

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 <p>UKAS TESTING 0327</p> <p>Accredited to ISO/IEC 17025:2017</p>	<p>CSA Group Testing UK Ltd</p> <p>Issue No: 047 Issue date: 10 June 2020</p>	
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<p>Testing performed at the above address only</p>		

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
<p>SECTION 1: Electrical and Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres</p>	<p>Electrical Product Tests</p>	
<p>Electrical Apparatus for explosive gas atmospheres and explosive dust atmospheres: General requirements,</p>	<p>Construction, safety and marking</p> <p>Thermal Stability min temp – 80°C</p> <p>Max enclosure size for Thermal Stability test 1500 x 1000 x 1000 mm</p>	<p>IEC 60079-0:2017 IEC 60079-0:2011 IEC 60079-0:2007 (withdrawn) IEC 60079-0:2004 (withdrawn) Excluding: Resistance to light on Non-metallic enclosures</p>
<p>Tests for Apparatus in Flameproof Enclosures (Exd)</p>	<p>Construction, safety and marking</p> <p>Clause 15.1.2/15.1.3, min temp - 80 °C Clause 15.2, max temp 300 °C</p>	<p>IEC 60079-1:2014 IEC 60079-1:2007 (withdrawn) Excluding: Flammability tests</p>
<p>Tests for Pressurised and Purged Apparatus (Exp)</p>	<p>Construction, safety and marking</p>	<p>IEC 60079-2:2014 IEC 60079-2:2007 (withdrawn)</p>
<p>Tests for Sand Filled Apparatus (Exq)</p>	<p>Construction, safety and marking</p>	<p>IEC 60079-5:2015 IEC 60079-5:2007 (withdrawn)</p>
<p>Tests for Liquid Immersed Apparatus (Exo)</p>	<p>Construction, safety and marking</p>	<p>IEC 60079-6:2015 IEC 60079-6:2007 (withdrawn)</p>



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<p>SECTION 1: Electrical and Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd)</p> <p>Tests for Increased Safety Apparatus (Exe)</p> <p>Tests for Intrinsically Safe Apparatus, Associated Apparatus and Systems (Exi)</p> <p>Tests for Electrical Apparatus for Explosive Atmospheres with Type of Protection n (Exn)</p> <p>Tests for Encapsulated Apparatus (Exm)</p> <p>Intrinsically safe systems</p> <p>Special requirements for construction, Test and Marking of Electrical Apparatus of Equipment Group II, Category 1G</p>	<p>Electrical Product Tests (cont'd)</p> <p>Construction, safety and marking</p> <p>Construction, safety and marking</p> <p>Construction, safety and marking</p> <p>Construction, safety and marking</p> <p>Construction, safety and markings</p> <p>Construction, safety and markings</p>	<p>IEC 60079-7:2017 IEC 60079-7:2015 IEC 60079-7:2006 (withdrawn) Excluding: Interturn voltage test as IEC 60044-6 Mechanical shock tests Sulphur dioxide tests Vibration tests Tests for high-voltage machines</p> <p>IEC 60079-11:2011 IEC 60079-11:2006 (withdrawn)</p> <p>IEC 60079-15:2017 IEC 60079-15:2010 (withdrawn) IEC 60079-15:2005 (withdrawn) Excluding: Tests for ballasts in circuits with ignitors Mechanical shock for batteries Ignition tests for large high-voltage machines</p> <p>IEC 60079-18:2017 IEC 60079-18:2014 IEC 60079-18:2009 (withdrawn)</p> <p>IEC 60079-25:2010 IEC 60079-25:2003 (withdrawn)</p> <p>IEC 60079-26:2014 IEC 60079-26:2006 (withdrawn)</p>



