

Annex to declaration of accreditation (scope of accreditation)
 Normative document: EN ISO/IEC 17025:2017
 Registration number: **L 022**

of **DEKRA Certification B.V.**

This annex is valid from: **09-09-2020** to **01-05-2022**

Replaces annex dated: **12-08-2020**

Location(s) where activities are performed under accreditation

Head Office

Meander 1051
 6825 MJ
 Arnhem
 The Netherlands

No.	Material or product	Type of activity	Internal reference number
Electrical Safety Tests			
1.	Cables and cords (CABL)	Type test of cables and cords according to the tests in the standard, among others: - electrical safety tests - mechanical tests - environmental tests	HD 21 HD 22 HD 603 HD 604 HD 605 EN 13501, EN 50143; EN 50214; EN 50267; EN 50525; EN 50288; EN 50399; EN 50618 NEN/EN 50200 NEN/EN/IEC 60228 NEN-EN 50525 NEN/EN 50266 NEN/EN 50362 NEN/EN /IEC 61034 IEC 60092; IEC 60227 ³ ; IEC 60245 ³ ; IEC 60331; IEC 60332; IEC 60502-1; IEC 60502-2; IEC 60754;

This annex has been approved by the Board of the Dutch Accreditation Council, on its behalf,

J.A.W.M. de Haas

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No.	Material or product	Type of activity	Internal reference number
			IEC 60800; IEC 60840; IEC 62067 DEKRA K 42; DEKRA K 102 DEKRA K 145; DEKRA K 146 DEKRA K 151; DEKRA K 152 DEKRA K 156; DEKRA K 157 DEKRA K 158; DEKRA K160 DEKRA K 161; DEKRA K 162 DEKRA K 163; DEKRA K 164 DEKRA K 165; DEKRA K 167 DEKRA K 168; DEKRA K 169 DEKRA K 170; DEKRA K 171 DEKRA K 175; DEKRA K 176 DEKRA K 177; DEKRA K 178 DEKRA K 179 BS 6004; BS 6007; BS 4553; BS 5467; BS 6231; BS 6346; BS 6387; BS 6500; BS 6622; BS 6724; BS 6883; BS 7211; BS 7629; BS 7835; BS 7846; BS 7889; BS 8491; BS EN 50288-7 BS EN 50525 DIN VDE0815; DIN VDE0250
2.	Cables and cords (CABL)	Test methods for non-metallic materials	IEC 60811-201; IEC 60811-202 IEC 60811-203; IEC 60811-401 IEC 60811-402; IEC 60811-403 IEC 60811-404; IEC 60811-405 IEC 60811-406; IEC 60811-408 IEC 60811-409; IEC 60811-411 IEC 60811-412; IEC 60811-501 IEC 60811-502; IEC 60811-503 IEC 60811-504; IEC 60811-505 IEC 60811-506; IEC 60811-507 IEC 60811-508; IEC 60811-509 IEC 60811-510; IEC 60811-511 IEC 60811-605; IEC 60811-606 IEC 60811-607

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No.	Material or product	Type of activity	Internal reference number
3.	Cables and cords (CABL)	Electrical test methods for low voltage energy cables	NEN-EN 50395
4.	Cables and cords (CABL)	Non electrical test methods for low voltage energy cables	NEN-EN 50396
5.	Conduits	Type test of conduits according to the tests in the standard, among others: - electrical safety tests - mechanical tests - environmental tests	NEN/EN/IEC 61386 DEKRA K24 EN 50086
6.	Installation systems Cable trays Cable ladders	Type test of cable trays and cable ladders, according to the tests in the standard, among others: - electrical safety tests - mechanical tests - environmental tests	KEMA 55 NEN/EN 50085 NEN/IEC/EN 61537 BS EN 61537
7.	Boxes and enclosures for electrical installations	Type test of boxes and enclosures for electrical installations, according to the tests in the standard, among others: - electrical safety tests - mechanical tests - environmental tests	NEN/EN/IEC 60670

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8.	Switches for appliances and automatic controls for electrical household appliances (CONT)	Type test of switches according to the tests in the standard, among others: - electrical safety tests - mechanical tests - environmental tests.	IEC/EN 60730 ³ , 61095 ³ IEC/EN 60691, 60934, 61058 ³ , 60529, IEC 60265, 62271-1, 62271-100, 62271-101, 62271- 102, 62271-105, 62271-110, 62271-200, 62271-201, 62271- 202, 62271-203, EN 50152-1 IEEE Std C37.09, C37.081, 37.60, C37.013, C37.34, ANSI C37.41, C37.73, C37.20.2, C37.122 ANSI/IEEE C37.21 ANSI C37.54, C37.55, C37.20.2, C37.72
9.	Household and similar equipment (HOUS)	Type test of household equipment according to the tests in the standard, among others: - electrical safety tests - mechanical tests - environmental tests	IEC/EN 60335 ³ IEC/EN 61770 IEC/EN 62233 EN 50366 IEC/EN 60204 IEC/EN 60730-1/ 2-8 / 2-9 IEC/EN 61558-1/ 2-3 / 2-6 / 2-5 / 2-6 / 2-16 IEC/EN 62061 EN/ISO 13849-1
10.		Low power measurements	IEC/EN 62301

