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# BUREAU OF INDIAN STANDARDS

## AGENDA

**ELEVENTH MEETING OF ELECTROMAGNETIC COMPATIBILITY SECTIONAL COMMITTEE, LITD 09**

| दिनांक- दिन- समय/ DATE & TIME | स्थान VENUE |
|---|---|
| दिनांक DATE : 28th मार्च /March 2022<br>दिन DAY : सोमवार / Monday<br>समय TIME : 1100 h (11:00 AM) | Meeting Link (WEBEX):<br>https://bisindia.webex.com/bisindia/j.php?MTID=m5247ea5907c7295b5fa488e51c128ab5<br><br>Meeting number : 2511 836 9106<br>Password : Ltd9 |
| **Chairman: Dr Subbarao Bandaru** | **Member Secretary: Shri Bipin Jambholkar** |

### ITEM 0 WELCOME

**0.1** Welcome

**0.2** Opening Remarks by the Chairman

### ITEM 1 FORMAL CONFIRMATION OF THE MINUTES OF LAST MEETING

**1.1** The minutes of the last meeting of LITD 09 were circulated vide BISDG letter No. LITD 09/A-2.10 dated 16th Nov 2021. No Comments were received on MOM.

***The Committee may formally confirm these minutes.***

### ITEM 2 REVIEW OF COMPOSITION OF SECTIONAL COMMITTEE LITD 09

**2.1** The composition of Electromagnetic Compatibility Sectional Committee, LITD 09 is given in ANNEX A (Pg 11-12).

***2.2 BIS has received request for co-option from following organization.***

***(***a) Nidec Control Techniques

b) Dell technologies ltd.

***The Committee may note and review its composition.***

## ITEM 3 DRAFT INDIAN STANDARDS FOR FINALIZATION

**3.1** The following Draft Standards were sent for comments under wide Circulation for Comments.

| Sl No. | Document No. IS Number Equivalent Standard | Ref. No and date | Title & ICS No. | Remarks |
|---|---|---|---|---|
| 1 | LITD 09 (18772) IS 6873 (Part 2/Sec 1) CISPR 14-1: 2020 | LITD 09/ T Dt 25th Jan- 22 | **Limits and Methods of Measurement of Radio Disturbance Characteristics** Part 2 Electromagnetic Compatibility (EMC) —Requirements for Household Appliances, Electric Tools and Similar Apparatus Section 1 Emission [Forth Revision of IS 6873 (Part 2/Sec 1) ] ICS : 33.100.10 | Comments received from Schneider Electric Annex B (Page 12-16) |
| 2 | LITD 09 (18774) IS 6873 (Part 2/Sec 2) CISPR 14-2: 2020 | LITD 09/ T Dt 25th Jan- 22 | **Limits and Methods of Measurement of Radio Disturbance Characteristics** Part 2 Electromagnetic Compatibility (EMC) — Requirements for Household Appliances, Electric Tools and Similar Apparatus Section 2 Emission − Product Family Standard [Fourth Revision of IS 6873 (Part 2/Sec 2)] ICS : 33.100.20 | Comments received from Schneider Electric Annex B (Page 12-16) |
| 3 | LITD 09 (18775) IS 10052 (Part 1/Sec 4) CISPR 16-1-4: 2020 | LITD 09/ T Dt 25th Jan- 22 | **Radio Disturbance and Immunity Measuring Apparatus and Methods — Specification** Part 1 Radio Disturbance and Immunity Measuring Apparatus Section 4 Antennas and test sites for radiated disturbance measurements [First Revision of IS 10052 (Part 1/Sec 4) ] ICS : 33.100.10; 33.100.20 | No Comments received |
| 4. | LITD 09 (18776) IS 14700 (Part 4/Sec 3) IEC 61000-4-3 : 2020 | LITD 09/ T Dt 25th Jan- 22 | **Electromagnetic compatibility (EMC) –** Part 4 Testing and Measurement Techniques Section 3 Radiated, radio-frequency electromagnetic field immunity test [Second Revision of IS 14700 (Part 4/Sec 3)] ICS: 33.100.20 | Comments received from Schneider Electric Annex B (Page 12-16) |
| 5. | LITD 09 (18777) IS 14700 (Part 6/Sec 3) IEC 61000-6-3 : 2020 | LITD 09/ T Dt 25th Jan- 22 | **Electromagnetic compatibility (EMC) –** Part 6 Generic standards Section 3 Emission standard for equipment in residential environments [Second Revision of IS 14700 (Part 6/Sec 3)] ICS: 33.100.10 | No Comments received |

**3.1.1** The Committee may consider to finalize the above mentioned wide circulation documents for printing as Indian Standards.

**3.2** In the last meeting of LITD 09, Committee finalized the **IS/IEC/IEEE 62209-1528: 2020** for printing as Indian Standard.

**3.2.1** In the meeting, the committee noted that IEC/IEEE 62209-1528: 2020 cancels and replaces IEC 62209-1:2016, IEC 62209-2:2010, IEC 62209-2:2010/AMD1:2019 However in India, both IEC

62209-1 & 2 are referred in Telecommunication Engineering Centre (TEC), Min. of Communications notifications. Hence it was decided that unless TEC viewpoint are received on IEC 62209-1 & 2 are obtained, both IS/IEC 62209-1: 2016 and IS/IEC 62209-2: 2019 will run concurrently along with IS/IEC/IEEE 62209-1528: 2020 in India without any time limit.

**3.2.1** The Committee may kindly re-examine it, since as per TEC regulation is IS/IEC 62209-1 & 2 are valid for all the mobiles and printing of IS/IEC 62209-1528: 2019 may create confusion for manufactures/importers.

## ITEM 4 PRESENT POSITION OF WORK (POW) OF LITD 09

**4.1** The present position of work of LITD 09 is given in Annex 3 (Pg 17-22)

***The Committee may note and review the POW.***

## ITEM 5 REVIEW OF PUBLISHED INDIAN STANDARDS

**5.1** In accordance with BIS procedure, Indian Standards which are in existence for more than 3 years are to be reviewed for reaffirmation/revision/withdrawal. Latest status of such standards along with the status of the ISO/IEC standards, on which these are based. This list of Indian standards whose base ISO/IEC standards have been revised/withdrawn are given below with details of Status of base International Standards.

| Sl. No | IS. No. & Title | Date of Last Reaffirmation | Corresponding International Standard | Latest Position of International Standard | Remarks |
|---|---|---|---|---|---|
| 1 | IS 6873 (Part 1) : 2010 Limits and methods of measurements of radio disturbance characteristics: Part 1 vehicles, boats and internal combustion engines (Third Revision) | Jan 2019 | CISPR 12 : 2007 | No Change | Standard may reaffirmed |
| 2 | IS 1885 (Part 85) : 2003 Electrotechnical vocabulary: Part 85 electromagnetic compatibility | Jan 2019 | IEC 60050 - 161: 1990 | Amd No 1 to 10 has been issued | Standard may reaffirmed |
| 3 | IS 12743 : 1989 Guide on methods of measurement of short duration transients on low voltage power and signal lines | Jan 2019 | IEC Pub 816 (1984) | No Change | WC may be issued as per latest Standard |
| 4 | IS 14700 (Part 1/Sec 1) : 2000 Electromagenetic compatibility (EMC) Part 1 general: Sec 1 application and interpretation of fundamental definitions and terms | Jan 2019 | IEC 61000-l-l (1992) | No Change | Standard may be reaffirmed |

