

SMART BASIC METERS / TRANSDUCERS/DC ENERGY

ALPHA PLUS | μ ALPHA PLUS | OMEGA | DC ENERGY

Cost Effective | User Friendly | Field Programmable



Measure, Monitor and Control

Current, Voltage, Frequency and Relay Output

Benefits

Multiple options like relay output for tripping.
RS 485 for communication.

Technology

Advanced circuitry for accurate measurements.

Applications

AC & DC measurement, equipment monitoring,
Genset, Solar and UPS applications etc.

ELNET Energy Management System

Common Features:

True RMS.

Four digit resolution with auto scaling.

Field programmable Star (Wye) or Delta or single phase configuration.

Average & phase wise information.

Accuracy class 1.0 IEC 61036 / CBIP 88
Optional: 0.5.

Additional Features:

Universal auxiliary input 80 - 300V AC
(Optional: 40-300V DC, 80-300V AC/DC).

Auto-scrolling.

Available in single row Dinrail version (Alpha+ D VAF, Alpha+ D V/3V, Alpha+ D A/3A, Alpha+ D Hz).
Minimum order quantity apply.

Optional direct measurement upto 20A.
60A or 100A max. using Hanging CT.

Available in 0.8 inch display (4 digit) - optional
(for Alpha+ series only). Minimum order quantity apply.

Optional Features:

2 digital output programmable for threshold upto 6 parameters (Under/Over).

Programmable tripping time upto 180 secs. with Hysteresis of 1%.

Analog transducer output 0-20mA / 4-20mA or 0-1V,
Accuracy of 1% FS.

Optically isolated RS 485 / RS 232 serial interface
(Alpha+ and Omega only).

ETL version for Alpha+ and Omega with and without RS485.



OMEGA 1310

Displays more than 17 basic parameters

Simultaneous display of average VLL A F or VLL A PF or VLN A F or all basic parameters + PF + RPM + ON Hrs + Hi Amps.

Generator RPM display

Optional programmable relay O/P (upto 2) {VLL, A, F (under, over)}



OMEGA 1300

Displays more than 13 basic parameters i.e., VLL, VLN, A (Average & Phase wise), F, ON Hours.

Programmable Relay Output (upto 2) {VLL, A, F (under, over)}.



ALPHA+ / μ A+ 3A/A

Display Amps - average and phasewise for A+ 3A & Amps for A+ 3A.

Field programmable CT primary and secondary.

Models: Alpha+ 3A & μ Alpha+ 3A (3 Phase); Alpha+ A & μ Alpha+ A (single phase).

CT secondary programmable to 5A/1A - standard (500mA optional).

Optional programmable relay output (upto 2) for threshold Amp (under or over).

Optional transducer output (0 to 20mA / 4 to 20mA or 0 to 1V DC) for average A (for Alpha+ series only) Accuracy 1% of FS.



ALPHA+ VAF/3VAF, μ A+ VAF

Display Line to Line Voltage -average and phase wise, Amps - average and phase wise & Frequency (External selector switch to be used for μ Alpha+ VAF), i.e., VLL, A.

Field programmable PT and CT primary and secondary.

Optional programmable relay output (upto 2) for any threshold V, VLL avg, A, Hz (under or over).

Optional transducer output (0 to 20mA / 4 to 20mA or 0 to 1V DC) for average VLL, VLN, A and F (for Alpha+ series only) Accuracy 1% FS. VAF (VLN, A and F).



ALPHA+ / μ A+ Hz

Displays wider range of frequency 35 - 70 Hz.

Higher accuracy class 0.2.

Optional programmable relay output (upto 2) for threshold Hz (under or over).

Optional transducer output (0 to 20mA / 4 to 20mA or 0 to 1V DC) for Hz (for Alpha+ series only).



ALPHA+ / μ A+ 3V/V

Displays Voltage Line to Line and Line to Neutral, Average and Phase wise, Frequency VLL, VLN (Avg & PW), F for A+ 3V & VLL for Alpha+ V

Field programmable PT primary and secondary.

