

CERTIFICATE

of Conformity

Low Voltage Directive (EU) 2014/35

Registration No.: AN 50645828 0001
Report No.: CN2418X6 001
Holder: EASCO ELECTRICAL (JIANG SU) CO,LTD.
No.88 Chaoyang Road, Huiping Town,
Qidong City,
226265 Jiangsu
P.R. China
Product: Cable trunking systems
(Cable Trunking Length and Cover)

Type designation listed on the next page

This certificate of conformity is based on an evaluation of a sample of the above-mentioned product. Technical Report and documentation are at the License Holder's disposal. This is to certify that the tested sample is in conformity with Annex I of Council Directive (EU) 2014/35, referred to as the Low Voltage Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex IV of the Directive.

Date: 2024-09-06

Certification Body


Paulus Hou



TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

The CE marking may be used if all relevant and effective EC Directives/Regulations are complied with.

CERTIFICATE

of Conformity

Low Voltage Directive (EU) 2014/35

Registration No.: AN 50645828 0001

Product: Cable trunking systems
(Cable Trunking Length and Cover)

Identification:

Type Designation

SDRHF025030	SDRHF030030	SDRHF025375	SDRHF375375
SDRHF050375	SDRHF025040	SDRHF040040	SDRHF060040
SDRHF080040	SDRHF100040	SDRHF025050	SDRHF375050
SDRHF050050	SDRHF075050	SDRHF100050	SDRHF125050
SDRHF025060	SDRHF030060	SDRHF040060	SDRHF060060
SDRHF080060	SDRHF100060	SDRHF120060	SDRHF045065
SDRHF025075	SDRHF375075	SDRHF050075	SDRHF075075
SDRHF100075	SDRHF125075	SDRHF025080	SDRHF035080
SDRHF040080	SDRHF060080	SDRHF080080	SDRHF100080
SDRHF120080	SDRHF033100	SDRHF040100	SDRHF050100
SDRHF060100	SDRHF075100	SDRHF080100	SDRHF100100
SDRHF025025	SDRHF040025		




Serial No. : Engineering sample

Remark: Refer to test report CN2418X6 001 for details



TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

The CE marking may be used if all relevant and effective EC Directives/Regulations are complied with.

Prüfbericht-Nr.: <i>Test report no.:</i>	CN2418X6 001	Auftrags-Nr.: <i>Order no.:</i>	180299223	Seite 1 von 35 Page 1 of 35
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2024-07-05	
Auftraggeber: <i>Client:</i>	EASCO ELECTRICAL (JIANG SU) CO., LTD. No.88 Chaoyang Road, Huiping Town, Qidong City, 226265 Jiangsu, P.R. China			
Prüfgegenstand: <i>Test item:</i>	Cable Trunking Length and Cover			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	SDRHF Series (details see page 5)			
Auftrags-Inhalt: <i>Order content:</i>	Type test			
Prüfgrundlage: <i>Test specification:</i>	EN 50085-2-2:2008 EN 50085-1:2005+A1:2013			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2024-07-15			
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003777435			
Prüfzeitraum: <i>Testing period:</i>	2024-07-19 - 2024-08-27			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland / CCIC (Ningbo) Co., Ltd			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland / CCIC (Ningbo) Co., Ltd			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>			genehmigt von: <i>authorized by:</i>	
Datum: <i>Date:</i> 2024-09-04	Signed by: Jane Hu		Ausstellungsdatum: <i>Issue date:</i> 2024-09-05	Signed by: Jie Zheng
Stellung / Position:	Project Engineer		Stellung / Position:	Report authorizer
Sonstiges / <i>Other:</i>	This report was issued for type test of Slotted Cable Trunking Length and Cover.			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet				
* Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

Prüfbericht-Nr.: CN2418X6 001
Test report no.:

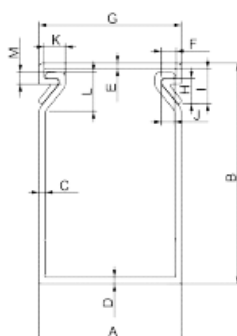
Seite 2 von 35
Page 2 of 35

Absatz Clause	Anforderungen - Prüfungen / Requirements - Tests	Messergebnisse – Bemerkungen/ Measuring results - Remarks	Ergebnis Result
1	<p>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</p> <p><i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i></p>		
2	<p>Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben. Informationen zur Verifizierung der Authentizität unserer Dokumente erhalten Sie auf folgender Webseite: go.tuv.com/digital-signature</p> <p><i>As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged. For information on verifying the authenticity of our documents, please visit the following website: go.tuv.com/digital-signature</i></p>		
3	<p>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.</p> <p><i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i></p>		
4	<p>Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.</p> <p><i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i></p>		

TEST REPORT EN 50085-2-2 Cable trunking systems and cable ducting systems for electrical installations Part 2-2: Particular requirements for cable trunking systems and cable ducting systems intended for mounting underfloor, flushfloor, or onfloor	
Report reference No.	CN2418X6 001
Compiled by (+ signature)	See cover sheet
Approved by (+ signature)	See cover sheet
Date of issue	See cover sheet
Testing laboratory	TÜV Rheinland / CCIC (Ningbo) Co., Ltd.
Address	3F Building C13, R&D Park, No.32 , Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo, 315048, P.R. China
Testing location	As above
Applicant	EASCO ELECTRICAL (JIANG SU) CO., LTD.
Address	No.88 Chaoyang Road, Huiping Town, Qidong City, 226265 Jiangsu P.R. China
Standard	EN 50085-2-2:2008 (in conjunction with EN 50085-1:2005+A1:2013)
Test procedure	Type test
Non-standard test method	N/A
Test Report Form No.	TRF_EN 50085-2-2Ed.1.0
TRF originator	TÜV Rheinland
Master TRF	Dated 2017-03
Type of test object	Cable Trunking Length and Cover
Trademark	EASCO
Model/type reference	SDRHF Series (details see page 5)
Manufacturer	Same as applicant
Rating	-25 ° C to 90 ° C; IP20

Summary of testing:	
Tests performed (name of test and test clause): All relevant test.	Testing location: TÜV Rheinland / CCIC (Ningbo) Co., Ltd. 3F Building C13, R&D Park, No.32 , Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo, 315048, P.R. China
Copy of marking plate:	
	
Remark: information of manufacture and impoter will be marked on the package	
General product information:	
Cable Trunking length and cover, IP20, -25 °C to 90 °C, IP20, Max length 2m. Non-metallic materials:	
Material	Manufacturer
PC/ABS	EASCO ELECTRICAL (JIANG SU) CO., LTD.
Model names: SDRHF025030, SDRHF030030, SDRHF025375, SDRHF375375 SDRHF050375, SDRHF025040, SDRHF040040, SDRHF060040 SDRHF080040, SDRHF100040, SDRHF025050, SDRHF375050 SDRHF050050, SDRHF075050, SDRHF100050, SDRHF125050 SDRHF025060, SDRHF030060, SDRHF040060, SDRHF060060 SDRHF080060, SDRHF100060, SDRHF120060, SDRHF045065 SDRHF025075, SDRHF375075, SDRHF050075, SDRHF075075 SDRHF100075, SDRHF125075, SDRHF025080, SDRHF035080 SDRHF040080, SDRHF060080, SDRHF080080, SDRHF100080 SDRHF120080, SDRHF033100, SDRHF040100, SDRHF050100 SDRHF060100, SDRHF075100, SDRHF080100, SDRHF100100 SDRHF025025, SDRHF040025	

Dimension:



Unit :mm

Part No.	WXH	A	B	C	D	E	F	G	H	I	J	K	L	M	N	14AWG /PCS	Length
SDRHF		Bottom channel Width	Side overall Height	Side wall Thickness	Bottom Thickness	Lid Thickness	Lid latch lip Width	Lid Width	Lid lip Height	Lid side overall Height	channel lip latch Width	channel latch lip Width	Channel overall latch Height	Channel latch	Channel overall Height		
SDRHF025025	25 x 25	25.00	25.00	1.40	1.40	1.40	4.15	25.00	6.60	9.45	3.56	6.90	9.80	2.80	23.00	10-25	2m
SDRHF040025	40 x 25	40.00	25.00	1.50	1.50	1.45	4.15	40.00	6.80	9.50	3.56	6.90	9.80	2.80	23.00	25-35	2m
SDRHF025030	25 x 30	25.00	30.00	1.40	1.40	1.40	4.15	25.00	6.60	9.45	3.56	6.90	9.80	2.80	28.00	15-25	2m
SDRHF030030	30 x 30	30.00	30.00	1.50	1.50	1.40	4.15	30.00	6.60	9.45	3.56	6.90	9.80	3.00	28.00	15-25	2m
SDRHF025375	25 x 37.5	25.00	37.50	1.50	1.50	1.40	4.15	25.00	6.60	9.45	3.56	6.90	9.80	3.00	35.50	15-25	2m
SDRHF375375	37.5 x 37.5	37.50	37.50	1.60	1.60	1.40	4.15	37.50	6.60	9.45	3.56	6.90	9.80	3.00	35.50	25-35	2m
SDRHF050375	50 x 37.5	50.00	37.50	1.60	1.60	1.50	4.15	50.00	6.60	9.45	3.56	6.90	9.80	3.00	35.50	50-60	2m
SDRHF025040	25 x 40	25.00	40.00	1.60	1.60	1.40	4.15	25.00	6.60	9.45	3.80	5.85	9.80	3.00	38.00	20-25	2m
SDRHF040040	40 x 40	40.00	40.00	1.60	1.60	1.45	4.15	40.00	6.60	9.45	3.80	5.85	9.80	3.10	38.00	60-70	2m
SDRHF060040	60 x 40	60.00	40.00	1.60	1.60	1.50	4.15	60.00	6.60	9.45	3.80	5.85	9.80	3.10	38.00	100-115	2m
SDRHF080040	80 x 40	80.00	40.00	1.80	1.80	1.60	4.15	80.00	7.10	9.45	4.15	6.20	9.80	3.30	38.00	150-170	2m
SDRHF100040	100 x 40	100.00	40.00	1.80	1.80	1.70	4.40	100.00	7.10	9.45	4.15	6.20	9.80	3.30	38.00	200-240	2m
SDRHF025050	25 x 50	25.00	50.00	1.50	1.50	1.40	4.15	25.00	6.60	9.45	3.80	5.85	9.80	4.50	48.00	20-25	2m
SDRHF375050	37.5 x 50	37.50	50.00	1.50	1.50	1.40	4.15	37.50	6.60	9.45	3.80	5.85	9.80	4.50	48.00	50-60	2m
SDRHF050050	50 x 50	50.00	50.00	1.60	1.60	1.50	4.15	50.00	6.60	9.45	3.80	5.85	9.80	3.10	48.00	80-90	2m
SDRHF075050	75 x 50	75.00	50.00	1.80	1.80	1.60	4.15	75.00	7.10	9.45	4.15	6.20	9.80	3.30	48.00	150-170	2m
SDRHF100050	100 x 50	100.00	50.00	1.80	1.80	1.70	4.40	100.00	7.10	9.45	4.15	6.20	9.80	3.30	48.00	200-240	2m
SDRHF125050	125 x 50	125.00	50.00	2.00	2.00	1.70	4.60	125.00	7.10	9.45	4.15	6.20	9.80	3.50	48.00	210-250	2m
SDRHF025080	25 x 80	25.00	60.00	1.70	1.70	1.40	4.15	25.00	6.60	9.45	3.80	5.85	9.80	3.10	58.00	40-45	2m
SDRHF030080	30 x 80	30.00	60.00	1.70	1.70	1.40	4.15	30.00	6.60	9.45	3.80	5.85	9.80	3.10	58.00	40-45	2m
SDRHF040080	40 x 80	40.00	60.00	1.80	1.80	1.45	4.15	40.00	6.60	9.45	3.80	5.85	9.80	3.10	58.00	100-115	2m
SDRHF060080	60 x 80	60.00	60.00	1.80	1.80	1.50	4.15	60.00	6.60	9.45	3.80	5.85	9.80	3.10	58.00	120-135	2m
SDRHF080080	80 x 80	80.00	60.00	1.90	1.90	1.60	4.40	80.00	7.10	9.45	4.15	6.20	9.80	3.30	58.00	180-240	2m
SDRHF100080	100 x 80	100.00	60.00	2.00	2.00	1.70	4.60	100.00	7.10	9.45	4.15	6.20	9.80	3.50	58.00	190-250	2m
SDRHF120080	120 x 80	120.00	60.00	2.10	2.10	1.70	4.70	120.00	7.10	9.45	4.15	6.20	9.80	3.50	58.00	200-260	2m
SDRHF045085	45 x 85	45.00	65.00	1.80	1.80	1.50	4.15	45.00	6.60	9.45	3.80	5.85	9.80	3.30	63.00	110-120	2m
SDRHF025075	25 x 75	25.00	75.00	1.80	1.80	1.40	4.15	25.00	6.60	9.45	3.80	5.85	9.80	3.10	73.00	100-120	2m
SDRHF375075	37.5 x 75	37.50	75.00	1.80	1.80	1.40	4.15	37.50	6.60	9.45	3.80	5.85	9.80	3.10	73.00	110-130	2m
SDRHF050075	50 x 75	50.00	75.00	2.00	2.00	1.50	4.15	50.00	6.60	9.45	3.80	6.20	9.80	3.50	73.00	150-190	2m
SDRHF075075	75 x 75	75.00	75.00	2.10	2.10	1.60	4.15	75.00	6.60	9.45	3.80	6.20	9.80	3.50	73.00	190-210	2m
SDRHF100075	100 x 75	100.00	75.00	2.20	2.20	1.70	4.50	100.00	7.10	9.45	4.15	6.20	9.80	3.50	73.00	250-340	2m
SDRHF125075	125 x 75	125.00	75.00	2.20	2.20	1.70	4.50	125.00	7.10	9.45	4.15	6.20	9.80	3.50	73.00	260-350	2m
SDRHF025080	25 x 80	25.00	80.00	1.80	1.80	1.40	4.15	25.00	6.60	9.45	3.80	5.85	9.80	3.10	78.00	100-120	2m
SDRHF035080	35 x 80	35.00	80.00	1.80	1.80	1.40	4.15	35.00	6.60	9.45	3.80	5.85	9.80	3.10	78.00	120-140	2m
SDRHF040080	40 x 80	40.00	80.00	1.80	1.80	1.45	4.15	40.00	6.60	9.45	3.80	5.85	9.80	3.10	78.00	190-210	2m
SDRHF060080	60 x 80	60.00	80.00	1.80	1.80	1.50	4.15	60.00	6.60	9.45	3.80	5.85	9.80	3.10	78.00	180-210	2m
SDRHF080080	80 x 80	80.00	80.00	2.00	2.00	1.60	4.50	80.00	6.60	9.45	3.80	6.20	9.80	3.50	78.00	240-290	2m
SDRHF100080	100 x 80	100.00	80.00	2.20	2.20	1.70	4.50	100.00	7.10	9.45	4.15	6.20	9.80	3.50	78.00	260-350	2m
SDRHF120080	120 x 80	120.00	80.00	2.20	2.20	1.70	4.50	120.00	7.10	9.45	4.15	6.20	9.80	3.50	78.00	260-350	2m
SDRHF033100	33 x 100	33.00	100.00	2.00	2.00	1.40	4.15	33.00	6.60	9.45	3.80	6.20	9.80	3.50	98.00	110-160	2m
SDRHF040100	40 x 100	40.00	100.00	2.00	2.00	1.45	4.15	40.00	6.60	9.45	3.80	6.20	9.80	3.50	98.00	130-170	2m
SDRHF050100	50 x 100	50.00	100.00	2.00	2.00	1.50	4.15	50.00	6.60	9.45	3.80	6.20	9.80	3.50	98.00	220-250	2m
SDRHF060100	60 x 100	60.00	100.00	2.10	2.10	1.50	4.15	60.00	6.60	9.45	3.80	6.20	9.80	3.50	98.00	240-290	2m
SDRHF075100	75 x 100	75.00	100.00	2.10	2.10	1.60	4.15	75.00	6.60	9.45	3.80	6.20	9.80	3.50	98.00	250-350	2m
SDRHF080100	80 x 100	80.00	100.00	2.10	2.10	1.60	4.15	80.00	6.60	9.45	3.80	6.20	9.80	3.50	98.00	260-350	2m
SDRHF100100	100 x 100	100.00	100.00	2.20	2.20	1.70	4.50	100.00	7.10	9.45	4.15	6.20	9.80	3.50	98.00	300-400	2m