***The Committee may examine and decide to revise/reaffirm or withdraw above mentioned Indian standards***

**5.2** Following Standards are due for review from April 2022 to March 2023

| | | | |
|---|---|---|---|
| 1 | IS 6873(Part 4):2019 / CISPR 11(2016) | Limits and methods of measurements of Radio disturbance characteristics Part 4 Industrial, scientific and medical (ISM) radio frequency equipment [first revision] | Dec 2019 |
| 2 | IS 6873(Part 5):2019 / CISPR 15:2021 | Limits and Methods of Measurement of Radio Disturbance Characteristics Part 5 Electrical | Dec 2019 |

| | | | |
|---|---|---|---|
| | | Lighting and Similar Equipment (Third Revision) | |
| 3 | IS 14700(Part 4/Sec 1):2019 / IEC 61000-4-1(2016) | Electromagnetic compatibility (EMC) Part 4 Testing and measurement techniques Section 1: Overview of the IEC 61000-4 series (Second Revision) | May 2019 |
| 4 | IS 14700(Part 4/Sec 5):2019 / IEC 61000-4-5(2017) | Electromagnetic compatibility (EMC) Part 4 Testing and measurement techniques - Sec 5 Electrical fast transient/burst immunity test (First Revision) | May 2019 |
| 5 | IS 14700(Part 4/Sec 6):2016 / IEC 61000-4-6(2013) | Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques Sec 6 Immunity to conducted disturbances, induced by radio-frequency fields | Apr 2019 |
| 6 | IS 14700(Part 4/Sec 9):2019 / IEC 61000-4-9(2016) | Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 9: Impulse magnetic field immunity test (Second Revision) | May 2019 |
| 7 | IS 14700(Part 4/Sec 12):2019 / IEC 61000-4-12(2017) | Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 12: Ring wave immunity test (Second Revision) | May 2019 |
| 8 | IS 14700(Part 4/Sec 13):2016 / IEC 61000-4-13(2009) | Testing and measurement techniques - Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity tests | Apr 2019 |
| 9 | IS 14700(Part 4/Sec 16):2019 / IEC 61000-4-16(2015) | Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 16: Test for immunity to be conducted, Common mode disturbances in the frequency range 0Hz to 150 kHz (Second Revision) | May 2019 |
| 10 | IS 14700(Part 6/Sec 1):2019 / IEC 61000-6-1(2016) | Electromagnetic compatibility (EMC)-Part 6 Generic standards Sec 1 Immunity standard for residential. Commercial and light-industrial environments(first Revision) | Jul 2019 |
| 11 | IS 14700(Part 6/Sec 2):2019 / IEC 61000-6-2(2016) | Electromagnetic compatibility (EMC)-Part 6 Generic standards Sec 2 Immunity for industrial environments (first Revision) | Jul 2019 |
| 12 | IS 15040:2019 / CISPR 25 (2016) | Radio disturbance characteristics for the protection of receivers used on board vehicles, boats, and on devices - Limits and methods of measurement (First revision) | Dec 2019 |
| 13 | IS CISPR(Part 32):2015 / CISPR 32:2015 | Electromagnetic compatibility of multimedia Equipment Emission Requirements | May 2019 |

**5.2.1** The Committee member who volunteers may review the above mentioned Standards as per BIS working Sheet.

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## ITEM 6 INTERNATIONAL STANDARDIZATION ACTIVITIES

**6.1** Presently, LITD 09 acts as National Mirror Committee of IEC/ TC 77, IEC/ TC 77A, IEC/ TC 77B, IEC/ TC 77C, IEC/ TC 106, CISPR, CIS/A, CIS/B, CIS/D, CIS/F, CIS/H and CIS/I.

**6.2** India is a P-member on IEC/ TC 77, IEC/ TC 77A, IEC/ TC 77B, IEC/TC 106 and, CIS/B India is also O-member on IEC/TC 77C., CISPR, CIS/A, CIS/D, CIS/F, CIS/I and CIS/H.

**6.2.1** The Committee may review the Status (P/O) of above mentioned International Committees

**6.3** List of International Standards formulated by various IEC Committees along with their SCOPE are given in Annex 4 (Separate Attachment) and also given in link below:

i) List of standards published by IEC/TC 77 Electromagnetic compatibility are given at following link:
https://www.iec.ch/dyn/www/f?p=103:22:0::::FSP_ORG_ID:1265

ii) List of standards published by IEC/TC 77A EMC - Low frequency phenomena:
http://www.iec.ch/dyn/www/f?p=103:22:0::::FSP_ORG_ID:1384

iii) List of standards published by IEC/TC 77B High frequency phenomena:
http://www.iec.ch/dyn/www/f?p=103:22:0::::FSP_ORG_ID:1385

iv) List of standards published by IEC/TC 77C High power transient phenomena:
http://www.iec.ch/dyn/www/f?p=103:22:0::::FSP_ORG_ID:1387

v) List of standards published by IEC/TC 106 Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure:
http://www.iec.ch/dyn/www/f?p=103:22:0::::FSP_ORG_ID:1303

vi) List of standards published by CIS/A Radio-interference measurements and statistical methods:
http://www.iec.ch/dyn/www/f?p=103:22:0::::FSP_ORG_ID:1327

vii) List of standards published by CIS/B Interference relating to industrial, scientific and medical radio-frequency apparatus, to other (heavy) industrial equipment, to overhead power lines, to high voltage equipment and to electric traction :
http://www.iec.ch/dyn/www/f?p=103:22:0::::FSP_ORG_ID:1412

viii) List of standards published by CIS/D Electromagnetic disturbances related to electric/electronic equipment on vehicles and internal combustion engine powered devices:
http://www.iec.ch/dyn/www/f?p=103:22:0::::FSP_ORG_ID:1419

ix) List of standards published by CIS/F Interference relating to household appliances tools, lighting equipment and similar apparatus :
http://www.iec.ch/dyn/www/f?p=103:22:0::::FSP_ORG_ID:1424

x) List of standards published by CIS/H Limits for the protection of radio services :
http://www.iec.ch/dyn/www/f?p=103:22:0::::FSP_ORG_ID:1439

xi) List of standards published by CIS/I Electromagnetic compatibility of information technology equipment, multimedia equipment and receivers:
http://www.iec.ch/dyn/www/f?p=103:22:0::::FSP_ORG_ID:1444