Models: Alpha+ 3V & μ Alpha+ 3V (3 phase measurement); Alpha+ V & μ Alpha+ V (Single Phase).

True RMS measurements of neutral to earth voltage optional (for Alpha+ V and μ A+ V only).

Optional programmable Relay output (upto 2) for any threshold V, Hz (under or over) for A+ 3v & only V (under or over) for A+ V.

Optional transducer output (0 to 20mA / 4 to 20mA or 0 to 1V DC) for average VLL, VLN and F (for Alpha+ series only) Accuracy 1% of FS.



ALPHA+ / μ A+ ADC/VDC

DC Vin - 75mV or 100mV or 10V or 100V or 500V.

0-20 mA / 4-20 mA input options 4 digit resolution for ADC.

DC auxiliary from 80-300V option available for Alpha+ and Dinrail version.

Field programmable full scale or offset value.



ALPHA+ / μ A+ RPM/MPM

DC Vin - 75mV or 100mV or 10V or 100V or 500V.

0-20 mA / 4-20 mA input options 4 digit resolution for RPM.

DC auxiliary supply option of 40 to 300V available.

Field programmable full scale or offset value.

Optional transducer output (0 to 20 mA / 4 to 20 mA or 0 to 1V DC) for Hz (for Alpha+ series only).



TRANSDUCER OUTPUT

ElMeasure transducers are programmable transducers (cum display), which converts various applicable electrical parameters like voltage, current, frequency, active power, apparent power, power factor into DC current 0-20mA or 4-20mA (Programmable) or voltage 0-1V or 0-10V DC output.

Applications are various: electrical, chemical, thermal power plants, etc., to monitor processed data either locally or remotely using scada system by ElMeasure or the third party.

- Accuracy : Class 1.0FS
- Maximum overload: 120% (Equivalent of 24mA)
- Number of output: One (0 to 20mA / 4 to 20mA or 0-1V DC)

Features & Benefits :

Programmable transducer for any measured parameters with display. For example; 3VAF model can program for voltage or current or frequency.

Programmable primary / secondary voltage or current making wider range of operations
- Stocking becomes simple

Programmable transducer output either 0-20mA or 4-20mA.

0-1V or 0-10V DC optional - Maximum load resistance: 75 ohms.

DC current signal or DC voltage signal directly proportional to the change of input.

Fully protected against open and short circuited output.

Technical Specification :

ALPHA + , μ A + & OMEGA

Accuracy: Class 1 (Default) IEC 61036, CBIP 88, Class 0.5 (Option).

Sensing/Measurement: True RMS, 1 Sec update time.

Input voltage: 4 Voltage inputs (VR, VY, VB, VN); Programmable 110 or 415V LL Nominal (Range 80-550V LL); Primary Programmable up to 999 kV.
Burden: 0.2VA Max. per phase

Input current: Current inputs (AR, AY, AB) 50mA - 6A (Field configurable 1A or 5A).
Primary Programmable up to 99 kA.
Overload: 10A max continuous, 50A max for 3 Sec
Burden: 0.2VA Max. per phase.

Aux-Supply (Control Power): 80 - 300V AC, 40-70Hz
for Omega 80-300V AC/DC
Burden: 4VA Max

Display: 4digits display with 14 mm height for Alpha Plus, 10 mm height for OMEGA series, μ Alpha Plus series & DinRail

Communication: RS485 serial channel connection, Industry standard Modbus RTU protocol (RS232 optional). Zigbee communication.

Baud rate: 2400 bps to 19200 bps. (Preferred 9600 bps)

Isolation: 2000 volts AC isolation for 1 minute between communication and other circuits.

