

अनिवार्य आवश्यकताएँ

संख्या : TEC64731911

Essential Requirements

ER No. : TEC64731911

ISDN Customer Premises Equipment

© टीईसी, २०२०
© TEC, 2020

MTCTE के तहत जारी:

Issued under MTCTE by:

दूरसंचार अभियांत्रिकी केंद्र

भारत सरकार

खुर्शीद लाल भवन, जनपथ, नई दिल्ली - 110001, भारत

Telecommunication Engineering Centre

Government of India

Khurshid Lal Bhawan, Janpath, New Delhi-110001, INDIA

Essential Requirements for:

ISDN Customer Premises Equipment

Certification Scheme: **SCS**

Product Fee Group: **A**

This ER covers all types of ISDN Customer Premises Equipment

Note: Annexures referred to in this ER are Annexures as mentioned in "Annexures to ERs" No. TEC/SD/DD/TCP-222/02/June19 as updated from time to time and available on MTCTE portal.

This product has the following variants:

1. ISDN Terminal
2. PC card based ISDN Terminal
3. ISDN NT-1 Network Termination
4. Multipoint Conferencing Server
5. ISDN Terminal Adapter
6. ISDN Gateway

1. Variant 1 : ISDN Terminal

1.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
1.1.1	Conducted And Radiated Emission - Class B	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
1.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
1.1.3	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B

1.1.4	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
1.1.5	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
1.1.6	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
1.1.7	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
1.1.8	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
1.1.9	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1

1.2 Interface 1 : ISDN BRI

S.No.	Parameter Name	Standard Name
1.2.1	Layer-III BRI Specification - Call Clearing	Q.931. Annex-D1
1.2.2	Layer-III BRI Specification - Call Setup	Q.931. Annex-D1

2. Variant 2 : PC card based ISDN Terminal

2.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
2.1.1	Conducted And Radiated Emission - Class B	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
2.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
2.1.3	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
2.1.4	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
2.1.5	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
2.1.6	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
2.1.7	Immunity to RF Field Induced Conducted	TEC EMI EMC Standard EN/IEC:61000-4-6.

	Disturbance	Annex-B
2.1.8	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
2.1.9	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1

2.2 Interface 1 : ISDN BRI

S.No.	Parameter Name	Standard Name
2.2.1	Layer-III BRI Specification - Call Clearing	Q.931. Annex-D1
2.2.2	Layer-III BRI Specification - Call Setup	Q.931. Annex-D1

3. Variant 3 : ISDN NT-1 Network Termination

3.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
3.1.1	Conducted And Radiated Emission - Class B	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
3.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
3.1.3	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
3.1.4	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
3.1.5	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
3.1.6	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
3.1.7	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
3.1.8	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
3.1.9	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1

3.2 Interface 1 : ISDN BRI

S.No.	Parameter Name	Standard Name
3.2.1	Layer-III BRI Specification - Call Clearing	Q.931. Annex-D1
3.2.2	Layer-III BRI Specification - Call Setup	Q.931. Annex-D1

4. Variant 4 : Multipoint Conferencing Server

4.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
4.1.1	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
4.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
4.1.3	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
4.1.4	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
4.1.5	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
4.1.6	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
4.1.7	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
4.1.8	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
4.1.9	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1

4.2 Interface 1 : ISDN BRI

S.No.	Parameter Name	Standard Name
4.2.1	Layer-III BRI Specification - Call Clearing	Q.931. Annex-D1
4.2.2	Layer-III BRI Specification - Call Setup	Q.931. Annex-D1

4.3 Interface 2 : ISDN PRI

S.No.	Parameter Name	Standard Name
-------	----------------	---------------

4.3.1	Bit Rate Tolerance for PRI	G.703 Cl. 11.1 ETSI TBR-4 Cl. 9.2.3. Annex-I
4.3.2	Input Jitter Tolerance for PRI	G.823 I.431 ETSI TBR-4. Annex-I
4.3.3	Input Return Loss for PRI	G.703 Cl. 11.3 ETSI TBR-4 Cl. 9.3.1. Annex-I
4.3.4	Layer-III PRI Specification - Call Clearing	Q.931. Annex-D1
4.3.5	Layer-III PRI Specification - Call Setup	Q.931. Annex-D1
4.3.6	Output Jitter for PRI	G.823 I.431 ETSI TBR-4. Annex-I
4.3.7	Pulse Mask for PRI	G.703 Cl. 11.2 ETSI TBR-4 Cl. 9.2.1. Annex-I

5. Variant 5 : ISDN Terminal Adapter

5.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
5.1.1	Conducted And Radiated Emission - Class B	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
5.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
5.1.3	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
5.1.4	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
5.1.5	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
5.1.6	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
5.1.7	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
5.1.8	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
5.1.9	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1

5.2 Interface 1 : 2 Wire Trunk

S.No.	Parameter Name	Standard Name
5.2.1	Current on Junction/ Trunk line	Annex-D
5.2.2	DC Resistance	ETSI TBR-21 Annex-D
5.2.3	Longitudinal Conversion Loss for 2W Trunk Int	Q.552 Cl 2.2.2 Annex- D
5.2.4	Resistance to Earth	ETSI TBR-21 Annex-D
5.2.5	Return Loss for 2 W Trunk Int	Q.552 Cl 2.2.1.2 Annex-D
5.2.6	Transmission of DTMF signalling	Q.23 Cl. 6 and 7. Annex-D

5.3 Interface 2 : ISDN BRI

S.No.	Parameter Name	Standard Name
5.3.1	Layer-III BRI Specification - Call Clearing	Q.931. Annex-D1
5.3.2	Layer-III BRI Specification - Call Setup	Q.931. Annex-D1

6. Variant 6 : ISDN Gateway

6.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
6.1.1	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
6.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
6.1.3	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
6.1.4	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
6.1.5	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
6.1.6	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
6.1.7	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
6.1.8	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B

6.1.9	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1
-------	---------------------	---

6.2 Interface 1 : Fast Ethernet Electrical

S.No.	Parameter Name	Standard Name
6.2.1	Link Speed and Autonegotiation Test FE	IEEE 802.3 Annex-H

6.3 Interface 2 : Gigabit Ethernet Electrical

S.No.	Parameter Name	Standard Name
6.3.1	Link Speed and Autonegotiation Test GE	IEEE 802.3. Annex-H

6.4 Interface 3 : ISDN PRI

S.No.	Parameter Name	Standard Name
6.4.1	Bit Rate Tolerance for PRI	G.703 Cl. 11.1 ETSI TBR-4 Cl. 9.2.3. Annex-I
6.4.2	Input Jitter Tolerance for PRI	G.823 I.431 ETSI TBR-4. Annex-I
6.4.3	Input Return Loss for PRI	G.703 Cl. 11.3 ETSI TBR-4 Cl. 9.3.1. Annex-I
6.4.4	Layer-III PRI Specification - Call Clearing	Q.931. Annex-D1
6.4.5	Layer-III PRI Specification - Call Setup	Q.931. Annex-D1
6.4.6	Output Jitter for PRI	G.823 I.431 ETSI TBR-4. Annex-I
6.4.7	Pulse Mask for PRI	G.703 Cl. 11.2 ETSI TBR-4 Cl. 9.2.1. Annex-I