**6.3.1** The Committee may examine and identify the International Standards to be adopted as Indian Standards.

**6.4** The list of working groups under IEC/TC 77, 106 and CISPR is given below:

| Sr No | Title | Subcommittee/Working Groups | Expert |
|---|---|---|---|
| 1 | TC 77 Electromagnetic compatibility | WG 13 Generic EMC Standards - Maintenance of IEC 61000-2-5 | Dr. B Subba Rao<br>Shri Bipin Jambholkar |

| Sr | Title | Subcommittee/Working Groups | Expert |
|---|---|---|---|
| 2 | IEC/TC 77A EMC - Low frequency phenomena | WG 1 Harmonics and other low-frequency disturbances | Dr. B Subba Rao<br>Shri Sulekh Chand<br>Shri Ashutosh Pandey,<br>Ms. Neha Upadhyay, |
| | | WG 2 Voltage fluctuations and other low-frequency disturbances | Dr. B Subba Rao<br>Shri Ashutosh Pandey,<br>Ms. Neha Upadhyay |
| | | WG 6 Low frequency immunity tests | Dr. B Subba Rao<br>Ms. Neha Upadhyay,<br>Shri Manish Kumar Singh, |
| | | WG 8 Description of the electromagnetic environment associated with the disturbances present on electricity supply networks | Dr. B Subba Rao |
| | | WG 9 Power Quality measurement methods | Dr. B Subba Rao |

| Sr | Title | Subcommittee/Working Groups | Expert |
|---|---|---|---|
| 3 | SC 77B High frequency phenomena | WG 10 Radiated and conducted continuous phenomena immunity tests | Dr. B Subba Rao<br>Ms. Neha Upadhyay,<br>Shri Manish Kumar Singh, |
| | | JTF REV Joint Task Force CISPR/A/SC77B on Reverberation chambers linked to CIS/A | Dr. B Subba Rao |
| | | JTF TEM Joint Task Force CISPR/A/SC77B on TEM Waveguides linked to CIS/A | Dr. B Subba Rao |
| | | JTF FAR Joint Task Force between CISPR/A and SC77B on Fully anechoic rooms (FARs) Managed by CIS/A | Shri G.Subba Rao |

| Sr | Title | Subcommittee/Working Groups | Organization |
|---|---|---|---|
| 4 | TC 106 Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure | WG 8 Addressing methods for assessment of contact current related to human exposures to electric, magnetic and electromagnetic fields | Shri Ashutosh Pandey, Shri Harshit Modi, Dr.S.K.Dubey Shri Bipin Jambholkar |
| | | WG 9 Addressing methods for assessment of Wireless Power Transfer (WPT) related to human exposures to electric, magnetic and electromagnetic fields | Ms. Neha Upadhyay, Shri Harshit Modi, Dr.S.K.Dubey Shri Nitin Jain |

| Sr | Title | Subcommittee/Working Groups | Organization |
|---|---|---|---|
| 5 | CIS/B Interference relating to industrial, scientific and medical radio-frequency apparatus, to other (heavy) industrial equipment, to overhead power lines, to high voltage equipment and to electric traction | WG 1 Industrial, scientific and medical (I.S.M.) radio frequency apparatus | Shri Ashutosh Pandey, Shri Manish Kumar Singh, |
| | | WG 2 Interference from overhead power lines, high-voltage equipment and electric traction | |

6.5.1 The Committee in its last meeting has decided that Organizations mentioned below will try to contribute in following Committees work/documents in which India is Observer member, so that Committee may consider upgrading Indian Status from O-Member to P-Member.

| Sr | Title | Subcommittee/Working Groups | Organization |
|---|---|---|---|
| 1 | CIS/A Radio-interference measurements and statistical methods | WG 1 EMC instrumentation specifications | DGAQA |
| | | WG 2 EMC measurement techniques, statistical methods and uncertainty | DGAQA |

| Sr | Title | Subcommittee/Working Groups | Organization |
|---|---|---|---|
| 2 | CIS/F Interference relating to household appliances tools, lighting equipment and similar apparatus | WG 1 Household appliances incorporating electric motors and contact devices | ERTL (N) |
| | | WG 2 Lighting equipment | - |

| Sr | Title | Subcommittee/Working Groups | Organization |
|---|---|---|---|
| 3 | CIS/H Limits for the protection of radio services | WG 1 A survey of EMC product standards on emission | AAI |
| | | JWG 5 Use of medium-sized EUT volumes at alternative test sites SAC and FAR Managed by CIS/A | AAI |

| Sr | Title | Subcommittee/Working Groups | Organization |
|---|---|---|---|
| 4 | CIS/I Electromagnetic compatibility of information technology | MT 7 Maintenance of CISPR 32 | BECIL,DGAQA |
| | | MT 8 Maintenance of CISPR 35 | BECIL,DGAQA,TEC |

| | | | |
|---|---|---|---|
| | equipment, multimedia equipment and receivers | MT 9 Maintenance of CISPR 29 | BECIL,DGAQA |

6.5.2 Other Committees of IEC/CISPR in the ambit of LITD 09 work:

| Sr | Title | Subcommittee/Working Groups |
|---|---|---|
| 1 | SC 77C High power transient phenomena | PT 61000-5-10 Guide to the Application of HEMP and IEMI Publications |
| | | MT 61000-2-10 Electromagnetic compatibility (EMC) - Part 2-10: Environment-Description of the HEMP environment - Conducted disturbance |
| | | MT 61000-4-25 Electromagnetic compatibility (EMC) - Part 4-25: Testing and measurement techniques - HEMP immunity test methods for equipment and systems |
| | | MT 61000-4-36 Electromagnetic compatibility (EMC) - Part 4-36: Testing and measurement techniques - IEMI immunity test methods for equipment and systems |

| Sr | Title | Subcommittee/Working Groups |
|---|---|---|
| 2 | CIS/D Electromagnetic disturbances related to electric/electronic equipment on vehicles and internal combustion engine powered devices | WG 1Protection of receivers used in buildings, along the roadside, or in outdoor areas |
| | | WG 2 Protection of on-board and adjacent vehicle receivers |
| | | Joint Working Groups JWG A-SITE-VAL Joint Task Force between CISPR/D and CISPR/A - Chamber validation methods |

| Sr | Title | Subcommittee/Working Groups |
|---|---|---|
| 3 | CIS/S Steering Committee | WG 2 Definitions |

**6.5.1** In order to increase India's participation into these committees, the committee may nominate experts into these Working Groups.

## ITEM 7 WTO-TBT ENQUIRY POINT

**7.1** World Trade Organization (WTO) is the International Organization dealing with global rules of trade between nations. The Technical Barriers to Trade Agreement (TBT) tries to ensure that Regulations, Standards, Conformity Assessment procedures do not create unnecessary obstacles to trade. Manufactures and exporters of each country need to know about the latest standards and technical regulations in their prospective markets. To help ensure that this information is made available conveniently, all WTO member Governments are required to establish National Enquiry Point. India is a signatory to the WTO TBT Agreement. Under this Agreement, India has to fulfill certain obligations such as establishing an enquiry point and transparency of its standards and its regulations. BIS functions as the enquiry point as nominated by Ministry of Commerce, the dealing Ministry with WTO.

**7.2** As the WTO TBT Enquiry Point, BIS answers all the reasonable enquiries pertaining to Technical Regulation, Standards and Conformity Assessments procedures addressed to it from the Enquiry Points of other countries. It also serves as the information centre within the country. Additionally, BIS also disseminates the TBT Notifications of other member bodies to the National Stakeholders.

