



WDTCF0220-LVD

**LVD Technical Construction File**  
**For**  
**Kaer Technology Co.,Ltd.**  
**Wiring duct**

**Prepared For :** Kaer Technology Co.,Ltd.  
No.230, Wei 20th Road, Yueqing Economic Development Zone,  
Zhejiang Province, China

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**Report Number:** WDTCF0220-LVD  
**Date of Test:** Feb.21, 2023  
**Date of Report:** Feb.21, 2023





WDTCF0220-LVD

## TEST REPORT DECLARATION

Applicant : Kaer Technology Co.,Ltd.  
Address : No.230, Wei 20th Road, Yueqing Economic Development Zone,  
Zhejiang Province, China  
Manufacturer : Kaer Technology Co.,Ltd.  
Address : No.230, Wei 20th Road, Yueqing Economic Development Zone,  
Zhejiang Province, China  
EUT Description : Wiring duct  
Model No. : KR5040  
Remark : N/A

Test Procedure Used:  
EN 50085-1:2005+A1:2013


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The test results of this report relate only to the tested sample identified in this report.

Date of Test : Feb.21, 2023

Prepared by :   
(Jack)

Checked by :   
(Gina)

Approved by :   
(Johnson)





WDTCF0220-LVD

Models:

1	KR2015	31	KR50100
2	KR2020	32	KR6025
3	KR2525	33	KR6030
4	KR2540	34	KR6035
5	KR3015	35	KR6040
6	KR3020	36	KR6050
7	KR3025	37	KR6060
8	KR3030	38	KR6080
9	KR3035	39	KR60100
10	KR3040	40	KR6525
11	KR3530	41	KR6532
12	KR3535	42	KR6545
13	KR3540	43	KR6565
14	KR4025	44	KR8025
15	KR4030	45	KR8030
16	KR4035	46	KR8035
17	KR4040	47	KR8040
18	KR4060	48	KR8045
19	KR4525	49	KR8050
20	KR4532	50	KR8055
21	KR4545	51	KR8060
22	KR5025	52	KR8080
23	KR5030	53	KR80100
24	KR5035	54	KR10030
25	KR5040	55	KR10033
26	KR5045	56	KR10040
27	KR5050	57	KR10050
28	KR5055	58	KR10060
29	KR5060	59	KR10080
30	KR5080	60	KR100100

EN 50085-1:2005+A1:2013			
Clause	Requirement-Test	Result-Remark	Verdict
1	Scope		P
	<p>Replacement:</p> <p>This European Standard specifies requirements and tests for cable trunking systems (CTS) and cable ducting systems (CDS) intended for the accommodation, and where necessary for the electrically protective separation, of insulated conductors, cables and possibly other electrical equipment in electrical and/or communication systems installations. The maximum voltage of these installations is 1 000 V a.c. and 1 500 V d.c. These systems are intended for mounting underfloor, flushfloor or onfloor.</p> <p>This standard does not apply to CTS/CDS which are intended to be fixed to the wall and supported by the floor.</p> <p>This standard does not apply to conduit systems, cable tray systems, cable ladder systems, power track systems or equipment covered by other standards.</p> <p>This standard shall be used in conjunction with EN 50085-1:2005, Cable trunking systems and cable ducting systems for electrical installations – Part 1: General requirements, which is referred to in this document as Part 1.</p>		P
2	Normative references		P
	<p>This clause of Part 1 is applicable except as follows:</p> <p>Add the following normative references:</p> <p>EN 60068-2-60 1996 Environmental testing – Part 2: Tests - Test Ke: Flowing mixed gas corrosion test (IEC 60068-2-60:1995)</p> <p>EN 60068-2-75 1997 Environmental testing – Part 2-75: Tests - Test Eh: Hammer tests (IEC 60068-2-75:1997)</p>		P
3	Definitions		P
	This clause of Part 1 is applicable except as follows:		P
3.1	<p>Replace the note by:</p> <p>NOTE Different types of CTS are shown in Figure 101 and explained in Clause A.2.</p>		P
3.2	<p>Replace the note by:</p> <p>NOTE Different types of CDS are shown in Figure 101 and explained in Clause A.2.</p>		P
3.3	<p>Add:</p> <p>f) service unit</p> <p>Replace the note by:</p> <p>NOTE A system does not necessarily include all system components a) to f). Different combinations of system components may</p>		P

EN 50085-1:2005+A1:2013			
Clause	Requirement-Test	Result-Remark	Verdict
	be used.		
	<p>Additional subclauses:</p> <p>3.101 underfloor CTS/CDS CTS/CDS whose components, except access units and service units, are intended to be mounted within or under a floor and in normal use are not exposed to traffic loads (Figures 102a), 102c) and 103)</p> <p>3.102 flushfloor CTS/CDS CTS/CDS whose components, except access units and service units, are intended to be mounted flush such that the height above the upper level of the floor covering is not more than 4 mm. The upper surface is considered to be exposed to traffic loads (Figures 102b) and 104)</p> <p>3.103 onfloor CTS/CDS CTS/CDS whose components are intended to be mounted on a floor such that the height above the upper level of the floor covering is greater than 4 mm. The upper surface is considered to be exposed to traffic loads (Figures 102d) and 105)</p> <p>3.104 access unit system component intended to provide access to insulated conductors or cables</p> <p>3.105 service unit system component intended for incorporation of one or more apparatus either directly or by means of one or more apparatus mounting devices</p> <p>3.106 service unit, when not in use service unit which has no cables connected to electrical equipments</p> <p>3.107 service unit, when in use service unit which has cables connected to electrical equipments</p>		P
4	General requirements		P
	This clause of Part 1 is applicable.		P
5	General conditions for tests		P
	This clause of Part 1 is applicable		P
6	Classification		P
	<p>This clause of Part 1 is applicable except as follows:</p> <p>Additional subclauses:</p> <p>6.101 According to floor treatment</p> <p>6.101.1 CTS/CDS for dry-treatment of floor</p>		P

<b>EN 50085-1:2005+A1:2013</b>			
<b>Clause</b>	<b>Requirement-Test</b>	<b>Result-Remark</b>	<b>Verdict</b>
	6.101.2 CTS/CDS for wet-treatment of floor when the service unit is not in use 6.101.3 CTS/CDS for wet-treatment of floor when the service unit is in use 6.102 According to resistance to vertical load applied through small surface area 6.102.1 CTS/CDS for 500 N 6.102.2 CTS/CDS for 750 N 6.102.3 CTS/CDS for 1 000 N 6.102.4 CTS/CDS for 1 500 N 6.102.5 CTS/CDS for 2 000 N 6.102.6 CTS/CDS for 2 500 N 6.102.7 CTS/CDS for 3 000 N 6.103 Optional classification according to resistance to vertical load applied through large surface area 6.103.1 CTS/CDS for 2 000 N 6.103.2 CTS/CDS for 3 000 N 6.103.3 CTS/CDS for 5 000 N 6.103.4 CTS/CDS for 10 000 N 6.103.5 CTS/CDS for 15 000 N		
7	Marking and documentation		P
	This clause of Part 1 is applicable except as follows: Additional subclauses: 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. The marking shall be visible by the user which may be achieved by opening the cover. NOTE This marking may be in the form of text or graphic. 7.102 Service units shall be marked with a warning about the potential damage to electrical accessories by closing the cover. The marking shall be visible by the user which may be achieved by opening the cover. NOTE This marking may be in the form of text or graphic. 7.103 Compliance with 7.101 and 7.102 is checked by inspection.		P
8	Dimensions		P
	This clause of Part 1 is applicable except as follows: Addition: There are no dimensions requirements.		P
9	Construction		P
	This clause of Part 1 is applicable except as follows: Additional subclauses: 9.101 Access covers of underfloor, flushfloor and onfloor CTS/CDS, which in normal use are subjected to external mechanical loads, shall resist movement and unintentional opening. Compliance is checked by inspection and by the tests of		P

