## SPECIFICATION

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#### EUROPEAN POWER SUPPLY CORDSET (PB FR)

CORD : HO3VVH2-F 2X0.75mm<sup>2</sup> PVC LEAD FREE

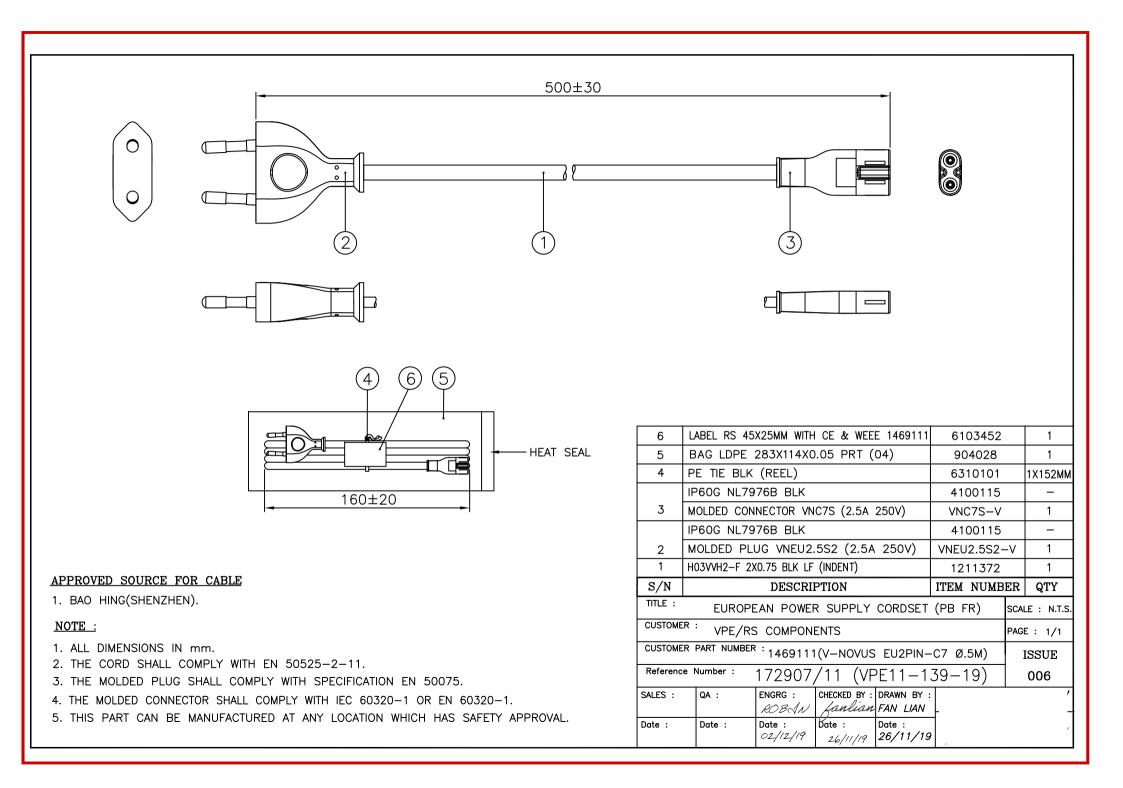
CUSTOMER	:	VPE/RS COMPONENTS
CUSTOMER'S PART No.	:	1469111(V-NOVUS EU2PIN-C7 Ø.5M)
VOLEX'S SPEC. REF No.	:	172907/11
ISSUE No.	:	006
DATE	:	26TH NOVEMBER 2019

