Test Report TS EN 61386-22 :2005
TS EN 60754-1 :2016

Talep No: 02.04.2018/209854

Üretici firma : DERSA ELEKTRİK

Müteahhit firma : -

İşin adı : -

Ürün referansı : DERSA Ø 18 mm.Boru.(Turuncu)

	Deney adı / Deney şartları / İstenen *Name of the test/ Standard values*	**Ölçülen/Görülen** *Measured/Observed*	**Sonuç** *Results*
13.1	**Yangına karşı dayanım deneyi** (TS EN 61386-22)		
13.1.3	Alev yaymayan boru sistemleri , alevin yayılmasına karşı yeterli dayanıklılığa sahip olmalıdır.		**UYGUN**
13.1.3.2	Metalik olmayan ve kompozit boruların uygunluğu IEC 60695-2-1/1' de belirtildiği gibi 1 kW alev uygulanarak kontrol edilir.		
13.1.3.2.1	675 ±10 mm uzunluğunda bir numune şekil 6' da belirtilen kabin içerisine düşey olarak monte edilir. Genel düzenek şekil 7' de verilmiştir.		
	Boyutları ≤ 12 mm' ye kadar olan boruların içerisinden 2 mm çapında çelik çubuk geçirilir, 16 mm' den 25 mm' ye kadar olan boruların içerisinden 6 mm çapında çelik çubuk geçirilir. 30 mm' den büyük olan boruların içerisinden 16 mm çapında çelik çubuk geçirilir. 10 mm kalınlığında beyaz kurutma kağıdı ile örtülmüş ahşap malzeme numunenin alt kısmına yerleştirilir.		
13.1.3.2.2	Alev beki 45 ° 'lik bir açı ile alt kısmın 100 mm üzerinden ve beki numuneye 100 mm yaklaştırarak deneye başlanır.		
13.1.3.2.3	Alevin uygulanma süresi (saniye) : 35 (Çizelge 11)		
13.1.3.2.4	Deney sonunda numune tutuşmazsa yada 30 sn içerisinde tutuşma sönerse , ince kağıt tutşmazsa , yanma üst tutucuya 50 mm yaklaşmazsa numune deneyden geçmiş sayılır.	-Yanmanın üst tutucuya olan mesafesi: 320 mm. -İpek kağıt tutuşmadı.	**UYGUN**
	Yanma süresi (sn) : max 30	5 sn.	**UYGUN**

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Elektroteknik Laboratuvarı Ankara Müdürlüğü

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Tel:+90 (312) 4166552 Fax: +90 (312) 4166385 E-posta:elektriklab@tse.org.tr Web:www.tse.org.tr

HEADSHIP OF TSE TEST and CALIBRATION CENTER
ELECTROTECHNICAL LABORATORY (ANKARA)

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Tel:+90 (312) 4166552 Fax: +90 (312) 4166385 E-mail:elektriklab@tse.org.tr Web:www.tse.org.tr

Test
TS EN ISO/IEC 17025
AB-0001-T

AB-0001-T
401524
04-18

MUAYENE VE DENEY RAPORU
TEST REPORT

Deneyi Talep Eden (Adı,Adresi,Şehir vb.) *Customer (Name,Adress,City etc.)*	:	DERSA ELEKTRİK İNŞAAT MAKİNA PLASTİK SAN.VE TİC.LTDİŞTİ. (BOĞAZKÖY İSTİKLAL MAH. ADNAN MENDERES CAD. NO: 99 ARNAVUTKÖY --İSTANBUL)
Deney Talep Tarihi/No *Order Date / No*	:	02.04.2018 / 209854
Numunenin Tanımı (No,Cins, Marka, Tip, Tür, Model vb.) *Sample Description (No,Type,Mark,Model etc.)*	:	398198,BORU, DERSA Marka , Q 18 mm.Boru (Turuncu) , - , - , 1.00 adet
Numune Kabul Tarihi *Test Item Receipt Date*	:	02.04.2018
Deneylerin Yapıldığı Tarih *Date of Test*	:	09.04.2018 - 13.04.2018
Uygulanan Standard / Metod *Applied Standard/Method*	:	İlgili standardlar müteakip sayfalarda verilmiştir.
Raporun Sayfa Sayısı *Number of pages of the report*	:	3
Açıklamalar *Remarks*	:	Yapılan muayene ve deneylerden OLUMLU sonuç alınmıştır.

Türk Akreditasyon Kurumu(TÜRKAK) deney raporlarının tanınması konusunda Avrupa Akreditasyon Birliği(EA) ve Uluslararası Laboratuvar Akreditasyon Birliği(ILAC) ile karşılıklı tanınma antlaşmasını imzalamıştır.
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The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.
Bu rapor özel deney talebine istinaden düzenlenmiş olup, Standartlara Uygunluk Belgesi niteliğinde değildir. Partiyi temsil etmez, ayrıca ilan, reklam ve ihalelerde uygunluk belgesi niteliğinde kullanılamaz.
This test report was prepared upon customer's request, can not be used as certificate of conformity to standards, does not represent a batch and can not be used as conformity document for advertisements and procurements .

Mühür *Seal*	**Tarih** *Date*	**Deney Sorumlusu** *Person in charge of tests*	**Kontrol Eden** *Reviewer*	**Onaylayan** *Approved by*
	13./04./2018	Hacı İsmail ÖZBEK Kıdemli Teknisyen	Ahmet Metin GEDİK Teknik Şef	Seyfettin KARABULUT Laboratuvar Müdürü

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Test
TS EN ISO/IEC 17025
AB-0001-T

AB-0001-T
232395
10-14

MUAYENE VE DENEY RAPORU
TEST REPORT

Deneyi Talep Eden (Adı,Adresi,Şehir vb.) *Customer (Name,Adress,City etc.)*	:	DERSA ELEKTRİK İNŞAAT MAKİNA PLASTİK SAN.VE TİC.LTDİŞTİ. BOĞAZKÖY İSTİKLAL MAH. ADNAN MENDERES CAD. NO: 99 ARNAVUTKÖY - -İSTANBUL)
Deney Talep Tarihi/No *Order Date / No*	:	11.09.2014 / 114651
Numunenin Tanımı (Cins, Marka, Tip, Tür, Model vb.) *Sample Description (Type,Mark,Model etc.)*	:	Elektrik Tesisat Borusu, DERSA Marka , Q 18 mm,Gri , - , - , 1.00 metre
Numune Kabul Tarihi *Test Item Receipt Date*	:	11.09.2014
Deneylerin Yapıldığı Tarih *Date of Test*	:	01.10.2014 - 02.10.2014
Uygulanan Standard / Metod *Applied Standard/Method*	:	TS EN 50267-2-1:2001-05 Kablolar- Yangın Şartlarında Ortak Deney Metotları- Kablolardan Alınan Malzemelerin Yanması Sırasında Açığa Çıkan Gazlara Uygulanan Deneyler- Bölüm 2-1: İşlemler- Halojen Asit Gazı Miktarının Tayini
Raporun Sayfa Sayısı *Number of pages of the report*	:	2
Açıklamalar *Remarks*	:	

Türk Akreditasyon Kurumu(TÜRKAK) deney raporlarının tanınması konusunda Avrupa Akreditasyon Birliği(EA) ve Uluslararası Laboratuvar Akreditasyon Birliği(ILAC) ile karşılıklı tanınma antlaşmasını imzalamıştır.
The Turkish Accreditation Acency(TURKAK) is signatory to the multilateral agreements of the European co-operation for the Accreditation(EA) and of the International Laboratory Accreditation(ILAC) for the Mutual recognation of test reports.
Deney ve/veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri (olması halinde) ve deney metodları bu raporun tamamlayıcı kısmı olan takip eden sayfalarda verilmiştir.
The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.
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This test report was prepared upon customer's request, can not be used as certificate of conformity to standards, does not represent a batch and can not be used as conformity document for advertisements and procurements .

Mühür *Seal*	**Tarih** *Date*	**Deney Sorumlusu** *Person in charge of tests*	**Kontrol Eden** *Reviewer*	**Onaylayan** *Approved by*
	10/2014	Hacı İsmail ÖZBİK Teknisyen	Ahmet Metin GEDİK Teknik Şef (Vekaleten)	Musa YAMATMA Laboratuvar Müdürü

Test Report TS EN 50267-2-1

Talep No:5.9.2014/114651

Üretici firma : DERSA BORU

Müteahhit firma :

İşin Adı :

Ürün Referansı : DERSA Marka Ø 18 mm.Gri Boş Boru.

Deney adı / Deney şartları *Name of the test*	**İstenen** *Standard values*	**Ölçülen/Görülen** Measured/Observed	**Sonuç** *Results*
Halojen asit gaz deneyi (gövde) Deney sıcaklığı: 850 °C Deney süresi: 60 dakika Ağırlığı: 1000±5 mg	Halojen miktarı max: % 0,5	**% 0,14**	**UYGUN**
Kızaran tel deneyi Deney sıcaklığı: 650 °C Deney süresi: 30 sn.	Deney süresi sonunda numunede herhangi bir tutuşma olmamalı yada alev 30 sn. içerisinde sönmelidir. Yanma süresi: ≤ 30 sn.	-	-

SONUÇ VE DÜŞÜNCELER :

DERSA Elektrik İnş.Mak.Plastik San.ve Tic.Ltd.Şti. firmasının 5.09.2014 tarihli deney talebi yazısı ekinde gelen DERSA Marka Ø18 mm. boş boru numunesi üzerinde TS EN 50267-2-1'e göre Halojen Asit Gazı Miktarının Tayini deneyi yapılmış olup, sonuç raporda belirtilmiştir.

İş bu rapor 02.10.2014 tarihinde 2 sayfa ve 3 nüsha olarak düzenlenmiştir.

T.C. TÜRK STANDARDLARI ENSTİTÜSÜ ELEKTRİK LABORATUVARI MÜDÜRLÜĞÜ

Test Report TS EN 61386-22 :2005
TS EN 50267-2-1 :2001

Talep No:10.03.2014/104432

SONUÇ VE DÜŞÜNCELER:

DERSA Elektrik İnş.Mak.Plastik San.ve Tic.Ltd.Şti. firmasının 06.03.2014 tarihli yazısı ekinde gelen DERSA Marka,Q18 mm.Boş Boru numunesi üzerinde TS EN 61386-22 ve TS EN 50267-2-1 Standardlarına göre Alev Yayılmasına Dayanım ve Halojen Asit Gazı Miktarının Tayini deneyleri yapılmış olup deney sonuçları raporda belirtilmiştir.

İş bu rapor 14.03.2014 tarihinde 3 sayfa ve 3 nüsha olarak düzenlenmiştir.

Test Report TS EN 61386-22 :2005
TS EN 60754-1 :2016

Talep No: 02.04.2018/209854

Halojen asit – gaz deneyi (TS EN 60754-1)

Deney sıcaklığı : 850 °C Deney süresi : 60 dakika Ağırlığı : 1000±5 mg Halojen miktarı max : % 0,5	% 0,15	**UYGUN**

SONUÇ VE DÜŞÜNCELER:

Dersa Elektrik İnş.Mak.Plastik San.ve Tic.Ltd.Şti.firmasının 29.03.2018 tarihli yazısı ekinde gelen : DERSA Ø 18 mm.Boru.(Turuncu) numunesi üzerinde TS EN 61386-22 ve TS EN 60754-1 Standardlarına göre Alev Yayılmasına Dayanım ve Halojen Asit Gazı Miktarının Tayini deneyleri yapılmış olup deney sonuçları raporda belirtilmiştir.

Bu rapor sadece deneyi yapılan numune için geçerlidir.

İş bu rapor 13.04.2018 tarihinde 3 sayfa ve 2 nüsha olarak düzenlenmiştir.

T.C. TÜRK STANDARTLARI ENSTİTÜSÜ 1923 ELEKTROTEKNİK LABORATUVARI ANKARA MÜDÜRLÜĞÜ

CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ

Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir
İstanbul/TURKİYE
Deney Raporu
Test Report

LVD-466-01
05-20

Müşterinin adı /adresi: Customer name/address	***DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ. / İstiklal Mah. Türksoy Cad. No:99 Boğazköy Arnavutköy İstanbul/Türkiye***
Üretici/ Üretim Yeri: Manufacturer/ Manufacturing Location	***DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ. / İstiklal Mah. Türksoy Cad. No:99 Boğazköy Arnavutköy İstanbul/Türkiye***
İstek Numarası: Order no.	***17122019nkk1***
Numunenin Adı ve Tarifi: Name and identity of test item	***DSPRHS20-05; Q20MM 2331-320N Hafif Seri Helojen Free Alev Yaymayan Spiral Boru*** Q20MM 2331-320N Light Series Halogen Free Flag Spiral Pipes
Numunenin Kabul tarihi: The date of receipt of test item	***06-02-2020***
Açıklamalar: Remarks	***Ürün ilgili testlerden geçmiştir, lütfen raporu inceleyiniz.*** / The product passes related tests, see report below.
Deneyin yapıldığı tarih: Date of Test	***06-05-2020 to 20-05-2020***
Deneyin Yapıldığı Yer: Testing Location	***CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ/ Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir İstanbul/TURKİYE***
Deney Standartı Test Standard	***EN 61386-22:2004 used in conjunction with EN 61386-1:2008***
Raporun Sayfa Sayısı: Number of pages of the Report	***15* sayfa/*pages***

Tarih Date	***Deney Sorumlusu*** Person in charge of test	***Onaylayan*** Approval
22-05-2020	***Naim Koralp KARAKOÇ***	***Timur GÜSER***

TEST REPORT
EN/IEC 61386-22
Conduit systems for cable management
Part 22: Particular requirements - Pliable conduit systems

Report Reference No. ..... :	LVD-466-01
Date of issue ..... :	22-05-2020
Contents..... :	15 pages
Testing Laboratory..... :	CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ
Address ..... :	Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir/İstanbul
Testing location..... :	CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ
Address ..... :	Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir/İstanbul
Applicant's name ..... :	DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ.
Address ..... :	İstiklal Mah. Türksoy Cad. No:99 Boğazköy Arnavutköy İstanbul/Türkiye
Test specification:	
Standard..... :	EN 61386-22:2004 used in conjunction with EN 61386-1:2008
Test procedure ..... :	Type Test
Non-standard test method..... :	N/A
Test Report Form No. ..... :	F510_54_R1.0

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description ..... :	Q20MM 2331-320N Light Series Halogen Free Flag Spiral Pipes
Trade Mark..... :	DERSA ELEKTRİK
Manufacturer ..... :	DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ.
Model/Type reference ..... :	DSPRHS20-05
Ratings ..... :	Q20mm; Light Series; 1 coil of 50 meters

List of Attachments (including a total number of pages in each attachment):	
Summary of testing:	
Tests performed (name of test and test clause): Necessary tests were applied to the sample according to EN 61386-22:2004 used in conjunction with EN 61386-1:2008 standards.	**Testing location:** CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir/İstanbul/Türkiye
Copy of marking plate **The artwork below may be only a draft.**	

Test item particulars:	Spiral Pipe
Conduit system classification coding..... :	2331(manufacturer's declaration)
Type of conduit..... :	☐ Metallic ☒ Non-metallic ☐Composite
Type of conduit..... :	☐Plain ☒ Corrugated
Type of conduit fitting..... :	No fittings
Conduit fitting – quantity..... :	---
Conduit fitting – type(s)..... :	---
Conduit fitting – colour(s)..... :	---
Method for connection ..... :	☐Threadable ☒ Non-threadable
Resistance to compression ..... :	2
Resistance to impact ..... :	3
Tensile strength..... :	0
Suspended load capacity..... :	0
Lower / Upper temperature range ..... :	-15°C / +60°C
Electrical characteristics ..... :	☐With electrical continuity ☒With electrical insulating (not declared)
Resistance to external influences..... :	---
Resistance against corrosion ..... :	---
Resistance to flame propagation..... :	☒ Non-flame propagating ☐ Flame propagating (all other types)
Possible test case verdicts:	
- test case does not apply to the test object..... :	N/A
- test case does meet the requirement..... :	Pass (P)
- test case does not meet the requirement..... :	Fail (F)
Testing:	
Date of receipt of test item..... :	06-02-2020
Date(s) of performance of tests..... :	06-05-2020 to 20-05-2020

General remarks:

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.
Throughout this report a comma (point) is used as the decimal separator.