Weight: Unpacked: 300 gms, Packed: 400 gms

ECO Friendly Lead Free

18 Months Warranty

Note: Additional error of 0.05% of full scale, for meter input current below 500mA

Transducer Output Programmable :

Sl No	Transducer Models	Any One Output Programmable						Output Range Options
		V	A	Hz	W	VA	PF	
1	Alpha+ 3VAF	V	A	Hz				<ul style="list-style-type: none"> ● 0-20mA / 4-20mA ● 0-1V DC
2	Alpha+ 3V	V		Hz				<ul style="list-style-type: none"> ● 0-20mA / 4-20mA ● 0-1V DC
3	Alpha+ 3A		A					<ul style="list-style-type: none"> ● 0-20mA / 4-20mA ● 0-1V DC
4	Alpha+ Hz			Hz				<ul style="list-style-type: none"> ● 0-20mA / 4-20mA ● 0-1V DC
5	LG+ 5110	V	A	Hz	W	VA	PF	<ul style="list-style-type: none"> ● 0-20mA / 4-20mA ● 0-1V DC ● 0-5V DC ● 0-10V DC

Product Selection :

96×96×50mm	Dinrail* (90 × 90 × 50mm)	Transducer	96×48×45mm	Parameters
OM 1310	<input type="checkbox"/>	<input type="checkbox"/>		VLL, VLN, AMP, Hz, PF, OH, RPM, A Peak
OM 1300	<input type="checkbox"/>	<input type="checkbox"/>		VLL, VLN, AMP, Hz, ON Hrs.
ALPHA+ 3VAF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		VLL, VLN, AMP, Hz
ALPHA+ VAF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	μ ALPHA+ VAF	VLN, AMP, Hz (Single Phase)
ALPHA+ 3A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	μ ALPHA+ 3A	AMP-Avg, AR, AY, AB
ALPHA+ 3V	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	μ ALPHA+ 3V	VLL, VLN, Avg & Phase wise, Hz
ALPHA+ A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	μ ALPHA+ A	AMP A
ALPHA+ V	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	μ ALPHA+ V	VOLT V
ALPHA+ ADC	<input type="checkbox"/>	<input type="checkbox"/>	μ ALPHA+ ADC	AMP DC
ALPHA+ VDC	<input type="checkbox"/>	<input type="checkbox"/>	μ ALPHA+ VDC	VOLTS DC
ALPHA+ Hz	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	μ ALPHA+ Hz	Frequency (Hz)
ALPHA+ RPM	<input type="checkbox"/>	<input checked="" type="checkbox"/>	μ ALPHA+ RPM	RPM

* Dinrail available as per minimum order quantity basis.

MULTI CHANNEL DC ENERGY METER

Common Features :

- Single meter measures Multiple channels and True RMS measurements.
- Differential current input for all the current channels.
- Voltage Full scale programmable.
- Current full scale programmable independently.
- Reverse lock option for not accumulating the reverse current energy. This can be used for the better study of charging and discharging circuit.
- Programmable shunt secondary 50mV to 75mV.
- Energy display programmable-counter based or resolution based.
- Energy resetting at 999999K* multiplication factor.
- Auto scaling of kilo and mega decimal point.
- Optional programmable relay output maximum 2 (upto 6 threshold parameters) and tripping time upto 180 seconds.

Technical Specification :

EDC

Accuracy: Class 1

Display Resolution: 4Row 6Digits for EDC4400, 1Row 6Digits for EDC4100 and EDC1100.

Input voltage: One Input Voltage (48VDC Factory Default). Varieties of range in Voltage like 48VDC, 100VDC, 150VDC, 300VDC, 600VDC, 800VDC (factory settable). Primary Programmable range: 0.100 to 999.9kV .

Input current: One/ four Input Current (50mV, 75mV Shunt type). Individually Programmable primary current. Range: 0.100 999.9k .

Aux-Supply: 80 - 300V AC/DC, 40-70Hz (48V DC Optional). Burden: 4VA Nominal.

Communication: RS485 interface Industry Standard Modbus RTU protocol (RS232 optional).

Baud rate: 4800 bps to 19200 bps. (Preferred 9600 bps).

Isolation: 2000 volts AC isolation for 1 minute between communication and other circuits.

Weight (Approx): Unpacked - 300 gms, Shipping - 400 gms.