EN 50085-1:2005+A1:2013			
Clause	Requirement-Test	Result-Remark	Verdict
	10.5.		
	<p>9.102 Service units installed flushfloor shall protect the installed electrical apparatus and the plug from direct impact when in use. This protection shall be effective and shall not cause damage to the outgoing cable.</p> <p>Compliance is checked by inspection and by the tests of 10.3.</p>		P
	<p>9.103 It shall be possible to securely fix:</p> <ul style="list-style-type: none"> <li>- service units to the system;</li> <li>- electrical apparatus to the service units.</li> </ul> <p>Compliance is checked by the tests of 10.3 and 10.5.1.</p>		P
	<p>9.104 When the service unit is not in use, it shall be possible to close openings intended for the passage of cables.</p> <p>Openings, when in use, in underfloor and flushfloor CTS/CDS, for the passage of cables, need not be closed if one of its dimensions is less than 20 mm in one direction.</p> <p>Compliance is checked by inspection and measurement.</p>		P
	<p>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.</p> <p>Openings leading to the interior of underfloor and flushfloor CTS/CDS which in normal use, are located below the upper level of the floor without covering, shall not be wider than 7 mm in one direction.</p> <p>Compliance is checked by inspection and measurement.</p>		P
	<p>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 by one or a combination of the following methods which may vary within the system:</p> <ul style="list-style-type: none"> <li>- method 1: ensuring by design that water does not come into contact with insulated conductors and live parts when the water level is 10 mm above the upper level of the floor covering;</li> <li>- method 2: providing an IP rating not less than IPX4;</li> <li>- method 3: providing manufacturer's instructions which require that insulated conductors and live parts are positioned not less than 10 mm above the upper level of the floor covering.</li> </ul> <p>For method 1 compliance is checked by measurement. For method 2 compliance is checked by the test of 14.1.2. For method 3 compliance is checked by inspection.</p>		P
	<p>9.107 Access cover of service unit, if any, shall withstand repeated opening and closing as in normal use.</p>		P

EN 50085-1:2005+A1:2013			
Clause	Requirement-Test	Result-Remark	Verdict
	Compliance is checked by 100 cycles of opening and closing of the access cover. After the test there shall be no damage to impair the further use of the access cover.		
	9.108 Additional requirements are under consideration for service units intended to be installed onfloor with reference to EN 50085-2-4 1).		P
<b>10</b>	Mechanical properties		P
	This clause of Part 1 is applicable except as follows:		P
<b>10.1</b>	Replacement:		P
	Underfloor, flushfloor and onfloor CTS/CDS shall have adequate mechanical strength. Compliance is checked by the tests specified in 10.3 and 10.5 according to Annex AA.		P
<b>10.2</b>	Not applicable.		P
10.3	Impact test		P
<b>10.3.2</b>	Impact test for installation and application Addition:		P
	10.3.2.101 Systems components only intended to be mounted underfloor are not tested. The test is carried out on an assembly made of one or more trunking lengths or ducting lengths with the relevant system component, if any, to fulfil the various functions of the system and prepared according to the manufacturer' s instructions. More than one assembly may be necessary to fulfil the various functions of the system. In each direction, the length L of trunking length or ducting length coming out of the functional area associated with the function of the system is as long as the width W of the trunking length or ducting length, or 250 mm, whichever is the greater. The tolerance of L is $\pm 25$ mm. NOTE 1 Functional area refers, for example, to a fitting, an apparatus mounting device or a junction as shown in Figure 106. The samples are mounted on a rigid smooth support such as a plywood board 16 mm thick, with a 50 mm minimum spacing between the assembly and the edge of the support. NOTE 2 For flushfloor CTS/CDS additional provision may be included, if necessary, to simulate the influence of the floor material on the side of the product. NOTE 3 Other system components may be included, if necessary, to prevent movements. These system components are the system components to terminate the trunking length or ducting length, if any. When there is no such system component, a system component chosen by the		P



EN 50085-1:2005+A1:2013			
Clause	Requirement-Test	Result-Remark	Verdict
	<p>manufacturer is used.            Examples for arrangement are shown in Figure 107.            Before the test non metallic system components and composite system components are aged at a temperature declared according to Table 3 for <math>(168 \pm 4)</math> h continuously.</p>		
	<p>10.3.2.102 The impact test apparatus according to Clause 4 of EN 60068-2-75:1997, is mounted on a solid wall or structure providing sufficient support. The samples are placed in a cabinet at a temperature declared according to Table 2.</p>		P
	<p>10.3.2.103 After 2 h, each sample is, in turn, removed from the cabinet and immediately placed in position in the impact test apparatus.            At <math>12 \text{ s} \pm 2 \text{ s}</math> after the removal of the sample from the cabinet the hammer is allowed to fall so that an impact is applied as far as possible perpendicular to the accessible region of the sample likely to be the weakest. Compliance with impact applied before 10 s provides also compliance with this test of the standard.            NOTE 1 The region likely to be the weakest can be on the relevant system component but can also be on a trunking length or a ducting length.            No impact is applied to knockouts, membranes and the like.            No impact is applied within 50 mm of any open extremity of the sample.            NOTE 2 When an other system component has been included at an extremity of the sample to prevent movements, this extremity is still considered open.            Instead of placing the samples in a cabinet and applying the impact at <math>12 \text{ s} \pm 2 \text{ s}</math> after the removal of the sample from the cabinet, it is allowed to apply the impact in a climatic chamber at a temperature declared according to Table 2 on samples placed at this temperature for 2 h.            Compliance in the climatic chamber is sufficient. In case of failure in the climatic chamber, compliance using the cabinet provides compliance with the standard.</p>		P
	<p>10.3.2.104 After the test</p> <ul style="list-style-type: none"> <li>- the assemblies shall show no cracks or similar damage visible to normal or corrected vision without magnification and</li> <li>- the assemblies shall remain intact and</li> <li>- the service unit cover shall be in a position such that safety is not impaired.</li> </ul> <p>In case of doubt, the test of 14.1.3 is carried out on the</p>		P

EN 50085-1:2005+A1:2013			
Clause	Requirement-Test	Result-Remark	Verdict
	impacted samples 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 6.7.1.		
10.4	Not applicable.		P
10.5	External mechanical load test Addition:		P
	10.5.101 Underfloor CTS/CDS, flushfloor CTS/CDS and onfloor CTS/CDS shall have sufficient mechanical strength against external mechanical loads likely to occur during transport, storage, installation and normal use. Compliance is checked by the tests of 10.5.102, 10.5.103 and 10.5.104. Any part for temporary use only during the installation phase does not need to comply with these tests but may be included for the test of 10.5.102 to allow compliance of other parts. A summary of tests is given in Annex AA.		P
	10.5.102 Load test for installation The test is carried out on an assembly made of one or more trunking lengths or ducting lengths with the relevant system component, if any, to fulfil the various functions of the system and prepared according to the manufacturer' s instructions. More than one assembly may be necessary to fulfil the various functions of the system. In each direction, the length L of trunking length or ducting length coming out of the functional area associated with the function of the system is as long as the width W of the trunking length or ducting length, or 500 mm, whichever is the greater. The tolerance of L is $\pm 25$ mm. NOTE 1 Functional area refers, for example, to a fitting, an apparatus mounting device or a junction as shown in Figure 106. The samples are mounted on a horizontal rigid smooth support such as a plywood board 16 mm thick, with a 50 mm minimum spacing between the assembly and the edge of the support. NOTE 2 Other system components may be included, if necessary, to prevent movements. These system components are the system components to terminate the trunking length or		P

EN 50085-1:2005+A1:2013			
Clause	Requirement-Test	Result-Remark	Verdict
	<p>ducting length, if any. When there is no such system component, a system component chosen by the manufacturer is used. Examples for arrangement are shown in Figure 107. Before the test non metallic system components and composite components are aged at a temperature declared according to Table 3 for <math>(168 \pm 4)</math> h continuously.</p> <p>A vertical force is applied centrally for <math>120 \text{ s} \pm 5 \text{ s}</math> to a steel cube of <math>50 \text{ mm} \pm 0,5 \text{ mm}</math> with an edge radius of approximately 1 mm.</p> <p>The cube is placed approximately in the middle of the length of the sample and in the most unfavourable position in the width of the sample. In the case of multi-compartment CTS/CDS whose partition(s) provide support, the middle of the largest compartment is selected.</p> <p>To allow for settlement of the sample, a pre-load of <math>25 \text{ N} \pm 5 \text{ N}</math> is applied and then the measurement apparatus is calibrated to zero.</p> <p>For the test of CTS/CDS intended to be installed underfloor under a raised floor a force of <math>250 \text{ N} (+ 10 \text{ N}, 0)</math> is applied.</p> <p>For the test of CDS intended to be embedded underfloor and CTS/CDS intended to be installed flushfloor a force of <math>750 \text{ N} (+ 30 \text{ N}, 0)</math> is applied except on parts of which the cover remains visible and above the floor level during the whole installation phase for which a force of <math>250 \text{ N} (+ 10 \text{ N}, 0)</math> is applied.</p> <p>During the test the vertical displacement of the cube shall be less than 25 mm.</p> <p>Cracks are allowed but the maximum vertical displacement of the cube shall not be exceeded.</p>		
	<p>10.5.103 Load test for application - Force applied through small surface area</p> <p>The test is carried out on an assembly made of one or more trunking lengths or ducting lengths with the relevant system component, if any, to fulfil the various functions of the system and prepared according to the manufacturer' s instructions. More than one assembly may be necessary to fulfil the various functions of the system. In each direction, the length L of trunking length or ducting length coming out of the functional area associated with the function of the system is as long as the width W of the trunking length or ducting length, or 500 mm, whichever is the greater.</p>		P