General product information:

Spiral pipes are produced for safe and trouble-free use in suspended ceilings, plasterboard walls and flush mounted light installations.

The other sub-models of the product are given in Attachment 3.

IEC 61386-22			
Clause	Requirement + Test	Result - Remark	Verdict

7	**MARKING AND DOCUMENTATION**		P
7.1	Conduit (conduit fitting) is marked on the product with a trade mark or a name identifying the manufacturer or responsible vendor ..... :	DERSA	P
	Conduit (conduit fitting) is marked in addition in such a way that it can be identified in the manufacturer's, or responsible vendor's, literature ..... :	Type designation, dimensions and length	P
7.1.1	Conduit is also marked with the classification code, in accordance with annex A, and includes at least the first four digits (optional) ..... :	Marked in specification	P
7.1.2	Manufacturer indicates the compatibility of parts within a conduit system	Only conduits (no system)	N/A
7.1.101	Conduit is marked in accordance with 7.1 along its entire length at regular intervals of preferably 1 m but not longer than 3 m (m) ..... :		N/A
	The mark is on a label attached to the product at each end or on the packaging (if the marking in accordance with 7.1 along its entire length is technically impractical) ..... :	Marked on label provided with each 25 or 50 m packaging	N/A
7.1.102	Minimum inside diameter and the classification for the system in accordance with clause 6 are documented by the manufacturer ..... :		P
7.2	Conduit fitting is marked in accordance with 7.1, on		N/A
	- the product ..... :	No fittings	N/A
	- a label attached to the product, or on the box or carton containing the fittings (if the marking on the product is impractical) ..... :		N/A
7.3	Flame propagating material is orange in colour		N/A
	Flame propagating material is not coloured orange by painting or other superficial means		N/A
	Non-flame propagating material is of any colour except yellow, orange or red, unless is clearly marked on the product to be of non-flame propagating material ..... :	Grey color	P
7.4	Earthing facilities are indicated by the symbol for protective earth in accordance with IEC 60417, symbol 60417-IEC-5019-a ..... :		N/A
	This marking is not placed on easily removable parts, for example screws		N/A
7.5	Compliance with 7.1 to 7.4 checked by inspection		P
7.6	Marking is durable and clearly legible		P
	Compliance checked by inspection and by rubbing the marking by hand for 15 s with a piece of cloth soaked with water, and again for 15 s with a piece of cloth soaked with petroleum spirit		P

IEC 61386-22			
Clause	Requirement + Test	Result - Remark	Verdict

8	**DIMENSIONS**		N/A
8.1	Outside diameters of non-metallic conduits comply with IEC 60423 ..... :		N/A
	Threads comply with IEC 60423 ..... :		N/A
	Outside diameters of metallic and composite conduits designed to be installed only with terminating conduit fittings having threads complying with IEC 60423: need not to comply with IEC 60423		N/A
8.2	Threadable conduits and threadable conduit fittings comply with table 101 (except terminating conduit fittings) ..... :		N/A
	Non-threadable conduit fittings comply with table 102 (except fittings which are part of a conduit system declaring tensile strength) ..... :		N/A
	Minimum inside diameter of the conduit system is as declared by the manufacturer		N/A

9	**CONSTRUCTION**		P
9.1	There are no sharp edges, burrs or surface projections within the conduit system		P
	The manufacturer provides guidelines to assist the safe installation of the conduit system	Use is self-evident	N/A
9.2	Screws, if any, used for attaching components or covers to conduit fittings, or in joints to conduits, do not cause damage to cable insulation when correctly inserted	No screws	N/A
	Screws have ISO metric threads		N/A
	Thread-cutting screws are not used		N/A
	Fixing screws and small clips for use with non-metallic or composite conduit fittings, of non-metallic material, are isolated from insulated conductors or cables		N/A
9.3	Test for screw fixing using preformed threads		N/A
	After the test: no damage sustained by the screw or nut, such as breakage of the screw or damage to the head or thread		N/A
9.4	Test for screw fixing using thread-forming screws		N/A
	After the test: no damage, such as breakage of the screw or damage to the head or thread		N/A
9.5	Any material within the joint have at least the same level of resistance to the external influence as either the conduit or the conduit fitting ..... :		N/A
9.6	Indications whether the conduit system that are assembled by means other than threads can be disassembled and if so, how this can be achieved, are provided by the manufacturer	Not assembled by means of threads	N/A

IEC 61386-22			
Clause	Requirement + Test	Result - Remark	Verdict

10	**MECHANICAL PROPERTIES**		P
10.1	**Mechanical strength**		P
10.1.1	Conduit systems have adequate mechanical strength		P
10.1.2	Conduits do not crack and are not deformed when bent or compressed, or exposed to impact or extreme temperature, according to their classification		P
10.1.3	Conduit systems intended as a mounting for other equipment have adequate mechanical strength		N/A
10.1.4	Compliance of 10.1.1 to 10.1.3 checked by the tests specified in 10.2 to 10.8		P
10.2	**Compression test**		P
	3 samples of conduit, each (200 ± 5) mm long, subjected to a compression test at (23 ± 2) °C, using the apparatus shown in figure 1		P
	Test for pliable conduits		P
10.2.101	Test for pliable/self-recovering conduits		N/A
10.3	**Impact test**		P
	12 samples of conduit, each (200 ± 5) mm in length, or 12 samples of conduit fittings subjectedto an impact test using the apparatus shown in figure 2		P
10.3.3	At least 9 of the 12 samples passed the test		P
10.4	**Bending test**		P
	6 samples of conduits subjected to a bending test by means of the apparatus as shown in figure 101		P
10.5	**Flexing test**		N/A
	Sub-clause of part 1 not applicable		—
10.6	**Collapse test**		N/A
	Sub-clause of part 1 not applicable		—
10.7	**Tensile test**		N/A
	Conduit systems declaring tensile strength: test carried out on an assembly prepared in accordance with the manufacturer's instructions so that the overall length is approximately 200 mm		N/A
10.8	**Suspended load test**		N/A
	Conduit fitting declared by the manufacturer to be suitable for suspended loads: test carried out with a load suspended by the means provided and installed in accordance with the manufacturer's instructions for a time duration given in table 7		N/A

IEC 61386-22			
Clause	Requirement + Test	Result - Remark	Verdict

11	**ELECTRICAL PROPERTIES**		P
11.1	**Electrical requirements**		P
11.1.1	Conduit systems declaring electrical continuity characteristics are checked by the tests in 11.2 immediately after the tests in 14.2	No electrical continuity declared	N/A
11.1.2	Conduit systems of metal or composite materials are so constructed that accessible metal parts can be bonded to earth		N/A
11.1.3	Accessible conductive parts of the metal or composite conduit system, which may become live in the event of a fault, are be effectively earthed		N/A
11.1.4	Conduit systems of non-metallic or composite materials, where declared, have an adequate electrical insulating strength and insulating resistance	Not declared	N/A
11.2	**Bonding test**		N/A
	Test carried out on a sample of a conduit and terminating conduit fittings assembled in accordance with the manufacturer's instructions and mounted as shown in figure 103: resistance not exceed 0,1 Ω		N/A
11.3	**Electrical insulating strength and resistance**		**N/A**
11.3.1	Conduits		N/A
	3 samples of conduit tested in a salt water solution at (23 ± 2) °C, in accordance with figure 5, and submitted after 24 h ± 15 min to a voltage of 2000 V maintained for a period of 15 min +5/0 s: trip device incorporated into the circuit not trip during the test		N/A
	Same samples then subjected to an electrical insulation resistance test with a direct voltage of 500 V applied for (60 ± 2)s: measured insulation resistance greater than 100 MΩ		N/A
11.3.2	Conduit fittings		N/A
	3 samples of conduit fittings immersed for 24 h ± 15 min in water at (23 ± 2) °C and then submitted by means of lead spheres to a voltage of 2000 V maintained for a period of 15 min +5/0 s: trip device incorporated into the circuit not trip during the test		N/A
	Same samples then subjected to an electrical insulation resistance test with a direct voltage of 500 V applied for (60 ± 2)s: measured insulation resistance greater than 100 MΩ		N/A
12	**THERMAL PROPERTIES**		P
12.1	Non-metallic and composite conduits have adequate resistance to heat		P

IEC 61386-22			
Clause	Requirement + Test	Result - Remark	Verdict
12.2	Samples of conduit, each (100 ± 5) mm long, together with the test apparatus as shown in figure 8, kept for 4 h ± 5 min in a heating cabinet at the declared temperature given in table 2, with a tolerance of ±2 °C		P
	Each sample then loaded for 24 h ± 15 min in the apparatus of figure 8 with a total mass as shown in table 9		P
12.3	It is possible to pass the appropriate gauge of figure 102 immediately after the removal of the load		P
13	**FIRE HAZARD**		P
13.1	Reaction to fire		P
13.1.1	Initiation of fire (not applicable)		—
13.1.2	Contribution to fire (under consideration)		—
13.1.3	Spread of fire		-
	Non-flame propagating conduit systems have adequate resistance to flame propagation		P
13.1.3.1	Non-metallic and composite conduit fittings subjected to glow-wire test of IEC 60695-2-1/1 (IEC 60695-2-11) at 750 °C		P
	No visible flame or sustained glowing,		N/A
	Flames and glowing extinguished within 30 s of the removal of the glow-wire (s) ..... :		P
13.1.3.2	Non-metallic and composite conduits subjected to 1 kW flame of IEC 60695-2-4/1 (IEC 60695-11-2), according to the arrangement of figure 7, applied for the period given in table 11		P
	▪ Sample does not ignite, or		N/A
	▪ In case of ignition:		
	a) Flame extinguishes within 30 s .....:		P
	b) No ignition of the tissue paper		P
	c) No evidence of burning or charring within 50 mm of the lower extremity of the upper clamp		P
14	**EXTERNAL INFLUENCES**		P
14.1	Degree of protection provided by enclosure		P
	Conduit systems, when assembled in accordance with the manufacturer's instructions, have adequate resistance to external influences according to the classification declared by the manufacturer, with a minimum requirement of IP30 .....:	IP30 (manufacter's declared)	P
14.1.1	Degree of protection – Ingress of foreign solid objects	IP30	P
14.1.2	Degree of protection – Ingress of water		N/A
14.2	Resistance against corrosion		N/A

IEC 61386-22			
Clause	Requirement + Test	Result - Remark	Verdict

	Resistance to corrosion classification for painted and zinc coated steel and steel composite conduits and conduit fittings (table 10).....:		—
	For non-ferrous metallic and composite conduit systems, the manufacturer provided information about its protection against corrosion		N/A
14.2.2	Tests for resistance to corrosion for painted and zinc coated steel and steel composite conduits systems		N/A
14.2.2.1	Low protection conduit and conduit fittings inspected for completeness of covering by the protective coating, both inside and outside		N/A
14.2.2.2	Test for medium protection conduit and conduit fittings: after completion of the test, the samples showed no more than two blue coloured spots on each square centimetre of the surface, and no blue spot had a dimension larger than 1,5 mm		N/A
14.2.2.3	Test for high protection conduit and conduit fittings: after the test, the sample showed no precipitation of copper which cannot be scrubbed off in running water, if necessary after immersion for 15 s in a 10% solution of hydrochloric acid in water		N/A