Test item particulars	
Resistance to impact for installation and application	0,5 J / 0,7 J / 1 J / 2 J / 5 J / 10 J / 20 J
Minimum storage and transport temperature	<input type="checkbox"/> - 45; <input checked="" type="checkbox"/> - 25; <input type="checkbox"/> - 15; <input type="checkbox"/> - 5
Minimum installation and application temperature:	<input checked="" type="checkbox"/> - 25; <input type="checkbox"/> - 15; <input type="checkbox"/> - 5; <input type="checkbox"/> + 5; <input type="checkbox"/> + 15
Maximum application temperature	<input type="checkbox"/> + 60; <input checked="" type="checkbox"/> + 90; <input type="checkbox"/> + 105; <input type="checkbox"/> + 120
Resistance to flame propagation	Flame propagating / Non-flame propagating
Electrical continuity characteristic	with electrical continuity characteristic / without electrical continuity characteristic
Degree of protection against harmful ingress of solid foreign objects	
Degree of protection against access to hazardous parts.....	IP2X / IP4X / IP5X
Degree of protection against harmful ingress of water	IPX0 / IPX4 / IPX5
The system access cover retention	opened without a tool / only be opened with a tool
Electrical insulating characteristic	with electrical insulating characteristic / without electrical insulating characteristic
CTS/CDS floor treatment	for dry-treatment of floor / for wet-treatment of floor when the service unit is not in use / for wet-treatment of floor when the service unit is in use
Resistance to vertical load applied through small surface area.....	CTS/CDS for 500 N / 750 N / 1 000 N / 1 500 N / 2 000 N / 2 500 N / 3 000 N
Optional classification according to resistance to vertical load applied through large surface area ..	CTS/CDS for 2 000 N / 3 000 N / 5 000 N / 10 000 N / 15 000 N

Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement	F (Fail)
Testing:	
Date of receipt of test item	See cover page
Date (s) of performance of tests	See cover page
General remark:	
<p>The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a comma (point) is used as the decimal separator.</p>	

Manufacturer information:

Same as applicant.

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
7	MARKING AND DOCUMENTATION		—
7.1	Each system component shall be marked with		—
	- the manufacturer's or responsible vendor's name or trade mark or identification mark,		P
	- a product identification mark, which may be, for example, a catalogue number, a symbol or the like.		P
	When system components other than trunking length, ducting length and apparatus mounting device are supplied in a package and it is not feasible to have both markings legible due to the small size of the item:		N/A
	- if only one legible marking is feasible, it is sufficient to mark the product identification on the smallest supplied package, the name or trade mark being marked on the product,		N/A
	- if no legible marking is feasible, it is sufficient to place both markings on the smallest supplied package".		N/A
	When it is not possible to have a legible marking on small components, due to the small size of the item, it is sufficient to place these markings on the smallest supplied package.		N/A
	Flame propagating system component shall be clearly identified as being flame propagating on the system component and on the smallest supplied package or label.		N/A
	When it is not feasible to have this identification mean on small system components, due to the small size of the item, it is sufficient to place this identification mean on the smallest supplied package.		N/A
7.2	Marking shall be durable and easily legible.		P
	Check by rubbing the marking by hand for 15 s with a piece of cotton cloth soaked with water and again for 15 s with a piece of cotton cloth soaked with petroleum spirit.		P
	After the rubbing test, the marking shall be legible.		P
7.3	The manufacturer shall provide in his documentation all information necessary for the proper and safe installation and use. It shall include:		—
	- components of the system,		P
	- function of the system components and their assemblies,		P
	- classification of the system in accordance with Clause 6,		P

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
	- linear impedance, in Ω/m , of trunking length or ducting length of system declared according to 6.5.1,		N/A
	- rated voltage of CTS/CDS declared according to 6.6.2,		N/A
	- usable cross sectional area, in mm^2 , for cables of the CTS/CDS,		P
	- instructions to reach the declared classification and functions of the system.		P
7.4	Correct symbols used		P
	For the marking of rated current and rated voltage the figures may be used alone		P
7.101	Access units and service units of systems classified according to 6.101.1 shall be marked that they are suitable for dry treatment of floor only		N/A
7.102	Service units shall be marked with a warning about the potential damage to electrical accessories by closing the cover		N/A
8	DIMENSIONS		—
	There are no dimensions requirements		—
9	CONSTRUCTION		—
9.1	Sharp edges		P
	Any surface or edge shall not damage the insulated conductors or cables.		P
	Compliance is checked by inspection, if necessary after cutting the samples apart.		P
	Screws, studs or other securing devices provided shall be fitted so as not to damage the insulated conductors or cables.		P
9.2	Apparatus mounting		N/A
	If the CTS/CDS is provided with means for the mounting of apparatus, these means shall adequately secure this apparatus.		N/A
	Compliance is checked by the test of 10.5.		N/A
9.3	Means for protective separation and/or retention		N/A
	If the CTS/CDS is provided with means for the protective separation and/or retention, these means shall have adequate mechanical performance to fulfil their function.		N/A
	Compliance is checked by the tests of 10.2.		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
9.4	Mechanical connections		N/A
	Screwed connections and other mechanical connections shall withstand the mechanical stresses during installation and normal use.		N/A
	Screws shall be one or more of the following:		—
	a) ISO-metric threads,		N/A
	b) thread forming type,		N/A
	c) thread cutting type if suitable design provisions are made;		N/A
	d) threads other than a) to c) as specified by the manufacturer.		N/A
	Mechanical connections of CTS used to allow the laying in of insulated conductors or cables or relocation of an apparatus shall be intended for re-use.		N/A
	Compliance is checked by the tests of 9.4.1, 9.4.2 and 9.4.3 respectively.		N/A
9.4.1	Screws intended for re-use shall not be tightened by sudden or jerky motions.		N/A
	To test the screw it shall be tightened and removed:		—
	– 10 times for metal screws in engagement with a thread of non-metallic material and for screws of non-metallic material, or		N/A
	– 5 times in all other cases.		N/A
	The test is carried out using a suitable screwdriver or spanner to apply a torque, as specified by the manufacturer. In case the manufacturer does not specify the torque, the values of Table 4 apply.		N/A
	After the test there shall be no damage that will impair the further use of the screwed connection.		N/A

