Programmable Ratio AC Current Meters

Feature

True power system design complaints

ANSI-IEEE, IEC & VDE standards

High over capability to assure reliable operation

Ration programmable with field re-range ability

High accuracy of 0.2% fs

4-1/2 digits maximum of 19999 counts

Super rate display of 0.56"

Applied rules and standards

Measuring & conversion	IEC 688
Dielectric strength	IEC 688
Impulse & Surge test	ANSI C37.90.1/1989
	IEC 255-3 (1989)
Adaptability-power system	IEC 0110
Measuring reliability	VDE 3540

Description

The model UMAF series, are designed under micro base, and it also specially designed to solve the complicated ratio problem in CT variables, directly accept a secondary signals from CT & scale to a primary reading display. The designed specifications of the units, truly a real power system design, compliant ANSI-IEEE & IEC, VDE those standards providing full protection for surge intrusion & unusual over input to assure reliable operation.

Specification

|	
Accuracy (23±3℃)	0.2% fs
Stability	Temperature coefficient < 50 ppm per degree C. Long term draft < 0.2% per year
Digits / counts / display	Maximum 19999 counts of 4-1/2 digits. 0.56" super rate LED
Configuration	Ratio settable : CT ration for UMAF
Response time	Sample rate 1 of per sec typically
Input burden	0.25VA maximum
Input over	Current input : 3 x rating-continuous, 10 x rating - 30 sec, 25 x rating - 3 sec
Frequency	48 - 400 Hz
Dielectric strength	2.5KV rms / 1 minute, all terminals to reference ground (case)
	2KV rms / 1 minute, input terminals to power terminals
Surge test	ANSI C37.90.1/1989, IEC 255-3 (1989)
Impulse voltage	Impulse voltage 1.2 x 50 us 4KV
	Oscillation wave 0.5us - 100KHz 3KV & 1MHz - 0.25ms 2.5KV
Operation condition	Temperature range -10 to 55℃, 0 to 99% RH non-condensed
	Storage -25 to 70℃, 20-99% RH non-condensed
Auxiliary power	AC / DC version < 3.5VA, DC option version ±20% < 5 watts

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Order from

Function	Model	Digits
CT ration programmable	UMAF	4-1/2

Frame (in mm)

Model

96X48	U
110X110	O
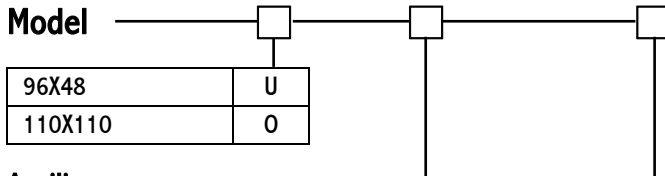
Auxiliary power

AC / DC 30-250V ★	S
DC option 24V	1

★ : This segment was originally used in the circuit of traditional transformer, and new model uses switching power circuit where in the wide range power system
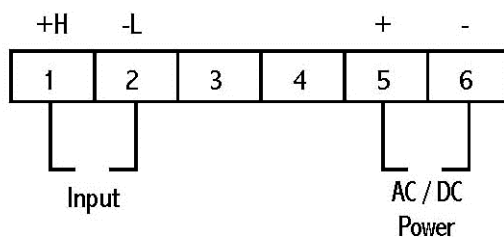
Input range

(Either standard calibration or customer calibration)

Standard calibration

CT ratio 100 / 5 P / S = 20					
Customer specified pre-calibration				AS	
CT ratio = P / S					
P / S	P/5A	P/1A	P / S	P/5A	P/1A
20A / S	A5	A1	400A / S	N5	N1
25A / S	B5	B1	500A / S	O5	O1
30A / S	C5	C1	600A / S	P5	P1
40A / S	D5	D1	750A / S	Q5	Q1
50A / S	E5	E1	800A / S	R5	R1
60A / S	F5	F1	1000A / S	S5	S1
75A / S	G5	G1	1200A / S	T5	T1
80A / S	H5	H1	1500A / S	U5	U1
100A / S	I5	I1	1600A / S	V5	V1
150A / S	J5	J1	2000A / S	W5	W1
200A / S	K5	K1	2500A / S	X5	X1
250A / S	L5	L1	3000A / S	Y5	Y1
300A / S	M5	M1	3600A / S	Z5	Z1
The other range				AY	