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

ATTACHMENT 1

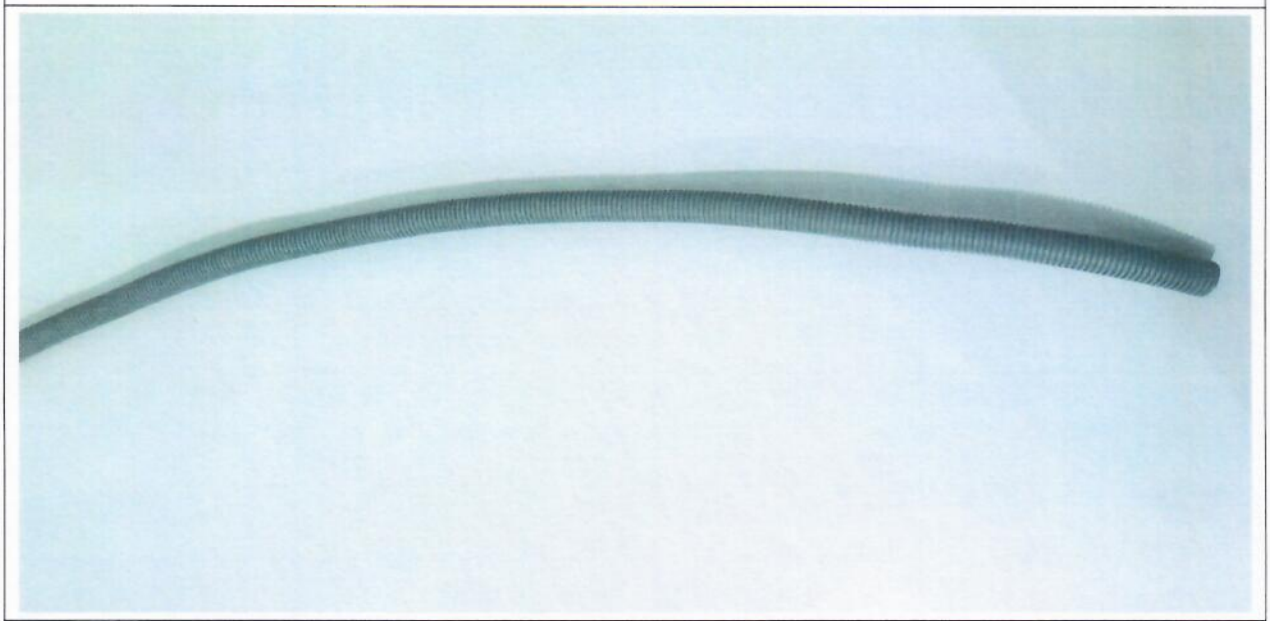
Equipment of measurements

Equipment No	Kind of equipment	Model Type	Manufacturer	Last Cal Date	Next Cal Date	Last Ver Date	Next Ver Date
E-054	CE Multitester	C.A 6160	Chauvin Arnoux	14-12-2019	14-12-2020	---	---
E-003	Datalogger	DL40	CSK Elektrik Elektronik San. ve Tic. Ltd. Şti	09-10-2019	09-10-2020	---	---
E-004	Humidity cabinet	---	ULMEKA mekatronik	04-10-2019	04-10-2020	---	---
E-011	Multimeter	UT61B	UNI-T	05-10-2019	05-10-2020	---	---
E-021	Probe B	TS015/1000-B	CSK Elektrik Elektronik San. ve Tic. Ltd. Şti	06-04-2020	06-04-2022	---	---
E-091	Temperature-Humidity Meter	351077	TFA	02-04-2020	02-04-2021	---	---
E-037	Force gauge	SF-500	Geratech	09-10-2019	09-10-2020	---	---
E-042	Variac	---	VARSAN	---	---	---	---
E-045	Ball pressure mass	---	TEKNİK MEKATRONİK	08-04-2019	08-04-2021	---	---
E-034	Oven	T12	HERAEUS	04-10-2019	04-10-2020	---	---
E-005	Glow wire test	---	ULMEKA mekatronik	04-10-2019	04-10-2020	---	---
E-007	Needle flame	---	ULMEKA mekatronik	13-11-2019	13-11-2020	---	---

ATTACHMENT 2
Photo Documentation

Photo documentation

Top View
 
Top View

Photo documentation

Top View

ATTACHMENT 3

DERSA ELEKTRİK İNŞ. MAK. PLASTİK SAN. VE TİC. LTD. ŞTİ

İSTİKLAL MAHALLESİ TÜRKSOY CAD. NO: 99 BOĞAZKÖY
ARNAVUTKÖY / IST. TEL:(0212) 684 18 26 - 684 28 16 FAX:(0212) 684 28 98
e- mail: info@dersaelektrik.com - dersaboru@hotmail.com
web: www.dersaelektrik.com - www.dersaboru.com

AYNİYET BEYANI **06.01.2020**

IDENTITY DECLARATION

1: DSPRHS12-01, DSPRHS14-01, DSPRHS16-01, DSPRHS18-01, DSPRHS20-01, DSPRHS25-01, DSPRHS32-01, DSPRHS37-01
DSPROS12-02, DSPROS14-02, DSPROS16-02, DSPROS18-02, DSPROS20-02, DSPROS25-02, DSPROS32-02, DSPRHS37-02
DSPRHS12-07, DSPRHS14-07, DSPRHS16-07, DSPRHS18-07, DSPRHS20-07, DSPRHS25-07, DSPRHS32-07, DSPRHS37-07
DSPROS12-08, DSPROS14-08, DSPROS16-08, DSPROS18-08, DSPROS20-08, DSPROS25-08, DSPROS32-08, DSPROS37-08

2: DSPRHS12-03, DSPRHS14-03, DSPRHS16-03, DSPRHS18-03, DSPRHS20-03, DSPRHS25-03, DSPRHS32-03, DSPRHS37-03
DSPROS12-04, DSPROS14-04, DSPROS16-04, DSPROS18-04, DSPROS20-04, DSPROS25-04, DSPROS32-04, DSPROS37-04,
DSPRHS12-09, DSPRHS14-09, DSPRHS16-09, DSPRHS18-09, DSPRHS20-09, DSPRHS25-09, DSPRHS32-09, DSPRHS37-09,
DSPROS12-10, DSPROS14-10, DSPROS16-10, DSPROS18-10, DSPROS20-10, DSPROS25-10, DSPROS32-10, DSPROS37-10

3: DSPRHS12-05, DSPRHS14-05, DSPRHS16-05, DSPRHS18-05, DSPRHS20-05, DSPRHS25-05, DSPRHS32-05, DSPRHS37-05,
DSPROS12-06, DSPROS14-06, DSPROS16-06, DSPROS18-06, DSPROS20-06, DSPROS25-06, DSPROS32-06, DSPROS37-06,
DSPRHS12-11, DSPRHS14-11, DSPRHS16-11, DSPRHS18-11, DSPRHS20-11, DSPRHS25-11, DSPRHS32-11, DSPRHS37-11,
DSPROS11-12, DSPROS14-12, DSPROS16-12, DSPROS18-12, DSPROS20-12, DSPROS25-12, DSPROS32-12, DSPROS37-12

Kodlu ürünlerin bütün teknik özelliklerinin (örn. Tasarım, özellikler, kritik kompanentler) benzer olduğunu beyan ederiz.

We declared that the product(s) is (are) identical in the all tecnical respects (e.g desing, properties, critical components)

1: DSPRHS12-01, DSPRHS14-01, DSPRHS16-01, DSPRHS18-01, DSPRHS20-01, DSPRHS25-01, DSPRHS32-01, DSPRHS37-01
DSPROS12-02, DSPROS14-02, DSPROS16-02, DSPROS18-02, DSPROS20-02, DSPROS25-02, DSPROS32-02, DSPRHS37-02
DSPRHS12-07, DSPRHS14-07, DSPRHS16-07, DSPRHS18-07, DSPRHS20-07, DSPRHS25-07, DSPRHS32-07, DSPRHS37-07
DSPROS12-08, DSPROS14-08, DSPROS16-08, DSPROS18-08, DSPROS20-08, DSPROS25-08, DSPROS32-08, DSPROS37-08

2: DSPRHS12-03, DSPRHS14-03, DSPRHS16-03, DSPRHS18-03, DSPRHS20-03, DSPRHS25-03, DSPRHS32-03, DSPRHS37-03
DSPROS12-04, DSPROS14-04, DSPROS16-04, DSPROS18-04, DSPROS20-04, DSPROS25-04, DSPROS32-04, DSPROS37-04,
DSPRHS12-09, DSPRHS14-09, DSPRHS16-09, DSPRHS18-09, DSPRHS20-09, DSPRHS25-09, DSPRHS32-09, DSPRHS37-09,
DSPROS12-10, DSPROS14-10, DSPROS16-10, DSPROS18-10, DSPROS20-10, DSPROS25-10, DSPROS32-10, DSPROS37-10

3: DSPRHS12-05, DSPRHS14-05, DSPRHS16-05, DSPRHS18-05, DSPRHS20-05, DSPRHS25-05, DSPRHS32-05, DSPRHS37-05,
DSPROS12-06, DSPROS14-06, DSPROS16-06, DSPROS18-06, DSPROS20-06, DSPROS25-06, DSPROS32-06, DSPROS37-06,
DSPRHS12-11, DSPRHS14-11, DSPRHS16-11, DSPRHS18-11, DSPRHS20-11, DSPRHS25-11, DSPRHS32-11, DSPRHS37-11,
DSPROS11-12, DSPROS14-12, DSPROS16-12, DSPROS18-12, DSPROS20-12, DSPROS25-12, DSPROS32-12, DSPROS37-12

Firma kaşesi

Yetkili imza

DERSA ELEKTRİK
İNŞ. MAK. PLS. SAN. VE TİC. LTD. ŞTİ.

CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ

Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir
İstanbul/TURKİYE
Deney Raporu
Test Report

LVD-466-02
05-20

Müşterinin adı /adresi: Customer name/address	***DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ. / İstiklal Mah. Türksoy Cad. No:99 Boğazköy Arnavutköy İstanbul/Türkiye***
Üretici/ Üretim Yeri: Manufacturer/ Manufacturing Location	***DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ. / İstiklal Mah. Türksoy Cad. No:99 Boğazköy Arnavutköy İstanbul/Türkiye***
İstek Numarası: Order no.	***17122019nkk1***
Numunenin Adı ve Tarifi: Name and identity of test item	***DRS1OS25-06; Q25MM 3331-750N Orta Seri Alev Yaymayan Kangal Boru*** Q25MM 3331-750N Medium Series Halogen Free Non-Flammable Coil Pipes
Numunenin Kabul tarihi: The date of receipt of test item	***06-02-2020***
Açıklamalar: Remarks	***Ürün ilgili testlerden geçmiştir, lütfen raporu inceleyiniz.*** / The product passes related tests, see report below.
Deneyin yapıldığı tarih: Date of Test	***06-05-2020 to 20-05-2020***
Deneyin Yapıldığı Yer: Testing Location	***CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ/ Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir İstanbul/TURKİYE***
Deney Standartı Test Standard	***EN 61386-22:2004 used in conjunction with EN 61386-1:2008***
Raporun Sayfa Sayısı: Number of pages of the Report	***15 sayfa****/pages*

Tarih Date	***Deney Sorumlusu*** Person in charge of test	***Onaylayan*** Approval
22-05-2020	***Naim Koralp KARAKOÇ***	***Timur GÜSER***

TEST REPORT
EN/IEC 61386-22
Conduit systems for cable management
Part 22: Particular requirements - Pliable conduit systems

Report Reference No. ..... :	LVD-466-02
Date of issue ..... :	22-05-2020
Contents..... :	15 pages
Testing Laboratory..... :	CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ
Address ..... :	Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir/İstanbul
Testing location..... :	CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ
Address ..... :	Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir/İstanbul
Applicant's name ..... :	DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ.
Address ..... :	İstiklal Mah. Türksoy Cad. No:99 Boğazköy Arnavutköy İstanbul/Türkiye
Test specification:	
Standard..... :	EN 61386-22:2004 used in conjunction with EN 61386-1:2008
Test procedure ..... :	Type Test
Non-standard test method..... :	N/A
Test Report Form No. ..... :	F510_54_R1.0

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description ..... :	Q25MM 3331-750N Medium Series Halogen Free Non-Flammable Coil Pipes
Trade Mark..... :	DERSA ELEKTRİK
Manufacturer ..... :	DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ.
Model/Type reference ..... :	DRS1OS25-06
Ratings ..... :	Q25mm; Medium Series; 1 coil of 100 meters

List of Attachments (including a total number of pages in each attachment):	
Summary of testing:	
Tests performed (name of test and test clause): Necessary tests were applied to the sample according to EN 61386-22:2004 used in conjunction with EN 61386-1:2008 standards.	**Testing location:** CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir/İstanbul/Türkiye

Copy of marking plate

The artwork below may be only a draft.

Test item particulars:	Coil Pipe
Conduit system classification coding..... :	3331 (manufacturer's declaration)
Type of conduit..... :	☐ Metallic ☒ Non-metallic ☐Composite
Type of conduit..... :	☒Plain ☐ Corrugated
Type of conduit fitting..... :	No fittings
Conduit fitting – quantity..... :	---
Conduit fitting – type(s) ..... :	---
Conduit fitting – colour(s) ..... :	---
Method for connection ..... :	☐Threadable ☒ Non-threadable
Resistance to compression ..... :	3
Resistance to impact ..... :	3
Tensile strength..... :	0
Suspended load capacity..... :	0
Lower / Upper temperature range ..... :	-15°C / +60°C
Electrical characteristics ..... :	☐With electrical continuity ☒With electrical insulating (not declared)
Resistance to external influences..... :	---
Resistance against corrosion ..... :	---
Resistance to flame propagation..... :	☒ Non-flame propagating ☐ Flame propagating (all other types)
Possible test case verdicts:	
- test case does not apply to the test object..... :	N/A
- test case does meet the requirement..... :	Pass (P)
- test case does not meet the requirement..... :	Fail (F)
Testing:	
Date of receipt of test item..... :	06-02-2020
Date(s) of performance of tests..... :	06-05-2020 to 20-05-2020

General remarks:

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.
Throughout this report a comma (point) is used as the decimal separator.

General product information:

It is produced for use in buildings, residential buildings, prefabricated structures, in all plastered and surface-mounted applications, in concrete, plasterboard, walls or suspended ceilings, in all structures that do not require formation of acid gas.

The other sub-models of the product are given in Attachment 3.

IEC 61386-22			
Clause	Requirement + Test	Result - Remark	Verdict

7	**MARKING AND DOCUMENTATION**		P
7.1	Conduit (conduit fitting) is marked on the product with a trade mark or a name identifying the manufacturer or responsible vendor ..... :	DERSA	P
	Conduit (conduit fitting) is marked in addition in such a way that it can be identified in the manufacturer's, or responsible vendor's, literature ..... :	Type designation, dimensions and length	P
7.1.1	Conduit is also marked with the classification code, in accordance with annex A, and includes at least the first four digits (optional) ..... :	Marked in specification	P
7.1.2	Manufacturer indicates the compatibility of parts within a conduit system	Only conduits (no system)	N/A
7.1.101	Conduit is marked in accordance with 7.1 along its entire length at regular intervals of preferably 1 m but not longer than 3 m (m) ..... :		N/A
	The mark is on a label attached to the product at each end or on the packaging (if the marking in accordance with 7.1 along its entire length is technically impractical) ..... :	Marked on label provided with each 25 or 100 m packaging	N/A
7.1.102	Minimum inside diameter and the classification for the system in accordance with clause 6 are documented by the manufacturer ..... :		P
7.2	Conduit fitting is marked in accordance with 7.1, on		N/A
	- the product ..... :	No fittings	N/A
	- a label attached to the product, or on the box or carton containing the fittings (if the marking on the product is impractical) ..... :		N/A
7.3	Flame propagating material is orange in colour		N/A
	Flame propagating material is not coloured orange by painting or other superficial means		N/A
	Non-flame propagating material is of any colour except yellow, orange or red, unless is clearly marked on the product to be of non-flame propagating material ..... :	Blue color	P
7.4	Earthing facilities are indicated by the symbol for protective earth in accordance with IEC 60417, symbol 60417-IEC-5019-a ..... :		N/A
	This marking is not placed on easily removable parts, for example screws		N/A
7.5	Compliance with 7.1 to 7.4 checked by inspection		P
7.6	Marking is durable and clearly legible		P
	Compliance checked by inspection and by rubbing the marking by hand for 15 s with a piece of cloth soaked with water, and again for 15 s with a piece of cloth soaked with petroleum spirit		P

