

New indoor and outdoor High Voltage instrumentation transducers extend our HV Transducer range of sensors

SURETECH™ DC Voltage Sensor

The SURETECH DC Voltage Sensor measures DC voltage on switch-gear, cables, railway catenary etc. The SURETECH DC Voltage Sensor provides a range of outputs such as 4-20mA or RS232. Potential-free 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.

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 are then used to develop the voltage drop of 3kV. The sensor is earthed at the sensing point. Input and output have galvanic isolation by optical coupling (optional). In the event of a fault, clamping diodes will prevent the LV side of the sensor from rising in voltage and damage the sensor. All power supplies are fitted with transient suppressers to prevent sensor damage. The sensor is

encapsulated in epoxy for improved accuracy, and to control the electric field and partial discharge. Sensor power is minimised to ensure low temperature operation. Single ended, and differential sensors are available. Positive and negative ends are shown in the picture, enabling the earthing of either end.



Specifications:

<i>Parameter</i>	<i>Value</i>
Input Voltage (nominal)	3000Vdc
Input Voltage (FSD)	4200Vdc
Input Voltage (Max - 1min):	13500Vdc
Input Resistance	30Mohms
Isolation voltage to PSU	2kV
Isolation voltage (input - output)	2kV (optional extra)
Accuracy	0.5%

Outputs Available:

<i>Output type</i>	<i>Range</i>	<i>Type</i>
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) (Optional Extra)	DC Voltage	HO

Power Supply Options:

<i>Auxiliary Power Supply</i>	<i>Tolerance</i>	<i>PS Type</i>
12V battery	10 Vdc to 20Vdc	PS12
30V battery	20 Vdc to 35Vdc	PS 30
110 Vac (50 / 60 Hz)	+/-15%	PS 110
220 Vac (50 / 60 Hz)	+/-15%	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 130mm
- ✓ LV enclosure is K125 standard for panel mount flush or top-hat rail
- ✓ Integral cable connection

- ✓ 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

Typical Applications:

- ✓ Railway systems
- ✓ Lab Voltmeters
- ✓ HV panel voltage measurements
- ✓ Safety interlocks in HV DC 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

15-Apr-04



SURE Engineering CC

PO Box 63, Steenberg, Cape Town 7947
South Africa
Reg CK 87/11172/23

Website: <http://www.suretech.co.za>

email: info@suretech.co.za

Tel:+27-21-701-8529 Fax:+27-21-701-9183

Cell: +27-83-555-0149