Programmabler Ziegler Eine V/A

Application :

The digital panel meters Ziegler Eine DPM have been designed for industrial applications ,which frequently require precise and on-site adjustment of the display range .It can be used in industrial automation and for laboratory uses.

Ziegler Eine DPM measures important electrical parameters in 3 phase 4 Wire ,3 phase 3 Wire and single phase Network & replaces the multiple analog panel meters.

Salient Features:

- Fast &Easy Installation on panel with the help of external swivel screws.
- True RMS measurement .
- 4 Digits ultra bright LED Display.
- User selectable CT/PT Primary .
- User selectable 3ph3wire or 3ph4wire Network(for 3A/3V).
- Two auxillary Power Supply available 40V –300V AC DC or 80 -300V AC.
- Available in two sizes -96x96 and 48x96.

Products Features :

True RMS measurement
The instrument measures distorted waveform up to 15th Harmonic.

User selectable CT Primary
The Primary of current transformer can be programmed on site from 1A to 999kA for Current DPM using front panel keys.

User selectable PT Primary
The Primary of Potential transformer can be programmed from on site 100 VLL to 999 kVLL for Voltage DPM (3V) and 60 VLN to 999 kVLN for Voltage DPM (V) using front panel keys.

4 digits LED display:
14mm ultra bright 4 digits LED display.

User selectable 3 phase 3Wire or 4Wire Network(for 3A/3V)
User can program on site the network connection as either 3 Phase 3 Wire or 4 Wire network using front panel keys.

Onsite selection of Auto scroll /Fixed Screen(for 3A/3V)
User can set the display in auto scrolling mode or fixed screen mode using front panel keys.

Function keys:
Using two function keys it is possible to Display various parameters in Current and Voltage DPM .These function keys are also used for Network selection ,CT/PT Primary values ,Auto Scroll mode selection .

Screen No .storage
In case of power failure ,the instrument memorizes the last screen stored .For every 1 min .the instrument stores the screen no .in the non-volatile memory.

Low back depth
The instrument has very low back depth (behind the panel) of less than 40mm .

Enclosure Protection for dust and water:
Conforms to IP 50 (for front face) or IP 65 option (for front with seal) &IP 20 (for back) & as per IEC60529.

EMC Compatibility
Compliance to International standard IEC 61326.

- Interference Emission :IEC 61326-1 :2005 ,Class A
- Interference Immunity :IEC 61326-1 :2005
- Electrostatic discharge :IEC 61000-4-2 --4kV/8kV contact/air .(ESD)
- EM Field :IEC 61000-4-3 --10 V/m (80 MHz to 1 GHz) –3 V/m (1.4 Ghz to 2 GHz) --1 V/m (2 GHz to 2.7 GHz)
- Burst :IEC 61000-4-4 --2 kV (5/50 ns ,5 kHz)
- Surge :IEC 61000-4-5 --1 kVLL /2 kVLN.
- Conducted RF :IEC 61000-4-5 --3 V (150 kHz to 80 MHZ)
- Rated Power Frequency magnetic Field :IEC 61000-4-8 --30 A/m
- Voltage dip :IEC 61000-4-11 --0 %during 1 cycle. --40 %during 10/12 cycles. -- 70 %during 25/30 cycles.
- Short interruptions :IEC 61000-4-11 – 0 %during 25/30 cycles . 25 cycles for 50 Hz test. 30 cycles for 60 Hz test.

Technical Specifications:

Input Voltage:

Nominal input voltage Ranges (AC RMS) (to be specified while ordering)	Phase –Neutral	57 -70V L-N 71 -139V L-N 140 -277V L-N	,Line-Line	100-120V L-L 121-240V L-L 241-480V L-L
Max continuous input voltage	120 %of rated value			
Nominal input voltage burden	>0.3 VA approx .per phase.			
System PT primary values	100VLL to 999kVLL programmable on site for 3 -Phase Voltage (3V). 60VLN to 999kVLN programmable on site for 1 -Phase Voltage (V).			

Input Current:

Nominal input current Ranges	1A or 5A AC RMS (to be specified while ordering)
System CT primary values	From 1A up to 999kA (for 1 or 5 Amp)
Max continuous input current	150 %of rated value
Nominal input current burden	>0.2 VA approx .per phase

Overload Indication : -“oL”-
(If input is greater than 125 %of secondary value for Voltage and 155 %of secondary value for current)

Auxiliary Supply:

AC DC Auxiliary Supply	40-300 V AC-DC(±5%)
AC Auxiliary Supply	80 -300V AC
Frequency range	45 to 65 Hz
VA burden	3 VA Approx at 240VLN ,50Hz.