IEC 61386-22			
Clause	Requirement + Test	Result - Remark	Verdict

8	**DIMENSIONS**		N/A
8.1	Outside diameters of non-metallic conduits comply with IEC 60423 ..... :		N/A
	Threads comply with IEC 60423 ..... :		N/A
	Outside diameters of metallic and composite conduits designed to be installed only with terminating conduit fittings having threads complying with IEC 60423: need not to comply with IEC 60423		N/A
8.2	Threadable conduits and threadable conduit fittings comply with table 101 (except terminating conduit fittings) ..... :		N/A
	Non-threadable conduit fittings comply with table 102 (except fittings which are part of a conduit system declaring tensile strength) ..... :		N/A
	Minimum inside diameter of the conduit system is as declared by the manufacturer		N/A

9	**CONSTRUCTION**		P
9.1	There are no sharp edges, burrs or surface projections within the conduit system		P
	The manufacturer provides guidelines to assist the safe installation of the conduit system	Use is self-evident	N/A
9.2	Screws, if any, used for attaching components or covers to conduit fittings, or in joints to conduits, do not cause damage to cable insulation when correctly inserted	No screws	N/A
	Screws have ISO metric threads		N/A
	Thread-cutting screws are not used		N/A
	Fixing screws and small clips for use with non-metallic or composite conduit fittings, of non-metallic material, are isolated from insulated conductors or cables		N/A
9.3	Test for screw fixing using preformed threads		N/A
	After the test: no damage sustained by the screw or nut, such as breakage of the screw or damage to the head or thread		N/A
9.4	Test for screw fixing using thread-forming screws		N/A
	After the test: no damage, such as breakage of the screw or damage to the head or thread		N/A
9.5	Any material within the joint have at least the same level of resistance to the external influence as either the conduit or the conduit fitting ..... :		N/A
9.6	Indications whether the conduit system that are assembled by means other than threads can be disassembled and if so, how this can be achieved, are provided by the manufacturer	Not assembled by means of threads	N/A

IEC 61386-22			
Clause	Requirement + Test	Result - Remark	Verdict

10	**MECHANICAL PROPERTIES**		P
10.1	**Mechanical strength**		P
10.1.1	Conduit systems have adequate mechanical strength		P
10.1.2	Conduits do not crack and are not deformed when bent or compressed, or exposed to impact or extreme temperature, according to their classification		P
10.1.3	Conduit systems intended as a mounting for other equipment have adequate mechanical strength		N/A
10.1.4	Compliance of 10.1.1 to 10.1.3 checked by the tests specified in 10.2 to 10.8		P
10.2	**Compression test**		P
	3 samples of conduit, each (200 ± 5) mm long, subjected to a compression test at (23 ± 2) °C, using the apparatus shown in figure 1		P
	Test for pliable conduits		P
10.2.101	Test for pliable/self-recovering conduits		N/A
10.3	**Impact test**		P
	12 samples of conduit, each (200 ± 5) mm in length, or 12 samples of conduit fittings subjectedto an impact test using the apparatus shown in figure 2		P
10.3.3	At least 9 of the 12 samples passed the test		P
10.4	**Bending test**		P
	6 samples of conduits subjected to a bending test by means of the apparatus as shown in figure 101		P
10.5	**Flexing test**		N/A
	Sub-clause of part 1 not applicable		—
10.6	**Collapse test**		N/A
	Sub-clause of part 1 not applicable		—
10.7	**Tensile test**		N/A
	Conduit systems declaring tensile strength: test carried out on an assembly prepared in accordance with the manufacturer's instructions so that the overall length is approximately 200 mm		N/A
10.8	**Suspended load test**		N/A
	Conduit fitting declared by the manufacturer to be suitable for suspended loads: test carried out with a load suspended by the means provided and installed in accordance with the manufacturer's instructions for a time duration given in table 7		N/A

IEC 61386-22			
Clause	Requirement + Test	Result - Remark	Verdict

11	**ELECTRICAL PROPERTIES**		P
11.1	**Electrical requirements**		P
11.1.1	Conduit systems declaring electrical continuity characteristics are checked by the tests in 11.2 immediately after the tests in 14.2	No electrical continuity declared	N/A
11.1.2	Conduit systems of metal or composite materials are so constructed that accessible metal parts can be bonded to earth		N/A
11.1.3	Accessible conductive parts of the metal or composite conduit system, which may become live in the event of a fault, are be effectively earthed		N/A
11.1.4	Conduit systems of non-metallic or composite materials, where declared, have an adequate electrical insulating strength and insulating resistance	Not declared	N/A
11.2	**Bonding test**		N/A
	Test carried out on a sample of a conduit and terminating conduit fittings assembled in accordance with the manufacturer's instructions and mounted as shown in figure 103: resistance not exceed 0,1 Ω		N/A
11.3	**Electrical insulating strength and resistance**		**N/A**
11.3.1	Conduits		N/A
	3 samples of conduit tested in a salt water solution at (23 ± 2) °C, in accordance with figure 5, and submitted after 24 h ± 15 min to a voltage of 2000 V maintained for a period of 15 min +5/0 s: trip device incorporated into the circuit not trip during the test		N/A
	Same samples then subjected to an electrical insulation resistance test with a direct voltage of 500 V applied for (60 ± 2)s: measured insulation resistance greater than 100 MΩ		N/A
11.3.2	Conduit fittings		N/A
	3 samples of conduit fittings immersed for 24 h ± 15 min in water at (23 ± 2) °C and then submitted by means of lead spheres to a voltage of 2000 V maintained for a period of 15 min +5/0 s: trip device incorporated into the circuit not trip during the test		N/A
	Same samples then subjected to an electrical insulation resistance test with a direct voltage of 500 V applied for (60 ± 2)s: measured insulation resistance greater than 100 MΩ		N/A
12	**THERMAL PROPERTIES**		P
12.1	Non-metallic and composite conduits have adequate resistance to heat		P

IEC 61386-22			
Clause	Requirement + Test	Result - Remark	Verdict
12.2	Samples of conduit, each (100 ± 5) mm long, together with the test apparatus as shown in figure 8, kept for 4 h ± 5 min in a heating cabinet at the declared temperature given in table 2, with a tolerance of ±2 °C		P
	Each sample then loaded for 24 h ± 15 min in the apparatus of figure 8 with a total mass as shown in table 9		P
12.3	It is possible to pass the appropriate gauge of figure 102 immediately after the removal of the load		P
13	**FIRE HAZARD**		P
13.1	Reaction to fire		P
13.1.1	Initiation of fire (not applicable)		—
13.1.2	Contribution to fire (under consideration)		—
13.1.3	Spread of fire		-
	Non-flame propagating conduit systems have adequate resistance to flame propagation		P
13.1.3.1	Non-metallic and composite conduit fittings subjected to glow-wire test of IEC 60695-2-1/1 (IEC 60695-2-11) at 750 °C		P
	No visible flame or sustained glowing,		N/A
	Flames and glowing extinguished within 30 s of the removal of the glow-wire (s) ..... :		P
13.1.3.2	Non-metallic and composite conduits subjected to 1 kW flame of IEC 60695-2-4/1 (IEC 60695-11-2), according to the arrangement of figure 7, applied for the period given in table 11		P
	▪ Sample does not ignite, or		N/A
	▪ In case of ignition:		
	a) Flame extinguishes within 30 s .....:		P
	b) No ignition of the tissue paper		P
	c) No evidence of burning or charring within 50 mm of the lower extremity of the upper clamp		P
14	**EXTERNAL INFLUENCES**		P
14.1	Degree of protection provided by enclosure		P
	Conduit systems, when assembled in accordance with the manufacturer's instructions, have adequate resistance to external influences according to the classification declared by the manufacturer, with a minimum requirement of IP30 .....:	IP30 (manufacter's declared)	P
14.1.1	Degree of protection – Ingress of foreign solid objects	IP30	P
14.1.2	Degree of protection – Ingress of water		N/A
14.2	Resistance against corrosion		N/A

IEC 61386-22			
Clause	Requirement + Test	Result - Remark	Verdict

	Resistance to corrosion classification for painted and zinc coated steel and steel composite conduits and conduit fittings (table 10).....:		—
	For non-ferrous metallic and composite conduit systems, the manufacturer provided information about its protection against corrosion		N/A
14.2.2	Tests for resistance to corrosion for painted and zinc coated steel and steel composite conduits systems		N/A
14.2.2.1	Low protection conduit and conduit fittings inspected for completeness of covering by the protective coating, both inside and outside		N/A
14.2.2.2	Test for medium protection conduit and conduit fittings: after completion of the test, the samples showed no more than two blue coloured spots on each square centimetre of the surface, and no blue spot had a dimension larger than 1,5 mm		N/A
14.2.2.3	Test for high protection conduit and conduit fittings: after the test, the sample showed no precipitation of copper which cannot be scrubbed off in running water, if necessary after immersion for 15 s in a 10% solution of hydrochloric acid in water		N/A

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

ATTACHMENT 1

Equipment of measurements

Equipment No	Kind of equipment	Model Type	Manufacturer	Last Cal Date	Next Cal Date	Last Ver Date	Next Ver Date
E-054	CE Multitester	C.A 6160	Chauvin Arnoux	14-12-2019	14-12-2020	---	---
E-003	Datalogger	DL40	CSK Elektrik Elektronik San. ve Tic. Ltd. Şti	09-10-2019	09-10-2020	---	---
E-004	Humidity cabinet	---	ULMEKA mekatronik	04-10-2019	04-10-2020	---	---
E-011	Multimeter	UT61B	UNI-T	05-10-2019	05-10-2020	---	---
E-021	Probe B	TS015/1000-B	CSK Elektrik Elektronik San. ve Tic. Ltd. Şti	06-04-2020	06-04-2022	---	---
E-091	Temperature-Humidity Meter	351077	TFA	02-04-2020	02-04-2021	---	---
E-037	Force gauge	SF-500	Geratech	09-10-2019	09-10-2020	---	---
E-042	Variac	---	VARSAN	---	---	---	---
E-045	Ball pressure mass	---	TEKNİK MEKATRONİK	08-04-2019	08-04-2021	---	---
E-034	Oven	T12	HERAEUS	04-10-2019	04-10-2020	---	---
E-005	Glow wire test	---	ULMEKA mekatronik	04-10-2019	04-10-2020	---	---
E-007	Needle flame	---	ULMEKA mekatronik	13-11-2019	13-11-2020	---	---

ATTACHMENT 2
Photo Documentation

Photo documentation

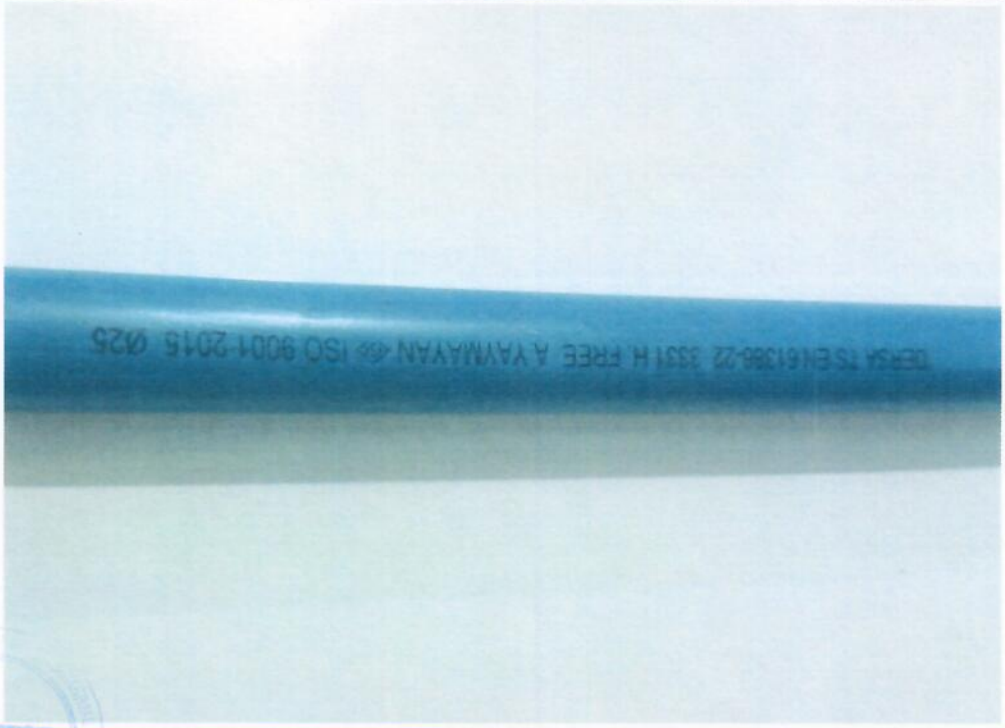
Top View

Top View

Photo documentation

Top View

ATTACHMENT 3

DERSA ELEKTRİK İNŞ. MAK. PLASTİK SAN. VE TİC. LTD. ŞTİ
İSTİKLAL MAHALLESİ TÜRKSOY CAD. NO: 99 BOĞAZKÖY- ARNAVUTKÖY / İSTANBUL
TEL: (0212) 684 18 26 - 684 28 16 FAX (0212) 684 28 98
e- mail: info@dersaelektrik.com - dersaboru@hotmail.com
web: www.dersaelektrik.com - www.dersaboru.com

AYNİYET BEYANI **06.01.2020**

IDENTITY DECLARATION

1: DRS2HS14-01, DRS2HS16-01, DRS2HS18-01, DRS2HS20-01, DRS2HS25-01, DRS2HS32-01, DRS2HS40-01, DRS2HS50-01, DRS2HS63-01,
DRS2OS14-02, DRS2OS16-02, DRS2OS18-02, DRS2OS20-02, DRS2OS25-02, DRS2OS32-02, DRS2OS40-02, DRS2OS50-02, DRS2OS63-02
DRSY2N20-07, DRSY2N25-07, DRSY2N32-07, DRSY2N40-07, DRSY2N50-07, DRSY2N63-07, DRSY2N75-07, DRSY2N90-07, DRSY2N110-07
DRSY2N20-08, DRSY2N25-08, DRSY2N32-08, DRSY2N40-08, DRSY2N50-08, DRSY2N63-08, DRSY2N75-08, DRSY2N90-08, DRSY2N110-08
EKO14-01, EKO16-01, EKO18-01, EKO20-01, EKO25-01, EKO32-01

2: DRS2HS14-03, DRS2HS16-03, DRS2HS18-03, DRS2HS20-03, DRS2HS25-03, DRS2HS32-03, DRS2HS40-03, DRS2HS50-03, DRS2HS63-03
DRS2OS14-04, DRS2OS16-04, DRS2OS18-04, DRS2OS20-04, DRS2OS25-04, DRS2OS32-04, DRS2OS40-04, DRS2OS50-04, DRS2OS63-04
EKO14-02, EKO16-02, EKO18-02, EKO20-02, EKO25-02, EKO32-02