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<p>SECTION 1: Electrical and Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd)</p> <p>Tests for Fieldbus intrinsically safe concept (FISCO)</p> <p>Protection of equipment and transmission systems using optical radiation</p> <p>Electrical Trace Heating Tapes</p> <p>Equipment dust ignition protection by enclosure "t"</p> <p>Caplights for use in mines susceptible to firedamp</p> <p>Tests for Electrical Apparatus with Protection by Enclosure for use in the presence of Combustible Dusts</p>	<p>Electrical Product Tests (cont'd)</p> <p>Construction, safety and markings</p> <p>Construction, safety and markings</p> <p>Tests to demonstrate compliance with constructional requirements and prove thermal performance</p> <p>Clause 5.1.7 Min temp - 80 °C</p> <p>Construction, safety and marking</p> <p>Construction, safety and marking</p> <p>Construction, safety and marking</p> <p>Thermal Stability min temp – 80°C</p> <p>Max enclosure size for Thermal Stability test 1500 x 1000 x 1000 mm</p>	<p>IEC 60079-27:2005 IEC TS 60079-27:2002 (withdrawn)</p> <p>IEC 60079-28:2015 Excluding: Clause 6, Ignition tests</p> <p>IEC 60079-30-1:2015 IEC 62086-1:2001 (withdrawn) Excluding: Flammability test Verification of rated output (Method b)</p> <p>IEC 60079-31:2013 IEC 60079-31:2008 (withdrawn)</p> <p>IEC 60079-35-1:2011 Excluding: Resistance to fire</p> <p>IEC 61241-0:2004 (withdrawn) Excluding: Resistance to light Ageing of materials</p> <p>IEC 61241-1-1:1999 (withdrawn)</p> <p>EN 50281-1-1:1998 (withdrawn) Excluding: Clause 6.10 Radiating equipment</p> <p>BS 6467:Part 1:1985 (withdrawn) Excluding: Appendix H.2</p>



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SECTION 1: Electrical and Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd)	Electrical Product Tests (cont'd)	
Protection by enclosure "tD"	Construction, safety and marking	IEC 61241-1:2004 (withdrawn)
Protection by enclosure "pD"	Construction, safety and marking	IEC 61241-4:2001 (withdrawn)
Protection by enclosure "iD"	Construction, safety and marking	IEC 61241-11:2005 (withdrawn)
Protection by enclosure "mD"	Construction, safety and marking	IEC 61241-18:2004 (withdrawn)
Petrol filling stations - Construction and performance of automatic nozzles for use on fuel dispensers	Construction and performance	EN 13012:2012 Excluding: Clauses B5, B7, B8, B9, B10, B12, B13
Petrol filling stations Part 1: Safety requirements for construction and performance of metering pumps, dispensers and remote pumping units	Construction and performance	EN 13617-1:2012 Excluding: Stability test
Petrol filling stations Part 2: Safety requirements for construction and performance of safe breaks for use on metering pumps and dispensers.	Construction and performance	EN 13617-2: 2012 Excluding: Clauses B.7, B.8, B.9, B.10, B.11, B.12, B.13
Petrol filling stations Part 3: Safety requirements for construction and performance of shear valves.	Construction and performance	EN 13617-3:2012 Excluding : Clauses B.12, B.13



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<p>SECTION 1: Electrical and Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd)</p>	<p>Electrical Product Tests (cont'd)</p>	
<p>Petrol filling stations Part 4: Safety requirements for construction and performance of swivels for use on metering pumps and dispensers.</p>	<p>Construction and performance</p>	<p>EN 13617-4:2012 Excluding: Endurance</p>
<p>General requirements – Canadian Electrical Code, Part II</p>	<p>Construction, safety and marking</p>	<p>C22.2 No. 0-10</p>
<p>Bonding of electrical equipment</p>	<p>Construction, safety and marking</p>	<p>C22.2 No. 0.4-04 (R 2013)</p>
<p>Explosion-proof enclosures for use in class I hazardous locations</p>	<p>Construction, safety and marking</p>	<p>C22.2 No. 30 – M1986 (R 2012) Excluding: Arc-Rupturing Flammability Gastight Joints – Type Test</p>
<p>Enclosures for electrical equipment, non-environmental conditions</p>	<p>Construction, safety and marking</p>	<p>C22.2 No 94.1-07 (R 2012) UL50:2012 Excluding: Crushing resistance tests for both listed standards</p>
<p>Enclosures for electrical equipment, environmental conditions</p>	<p>Construction, safety and marking</p>	<p>C22.2 No 94.2-07 (R 2012) UL50E:2012 Clauses 8.6, 8.10, 8.11, 8.14 & 8.15 for both listed standards</p>
<p>Process Control Equipment</p>	<p>Construction, safety and marking</p>	<p>C22.2 No 142-M1987 (R 2009) Excluding: Overload (Control Devices) Endurance (Control Devices) Flammability of Polymeric Enclosures Flaming Oil (Perforated Panels)</p>



