# burster

# **Process-Calibrator**

# **Model 4409**



Code: 4409 E Manufacturer: burster Delivery: ex stock Warranty: 24months Issue: 1.1.2005

#### NEW-

- 50,000 count multimeter
- %-Scale for mA readout
- Constant voltage/current source
- Square wave generator
- Memory generation output
- Generate and measure simultaneously
- Multi-display multimeter
- **Auto Scan/Ramp**

# **Application**

This device can be used not only for instrument system maintenance, but also for maintaining and servicing industrial meters and for testing electronic circuits and electronic equipment. Even the sensor can be measured for automotive or automatic control system. In addition to generating high accuracy DC voltage and current sources, this device can generate square wave with PWM features. That is a free-for-all application function, including a strong multimeter function. It can generate and measure signals simultaneously.

### **Description**

The process-calibrator with meter is a hand-held, batteryoperated instrument. The device is operated via rotary switch and 7 push buttons. Indication of the primary and secondary display is 50,000 counts. The constant voltage outputs are bipolar 1.5 V and 15 V, also the constant current output is a bipolar 25 mA and up to 500  $\Omega$ . The square wave output has 28 models of frequency, adjustable duty cycle, pulse width and adjustable amplitude. Memory generation scan output can set the level and interval of staying time. Sixteen steps for each range can be defined.

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# **Technical Data**

**Constant Voltage Output:** 

**Specification of Calibrator** 

Range: ± 1.5 V, ± 15 V, approx. 25 mA Accuracy: ± (0.03 % rdg. + 3 dig.) 0.1 mV, 1 mV Resolution: 30 VDC Maximum input voltage:

**Constant Current Output:** 

 $\pm$  25 mA, approx. 12 V (500  $\Omega$ ) Range:  $\pm$  (0.03 % rdg + 5 dig.) Accuracy: Resolution: 1 μΑ Maximum input voltage: 30 VDC

#### Square wave output:

Output	Range	Resolution	Accuracy
Frequency	0.5 Hz to 4800 Hz (28 fixed values)	0.01 Hz	± (0.005% rdg + 0.01 Hz)
Duty cycle	0.39 % ~ 99,60 %	0.390625 %	± (0.01 % rdg + 0.02 %)
Pulse width	1/frequence	ranges/256	± (0.01 % rdg + 0.3 ms)
Amplitude	5 V, ± 5 V, 12 V, ± 12V	0.1 V	± (2 % rdg + 0.2 V)

**Two-Wire Transmitter** 

-Supply of a transmitter and simultaneously measure current

-Current loop 4 ... 20 mA or 0 to 25 mA voltage from 15 to 30 VDC

Measuring function

AC + DC True RMS:

Scan output

16 steps adjustable level and time interval

Ramp autput

(LO ~ HI or HI ~ LO) 999 steps of each slope

#### **Specification of Meter**

Display counts	50,000 counts	
	Ranges	Basis accuracy
DC voltage	50mV, 500mV, 5V, 50V, 300V	± (0.05 % rdg +5 dgt) ± (0,.06 % rdg +3 dgt)
AC voltage	50mV, 500mV, 5V, 50V, 300V	± (0.7 % rdg +40 dgt) ± (0.7 % rdg +20 dgt)
DC current	50mA, 500mA,	± (0.3 % rdg +3 dgt)
AC current	50mA, 500mA,	± (0.6 % rdg +20 dgt.)
Resistance	500, 5k, 50k, 500k, 5M, 50 M $\Omega$	± (0.15 % rdg +3 dgt) ± (1 % rdg +5 dgt)
Temperature (K model)	-40 °C to 1000 °C	± (0.3 % rdg +3°C)
Frequenz	100, 1k, 10k, 100k 200kHz	± (0.02 % rdg +1dgt)
1ms Peak Hold	Current/voltage	± (2 % rdg +400 dgt)
% - Scale for mA read out	020 or 420 mA	

Calibration/Meter:

simultaneously

Output is fully isolated from the input.

Measuring rate: 3 times per second (AC+DC: 1 time per second) (approx.) 1 time per second for frequency or duty cycle measurement. (>1 Hz)

0.25 ~ 1 time per second for pulse width

measurements. (>1 Hz)

Battery control: Battery symbol, if the voltage falls under 9 V.

Work temperature range: 0 °C to 40 °C,

(32 °F to 104 °F)

- 20 °C to 60 °C, Storage temperature: ( - 4 °F to 140 °F) (Battery removed)

max. 80 % R.H. Relative humidity (R.H.):

Battery life: 20 hours above for meter only 5 hours for meter/source

for 0 ... 18 °C and 28 ... 40 C Temperature coefficient:

Meter: 0.15. x /specified accuracy) / °C  $\pm$  (50 ppm rgd + 0.5 dgt) / °C Calibrator:

Power supply: 8 Ni-MH accus, power supply to charge the accus

Dimension (LxWxH): 192 x 90 x 54 mm

(7.56 x 3.54 x 2.1 inches)

Weight: approx. 1.71 kg

# **Order information**

Process-Calibrator Model 4409-V001 including test leads, alligator clips, leads of alligator clip, soft carrying case, 8 x Ni-MH accus, power supply

#### **Accessories**

K type thermocouple adapter Model 4409-Z003 Data cable and software (USB) Model 4409-Z006

#### **DKD Calibration Certificate** for Process-Calibrator Model 4409

with 9 DC current simulating points and

Model 44DKD-4409G 12 DC voltage simulation points

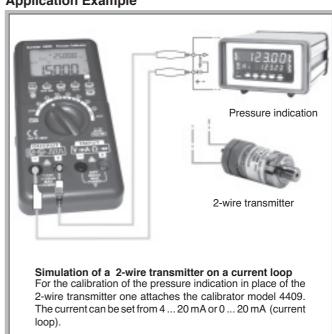
#### **Proprietary Calibration Certifcate** for Process-Calibrator Model 4409

Model 44WKS-4409G with 21 DC simulating points

with 26 measuring/simulating points

Model 44WKS-4409GM at the function DC

# **Application Example**



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