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No.	Material or product	Type of activity	Internal reference number
11.	Installation accessories and connection devices (INST)	Type test of installation accessories and connection devices according to the tests in the standard, among others: <ul style="list-style-type: none"> - electrical safety tests - mechanical tests - environmental tests 	IEC/EN 60309 ³ , 60320 ³ , 60669 ³ , 60670 ³ , 60799 ³ , 60884 ³ , 60998 ³ , 61058 ³ , 61242 ³ , 61534 ³ , 61984 ³ , 62208 ³ ; IEC/EN 60335-2-76, 60974, 61316, 61386, 62094 EN 50075, 50066, 50146, 50250, 50393 NEN 1251, IEC 60884 ³ , 61238, 62080 BS 1363-1, BS 1363-2, BS 1363-3, BS 1363-4 SS 145 BS 546, BS 4573, BS 5733 NEN 1020 NF C61-314 DIN VDE 0620-1, DIN VDE 0620-2-1 CEI 23-50 NBN C 61-112-1 NEK IEC 60884-1, NEK 502 ÖVE/ÖNORM E 8684-1 ÖVE/ÖNORM E 8620-2(-3,-4, -5) SFS 5610 SS 428 08 34 DS 60884-2-D1 SEV 1011 UNE 20315-1-1; UNE 20315-1-2 IEC/EN 61535 EN 50428 required with 60669
12.	Luminaires (LITE)	Type test of luminaires according to the tests in the standard, among others: <ul style="list-style-type: none"> - electrical safety tests - mechanical tests - environmental tests 	IEC/EN 60155 ³ , 60238 ³ , 60400 ³ , 60570 ³ , 60598 ³ , 60838 ³ , 60921 ³ , 60968 ³ , 60969 ³ , 61347 ³ , 62471 ³ IEC/EN 60929, 61184, 62031, 62035, 60923, 60925, 60927, 61047, 62384, 62560, 61195, 62493

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No.	Material or product	Type of activity	Internal reference number
13.	Measurement, control and laboratory equipment (MEAS)	Type test of measurement-, control- and laboratory equipment according to the tests in the standard, among others: <ul style="list-style-type: none"> - electrical safety tests - mechanical tests - environmental tests 	IEC/EN 61010 ³ IEC/EN 60044 IEC/EN 61243 IEEE Std C57.13
14.	Electrical equipment for medical use (MED)	Type test of electrical equipment for medical use according to the tests in the standard, among others: <ul style="list-style-type: none"> - electrical safety tests - mechanical tests - environmental tests 	IEC/EN 60601 ³ IEC/EN/ISO 80601 HD 395
15.	Miscellaneous equipment (MISC)	Type test of miscellaneous equipment according to the tests in the standard, among others: <ul style="list-style-type: none"> - electrical safety tests - mechanical tests - environmental tests 	IEC/EN 60825 ³

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16.	IT and office equipment (OFF)	Type test of IT and office equipment according to the tests in the standard, among others: - electrical safety tests - mechanical tests - environmental tests	IEC/EN 60950 ³ IEC/EN 62040 ³ IEC/EN 60825 IEC 62368 EN 41003
17.	Low voltage, high power switching equipment (POW)	Type test of low voltage, high power switching equipment according to the tests in the standard, among others: - electrical safety tests - mechanical tests - environmental tests	IEC/EN 60439 ³ , 61439, IEC/EN 60947 ³ IEC/EN 60282, 62208 EN 50178, IEC 60470, 60549, 60644, EN 60282-1 IEEE Std C37.41, C37.60 ANSI C37.44 IEC 61921
18.	Installation protective equipment (PROT)	Type test of installation protective equipment according to the tests in the standard, among others: - electrical safety tests - mechanical tests - environmental tests	IEC/EN 60127 ³ , 60269 ³ , 60529 ³ , 60898 ³ , 61008 ³ , 61009 ³ , 61643 ³ , 60755, 62019 IEC 60099, 60137, 60168, 60383, 60507, 60660, 61109, 60815 HD 630, 639, 60269 IEEE Std 62.11 ANSI C29 CAN/CSA C411.1
19.	Safety transformers and similar equipment (SAFE)	Type test of safety transformers and similar equipment according to the tests in the standard, among others: - electrical safety tests - mechanical tests - environmental tests	IEC/EN 60044 ³ , IEC/EN 61558 ³ IEC/EN 62040, IEC/EN 60076, IEC/EN 60353 EN 50091, EN 50464-1 HD 538.1 IEEE Std. C57.12.90, C57.21 NEMA 107 CISPR 16