**7.3** The awareness regarding TBT notifications is lacking among various stakeholders in India and as a result India is not sending its comments on draft notifications by other countries, which may be of trade interest to India. As signatory of WTO-TBT agreement, there is a greater need for us to be aware of the TBT notifications issued by different countries in order to protect our interest.

**7.4** BIS disseminates the TBT Notifications of other countries to the Indian Stakeholders with a view to seek their comments and taking up the same at appropriate forum. The stakeholders are expected to examine the notifications on the following aspects:

i) Are the notifications in accordance with International Standards?

ii) Are they stricter than the International Standards?

iii) Are they stricter than the International Standards then necessary to meet the legitimate objective of

- Protection of human health or safety
- Animal or Plant life or health
- Environment Protection

**7.5** The BIS technical committees have also been identified as stakeholders for the TBT Notifications and relevant notifications are being disseminated to them. The committee members should examine the TBT Notifications with a view to protect Indian trade interest.

**7.6** The e-mail address of BIS Enquiry Point is as follows:
BIS: **info@bis.org.in**
Website**:** **www.bis.org.in**

***The Committee may note.***

## ITEM 8 ELECTRONICS AND INFORMATION TECHNOLOGY GOODS (REQUIREMENTS FOR COMPULSORY REGISTRATION) ORDER, 2012

**8.1** Ministry of Information and Technology, Department of Electronics and IT(DeitY) has issued the Electronics and Information Technology Goods (Requirements for Compulsory Registration) Order, 2012, bringing into force a scheme for mandatory regime of registration of identified ~~44~~ electronic products so that these products meet specified safety standards (Out of which 29 belongs LITD). According to this order, No person shall manufacture or store for sale and import of electronics goods which do not conform to the specified Indian standard and do not bear the self declaration- Conforming to IS on such goods after obtaining Registration from BIS. The detail information of the registration scheme is available on BIS website http://www.bis.org.in.

***The Committee may note.***

## ITEM 9 INFORMATION ON E-SALE OF STANDARDS BY BIS

**9.1** **Bureau of Indian Standards**, the National Standards Body of India has published more than 19000 Indian Standards which are available for sale. They are available on e-sale as under:
Softcopy download from BIS sales portal http://www.standardsbis.in.

***The Committee may note.***

## ITEM 10 NATIONAL INSTITUTE FOR TRAINING IN STANDARDISATION (NITS)

**10.1** National Institute of Training for Standardization (NITS) has been set up by BIS with world class facilities to impart training on various aspects leading to standardization, quality and other management systems, consumer protection, public service delivery, etc. The training calendar for the current year is available on BIS web site http://www.bis.org.in. The organizations willing to depute their personnel for training may kindly go through the appropriate programme and get them registered to undergoing training.

***The Committee may note.***

## ITEM 11 DATE AND PLACE FOR THE NEXT MEETING

## ITEM 12 ANY OTHER BUSINESS

# ANNEX 1
# (Item 2.1)

## ELECTROMAGNETIC COMPATIBILITY
## SECTIONAL COMMITTEE LITD 09 COMPOSITION

| Sl. No. | Organization | Member | | Attendance | | | |
|---|---|---|---|---|---|---|---|
| | | | | 17-02-20 | 16-12-20 | 11-08-21 | |
| 1 | **SAMEER** | | | **Y** | **Y** | **Y** | 3/3 |
| | | Dr. B. Subbarao | **Chairman** | | | | |
| 2 | **Airport Authority Of India (AAI)** | | | **Y** | **Y** | **N** | 2/3 |
| | | Shri Anurag Sharma | Principal | | | | |
| | | Shri J B Singh | Alternate | | | | |
| 3 | **All India Radio (AIR)** | | | **N** | **N** | **Y** | 1/3 |
| | | Shri S K Srivastva | Principal | | | | |
| | | Shri Akhilesh Prasad | Alternate | | | | |
| 4 | **Automotive Research Association of India (ARAI)** | | | **N** | **N** | **Y** | 1/3 |
| | | Shri A.B. Mulay | Principal | | | | |
| | | Shri Nishit Shankar | Alternate | | | | |
| 5 | **Broadcast Engineering Consultants India Ltd (BECIL)** | | | **N** | **N** | **N** | **0/3** |
| | | Shri W.B.Prasad | Principal | | | | |
| | | Mr. Mazar Umer | Alternate | | | | |
| | | Shri Khuswinder Singh Bhatia | 2nd Alternate | | | | |
| 6 | **Bharat Electronics Ltd. (BEL)** | | | **N** | **N** | **N** | **0/3** |
| | | Shri Ajay Khilnani | Principal | | | | |
| | | Shri G.Subba Rao | Alternate | | | | |
| 7 | **BNN Speag, Test and Calibration Laboratory Indian Pvt ltd,** | | | **Y** | **Y** | **Y** | 3/3 |
| | | Shri Nitin Jain | Principal | | | | |
| | | Shri Nikhil Jain | Alternate | | | | |
| 8 | **Central Electricity Authority (CEA)** | | | **N** | **N** | **N** | **0/3** |
| | | Shri Naresh Kumar | Principal | | | | |
| | | Shri Lokesh kumar Meena | Alternate | | | | |
| 9 | **Consumer Electronics and Appliance Mfrs.Association (CEAMA)** | | | **N** | **Y** | **Y** | 2/3 |
| | | Shri Srinivasu Moturi | Principal | | | | |
| | | Shri Anil Mehta | Alternate | | | | |
| | | Mr. Rajaram Dere | 2nd Alternate | | | | |
| 10 | **Cellular Operators Association of India (COAI)** | | | **N** | **N** | **N** | **0/3** |
| | | Ms Sugandha Berry | Principal | | | | |
| | | Shri Rohit Singh | Altenate | | | | |
| 11 | **Directorate of Coordination, Police Wireless (DCPW)** | | | **N** | **Y** | **N** | 1/3 |
| | | Shri Amarjeet Singh | | | | | |
| 12 | **Directorate General Doordarshan, Prasar Bharati (DD)** | | | **N** | **N** | **Y** | 1/3 |
| | | Shri D P Singh | Principal | | | | |
| | | Shri Rajesh Meena | Alternate | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 13 | **Dte. General of Aeronautical Quality Assurance (DGAQA)**<br>Shri Manoj Sharma Principal | **Y** | **N** | **Y** | 2/3 |
| 14 | **Electronics Corporation of India Ltd. (ECIL)**<br>Shri A Bhaskar Rao Principal<br>Shri S. Subba Rao Alternate | **Y®** | **N** | **N** | 1/3 |
| 15 | **Electronic Component Industries Association (ELCINA)**<br>Shri Rajoo Goel Principal | **N** | **Y** | **Y** | 2/3 |
| 16 | **Electronics Regional Test Lab. (North)**<br>Shri Sulekh Chand Principal | **Y** | **Y** | **Y** | 3/3 |
| 17 | **Joint Communications & Electronic Staff**<br>Col. Rajnish Sethi Principal<br>Gp Capt JR Kelkar Alternate | **Y** | **N** | **Y** | 2/3 |
| 18 | **Ministry of Electronics & Information Technology (MeitY)**<br>Dr Bharat Kumar Yadav Principal | **N** | **N** | **N** | 0/3 |
| 19 | **National Physical Laboratory (NPL)**<br>Dr. S.K. Dubey Principal | **N** | **N** | **Y** | 1/3 |
| 20 | **In Personal Capacity**<br>Shri I. S. Mehla Principal | **Y** | **N** | **N** | 1/3 |
| 21 | **Telecommunication Engineering Centre (TEC), DOT**<br>Shri Asutosh Pandey Principal<br>Shri P.S. Jadon Alternate<br>Ms Neha Upadhyay 2nd Alt. | **Y** | **N** | **N** | 2/3 |
| 22 | **Telecom Equipment Manufactures Assn. of India (TEMA)**<br>Shri Prof. N.K. Goyal Principal<br>Ms Manisha Kumari Alternate | **N** | **Y** | **Y** | 2/3 |
| 23 | **TUV Rheinland (India) Pvt Ltd**<br>Shri Ravindra Kumar Principal<br>Shri Rajesh Gupta Alternate | **Y** | **N** | **Y** | 2/3 |
| 23 | **Voluntary Orgn. in Interest of Consumer Education (VOICE)**<br>Shri H S Wadhwa Principal<br>Shri K.C. Chaudhary Alternate | **Y** | **Y** | **Y** | 3/3 |
| 24 | **Wireless Planning and Coordination Wing**<br>Shri Gulab Chand Principal<br>Shri Ashim Dutta Alternate | **N** | **N** | **N** | 0/3 |
| 25 | **Samsung India Electronics Private Limited**<br>Shri Saurabh Nag Principal | **-** | **Y** | **Y** | 2/2 |