Overload Withstand:

Voltage	2 x rated value for 1 second ,repeated 10 times at 10 second intervals
Current	4x rated value for 1 second ,repeated 5 times at 5 min intervals

Technical Specifications :

Operating Measuring Ranges:

Voltage Range	10 …120 %of rated value
Current Range	10 …150 %of rated value
Frequency	45…65 Hz

Reference conditions for Accuracy:

Reference temperature	23°C -/+2°C
Input waveform	Sinusoidal (distortion factor 0.005)
Auxiliary supply voltage	Rated Value ±1%
Auxiliary supply frequency	Rated Value ±1%
Voltage Range	20...100 %of Nominal Value
Current Range	10...100 %of Nominal Value
Input Frequency	50 Hz /60 Hz

Accuracy:

Voltage	±1.0 %of Nominal value (Optional ±0.5 %Available)
Current	±1.0 %of Nominal value (Optional ±0.5 %Available)

Influence of Variations:

Temperature coefficient :	
(for rated value range of use (0…50°C))	0.025°/%C for Voltage
	0.05°/%C for Current

Applicable Standards:

EMC	IEC 61326-1 :2005
Safety	IEC 61010-1-2001 ,Permanently connected use
IP for water &dust	IEC60529

Safety :

Pollution degree :	2
Installation category :	III
High Voltage Test	2.2 kV AC ,50Hz for 1 minute.

Environmental :

Operating temperature	0 to +50°C
Storage temperature	-25°C to +70°C
Relative humidity	0 ...90 %non condensing
Warm up time	Minimum 3 minute
Shock	15g in 3 planes
Vibration	10 ...55 Hz ,0.15mm amplitude

Enclosure:

Front	IP 50(IP 54 on request).
Front with seal (Option)	IP 65.
Back	IP 20.

Dimensions and Weights:

a)96x96 DPM

Bezel size (DIN 43 718)	96 mm x 96 mm.
Panel cut-out	92 +0.8 mm x 92 +0.8 mm.
Overall depth	40 mm.
Weight	310 gm .Approx.

b)48x96 DPM

Bezel size(DIN 43 718)	48 mm x 96 mm .
Panel cut-out	43.5 +0.6 mm x 92 +0.8 mm.
Overall depth	68 mm.
Weight	250 gm .Approx.

Various Input Voltage Ranges:

Input Voltage(3V)
110 V L-L
230 V L-L
415 V L-L

Input Voltage (V)
64 V L-N
110 V L-N
240 V L-N
600 V L-N

Various Input Current Ranges:

Input Current
1A
5A

Parameters measured and displayed:

A) Ziegler Eine 3V

Network type	Displayed Parameter
1)3 Phase 4 wire	a .Phase –Neutral Voltage VL1 b .Phase –Neutral Voltage VL2 c .Phase –Neutral Voltage VL3 d .Line-Line Voltage VL1L2 e .Line-Line Voltage VL2L3 f .Line-Line Voltage VL3L1 g .System Voltage
2)3 Phase 3 wire	a .Line-Line Voltage VL1L2 b .Line-Line Voltage VL2L3 c .Line-Line Voltage VL3L1 d .System Voltage

B) Ziegler Eine 3A

Network type	Displayed Parameter
1)3 Phase 4 wire and 3 Phase 3 Wire	a .Phase Current IL1 b .Phase Current IL2 c .Phase Current IL3 d .System Current

C) Ziegler Eine V

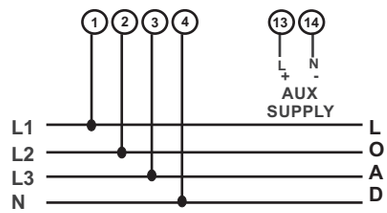
Network type	Displayed Parameter
1 Phase 2 wire	Phase –Neutral Voltage VL

D) Ziegler Eine A

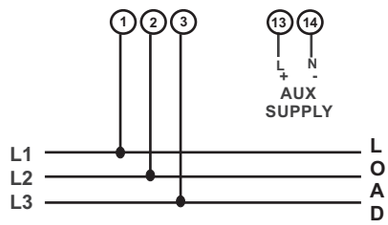
Network type	Displayed Parameter
1 Phase 2 wire	Phase Current IL

Connection Diagram:

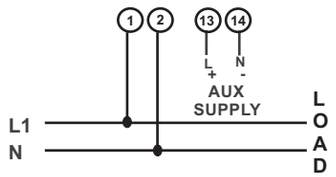
A (For 96x96 DPM



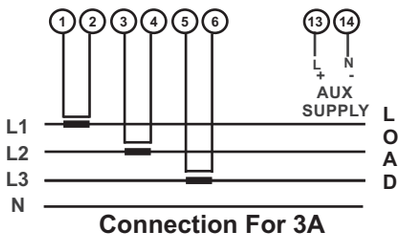
Connection For 3V
3PH -4 Wire Network



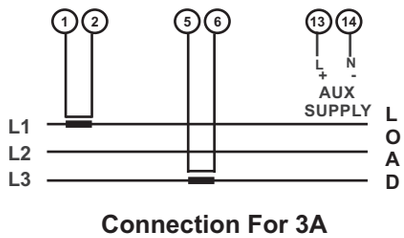
Connection For 3V
3PH -3 Wire Network



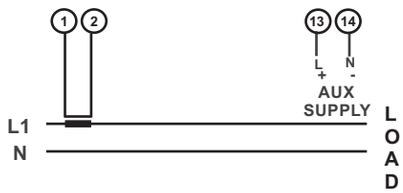
Connection For V
1PH -2 Wire Network



Connection For 3A
3PH -4 Wire Network

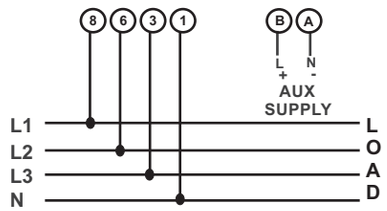


Connection For 3A
3PH -3 Wire Network

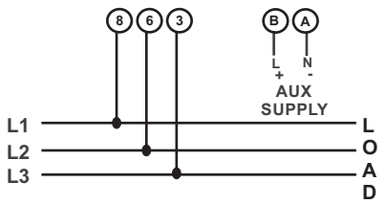


Connection For A
1PH -2 Wire Network

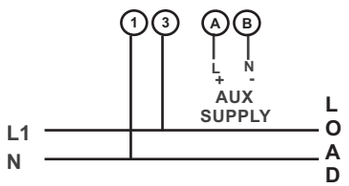
B (For 48x96 DPM



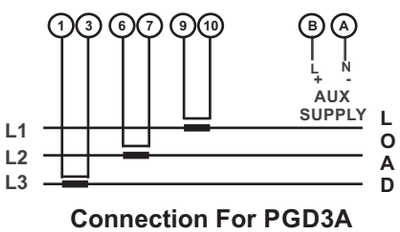
Connection For PGD3V
3PH -4 Wire Network



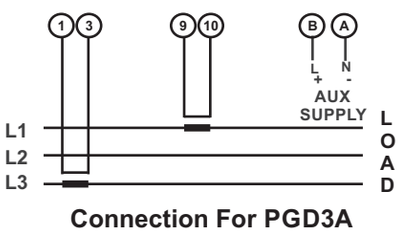
Connection For PGD3V
3PH -3 Wire Network



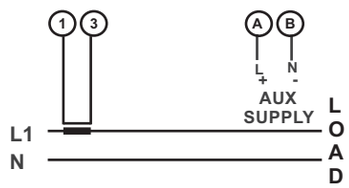
Connection For PGDV
1PH Network



Connection For PGD3A
3PH -4 Wire Network



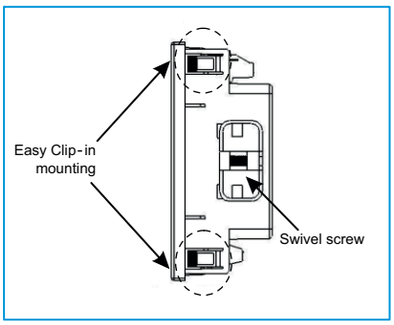
Connection For PGD3A
3PH -3 Wire Network