EN 50085-1:2005+A1:2013			
Clause	Requirement-Test	Result-Remark	Verdict
	<p>The tolerance of L is <math>\pm 25</math> mm.</p> <p>NOTE 1 Functional area refers, for example, to a fitting, an apparatus mounting device or a junction as shown in Figure 106.</p> <p>The samples are mounted on a horizontal rigid smooth support such as a plywood board 16 mm thick, with a 50 mm minimum spacing between the assembly and the edge of the support.</p> <p>NOTE 2 For flushfloor CTS/CDS additional provision may be included, if necessary, to simulate the influence of the floor material on the side of the product.</p> <p>NOTE 3 Other system components may be included, if necessary, to prevent movements. These system components are the system components to terminate the trunking length or ducting length, if any. When there is no such system component, a system component chosen by the manufacturer is used. Examples for arrangement are shown in Figure 107.</p> <p>Before the test non metallic system components and composite system components are aged at a temperature declared according to Table 3 for <math>(168 \pm 4)</math> h continuously.</p> <p>The surface of the sample which can be exposed to traffic is loaded with the force declared according to 6.102.</p> <p>A vertical force is applied through a steel cylinder of 13,3 mm <math>\pm 0,1</math> mm diameter with an edge radius of 1 mm providing a contact surface of approximately 1 cm<sup>2</sup> with a minimum length of 30 mm (Figure 108).</p> <p>The cylinder is placed approximately in the middle of the length of the sample and in the most unfavourable position in the width of the sample. In the case of multi-compartment CTS/CDS whose partition(s) provide support, the middle of the largest compartment is selected.</p> <p>To allow for settlement of the sample, a pre-load of 50 N <math>\pm 10</math> N is applied and then the measurement apparatus is calibrated to zero.</p> <p>The force is gradually increased up to the value declared according to 6.102 with a tolerance <math>(+ 4 \%, 0)</math> over 15 s <math>\pm 5</math> s and maintained for 60 s <math>\pm 1</math> s. During the test the samples shall show no deflection greater than 6 mm. After the tests the samples shall show no signs of disintegration, nor shall there be any crack visible to normal or</p>		

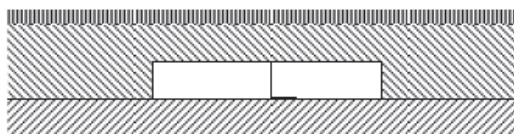
EN 50085-1:2005+A1:2013			
Clause	Requirement-Test	Result-Remark	Verdict
	<p>corrected vision without additional magnification. One min after the load has been removed, there shall be no permanent deformation exceeding 3 mm. The electrical safety shall not be impaired. In case of doubt, the test of 14.1.3 is carried out on the sample 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 6.7.1.</p>		
	<p>10.5.104 Load test for application - Force applied through large surface area            The test is carried out on an assembly made of one or more trunking lengths or ducting lengths with the relevant system component, if any, to fulfil the various functions of the system and prepared according to the manufacturer' s instructions. More than one assembly may be necessary to fulfil the various functions of the system. In each direction, the length L of trunking length or ducting length coming out of the functional area associated with the function of the system is as long as the width W of the trunking length or ducting length, or 500 mm, whichever is the greater. The tolerance of L is <math>\pm 25</math> mm.            NOTE 1 Functional area refers, for example, to a fitting, an apparatus mounting device or a junction as shown in Figure 106.            The samples are mounted on a rigid smooth support such as a plywood board 16 mm thick, with a 50 mm minimum spacing between the assembly and the edge of the support.            NOTE 2 For flushfloor CTS/CDS additional provision may be included, if necessary, to simulate the influence of the floor material on the side of the product.            NOTE 3 Other system components may be included, if necessary, to prevent movements. These system components are the system components to terminate the trunking length or ducting length, if any. When there is no such system component, a system component chosen by the manufacturer is used.            Examples for arrangement are shown in Figure 107. Before the test non metallic system components and composite system components are aged at a temperature declared according to Table 3 for <math>(168 \pm 4)</math> h</p>		P

EN 50085-1:2005+A1:2013			
Clause	Requirement-Test	Result-Remark	Verdict
	<p>continuously.            The surface of the sample which can be exposed to traffic is loaded with the force declared according to 6.103.            A vertical force is applied through a circular steel plate with a 130 mm <math>\pm</math> 0,5 mm diameter and a thickness of 20 mm <math>\pm</math> 1 mm with an edge radius of approximately 2 mm (Figure 109).            The circular plate is placed approximately in the middle of the length of the sample and in the most unfavourable position in the width of the sample. In the case of multi-compartment CTS/CDS whose partition(s) provide support, the middle of the largest compartment is selected.            To allow for settlement of the sample, a pre-load of 200 N <math>\pm</math> 40 N is applied and then the measurement apparatus is calibrated to zero.            The force is gradually increased up to the value declared according to 6.103 with a tolerance (+ 4 %, 0) over 15 s <math>\pm</math> 5 s and maintained for 60 s <math>\pm</math> 1 s.            During the test the samples shall show no deflection greater than 6 mm. After the tests the samples shall show no signs of disintegration, nor shall there be any crack visible to normal or corrected vision without additional magnification. One min after the load has been removed, there shall be no permanent deformation exceeding 3 mm.            The electrical safety shall not be impaired.            In case of doubt, the test of 14.1.3 is carried out on the sample 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 6.7.1.</p>		
11	Electrical properties		P
	This clause of Part 1 is applicable		P
12	Thermal properties		P
	This clause of Part 1 is applicable		P
13	Fire hazard		P
	This clause of Part 1 is applicable		P
14	External influences		P
	This clause of Part 1 is applicable except as follows:		P

<b>EN 50085-1:2005+A1:2013</b>			
<b>Clause</b>	<b>Requirement-Test</b>	<b>Result-Remark</b>	<b>Verdict</b>
14.1	Degree of protection provided by enclosure		P
	<p>Add after the third paragraph the following:            The assembly is placed in such a way that the upper surface of floor is in the horizontal plane.            The test floor is flat and extends 100 mm <math>\pm</math> 10 mm beyond the edges of the samples.            Replace the fourth paragraph by:            The following ageing treatment is carried out on assemblies including non metallic system component or composite system component before the tests of 14.1.1, 14.1.2 and 14.1.3.            14.1.2.2 Add after the third paragraph the following:            For service unit and access unit the formula is:            5 x 10<sup>-3</sup> x internal volume of the service unit or access unit.            14.1.3.1 Add the following paragraph:            Service units are tested with the cover opened.</p>		P
	Additional subclauses:		P
	<p>14.101 Protection against corrosion by wet screed material            Parts of CTS/CDS intended to be in contact with wet screed material which are made entirely or partially of metal shall have adequate protection against corrosion.            For small fixing devices, such as screws, nuts and the like a coating of grease is deemed to be a sufficient protection against rusting.            Compliance is checked by the following test.            The sample is degreased by immersion in white spirit with a kaury-butanol value of 35 <math>\pm</math> 5 or an equivalent degreasing agent for 10 min <math>\pm</math> 1 min.            After degreasing the sample is submitted to a test according to EN 60068-2-60 using test method 1 with test duration of 4 days.            After exposure, the surface shall show no areas of red rust.            White rust (zinc oxide) and traces of red rust which are removable by rubbing as well as traces of rust at the surface of cuts, bent edges and welded joints are ignored.</p>		P
15	Electromagnetic compatibility		P
	This clause of Part 1 is applicable		P

