

अनिवार्य आवश्यकतायें
संख्या: TEC64731906

Essential Requirement
ER No.: TEC64731906

ISDN Customer Premises Equipment

© टीईसी, २०१८
© TEC, 2018

Issued under MTCTE by:

दूरसंचार अभियांत्रिकी केंद्र

भारत सरकार

खुर्शीदलाल भवन, जनपथ, नई दिल्ली - 110001, भारत

Telecom Engineering Centre

Government of India

Khurshidlal 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

This product has the following variants:

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

Variant 1 : ISDN Gateway

Mandatory Parameters

Parameter Name	Standard Name
IT Equipment Safety	IS 13252. IEC:60950-1 or IEC 62368 Annex-A1
Conducted And Radiated Emission - Class A	TEC EMI EMC Standard, CISPR 22/32, EN55022/32. Annex-B
Immunity to Electrostatic Discharge	TEC EMI EMC Standard, EN/IEC:61000-4-2. Annex-B
Immunity to Radiated RF	TEC EMI EMC Standard, EN/IEC:61000-4-3. Annex-B
Immunity to Fast Transients (Burst)	TEC EMI EMC Standard, EN/IEC:61000-4-4. Annex-B
Immunity to Surges	TEC EMI EMC Standard, EN/IEC:61000-4-5. Annex-B
Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard, EN/IEC:61000-4-6. Annex-B
Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard, EN/IEC:61000-4-11. Annex-B
Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B

Mandatory Parameters if interface selected: Fast Ethernet Electrical

Parameter Name	Standard Name
Link Speed and Autonegotiation Test FE	IEEE 802.3 Cl. 28 Annex-H

Mandatory Parameters if interface selected: Gigabit Ethernet Electrical

Parameter Name	Standard Name
Link Speed and Autonegotiation Test GE	IEEE 802.3. Annex-H

Mandatory Parameters if interface selected: ISDN PRI

Parameter Name	Standard Name
-----------------------	----------------------

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

Variant 2 : ISDN NT-1 Network Termination

Mandatory Parameters

Parameter Name	Standard Name
IT Equipment Safety	IS 13252. IEC:60950-1 or IEC 62368 Annex-A1
Conducted And Radiated Emission - Class B	TEC EMI EMC Standard, CISPR 22/32, EN55022/32. Annex-B
Immunity to Electrostatic Discharge	TEC EMI EMC Standard, EN/IEC:61000-4-2. Annex-B
Immunity to Radiated RF	TEC EMI EMC Standard, EN/IEC:61000-4-3. Annex-B
Immunity to Fast Transients (Burst)	TEC EMI EMC Standard, EN/IEC:61000-4-4. Annex-B
Immunity to Surges	TEC EMI EMC Standard, EN/IEC:61000-4-5. Annex-B
Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard, EN/IEC:61000-4-6. Annex-B
Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard, EN/IEC:61000-4-11. Annex-B
Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B

Mandatory Parameters if interface selected: ISDN BRI

Parameter Name	Standard Name
Layer-III BRI Specification - Call Setup	Q.931. Annex-D1
Layer-III BRI Specification - Call Clearing	Q.931. Annex-D1

Variant 3 : ISDN Terminal

Mandatory Parameters

Parameter Name	Standard Name
IT Equipment Safety	IS 13252. IEC:60950-1 or IEC 62368 Annex-A1
Conducted And Radiated Emission - Class B	TEC EMI EMC Standard, CISPR 22/32, EN55022/32. Annex-B
Immunity to Electrostatic Discharge	TEC EMI EMC Standard, EN/IEC:61000-4-2. Annex-B
Immunity to Radiated RF	TEC EMI EMC Standard, EN/IEC:61000-4-3. Annex-B
Immunity to Fast Transients (Burst)	TEC EMI EMC Standard, EN/IEC:61000-4-4. Annex-B
Immunity to Surges	TEC EMI EMC Standard, EN/IEC:61000-4-5. Annex-B
Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard, EN/IEC:61000-4-6. Annex-B
Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard, EN/IEC:61000-4-11. Annex-B
Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B

Mandatory Parameters if interface selected: ISDN BRI

Parameter Name	Standard Name
Layer-III BRI Specification - Call Setup	Q.931. Annex-D1
Layer-III BRI Specification - Call Clearing	Q.931. Annex-D1