Table 4	Torque values for the test of screwed connections			
	Nominal thread \varnothing (mm)	Torque for metal screws (Nm)		—
	4,2	1,8		N/A
	3,9	1,2		N/A
	3,5	0,8		N/A
	2,6	0,4		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
9.4.2	Mechanical connections intended for re-use other than screwed connections, shall be fitted and removed 10 times.		N/A
	After the test there shall be no damage to impair the further use of the mechanical connection.		N/A
9.4.3	Mechanical connections not intended for re-use are checked by inspection.		P
9.5	Accessible conductive parts	No such parts	N/A
	Accessible conductive parts of CTS/CDS shall comply with 9.5.1 unless they comply with 9.5.2.		N/A
9.5.1	Accessible conductive parts of CTS/CDS installed according to the manufacturer's instructions, which are likely to become live in the event of an insulation fault, shall have the provision for reliable connection to earth.		N/A
	If precautions are taken in order to prevent creepage distances and clearances from becoming less than 3 mm, even if a conductor should become loose from its terminal, the accessible conductive part is not considered likely to become live.		N/A
	Protection against electric shock in case of a fault may be omitted for accessible conductive parts which, owing to their reduced dimensions (up to approximately 50 mm x 50 mm) or their disposition, cannot be gripped or come into significant contact with a part of the human body and provided that connection with a protective conductor could only be made with difficulty or would be unreliable.		N/A
	Compliance is checked by inspection, measurement and if necessary by the appropriate test of 11.1.2 or 11.2. Before the test the samples are subjected to conditioning according to 11.1.1 respectively 11.2.2.		N/A
9.5.2	Accessible conductive parts need not have provision for connection to earth if they are insulated from live parts with supplementary or reinforced insulation used to form barriers or linings which shall be designed in such a way that:		—
	– they cannot be removed without being permanently damaged or,		N/A
	– they cannot be replaced in an incorrect position or,		N/A
	– if omitted, the system is rendered inoperable or manifestly incomplete.		N/A
9.6	Equipotential bonding		N/A
9.6.1	The manufacturer shall declare if the CTS/CDS can be used for equipotential bonding.		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
9.6.2	If there is a provision for bonding, compliance is checked by the tests of 11.1.2. Before the test the sample is subjected to conditioning of 11.1.1.		N/A
9.7	Access to live parts		N/A
9.7.1	CTS/CDS shall be so designed that when they are installed and fitted with apparatus and/or other electrical equipment as in normal use, live parts are not accessible.	CTS is submitted without apparatus or other electrical equipments. It shall be checked after final installation.	N/A
	Compliance is checked by inspection and, if necessary, by the tests of 9.7.2, 9.7.3 and 9.7.4 on the sample installed and fitted with apparatus and/or other electrical equipment as in normal use.		N/A
	The tests are carried out after all parts removable without tools are removed.		N/A
9.7.2	The test probe B of EN 61032:1998 is applied in every possible position, an electrical indicator with a voltage not less than 40 V and not more than 50 V being used to show contact with the relevant part.		N/A
9.7.3	Non-metallic system components and composite system components are subjected to the following additional test, which is carried out at the temperature declared according to Table 3.		N/A
	The sample is subjected for 1 min to a force of 50 N applied through the tip of test probe 11 of EN 61032:1998.		N/A
	This test probe 11 with an electrical indicator as described in 9.7.2 is applied to all places where yielding of insulating material could impair the safety of the system but is not to be applied to knockouts, membranes and the like.		N/A
	During this test system components and their associated fixing devices shall not deform to such an extent that live parts can be touched with the test probe 11.		N/A
9.7.4	Knockouts are subjected for 1 min to a force of 10 N applied through the tip of test probe 11 of EN 61032:1998.	No knockouts	N/A
	During this test, knockouts shall not break.		N/A
9.8	Inlet openings	No inlet openings	N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
	Inlet openings, if any, shall allow the introduction of conduits and/or the like, or the protective covering of the cable at least 1 mm into the system component, in order to maintain the mechanical protection.		N/A
	Inlet openings for conduits shall be capable of accepting conduit sizes according to EN 60423:1994.		N/A
9.9	Membranes	No such parts.	N/A
9.9.1	Membranes and the like which prevent access to live parts shall withstand the mechanical stresses occurring in normal use.		N/A
	The manufacturer shall declare the dimensions of the cables which may be installed in the entry membranes.		N/A
9.9.2	Membranes are tested when assembled in the system. The sample is placed for 2 h in a heating cabinet the temperature being maintained at the value declared according to Table 3. Immediately after this period a force of 30 N is applied for 5 s to various regions of the membrane through the tip of test probe 11 of EN 61032:1998. For membranes likely to be subjected to an axial pull force in normal use, an axial pull force of 30 N is applied for 5 s.		
	During this test, the membranes shall not deform to such an extent that live parts become accessible and the membranes shall not become detached.		N/A
9.9.3	Entry membranes shall allow the introduction of cables into the system at the minimum installation temperature declared according to Table 2.		N/A
9.9.4	The system component shall be fitted with entry membranes which have not been subjected to any ageing treatment, those without openings being suitably pierced.		N/A
	The sample is then kept for 2 h in a refrigerator at the temperature declared according to Table 2.		N/A
	After this period the sample is removed from the refrigerator, and immediately afterwards, while the sample is still cold, it shall be possible to introduce through the entry membranes without undue force, cables having the largest outside dimension as declared.		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
9.9.5	After the tests of 9.9.2 and 9.9.4, the membranes shall show no cracks or similar damages visible to normal or corrected vision without magnification that are likely to impair safety.		N/A
9.10	Cable restrainer		N/A
	Cable restrainers, if any, shall relieve conductors from strain in terminals or terminations by resisting the pull force on cable or insulated conductors.		N/A
	It shall be clear or indicated in the manufacturer's instructions how the relief from strain is intended to be effected.		N/A
	Cable restrainers shall		N/A
	<ul style="list-style-type: none"> be suitable for the different types of cable and the different types and number of insulated conductors according to the manufacturer's instructions, 		N/A
	<ul style="list-style-type: none"> be such that at least part of it is integral with or permanently fixed to a system component, 		N/A
	<ul style="list-style-type: none"> not use makeshift method such as tying cable or insulated conductor in a knot or tying the ends with string, 		N/A
	<ul style="list-style-type: none"> not impair electrical safety. 		N/A
	Compliance is checked by inspection and by the following test.		N/A
	The cable restrainer is fitted with a cable of the smallest outside dimension. The screws, if any, are tightened with a torque as specified by the manufacturer.		N/A
	An axial pull force of 20 N is applied for 60 s to the cable or to each insulated conductor.		N/A
	The test is then repeated with the cable restrainer fitted with a cable of the largest outside dimension or with insulated conductors of the largest outside dimension for which it is intended.		N/A
	After any of the tests:		—
	<ul style="list-style-type: none"> the longitudinal displacement of the cable or any insulated conductor in the restrainer shall not be more than 2 mm and 		N/A
	<ul style="list-style-type: none"> electrical safety shall not be impaired. 		N/A
9.11	Internal protective partition		
	Under consideration.		

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
9.12	Cable anchorage	No such parts.	N/A
	Cable anchorage, if any, shall relieve conductors from strain in terminals or terminations by resisting the pull and twist forces on cable.		N/A
	It shall be clear or indicated in the manufacturer's instructions how the relief from strain is intended to be effected.		N/A
	Cable anchorage shall:		—
	• be suitable for the different types of cable according to the manufacturer's instructions;		N/A
	• be such that at least part of it is integral with or permanently fixed to a system component;		N/A
	• not use makeshift method such as tying cable in a knot or tying the ends with string;		N/A
	• not impair electrical safety;		N/A
	Compliance is checked by inspection and by the following test.		N/A
	The effectiveness of the cable anchorage is checked by means of apparatus as shown in Figure 8 and Figure 9.		N/A
	The cable anchorage is fitted with a cable of the smallest outside dimension. The screws, if any, are tightened with a torque as specified by the manufacturer.		N/A
	The cable is then subjected 50 times for 1 s to a pull force and immediately afterwards the cable is subjected to a torque for 15 s \pm 1 s applied as near as practicable to the cable entry.		N/A
9.101	Access covers, which in normal use are subjected to external mechanical loads, shall resist movement and unintentional opening.		P
9.102	Service units installed flush floor shall protect the installed electrical apparatus and the plug from direct impact when in use		N/A
9.103	It shall be possible to securely fix:		N/A
	- service units to the system;		N/A
	- electrical apparatus to the service units.		N/A
9.104	When the service unit is not in use, it shall be possible to close openings intended for the passage of cables		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict

9.105	Underfloor and flushfloor CTS/CDS which in normal use are embedded in screed material shall be protected against ingress of the screed material		N/A
9.106	CTS/CDS declared according to 6.101.2 and 6.101.3 shall avoid water coming into contact with insulated conductors and live parts during wet-treatment of floor		N/A
9.107	Access cover of service unit, if any, shall withstand repeated opening and closing as in normal use.		P

Table4	Minimum outside dimension of cable (mm)	Force (N)	Torque (Nm)		—
					N/A
	The test is then repeated with the cable anchorage fitted with a cable of the largest outside dimension for which it is intended.				N/A
	After any of the tests:				—
	<ul style="list-style-type: none"> the longitudinal displacement of the cable in the cable anchorage shall not be more than 2 mm and 				P
	<ul style="list-style-type: none"> the cable shall not have turned in the cable anchorage more than 2 revolutions and 				N/A
	<ul style="list-style-type: none"> electrical safety shall not be impaired. 				N/A

10	MECHANICAL PROPERTIES		—
10.1	Mechanical strength		P
	CTS/CDS shall have adequate mechanical strength.		P
	Compliance is checked by the tests of 10.2 to 10.5.		P
10.2	Cable support test		—
	The test is described in the appropriate Part 2.		—
10.3	Impact test		P
10.3.1	Impact test for storage and transport		P
10.3.1.1	The test is carried out on samples of trunking lengths or ducting lengths each 250 mm ± 5 mm long.		P

