

EasyCal Series

Single function calibrators



**PORTABLE
CALIBRATORS**

- ▶ **EasyCal Tc**
- ▶ **EasyCal rtd**
- ▶ **EasyCal loop**

Accuracy up to $\pm 0.02\%$ of reading

Light, rugged and ergonomic

Ready to use on field and in laboratory

Circular 4 Wires connector for rtd and mini-din for TC

High quality and modern design

Auto-detection 2,3 and 4 wires

Bigger graphic display
backlighted

Rubber protection holster

Input the linearisation data for rtd and TC



EasyCal Tc

The Hand-held calibrator EasyCal Tc is what the engineers needs for certificate all the thermocouples because it is able to measure and generate mV signals and 14 types of Tc. The Easycal calibrator is compact lightweight and easy to use.

MEASUREMENT				GENERATION		
Probe	Range	Resolution	Accuracy	Range	Resolution	Accuracy
K	- 250 to - 200°C	0,20°C	0,90°C	- 240 to - 50°C	0,20°C	0,80°C
	- 200 to - 120°C	0,10°C	0,3°C	- 50 to + 120°C	0,10°C	0,30°C
	- 120 to - 50°C	0,05°C	0,02 %r+ 0,12°C	+120 to + 1372°C	0,05°C	0,020 %r+ 0,11°C
	- 50 to + 1372°C	0,05°C	0,02 %r+ 0,11°C			
T	- 250 to - 200°C	0,2°C	0,80°C	- 240 to - 100°C	0,20°C	0,50°C
	- 200 to - 50°C	0,05°C	0,25°C	- 100 to - 40°C	0,05°C	0,25°C
	- 50 to + 400°C	0,05°C	0,02 %r+ 0,09°C	- 40 to + 400°C	0,05°C	0,020 %r+ 0,10°C
J	- 210 to - 200°C	0,05°C	0,30°C	- 210 to + 50°C	0,05°C	0,35°C
	- 200 to - 120°C	0,05°C	0,25°C	+ 50 to + 500°C	0,05°C	0,020 %r+ 0,11°C
	- 120 to + 60°C	0,05°C	0,020 %r+ 0,11°C	+ 500 to + 1200°C	0,05°C	0,020 %r+ 0,09°C
	+ 60 to + 1200°C	0,05°C	0,020 %r+ 0,09°C			
E	- 250 to - 200°C	0,1°C	0,55°C	- 240 to - 100°C	0,1°C	0,55°C
	- 200 to - 100°C	0,05°C	0,20°C	- 100 to + 40°C	0,1°C	0,20°C
	- 100 to + 450°C	0,05°C	0,020 %r+ 0,07°C	+ 40 to + 1000°C	0,05°C	0,020 %r+ 0,06°C
	+ 450 to + 1000°C	0,05°C	0,020 %r+ 0,05°C			
R	- 50 to + 150°C	0,50°C	0,95°C	- 50 to + 350°C	0,50°C	0,95°C
	+ 150 to + 550°C	0,20°C	0,40°C	+ 350 to + 900°C	0,20°C	0,5°C
	+ 550 to + 1768°C	0,10°C	0,020 %r+ 0,30°C	+ 900 to + 1768°C	0,10°C	0,020 %r+ 0,30°C
S	- 50 to + 150°C	0,5°C	0,85°C	- 50 to + 350°C	0,50°C	0,90°C
	+ 150 to + 550°C	0,2°C	0,020 %r+ 0,4°C	+ 350 to + 900°C	0,20°C	0,020 %r+ 0,40°C
	+ 550 to + 1768°C	0,1°C	0,020 %r+ 0,3°C	+ 900 to + 1768°C	0,10°C	0,020 %r+ 0,30°C
B	+ 400 to + 900°C	0,2°C	0,95°C	+ 400 to + 850°C	0,20°C	0,95°C
	+ 900 to + 1820°C	0,1°C	0,50°C	+ 850 to + 1820°C	0,10°C	0,50°C
U	- 200 to - 100°C	0,05°C	0,35°C	- 200 to - 70°C	0,05°C	0,35°C
	- 100 to + 600°C	0,05°C	0,20°C	- 70 to + 600°C	0,05°C	0,20°C
L	- 200 to - 100°C	0,05°C	0,30°C	- 200 to - 70°C	0,05°C	0,30°C
	- 100 to + 900°C	0,05°C	0,20°C	- 70 to + 900°C	0,05°C	0,25°C
C	- 20 to + 900°C	0,1°C	0,30°C	- 20 to + 900°C	0,10°C	0,35°C
	+ 900 to + 2 310°C	0,1°C	0,020 %r+ 0,15°C	+ 900 to + 2 310°C	0,10°C	0,020 %r+ 0,15°C
N	- 240 to - 190°C	0,2°C	0,60°C	- 240 to + 10°C	0,20°C	0,90C
	- 190 to - 110°C	0,1°C	0,25°C	+ 10 to + 250°C	0,10°C	0,20°C
	- 110 to - 0°C	0,05°C	0,15°C	+ 250 to + 1300°C	0,05°C	0,020 %r+ 0,09°C
	+ 0 to + 1300°C	0,05°C	0,020 %r+ 0,07°C			
Platine	- 100 to + 1400°C	0,05°C	0,3°C	- 100 to + 1400°C	0,05°C	0,35°C
Mo	0 to + 1375°C	0,05°C	0,020 %r+ 0,10°C	0 to + 1375°C	0,05°C	0,25°C
NiMo\NiCo	- 50 to + 1410°C	0,05°C	0,020 %r+ 0,35°C	- 50 to + 1410°C	0,05°C	0,020 %r+ 0,35°C
mV	- 10 to + 100mV	1uV	0,020%r+ 3uV	- 9,5 to + 80mV	1uV	0,020%r+ 3uV