**EN 50085-1:2005+A1:2013**

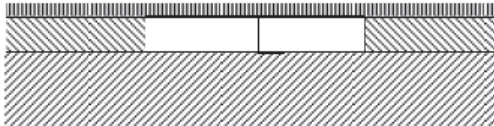
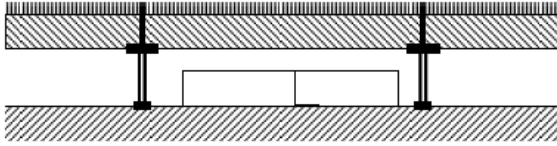

Clause	Requirement-Test	Result-Remark	Verdict
<p>▼ Indicates a removable cover for a CTS</p>			
<p>NOTE An explanation of the numbers used in this figure is given in Clause A.2.</p>			
<p><b>Figure 101 – Types and application of CTS/CDS for underfloor, flushfloor or onfloor installations</b></p>			



Underfloor CDS - embedded in the floor

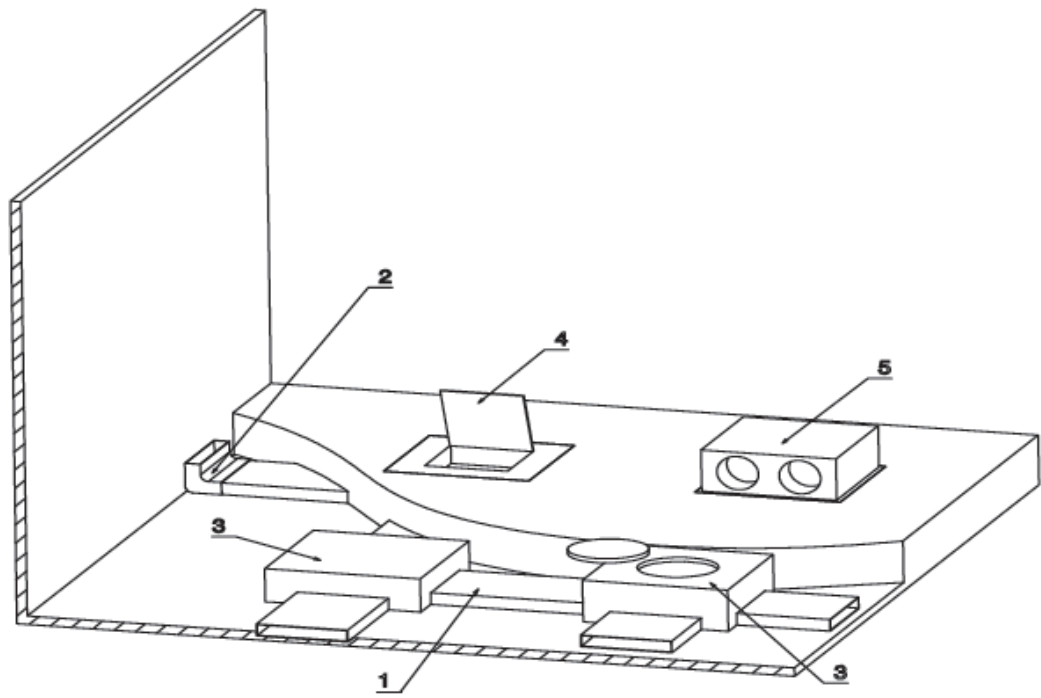
**Figure 102a)**



EN 50085-1:2005+A1:2013			
Clause	Requirement-Test	Result-Remark	Verdict
	 <p>Flush floor CTS/CDS - installed flush with the upper level of the floor</p> <p>Figure 102b)</p>		
	 <p>Underfloor CTS/CDS - installed under a raised floor</p> <p>Figure 102c)</p>		
	 <p>Onfloor CTS/CDS - installed above the upper level of the floor</p> <p>Figure 102d)</p>		
<p>Figure 102 – Examples of trunking and ducting installations</p>			

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Clause	Requirement-Test	Result-Remark	Verdict
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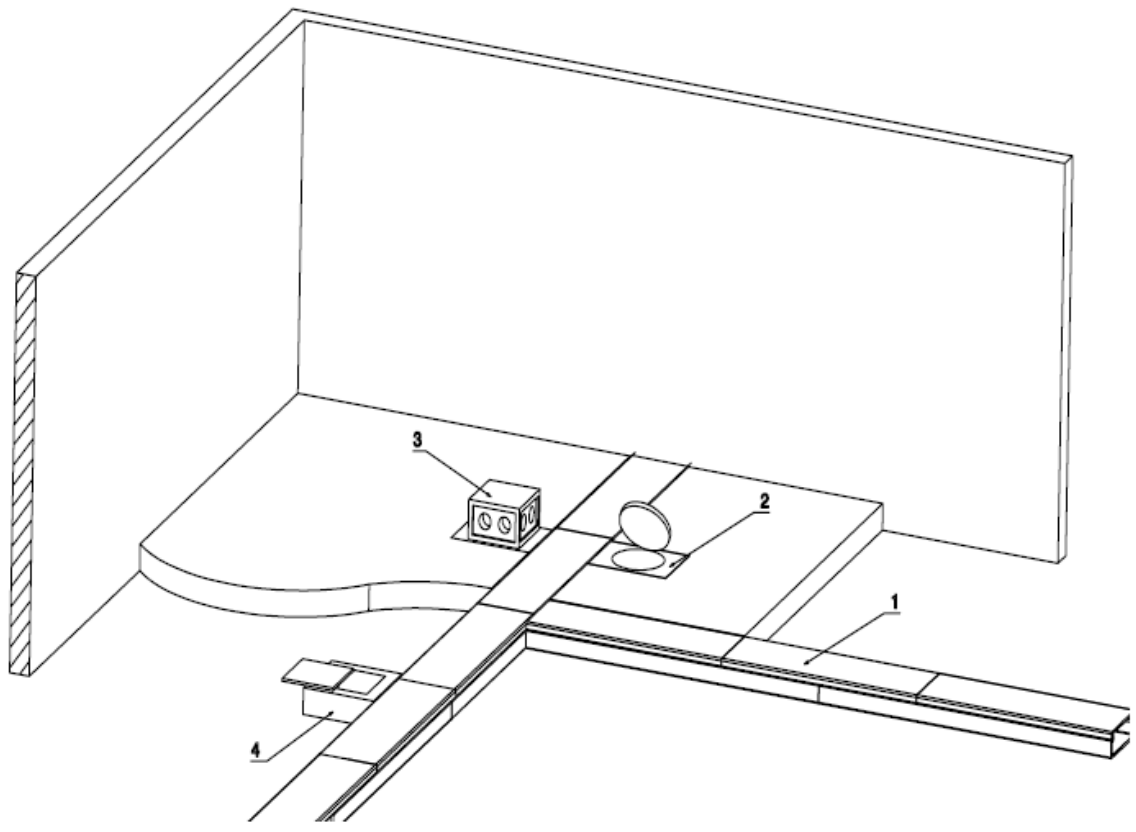


**Key:**

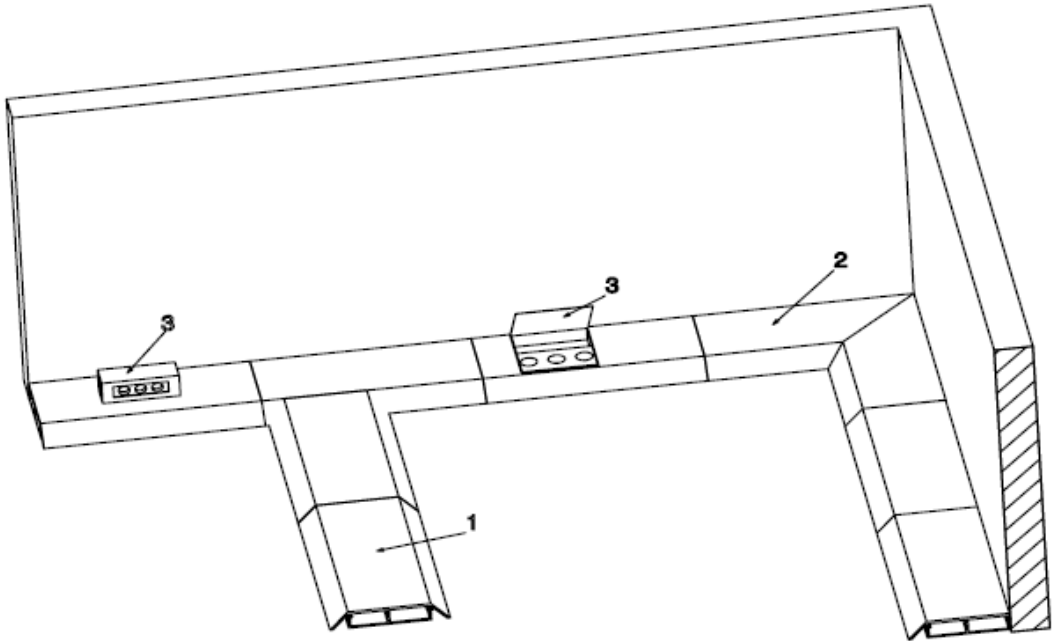
- 1 Ducting length
- 2 Fitting
- 3 Access unit
- 4 Service unit mounted flushfloor
- 5 Service unit mounted onfloor