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
	Before the test, non-metallic system components and composite system components are aged at the temperature declared according to Table 3 for 168 h continuously.	90° C, 168h	P
10.3.1.2	The test apparatus consists basically of a hammer which falls freely from rest through a vertical height on to an intermediate part placed on the sample held in a horizontal plane.		P
	The following conditions are also complied with:		—
	– the fall of the hammer is along a guideway, for example a tube, with negligible braking,		P
	– the guideway does not rest on the sample,		P
	— the mass of the hammer is 0,5 kg + 0,005 / 0 kg and the fall height is 100 mm ± 1 mm,		P
	— the intermediate part is made in a steel 20 mm diameter cylinder. Its lower surface has a 300 mm bending radius and its mass is 100 g		P
	The samples are placed in a refrigerator at the temperature declared according to Table 1.	-25° C, 2h	P
10.3.1.3	After 2 h, each sample is, in turn, removed from the refrigerator and immediately placed in position in the test apparatus.		P
	At 12 s after the removal of the sample from the refrigerator the hammer is allowed to fall so that an impact is applied as far as possible perpendicular to the region likely to be the weakest accessible region. Compliance with impact applied before 10 s provides also compliance with this test of the standard.		P
	This test is not applied to knockouts, membranes and the like, and within 50 mm of each end.		P
10.3.1.4	After the test the samples shall show no signs of disintegration nor shall there be any cracks or similar damages visible to normal or corrected vision without magnification that are likely to impair safety.		P
10.3.2	Impact test for installation and application		P
10.3.2.101	The test is carried out on an assembly made of one or more lengths with the relevant system component, if any, to fulfil the various functions of the system and prepared according to the manufacturer's instructions.		P
	Before the test non metallic system components and composite system components are aged at a temperature declared according to Table 3 for (168 ± 4) h continuously.	90° C, 168h	P

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
10.3.2.102	The impact test apparatus according to EN 60068-2-75, is mounted on a solid wall or structure providing sufficient support		P
10.3.2.103	The samples are treated at a temperature declared according to Table 2 for 2 h		P
	At 12 s \pm 2 s after the removal of the sample from the cabinet the hammer is allowed to fall, to be the weakest		P
10.3.2.104	After the test:		P
	- the assemblies shall show no cracks or similar damage visible to normal or corrected vision without magnification and		P
	- the assemblies shall remain intact and		P
	- the service unit cover shall be in a position		P
	such that safety is not impaired.		P

Table 6	Resistance to impact classification	Equivalent mass (kg)	Fall height (mm) \pm 1 %		—
	Impact 1J	0,25	400		P
	In addition, the manufacturer may declare the CTS/CDS IK code according to EN 62262 following Annex C (normative).				N/A

10.4	Linear deflection test		—
10.5	External mechanical load test		—
10.5.1	Fixing test for apparatus mounting of socket outlets	No such part	N/A
	An apparatus-mounting device is fitted on a sample of the relevant system component, in the middle of its length unless otherwise stated in the manufacturer's instructions. When the relevant system component is a trunking length or a ducting length, the sample is 250 mm \pm 5 mm long or 100 mm \pm 5 mm longer than the apparatus mounting device, whichever is the greater.		N/A
	If the results of the tests are dependent on the temperature the tests are carried out at a temperature of 60 °C \pm 2 °C.		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
	A pull and a press force of 1,5 times the maximum withdrawal force of the plug is applied in turn to the apparatus fixing of the apparatus mounting device for 1 min in the most unfavourable position and direction within an angle of 45° to 90° from the front surface.		N/A
	The maximum withdrawal force for the plug is taken from the relevant standard. When there is no relevant standard, a maximum withdrawal force of 50 N is used.		N/A
	After the test, electrical safety shall not be impaired. In case of doubt, the test of 14.1.3 shall be carried out on the assembly to check that the declared degree of protection against access to hazardous parts is maintained. The declared degree of protection against access to hazardous parts is either the additional letter directly declared by the manufacturer according 6.7.3, if any, or the degree of protection against access to hazardous parts indirectly declared by the manufacturer according to 6.7.1.		N/A
	Immediately after this test, the apparatus mounting device is subjected to a torque of 3,0 Nm \pm 0,2 Nm, clockwise and anticlockwise. The duration of the test is 1 min in each direction.		N/A
	During the test, the apparatus mounting device shall not turn more than an angle of 15° from its initial position and after the test electrical safety shall not be impaired.		N/A
10.5.2	Fixing test for apparatus mounting other than socket outlets		N/A
	For other apparatus, only a pull and press force test is carried out according to the test of 10.5.1 with a force of 50 N \pm 2 N.		N/A
10.5.101	Underfloor CTS/CDS, flushfloor CTS/CDS and onfloor CTS/CDS shall have sufficient mechanical strength against external mechanical loads		P
10.5.102	Load test for installation		N/A
10.5.103	Load test for application - Force applied through small surface area		P
10.5.104	Load test for application - Force applied through large surface area		N/A
10.6	System access cover retention		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict

	Access cover of system components of systems classified according to 6.9.2 shall not be capable of being opened without a tool.		N/A
	Compliance is checked by the following test.		N/A
	Before the test, non-metallic system components and composite system components are aged at the temperature declared according to Table 3 for 168 h continuously.		N/A
	The system component is firmly fixed and the access cover fitted.		N/A
	Without the use of a tool, all reasonable effort shall be made to open the access cover manually.		N/A
	After the test, the access cover shall remain secured.		N/A