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20.	Electric tools (TOOL)	Type test of electric tools according to the tests in the standard, among others: - electrical safety tests - mechanical tests - environmental tests	IEC/EN 60745 ³ IEC/EN 61029 ³ IEC/EN 60335 ³ (Gardening) IEC/EN 62233, IEC/EN 60204 EN 50144 EN 50260-2-7 EN 792 EN/ISO 1114 IEC/EN 62061 EN/ISO 13849-1
21.	Electronics, entertainment equipment (TRON)	Type test according to the tests as mentioned in the standard, except the following tests which are subcontracted: 60065, cl. 20.1.3 Pre-conditioning of printed circuit boards 60065, cl. 12.1.2 Vibration-sine	IEC / EN 60065 ³ IEC / EN 60491 IEC 62368

Photometric Tests
(all tests are in accordance with the reference method)

22.	Headlamps low and high beams and front fog lamps	All tests as mentioned in the ECE Regulations stated under Test method ¹ Photometry Colorimetry Heat tests Plastic tests	ECE Regulations Nos. 1, 5, 8, 19, 20, 31, 56, 57, 72, 76, 82, 98, 112, 113 and 123; European Directives 76/761, 76/762 and 97/24
23.	Headlamps low and high beams and front fog lamps	All tests as mentioned in de FMVSS, CMVSS and SAE (methods) Photometry Colorimetry	FMVSS108 (49CFR 571.108); CMVSS 108, 108.1, 1201; SAE J578, J581, J582, J583, J591, J852, J1383, J1735, J2595; SAE (Methods) J575, J2139, J1889, J2650, J1306, J1623

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No.	Material or product	Type of activity	Internal reference number
24.	Signalling lamps	All tests as mentioned in the ECE Regulations stated under Test method Photometry Colorimetry Heat test	ECE Regulations Nos. 6, 7, 23, 38, 50, 77, 87 and 91 and European Directives 76/757, 76/759, 76/758, 77/538, 77/539, 77/540 and 97/24 ECE Regulation 38 (rear fog lamps only)
25.		All tests as mentioned in de FMVSS, CMVSS and SAE(methods) Photometry Colorimetry	FMVSS108 (49CFR 571.108); CMVSS 108, 108.1, 1201; SAE J222, J578, J585, J586, J587, J588, J592, J593, J914, J1319, J1373, J1395, J1398, J1424, J1432, J1957, J2039, J2040, J2042, J2087, J2261, J131, J584;
26.	Devices for the illumination of rear registration plates	All tests as mentioned in the ECE Regulations stated under Test method Luminance Colorimetry	ECE Regulations Nos. 4 and 50 European Directives 76/760 and 97/24
27.		All tests as mentioned in de FMVSS, CMVSS and SAE (methods) Luminance Colorimetry	FMVSS 108 (49 CFR 571.108); CMVSS 108; SAE J578, J587;
28.	Retro-reflective devices	All tests as mentioned in the ECE Regulations stated under Test method ² Retro-reflection Colorimetry Water resistance test Corrosion Fuel and oil resistance Heat test UV resistance	ECE Regulations Nos. 3, 27, 69, 70, 88 and 104 European Directive 76/757
29.		All tests as mentioned in de FMVSS, CMVSS and SAE (methods) Retro-reflection Colorimetry	FMVSS 108 (49 CFR 571.108), CMVSS 108, 108.1, SAE J578, J594, J774, J1967, J2041

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No.	Material or product	Type of activity	Internal reference number
30.	Light Sources	All tests as mentioned in the ECE Regulations stated under Test method Geometry Photometry Colorimetry Optical quality Mechanical tests	ECE Regulations Nos. 37, 99 IEC 60809 IEC 60810 IEC 60983 IEC 60061
31.	Special warning lamps (beacons and flash lights)	All tests as mentioned in the ECE Regulations stated under Test method Photometry Colorimetry Water resistance test	ECE Regulation No. 65
32.	Cornering Lamps	All tests as mentioned in the ECE Regulations stated under Test method Photometry Colorimetry	ECE Regulation No.119
33.		All tests as mentioned in de FMVSS, CMVSS and SAE (methods) Photometry Colorimetry	FMVSS108 (49CFR 571.108); CMVSS 108, 108.1, 1201; SAE J578, J852 SAE (Methods) J575, J2139, J1889, J2650, J1306, J1623;
34.	Non-directional Solid State Luminaires and Subcomponents	Electrical and Photometric Measurements of Solid-State Lighting Products (section 10 not required for non-directional or subcomponents): - Efficacy, - Light Output, - Lumen Maintenance, - CCT, CRI, - Color Maintenance	IES LM-79