# ANNEX B
# (Item 3.1)
## Comments of M/s Schneider Electric

| S No | Document No. | Clause/ title | Docu-ment Page no | Comments | BIS Comments |
|---|---|---|---|---|---|
| 1 | LITD 9 18772 Point 1 to 5 | National Foreword | 1 | This draft Indian Standard (~~Part 2~~ Part 1/Sec 1) (forth revision) which is identical with CISPR 14-1: 2020 'Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission' | The suggestion for changing Part No from (Part 2/Sec 1) to (Part 1/Sec 1) cannot be accepted as Part 1 is already given to CISPR 12 and is referred in numerous Indian Standards. |
| 2 | | Name or title of the document | 1 | Limits and Methods of Measurement of Radio Disturbance Characteristics ~~PART 2~~ PART 1 Electromagnetic Compatibility EMC Requirements for Household Appliances Electric Tools and Similar Apparatus Section 1 Emission Forth Revision of IS 6873 ~~Part 2~~ Part 1 Sec 1 | As informed in Point No.1, suggestion cannot be accepted. |
| 3 | | Degree of Equivalence table | 2 | Reference to CISPR 16-1-4:2019 can be updated to CISPR 16-1-4:2020 with corresponding Indian standard Degree of Equivalence Identical With CISPR 16-1-4 : 2017 can be changed to CISPR 16-1-4 : 2020 | As per the norm, unless specified latest version of refereed Standards need to be referred, unless specific year is mentioned. CISPR 16-1-4: 2020 has completed the WC and will automatically referred in final draft. |
| 4 | | Degree of Equivalence table | 3 | Missing : Corresponding Indian Standard must be mentioned in page 2/3 for CISPR 14-1 : 2020 as .....IS 6873 (Part 1/Sec 1) | As mentioned above the suggestion cannot be accepted. |
| 5 | | Recommendations for additional information | 1 | identical with CISPR 14-1: 2020 Good to mention the changes in LITD 9(18772) document with respect to the CISPR 14-1: 2020 latest changes: a) extension of the frequency range for radiated immunity above 1 GHz; b) an advanced categorisation of equipment; c) revision of general test conditions and addition of new specific test conditions (e.g. for robotic equipment); d) clarification of requirements applicable to equipment incorporating radio functions; e) addition of requirements for wired network ports; f) revision of definitions and addition of new ones; g) delete requirements referring to statistical evaluation; h) alignment with CISPR 14-1, where applicable.<br><br>**Kindly see the feasibility if there is any possibility to add products used in public gathering areas like amusement parks, GYM centers, spiritual centers, public transpiration areas like stations, schools and collages, community halls,** | As Standard is in wide circulation and the information is already available in CISPR 14-1: 2020.<br><br>B) For feasibility to add products, no data/study submitted,<br>hence suggestion may not be accepted. |

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|---|---|---|---|---|---|
| 6 | LITD 9 18774 Point 6 to 10 | Name or title of the document | 1 | Limits and Methods of Measurement of Radio Disturbance Characteristics PART 2 Electromagnetic Compatibility EMC Requirements for Household Appliances Electric Tools and Similar Apparatus Section 2 ~~Emission~~ ( Immunity ) Product Family Standard | The suggestion for changing title cannot be accepted as we are adopting IEC as single no. Standard. Also no justification given for changing the title name. |
| 7 | | Degree of Equivalence table | 2 | Corresponding Indian Standard mentioned in page 3 for CISPR 14-1 : 2020 is ~~IS 6873 (Part 2/Sec 1)~~ is wrong it must be IS 6873 (Part 1/Sec 1) | As informed in Point No.1, suggestion cannot be accepted. |
| 8 | | Degree of Equivalence table | 2 | Missing : Corresponding Indian Standard must be mentioned in page 3 for CISPR 14-2 : 2020 as .....IS 6873 (Part 2/Sec 2) : 2015 Limits and Methods of Measurements of Radio Disturbance Characteristics Part 2 Electromagnetic Compatibility (EMC) - Requirements for Household Appliances, Electric Tools and Similar Apparatus Section 2 Immunity - Product family standard (third Revision )[ 2020 version Wide Circulation ] | Page No.3 informs about the Scope of CISPR 14-2: 2020 as it is Wide Circulation document only. Also history of Indian Standard is given in page1 of WC. Hence suggestion may be rejected. |
| 9 | | NATIONAL FOREWORD | 1 | This draft Indian Standard (Part 2/Sec 2) (Fourth Revision) which is identical with CISPR 14-2: 2020 'Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 2: ~~Emission~~ Immunity | As inform in point 6, suggestion cannot be accepted. |
| 10 | | Recommendations for additional information | 1 | identical with CISPR 14-2: 2020<br>Good to mention the changes in LITD 9(18774) document with respect to the CISPR 14-2: 2020 latest changes:<br>– extension of the frequency range for radiated measurements above 1 GHz;<br>– revision of general test conditions and addition of new specific test conditions (e.g. for robotic equipment);<br>– introduction of additional requirements for equipment making use of inductive power transfer technology;<br>– remove from the normative text any compliance requirement based on statistical evaluation;<br>revision of clicks analysis, with particular relevance to the determination of the observation<br>time and the application of the upper quartile method for different types of click analysers.<br><br>**Kindly see the feasibility if there is any possibility to add products used in public gathering areas like amusement parks, GYM centers, spiritual centers, public transpiration areas like stations, schools and collages, community halls,** | As Standard is in wide circulation and the information is already available in CISPR 14-2: 2020.<br><br>B) For feasibility to add products, no data/study submitted,<br>hence suggestion may not be accepted. |