Operating Temperature: -10°C to +55°C (14°F to 131°F).

Storage Temperature: -25°C to +75°C (-13°F to 158°F).

Humidity: 5% to 95% non condensing.

Protection index: IP 51 (IP 54 front option).

Recommended connection wire: 12 to 14 SWG.

Applicable Standards:

DIN 40050 EN 60529	Degrees of protection provided by enclosure for electrical equipment against ingress of solid foreign objects.
DIN / IEC 688-1	Electrical measuring transducers for converting AC electrical quantities into DC electrical quantities.
IS 12784	Electrical measuring transducers for converting AC electrical quantities into DC electrical quantities.



Additional features for EDC 1100

- Displays V, 1 channel current, 1 channel Watt and 1 channel energy in the bright single row 6 digits.
- Optional RS485 communication.
- Optional single digital output with the programmable delay.

Additional features for EDC 4100

- Displays V, 4 channels Current, 4 channel Watts and energy in the bright single row 6 digits.
- Optional RS485 communication.
- Optional single digital output with the programmable delay.

Additional features for EDC 4400

- Displays V, 4 channels Current, Watts and Energy.
- Optional Load Hours (LH) and Amps hours (Ah).
- Optional RS485 communication.
- Optional two digital output with the programmable delay.

Safety and Environmental Specification:

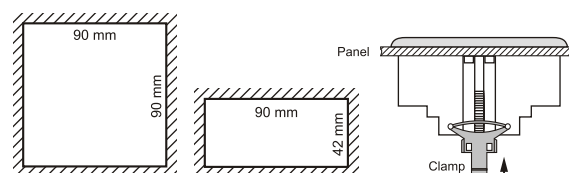
Safety: Designed to meet protection class III, pollution degree 2. Protection against shock by double insulation. Clearance and creepage meets as per UL 61010 safety standard. Finger touch proof terminals to voltage and current connections.

Environment:

Operating temperature	-10°C to +55°C (14°F to 131°F)
Storage temperature	-25°C to +70°C (-13°F to 158°F)
Humidity	5% to 95% non condensing.
Protection index	IP 51 (IP 54 front option).
Recommended wire gauge	12 to 14 SWG.

Mechanical Specification:

Dimension Bezel:	Panel Cutout:
96 x 96 mm (Depth 50mm behind Bezel)	90 ⁺² ₋₀ x 90 ⁺² ₋₀ mm
96 x 48 mm (Depth 45mm behind Bezel)	90 ⁺² ₋₀ x 42 ⁺² ₋₀ mm



Range of Products: | Building Energy Management System (BEMS) | EMS | Demand Controller | Multi function Meters | Load Manager | Electronic Energy Meters | Dual Energy Meter | Digital Panel Meters | Power Factor Controller | Intelligent Earth Leakage Relay | Aggregator | Smart Plug | Power Distribution Unit | Control Relay Unit for PDU | Transducers | Power & Energy Transducers | RS485 to RS232/Ethernet/Optic Fiber Converter | RF Modem | GSM Modem |



Sales Offices: BANGALORE | CHENNAI | MUMBAI | DELHI | HYDERABAD | USA | UAE

Elecon Measurements

A group of **ElMeasure India Private Limited**

HO & Unit-I
764, 4th Phase, 707, Yelahanka New Town, Bangalore - 560 064. INDIA
T : +91 80 2846 1777/744 F : +91 80 41272461
CS : +91 80 3290 4489 E : contactblr@elmeasure.com

Unit-II:
Goutham Garden, No. 4, Veerapandi, Coimbatore - 641019 INDIA
T : 0422 2697200. TF : 0422 2695200 E : contactcbe@elmeasure.com

Unit-III
Plot No.: 323/19, Camp Road, Selaqi, Dehradun, UTTARANCHAL
C : 097600 02492, 12492 E : contactddn@elmeasure.com

Unit-IV
1049, MIG 3rd Phase, Yelahanka New Town, Bangalore - 560 064. INDIA

www.elmeasure.com