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No.	Material or product	Type of activity	Internal reference number
35.		Characterization of LED Light Engines and LED Lamps for Electrical and Photometric Properties as a Function of: - Temperature, -Efficacy, - Light Output, - Lumen Maintenance, - CCT , CRI, - Color Maintenance, - Light Source Life	IES LM-82
36.	LED Directional Lamps	Electrical and Photometric Measurements of Solid-State Lighting Products, - Efficacy, - Light Output, -Lumen Maintenance, - Lifetime, - CCT, CRI, - Color Maintenance	IES LM-79 (excluding par. 9.3, 10.0 en 12.5)
37.	LED Omnidirectional and Decorative Lamps	Electrical and Photometric Measurements of Solid-State Lighting Products, - Efficacy, - Light Output, -Lumen Maintenance, - Lifetime, - CCT, CRI, - Color Maintenance	IES LM-79 (excluding par. 9.3, 10.0 en 12.5)
38.	All Lamps (Light Bulbs)	- Efficacy, - Light Output, - Lumen Maintenance, - CCT, CRI, - Color Maintenance	IES LM-79

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No.	Material or product	Type of activity	Internal reference number
39.	All Luminaire and Subcomponents	- Efficacy, - Light Output, - Lumen Maintenance, - CCT, CRI, - Color Maintenance	IES LM-79 IES LM-82

Radio Testing

40.	Radio transmitters and receivers	Carrier/Operating frequency/Permitted Range of operating frequencies 10 Hz – 40 GHz	2231-1, 2232-1, 2230-1
41.		Unwanted emissions in the spurious domain (Transmitter/Receiver) 9 KHz – 40 GHz	2231-1, 2232-1, 2229-1, 2238-1, 2230-1, 2235-1, FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1, 2236-1)
42.		TX effective radiated power/RF Output Power, 10 nW – 2 W @ 10 Hz – 40 GHz	2232-1, 2229-1, 2238-1, 2230-1, FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1, 2236-1)
43.		TX Maximum e.r.p. power spectral density, 10 nW/MHz – 2 W/MHz @ 10 Hz – 40 GHz	2232-1, 2229-1, 2238-1, FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1)
44.		6dB/20dB/26dB/99%/Occupied/Nominal/Bandwidth /Modulation bandwidth 10 Hz – 40 GHz	2231-1, 2232-1, 2229-1, 2238-1, FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1, 2236-1)
45.		Duty cycle, Tx-Sequence, Tx-gap Up to 100% @ 10 Hz – 40 GHz	2229-1, 2238-1, 2230-1
46.		Frequency error, -40 to + 60 °C	2229-1, FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1)
47.		TX out of band emissions, 9 KHz – 40 GHz	2232-1, 2229-1, 2238-1

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No.	Material or product	Type of activity	Internal reference number
48.		TX Transient power, 10 nW – 2 W @ 10 Hz – 40 GHz	2229-1
49.		TX Adjacent channel power, 10 nW – 2 W @ 10 Hz – 40 GHz	2229-1
50.		TX behaviour under low voltage conditions	2229-1
51.		TX Adaptive power control	2229-1
52.		TX FHSS , Accumulated Transmit time, Frequency Occupation & Hopping Sequence, Hopping Frequency Separation	2229-1, 2238-1, FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1)
53.		TX short term behavior	2229-1
54.		RX Sensitivity level, -150 dBm – 30 dBm	2229-1
55.		Clear channel assessment threshold	2229-1
56.		Polite spectrum access/timing	2229-1
57.		Adaptive Frequency agility	2229-1
58.		Behavior at high wanted signal level	2229-1
59.		Receiver Blocking or decentralization 9 kHz to 6 GHz	2231-1, 2232-1, 2229-1, 2238-1, 2230-1
60.		Medium Utilization	2238-1
61.		Adaptivity, 9 kHz to 6 GHz	2232-1, 2238-1
62.		Geo-location capability	2232-1, 2238-1

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No.	Material or product	Type of activity	Internal reference number
63.		User Access Restrictions	2232-1
64.		Transmitter H-field requirements, 9 KHz – 30 MHz	2231-1
65.		Transmitter RF carrier current, 9 KHz – 135 KHz	2231-1
66.		Transmitter radiated E-field, 9 KHz – 30 MHz	2231-1
67.		Transmitter Frequency Stability	2231-1
68.		Adjacent channel selectivity, 0 dB to -80 dB @ 9 kHz – 6 GHz	2231-1, 2230-1
69.		Spectrum access Techniques	2230-1
70.		Transmit Power Control (TPC)	2232-1
71.		Band Edge (Low/High)	FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1)
72.		Field strength of emissions within the band 9 kHz – 40 GHz	FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1)
73.		Field strength of emissions outside of the band, 9 kHz – 40 GHz	FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1)
74.		Frequency tolerance of the carrier signal	FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1)
75.		Number of hopping channels and Dwell time	2230-1, FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1)
76.		Frequency Stability	2236-1
77.		Carrier Frequency Separation	FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1)