Terminal connection

+H	-L			+	-
1	2	3	4	5	6

Input   AC / DC Power

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-1.8.8.8.8

S1   S2   S3
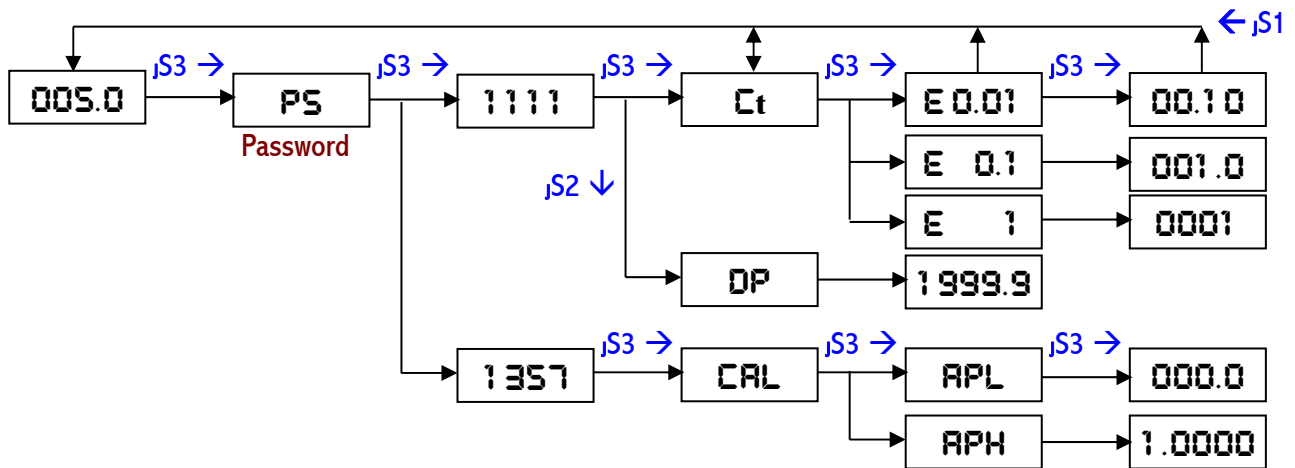
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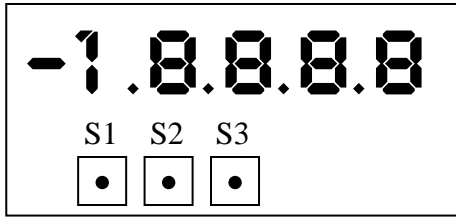
Function Key

S1 : Exit the setting and return to mode of measurement

S2 : Increasing value or Select Type

S3 : Enter the setting or next figures

 ↲ : Keying Sx (S1、S2、S3)

UMAF function block :

Programmable Ratio AC Current Meters

Function Setting 1 :

1. Enter Password

   ↓S3 → | PS | → ↓S3 → | 0000 |

2. Write Password (1111)

   | 1 | | 1 | | 1 | | 1 |
   ↓S2 → ↓S3   ↓S2 → ↓S3   ↓S2 → ↓S3   ↓S2 → ↓S3

3. CT ratio setting (Ct)

   Example : Ct ratio = 1.0 → 2.0

   | Ct | → ↓S3 → | E 0.1 | → ↓S3 → | 001.0 | → ↓S2/ ↓S3 → | 002.0 | → ↓S3 → Repeat

4. Decimal point setting (DP)

   | D.P | → ↓S3 → | 1.9999 | → ↓S2 → | 19.999 | → ↓S2 → | 199.99 |

   → ↓S2 → | 1999.9 | → ↓S2 → | 19999 | → ↓S2 → Repeat

5. Escape Setting and Save

   ↓S1

Programmable Ratio AC Current Meters UMAF

Function Setting 2 :

1. Enter Password

˩S3 → | PS | → ˩S3 → | 0000 |

2. Write Password (1357)

| 1 | | 3 | | 5 | | 7 |
˩S2 → ˩S3   ˩S2 → ˩S3   ˩S2 → ˩S3   ˩S2 → ˩S3

3. Calibration setting (Cal)

Zero calibration (APL)

˩S3 → | CAL | → ˩S3 → | APL | → ˩S3 → | 000.0 |

Span calibration (APH)

˩S3 → | CAL | → ˩S3 → | APL | → ˩S2 → | APH | → ˩S3 → | 1.0000 |

Example :

100% standard current = 300.0A, 10% standard current = 30.0A

100% meter read = 301.0A, 10% meter read = 30.1A

Zero set   10% meter read = 30.1A | | | 3 | 0 . 1 |

        APL setting   = -0.1A | — | 0 | 0 | 0 . 1 |

Span set   100% meter read =301.0A | | 3 | 0 | 1 . 0 |

        APH setting   = 0.9970 | . | 9 | 9 | 7 | 0 |

APH = standard current / (100% meter read - APL)
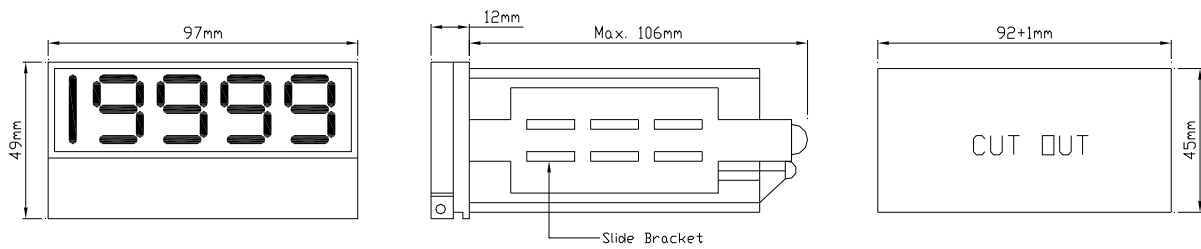
= 300.0A / (301.0 - 0.1)

= 0.9970

4. Escape Setting and Save

˩S1

Programmable Ratio AC Current Meters

Dimension

U TYPE

97mm

49mm

12mm

Max. 106mm

Slide Bracket

92+1mm

CUT OUT

45mm

O TYPE

110mm

110mm

10mm

ø5mm

Max. 108mm

90mm

100mm

90mm

Ø103mm

90mm