



The **DCflex** current probe from Power Electronic Measurements Ltd is an easy to use, economical, clip-around DC current probe.

It is suitable for measuring large dc currents of 2kA and greater.

The probe takes a **single shot measurement** of the DC current with a typical accuracy of  $\pm 1\%$ .

## Applications

The DCflex current probe can be used wherever large DC current needs to be measured

- smelting plants
- cathodic protection
- hydro-generation
- DC connection buses between large users
- DC link (large inverter motor drives)
- plating plants
- verifying the performance of large dc shunts or hall effect transducers that are in-situ

## Benefits and features

- thin, flexible, clip-around coil easy to insert in confined spaces
- accuracy typically  $\pm 1\%$
- intrinsically safe, galvanically isolated measurement
- battery powered with an integral display on the enclosure, thus no need for external scopes or meters

## Operation

The DCflex current probe is simple to use



Press the reset button.  
Null the offset trimmer to zero



Clip the probe around the dc busbar



Take the reading

## OUTPUT AND RATINGS

OUTPUT (Full Scale FS)	1.999V
PEAK CURRENT (FS)	9.999 / 19.99 / 29.99 / 39.99 kA

Other current ratings and outputs are available on request

## ACCURACY

CALIBRATED WITH CONDUCTOR CENTRAL IN THE COIL	± 0.4% of reading The DCflex is supplied with traceable calibration certificate to UKAS
TYPICAL VARIATION OF ACCURACY WITH POSITION OF A 20cm <sup>2</sup> BUSBAR IN THE COIL	± 0.5% reading
DISPLAY ERROR	0.1% of FS
TEMPERATURE COEFFICIENT	-0.16% / °C clip - around coil ± 0.017% / °C electronics
ADDITIONAL MEASUREMENT UNCERTAINTY DUE TO INTERNAL NOISE	10.0 A pk - pk (e.g. for the 10kA version 0.1% of FS, and for the 40kA version 0.025% of FS)

## MEASUREMENT DRIFT

SET-UP DRIFT	0.025% per sec (of reading) From reset to clipping the coil into its socket around the busbar
OUTPUT DRIFT	< 5.0A per sec From clipping the coil into its socket to taking a reading

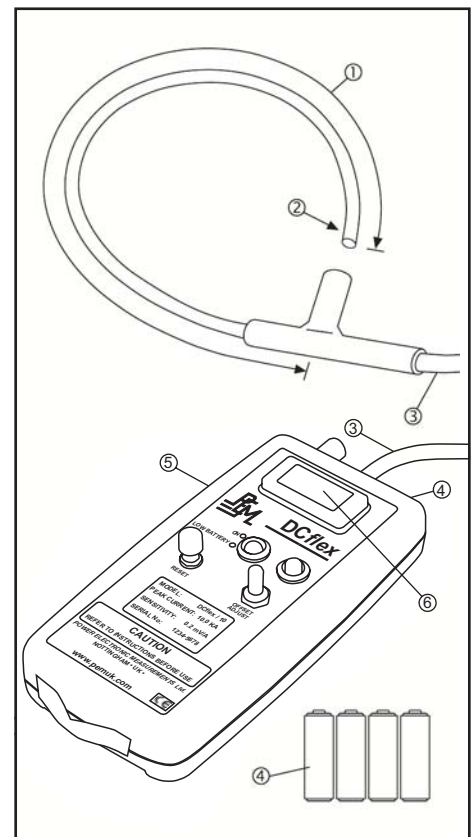
FOR FURTHER DETAILS OF THE DCflex PERFORMANCE CHARACTERISTICS PLEASE SEE FULL TECHNICAL DATA SHEET AVAILABLE FROM [www.pemuk.com](http://www.pemuk.com)

## COIL AND CABLE

① COIL CIRCUMFERENCE	1000 or 2000mm
② COIL CROSS SECTION (max)	8.5mm
PEAK COIL VOLTAGE ISOLATION	2kV
Safe peak working voltage to earth. The coils are flash tested at 4kVrms / 50Hz for 60 seconds	
TEMPERATURE RANGE	0°C to 120°C
For operation at high temperature please consult PEM	
③ CABLE LENGTH (from box to coil)	1.5m

## INTEGRATOR AND DISPLAY

④ POWER SUPPLY	Battery 4 x AA (1.5V standard alkali batteries) Typical life battery > 100hrs <b>-plus-</b> 2.1/2.5mm socket for 12V to 24V (±10%) DC input Battery inoperative with DC supply present
⑤ INTEGRATOR BOX DIMENSIONS	H = 183mm, W = 93mm, D = 32mm
⑥ DISPLAY	1.999V max output (4digit display, 0.001V resolution) Alternative a version available to drive a DMM or oscilloscope directly
TEMPERATURE RANGE	0°C to 40°C



## ORDERING

TYPE	/	Current rating (kA)	/	Coil Circumference (mm)
e.g. order code		<b>DCflex</b>		<b>10 / 2000</b>

If you have any queries regarding the DCflex or require specifications outside our standard ranges please do not hesitate to contact us.