# **SURETECH™ 60kV DC Voltage Sensor**

The SURETECH DC Voltage Sensor provides a range of outputs such as 4-20mA or RS232. Potentialfree relay contacts are also available to interface to alarms, telemetry, protection or SCADA systems if required. The SURETECH DC Voltage Sensor can be fitted with signal processing options for a wide range of smart applications. SLP (Smart Load Processor) can be supplied with 1Mbyte data logger. **Construction**: the SURETECH DC Voltage Sensor is of the resistive type. High value, and high voltage resistors are mounted in series on a carefully designed format, and the stack is then used to develop the voltage drop of 60kV. Great care is taken with capacitive grading, to ensure the high frequency response. The sensor is earthed at the sensing point. Input and output have galvanic isolation by optical coupling (optional). Power supplies are fitted with transient suppressers to prevent sensor damage. The sensor is encapsulated in resin for improved accuracy, and to control the electric field and partial discharge. Sensor power dissipation is minimised to ensure low operating temperature. Single ended, and differential sensors are available, as are positive and negative. Higher voltages are also available. AC operation for 50Hz applications is also available.



#### **Specifications:**

Parameter	Value
Input Voltage (nominal)	60 kVdc
Input Voltage (FSD)	70 kVdc
Input Voltage (Max - 1min):	110 kV
Input Resistance	330 Mohms
Isolation voltage to PSU	2kV
Isolation voltage (input - output)	70kV opto isol (optional)
Accuracy	0.5%

#### **Outputs Available:**

Output type	Range	Туре
Relay contact	Single voltage threshold	LR1
Relay contact	High and Low voltage threshold	LR2
Opto-Isolated	High and Low voltage threshold	LOI
Analog voltage	0-2V, 0-5V, 0-10V	AV2, AV5, AV10
Analog current	0-1mA, 5mA, 20mA, 4-20mA	AI1, AI5, AI20, AI420
RS232	DC Voltage	RS232
LCD (Liquid Crystal Display)	DC Voltage	HO

### **Power Supply Options:**

Auxiliary Power Supply	Tolerance	PS Type
24V battery	10 Vdc to 35Vdc	PS 24
220Vac / dc	90-260Vac / dc	PS 220

#### **General Features:**

- ✓ Linear measurement circuits
- ✓ Optional LCD readout available
- ✓ Noise filtering available
- ✓ Cylindrical HV sensor enclosure has epoxy potted components for long life and reliability
- ✓ Dimensions: 70mm diameter x 450mm
- ✓ Integral cable connection
- ✓ SABS Calibration certificate optional

## **Typical Applications:**

- ✓ Electrostatic precipitators
- ✓ Electrostatic separators
- ✓ MV DC motors & drives
- ✓ Railway systems
- ✓ Lab Voltmeters
- HV panel voltage measurements

- Transient suppression on input and outputs protects sensor against lightning and fault induced transients
- ✓ Wide selection of input and output options including, logic, analogue, RS232 and human
- ✓ Wide selection of auxiliary power supply options
- ✓ Galvanic isolation from HV source (optional)
- Engineering backup to provide you support for design, applications information, installation & calibration, maintenance
- ✓ Safety interlocks in HV panels
- ✓ Voltage alarms (upper & lower)
- ✓ Line fault location Cable LIVE sensors for detection of cable theft
- ✓ Cable LIVE sensor for indication and protection
- ✓ Cable LIVE sensors for switch interlocks

## **NB SPECIFICATIONS CAN CHANGE AT ANY TIME**

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#### SURE Engineering CC

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