11	ELECTRICAL PROPERTIES		—
11.1	Electrical continuity		N/A
	CTS/CDS declared according to 6.5.1 shall have adequate conductivity.		N/A
	Compliance is checked by the tests of 11.1.2 carried out after conditioning according to 11.1.1 on sample arrangements having a minimum length of 1m at middle line, each made of one or two trunking lengths or ducting lengths with the relevant system component, if any.		N/A
	Where electrical connections include screwed connections, the screwed connections are tightened by applying the torque specified by the manufacturer. In case the manufacturer does not specify the torque, 2/3 of the values of Table 4 apply.		N/A
11.1.1	Preparation and conditioning		N/A
	All grease is removed from the parts to be tested, by cleaning with white spirit with a kauri-butanol value of 35 ± 5 . The samples are then immersed for 10 min in a 10 % solution of ammoniumchloride in water at a temperature of $20\text{ °C} \pm 5\text{ °C}$. Without drying, but after shaking off any drops, the samples are then placed for 10 min in a box containing air saturated with moisture at a temperature of $20\text{ °C} \pm 5\text{ °C}$.		N/A
	The samples shall then be dried for 10 min in a heating cabinet at a temperature of $100\text{ °C} \pm 5\text{ °C}$ and are left at room temperature for 24 h.		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
11.1.2	Electrical impedance tests		N/A
	A current derived from an a.c. source having a no-load voltage not exceeding 12 V and equal to $25 \text{ A} \pm 1 \text{ A}$ at the nominal frequency 50 Hz is passed through the four sample arrangements of 11.1.2.1 to 11.1.2.4, and the voltage drop is measured:		N/A
11.1.2.1	Impedance of ducting length or trunking length		N/A
	The test is carried out on one or more of the following samples according to the manufacturer's declaration:		N/A
	– ducting length;		N/A
	– base of trunking length;		N/A
	– access cover of trunking length;		N/A
	– trunking length.		N/A
	The voltage drop V is measured between two convenient points as shown in Figure 6a. The impedance Z_1 is calculated using the following formula:		N/A
	$Z_1 = \Delta V / (I \times d_1) \text{ (}\Omega/\text{m)}$		N/A
	Z_1 shall not be greater than the declared value.		N/A
11.1.2.2	Impedance of a joint		N/A
	The test is carried out on the following samples:		N/A
	– two assembled trunking lengths or assembled ducting lengths;		N/A
	– trunking length or ducting length assembled with a different system component.		N/A
	The voltage drop V is measured as shown in Figure 6b between two convenient points each on one side of the joint and separated by distance of at least 50 mm from the coupling area. The impedance Z_2 is calculated using the following formula:		N/A
	$Z_2 = \Delta V / I - d_2 \times Z_1 \text{ (}\Omega\text{)}$		N/A
	where Z_1 is the impedance of the relevant ducting length or trunking length as calculated in 11.1.2.1;		N/A
	Z_2 shall not be greater than $50 \text{ m}\Omega$.		N/A
11.1.2.3	Impedance of connection between trunking base and access cover		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
	If the manufacturer declares that the system provides appropriate electrical continuity between the base and access cover for good earthing then the following test is carried out on one of the following samples:		N/A
	– one access cover having a length equal to the smallest length of access cover allowed by the manufacturer's instruction mounted on a base as long as the access cover but at least 100 mm long;		N/A
	– system component.		N/A
	The voltage drop V is measured as shown in Figure 6c between both sides of the connection. The impedance Z_3 is calculated using the following formula:		N/A
	$Z_3 = \Delta V / I \text{ (}\Omega\text{)}$		N/A
	Z_3 shall not be greater than 50 m Ω .		N/A
11.1.2.4	Impedance of the connection of the earthing terminal or termination		N/A
	The test is carried out on system components fitted or intended to be fitted with earthing terminal or termination.		N/A
	The voltage drop V is measured as shown in Figure 6d between the earthing terminal or termination and a point separated by a distance d_3 of 10 mm to 20 mm from the edge of the earthing terminal or termination along the line of current flow. The impedance Z_4 is calculated using the following formula:		N/A
	$Z_4 = \Delta V / I \text{ (}\Omega\text{)}$		N/A
	Z_4 shall not be greater than 50 m Ω .		N/A
11.2	Electrical insulation		N/A
11.2.1	Solid insulation		N/A
	System components, which form part of the enclosure, of CTS/CDS declared according to 6.6.2 shall be capable of withstanding electrical stress, which is likely to occur.		N/A
	Internal protective partitions, declared by the manufacturer as providing supplementary insulation, shall be capable of withstanding electrical stress, which is likely to occur.	No such partitions.	N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
	Compliance is checked by the tests according to 11.2.3 and 11.2.4 using the same sample, after conditioning and preparation according to 11.2.2.		N/A
	For trunking lengths and ducting lengths the samples are 250 mm \pm 5 mm long. Other system components are tested as supplied. Where internal protective partitions are declared by the manufacturer as providing supplementary insulation, the solid insulation is tested in the same way as system components forming part of the enclosure.		N/A
11.2.2	Conditioning and preparation		N/A
	The humidity treatment is carried out in a humidity cabinet with a relative humidity between 91 % and 95 % at a temperature t maintained within ± 1 °C of any convenient value between 25 °C and 30 °C.		N/A
	Before being placed in the humidity cabinet, the samples are brought to a temperature between t and $t + 4$ °C. This may be achieved by keeping them at this temperature for at least 4 h before the humidity treatment.		N/A
	The samples are kept in the cabinet for 120 h.		N/A
	Immediately after conditioning, two conductive foils used as electrodes are applied, one to the outer surface and one to the inner surface of the sample to provide an area of overlap not less than 2 500 mm ² . When 2 500 mm ² cannot be achieved, the maximum possible area of overlap is used.		N/A
	The foils are pushed into corners and the like with a maximum force of 10 N so as to provide good contact with the surface, using the test probe 11 of EN 61032, if necessary after cutting the sample.		N/A
	A distance of at least 2 mm from edges and openings is maintained in order to prevent short circuit between the electrodes through the air or along the surface of the sample.		N/A
11.2.3	Insulation resistance test		N/A
	The insulation resistance is measured by applying between the electrodes a d.c. voltage of 500 V \pm 25 V. The measurement is made 60 s (+ 10/0) s after the application of the voltage. The insulation resistance shall be not less than 100 M Ω .		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
11.2.4	Dielectric strength test		N/A
	Immediately after the test of 11.2.3, a voltage of $(2 U_n + 1\,000)$ V, where U_n is the rated voltage, of substantially sine-wave form and having a nominal frequency of 50 Hz, is then applied between electrodes.	Un: 500V Test voltage: 3750V	N/A
	Initially not more than half the voltage is applied and this is raised to the test voltage as rapidly as possible without transient overvoltage. The voltage is maintained for 5 s (+ 1/0) s.		N/A
	The high-voltage transformer used for the test shall be so designed that, when the output terminals are short-circuited after the output voltage has been adjusted to the appropriate test voltage, the output current is of at least 200 mA.		N/A
	The overcurrent relay shall not trip when the output current is less than 100 mA.		N/A
	No flashover or breakdown shall occur during the test.		N/A
12	THERMAL PROPERTIES		—
12.1	Resistance to heat		—
	Non-metallic or composite system components shall have adequate resistance to heat.		P
	Compliance is checked by test of 9.7, 9.9, 10.5, 12.2 and 12.3.		P
12.2	Non-metallic or composite system components necessary to retain current-carrying parts in position are subjected to a ball-pressure test by means of the apparatus shown in Figure 5.	No components are intended to retain current-carrying parts.	N/A
	Before the test is started, the ball and the support on which the sample shall be placed are brought to the temperature specified. The part under test shall be placed on a 3 mm thick steel plate in direct contact with it so as to be supported to withstand the test force.		N/A
	When it is not possible to carry out the test on the sample, the test shall be carried out on a piece of the same material at least 2 mm thick.		N/A
	The surface of the part to be tested is placed in the horizontal position and a steel ball of 5 mm diameter is pressed against the surface with a force of 20 N.		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
	The test is carried out in a heating cabinet at a temperature of $125\text{ °C} \pm 2\text{ °C}$. After 1 h, the ball is removed from the sample which is then cooled down within 10 s to approximately room temperature by immersion in cold water.		N/A
	The diameter of the impression caused by the ball is measured and shall not exceed 2 mm.		N/A
12.3	Non-metallic or composite system components not necessary to retain current-carrying parts in position, but in contact with them and non-metallic or composite system components which retain parts of the protective earthing circuit, are subjected to the ball-pressure test of 12.2 but the test is carried out at a temperature of $70\text{ °C} \pm 2\text{ °C}$.		N/A
13	FIRE HAZARD		P
13.1	Reaction to fire		P
13.1.1	Initiation of fire		P
	Non-metallic system components and composite system components which might be exposed to abnormal heat due to electrical effects and deterioration of which might impair the safety of the system, shall not initiate fire.		P
	Compliance is checked by the following test.		P
	The glow-wire test is performed according to Clauses 4 to 10 of EN 60695-2-11 under the following conditions:		P
	– for non-metallic or composite parts of system components necessary to retain current-carrying parts in position, by the test carried out at a temperature of 850 °C ;		N/A
	– for non-metallic or composite parts of system components not necessary to retain current-carrying parts and parts of the earthing circuit in position, but in contact with them, by the test carried out at a temperature of 650 °C .		P
	Small parts, such as washers, are not subjected to the test of this subclause.		N/A
	The tests are not carried out on parts of ceramic material.	No such parts.	N/A
	If possible, the sample should be a complete system component.		P
	If the test cannot be carried out on a complete system component, a suitable part may be cut from it for the purpose of the test.		P