CJC accuracy : $\pm 0,3^{\circ}\text{C}$
Temperature Coefficient: <20ppm/ $^{\circ}\text{C}$ from 0 to 18 $^{\circ}\text{C}$ and 28 to 50 $^{\circ}\text{C}$

Ordering Codes:

3105 - A - 1 - B \ENG

Instruction manual (eng)

0-None

1-Traceable calibration certificate

Rubber holster

0- Alkaline batteries

1-Rechargeable battery pack+charger EU

2-Rechargeable battery pack+charger UK

3-Rechargeable battery pack+charger USA

4-Rechargeable battery pack+charger Schuko

ACCESSORIES:

Soft carryng case (Ac6908)

Test leads kit for electric signal(EE300040)

Mini-din compensated plug Types J, K, T, S



Mini-din connector

Technical specification:

Measure and generate
Thermocouples and mV

Automatic and manual step
generation

Operate with 14 types of Tc

Input the linearisation data for Tc

Plug mini-din for Tc

Scale function

Integrated datalogger allow to
dysplay the measures into text or
graphic format

Bigger graphic display backlight

5 languages menu

Supply: 4 AA alkaline batteries or
battery pack with charger (option)

Reference condition: 23 $^{\circ}\text{C} \pm 5^{\circ}\text{C}$,
relative humidity: 45 % to 75 %

Nominal using conditions: -10 $^{\circ}\text{C}$ up to
+ 50 $^{\circ}\text{C}$, relative humidity: 20 % up to 80
% without condensation.

Limit stocking and transporting
conditions: - 30 $^{\circ}\text{C}$ up to + 60 $^{\circ}\text{C}$
(without battery).

Electrical security according to EN
61010

Electromagnetic compatibility of
electrical equipment according to
EN61326

Autonomy: up to 40 houres

Dimensions: 157x85x45 mm (without
protection sheath)

Weight: 306 g

Tightness: IP 54 according to EN 60529

Standard supply:

Instrument

Rubber holster

4 AA batteries (alkaline)

Instruction manual

Trasportation wrist-strap

EasyCal rtd

The Hand-held calibrator EasyCal rtd is what the engineers needs for certificate all the resistance probes because it is able to measure and generate signals and 12 types of rtd. The Easycal calibrator is compact lightweight and easy to use.