**Figure 103 – Example of underfloor embedded CDS according to 3.101**

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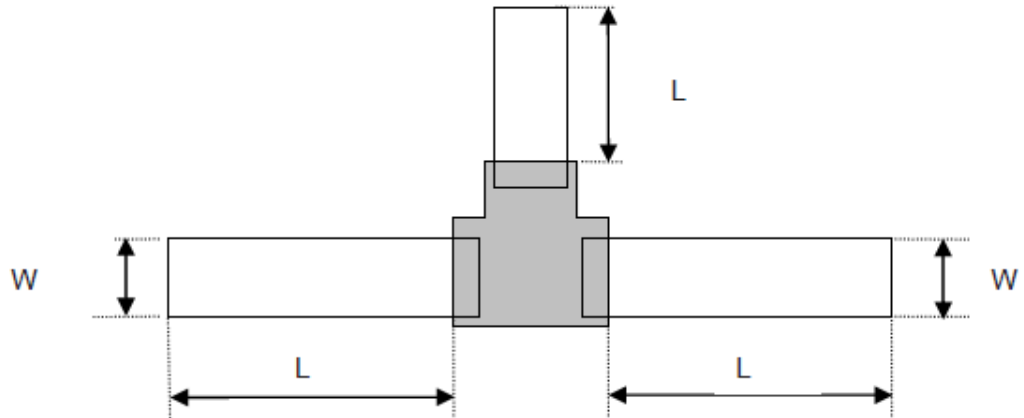
Clause	Requirement-Test	Result-Remark	Verdict
			
<p><b>Key:</b></p> <ul style="list-style-type: none"> <li>1 Trunking length</li> <li>2 Service unit mounted flushfloor</li> <li>3 Service unit mounted onfloor</li> <li>4 Provision for service unit</li> </ul>			
<p><b>Figure 104 – Example of flushfloor CTS according to 3.102</b></p>			

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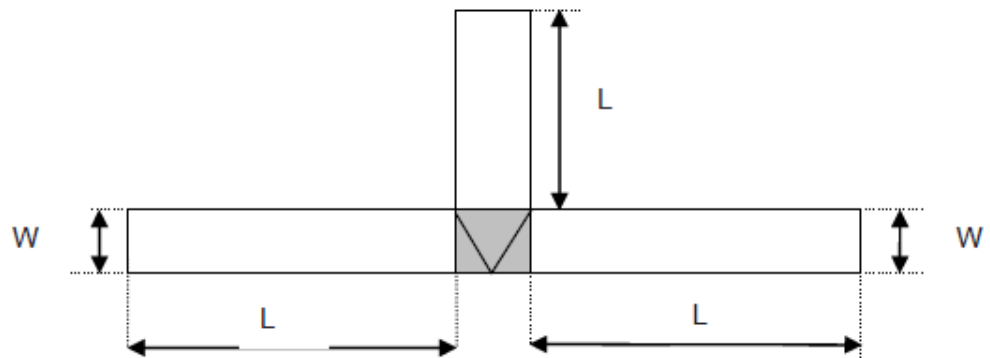
Clause	Requirement-Test	Result-Remark	Verdict
 <p>The diagram shows a cross-section of a cable tray system. A horizontal trunking (1) is supported by two vertical legs (2). Two service units (3) are mounted on the top surface of the trunking. The right leg is shown with a hatched section at its base, indicating a specific mounting or support detail.</p>			
<p><b>Key:</b></p> <ul style="list-style-type: none"> <li>1 Trunking length</li> <li>2 Fitting</li> <li>3 Service unit mounted onfloor</li> </ul>			
<p><b>Figure 105 – Example of onfloor CTS according to 3.103</b></p>			

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Clause	Requirement-Test	Result-Remark	Verdict
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**Figure 106a) - Example with fitting**



**Figure 106b) - Example without fitting**

**Key:**







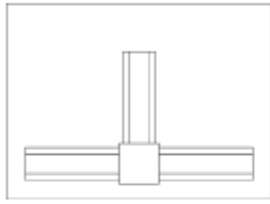
 Functional area associated with the function of the system (junction in this example)

*W* Width of the trunking length

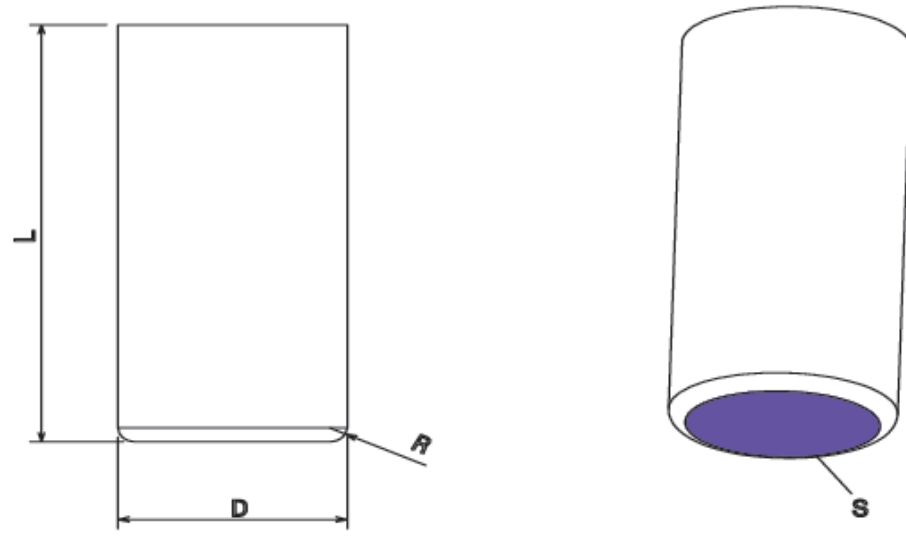
*L* For 10.5.102, 10.5.103 and 10.5.104: *W* or 500 mm, whichever is the greater