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
	The test is carried out on one sample that is permitted to be tested at more than one point.		P
	In case of doubt, the test shall be repeated on two further samples.		P
	The test is carried out by applying the glow-wire once for $30 \text{ s} \pm 1 \text{ s}$.		P
	The sample is regarded as having passed the glow-wire test if		P
	– there is no visible flame and no sustained glowing, or if		P
	– flames or glowing of the sample extinguish within 30 s after the removal of the glow-wire.		N/A
	There shall be no ignition of the tissue paper or scorching of the board.		P
13.1.2	Contribution to fire		—
	Non metallic system components and composite system components shall not actively contribute to fire.		P
	Compliance is checked by the following test.		P
	The glow-wire test is performed according to Clauses 4 to 10 of EN 60695-2-11 on all parts under the conditions specified in 13.1.1 at a temperature of 650 °C.		P
	Parts, which have already been tested at 650 °C or 850 °C according to 13.1.1, are not tested again at this temperature.		P
	Small parts and parts in ceramic material are not tested.		N/A
13.1.3	Spread of fire		—
	Non-flame propagating CTS/CDS shall either not ignite or if ignited, shall not continue to burn when the source of ignition is removed.		P
	Non-metallic system component or metallic system component coated in paint or any other substance, which is likely to affect its resistance to flame propagation, is to be considered as a composite component and tested accordingly.		P
	Compliance is checked		P
	– for trunking lengths or ducting lengths of non-metallic or composite material by the following test,		P
	– for other system components of non-metallic or composite material by the test of 13.1.1 at a temperature of 650 °C.		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
	System components, which have already been tested at 650 °C or 850 °C according to 13.1.1, are not tested again at this temperature.		N/A
	The test is carried out with a length of 675 mm \pm 10 mm. If partitions are not integral with the sample, a partition shall be mounted on the trunking length or ducting length. Other parts may be added to the sample at the request of the manufacturer.		P
	The test is performed using the burner specified in EN 60695-2-4/1.		P
	The sample is placed as shown in Figure 3 in a rectangular metal enclosure with an open front face as shown in Figure 4 in an area substantially free from draughts. It shall be clamped at both ends, in order to prevent distortion or movement of the sample itself under flame application conditions.		P
	The burner is positioned in such a way that the axis forms an angle of $45^\circ \pm 2^\circ$ with the vertical one. The flame is applied to the sample so that the distance from the top of the burner tube to the sample measured along the axis of the burner tube is 100 mm \pm 10 mm, and the axis of the flame intersects with the surface of the sample at a point 100 mm \pm 5 mm above the upper extremity of the lower clamp. The upper extremity of the lower clamp is 500 mm \pm 10 mm above the internal lower surface of the enclosure as shown in Figure 4.		P
	The internal lower surface of the enclosure shall be covered with a piece of soft whitewood board, approximately 10 mm thick, covered with a single layer of wrapping paper.		P
	The sample is subjected to the exposure of the flame for 60 s \pm 2 s.		P
	The sample is regarded as having passed the test if		—
	- it does not ignite, or if		P
	- in the case of ignition, the following three conditions are fulfilled:		—
	1) the flame extinguishes within 30 s after removal of the test flame;		N/A
	2) there is no ignition of the wrapping paper or scorching of the board;		N/A
	3) after wiping of the sample, there is no evidence of burning or charring above 50 mm below the lower extremity of the upper clamp.		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
14	EXTERNAL INFLUENCES		P
14.1	Degree of protection provided by enclosure		P
	CTS/CDS, when assembled and installed according to the manufacturer's instructions, shall provide adequate protection according to the classification declared by the manufacturer with a minimum of IP20.	IP20	P
	Compliance is checked by the tests of 14.1.1, 14.1.2 and 14.1.3.		P
	The system declared by the manufacturer is tested in the most unfavourable installation positions according to the manufacture's instruction. Each assembly is made of one or more trunking lengths or ducting lengths of 250 mm \pm 5 mm with the relevant system component, if any, to fulfil the various functions of the system. More than one assembly may be necessary to fulfil the various functions of the system. Where necessary, the open ends of the assembly are plugged or are not part of the test.		P
	The following ageing treatment is carried out before the tests of 14.1.1, 14.1.2 and 14.1.3.		P
	The assemblies are placed in a heating cabinet for 168 h at the maximum application temperature as declared by the manufacturer according to Table 3.		P
	The assemblies are then removed from the cabinet and kept at room temperature for not less than 24 h.		P
	Assemblies designed for opening are opened and closed five times.		P
14.1.1	Protection against ingress of solid foreign objects		—
14.1.1.1	The assembly is tested in accordance with the appropriate test of EN 60529:1991. For numeral 5, category 2 applies.		P
14.1.1.2	The assembly tested for numeral 5 or 6 passes the test if there is no ingress of dust visible to normal or corrected vision without magnification.		N/A
14.1.2	Protection against ingress of water		—
14.1.2.1	The assembly is tested in accordance with the appropriate test of EN 60529		N/A
14.1.2.2	The assembly tested for numeral 1 and above passes the test if there is no ingress of water in hazardous quantity.		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict

	The quantity in mm ³ is considered as non hazardous when the volume of water which has penetrated the assembly is less than:		N/A
	$5 \times 10^{-3} \times \text{cross sectional area (mm}^2\text{)} \times [250 \text{ (mm)} \times \text{number of trunking lengths or ducting lengths} + \text{the length (mm) along the centre line of the relevant system component if any}]$.		N/A
	The measurement of the volume of water is made with a syringe after wiping of the exterior of the assembly and careful removal of the access covers, if any.		N/A
14.1.3	Protection against access to hazardous parts		—
14.1.3.1	The assembly is tested in accordance with the appropriate test of EN 60529:1991.		N/A
14.1.3.2	The probe shall not enter the space for the accommodation of circuits.		N/A

15	ELECTROMAGNETIC COMPATIBILITY		—
	Products covered by this standard are, in normal use, passive in respect of electromagnetic influences (emission and immunity).		N/A

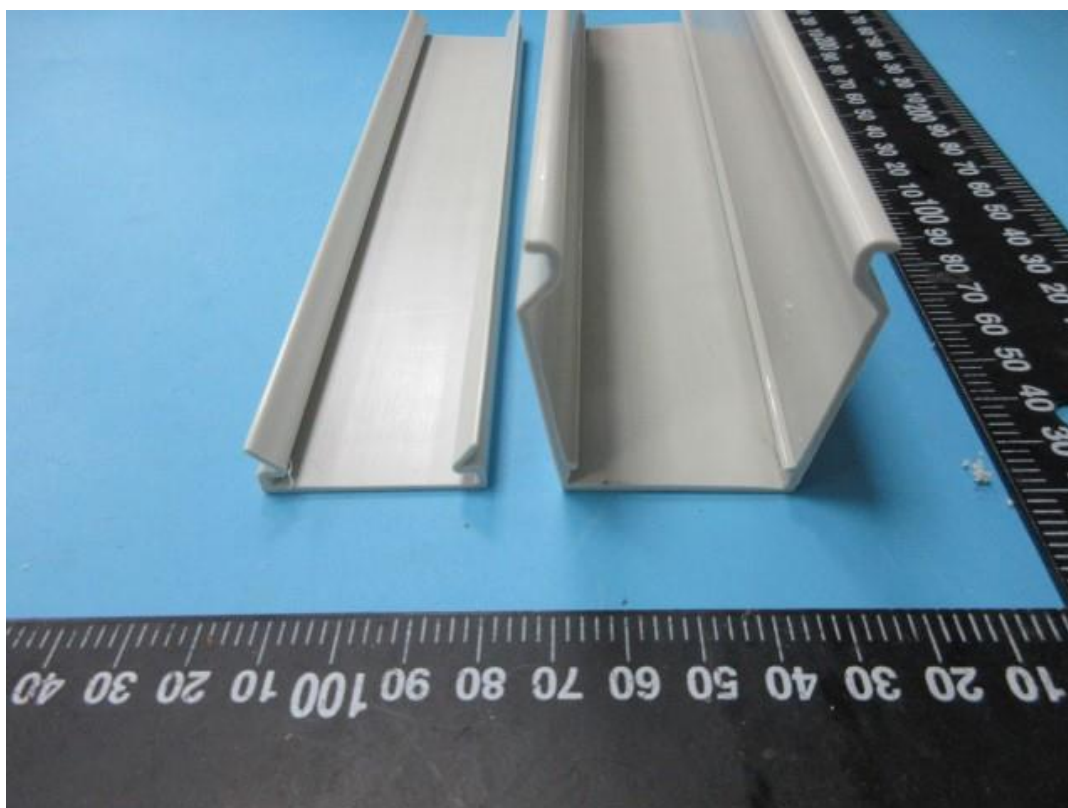
Annex C	CTS/CDS IK code		N/A
	The manufacturer may declare the CTS/CDS IK code according to EN 62262 under the following conditions.	No IK code is declared by the manufacturer.	N/A
	The declared code shall be IK04 at the minimum.		N/A
	The test shall be carried out at ambient temperature using pendulum hammer		N/A
	Before the test, non-metallic system components and composite system components are aged at the temperature declared according to Table 3 for 168 h continuously.		N/A
	The conditions for mounting, assembling and positioning the samples, the number of impacts and their points of application together with the test compliance are described in the appropriate Part 2 of EN 50085, in the impact test for installation and application.		N/A

EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict

Photos:



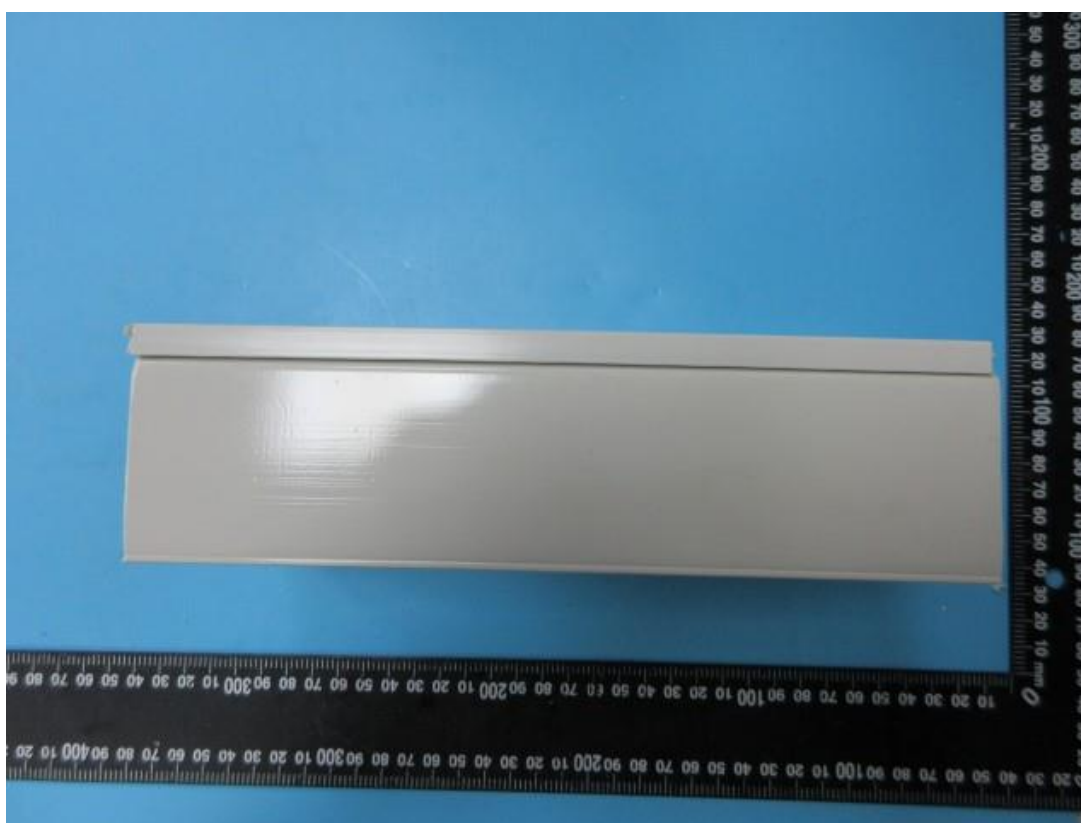
EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict



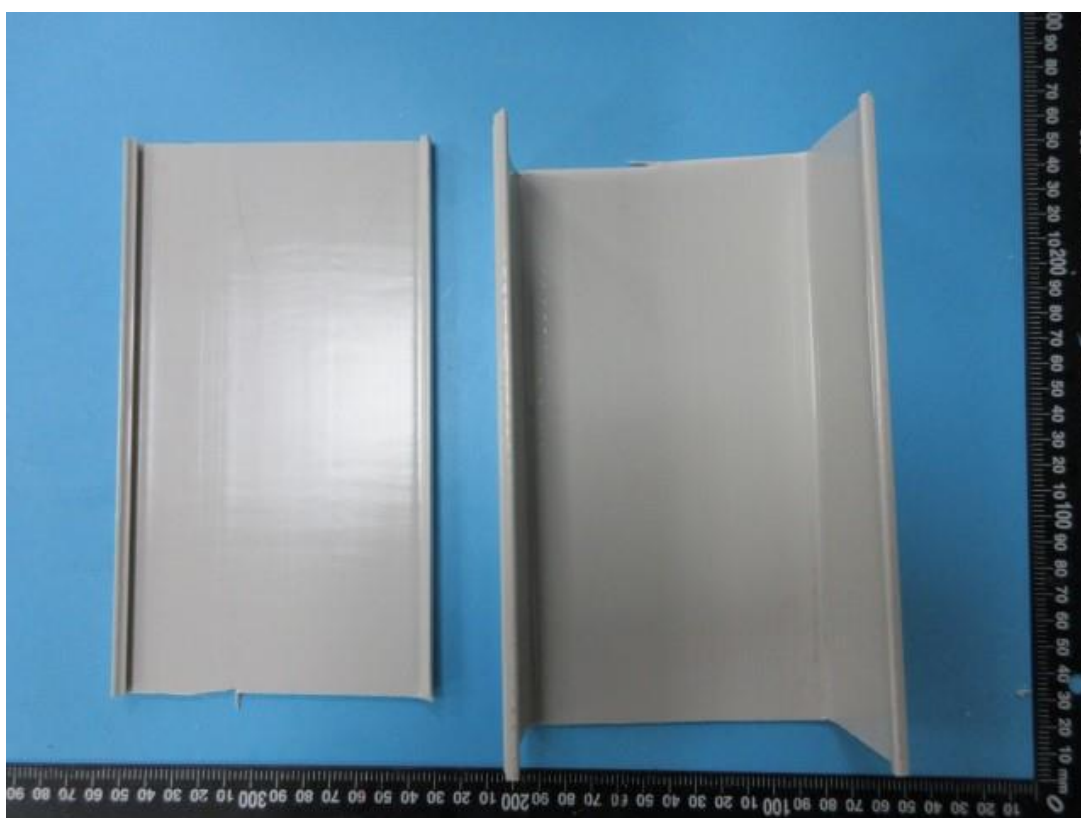
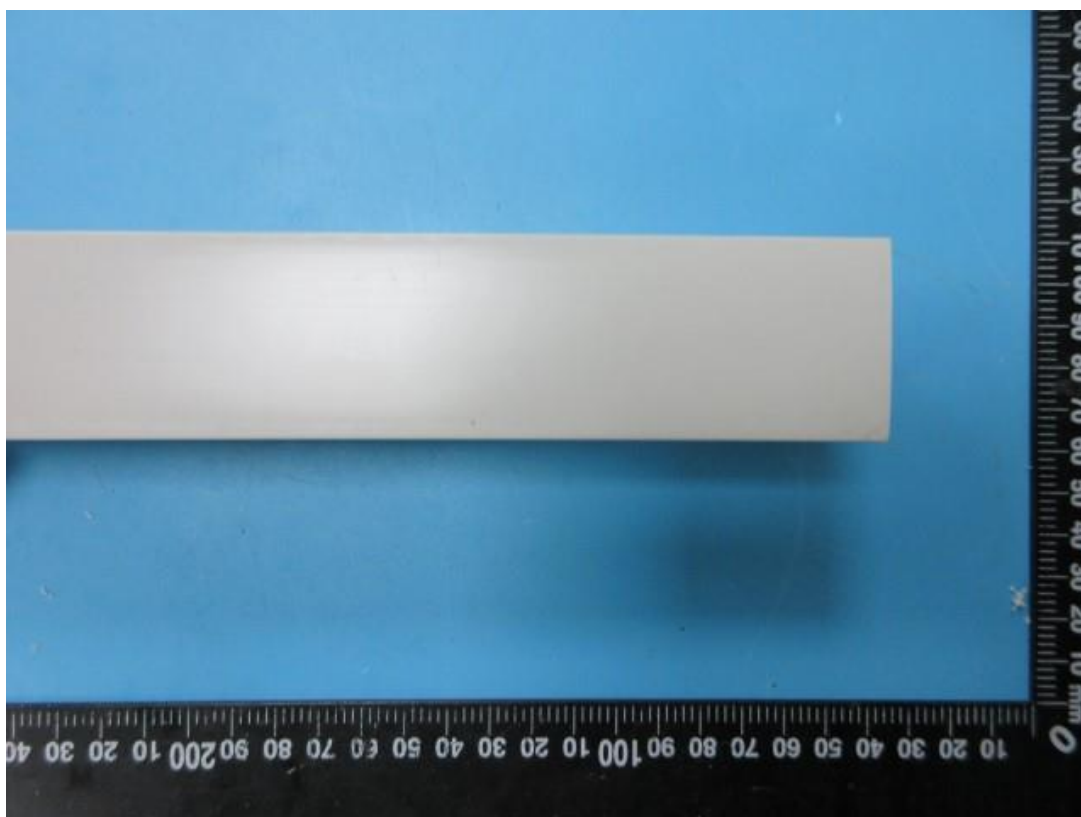
EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict



EN 50085-2-2			
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Clause	Requirement - Test	Result - Remark	Verdict



EN 50085-2-2			
Clause	Requirement - Test	Result - Remark	Verdict