MEASUREMENT/GENERATION				
Probe	Range	Resolution	Accuracy IN	Accuracy OUT
Pt 50 (α = 3851)	- 220°C + 850°C	0,01°C	0,012 % + 0,06°C	0,012 % + 0,18°C
Pt 100 (α = 3851)	- 220°C + 850°C	0,01°C	0,012 % + 0,05°C	0,012 % + 0,12°C
Pt 100 (α = 3916)	- 200°C + 510°C	0,01°C	0,012 % + 0,05°C	0,012 % + 0,12°C
Pt 100 (α = 3926)	- 210°C + 850°C	0,01°C	0,012 % + 0,05°C	0,012 % + 0,12°C
Pt 200 (α = 3851)	- 220°C + 1200°C	0,01°C	0,012 % + 0,12°C	0,012 % + 0,33°C
Pt 500 (α = 3851)	- 220°C + 1200°C	0,01°C	0,012 % + 0,07°C	0,012 % + 0,18°C
Pt 1000 (α = 3851)	- 220°C + 760°C	0,01°C	0,012 % + 0,05°C	0,012 % + 0,08°C
Ni 100 (α = 618)	- 60°C + 180°C	0,01°C	0,012 % + 0,03°C	0,012 % + 0,08°C
Ni 120 (α = 672)	- 40°C + 205°C	0,01°C	0,012 % + 0,03°C	0,012 % + 0,08°C
Ni 1000 (α = 618)	- 60°C + 180°C	0,01°C	0,012 % + 0,03°C	0,012 % + 0,08°C
Cu 10 (α = 427)	- 70°C + 150°C	0,01°C	0,012 % + 0,18°C	0,012 % + 0,10°C
Cu 50 (α = 428)	- 50°C + 150°C	0,01°C	0,012 % + 0,06°C	0,012 % + 0,15°C
Ohm	0 Ohm to 400 Ohm	1 mOhm	0,012 %r + 10 mOhm	0,012 %r + 30 mOhm
	0 Ohm to 3600 Ohm	10 mOhm	0,012 %r + 100 mOhm	0,012 %r + 300 mOhm

Temperature Coefficient: < 10 % of accuracy/°C.

For measurement, accuracy is given for a 4 wires connection. Sensor accuracy is not taken into account in this accuracy. Measuring current: 0.65 mA

Simulation current: de 0,1 mA à 1mA

Minimal Current pulse duration: < 1 ms

Ordering Codes:

3115 - A - 1 - B \ ENG

Instruction manual (english)

0-None

1-Traceable calibration certificate

Rubber holster

0- Alkaline batteries

1-Rechargeable battery pack+charger EU

2-Rechargeable battery pack+charger UK

3-Rechargeable battery pack+charger USA

4-Rechargeable battery pack+charger Schuko

ACCESSORIES:

Soft carryng case (AC6908)

Test leads kit for electric signal(EE300040)

Circular 4 wires plug



Circular 4 wires connector

Technical specification:

Measure and generate Thermoresistences and Ohm
Automatic and manual step generation

Operate with 12 types of rtd

Input the linearisation data for rtd

Circular 4 wires connector

Scale function

Integrated datalogger allow to dysplay the measures into text or graphic format

Bigger graphic display backlight

5 languages menu

Supply: 4 AA alkaline batteries or battery pack with charger (option)

Reference condition: 23°C ± 5°C, relative humidity: 45 % to 75 %

Nominal using conditions: -10°C up to + 50°C, relative humidity: 20 % up to 80 % without condensation.

Limit stocking and transporting conditions: - 30°C up to + 60°C (without battery).