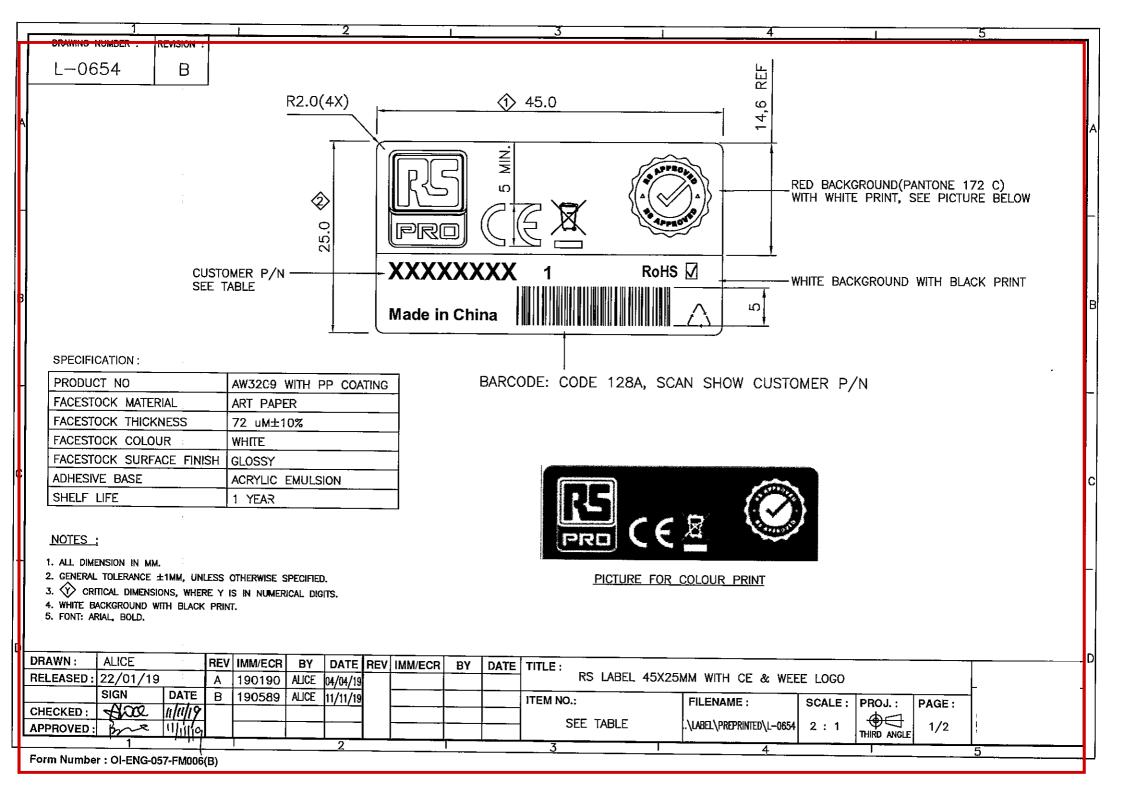
CUSTOMER APPRO	VED	:
APPROVED BY	:	
SIGNATURE	:	
APPROVED DATE	:	
No. OF PAGES	:	



### AMENDMENT RECORD

REF. No.	DESCRIPTION OF CHANGES	DATE
172907/11	(1) FIRST SUBMISSION.	11/09/17
(VPE09-025-17)		
ISSUE : 001		
172907/11	(1) CHANGE CUSTOMER P/N FM. VNEU2.5S2-NVC7S-Ø.5M'	30/10/17
(VPE10-058-17)	TO '1469111(V-NOVUS EU2PIN-C7 Ø.5M)' ON COVER &	
ISSUE : 002	ASSEMBLY DWG. PAGES.	
172907/11	(1) CHANGE CABLE MARKING FM. 'INK MARK' TO 'INDENTED'	29/11/17
(EVPE11-049-17)	& REMOVE ITEM No. '1210333' FM. ASSEMBLY DWG. PAGE.	
ISSUE : 003		
172907/11	(1) ADD IN PE BAG '904028' & LABEL 'VL-0538'	25/01/18
(VPE01-047-18)	AS SHOWN ON ASSEMBLY DWG. PAGE	
ISSUE : 004	(2) ADD IN NOTE 6 AS SHOWN ON ASSEMBLY DWG. PAGE.	
	(3) ADD IN LABEL DWG. PAGE.	
172907/11	(1) CHANGE LABEL FM. 'VL-0538' TO 'L-T383' & REMOVE	14/02/18
, (EVPE02-121-18)		
ISSUE : 005	(2) CHANGE LABEL DWG. PAGE.	
172907/11	(1) CHANGE LABEL FM. 'L-T383' TO 'L-0654(6103452)' IN S/N	26/11/19
, (VPE11–139–19)	6 ON ASSEMBLY DWG. PAGE.	, ,
ISSUE : 006	(2) ADD CABLE ITEM NUMBER '1211372' IN S/N 1 ON	
	ASSEMBLY DWG. PAGE.	
	(3) CHANGE LABEL DWG. PAGE.	
	(4) CHANGE PLUG AND CONNECTOR SPEC. PAGES.	