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|---|---|---|---|---|---|
| 11 | LITD 18775 | Recommendations for additional information | 1 | identical with IEC CISPR 16-1-4: 2020, Good to mention the changes in LITD 9(18775) document with respect to the CISPR 16-1-4: 2020 latest changes: provisions are added to address test site validation in the frequency range from 30 MHz to 1000 MHz using the reference site method, to take into account the receive antenna radiation pattern in the frequency range from 1 GHz to 18 GHz, and further details on test site validation using the NSA method with broadband antennas in the frequency range. from 30 MHz to 1 000 MHz. | As Standard is in wide circulation and the information is already available in CISPR 16-1-4: 2020. |
| 12 | LITD 18776 | Recommendations for additional information | 1 | identical with IEC 61000-4-3 : 2020, Good to mention the changes in LITD 9(18776) document with respect to the IEC 61000-4-3 : 2020 latest changes: This edition includes the following significant technical changes with respect to the previous edition:a) testing using multiple test signals has been described; b) additional information on EUT and cable layout has been added; c) the upper frequency limitation has been removed to take account of new services;d) the characterization of the field as well as the checking of power amplifier linearity of the immunity chain are specified. | As Standard is in wide circulation and the information is already available in IEC 14700-4-3: 2020. |
| 13 | LITD 9 18777 | Recommendations for additional information | 1 | This edition includes the following significant technical changes with respect to the previous edition: a) alternative method for measuring conducted emissions on DC ports; b) limits and requirements applicable only to equipment intended to be used in residential locations; more stringent limits for DC power ports. | As Standard is in wide circulation and the information is already available in IEC 14700-6-3: 2020. |
| 14 | | Degree of Equivalence table | 2 | corresponding Indian standard for CISPR 14-1 : 2016 mentioned as IS 6873 (Part 2/Sec 1) : 2016 corresponding Indian standard for CISPR 14-1 : 2020 should be IS 6873 (Part 1/Sec 1) : 2020 Degree of Equivalence Identical With CISPR 14-1 : 2016 can be changed to CISPR 14-1 : 2020 | AS per the norm, unless specified latest version of refereed Standards need to be referred, unless specific year is mentioned. CISPR 14-1: 2020 has completed the WC and will automatically referred in final draft. |
| 15 | | Degree of Equivalence table | 2 | Reference CISPR 16-1-4:2019 can be updated to CISPR 16-1-4:2020 with corresponding Indian standard Degree of Equivalence Identical With CISPR 16-1-4 : 2019 can be changed to CISPR 16-1-4 : 2020 | AS per the norm, unless specified latest version of refereed Standards need to be referred, unless specific year is mentioned. CISPR 16-1-4: 2020 has completed the WC and will automatically referred in final draft. |

| Remarks on improvement in the future versions of IS 6873-2-2 document | | | | | |
|---|---|---|---|---|---|
| 16 | CISPR 14-2: 2020 | IEC 61000-4-4: 2012 – Electrical fast transient/ burst immunity test | IS 6873-2-2 Clause 5.2 | The remark is from basic standard IEC 61000-4-4 clause 5. The standard states that the test must be performed with a repetition frequency of 5 kHz , but this is a common practice; however, 100 kHz is closer to reality. | No data/study submitted for changing the frequency. Hence suggestion may not be accepted. |
| 17 | CISPR 14-2: 2021 | IEC 61000-4-2 : 2008 – Electrostatic discharge immunity test | IS 6873-2-2 Clause 5.1 | IEC 61000-4-2 Clause : 5.1 Apply 20 discharges (10 with positive and 10 with negative polarity) to each selected discharging point. ~~Tests with other (lower) voltages than those given in Table 1 are not required~~. For air discharge testing, the test shall be applied at all test levels in Table 1 up to and including the specified test level. For contact discharge testing, the test shall be applied at the specified test level only. | No data/study submitted for changing the frequency. Hence suggestion may not be accepted. |

# ANNEX 3

**(Item 4.1)**

**LITD 9 ELECTROMAGNETIC COMPATIBILITY**

**SCOPE -** To prepare Indian Standards relating to:

a) Electromagnetic compatibility of electrical and/or electronic equipment, between themselves and with electrical power networks including Electromagnetic interference.
b) Measurement and calculation methods to assess human exposure to electric, magnetic and electromagnetic fields.

LIAISON WITH IEC COMMITTEES

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|---|---|
| IEC/TC 77 Electromagnetic Compatibility | (P-Member) |
| IEC/SC 77A Low Frequency Phenomena | (P-Member) |
| IEC/SC 77B High Frequency Phenomena | (P-Member) |
| IEC/SC 77C High Power Transient Phenomena | (O-Member) |
| IEC/TC 106 Methods for the assessment of Electric, Magnetic and Electromagnetic fields associated wih human exposure | (P-Member) |
| CISPR International Special Committee on Radio Interference | (O-Member in all CISPR, CIS-A, C, D, E, F, G, H and I.) |
| IEC CIS/B : Interference Relating To Industrial, Scientific And Medical Radio-Frequency Apparatus, To Other (Heavy) Industrial Equipment, To Overhead Power Lines, To High Voltage Equipment And To Electric Traction | (P-Member) |

| Sl. No. | IS Number/ DOC Number | Title | Date |
|---|---|---|---|
| **STANDARDS PUBLISHED** | | | |
| 1 | IS 1885 (Part 85):2003 / IEC60050-161 (1990) | Electrotechnical vocabulary - Electromagnetic compatibility | Jan 2019 |
| 2 | IS 6873 (Part 1):2010 / CISPR 12(2007) | Limits and methods of measurements of radio disturbances characteristics: Part 1 Vehicles, boats and internal combustion engine (Third Revision ) | Jan 2019 |
| 3* | IS 6873 (Part 2/Sec 1):2019 / CISPR 14-1 (2016) Doc. No. : LITD 09 (18772) | Limits and methods of measurements of radio disturbance characteristics Part 2 Electromagnetic Compatibility (EMC) - Requirements for household appliances electric tools and similar apparatus Sec 1 Emission (fourth revision ) | Jul 2019 |
| 4* | IS 6873(Part 2/Sec 2):2019 / CISPR 14-2 (2015) Doc. No. : LITD 09 (18774) | Limits and methods of measurements of radio disturbance characteristics Part 2 Electromagnetic Compatibility (EMC) - Requirements for household appliances electric tools and similar apparatus Sec 2 Emission - Product Family Standard (Fourth revision) | May 2019 |
| 5 | IS 6873(Part 4):2019 / CISPR 11(2016) | Limits and methods of measurements of Radio disturbance characteristics Part 4 Industrial, scientific and medical (ISM) radio frequency equipment [first revision] | Dec 2019 |
| 6 | IS 6873(Part 5):2019 / CISPR 15:2021 | Limits and Methods of Measurement of Radio Disturbance Characteristics Part 5 Electrical Lighting and Similar Equipment (Third Revision) | Dec 2019 |
| 7 | IS 10052 (Part 1/Sec 1):*2021* / CISPR 16-1-1: *2019* *Doc* | Radio disturbance and immunity Measuring Apparatus and Methods Specification Part 1 Radio disturbance and Immunity Measuring | May 2019 |

