elcometer

Elcometer 280 Pulsed DC Holiday Detector

Can be used in accordance with:
ISO 29601, **AS 3894.1, ANSI/AWWA C203, ANSI/AWWA C214, ASTM D4787,**
ASTM D5162, ISO 29601, JIS G 3491*, JIS G 3492*,**NACE RP0274,**
NACE SP0188, NACE SP0490, NACE TM0186, NACE TM0384

The Elcometer 280 is a 'stick type' holiday detector which has been designed to make pulsed DC high voltage holiday detection safer, easier and more reliable than ever before.

Using state of the art electronics, the Elcometer 280 allows users to inspect coatings - without connecting the earth return lead to the component substrate - ideal for inspecting large surfaces and pipelines.

- Flashing display, bright LED and a user adjustable volume alarm indicates detection of a holiday
- 0.5 - 35kV range (user selectable) for detecting porosity in coatings up to 25mm (1") thick
- Safety trigger integrated inside the handle cuts power if released
- Rugged, shock proof and water resistant design to ensure long life - even in harsh environments
- Balanced, ergonomic design, complete with shoulder strap allows long periods of continuous use
- A wide range of interchangeable probe accessories available - compatible with all Elcometer holiday detectors - please order as a separate item.
- Ideal for testing clean, damp, dirty or slightly conductive coatings
- Voltage calculator automatically sets the correct voltage from your coating thickness value
- Internal jeep tester ensures that the selected voltage equals the test voltage

The Elcometer 280 uses the high voltage pulsed DC technique to detect holidays in coatings - even if the coating is damp, dirty or slightly conductive.

From the two stage safety switch, bright LED's and screen icons signifying when the high voltage is on, to the extended ribbing to protect the user from spark creep, the Elcometer 280 sets the standard for high voltage measurement safety.

Using the wide range of probe accessories users can detect porosity / holidays in coatings up to 25mm (1") thick.
Rugged, shockproof and water resistant, each unit is designed for use even in the harshest of environments.

* Standards not in bold have been superseded but are still recognised in some industries

Features

- Rubberised second hand grip provides greater control and balance during testing
- Large, waterproof buttons ideal for use - even in gloves
- High Voltage ON/OFF separate button minimises risk of accidental switch on
- Clear, backlit LCD display shows all relevant information, even in dark environments
- Shoulder harness point strap can be quickly clipped on as required
- Earth return lead socket including ¼ turn lock/release to ensure connection during testing
- Quick release battery pack fully charged in 4 hours, provides up to 30+ hours of continuous use*

* The battery life is dependant on selected voltage and load applied - see Technical Specification for more information
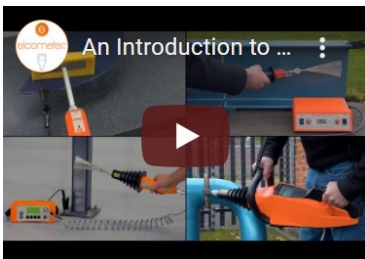

Technical Specifications

Description	Model S	Model T	Certificate
Elcometer 280 Pulsed DC Holiday Detector	D280-S----	D280-T----	o
Elcometer 280 Pulsed DC Holiday Detector Inspection Kit	D280-S-KIT	D280-T-KIT	o
Rugged, Shock Proof & Water Resistant	●	●	
Integrated Safety Trigger Switch	●	●	
Quick Release Battery Pack	●	●	
Internal Jeep Tester	●	●	
Integrated Voltage Calculator		●	
Pulsed DC High Voltage Range	0.5kV - 35kV		
Voltage Adjustment	User adjustable: 0.5 - 1kV: 10 Volt steps, 1 - 35kV: 100V steps		
High Voltage Output Accuracy	±5% or ±50V below 1000 Volts		
Pulse Repetition Rate	30Hz		
Operating Temperature	0°C to 50°C		
Power Supply	Rechargeable lithium ion battery, fully charged within 4 hours		
Typical Battery Life	Battery life is dependent on selected voltage and load applied; 12" (DN305) Rolling Spring 30 hours at 10kV 12 hours at 35kV 40" (DN1016) Rolling Spring 22 hours at 10kV 8 hours at 35kV		
Instrument Case Dimensions	PC ABS case; (l x w x h): 603 x 219 x 193mm		
Weight (no probes attached)	3.0kg - including battery pack		
Certificate Available	Certificate of Calibration: issued for Fixed Calibration equipment and shows readings and traceability.		

o Optional Calibration Certificate available

Video

YouTube Video - An Introduction to Pinholes and Holidays - Porosity Detection
(Click on the image to the left to view the video)

Corrosion is caused by two things – a steel substrate and oxygen, while contaminants such as water can accelerate the process. The coating is there to protect the steel from oxygen and contaminants. A flaw in the coating can leave the substrate poorly protected, or in some cases completely exposed.

Accessories

Part Number	Description
T28022769	Light weight, rugged, wheeled transit case - ideal for gauge transportation with additional space to house up to 20m of phosphor bronze or 6m of stainless steel rolling spring
T28022637-1	Grounding Mat 750mm long - for pipe diameters up to 9" (NPS)/ 229mm (DN)
T28022637-2	Grounding Mat 1500mm long - for pipe diameters up to 18" (NPS)/ 457mm (DN)
T28022637-3	Grounding Mat 2500mm long - for pipe diameters up to 30" (NPS)/ 762mm (DN)
T28022637-4	Grounding Mat 3500mm long - for pipe diameters up to 42" (NPS)/ 1067mm (DN)
T28022748	Grounding pin; 60cm long x 0.2cm diameter
T28022622	Trailing signal return lead, 5m
T28022749	10m earth lead, clips each end

Grounding mats are ideal for testing on un-grounded pipes. The conductive rubber mat is wrapped around the coated pipe and connected to both the grounding pin (supplied separately) and the signal return lead.

Grounding mats

Part Number	Description	Outside Diameter (OD)	
		DN	NPS
T28022637-1	Grounding Mat	up to 229mm	up to 9"
T28022637-2	Grounding Mat	up to 457mm	up to 18"
T28022637-3	Grounding Mat	up to 762mm	up to 30"
T28022637-4	Grounding Mat	up to 1067mm	up to 42"
T28022748	Grounding pin; 60cm long x 0.2cm diameter		
T28022749	10m earth lead, clips each end		
T28022750	10m earth lead, clip / Elcometer 280 connector		

*See separate leaflet for all the accessories for the Elcometer 280

Packing Lists

Elcometer 280 Pulsed DC Holiday Detector Gauge (Model S or T)

5m trailing signal return lead
Battery pack
Battery charger with mains cables
Shoulder strap
Operating instructions

Elcometer 280 Pulsed DC Holiday Inspection Kit (Model S or T)

5m trailing signal return lead
Battery pack (2 supplied with Model T)
Battery charger with mains cables
Stainless steel rolling spring holder (supplied with Model T only),
250mm probe extension shaft,
Shoulder strap and
Operating instructions
Wheeled transit Case