3: DRS1HS14-05, DRS1HS16-05, DRS1HS18-05, DRS1HS20-05, DRS1HS25-05, DRS1HS32-05, DRS1HS40-05, DRS1HS50-05, DRS1HS63-05
DRS1OS14-06, DRS1OS16-06, DRS1OS18-06, DRS1OS20-06, DRS1OS25-06, DRS1OS32-06, DRS1OS40-06, DRS1OS50-06, DRS1OS63-06

Kodlu ürünlerin bütün teknik özelliklerinin (örn. Tasarım, özellikler, kritik kompanentler) benzer olduğunu beyan ederiz.
We declared that the product(s) is (are) identical in the all tecnical respects (e.g desing, properties, critical components)

1: DRS2HS14-01, DRS2HS16-01, DRS2HS18-01, DRS2HS20-01, DRS2HS25-01, DRS2HS32-01, DRS2HS40-01, DRS2HS50-01, DRS2HS63-01,
DRS2OS14-02, DRS2OS16-02, DRS2OS18-02, DRS2OS20-02, DRS2OS25-02, DRS2OS32-02, DRS2OS40-02, DRS2OS50-02, DRS2OS63-02
DRSY2N20-07, DRSY2N25-07, DRSY2N32-07, DRSY2N40-07, DRSY2N50-07, DRSY2N63-07, DRSY2N75-07, DRSY2N90-07, DRSY2N110-07
DRSY2N20-08, DRSY2N25-08, DRSY2N32-08, DRSY2N40-08, DRSY2N50-08, DRSY2N63-08, DRSY2N75-08, DRSY2N90-08, DRSY2N110-08
EKO14-01, EKO16-01, EKO18-01, EKO20-01, EKO25-01, EKO32-01

2: DRS2HS14-03, DRS2HS16-03, DRS2HS18-03, DRS2HS20-03, DRS2HS25-03, DRS2HS32-03, DRS2HS40-03, DRS2HS50-03, DRS2HS63-03
DRS2OS14-04, DRS2OS16-04, DRS2OS18-04, DRS2OS20-04, DRS2OS25-04, DRS2OS32-04, DRS2OS40-04, DRS2OS50-04, DRS2OS63-04
EKO14-02, EKO16-02, EKO18-02, EKO20-02, EKO25-02, EKO32-02

3: DRS1HS14-05, DRS1HS16-05, DRS1HS18-05, DRS1HS20-05, DRS1HS25-05, DRS1HS32-05, DRS1HS40-05, DRS1HS50-05, DRS1HS63-05
DRS1OS14-06, DRS1OS16-06, DRS1OS18-06, DRS1OS20-06, DRS1OS25-06, DRS1OS32-06, DRS1OS40-06, DRS1OS50-06, DRS1OS63-06

Firma kaşesi

Yetkili imza

DERSA ELEKTRİK
İNŞ. MAK. PLS. SAN. VE TİC. LTD. ŞTİ.

CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ

Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir
İstanbul/TURKİYE
Deney Raporu
Test Report

LVD-466-03
06-20

Müşterinin adı /adresi: Customer name/address	***DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ. / İstiklal Mah. Türksoy Cad. No:99 Boğazköy Arnavutköy İstanbul/Türkiye***
Üretici/ Üretim Yeri: Manufacturer/ Manufacturing Location	***DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ. / İstiklal Mah. Türksoy Cad. No:99 Boğazköy Arnavutköy İstanbul/Türkiye***
İstek Numarası: Order no.	***17122019nkk1***
Numunenin Adı ve Tarifi: Name and identity of test item	***DRS-07; Çift Girişli Geçmeli Derin Anahtar Priz Kasasi*** Double Entry Pick-Up Deep Switch Socket
Numunenin Kabul tarihi: The date of receipt of test item	***06-02-2020***
Açıklamalar: Remarks	***Ürün ilgili testlerden geçmiştir, lütfen raporu inceleyiniz.*** / The product passes related tests, see report below.
Deneyin yapıldığı tarih: Date of Test	***06-05-2020 to 20-05-2020***
Deneyin Yapıldığı Yer: Testing Location	***CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ/ Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir İstanbul/TURKİYE***
Deney Standartı Test Standard	***EN 60670-22:2006 used in conjunction with EN 60670-1:2005/A1:2013***
Raporun Sayfa Sayısı: Number of pages of the Report	***25 sayfa/ 24 pages***

Tarih Date	***Deney Sorumlusu*** Person in charge of test	***Onaylayan*** Approval
09-06-2020	***Naim Koralp KARAKOÇ***	***Timur GÜSER***

Test Report
EN 60670-22

Boxes and enclosures for electrical accessories for household and similar fixed electrical installations - Part 22: Particular requirements for connecting boxes and enclosures

Report Number.....:	LVD-466-03
Date of issue.....:	09-06-2020
Total number of pages.....:	25 pages
Applicant's name.....:	DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ.
Address.....:	İstiklal Mah. Türksoy Cad. No:99 Boğazköy Arnavutköy İstanbul/Türkiye
Manufacturer.....:	DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ.
Address.....:	İstiklal Mah. Türksoy Cad. No:99 Boğazköy Arnavutköy İstanbul/Türkiye
Test specification:	
Standard .....:	EN 60670-22:2006 used in conjunction with EN 60670-1:2005/A1:2013
Test procedure .....:	Type Test
Non-standard test method.....:	N/A
Test Report Form No.....:	F510_35_R2.0

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

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 CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description .....:	Double Entry Pick-Up Deep Switch Socket
Trade Mark.....:	DERSA ELEKTRİK
Manufacturer .....:	DERSA ELEKTRİK İNŞ. MAK. PLS. SAN. TİC. LTD. ŞTİ.
Model/Type reference .....:	DRS-07
Ratings.....:	220 V AC; IP30; (-25 °C / + 60 °C)

List of Attachments (including a total number of pages in each attachment):

Test report: 24 pages

Annex-1: Identity declaration: 1 page

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
Necessary tests were applied to the sample according to EN 60670-22:2006 used in conjunction with EN 60670-1:2005/A1:2013 standards.	CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir/İstanbul/Türkiye

Copy of marking plate:
The artwork below may be only a draft.

Declared

General product information:

They can be used in all kinds of electrical installation, in places where there is a mechanical force, in buildings and prefabricated buildings, inside mortar, concrete, in sheetrock walls and suspended ceilings, in tunnel formwork applications.

The other sub-models of the product are given in Attachment 3.

Test item particulars:	Double Entry Pick-Up Deep Switch Socket
7.1 Nature of materials	☒ 7.1.1 Insulating ☐ 7.1.2 Metallic ☐ 7.1.3 Composite
7.2 Method of installation	☒ 7.2.1 Flush semi-flush or embedded in ☒ 7.2.1.1 Non-combustible walls or floors ☐ 7.2.1.2 Combustible walls, ceiling or floors ☐ 7.2.1.3 Hollow walls, hollow ceiling, hollow floors or furniture ☐ 7.2.2 Surface mounting on ☐ 7.2.2.1 Non-combustible walls, ceiling, floors or furniture ☐ 7.2.2.2 Combustible walls, ceiling, floors or furniture ☐ 7.2.3 Placement ☐ 7.2.3.1 Suitable for installation into concrete during the casting process (See 7.6) ☐ 7.2.3.2 Suitable for all types of installation into concrete
7.3 Nature of material	☒ 7.3.1 With inlets for sheathed cables for fixed installations ☐ 7.3.2 With inlets for flexible cables ☐ 7.3.3 With inlets for plain or corrugated conduits ☐ 7.3.4 With inlets for threaded or corrugated conduits ☐ 7.3.5 With inlets for other types of conductors/cables or conduits ☐ 7.3.6 With spouts (hub) ☐ 7.3.7 With inlets. Inlets opening will be made during installation.
7.4 Clamping means	☐ 7.4.1 With cable retention ☐ 7.4.2 With cable anchorage ☐ 7.4.3 With clamping means for flexible conduits ☒ 7.4.4 With clamping means
7.5 Minimum and maximum temperatures during installation	☐ 7.5.1 -5 °C to +60 °C ☐ 7.5.2 -15 °C to +60 °C ☒ 7.5.3 -25 °C to +60 °C
7.6 Maximum temperature during the during the casting process	☒ 7.6.1 +60 °C ☐ 7.6.2 +90 °C
7.7 Boxes and enclosures for hollow walls and the like according to 7.2.1.3	☐ 7.7.1 Class Ha ☐ 7.7.2 Class Hb ☐ 7.7.2.1 for walls ☐ 7.7.2.2 for ceilings ☒ 7.7.3 degree of protection of the part mounted in the hollow wall ☐ 7.7.3.1 IP2X ☒ 7.7.3.2 >IP2X
7.8 The provision for fixing accessories to boxes	☐ 7.8.1 Boxes supplied with screws ☐ 7.8.2 Boxes intended to receive screws ☐ 7.8.3 Boxes intended to receive claws ☒ 7.8.4 Boxes intended to receive other means
7.101 Method of fixing the terminals or connecting box	☐ 7.101.1 With integrated clamping units ☐ 7.101.2 With incorporated terminals or connecting devices ☐ 7.101.3 With provisions for subsequent incorporation of terminals or connecting devices ☒ 7.101.4 Without fixing (for floating terminals or connecting devices)
IP code:	IP30
Rated insulation voltage:	> 250 ve ≤ 450 V
Rated voltage of integrated or incorporated connecting device:	---
Rated connecting capacity:	---
Maximum number of conductors to be placed in the box (if marked of declared)	---
Dimension sheet(s), if any:	---

Clause	Requirement + Test	Result – Remark	P
8	**MARKING**		P
8.1	Boxes and enclosures are marked with:		P
	a) name, trade mark or identification mark of the manufacturer or the responsible vendor.....:	DERSA ELEKTRİK	P
	Enclosures are marked in addition with:		P
	b) IP code against ingress of solid objects if higher than IP2X ..... :	IP3X	P
	c) IP code against harmful ingress of water if higher than IPX0 ..... :		N/A
	d) marking on cover of flush enclosures for rough surfaces and where IP is dependent on the surface (Fig. 5)..... :		N/A
	IP code is marked on the outside of the enclosure so as to be easily discernible when the enclosure is mounted and wired as for normal use		N/A
	e) type reference, which may be a catalogue number ..... :	DRS-07	P
	Information marked on the boxes and enclosures or provided by the manufacturer on the smallest package unit or in the instructions of the manufacturer:		P
	f) maximum temperature during the building process if 90 °C ..... :		N/A
	g) necessary information concerning the openings which can be made during installation for boxes and enclosures classified according to 7.3.7 ..... :		N/A
	h) minimum temperature during installation for boxes classified according to 7.5.2 and 7.5.3..... :	-25	P
	i) minimum internal volume in cm^3 for boxes and enclosures classified according to 7.7.2, inside the box or enclosure, legible after installation of the box but before installation of wiring devices and wiring :		N/A
	j) symbol Ha for boxes classified according to 7.7.1, symbol Hb for boxes classified according to 7.7.2. :		N/A
	k) the mass in kg, if the test force declared by the manufacturer is greater than 250 N for boxes and enclosures classified according to 7.101.1.....:		N/A
	Further information given in the manufacturer's catalogue or in an instruction sheet ..... :		N/A
	Higher degree of protection achieved by the use of special parts: an instruction sheet is provided and it indicates the higher degree of protection		N/A
8.2	Marking is durable and easily legible		P
	Rubbing test 15 s with water and 15 s with petroleum spirit		P
	After the test: marking still legible	Appropriate	P

9	**DIEMENSIONS**		N/A
	Boxes and enclosures coply with the appropriate standars sheets, if any		N/A

10	**PROTECTION AGAINST ELECTRIC SHOCK**		P
	In boxes and enclosures assembled, equipped and installed as for normal use in accordance with the manufacturer's instructions: live parts are not accessible		P
	Test probe 11 of IEC 61032 applied for 1 min with a force of 20 N do not penetrate in the internal volume of the enclosure, as show in figure 26, which are accessible after installation		P
	Additional test at (35 ± 2) °C with probe 11 of IEC 61032 on enclosures according to 7.1.1 and 7.1.3 with parts of thermoplastic or electrometric material applied to:		P
	- all places, except membranes or the like, where yielding of insulating material could impair the safety, with a force of 75 N		P

12	**CONSTRUCTION**		P
	Boxes and enclosures are constructed without sharp edges		P
	The inner and outer surfaces of a box or cover have the following characteristics:		P
	- not subject to peeling, scaling or flaking, and		P
	- smooth and free from blisters, crack and other defects		P
12.1	Lids, covers or cover-plates or part of them		P
	Lids, covers or cover-plates or parts of them, such as protective membranes, which are intended to ensure protection against electric shock, are held in place effectively		P
12.1.1	Screw-type fixing		N/A
	Box or enclosure intended to accept a lid, cover or cover plate by means of screw fixing is provided with means to accommodate the intended screws		N/A
	Lids, covers or cover-plates whose fixing is of the screw-type		N/A
12.1.2	Non-screw-type fixing operable without the use of a tool or a key		N/A
	Lids, covers or cover-plates whose fixing is not dependent on screws and whose removal is obtained by applying a force according to Table 2 in a direction approximately perpendicular to the mounting/supporting surface:		N/A
	- removal give access (with test probe A of IEC 61032) to live parts		N/A
	- removal give access (with test probe A of IEC 61032) to non-earthed conductive parts separated from live parts by basic insulation		N/A
	- removal give access (with test probe A of		N/A