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78.		RF exposure evaluation, 0 Hz to 300 GHz	EN/IEC 62311, EN/IEC 62479, 47 CFR § 2.1091, 47 CFR § 2.1093, RSS-102
79.		Dynamic Frequency Selection (DFS), 10 Hz to 6 GHz	2232-1, FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1)
80.		DFS Tests: Channel Availability Check, Off-Channel CAC – Radar Detection Threshold Level, Off-Channel CAC – Detection Probability, In service Monitoring, Channel shutdown, Non-occupancy period, Uniform spreading, DFS U-NII Detection bandwidth, Statrical performance check 10 Hz to 6 GHz	2232-1, FCC (2226-1, 2227-1, 2228-1, 2233-1, 2234-1)
81.		TX In-band emissions	2232-1

The accreditation for the activities below is suitable for notification

**European construction products regulation No 305/2011
 System 3 Verification of Constancy of Performance**

**Product area 31:
 Power, control and communication cables**

Decision 2011/284/EC Power, control and communication cables	EN 50575:2014+A01:2016		
82.	Power, control and communication cables ²	Flame spread test	EN 50399
		Test for vertical flame propagation	EN 60332-1-2
		Determination of acidity (by pH measurement) and conductivity	EN 60754-2
		Reaction to fire classification (D) and (E)	EN 13501-6

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Electromagnetic Compatibility (EMC) - Emission (EMC.E)			
Code	Test object or product	Type of test	Method / Reference documents
EMC.E.01	Electric and electronic equipment	Conducted Emissions, Voltage method (AN), 100 KHz - 108 MHz	EN 55025 (CISPR 25)
EMC.E.02	Electric and electronic equipment	Conducted Emissions Voltage method (AMN), 9 KHz - 30 MHz	EN 55011 (CISPR 11), EN 55013 (CISPR 13), EN 55014-1 (CISPR 14-1), EN 55015 (CISPR 15), EN 55016-1-2 (CISPR 16-1-2), EN 55016-2-1 (CISPR 16-2-1), EN 55022 (CISPR 22), EN 55025 (CISPR 25), EN 55032 (CISPR 32), EN/IEC 60945, ANSI C63.4, MP5-1986, CAN/CSA-CEI/IEC CISPR 11-04, CAN/CSA-CISPR 22-10
EMC.E.03	Electric and electronic equipment	Conducted Emissions Voltage method (LISN), 9 KHz - 30 MHz	EN 55011 (CISPR 11), EN 55013 (CISPR 13), EN 55014-1 (CISPR 14-1), EN 55015 (CISPR 15), EN 55016-1-2 (CISPR 16-1-2), EN 55016-2-1 (CISPR 16-2-1), EN 55022 (CISPR 22), EN 55025 (CISPR 25), EN 55032 (CISPR 32), EN/IEC 60945, ANSI C63.4, MP5-1986, CAN/CSA-CEI/IEC CISPR 11-04, CAN/CSA-CISPR 22-10
EMC.E.04	Electric and electronic equipment	Conducted Emissions, Voltage method (Voltage probe) 9 KHz - 30 MHz	EN 55011 (CISPR 11), EN 55013 (CISPR 13), EN 55014-1 (CISPR 14-1), EN 55015 (CISPR 15), EN 55016-1-2 (CISPR 16-1-2), EN 55016-2-1 (CISPR 16-2-1), EN 55022 (CISPR 22), EN 55032 (CISPR 32), ANSI C63.4, MP5-1986, CAN/CSA-CEI/IEC CISPR 11-04, CAN/CSA-CISPR 22-10
EMC.E.05	Electric and electronic equipment	Conducted Emissions, Current method (Current probe) 100 KHz - 250 MHz	EN 55011 (CISPR 11), EN 55013 (CISPR 13), EN 55014-1 (CISPR 14-1), EN 55015 (CISPR 15), EN 55016-1-2 (CISPR 16-1-2), EN 55016-2-1 (CISPR 16-2-1), EN 55022 (CISPR 22), EN 55025 (CISPR 25), EN 55032 (CISPR 32)

