



**PRODUCT MANUAL FOR
CABLE TRUNKING AND DUCTING SYSTEMS
FOR ELECTRICAL INSTALLATIONS –
INTENDED FOR MOUNTING ON WALLS OR CEILING
ACCORDING TO IS 14927 (Part 2):2001**

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	Product	:	IS 14927(Part 2):2001
	Title	:	Cable Trunking and ducting systems for Electrical Installations - intended for mounting on walls or ceilings
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	-
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	12 pieces
3.	List of Test Equipment	:	Please refer ANNEX – B
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – C
5.	Possible tests in a day : Please refer ANNEX – D		
6.	Scope of the Licence :		
	Licence is granted to use Standard Mark as per IS 14927(Part 2):2001 with the following scope:		
	Name of Product :	Cable Trunking and ducting systems for Electrical Installations - intended for mounting on walls or ceilings	
	Classification :	As per Cl. 6 of IS 14927 (Part 2):2001	
	Size :		

ANNEX A

Grouping Guidelines

1. The parameters as given below shall be considered for grouping of Cable Trunking and Ducting Systems (CT/DS) for Electrical Installations - intended for mounting on walls or ceilings as per IS 14927 (Part 2):2001 for GoL/CSoL:
 - i. Material – Metal / Insulating Material / Composite Material
 - ii. Mechanical Properties (Grade of Mechanical Stress) – Very Light / Light / Medium / Heavy / Very Heavy
 - iii. Electrical Characteristics – With or without Electrical Continuity/ With or without Electrical Insulating Characteristics
 - iv. Cover Retention of the System – Access Cover removable without Tools / Access Cover Removable with Tools
2. Considering the above, one sample of CT/DS with highest size from each Material, Grade of Mechanical Stress, Electrical Characteristics and Cover Retention of the System shall be tested to cover all the sizes of that variety tested.
3. However, if CT/DS with Electrical Continuity Characteristics is tested, CT/DS without Electrical Continuity Characteristics may also be covered. Similarly if CT/DS with Electrical Insulating Characteristics is tested, CT/DS without Electrical Insulating characteristics may also be covered.
4. If CT/DS with system components that are removable with tools is tested, CT/DS with system components that are removable without tools may also be covered.
5. The Firm shall declare the varieties of CT/DS intended to be covered in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
6. During the operation of the Licence, BO shall ensure that all the varieties covered in the Licence are tested in rotation, to the extent possible.

ANNEX B**List Of Test Equipment***Major test equipment required to test as per the Indian Standard*

S. No.	Test Equipment	Tests used in with Clause Reference
1.	Digital Vernier Calliper Micrometer Measuring tape	Cl. 8 - Dimensions
2.	Finger Test Apparatus Digital Compression Test Apparatus Torque Meter	Cl. 9 - Construction
3.	Travelling Microscope with magnifying glass Ball Pressure Test Apparatus	Cl. 10 – Mechanical Properties
4.	Impact Test Apparatus Conditioning chamber with digital temperature controller Air Oven	
5.	Flame Test Apparatus Glow Wire Test Apparatus with Timer	Cl. 11 – Resistance to flame propagation
6.	Electrical continuity test apparatus AC High Voltage Tester Million Mega ohm meter Water Bath with digital temperature controller Hour meter Humidity chamber	Cl. 12 – Electrical characteristics

The above list is indicative only and may not be treated as exhaustive.

ANNEX C

Scheme Of Inspection And Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipment.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – In addition to the requirements of IS 14927 (Part 2):2001, the nominal size of trunking/ducting and wall thickness shall also be marked.

4. CONTROL UNIT – All CT/DS of the same classification and size manufactured in a day shall constitute a control unit.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of [Table 1](#) and the levels of control in column 3 of [Table 1](#), shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standard and covered by the licence should be marked with Standard Mark.

6. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1

(1)				(2)	(3)	
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control	
Cl.	Requirement	Test Methods			No. of Sample	Frequency
		Clause	Reference			
7	Marking	7	IS 14927(Part 2)	R	Each CT/DS	
8	Dimension	8	IS 14927(Part 2)	R	Three	Each Control Unit
7	Durability of Marking	7.2	IS 14927(Part 1)	R	Three	Each Control Unit
9	Construction	9.1	IS 14927(Part 1)	R	As mentioned in Cl. 5.101 of IS 14927 (Part 2)	Each Control Unit
		9.1.101	IS 14927(Part 2)	R		Once in a week
		9.2,10.2, 12.2	IS 14927(Part 1)	R		Once in a week from each classification and size
		9.3	IS 14927(Part 1)	R		
	Access to Live Parts	9.4	IS 14927(Part 1)	R		
		9.4.1	IS 14927(Part 2)			
	Construction	9.5	IS 14927(Part 1)	R		
Membranes	9.6					
Glands	9.7					
10.3	Impact Test	10.3	IS 14927(Part 2)	R		Once in three months from each classification and size
10.5	External Load Test	10.5.101	IS 14927(Part 2)	R		Once in a week from each classification and size
10.6	Cover Retention Test	10.6	IS 14927(Part 1)	R		
11	Resistance to Flame Propagation	11	IS 14927(Part 1)	R		
12	Electrical Characteristics	12	IS 14927(Part 1)	R		

Note-1: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.

ANNEX D

Possible Tests in a day

1. Dimension
2. Marking
3. Access to live parts
4. Resistance to Flame Propagation
5. Cover Retention Test
6. External Load Test