For 10.3.2: *W* or 250 mm, whichever is the greater

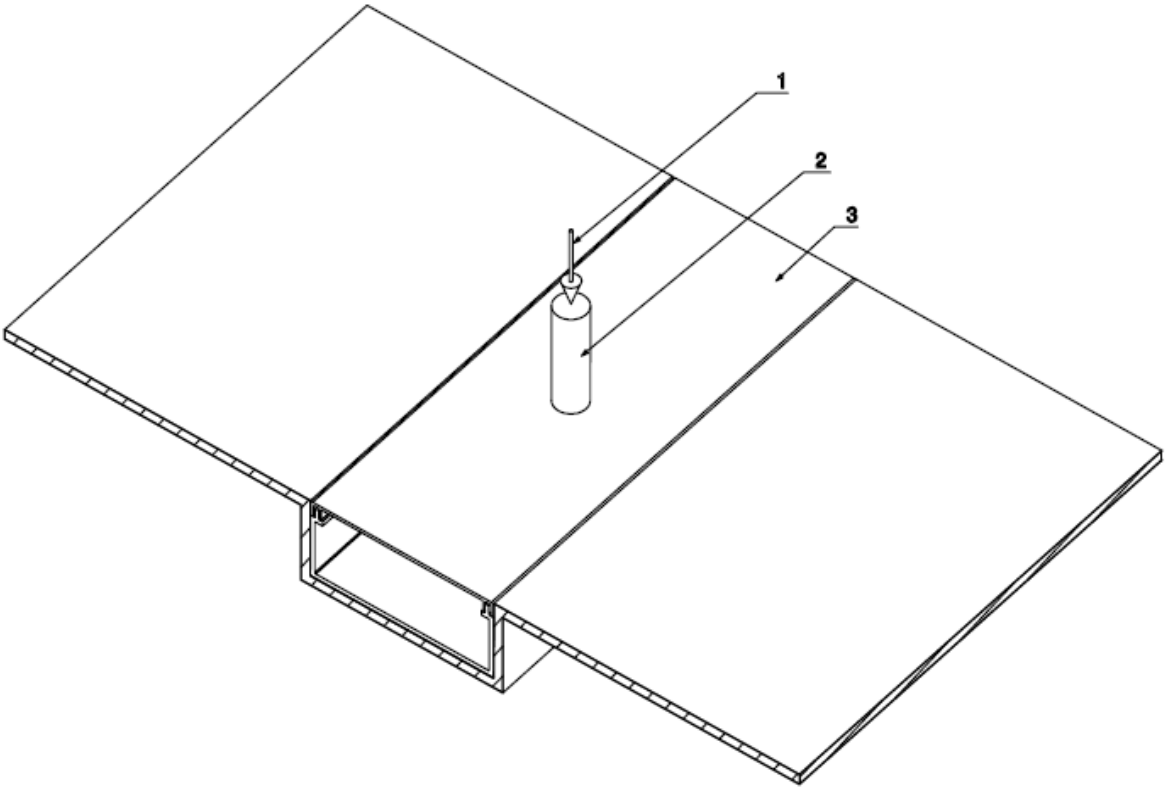
**Figure 106 – Principles for arrangement**

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Clause	Requirement-Test	Result-Remark	Verdict
	 <p>With fitting</p>  <p>Without fitting</p> <p><b>Figure 107a) - Arrangement for connection</b></p>		
	 <p>With fitting</p>  <p>Without fitting</p> <p><b>Figure 107b) - Arrangement for flat angle</b></p>		
	 <p>With fitting</p>  <p>Without fitting</p> <p><b>Figure 107c) - Arrangement for junction</b></p>		
	 <p>With fitting</p> <p><b>Figure 107d) - Arrangement for terminating</b></p>		
	<p><b>Figure 107 – Examples for arrangement</b></p>		

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Clause	Requirement-Test	Result-Remark	Verdict
	 <p><b>Key:</b></p> <ul style="list-style-type: none"> <li>D Diameter 13,3 mm ± 0,1 mm</li> <li>L Length 30 mm minimum</li> <li>R Edge radius approximately 1 mm</li> <li>S Contact surface</li> </ul>		
<p><b>Figure 108a) - Detail of the cylinder for load test</b></p>			

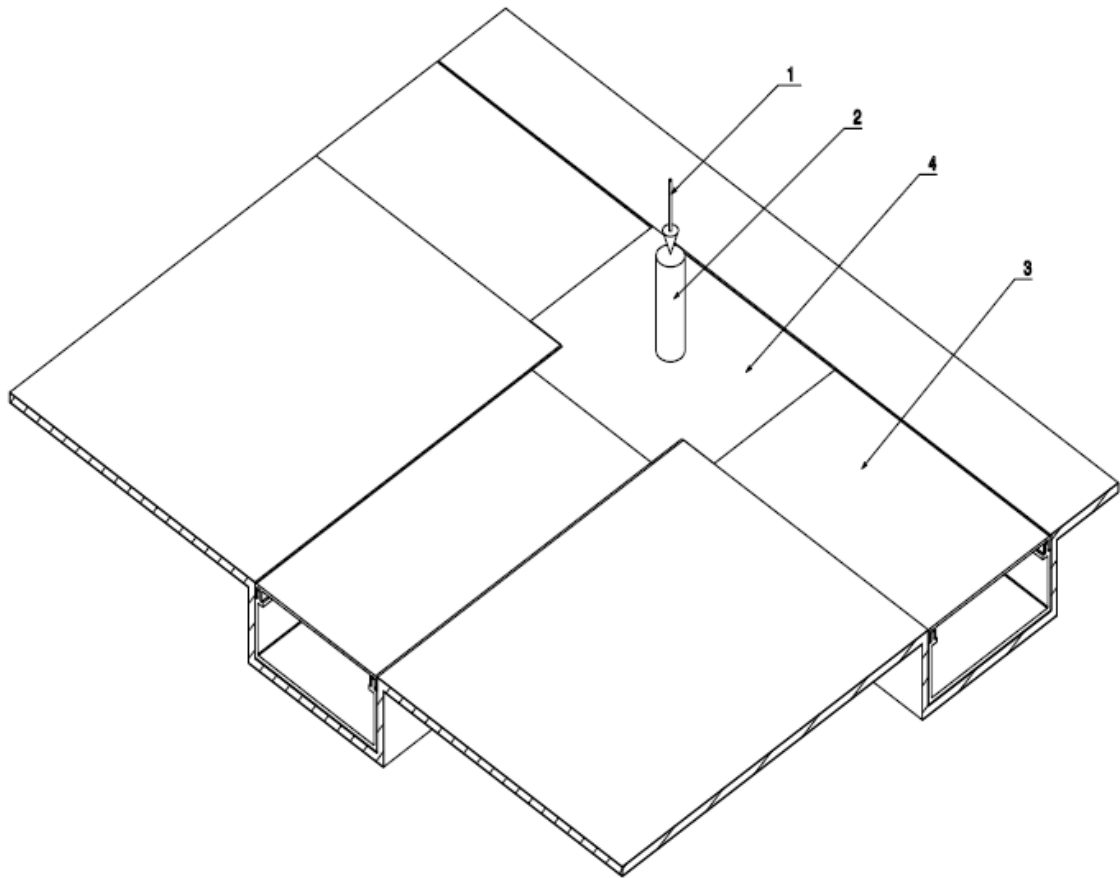
**EN 50085-1:2005+A1:2013**

Clause	Requirement-Test	Result-Remark	Verdict
	 <p><b>Key:</b></p> <ul style="list-style-type: none"> <li>1 Force</li> <li>2 Cylinder</li> <li>3 Length</li> </ul> <p><b>Figure 108b) - Example of arrangement for load test on trunking length</b></p>		



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Clause	Requirement-Test	Result-Remark	Verdict
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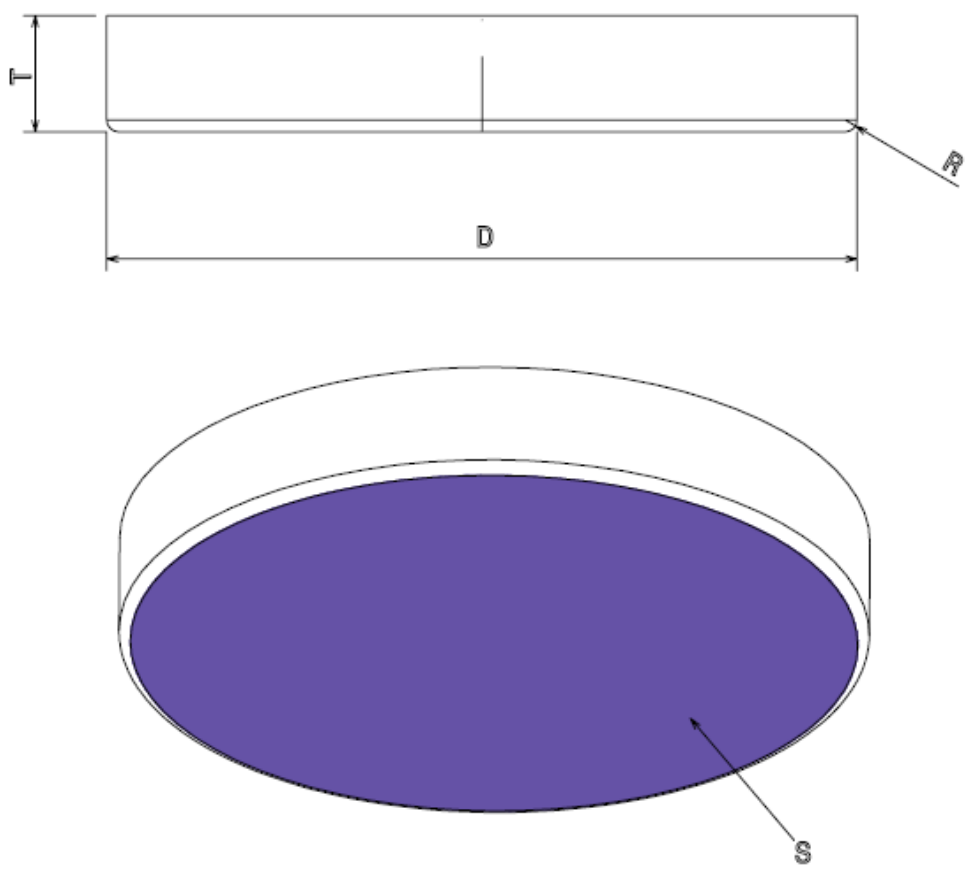
**Key:**