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<p>SECTION 1: Electrical and Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd)</p> <p>Electrical Equipment for Use in Hazardous (Classified) Locations General Requirements</p> <p>Explosionproof Electrical Equipment General Requirements</p> <p>Dust-Ignitionproof Electrical Equipment General Requirements</p> <p>Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations</p>	<p>Electrical Product Tests (cont'd)</p> <p>Construction, safety and marking</p> <p>Construction, safety and marking</p> <p>Construction, safety and marking</p> <p>Construction, safety and marking</p>	<p>FM 3600:2018 FM 3600:2011 Excluding: Rubber or neoprene tests</p> <p>FM 3615:2018 FM 3615:2006 Excluding: Flammability tests</p> <p>FM 3616:2011</p> <p>UL 1203:2013 Excluding: Clauses 21.5, 21.6, 21.7, 21.8, 21.9, 24, 31, 34, 41, 43.9, 44.9, 45 & 56</p>



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SECTION 1: Electrical and Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd)	Non-Electrical Product Tests	
Non-electrical equipment for explosive atmospheres - Basic method and requirements	Construction, safety and marking	ISO 80079-36:2016
Explosive atmospheres. Non-electrical equipment for explosive atmospheres. Non-electrical type of protection constructional safety "c", control of ignition sources "b", liquid immersion "k"	Construction, safety and marking	ISO 80079-37:2016
Basic Methods and Requirements	Construction, safety and marking	EN 13463-1:2009 (withdrawn) Excluding: Clause 8.3, Flammability Clause 8.4.4, Protective coating Clause 8.5.6, Chemical Substances Appendix D, Charging test
Protection by flow restricting enclosure "fr"	Construction, safety and marking	EN 13463-2:2004
Protection by flameproof enclosure 'd'	Construction, safety and marking	EN 13463-3:2005



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<p>SECTION 1: Electrical and Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd)</p> <p>Mechanical Cable Glands</p>	<p>Non-Electrical Product Tests (cont'd)</p> <p><u>DIMENSIONAL TESTS</u></p> <p>Tests to demonstrate compliance with Constructional Requirements</p>	<p>BS 6121:Part 1:1989 (withdrawn) BS 6121:Part 2:1989 (withdrawn) Excluding: Seal Compression and Hardness Tensile Tests</p>
<p>In the above Section 1, where IEC or EN standards have exact equivalents in BS, EN or BS EN, CSA, UL, ISA or UL/ANSI standards, these BS, EN or BS EN, CSA, UL, ISA or UL/ANSI standards are also included in the accreditation.</p>		
<p>SECTION 2: INGRESS PROTECTION TESTS</p> <p>Enclosures for Electrical Equipment</p>	<p><u>Ingress Protection Tests</u></p> <p>IP1X Protected against solid objects greater than 50 mm diameter</p> <p>IP2X Protected against solid objects greater than 12 mm diameter</p> <p>IP3X Protected against solid objects greater than 2.5 mm diameter</p> <p>IP4X Protected against solid objects greater than 1.0 mm diameter</p> <p>IP5X Dust Protected Excluding: Objects greater than 950 x 920 x 860 mm</p> <p>IP6X Dust Tight Excluding: Objects greater than 950 x 920 x 860 mm</p> <p>IPX2 Protected against dripping water when tilted up to 15°</p> <p>IPX3 Protected against spraying water</p>	<p>IEC 60529 :1989 IEC 60529 :2001 IEC 60529 :2013</p>