	IEC 61032) only to insulating parts, earthed conductive parts, conductive parts separated from live parts by double or reinforced insulation, or live parts of SELV circuits according to IEC 61140 having a voltage ≤ 25 V a.c. or 60 V d.c.		
12.1.2.1	Verification of the non removal of the lids, covers or cover-plates		N/A
	Force according to Table 2 applied for 1 min in a direction perpendicular to the mounting surface... :	10 N / 20 N / 40 N / 80 N	N/A
	Lids, covers or cover-plates not come off		N/A
	For flush-mounting boxes or enclosures, test repeated on new specimens with a sheet of hard material, (1 ± 0,1) mm thick, fitted on the wall around the supporting frame according to figure 12		N/A
	Lids, covers or cover-plates not come off		N/A
12.1.2.2	Verification of the removal of the lids, covers or cover-plates		N/A
	Force not exceeding 120 N applied 10 times in a direction perpendicular to the mounting/supporting surface: lids, covers or cover-plates come off		N/A
	After the test: no damage		N/A
	For flush-mounting boxes or enclosures, test repeated on new specimens with a sheet of hard material, (1 ± 0,1) mm thick, fitted on the wall around the supporting frame according to figure 12		N/A
	Force not exceeding 120 N applied 10 times in a direction perpendicular to the mounting/supporting surface: lids, covers or cover-plates come off		N/A
	Lids, covers or cover-plates come off		N/A
	After the test: no damage		N/A
12.1.2.3	Verification of the outline of lids, covers and cover-plates		N/A
	Gauge of figure 13 applied according to figure 14 for verification of the outline of lids, covers or cover-plates: distances between face C of gauge and outline of side under test, not decrease .....:	complying / not complying	—
12.1.2.4	Verification of grooves, holes and reverse tapers		N/A
	Gauge of figure 16 applied according to figure 17 with a force of (1 ± 0,2) N: gauge not enter more than 1 mm ..... :	complying / not complying	—
12.1.3	Non screw-type fixing operable with the use of a tool or key		P
	Lids, covers or cover-plates whose fixing is not dependent on screws and whose removal is obtained by using a tool and/or a key according to the manufacturer's instructions: tests according to 12.1.2		P
	Force not exceeding 120 N applied in a direction perpendicular to the mounting/supporting surface: lids, covers or cover-plates need not come off		P
	For flush-mounting boxes or enclosures, test repeated on new specimens with a sheet of hard material, (1 ± 0,1) mm thick, fitted on the wall around the supporting frame according to figure 12		N/A
	Lids, covers or cover-plates not come off		N/A
12.2	Drain holes		N/A

	Surface and semi-flush mounting enclosures having IPX1 to IPX6 allow the opening of a drain hole ≥ 5 mm in diameter (mm Ø) or 20 mm² in area (mm²) with a width or length ≥ 3 mm (mm)..... :	No drain holes	N/A
	Drain holes: effective		N/A
12.3	Mounting of enclosures		P
	Enclosures have provisions for their suitable attachment according to the method of installation		P
	Conductive parts of fixing means inside the box or enclosure are surrounded by insulation which projects above the top of the fixing means by an amount of ≥ 10 % of the maximum width of the cavity for the fixing means (mm) ..... :	10% of mm ≥ mm	N/A
12.4	Boxes and enclosures with inlets for flexible cables		P
	Inlets (outlets) provided in boxes and enclosures classified according to 7.3.2, the flexible cables can be easily introduced, and		P
	- no damage the flexible cable where it enter, or		P
	- enclosure impairing its further use		P
12.5	Boxes and enclosures with inlets for applications other than flexible cables		N/A
	Inlet openings classified according to 7.3 other than 7.3.2, if any, allow the introduction of:	No cable	N/A
	- a conduit or a suitable fitting, and/or		N/A
	- the protective covering of the cable		N/A
	Inlet opening for conduit entries:		N/A
	- capable of accepting either conduits of sizes, or a combination of sizes, according to IEC 60423 and/or IEC 60981		N/A
	- same requirement in at least two inlet openings if there are more than one		N/A
12.6	Boxes and enclosures with a cable anchorage(s)		N/A
	In boxes and enclosures classified according to 7.4.2 the connection of the conductors of the flexible cable are relieved from strain	No cable anchorage	N/A
	Clear how relief from strain and prevention of twisting is intended to be effected		N/A
	Cable anchorages are:		N/A
	- suitable for the different types of flexible cable	No cable	N/A
	- at least one part of it is integral with, or permanently fixed to, one of the component parts of the box		N/A
	- of insulating material or provided with an insulating lining fixed to the metal parts		N/A
	Test of effectiveness of the cable anchorage:		N/A
	- external dimensions of flexible cable (mm)..... :	No cable anchorage	—

	- clamping screws tightened with a torque equal to 2/3 of that specified in Table 4 (Nm) ..... :		—
	- glands tightened with a torque equal to that specified in Table 5 ..... :		—
	It is not possible to push the flexible cable into the specimen by more than 1 mm with a force specified in Table 3 (N) ..... :		N/A
	Pull force as specified in Table 3 applied 50 times for 1 s (N) ..... :		—
	Torque as specified in Table 3 applied for (15 ± 1) s (Nm)..... :		—
	After the test: displacement ≤ 2 mm (mm)..... :		N/A
	Cable anchorage: no damage		N/A
12.7	Boxes and enclosures with cable retention means		
	Cable retention means of boxes and enclosures classified according to 7.4.1 retain the cable in place	No cable retention means	N/A
	Boxes and enclosures according to 7.5.2 or 7.5.3, tested at (-15 ± 2) °C and (-15 ± 2) °C respectively		N/A
	Test with cables as declared by the manufacturer, fitted according to the manufacturer's instructions and loaded with an axial force of (20 ± 1) N applied for 1 min:		N/A
	Type of cable/maximum nominal cross-sectional area (mm^2) ..... :		—
	After the test: displacement ≤ 3 mm (mm)..... :		N/A
	Type of cable/minimum nominal cross-sectional area (mm^2) ..... :		—
	After the test: displacement ≤ 3 mm (mm)..... :		N/A
12.8	Knock-out inlets (outlets) intended to be removed by mechanical impact		N/A
12.8.1	General		N/A
	It is possible to remove knock-out by mechanical impact without damaging the box	No such parts	N/A
	Chips or burrs are not accepted in knock-out for cables		N/A
	Chips and burrs are disregarded in knock-out for conduits and/or for use with a grommet or a membrane		N/A
	In order to close an open knock-out in a box or an enclosure according 7.1.2 a blanking-plug used without a locknut:		
	- not become dislodged, and		N/A
	- its effectiveness not be impaired, and		N/A
	- it fullfil all requirements for knock-outs		N/A
12.8.2	Knock-out retention		N/A
	Boxes and enclosures having knock-outs, accessible after installation by means of a 6 mm diameter mandrel with a flat end that:		N/A

	- not provide access to live parts, a force of (30 ± 1) N applied for (15 ± 1) s		N/A
	- provide direct access to live parts, a force of (40 ± 1) N applied for (60 ± 1) s		N/A
	Box with multi-stage knock-outs, the force applied to the smallest		N/A
	During the test: knock-out remains in place		N/A
	Degree of protection unchanged 1 h after the test		N/A
12.8.3	Knock-out removal		N/A
	Removal test of knock-outs with a tool as stated by the manufacturer, without conditioning:		N/A
	During the test: no displacement of a larger stage of multi-stage knock-outs when a smaller stage is removed		N/A
	After the test: no sharp edges, box and enclosure is not damaged		N/A
	Removal test of knock-outs with a tool as stated by the manufacturer, immediately following a conditioning at the minimum temperature specified according to 7.5 for 5 h ± 10 min (boxes and enclosures according to 7.1.1 or 7.1.3)		
	Test temperature (°C) ..... :		—
	During the test: no displacement of a larger stage of multi-stage knock-outs when a smaller stage is removed		N/A
	After the test: no sharp edges, box and enclosure is not damaged		N/A
12.9	Screw fixings		N/A
	Fixing means effected by screws withstand mechanical stresses	No screw fixing	N/A
	Screw or other fixing means made from insulating material without standardized thread are tested according to the manufacturer's instruction		N/A
	Thread-forming or thread-cutting screws used only if supplied together with one of the pieces with which they are intended to be inserted		N/A
	Verification of the mechanical strength of screws	See appended table 12.9	N/A
12.10	Fixing of boxes and enclosures classified according to 7.2.1.1 and 7.2.1.2		N/A
	Fixing means provided for flush type boxes and enclosures other than for hollow walls.....:		N/A
	Screws not supplied with box or enclosures can be provided according to the manufacturer's instruction		N/A
	Screws, additional mechanical supports or design features, are considered adequate fixing means		N/A
	Boxes and enclosures not fulfilling at least one of the above requirement and having an internal volume less than 400 cm³ tested as follow:		
	- the block is filled by the following material.....:		N/A
	- assembly is kept at ambient temperature for 10 (+1/0) days		—

	- auxiliary device described in figure 23 is mounted on the specimen and the screw are tightened with a torque equal to 2/3 of that specified in table 4 ..... :		—
	After the test, according to figure Z3, displacement of the specimen from the mounting block ≤ 0,5 mm:		N/A
12.11	Boxes and enclosures classified according to 7.7.1 (Class Ha)		
	Boxes and enclosures for hollow walls or the like classified according to 7.7.1 provide suitable means for fixing the box or the enclosure to hollow walls or the like	No such parts	N/A
	Fixing means not rely the on the cable management system		N/A
	Box or enclosure mounted in a test wall:		
	- according to the manufacturer's instructions		—
	- sheet of plywood 500 mm wide x 500 mm high, (10 ± 1) mm thick		—
	a) Pull and torque test: lever loaded with a torque of 3 Nm (Figure 18a) and a force of 100 N (Figure 18b) for 1 min		N/A
	After this tests: no damage, displacement of the lever no more than 2 ° (°) ..... :		N/A
	b) Displacement test: lever loaded with a torque of 3 Nm (Figure 18c) for 1 min		
	After the test: edge of the box not displaced by more than 1 mm (mm) ..... :		N/A
12.12	Fixing of boxes and enclosures classified according to 7.7.2 (Class Hb)		N/A
	Boxes and enclosures for hollow wall or like classified according to 7.7.2 provide suitable means for fixing the box or the enclosure to hollow walls or the like		N/A
	Fixing means not rely the on the cable management system		N/A
12.12.1	Boxes intended for mounting to a wood structural member of a wall		N/A
	Box mounted to a (45 x 90) mm wood structural member in a vertical position; force of 225 N applied for 5 min		N/A
	After the test: no pulling out of the nails or screws		N/A
	No movement of the face of the box of more than 3 mm (mm)..... :		N/A
12.12.2	Boxes intended for mounting to a wood structural member of a ceiling		N/A
	Box mounted to a (35 x 190) mm wood structural member in vertical position; force of 225 N applied for 1 min		N/A
	During the test: deflection of the face of the box does not exceed 6 mm (mm) ..... :		N/A
12.12.3	Boxes intended for mounting to a steel-stud structural member of a wall		N/A
	Box mounted to a steel-stud structural member according to figure 19; force of 180 N applied for 5 min in the direction to push the box into the wall opening		N/A

	During the test with a force of 180 N applied for 5 min in the direction to push the box into the wall opening: deflection of the box does not exceed 2 mm (mm)..... :		N/A
	During the test with a force of 180 N applied for 5 min in the direction to pull the box out of the wall opening: deflection of the box does not exceed 2 mm (mm)..... :		N/A
12.12.4	Internal volume of boxes and enclosures classified according to 7.7.2 (Class Hb)		N/A
	Verification of the declared internal volume for boxes, enclosures, raised covers and box extensions		N/A
	Verification of the volume of each partitioned section for box or enclosure with a partition		N/A
	Checked by the test of clause 12.15		N/A
12.12.5	Boxes intended for mounting in a finished structure		N/A
	Supporting means not crack or break nor the face of the box be permanently displaced more than 3,2 mm from the plane of the face of the test surface when measured 1 minute after the test load is removed		N/A
	Six boxes intended for use in walls or eight boxes intended for use in ceilings are installed in prescribed plywood sheet or in a finished surface in accordance with the manufacturer's instructions		—
	Screws for the box supporting means are tightened as follow:		N/A
	- in accordance with the manufacturer's instructions or		N/A
	- in accordance with column 4 of Table 4.		N/A
	Following installation, a force of 222 N is applied for 5 min		N/A
12.13	Cable gland entry		N/A
	Torque test: glands provided with a metal rod tightened and loosened 10 times with a torque specified in Table 5 for 1 min ± 5 s		N/A
	- diameter of test rod (mm) ..... :		—
	- type of material (metal / insulating) ..... :		—
	- torque (Nm) ..... :		—
	After the test: no damage		—
12.14	Boxes and enclosures with inlets (outlets) for conduits or spouts (hubs)		N/A
	Boxes and enclosures classified according to 7.3.4 and conical spouts as in 7.3.6 withstand the tests of 12.14.1, 12.14.2 and 12.14.3		N/A
	Boxes and enclosures classified according to 7.4.3 withstand the tests of 12.14.1 and 12.14.2		N/A
12.14.1	Enclosures with inlet spout for conduits: a minimum size piece of conduit pressed for 1 min ± 5 s with a force of (100 ± 2) N		P
	During the test: inlet spout prevents further entry of the conduit into the box	Applied, no hazardous	P

12.14.2	Pull-out test after the test according to 12.14.1: conduit with the minimum size corresponding to the insert opening loaded for 1 min with a tensile force of (20 ± 2) N		P
	During the test: conduit not come loose from the inlet spout of the enclosure	Applied, no hazardous	P
12.14.3	Resistance to bending strain of an inlet spout: piece of conduit inserted into the inlet spout with a compressible force of (100 ± 2) N and loaded with a bending moment of 3 Nm for 1 min in six different directions with an interval of (60 ± 2) °		P
	During the test: inlet spout not come loose or damaged and conduit stays within the inlet spout		P
12.101	Screws for fixing accessories and/or covers are not considered as provision for suspension means, unless otherwise declared by the manufacturer	See Clause 12.3	P
12.15	Internal volume of boxes and enclosures		N/A
	Declared internal volume of the box or enclosure and each partitioned section of a box or enclosure, raised cover and box extension is measured		N/A
	The volume of a side pocket provided to increase the volume of a box or enclosure is calculated using a depth-of-pocket not more than the smallest dimension of the opening into that side pocket		N/A
	Difference in the volume of water in the measuring cylinder measured before and after the filling of the box, enclosure or raised cover indicates the volume of the box ..... :		N/A

13	**RESISTANCE TO AGEING, PROTECTION AGAINST INGRESS OF SOLID OBJECTS AND AGAINST HARMFUL INGRESS OF WATER**		P
13.1	Resistance to ageing		P
13.1.1	Specimens of insulating and composite boxes and enclosures, glands, grommets and replaceable membranes placed in a heating cabinet at (70 ± 2) °C for (168 + 4) h and then kept at room temperature for (96 + 4) h		P
	Glands tightened with a torque equal to 2/3 of the torque applied during the test of 12.13 (Nm) ..... :	---	↓
	Greater torque value stated by the manufacturer, if any (Nm) ..... :	---	↓
	After the test: no harmful deformation or similar damage		↓
13.1.2	Grommets, blanking-plug and entry membranes in inlet openings and protecting membranes are reliably fixed and are not displaced by the mechanical and thermal stresses occurring in normal use	No grommets, blanking-plug, and entry membranes	↓
	Specimens that have been subjected to the treatment specified in 13.1.1 placed in a heating cabinet at (40 ± 2) °C for 2 h ± 15 min		N/A
	Immediately after this period the tip of test probe 11 of IEC 61032 is applied for (5 ± 1) s with a force of (30-2) N. During the tests: grommets, blanking-plug and/or membranes not deformed to such an extent that live parts of any included accessory become accessible		N/A