DRAWING NUMBER : REVISION : L-0654 B

TABLE B

	· - · -		- —								_		
CUSTOMER P/N	ITEM N	10.	CL	JSTOMER	P/N	IT IT	EM NO		CUSTOMER P/N	ITEM NO.		CUSTOMER P/N	ITEM NO.
1247409	6103431-	XXXX		32120	3	61034	75–XX	XX	7440929	6103502-XXXX	1	262 1154 0001	6103536XXX
1468803	6103441-	XXXX		32121	9	61034	76–XX	XX	7440931	6103503-XXXX	]	262 1160 0001	6103537-XXX
1468804	6103442-	XXXX		42642	4	61034	78–XX	XX	7440935	6103504-XXXX	1	262 1176 0001	6103538-XXX
1469102	6103443-	XXXX		53110	0	61034	79–XX	(XX	7440941	6103505-XXXX	1	262 1182 0001	6103539-XXX
1469103	6103444-	XXXX		53111	6	61034	80-XX	XX	8188903	6103507-XXXX	1	680 3798 0001	6103540-XXX
1469104	6103445-	XXXX		615115	4	61034	-81–XX	XX	8188909	6103508-XXXX	1	426 373 0001	6103541-XXX
1469105	6103446-	XXXX		615117	6	61034	82–XX	XX	8188912	6103509-XXXX	1	426 389 0001	6103542-XXX
1469106	6103447-	XXXX		615118	2	61034	83–XX	XX	8188915	6103510-XXXX	1	426 395 0001	6103543-XXX
1469107	6103448-	XXXX		626659	3	61034	-84-XX	XX	8188919	6103511-XXXX	1	426 402 0001	6103544-XXX
1469108	6103449-	XXXX		626660	0	61034	85-XX	XX	9010753	6103512-XXXX	1	426 418 0001	6103545-XXX
1469109	6103450-	XXXX		626661	6	61034	86-XX	XX	9092156	6103513-XXXX	1	452 669 0001	6103546-XXX
1469110	6103451-	XXXX		626668	8	61034	-89-XX	XX	9092168	6103516-XXXX	11	487 277 0001	6103547-XXX
1469111	6103452-	XXXX		626669	4	61034	90-XX	XX	9092171	6103517-XXXX	1	487 277 0010	6103548-XXX
1469112	6103453-	XXXX		626670	1	61034	91–XX	XX	9092174	6103518-XXXX	1	489 201 0001	6103549-XXX
1469114	6103454-	XXXX		626671	7	61034	92-XX	XX	9092178	6103519-XXXX	1	489 217 0001	6103550-XXX
1469115	6103455-	XXXX		626672	3	61034	93–XX	XX	9092184	6103521-XXXX		489 346 0001	6103551-XXX
1469116	6103456-	XXXX		626674	5	61034	94–XX	XX	9092193	6103524-XXXX	1	489 352 0001	6103552-XXX
1469117	6103457-2	XXXX	1	731615	7	61034	95–XX	XX	445 740	6103528-XXXX	1	490 217 0001	6103553-XXX
1469118	6103458-	XXXX		731616	6	61034	97–XX	XX	449 297	6103529-XXXX	11	490 223 0001	6103554-XXX
1469119	6103459-2	XXXX	1 - 3	731617	5	61034	98-XX	XX	449 326	6103530-XXXX		490 239 0001	6103555-XXX
1469120	6103460-2	XXXX		731620	1	61034	99–XX	XX	815 846	6103531-XXXX		490 245 0001	6103556-XXX
321180	6103473-2	XXXX	] 📑	731620	8	61035	00-XX	XX	268 2610	6103532-XXXX		311-9321-0000	6103557-XXX
321196	6103474-2	XXXX	] [ _ ·	744092	5	61035	01–XX	XX	311 9315	6103533-XXXX		311-9337-0000	6103558-XXX
_									262 1126 0001	6103535-XXXX		311-9359-0000	6103559-XXX
										<b>- 1</b>			
ALICE	REV IMM	I/ECR	BY	DATE	REV	IMM/ECF	R BY	DA	TE TITLE :		—		
22/01/19	A 190	0190	ALICE	04/04/19			-		RS	LABEL 45X25MM	Wľ	TH CE & WEEE	LOGO