Electrical security according to EN 61010

Electromagnetic compatibility of electrical equipment according to EN61326

Autonomy: up to 40 heures

Dimensions: 157x85x45 mm (without protection sheath)

Weight: 306 g

Tightness: IP 54 according to EN 60529

Standard supply:

Instrument

Rubber holster

4 AA batteries (alkaline)

Instruction manual
Transportation wrist-strap

EasyCal MAV

The Hand-held calibrator EasyCal MAV is what the engineers needs for certificate all the current and voltage signals because it is able to measure and generate mA and V signals. The EasyCal MAVcalibrator is compact lightweight and easy to use.

MEASUREMENT			
Range	Meas.Range	Resolution	Accuracy(C195%)
0/20mA	-6 mA/24 mA	1uA	0,015%R + 2 uA
4/20mA	3.2 mA/24 mA	1uA	0,015%R + 2 uA
25mA	-6 mA/25 mA	1uA	0,015%R + 2 uA

Temperature coefficient: <20ppm R/°C from 0 to 18°C and from 28 to 50°C
 Possibility of loop supply: 24V ±10%
 Rin<300
 HART compatibility: R=250 ±5%
 Common rejection mode: ≥20dB at 50 and 60Hz

GENERATION			
Range	Meas.Range	Resolution	Accuracy(C195%)
0/20mA	500uA/24mA	1uA	0,015%R + 2 uA
4/20mA	3.2mA/24mA	1uA	0,015%R + 2 uA
25mA	500uA/25mA	1uA	0,015%R + 2 uA

Temperature coefficient: <20 ppm/°C from 0 to 18°C and from 28 to 50°C
 Rising time <500us (0V to 20mA - on 20Ω load)
 Noise VLF<1μA (at F<100Hz)

MEASUREMENT			
Range	Meas.Range	Resolution	Accuracy
0/10V	-2V / +12V	1mV	0,015%R + 2 mV
25V	-2 / +25V	1mV	0,015%R + 2 mV
50V	-5V / +50V	1mV	0,015%R + 4 mV

Temperature coefficient: <15 ppm/°C from 0°C to 18°C and from 28°C to 50°C.
 Serial rejection mode: ≥60 dB at 50 and 60 Hz.
 Common rejection mode: ≥20 dB at 50 and 60 Hz

GENERATION			
Range	Meas.Range	Resolution	Accuracy
0/10V	0V/+12V	1mV	0,015%R + 2mV
15V	0V/+15V	1mV	0,015%R + 2mV

Temperature coefficient: <15ppm/°C from 0 to 18°C and from 28 to 50°C
 Rising time <1ms (0V to 15V on 1MO load)
 R internal <10
 Noise VLF<1mV (at F<100Hz)

Ordering Codes:

3407 - A - 1 - B \ ENG

Instruction manual (english)

0-None

1-Traceable calibration certificate

Rubber holster

- 0- Alcaline batteries
- 1-Battery pack+charger EU
- 2-Battery pack+charger UK
- 3-Battery pack+charger USA
- 4-Battery pack+charger Schuko

ACCESSORIES:

- Soft carrying case (Ac6908)
- Test leads kit for electric signal(EE300040)

Technical specification:

Measure and generate of current and voltage

Automatic ramps or steps outputs with function for valves verification

Scale function

Continuity test

250 series resistor for HART devices.

Integrated datalogger allow to display the measures into text or graphic format

Bigger graphic display backlight

5 languages menu

Supply: 4 AA alkaline batteries or battery pack with charger (option)

Reference condition: 23°C ± 5°C, relative humidity: 45 % to 75 %

Nominal using conditions: -10°C up to + 50°C, relative humidity: 20 % up to 80 % without condensation.

Limit stocking and transporting conditions: - 30°C up to + 60°C (without battery).

Electrical security according to EN 61010

Electromagnetic compatibility of electrical equipment according to EN61326

Autonomy:up to 40 heures (without 24V loop supply)

Dimensions: 157x85x45 mm (without protection sheath)

Weight: 306 g

Tightness: IP 54 according to EN 60529

Standard supply:

- Instrument
- Rubber holster
- 4 AA batteries (alkaline)
- Instruction manual
- Transporting and hanging handle
- Test leads kit for electric signal