	Grommets, blanking-plug and/or membranes likely to be subjected to an axial pull: axial pull of (30-2) N applied for (5 ± 1) s. During the tests: grommets, blanking-plug and/or membranes not deformed to such an extent that live parts of any included accessory become accessible		N/A
	Test repeated on same enclosures fitted with grommets, blanking-plug and/or membranes not subjected to any treatment		N/A
	After the test: no harmful deformation, cracks or similar damage		N/A
13.1.3	Grommets, blanking-plug and entry membranes in inlet openings of boxes and enclosures classified according to 7.5.2 and 7.5.3: introduction of the cables and conduit permitted when the ambient temperature is low		N/A
	Test on enclosures fitted with grommets, blanking-plug and/or membranes not subjected to any ageing treatment kept for 2 h in a refrigerator		N/A
	Test temperature (°C) ..... :	---	↓
	Immediately after conditioning: it is possible to pierce any blind grommets, blanking-plug and entry membranes and to introduce cables and conduit of the maximum diameter intended		N/A
	After the test: no harmful deformation, cracks or similar damage		N/A
13.2	Protection against the ingress of solid objects		P
	Enclosures provide a degree of protection against the ingress of solid objects in accordance with the declared IP code ..... :	IP3X	P
	Enclosures mounted as in normal use with screwed glands or grommets fitted with cables as declared by the manufacturer:		N/A
	- type of cable, smallest cross-sectional area (mm²) ..... :	--	↓
	- type of cable, largest cross-sectional area (mm²):	--	↓
	Enclosures mounted as in normal use with screwed glands or grommets fitted with conduits as declared by the manufacturer:		N/A
	- smallest diameter or dimensions (mm) ..... :		↓
	- largest diameter or dimensions (mm)..... :		↓
	Fixing screws of the cover or cover-plate tightened with a torque equal to 2/3 of the value of Table 4 used for the test of 12.9 (Nm) ..... :		↓
	Greater torque value stated by the manufacturer, if the relevant information is provided (Nm) ..... :		↓
	- IP5X: test performed as specified in IEC 60529 category 2 with the drain holes, if any, not opened		N/A
	- IP≤4X: test probe does not pass through any opening other than drain holes	No screwed glands or grommets	N/A
	- IP≤4X: test probe applied on drain holes does not touch live parts within the enclosure	No screwed glands or grommets	N/A

	- IP5X: dust does not cover the whole inner surface		N/A
	- IP6X: there is no dust inside the box or enclosure		N/A
13.3	Protection against harmful ingress of water		N/A
13.3.1	Enclosures with IP>X0 provide a degree of protection against harmful ingress of water in accordance with the declared IP code ..... :	IPX0	N/A
	Enclosure dimensions: reference surface S (m²) / perimeter (m) ..... :		↓
	Appropriate test performed on surface, flush or semi-flush enclosures as specified in IEC 60529 under the following conditions:		N/A
	- dimension S ≤ 0,04 m² or perimeter ≤ 0,8 m according to 13.3.2 and 13.3.3		N/A
	- dimension S > 0,04 m² and perimeter > 0,8 m according to 13.3.2 and 13.3.4		N/A
	Enclosures with screwed glands or grommets fitted with cables as declared by the manufacturer:		N/A
	- type of cable, smallest cross-sectional area (mm²) ..... :		↓
	- type of cable, largest cross-sectional area (mm²):	--	↓
	Enclosures with screwed glands or grommets fitted with conduits as declared by the manufacturer:		N/A
	- smallest diameter or dimensions (mm) ..... :		↓
	- largest diameter or dimensions (mm)..... :		↓
	Fixing screws of the cover or cover-plate tightened with a torque equal to 2/3 of the value of Table 4 used for the test of 12.9 (Nm) ..... :		↓
13.3.2	Surface-mounting enclosures mounted as for normal use		P
	Flush type and semi-flush type enclosures fixed in a test wall:		P
	- according to the manufacturer's instructions		N/A
	- according to figure 5		N/A
	Enclosures fitted with cables having conductors of the largest and smallest cross-sectional area as declared by the manufacturer..... :		↓
	IPX3 and IPX4 enclosures: use of oscillating tube (Figure 4) or spray nozzle according to IEC 60529 (Figure 5) ..... :		↓
13.3.3	Immediately after the test no more than 0,2 ml x S (cm²) water in the enclosure (ml) ..... :		P
	Specimens withstand an electric strength test specified in 14.3 started within 5 min of the completion of IP test		N/A
13.3.4	Immediately after the test: indicator paper still dry		N/A

14	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		P
14.1	Insulation resistance and electric strength of enclosures classified according to 7.1.1 and 7.1.3 is adequate		P
	Specimens placed in a humidity cabinet containing air with relative humidity between 91 % and 95 % and air temperature between 20 °C and 30 °C for:		P
	- 2 days (48 h) for enclosures classified IPX0		P
	- 7 days (168 h) for enclosures classified IP>X0		N/A
	After this treatment: no damage		P
14.2	Insulation resistance measured 1 min after application of 500 V d.c.	See appended table 14.2	P
14.3	Electric strength: a.c. test voltage applied for 1 min	See appended table 14.3	P

15	**MECHANICAL STRENGTH**		P
	Boxes and enclosures have adequate mechanical strength		P
15.1	Impact test at low temperature		N/A
	Non-metallic boxes and enclosures for use in cast concrete according to 7.2.3.1: impact test with a vertical hammer test apparatus (Figure 8) placed together with the specimens for 2 h ± 15 min in a refrigerator at:		N/A
	- (-5 ± 2) °C for boxes and enclosures classified according to 7.5.1		N/A
	- (-15 ± 2) °C for boxes and enclosures classified according to 7.5.2		N/A
	- (-25 ± 2) °C for boxes and enclosures classified according to 7.5.3		N/A
	Specimens subjected to 5 blows with a mass of 1 kg falling from a height of 100 mm: no damage		N/A
15.2	Compression test		P
15.2.1	Boxes and enclosures according to 7.2.3.1 and 7.6.2: specimen placed in a heating cabinet at (90 ± 5) °C for (60 + 15) min		P
	After cool down to ambient temperature: neither deformation nor damage		P
	Boxes and enclosures then placed between two flat hardwood plates and loaded with a force of (500 ± 5) N for 1 min ± 5 s		P
	No deformation or damage		P
15.2.2	Boxes and enclosures according to 7.7.2: tests are under consideration		↓
15.3	Impact test for boxes and enclosures		N/A
	Specimens subjected to blows by means of an impact test apparatus as described in IEC 60068-2-75 (test EHA) with equivalent mass of 250 g		N/A
	Boxes classified according to 7.5.2 and 7.5.3 performed at the following temperature:		N/A
	- (-15 ± 2) °C for boxes classified according to 7.5.2		N/A
	- (-25 ± 2) °C for boxes classified according to 7.5.2		N/A
	After the test: no damage		N/A

16	**RESISTANCE TO HEAT**		P
16.1	Part of insulating material necessary to retain current-carrying parts		P
	Parts of insulating material necessary to retain current-carrying parts and/or parts of the earthing circuit in position: ball-pressure test according to IEC 60695-10-2 at (125 ± 2) °C for (60 + 5) min	See appended table 16.1-16.2	P
16.2	Part of insulating material not necessary to retain current-carrying parts		N/A
	Parts of insulating material not necessary to retain current-carrying parts and/or parts of the earthing circuit in position, even though in contact with them, and parts necessary to retain earthing terminals in position: ball-pressure test according to 16.1 but at (70 ± 2) °C	See appended table 16.1-16.2	N/A
	Parts of insulating material of flush-mounted enclosures classified according to 7.6.2: ball-pressure test according to 16.1 but at (90 ± 2) °C	See appended table 16.1-16.2	N/A
16.3	Boxes and enclosures of insulating materials classified according to 7.7.2		N/A
16.3.1	Mechanical strength		N/A
	Boxes and enclosures of insulating materials classified according to 7.7.2 (Class Hb): adequate mechanical strength at high temperature		N/A
	Rigid crossbar (Figure 20) secured across the face of the box with screws tightened with a torque according to Table 4 (Nm) ..... :		↓
	Total force of 180 N applied for 24 h to the face of the box at:		N/A
	- (80 ± 2) °C for boxes and enclosures classified according to 7.7.2.1		N/A
	- (105 ± 2) °C for boxes and enclosures classified according to 7.7.2.2		N/A
	After the assembly has been cooled down to ambient temperature:		N/A
	- screws not have pulled out more than 6,3 mm (mm)..... :		N/A
	- torque used for removal the screws not exceeding 2,3 Nm (Nm) ..... :		N/A
16.3.2	Part of insulating material necessary to retain current-carrying parts of earthing circuit		N/A
	Parts of insulating material necessary to retain earthing strap subjected to a pull test of 45 N for 5 min as follow:		N/A
	- one specimen tested in the condition as delivered and		N/A
	- one specimen tested after conditioning at 90 °C for 168 h		N/A
	Thread of the earthing terminal not stripped when applying a torque according to Table 4 (Nm).....		N/A
	After each test: the earthing strap not become detached from the specimen		N/A

17	**CREEPAGE DISTANCES, CLEARANCES AND DISTANCES THROUGH SEALING COMPOUND**	N/A
	see appendix EN 60670-22:2006	N/A

18	**RESISTANCE OF INSULATING MATERIAL TO ABNORMAL HEAT AND FIRE**		P
	Glow-wire test according to Clauses 4 to 10 if IEC 60695-2-11	See appended table 18	P

19	**RESISTANCE TO TRACKING**		N/A
	Parts of insulating material retaining live parts in position of boxes and enclosures having IP>X0: PTI 175, 50 drops, solution A of IEC 60112	See appended table 19	N/A

12.9	**TABLE: mechanical strength of screws**				N/A
threaded part identification (e.g. fixing means for cover)	diameter of screw thread (mm)	column number – Table 4 (I, II, III or IV)	applied torque – Table 4 (Nm)	times (5/10)	no damage
supplementary information: The cable gland for electrical installations is tested in VDE- Approval 40001040.					

14.2	**TABLE: insulation resistance**	P
test voltage applied between:	measured (MΩ)	required (MΩ)
Enclosure	> 5500MΩ	≥ 5MΩ
supplementary information:		

14.3	**TABLE: electric strength**		P
	rated insulation voltage (V) .....:	250-450 V	↓
test voltage applied between:		test voltage (V)	flashover / breakdown (Yes/No)
Enclosure		2500	No
supplementary information:			

15.3	**TABLE: impact test**		N/A
part of enclosure tested per Table 7 (A, B, C, D, E, F, G)	Total number of blows per part – figure 10	height of fall (mm)	comments
supplementary information:			

16.1-16.2	**TABLE: ball pressure test of insulating materials**		P
	allowed impression diameter (mm) .....:	≤ 2 mm	↓

part under test	test temperature (°C)	impression diameter (mm)
Enclosure	70	<1,0
supplementary information:		

18	TABLE: glow-wire test					P
part under test	material designation	test temperature (°C)	visible flame and sustained glowing (Y/N)	flames and glowing extinction time	ignition of the tissue paper (Y/N)	
Enclosure	Housing: thermoplastic Colour: Orange	650°C	N	---	N	
supplementary information:						

19	TABLE: resistance to tracking			N/A
part under test	material designation	test voltage (V)	flashover / breakdown (Yes/No)	
supplementary information:				

12	CONSTRUCTION		P
12.101	Connecting boxes have adequate space to allow the correct connection of conductor specified in the relevantsections of Part 2 of IEC 60998	Clause 8.1 l and m are not declared by producer.	N/A
	Maximum number of conductors of maximum cross-sectional areas or the most unfavourable combination .....:		N/A
	Test made on boxes classified according to 7.101.4 only if l) and m) of 8.1 are marked or declared		N/A
12.102	Retention means for terminals or connecting devices withstand the mechanical stresses	Clause 8.1 l and m are not declared by producer.	N/A
	Connected conductors in accordance with the relevant Part(s) 2 of IEC 60998 for the type of connecting device used .....:		↓
	After the test: no harmful deformation, cracks or similar damage .....:		N/A
12.103	Connecting boxes classified according to 7.101.1, 7.101.2 and 7.101.3 comply with temperature rise requirements of 16.102		P

16	RESISTANCE TO HEAT		P
16.101	Connecting devices having parts of insulating material are sufficiently resistant to heat		P
16.101.1	Speciments or portions of them kept for 1 h in a heating cabinet at (85 ± 2) °C		P
	During the test: no change impairing their further use and sealing compound, if any, not flow		P

	After the test:		P
	- no access to live parts with probe B of IEC 61032 applied with a force not exceeding 5 N		P
	- markings still legible		P
16.101.2	Parts of insulating material not necessary to retain current-carrying parts and parts of the earthing circuit in position, even though in contact with them: ball-pressure test according to 16.1	See appended table 16.101.2	N/A
16.101.3	Parts of insulating material necessary to retain current-carrying parts and parts of the earthing circuit in position: ball-pressure test according to IEC 60695-10-2 at (125 ± 2) °C for (60 +5) min	See appended table 16.101.3	P
16.102	In connecting devices integrated or incorporated in connecting boxes the temperature rise in normal use do not exceed 45 K		P
	Temperature rise test	See appended table 16.102	P

17	**CREEPAGE DISTANCES, CLEARANCES AND DISTANCES THROUGH SEALING COMPOUND**		N/A
	Creepage distances, clearances and distances through sealing compound are not less than the values shown in Table 102 (not applicable to boxes for floating terminals or connecting devices classified according to 7.101.4	See appended table 17	N/A

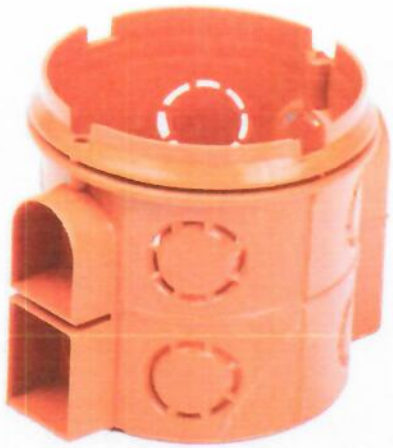
16.101.3	**TABLE: ball pressure test of insulating materials of connecting devices**		N/A
	allowed impression diameter (mm) .....:	≤ 2 mm	↓
part under test		test temperature (°C)	impression diameter (mm)
supplementary information:			

17	**TABLE: creepage distances, clearances and distances through sealing compound**					N/A
	rated voltage (V)..... .....:	---				↓
creepage distance dcr, clearance cl and distance through sealing compound dtsc at/of:	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)	required dtsc (mm)	dtsc (mm)
supplementary information:						