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4

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DRAW RELEASED: 22/01/19 A 190190 ALICE 04/04/19 DATE B 190589 ALICE 11/11/19 LOGO SIGN ITEM NO.: FILENAME : SCALE : PROJ. : PAGE : Aa CHECKED : 11/11/9 THIRD ANGLE SEE TABLE .\LABEL\PREPRINTED\L-0654 2:1 2/2 11/11/19 APPROVED : Bore 1 1 11 2 3 4 5 Form Number : OI-ENG-057-FM006(B)

#### 1. PVC FLEXIBLE CORD

# REV. DESCRIPTION DATE E AMEND WORDS FM. 'NORMAL' TO 'NOMINAL'. 14/10/05 CHANGE THE COMPLIANCE STANDARD PER SAFETY. F UPDATE FORMAT AS SHOWN. 20/12/13

#### 1.1 SCOPE

This specification shall be in accordance with EN 50525-2-11.  $\triangle$ 

#### 1.2 CONSTRUCTION

CONDUCTOR	ANNEALED COPPER WIRE
INSULATION	PVC (BLUE AND BROWN)
JACKET	PVC

	ITEM	UNIT	SPEC. VALUE			
TEMPERATURE R	ATING		•C	70		
RATED VOLTAGE			V	300/300		
NO. OF CORE			NO.	2		
CONDUCTOR NOM	IINAL AREA		mm²	0.75		
MIN. AVE. THICK	NESS OF INSULATIO	N	mm	0.50		
MIN. THICKNESS	AT ANY POINT OF	INSULATION	mm	0.35		
MIN. AVE. THICKI	NESS OF JACKET		mm	0.60		
MIN. THICKNESS	AT ANY POINT OF	JACKET	mm	0.41		
OVERALL DIAMET	ER OF JACKET		mm	3.2X5.2~3.8X6.3		
VOLTAGE TEST (	D.C)		_	2000 Va.c. for 5 mins (minimum) or 5000 Vd.c. for 5 mins(minimum)		
DIELECTRIC-	IMMERSED IN WATER, 20±5℃ FOR MINIMUM	ON COMPLETED CABLE	_	2000V for 15 mins(minimum)		
STRENGTH TEST	1HOUR	_	1500V for 5 mins(minimum)			
INSULATION RESI	STANCE TEST (70*	MΩ./Km	> 0.01			
CONDUCTOR RES	SISTANCE TEST (20	•C)	Ω/Km	<b>&lt;</b> 26		

TITLE : CABLE SPECIFICATION EUROPEAN APPROVED POWER SUPPLY CABLE H03VVH2-F 2X0.75mm <sup>2</sup>						
SPEC NO. :	APPROVED BY :	CHECKED BY :	DRAWN BY :	REVISION :		
	Huy	hongth	HONGYAN	F	-	
CS-013EU	DATE :	DATE : 🥄	DATE :	PAGE :		
 	23/12/13	20/12/13	20/12/13	1/1	_	

REV.	DESCRIPTION	DATE
A	INITIAL RELEASE	11/10/02
	UPDATE THE FORMAT AS SHOWN.	
8	ADD IN '(EU/SAA/SAB/IEC)' ON THE TITLE.	12/01/05

CABLE MARKING

#### BAO HING (SHENZHEN)

: - HO3VVH2-F 2X0.75mm<sup>2</sup> ⊲VDE▷ KEMA-KEUR + ω + ω + ω + ω ⊲öVE▷ CEBEC IEMMEQU SABS 1574 ⑤ ℕ ℗ ℗ ℗ BAOHING LTSA-2F N14586 € LF

DRAWN CHECK APPR	Coi ZX Metz	13/1/05	FILENAME : CABLE WANKING/ BAO HINO/HO3/ HO3WH2-F 200.75 (F	TITLE : CABLE MARKING (EU/SAA/SAB/IEC) /	
SCALE REFERENC	<u>  N.T.S.</u> ж: : /VH2—F 2	REV. X0.75mm	1 8 1 <sup>2</sup> LF	(EC/ SAA/ SAB/ IEC) ZE	

2. PLUG

REV	DESCRIPTION	DATE
Q	ADD CATALOGUE NO. 'SSEU2.5SA2'.	24/03/17
R	ADD CATALOGUE NO. 'VBEU2.5S2'.	28/06/18

#### 2.1. SCOPE

The plug shall be in accordance with specification EN 50075` Flat non-wirable two-pole plugs, 2.5A 250V, with cord, for the connection of class II-equipment for household and similar purposes.