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SECTION 2: INGRESS PROTECTION TESTS (cont'd) Enclosures for Electrical Equipment	<u>Ingress Protection Tests</u> (cont'd) IPX4 Protected against splashing water IPX5 Protected against water jets IPX6 Protected against heavy seas IPX7 Protected against the effects of immersion Excluding: Objects greater than 1800 x 950 x1300 mm IPX8 Protected against submersion Excluding: Objects greater than Ø 350 x 500 mm	IEC 60529:1989 IEC 60529:2001 IEC 60529:2013

In the above Section 2, where IEC standards have exact equivalents in BS, EN or BS EN, CSA, UL, ISA or UL/ANSI standards, these BS, EN or BS EN, CSA, UL, ISA or UL/ANSI standards are also included in the accreditation.



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<p>SECTION 3: GAS DETECTORS</p> <p>ELECTRICAL APPARATUS FOR THE DETECTION AND MEASUREMENT OF FLAMMABLE GASES</p> <p>Performance requirements of detectors for flammable gases</p>	<p>Performance Tests</p> <p>Performance tests</p>	<p>IEC 60079-29-1:2016 CSA-C22.2 No. 60079-29-1:2017 Excluding: Vibration Electromagnetic compatibility Software function</p> <p>IEC 60079-29-1:2007 (withdrawn) CSA-C22.2 No.60079-29-1:2012 ANSI/ISA-12.13.01:2013 Excluding: Vibration Voltage transients Electromagnetic immunity Software verification</p> <p>CSA-C22.2 No.152-M1984 Excluding: Bounce and vibration</p> <p>ANSI/ISA-12.13.01:2002 Excluding: Air velocity Vibration Voltage transients Electromagnetic compatibility</p> <p>ANSI/ISA-12.13.01:2000 Excluding: Vibration Electromagnetic interference</p>
<p>Electrical apparatus for the detection of combustible gases in domestic products</p>	<p>Performance tests</p>	<p>BS EN 50194-1:2009 Excluding: Electromagnetic compatibility Alarm sound level Mechanical strength</p>



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<p>SECTION 3: GAS DETECTORS (cont'd)</p> <p>ELECTRICAL APPARATUS FOR THE DETECTION AND MEASUREMENT OF OXYGEN</p> <p>Test Methods and performance requirements</p>	<p>Performance Tests (cont'd)</p> <p>Performance tests</p>	<p>BS EN 50104:2010 Excluding: Vibration Electromagnetic compatibility Verification of software and digital components</p>
<p>ELECTRICAL APPARATUS USED FOR THE DIRECT DETECTION AND DIRECT CONCENTRATION MEASUREMENT OF TOXIC GASES AND VAPOURS</p>	<p>For the following types of detector:- Carbon Monoxide, CO Carbon Dioxide, CO₂ Hydrogen Sulphide, H₂S</p>	
<p>Part 1: General requirements and test methods</p>	<p>Performance tests</p>	<p>EN 45544-1:2015 Excluding: Vibration Electromagnetic compatibility Verification of software and digital components</p>
<p>Part 2: Performance requirements for apparatus used for exposure measurements</p>	<p>Performance tests</p>	<p>EN 45544-2:2015 Excluding: Vibration Electromagnetic compatibility Verification of software and digital components</p>
<p>Part 3: Performance requirements for apparatus used for general gas detection</p>	<p>Performance tests</p>	<p>EN 45544-3:2015 Excluding: Vibration Electromagnetic compatibility Verification of software and digital components</p>



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SECTION 3: GAS DETECTORS (cont'd) Electrical apparatus for the detection of carbon monoxide in domestic premises	Performance Tests (cont'd) Performance tests	BS EN 50291-1:2018 Excluding: Electromagnetic compatibility Alarm sound level Inter-connectable apparatus Apparatus using radio links BS EN 50291-1:2010 Excluding: Electromagnetic compatibility Alarm sound level Mechanical strength
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END		