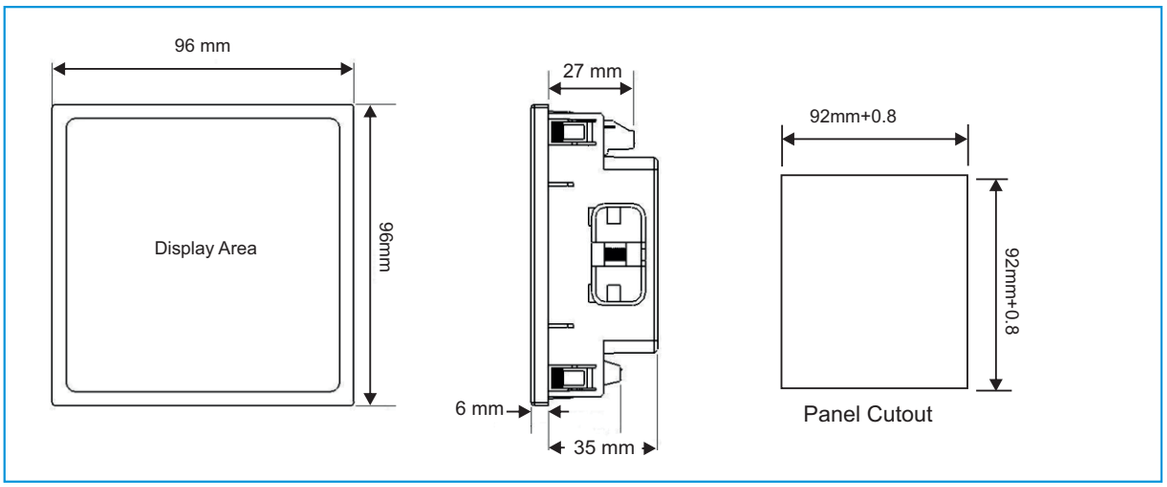
Connection For PGDA
1PH Network

Installation :

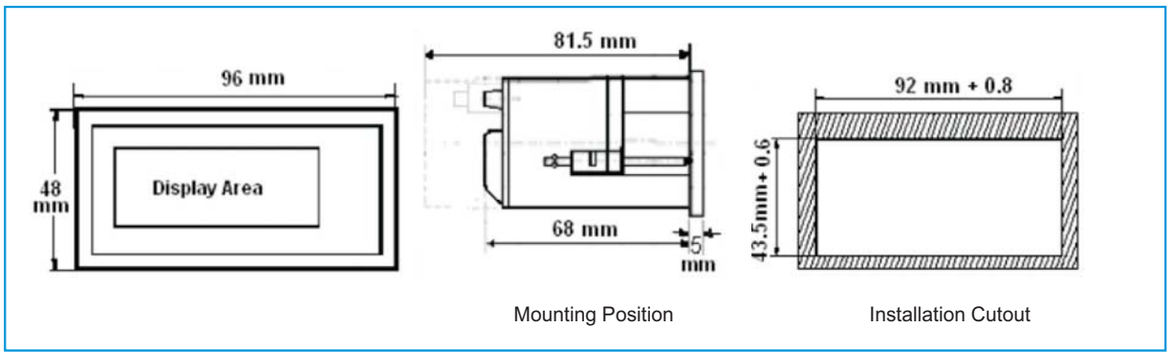
Easy Clip in Installation on Panel for 96x96 DPM:



A) For 96x96 DPM



A)For 48x96 DPM



Ziegler Eine Voltage DPM :

A)3 -Phase Voltage (3V)

Ordering information	Ordering Code
System Type	
3 Phase (Programmable as 4 wire or 3 wire on site)	3V
Accuracy Class	1.0
	0.5
Input Voltage	**3 Phase**
110V L-L	110
230V L-L	230
415V L-L	415
Auxiliary Voltage	
40-300 V AC-DC(±5%)	AD
80-300V AC	L
Size	
48x96 Low Depth DPM	48
96x96 DPM	96

B)Single -Phase Voltage (V)

Ordering information	Ordering Code
System Type	
1 Phase	V
Accuracy Class	1.0
	0.5
Input Voltage	**Single Phase**
64 V L-N	64
110V L-N	110
240V L-N	240
600V L-N	600
Auxiliary Voltage	
40-300 V AC-DC(±5%)	AD
80-300V AC	L
Size	
48x96 Low Depth DPM	48
96x96 DPM	96

Order Code Example:

For **3 Phase** Voltage DPM:

Ziegler Eine Voltage 3V-1.0-110-AD-48

i.e Ziegler Eine Voltage DPM ,3 Phase ,Accuracy class ±1.0 ,%110 VLL input voltage ,40-300 V AC-DC Auxiliary Supply , 48x96 Low Depth DPM.

For 1 **Phase** Voltage DPM:

Ziegler Eine Voltage V-0.5-240-L-96

i.e Ziegler Eine Voltage DPM ,Single Phase ,Accuracy class ±0.5 ,%240 VLN input voltage ,80-300 V AC Auxiliary Supply , 96x96 DPM.

Ziegler Eine Current DPM :

Ordering information	Ordering Code
System Type	
3 Phase Programmable as	
4 wire or 3 wire on site	3A
1 Phase	A
Accuracy Class	1.0
	0.5
Input Current	
1A	1
5A	5
Auxiliary Voltage	
40-300 V AC-DC(±5%)	AD
80-300V AC	L
Size	
48x96 Low Depth DPM	48
96x96 DPM	96

For Current DPM:

Ziegler Eine Current 3A-1.0-1-L-48

i.e Ziegler Eine Current DPM ,3 Phase ,Accuracy class ±1.0,%1 Ampere input current ,80-300 V AC Auxiliary Supply , 48x96 Low Depth DPM.

ZIEGLER INSTRUMENTS

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