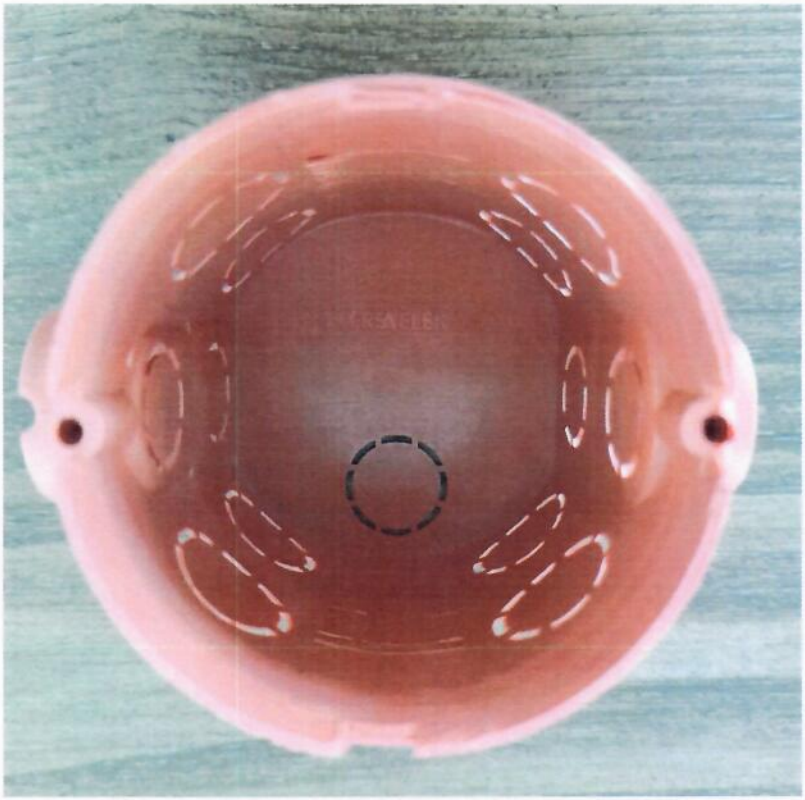
List of test equipment used:

Equipment No	Kind of equipment	Model Type	Manufacturer	Last Cal Date	Next Cal Date	Last Ver Date	Next Ver Date	Test Clause
E-037	Temperature-Humidity Meter	30.3166.02.S2	TFA	07.10.2019	07.10.2020	---	---	---
E-037	Force gauge	SF-500	Geratech	09.10.2019	09.10.2020	---	---	---
E-005	Glow Wire Device	---	ULMEKA Mekatronik Sistemler	04.10.2019	04.10.2020	14.05.2020	14.11.2020	Cl 16
E-045	Ball Mass	---	Teknik Mekatronik	08.04.2019	08.04.2020	18.05.2020	18.11.2020	Cl 16
E-034	Etüv oven	T12	Hereaus	04.10.2019	04.10.2020	18.05.2020	18.11.2020	Cl 16
E-054	CE compact tester	C.A 6160	Chauvin Arnoux	14.12.2019	14.12.2020	19.12.2019	19.06.2020	Cl 14.2& Cl 14.3
E-004	Humidity Chamber	---	ULMEKA Mekatronik Sistemler	04.10.2019	04.10.2020	14.05.2020	14.11.2020	---

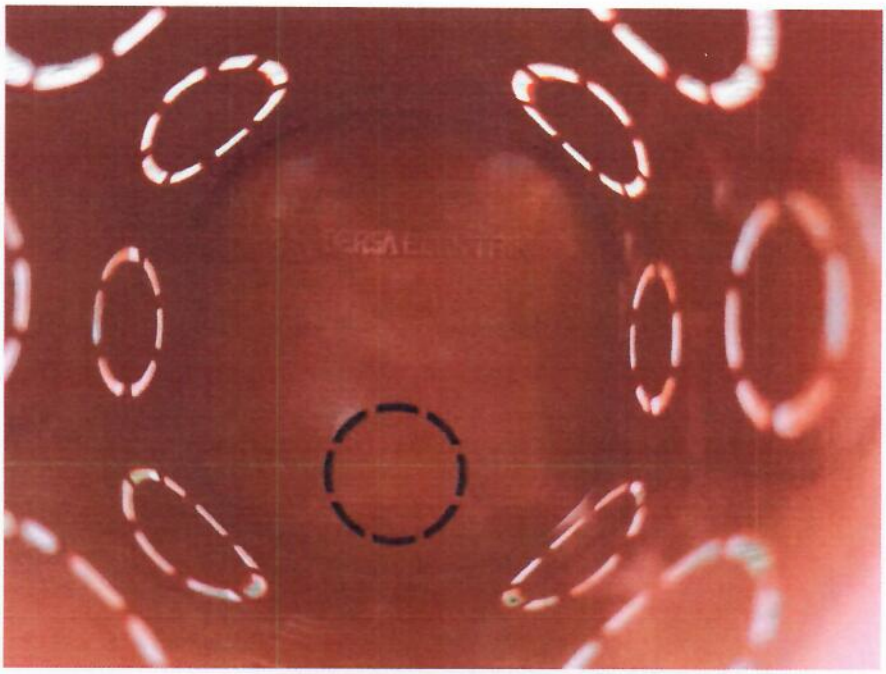
Photo documentation:



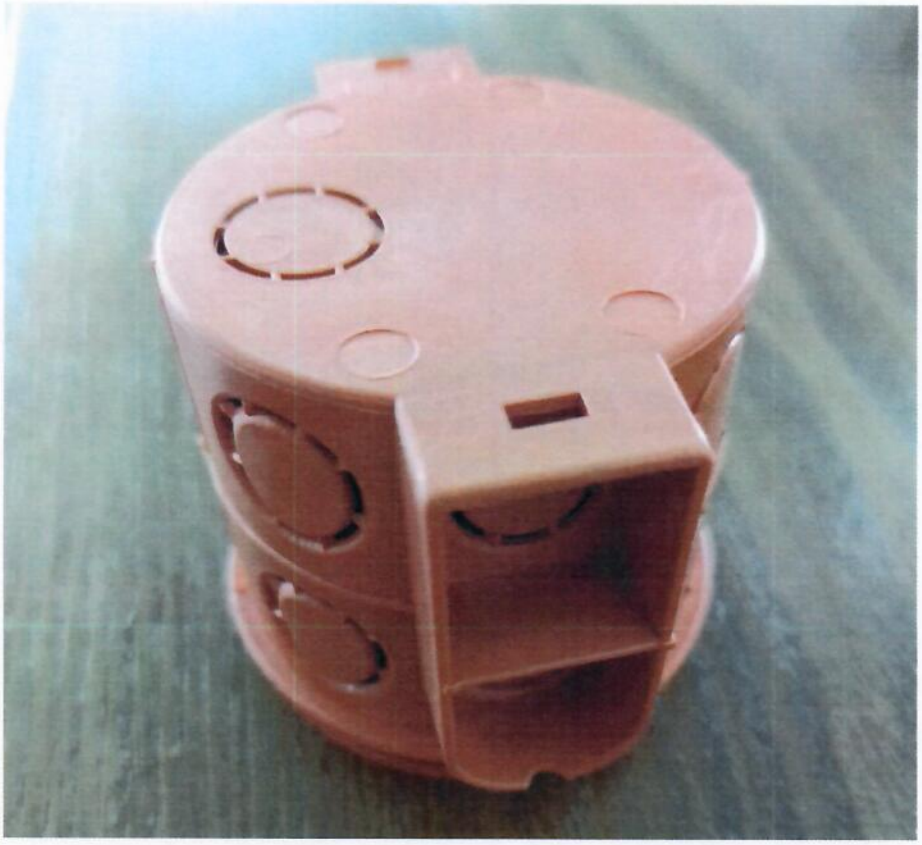
Product View



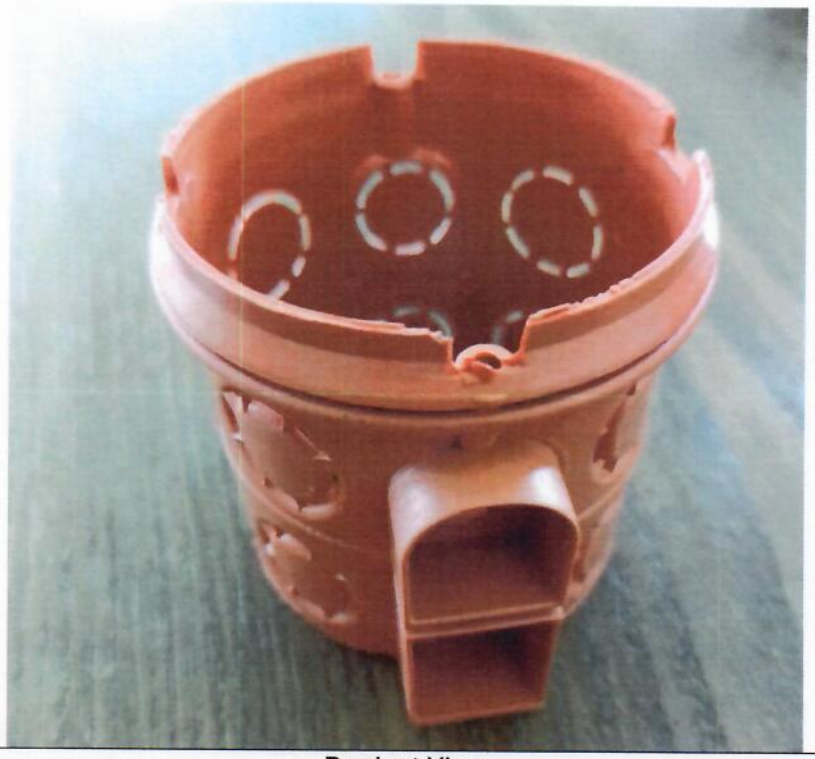
Product View



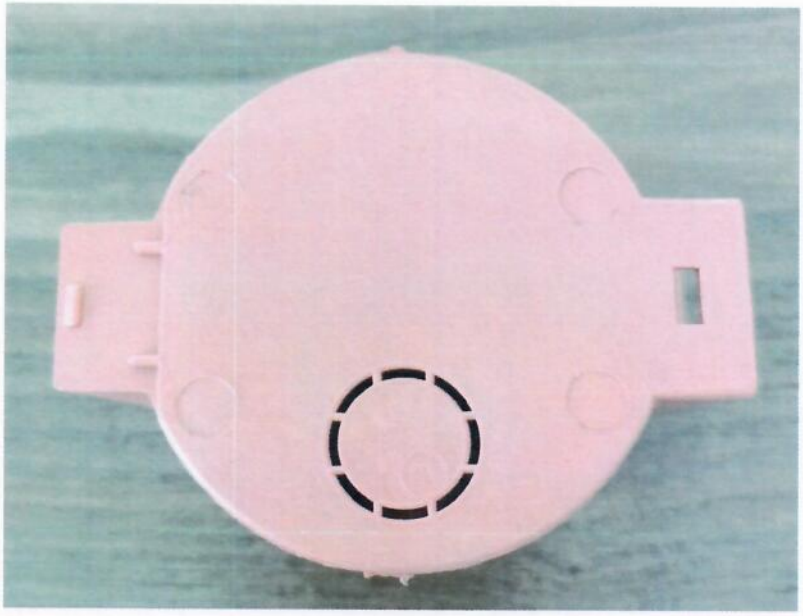
Product View



Product View



Product View



Product View

Identity declaration:

DERSA ELEKTRİK İNŞ. MAK. PLASTİK SAN. VE TİC. LTD. ŞTİ

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e- mail: info@dersaelektrik.com - dersaboru@hotmail.com
web: www.dersaelektrik.com - www.dersaboru.com

AYNİYET BEYANI **06.01.2020**

IDENTITY DECLARATION

DRS-01, DRS-02, DRS-03, DRS-04, DRS-05, DRS-06, DRS-07, DRS-08, DRS-09, DRS-10, DRS-11, DRS-12, DRS-13, DRS-14, DRS-15, DRS-16, DRS-17, DRS-18, DRS-19, DRS-20, DRS-21, DRS-22, DRS-23, DRS-24, DRS-25, DRS-26, DRS-27, DRS-28, DRS-29, DRS-30

DRS-06S, DRS-07S, DRS-08S, DRS-09S, DRS-10S, DRS-11S, DRS-12S, DRS-19S, DRS-20S, DRS-22S, DRS-23S, DRS-24S, DRS-25S, DRS-26S, DRS-27S, DRS-28S, DRS-29S, DRS-30S

DRS-01AY, DRS-02AY, DRS-03AY, DRS-04AY, DRS-05AY, DRS-06AY, DRS-07AY, DRS-08AY, DRS-09AY, DRS-10AY, DRS-11AY, DRS-12AY, DRS-13AY, DRS-14AY, DRS-15AY, DRS-16AY, DRS-17AY, DRS-18AY, DRS-19 AY, DRS-20 AY, DRS-21 AY, DRS-22 AY, DRS-23 AY, DRS-24 AY, DRS-25 AY, DRS-26 AY, DRS-27AY, DRS-28AY, DRS-29AY, DRS-30AY

Kodlu ürünlerin bütün teknik özelliklerinin (örn. Tasarım, özellikler, kritik kompanentler) benzer olduğunu beyan ederiz.

We declared that the product(s) is (are) identical in the all tecnical respects (e.g desing, properties, critical components)

DRS-01, DRS-02, DRS-03, DRS-04, DRS-05, DRS-06, DRS-07, DRS-08, DRS-09, DRS-10, DRS-11, DRS-12, DRS-13, DRS-14, DRS-15, DRS-16, DRS-17, DRS-18, DRS-19, DRS-20, DRS-21, DRS-22, DRS-23, DRS-24, DRS-25, DRS-26, DRS-27, DRS-28, DRS-29, DRS-30

DRS-06S, DRS-07S, DRS-08S, DRS-09S, DRS-10S, DRS-11S, DRS-12S, DRS-19S, DRS-20S, DRS-22S, DRS-23S, DRS-24S, DRS-25S, DRS-26S, DRS-27S, DRS-28S, DRS-29S, DRS-30S

DRS-01AY, DRS-02AY, DRS-03AY, DRS-04AY, DRS-05AY, DRS-06AY, DRS-07AY, DRS-08AY, DRS-09AY, DRS-10AY, DRS-11AY, DRS-12AY, DRS-13AY, DRS-14AY, DRS-15AY, DRS-16AY, DRS-17AY, DRS-18AY, DRS-19 AY, DRS-20 AY, DRS-21 AY, DRS-22 AY, DRS-23 AY, DRS-24 AY, DRS-25 AY, DRS-26 AY, DRS-27AY, DRS-28AY, DRS-29AY, DRS-30AY

Firma kaşesi

Yetkili imzası

DERSA ELEKTRİK
İNŞ. MAK. PLS. SAN. VE TİC. LTD. ŞTİ.