- 1 Force
- 2 Cylinder
- 3 Length
- 4 Fitting

**Figure 108c) - Example of arrangement for load test on fitting**

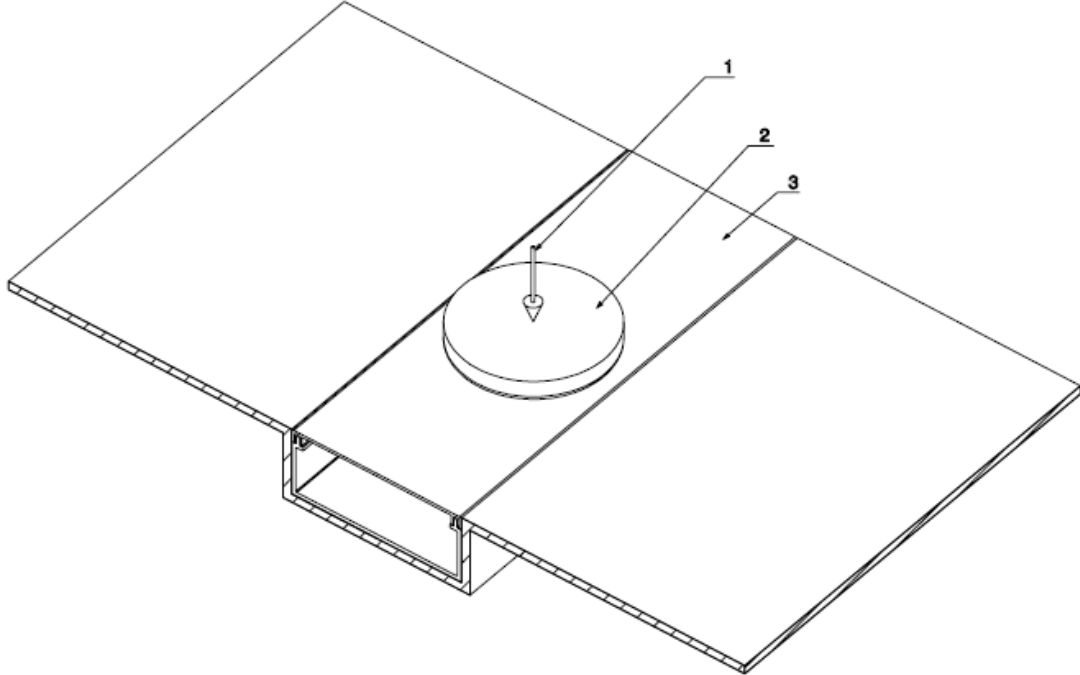
**Figure 108 – Load test set-up for CTS/CDS in accordance with 10.5.103**

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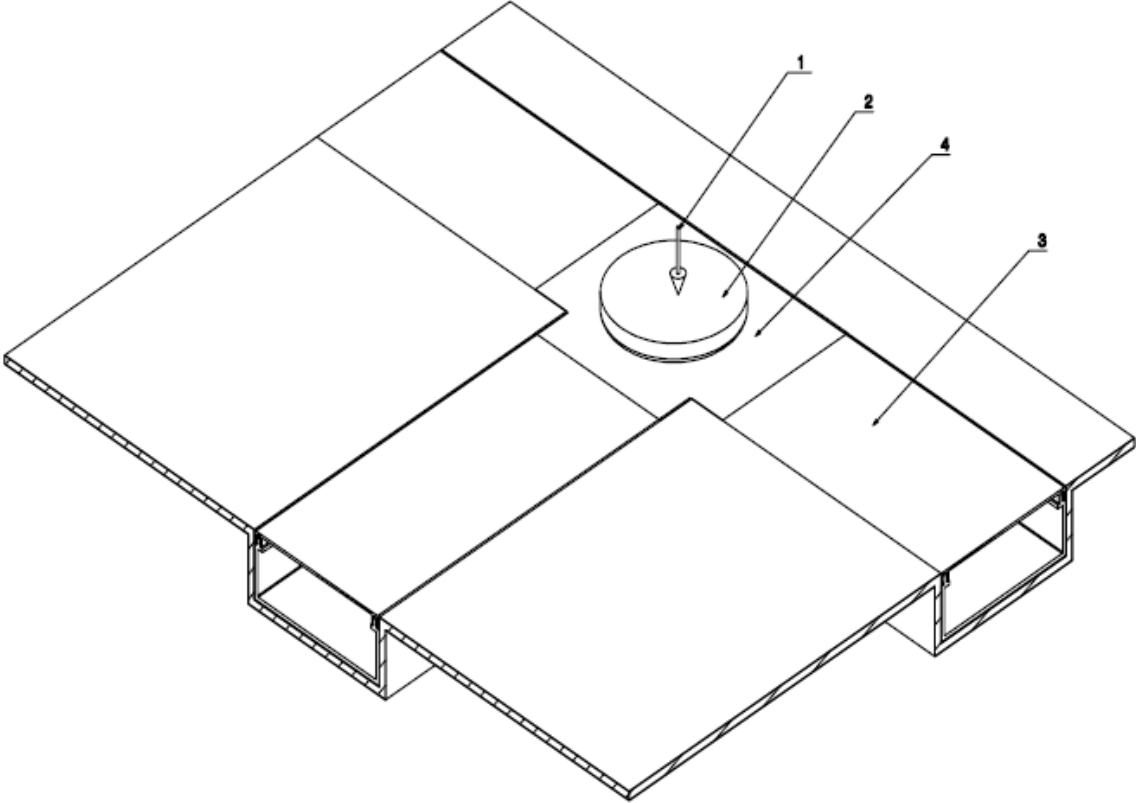
Clause	Requirement-Test	Result-Remark	Verdict
	 <p><b>Key:</b></p> <ul style="list-style-type: none"> <li>D Diameter 130 mm ± 0,5 mm</li> <li>T Thickness 20 mm ± 1 mm</li> <li>R Edge radius approximately 2 mm</li> <li>S Contact surface</li> </ul>		

**Figure 109a) - Detail of the circular plate for load test**

**EN 50085-1:2005+A1:2013**

Clause	Requirement-Test	Result-Remark	Verdict
			
<p><b>Key:</b></p> <ul style="list-style-type: none"> <li>1 Force</li> <li>2 Plate</li> <li>3 Length</li> </ul>			
<p><b>Figure 109b) - Example of arrangement for load test on trunking length</b></p>			