#### 2.2. CONSTRUCTION

The plug construction shall comply with our catalogue No: M5206, V4206, M4206, EU2.5S2, GPEU2.5S2, APEU2.5S2G, APEU2.5BS2G, MFEU2.5S2, VNEU2.5S2, SSEU2.5SA2 & *VBEU2.5S2*.

#### 2.3. CHARACTERISTICS

NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
1.	Moisture resistance test	Samples are kept in a humidity cabinet con- taining air with a relative humidity between 91	No damage
		to 95% and a temperature of 20°C-30°C for a duration of 48 hours.	
2.	Electric strength	A voltage of A.C 2000V with a trip current of min.	No flashover
	test	100mA is applied for 1 min after the moisture resistance test.	and breakdown
3.	Insulation resistance	This test is measured after 1 min. application of	Min. 5 M Ohm
	test	D.C 500V after the moisture resistance test.	
4.	Temperature rise	An alternating current of 4A is passed through	The temperature rise at
	test	poles for 1 hour.	any points shall not exceed 45°.
5.	Bending	The sample shall be loaded with a weight of 10N	No damage and
	test	for 0.75mm <sup>2</sup> or less, or 20N for 1.00mm <sup>2</sup> or bigger	the voltage drop shall
		and the oscillating member shall be moved backward	not exceed 10mV.
		and forward through an angle of $90^{\circ}$ (45° on	
		either side of the vertical) the number of flexing	
		being 10,000. The rated current of plug is passed	
		through the conductors.	
6.	Tumbling	The samples are dropped from a height of 50cm	No damage and the pins
	test	onto a steel plate (3mm thick) for a total of 1000	shall not turn.
		times. A torgue of 0.4Nm is applied in one	
		direction for 1 min. first then follow by the other	
		direction for another min.	

DRAWN:	LI XIA	28/06/18	TITLE:
CHECK:	Feng	28/06/18	EUROPEAN PLUG
APPR:	heith	28/06/18	(2.5A 250V)
REV:	R		
REFERENCE:			

NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
7.	Cold impact test	The samples are kept in a refrigerator at a temperature of - $15\pm2^{\circ}$ C for at least 16 hours. The samples are then allowed to fall by the hammer (1000g) from a height of 10cm.	No damage
8.	Abrasion test	The pin of sample slopes downwards at angle of 10° to the horizontal. The sample is loaded with a force of 4N on the pin. The number of move- ment is 20,000 and the length of pin subjected to abrasion is approx. 7mm over the insulating collar.	No damage
9.	Heat deformation test	The samples are kept for 1 hour in a heating cabinet at temperature of 100±5°C.	No damage
10.	Heat pressure test	The samples are applied 20N (2.04kg) at a temperature of 80±2°C for 1 hour.	No damage
11.	Ageing test	The samples are kept for 168 hours in a heating cabinet at temperature of 80±2°C.	No damage
12.	Pressure test	The samples are applied a force of 150N for 5 mins at room temperature. The samples are then allowed to rest for 15 mins.	No damage and dimension changes to the plug.
13.	Cord-anchorge test	The cord is subjected to pulls of 50N (2.5A) or 60N (10/16A) force 100 times with jerk each lasting 1 sec.Thereafter the cord is subjected to a torque of 0.1Nm for $0.5 \text{mm}^2$ and $0.15 \text{Nm}$ for 0.75mm <sup>2</sup> or more for 1 min.	The cord shall not be damaged and shall not been displaced by more than 2mm.
14.	Pin pull test	The plug is placed in an oven of 70±2°C for 1 hour. A pull force of 40N is applied on the pins in turns. After the test, the plug is allowed to cool down to ambient temperature	The pin shall not have been displaced by more than 1mm.
15.	Ball pressure test	A steel ball of 5mm in diameter is applied with 20N force on the sample at a temperature of 125±5°C for 1 hour on the insert The sample is than cooled by cold water.	The diameter of the impression shall not exceed 2mm.
16.	Glow wire test	The tip of the glow wire heated electrically to 750±10°C shall be applied at the portion between the current-carrying pins for a period of 30s.	Any flame and glowing shall extinguish within 30s after the removal of the glow-wire. There shall be no ignition of the tissue papernor sorching of the board.