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EMC.E.06	Electric and electronic equipment	Conducted Emissions, Power disturbance method (Absorbing clamp) 30 MHz - 1000 MHz	EN 55013 (CISPR 13), EN 55014-1 (CISPR 14-1), EN 55016-1-3 (CISPR 16-1-3), EN 55016-2-2 (CISPR 16-2-2), EN 55032 (CISPR 32)
EMC.E.08	Electric and electronic equipment	Conducted Emissions, Voltage method (Antenna terminal disturbance) 150 KHz - 30 MHz	EN 55013 (CISPR 13), EN 55016-1-2 (CISPR 16-1-2), EN 55016-2-1 (CISPR 16-2-1), EN 55032 (CISPR 32)
EMC.E.09	Electric and electronic equipment	Conducted Emissions, Discontinuous disturbance 9 KHz - 30 MHz	EN 55014-1 (CISPR 14-1)
EMC.E.15	Electric and electronic equipment	Radiated Emissions Semi Anechoic Chamber Method (SACM) 150 KHz - 40 GHz	EN 55011 (CISPR 11), EN 55012 (CISPR 12), EN 55013 (CISPR 13), EN 55014-1 (CISPR 14-1), EN 55015 (CISPR 15), EN 55016-1-4 (CISPR 16-1-4), EN 55016-2-3 (CISPR 16-2-3), EN 55022 (CISPR 22), EN 55025 (CISPR 25), EN 55032 (CISPR 32), EN/IEC 60945; FCC Part 15, FCC Part 18, ANSI C63.4, MP5-1986, CAN/CSA-CEI/IEC CISPR 11-04, CAN/CSA-CISPR 22-10
EMC.E.16	Electric and electronic equipment	Radiated Emissions Open Area Test Site (OATS) 150 KHz - 1 GHz	EN 55011 (CISPR 11), EN 55012 (CISPR 12), EN 55013 (CISPR 13), EN 55014-1 (CISPR 14-1), EN 55015 (CISPR 15), EN 55016-1-4 (CISPR 16-1-4), EN 55016-2-3 (CISPR 16-2-3), EN 55022 (CISPR 22), EN 55025 (CISPR 25), EN 55032 (CISPR 32), EN/IEC 60945; FCC Part 15, FCC Part 18, ANSI C63.4, MP5-1986, CAN/CSA-CEI/IEC CISPR 11-04, CAN/CSA-CISPR 22-10
EMC.E.18	Electric and electronic equipment	Radiated Emissions, Large Loop Antenna System (LLAS) 9 KHz - 30 MHz	EN 55011 (CISPR 11), EN 55015 (CISPR 15), EN 55016-1-4 (CISPR 16-1-4), EN 55016-2-3 (CISPR 16-2-3)
EMC.E.20	Electric and electronic equipment	Radiated Emissions, 60 cm loop method 9 KHz - 30 MHz	EN 55011 (CISPR 11), EN 55016-1-4 (CISPR 16-1-4), EN 55016-2-3 (CISPR 16-2-3), EN/IEC 60945 FCC Part 15, FCC Part 18, ANSI C63.4, MP5-1986, CAN/CSA-CEI/IEC CISPR 11-04

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EMC.E.22	Electric and electronic equipment	Radiated Emissions, Magnetic field 2 kHz – 185 kHz	EN/IEC 61851-21-2 (Annex B)
EMC.E.26	Electric and electronic equipment	Harmonic Current Emissions, (Up to and including 16A per phase) 1 and 3 phase	EN/IEC 61000-3-2
EMC.E.27	Electric and electronic equipment	Voltage changes, voltage fluctuations and flicker Emissions, (Up to and including 16A per phase) 1 and 3 phase 50/60 Hz	EN/IEC 61000-3-3
EMC.E.28	Electric and electronic equipment	Magnetic effect Emissions, Compass safe distance DC	EN/IEC 60945, EN ISO 694
EMC.E.29	Electric and electronic equipment	Harmonic Current Emissions, (> 16A per phase) 1 and 3 phase	EN/IEC 61000-3-12
EMC.E.30	Electric and electronic equipment	Voltage changes, voltage fluctuations and flicker Emissions (> 16A per phase) 1 and 3 phase 50/60 Hz	EN/IEC 61000-3-11
EMC.E.31	Electric and electronic equipment	Pulse emission for ESA's along supply lines 12V and 24V	ISO 7637-1, ISO 7637-2
EMC.E.33	Electric and electronic equipment	Radio disturbances (ALSE method) 150 kHz – 2500 MHz	EN 55025 (CISPR 25)
EMC.E.34	Electric and electronic equipment	Conducted Emissions, Voltage method (AAN method) 150 KHz - 30 MHz	EN 55013 (CISPR 13), EN 55014-1 (CISPR 14-1), EN 55015 (CISPR 15), EN 55016-1-2 (CISPR 16-1-2), EN 55016-2-1 (CISPR 16-2-1), EN 55022 (CISPR 22), EN 55032 (CISPR 32)

Electromagnetic Compatibility Immunity/Susceptability (EMI)

Code	Test object or product	Type of test	Method / Reference documents
EMC.I.01	Electric and electronic equipment	Conducted RF Immunity, Electromagnetic,	EN/IEC 61000-4-6