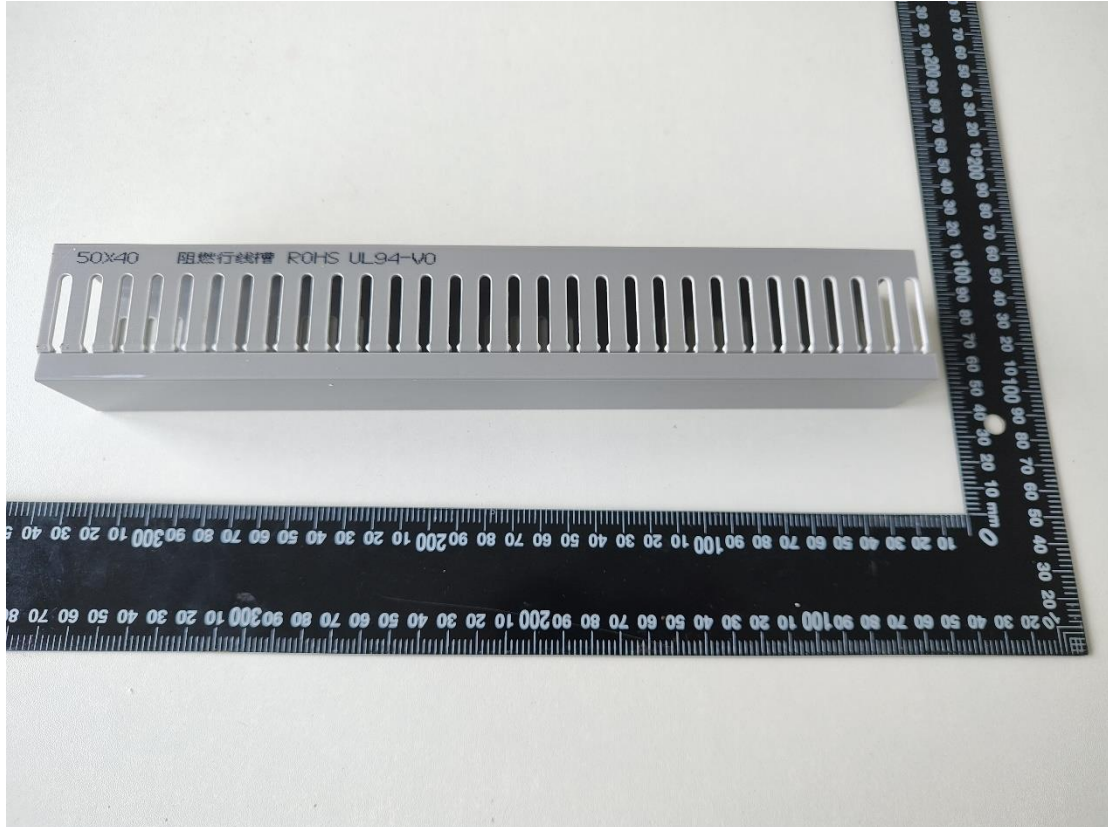
**EN 50085-1:2005+A1:2013**

Clause	Requirement-Test	Result-Remark	Verdict
			
<p><b>Key:</b></p> <ul style="list-style-type: none"> <li>1 Force</li> <li>2 Plate</li> <li>3 Length</li> <li>4 Fitting</li> </ul>			
<p><b>Figure 109c) - Example of arrangement for load test on fitting</b></p>			
<p><b>Figure 109 – Load test set-up for CTS/CDS in accordance with 10.5.104</b></p>			

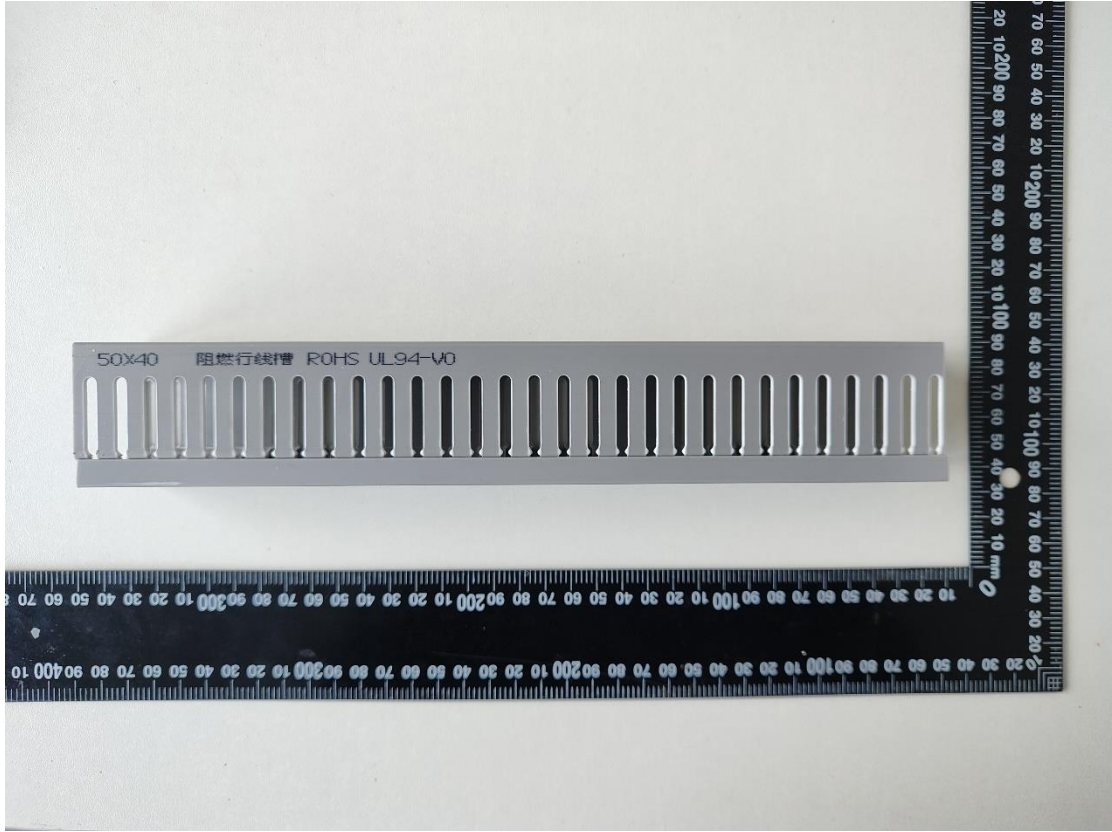


## Annex: Technical Information

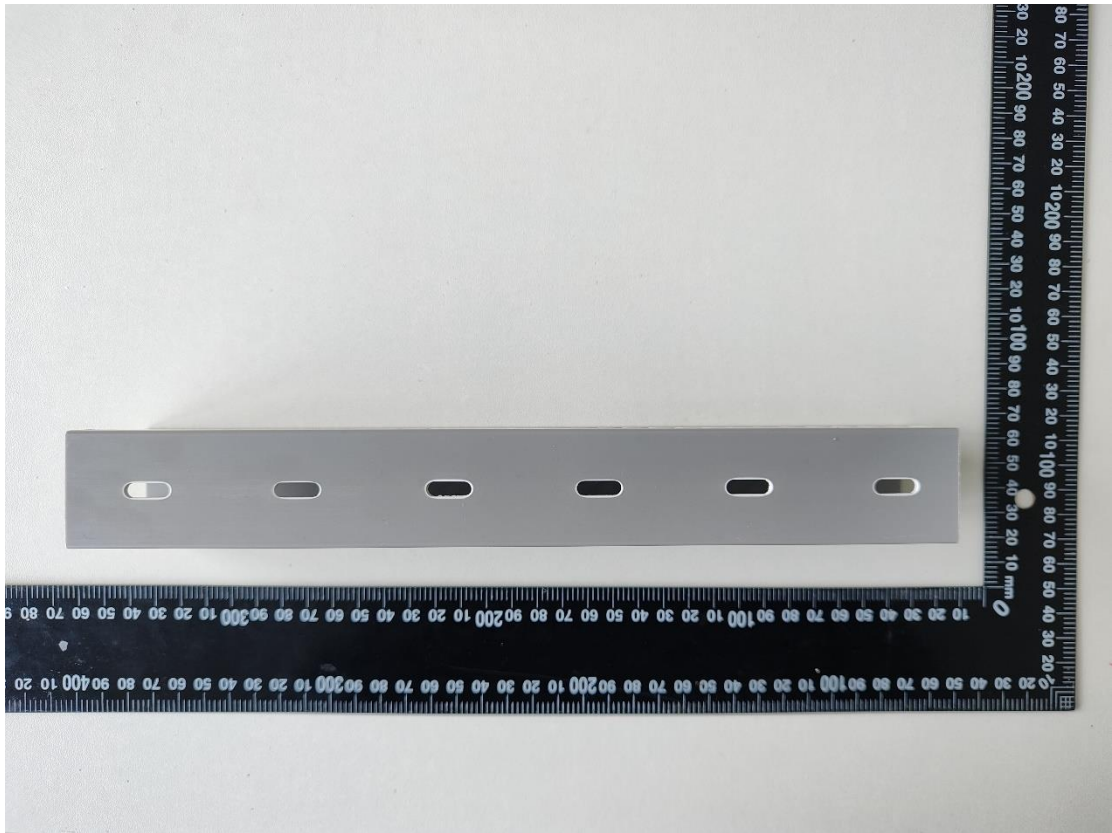
### (1) Product Photos



A.1



A.2



A.3