even/ Odd/ no
13	Device Id (dEV.Id)	1.000	1.000 to 247.0
14	Password (PWd)	1000	1000 to 9999
15	No of Poles (POLS)	4.000	1.000 to 28.00
16	Voltage Suppression	15.00	10.00 to 80.00

7. Enabling and disabling of Auto scrolling:

Enabling auto scrolling: Press UP key continuously for 5 seconds or until display shows EnbL Auto.Sc for upward scrolling. Press Down key continuously for 5 seconds or until display shows EnbL Auto.Sc for downward scrolling.

Disabling auto scrolling: Press any key (UP/DOWN), display show dSbL Auto.Sc and returns to normal mode.

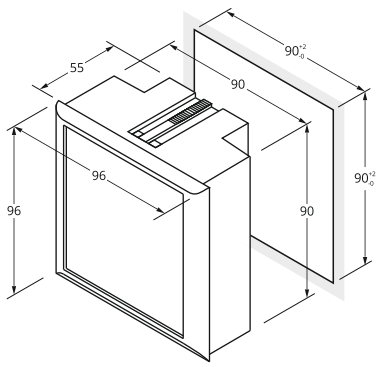
8. LED INDICATION

LED Status	Meaning
KILO – ON	Kilo
KILO – OFF	Direct reading
	Communication ON
VLL - ON	Voltage line to line
VLN - On	Voltage line to Neutral
A - ON	Amps
Hz - ON	Frequency

9. Mechanical Specification:

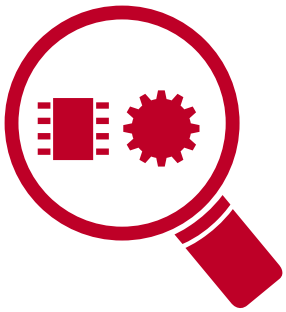
Dimension Bezel:
96 x 96 mm (Depth 55mm behind Bezel)

Panel Cutout:
90^{+2}_{-0} x 90^{+2}_{-0} mm



AUDITED

In compliance with industry standards



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