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		up to 30 Vrms 150 KHz to 230 MHz	
EMC.I.02	Electric and electronic equipment	Conducted RF Immunity Bulk Current Injection method up to 200 mA, 1 MHz – 400 MHz	ISO 11451-1, ISO 11451-4, ISO 11452-1, ISO 11452-4
EMC.I.03	Electric and electronic equipment	Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity 16.5 Hz – 3000 Hz	EN/IEC 61000-4-13, EN/IEC 61000-2-2
EMC.I.08	Electric and electronic equipment	Immunity to conducted disturbances, Common mode DC - 150 KHz up to 30 V DC, 16 ^{2/3} , 50, 60 Hz Continuous: up to 30 V Short duration: up to 300 V	EN/IEC 61000-4-16
EMC.I.21	Electric and electronic equipment	Electrostatic discharge Immunity (ESD) Contact discharge: up to 15 kV, Air discharge: up to 30 kV	EN/IEC 61000-4-2, ISO 10605
EMC.I.22	Electric and electronic equipment	Electrical fast transient / burst Immunity (EFT), 1 and 3 phase 0,25 kV - 4 kV	EN/IEC 61000-4-4
EMC.I.23	Electric and electronic equipment	Surge Immunity, 1-phase up to 10,0 kV 3-phase up to 4,0 kV	EN/IEC 61000-4-5
EMC.I.24	Electric and electronic equipment	Power frequency magnetic field Immunity 50/60 Hz 1 – 1500 A/m	EN/IEC 61000-4-8
EMC.I.25	Electric and electronic equipment	Pulsed magnetic field Immunity 1 - 5000 A/m	EN/IEC 61000-4-9
EMC.I.26	Electric and electronic equipment	Voltage dips, short interruptions and voltage variations Immunity 1 and 3 phase 0 - 360 Angle(s)	EN/IEC 61000-4-11, EN/IEC 61000-4-34
EMC.I.27	Electric and electronic equipment	Electric transient transmission via lines other than supply lines Immunity	ISO 7637-1, ISO 7637-3

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		600 V RF (fixed)	
EMC.I.30	Electric and electronic equipment	DC voltage ripple Immunity 16,5 Hz – 1000 Hz	EN/IEC 61000-4-17
EMC.I.32	Electric and electronic equipment	Supply frequency variations Immunity 16,5 Hz- 400 Hz	EN/IEC 61000-4-28
EMC.I.36	Electric and electronic equipment	Ring wave immunity test 1 and 3 phase up to 4 kV	EN/IEC 61000-4-12
EMC.I.37	Electric and electronic equipment	DC Voltage dips, short interruptions and voltage variations Immunity 360 Vdc 40 A	EN/IEC 61000-4-29
EMC.I.39	Electric and electronic equipment	Electric transient transmission along supply lines Immunity	ISO 7637-1, ISO 7637-2
EMC.I.41	Electric and electronic equipment	Radiated Immunity, Semi Anechoic Chamber method 20 MHz to 150 MHz up to 30 V/m 150 MHz to 6 GHz up to 200 V/m	EN/IEC 61000-4-3, ISO 11451-1, ISO 11451-2, ISO 11452-1, ISO 11452-2
EMC.I.43	Electric and electronic equipment	Radiated Radio Frequency Susceptibility Open Area Test Site (OATS) 20 MHz to 6 GHz up to 30 V/m	ISO 11451-1, ISO 11451-2, ISO 11452-1, ISO 11452-2
EMC.I.46	Electric and electronic equipment	Unbalance, immunity test 1 and 3 phase 50/60 Hz $U_N \pm 50\%$ $0^\circ, 120^\circ$ and $240^\circ \pm 30^\circ$	EN/IEC 61000-4-27
EMC.I.47	Electric and electronic equipment	Voltage fluctuation immunity test 1 and 3 phase 50/60 Hz $\Delta U = \pm 12\% U_n$	EN/IEC 61000-4-14
EMC.I.48	Electric and electronic equipment	An objective light flickermeter and voltage fluctuation immunity test 1 and 3 phase 50/60 Hz	IEC/TR 61547-1

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		39 – 4800 cpm	
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Electromagnetic Compatibility (EMC) - Electromagnetic Fields (EMC.F)

Code	Test object or product	Type of test	Method / Reference documents
EMC.F.01	Electric and electronic equipment	Magnetic flux density 20 KHz – 300 MHz	EN/IEC 62493
EMC.F.01	Electric and electronic equipment	Magnetic flux density 0 – 400 KHz	EN/IEC 62233

**Product standards containing one or more of the above mentioned test activities are listed below.
 Accreditation is only applicable to the tests mentioned above.**

Electromagnetic Compatibility (EMC) scheme (EMC.S)