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|---|---|---|---|
| | | Apparatus Section 1 Measuring apparatus (Third Revision) | |
| 8* | IS 10052 (Part 1/Sec 3):2021 / CISPR 16-1-3(2016) | Radio disturbance and immunity Measuring apparatus and methods Specification Part 1 Radio disturbance and immunity measuring apparatus Section 3 Ancillary equipment - Disturbance power | Jul 2021 |
| 9* | IS 10052(Part 1/Sec 4):2021 / CISPR 16-1-4 (2017) Doc. No. : LITD 09 (18775) | Radio disturbance and immunity Measuring apparatus and methods Specification Part 1 Radio disturbance and immunity measuring apparatus Section 4 Antennas and test sites for radiated disturbance measurements | Jul 2021 |
| 10* | IS 10052(Part 1/Sec 5):2018 / CISPR 16-1-5 (2016) | Radio disturbance and immunity Measuring apparatus and methods Specification Part 1 Radio disturbance and immunity measuring apparatus Section 4 Antennas calibration sites and reference test sites for 5 MHz to 18 GHz | Jul 2021 |
| 11* | IS 10052(Part 2/Sec 1):2018 / CISPR 16-2-1(2014) | Specification for radio disturbances and immunity measuring apparatus and methods: Part 2 Methods of measurement of disturbances and immunity Section 1Conducted distribution (Second revision ) | Jul 2021 |
| 12* | IS 10052(Part 4/Sec 4):2018 / CISPR/TR 16-4-4 (2017) | Radio disturbance and immunity Measuring apparatus and methods Specification Part 4 Uncertainties, statistics and limit modeling Section4 Statistics of complains and a model for the calculation of limits for the protection of radio services | Jul 2021 |
| 13* | IS 12233(Part 1):2018 / CISPR 18-1(2017) | Radio interference characteristics of overhead power lines and high voltage equipment - Part 1 Description of phenomena | Sep 2021 |
| 14 | IS 12233(Part 2):*2021* / CISPR 18-2(*2017*) | Electromagnetic interference characterstics of overhead power lines and high voltage equipment: Part 2 Methods of measurement and procedure for determining limits(First Revision) | Dec 2020 |
| 15* | IS 12233(Part 3):2019 / CISPR 18-3: 2017 | Radio Interference Characteristics of Overhead Power Lines and High-Voltage Equipment Part 3 Code of Practice for Minimizing the Generation of Radio Noise (Second Revision) ICS : 33.100.01 | May 2021 |
| 16 | IS 12743:1989 / IEC 60816: 1984 | Guide on methods of measurement of short duration transients on low voltage power and signal lines | Jan 2019 |
| 17 | IS 13397: 2018 / IEC/TR 60725-2012 | Considerations on reference impedances and public supply network impedances for use in determining the disturbance charcteristics of electrical equipment having a rated current < 75 A per phase (First Revision) | Mar 2021 |
| 18 | IS 14700(Part 1/Sec 1):2000 / IEC 61000-1-1 (1992) | Electromegnetic compatibility (EMC) Part 1: General section:1 Application and interpretation of fundamental definitions and terms | Jan 2019 |
| 19 | IS 14700(Part 3/Sec 2):2020 / IEC 61000-3-2(2018) | Electromagnetic compatibility Part 3 Limits Sec 2 Limits for harmonic current emmissions (equipment input current =< 16A per phase) (Second Revision) | Mar 2021 |
| 20 | IS 14700(Part 3/Sec 3):2018 | Electromegnetic compatibility (EMC) Part 3: Limits | Mar 2021 |

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| | / IEC 61000-3-3 (2013) | Sec-3 Limitations of voltage changes, Voltage flctuations and flicker in low voltage supply systems for equipment with rated current =<16A phase and not subject to conditional connection (Second Revision) | |
| 21 | IS 14700(Part 4/Sec 1):2019 / IEC 61000-4-1(2016) | Electromagnetic compatibility (EMC) Part 4 Testing and measurement techniques Section 1: Overview of the IEC 61000-4 series(Secound Revision) | May 2019 |
| 22 | IS 14700(Part 4/Sec 2):2018 / IEC 61000-4-2(2008) | Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 2: Electrostatic discharge immunity test (Second Revision) | Mar 2021 |
| 23* | IS 14700(Part 4/Sec 3):2018 / IEC 61000-4-3(2010) Doc. No. : LITD 09 (18776) | Electromagnetic compatibility (EMC) Part 4: Testing & measurement techniques Sec 3 Radiated, radio frequency, electromagnetic field immunity test (First Revision) | Sep 2020 |
| 24 | IS 14700(Part 4/Sec 4):2018 / IEC 61000-4-4(2012) | Electromagnetic compatibility (EMC) Part 4 Testing and measurement techniques - Sec 4 Electrical fast transient/burst immunity test (Second Revision ) | Mar 2021 |
| 25 | IS 14700(Part 4/Sec 5):2019 / IEC 61000-4-5(2017) | Electromagnetic compatibility (EMC) Part 4 Testing and measurement techniques - Sec 5 Electrical fast transient/burst immunity test (First Revision ) | May 2019 |
| 26 | IS 14700(Part 4/Sec 6):2016 / IEC 61000-4-6(2013) | Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques Sec 6 Immunity to conducted disturbances, induced by radio-frequency fields | Apr 2019 |
| 27 | IS 14700(Part 4/Sec 7):2017 / IEC 61000-4-7(2009) | Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 7- General guide on harmonic and interharmonics measurements and instrumentation, for power supply systems and equipment connected thereto(First Revision) | Dec 2020 |
| 28 | IS 14700(Part 4/Sec 8):2018 / IEC 61000-4-8(2009) | Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 8:Power frequency magnetic field immunity test (Second Revision) | Mar 2021 |
| 29 | IS 14700(Part 4/Sec 9):2019 / IEC 61000-4-9(2016) | Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 9:Impulse magnetic field immunity test (Second Revision) | May 2019 |
| 30 | IS 14700(Part 4/Sec 11):*2021* / IEC 61000-4-11(*2020*) | Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 11: Voltage dips, short interruptions and voltage variations immunity test | May 2017 |
| 31 | IS 14700(Part 4/Sec 12):2019 / IEC 61000-4-12(2017) | Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 12: Ring wave immunity test (Second Revision) | May 2019 |
| 32 | IS 14700(Part 4/Sec 13):2016 | Testing and measurement techniques - Harmonics | Apr 2019 |