Variant 4 : ISDN Terminal Adapter

Mandatory Parameters

Parameter Name	Standard Name
IT Equipment Safety	IS 13252. IEC:60950-1 or IEC 62368 Annex-A1
Conducted And Radiated Emission - Class B	TEC EMI EMC Standard, CISPR 22/32, EN55022/32. Annex-B
Immunity to Electrostatic Discharge	TEC EMI EMC Standard, EN/IEC:61000-4-2. Annex-B
Immunity to Radiated RF	TEC EMI EMC Standard, EN/IEC:61000-4-3. Annex-B
Immunity to Fast Transients (Burst)	TEC EMI EMC Standard, EN/IEC:61000-4-4. Annex-B
Immunity to Surges	TEC EMI EMC Standard, EN/IEC:61000-4-5. Annex-B
Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard, EN/IEC:61000-4-6. Annex-B
Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard, EN/IEC:61000-4-11. Annex-B
Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
Transmission of DTMF signalling	Q.23 Cl. 6 and 7. Annex-D

Mandatory Parameters if interface selected: 2 Wire Trunk

Parameter Name	Standard Name
Longitudinal Conversion Loss for 2W Trunk Int	Q.552 Cl 2.2.2, Annex- D
DC Resistance	ETSI TBR-21, Annex-D
Resistance to Earth	ETSI TBR-21, Annex-D
Return Loss for 2 W Trunk Int	Q.552 Cl 2.2.1.2, Annex- D
Minimum Current on Junction/ Trunk line	Annex-D

Mandatory Parameters if interface selected: ISDN BRI

Parameter Name	Standard Name
Layer-III BRI Specification - Call Setup	Q.931. Annex-D1
Layer-III BRI Specification - Call Clearing	Q.931. Annex-D1

Variant 5 : Multipoint Conferencing Server

Mandatory Parameters

Parameter Name	Standard Name
IT Equipment Safety	IS 13252. IEC:60950-1 or IEC 62368 Annex-A1
Conducted And Radiated Emission - Class A	TEC EMI EMC Standard, CISPR 22/32, EN55022/32. Annex-B
Immunity to Electrostatic Discharge	TEC EMI EMC Standard, EN/IEC:61000-4-2. Annex-B
Immunity to Radiated RF	TEC EMI EMC Standard, EN/IEC:61000-4-3. Annex-B
Immunity to Fast Transients (Burst)	TEC EMI EMC Standard, EN/IEC:61000-4-4. Annex-B
Immunity to Surges	TEC EMI EMC Standard, EN/IEC:61000-4-5. Annex-B
Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard, EN/IEC:61000-4-6. Annex-B
Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard, EN/IEC:61000-4-11. Annex-B
Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B

Mandatory Parameters if interface selected: ISDN BRI

Parameter Name	Standard Name
Layer-III BRI Specification - Call Setup	Q.931. Annex-D1
Layer-III BRI Specification - Call Clearing	Q.931. Annex-D1

Mandatory Parameters if interface selected: ISDN PRI

Parameter Name	Standard Name
Bit Rate Tolerance for PRI	G.703 Cl. 11.1, ETSI TBR-4 Cl. 9.2.3. Annex-I
Input Jitter Tolerance for PRI	G.823, I.431, ETSI TBR-4. Annex-I
Input Return Loss for PRI	G.703 Cl. 11.3, ETSI TBR-4 Cl. 9.3.1. Annex-I
Output Jitter for PRI	G.823, I.431, ETSI TBR-4. Annex-I
Pulse Mask for PRI	G.703 Cl. 11.2, ETSI TBR-4 Cl. 9.2.1. Annex-I
Layer-III PRI Specification - Call Setup	Q.931. Annex-D1
Layer-III PRI Specification - Call Clearing	Q.931. Annex-D1

Variant 6 : PC card based ISDN Terminal

Mandatory Parameters

Parameter Name	Standard Name
IT Equipment Safety	IS 13252. IEC:60950-1 or IEC 62368 Annex-A1
Conducted And Radiated Emission - Class B	TEC EMI EMC Standard, CISPR 22/32, EN55022/32. Annex-B
Immunity to Electrostatic Discharge	TEC EMI EMC Standard, EN/IEC:61000-4-2. Annex-B
Immunity to Radiated RF	TEC EMI EMC Standard, EN/IEC:61000-4-3. Annex-B
Immunity to Fast Transients (Burst)	TEC EMI EMC Standard, EN/IEC:61000-4-4. Annex-B
Immunity to Surges	TEC EMI EMC Standard, EN/IEC:61000-4-5. Annex-B
Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard, EN/IEC:61000-4-6. Annex-B
Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard, EN/IEC:61000-4-11. Annex-B
Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B

Mandatory Parameters if interface selected: ISDN BRI

Parameter Name	Standard Name
Layer-III BRI Specification - Call Setup	Q.931. Annex-D1
Layer-III BRI Specification - Call Clearing	Q.931. Annex-D1