Code	Material or product	Internal reference number	Method / Reference documents
EMC.S.02	Automotive EMC tests	EMC.E.01; EMC.E.02; EMC.E.03; EMC.E.04; EMC.E.05; EMC.E.15; EMC.E.16; EMC.E.26; EMC.E.27; EMC.E.29; EMC.E.30; EMC.E.31; EMC.E.33; EMC.E.34; EMC.I.02; EMC.I.22; EMC.I.23; EMC.I.39; EMC.I.41; EMC.I.43	UN ECE Regulation 10, 2004/104/EC, EN 55012 (CISPR 12), EN 55025 (CISPR 25), EN 50498, EN 12895, ISO/EN 14982 (Machinery)
EMC.S.03	Electrical and electronic equipment EMC tests	EMC.E.01; EMC.E.02; EMC.E.03; EMC.E.04; EMC.E.05; EMC.E.06; EMC.E.08; EMC.E.09; EMC.E.15; EMC.E.16; EMC.E.18; EMC.E.20; ; EMC.E.22; EMC.E.26; EMC.E.27; EMC.E.28; EMC.E.29; EMC.E.30; EMC.E.31; EMC.E.33; EMC.E.34 EMC.I.01; EMC.I.02; EMC.I.03; EMC.I.08; EMC.I.21; EMC.I.22; EMC.I.23; EMC.I.24; EMC.I.25; EMC.I.26; EMC.I.27; EMC.I.30; EMC.I.32; EMC.I.36; EMC.I.37; EMC.I.39; EMC.I.41; EMC.I.43; EMC.I.46; EMC.I.47; EMC.I.48	EN 55014-1, CISPR 14-1, EN 55014-2, CISPR 14-2, EN/IEC 60945 (EMC requirements), EN/IEC 61000-6-1, EN/IEC 61000-6-2, EN/IEC 61000-6-3, EN/IEC 61000-6-4, EN 50121-1, EN 50121-2, EN 50132-3-1, EN 50121-3-2, EN 50121-4, EN 50121-5, EN/IEC 61204-3, EN 50293, EN 55015 (CISPR 15), IEC/TR 61547-1 EN 55022 (CISPR 22), EN 55024 (CISPR 24), EN 55032 (CISPR 32), EN 55035 (CISPR 35), EN 55013 (CISPR 13), EN 55020 (CISPR 20), EN/IEC 60601-1-2, EN/IEC 60601-2-X, EN/IEC 60730-1, EN/IEC 60730-2-X (EMC requirements), EN/IEC 62040-2,

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			EN/IEC 61326-1, EN/IEC 61326-2-X, EN/IEC 60947-X (EMC requirements), EN/IEC 61008-1 (EMC Requirements), EN/IEC 61009-1 (EMC Requirements), EN/IEC 61543, EN/IEC 61131-2 (EMC Requirements), EN/IEC 61800-X (EMC Requirements), EN 50130-4, EN 301 489-1, EN 301 489-3, EN 301 489-17, EN 301 489-19, EN 301 489-52, EN 50428, EN/IEC 60669-2-X, EN 50270, EN 15194 (EMC requirements), EN/IEC 61000-6-7, EN/IEC 61326-3-1, EN 50491-5-1, EN 50491-5-2, EN 50491-5-3, EN/IEC 63044-5-1, EN/IEC 63044-5-2, EN/IEC 63044-5-3 EN/IEC 61851-22, EN/IEC 61851-21-2 Lloyds Regulations (Germanischer Lloyds, DNV-GL, Lloyd's Registers, Bureau Veritas), EMC requirements
EMC.S. 05	FCC (Federal Communications Commission) EMC tests	EMC.E.02; EMC.E.03; EMC.E.04; EMC.E.15; EMC.E.16	FCC Part 15, FCC Part 18
EMC.S. 07	ISED EMC tests	EMC.E.02; EMC.E.03; EMC.E.04; EMC.E.15; EMC.E.16	ICES-001, ICES-003

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Radio Product Standards

	Material or product	Internal reference number	Method / Reference documents
a.	Short range devices; Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz	Test numbers 40, 41, 44, 59, 64, 65, 66, 67 and 68	ETSI EN 300 330
b.	Broadband Radio Access Networks (BRAN); 5 GHz high performance RLAN	Test numbers 40, 41, 42, 43, 44, 47, 59, 61, 62, 63, 70, 79, 80 and 81	ETSI EN 301 893
c.	Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz;	Test numbers 41 up to and including 59	ETSI EN 300 220-1, ETSI EN 300 220-2
d.	Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz band;	Test numbers 41, 42, 43, 44, 45, 47, 52, 59, 60, 61 and 62	ETSI EN 300 328
e.	Short Range Devices (SRD); Radio equipment to be used in the 1 GHz to 40 GHz frequency range;	Test numbers 40, 41, 42, 45, 59, 68, 69 and 75	ETSI EN 300 440
f.	Global System for Mobile communications (GSM); Mobile Stations (MS) equipment;	Test number 41	ETSI EN 301 511
g.	IMT cellular networks;	Test number 41	ETSI EN 301 908-1

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h.	Electrical and Electronic Equipment (Including: (Fire) Alarm systems, Telecommunication Terminal Equipment, Maritime Communication and Navigation Equipment and Radio Transmitters and Receivers)	Test numbers 41, 42, 43, 44, 46, 52, 71, 72, 73, 74, 75, 77, 79 and 80	FCC CFR 47 Part 15, Subpart C, 15.209, 15.225, 15.231, 15.247, 15.407 ISED RSS-Gen, 210, 247
i.	Electrical and Electronic Equipment (Including: (Fire) Alarm systems, Telecommunication Terminal Equipment, Maritime Communication and Navigation Equipment and Radio Transmitters and Receivers)	Test numbers 41, 42, 44 and 76	FCC CFR 47 Part 22, 24, 27 ISED RSS 130, 132-134, 139, 199,

¹ Weather-beaten tests of synthetic lenses is subcontracted
² Use of facilities outside the test laboratory of the accredited organisation
³ See current list of sub set of standards on the IECEE CBTL website