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| | / IEC 61000-4-13(2009) | and interharmonics including mains signaling at a.c. power port, low frequency immunity tests | |
| 33 | IS 14700(Part 4/Sec 14):2018 / IEC 61000-4-14:2009 | Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 14 Voltage fluctuation immunity test for equipment with input current not exceeding 16 A per phase | May 2021 |
| 35 | IS 14700(Part 4/Sec 15):2018 / IEC 61000-4-15(2010) | Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 15:Flickermeter functional and design specification (Second Revision) | Mar 2021 |
| 36 | IS 14700(Part 4/Sec 16):2019 / IEC 61000-4-16(2015) | Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 16: Test for immunity to be conducted, Common mode disturbances in the frequency range 0Hz to 150 kHz (Second Revision) | May 2019 |
| 37 | IS 14700(Part 4/Sec 17):2018 / IEC 61000-4-17:2009 | Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 17 Ripple on d.c. input power port immunity test | May 2021 |
| 38 | IS 14700(Part 4/Sec 24):2018 / IEC 61000-4-24:2015 | Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 24 Test method for protective devices for HEMP conducted disturbance(First Revision) | Jul 2021 |
| 39 | IS 14700(Part 4/Sec 25):2018 / IEC 61000-4-25:2012 | Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 25HEMP immunity test methods for equipment and systems. | May 2021 |
| 40 | IS 14700(Part 4/Sec 32):2018 / IEC 61000-4-32:2002 | Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 32 High-Altitude Electromagnetic pulse HEMP Simulator Compendium | May 2021 |
| 41 | IS 14700(Part 4/Sec 33):2018 / IEC 61000-4-33:2005 | Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 33 Measurement method for high power transient parameters | Jun 2021 |
| 42 | IS 14700(Part 4/Sec 34):2017 / IEC 61000-4-34(2009) | EMC - Part 4-34:Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with mains current more than16A/phase | Dec 2020 |
| 43 | IS 14700(Part 4/Sec 35):2021 / IEC 61000-4-35:2009 | Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 35 HPEM simulator compedium | May 2021 |
| 44 | IS 14700(Part 6/Sec 1):2019 / IEC 61000-6-1(2016) | Electromagnetic compatibility (EMC)-Part 6 Generic standards Sec 1 Immunity standard for residential. Commercial and light-industrial environments(first Revision) | Jul 2019 |
| 45 | IS 14700(Part 6/Sec 2):2019 / IEC 61000-6-2(2016) | Electromagnetic compatibility (EMC)-Part 6 Generic standards Sec 2 Immunity for industrial environments (first Revision) | Jul 2019 |

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| 46 | IS 14700(Part 6/Sec 3):2021 / IEC 61000-6-3(2006) Doc. No. : LITD 09 (18776) | Electromagnetic compatibility (EMC) Part 6: Generic standards Section 3: Emission standards for residential, commercial and light industrial environment(First Revision) | May 2021 |
| 47 | IS 15040:2019 / CISPR 25 (2016) | Radio disturbance characteristics for the protection of receivers used on board vehicles, boats, and on devices - Limits and methods of measurement (First revision) | Dec 2019 |
| 48 | IS 15874:2009 / CISPR 28(1997) | Industrial scientific and medical equipment (ISM)- Guidelines for emission levels within the bands designated by the ITU | Jan 2019 |
| 49 | IS 16528:2017 / IEC 62232(2011) | Determination of RF field strength and SAR in the vicinity of radio communication base station for the purposed of evaluating human exposure | Dec 2020 |
| 50 | IS 62209(Part 1):2005 / IEC 62209-1(2005) | Human exposure to radio freq. fields from hand-held and body-mounted wireless comm. devices- Human models, inst. and procedures-Part 1 Procedure to determine the specific absorption rate(SAR)for hand-held devices used in close proximity to the ear(freq. ran | Dec 2021 |
| 51 | IS 62209(Part 2):*2019* / IEC 62209-2(*2019*) | Human exposure to radio freq. fields from hand-held and body-mounted wireless comm. devices- Human models, instrumentation and procedures : Part 2 Procedure to determine the SAR for wireless communication devices used in close proximity to the human body | Dec 2020 |
| 52 | IS 62209(Part 3):*2019* | Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices Part 3: Vector measurement-based systems (Frequency range of 600 MHz to 6 GHz) | |
| 53 | IS 62226(Part 1):2004 / IEC 62226-1(2004) | Exposure to electric or magnetic fields in the low and intermediate frequency range - Methods for calculating current density and internal electric field induced in the human body - Part 1 General | Feb 2021 |
| 54 | IS 62226(Part 2/Sec 1):2004 / IEC 62226-2-1(2004) | Exposure to electric or magnetic fields in the low and intermediate frequency range - Methods for calculating current density and internal electric field induced in the human body - Part 2 Exposure to magnetic fields - Sec 1 2D Models | Mar 2021 |
| 55 | IS 62226(Part 3/Sec 1):*2016* / IEC 62226-3-1 (2016) | Exposure to electric or magnetic fields in the low and intermediate frequency range- Methods for calculating the current density and internal electric field induced in the human body Part 3 Exposure to electric fields Section 1 Analytical and 2D numerical | Jul 2021 |
| 56 | IS 62233:2005 / IEC 62233 (2005) | Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure | Mar 2021 |
| 57 | IS 62311:*2018* / IEC62311(2018) | Assessment of electronic and electrical equipmentrelated to human exposure restrictions for electromagnetic fields (0Hz -300 GHz) | June 2021 |
| 58 | IS 62369(Part 1):2009 / IEC 62369-1:2009 | Evaluation of human exposure to electromagnetic fields from short range devices (SRDS) in various | Apr 2021 |

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|---|---|---|---|
| | | applications over the frequency range 0 GHz to 300 GHz - Part 1: Fields produced by devices used for electronic article surveillance, radio frequency id | |
| 59 | IS 62479:2010 / IEC 62479 (2010) | Assessment of the compliance of low - power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz) | Jul 2021 |
| 60 | IS 62577:2009 / IEC 62577 (2009) | Evaluation of human exposure to electromagnetic fields from a stand-alone broadcast transmitter (30 MHz - 40 GHz) | Jul 2021 |
| 61 | IS CISPR(Part 32):2015 / CISPR 32:2015 | Electromagnetic compatibility of multimedia Equipment Emission Requirements | May 2019 |
| 62 | *IS CISPR(Part 35):2016* / CISPR 35:2016 | Electromagnetic compatibility of multimedia Equipment Immunity Requirements | |

**ASPECT WISE REPORT**

| | |
|---|---|
| Product | 12 |
| METHODS OF TEST | 37 |
| CODES OF PRACTICES | 7 |
| TERMINOLOGY | 1 |
| OTHERS | 5 |
| **TOTAL :** | **62** |

**** INDICATES STANDARDS UNDER REVISION*** ***** INDICATES STANDARDS TO BE REVISED***

***/ INDICATES DUAL NUMBER STANDARDS*** ***| INDICATES EQUIVALENT STANDARDS***

**UNDER PRINTING**

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|---|---|---|
| 1. | **Doc. No. : LITD 09 (17072)**<br>**IS 10052 (Part 1/Sec 6)**<br>**CISPR 16-1-6: 2014** | **Specification for radio disturbance and immunity measuring apparatus and methods**<br>**Part 1 Radio disturbance and immunity measuring apparatus Section 6 EMC antenna calibration ICS 33.100.10; 33.100.20** |
| 2. | **Doc. No. : LITD 09 (17073)**<br>**IS/CISPR TR 29: 2020** | **Television broadcast receivers and associated equipment –**<br>**Immunity characteristics – Methods of objective picture assessment** |