DRAWN:	LI XIA	28/06/18	TITLE:
CHECK:	Feng	28/06/18	EUROPEAN PLUG
APPR:	heith	28/06/18	(2.5A 250V)
REV:	R		
REFERENCE:			

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#### 3. CONNECTOR

REV	DESCRIPTION	DATR
AE	ADD IN CATALOGUE NO. 'VNBC7S' .	27/06/19
AF	ADD IN CATALOGUE NO. 'VNBC7SL' .	07/08/19

#### 3.1. SCOPE

The connector shall be in accordance with IEC 60320-1 or EN 60320-1, Test specification - appliance couplers.

#### **3.2. CONSTRUCTION**

The connector construction shall comply with our catalogue No: VAC7S, VAC7A, SZC7S, APC7S, APC7Q, DLC7U2, AP7M16, SOC7S,VCC7, APC7K, APC7H, MFC7S, VAC7EA, APC7HB, VNC7S, VNC7A, VAC7SR, VBC7A & *VNBC7S VNBC7SL* ....... " All Connectors complying to Standard Sheet C7"

#### **3.3. CHARACTERISTICS**

			ACCEPTANCE
NO.	TEST ITEM	DESCRIPTION	CRITERIA
1.	Moisture resistance test	Samples are kept in a humidity cabinet con- taining air with a relative humidity between 91 to 95% and a temperature of 20°C-30°C for a duration of 48 hours.	No damage
2.	Electric strength	Voltages of 3000V±60V and 1500V±60V, with	No flashover
	test	min. trip current of 100mA is applied for 60s±5s	and breakdown
		between current-carrying contacts and body and between each contacts respectively after the moisture resistance tests.	
3.	Insulation resistance test	This test is measured with a D.C 500V after the moisture resistance test.Readings are taken after $60s \pm 5s$ of application of voltage.	Min. 5 M Ohm
4.	Withdrawal force test	i) Min. 1.5N (2N for 16A) - A single pin made to the minimum dimension is inserted into the connector. The pin, together with the weight should exert a force of 1.5N (2N for 16A connector). Each individual pole of the connector is tested seperately.	<ul> <li>i) The pin with the weight should not be withdrawn from the connector for more than 3 seconds.</li> </ul>
		ii) Max. 50N (60N for 16A) - Insert and withdraw the connector from a socket having pin dimension to the maximum and shroud dimension to the minimum for 10 times. The connector is then inserted again into the socket hang with a total weight of 50N(60N for 16A). The weight consist of a principal weight which is 90% of the total weight and a supplementary weight of 10%.	<ul> <li>ii) The connector shall be withdrawn from the socket.</li> <li>If not the supplementary weight is lifted from a height of 5cm and drop.</li> <li>The connector must be withdrawn.</li> </ul>
			The test is repeated after temperature rise test.

DRAWN:	PEIYUAN	07/08/19	TITLE :
CHECK:	Peiyuan	07/08/19	EUROPEAN & BRITISH
APPR:	Jianying	07/08/19	APPLIANCE COUPLERS
REV:	AF		
REFERENCE:			
			·

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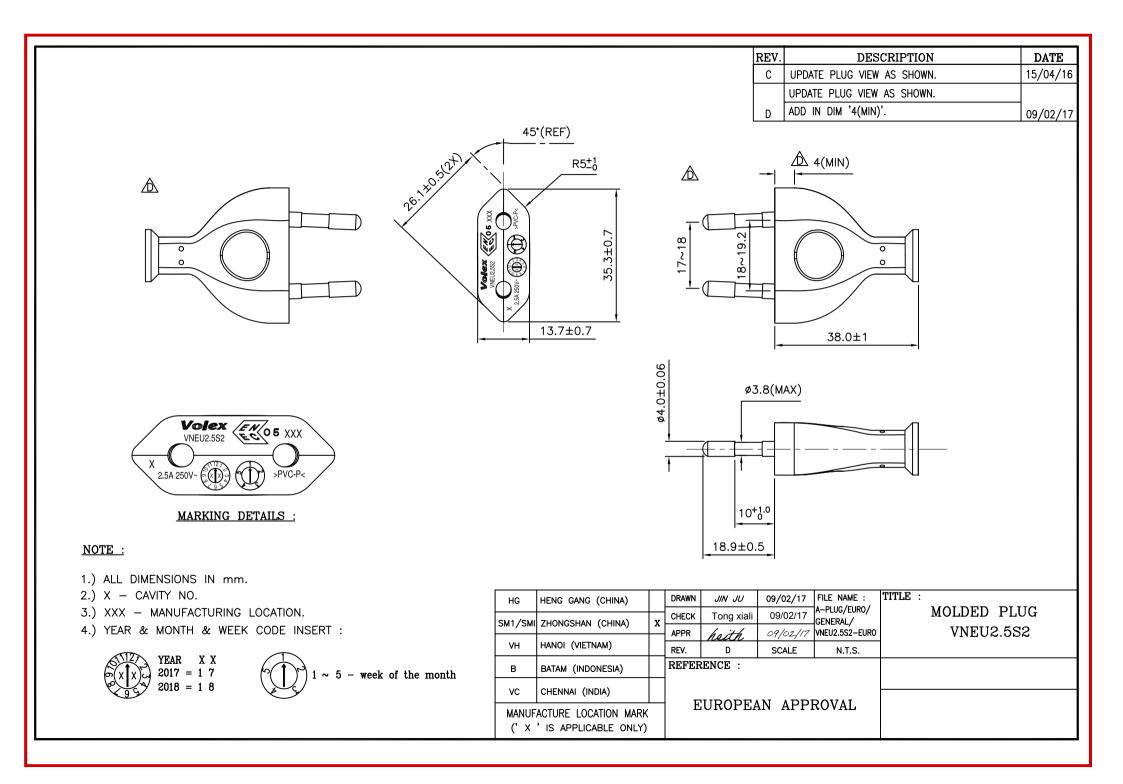
NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
5.	Glow wire test	Glow wire is applied for 30s with temperature of 750°C on inserts and housings retaining contacts and 650°C on elsewhere.	Flame (if any) shall be self- extinguished within 30s . upon the removal of the glow wire and molten droplets shall not ignite paper.
6.	Bending test	The sample shall be loaded with a weight of 10N for 0.75mm <sup>2</sup> or less, or 20N for 1.00mm <sup>2</sup> or bigger and the oscillating member shall be moved backward and forward through an angle of 90°(45° on either side of the vertical) the number of flexing being 20,000.A rated current is applied. For round cord, the sample is turned 90 degree around the axis of cable after 10,000 cycles. The flexing is further completed in this axis. Flat cable is flexed only along the bigger axis of the cable.	There shall be no complete breakage of any of the conductor. Broken conductor shall not have pierced the insulation
7.	Tumbling test	The sample is dropped from a height of 50cm onto a steel plate(3mm thick) for a total of 500 times.	No damage to impair further use of connector.
8.	Breaking capacity test	The connector is connected and disconnected 50 times (100 strokes) with the inlet at a rate of 30 strokes per minute with 275V and 1.25 times of rated current.	No flashover or sustained arcing during the test and no damage to impair further use of connector.
9.	Normal operation test	Test is similar to breaking capacity except that the test voltage is 250V with the connector connnected and disconnected with the inlet for 1000 times (2000 strokes) with rated current and 3000 times (6000 strokes) without current.	Withstand electric strength at 1500V for 1 min, and show no damage.
10.	Temperature rise test	An alternating current at 1.25 times rated current is passed through the current carrying contacts for 1 hour. This is repeated for connector with earth contact passing current between earth and each of the current carrying contacts.	The temperature rise shall not exceed 45K.
11.	Cord-anchorage test	The cord is subjected to pulls of $50N(2.5A)$ or 60N(others) for 100 times each time for 1 sec. without jerk.Thereafter the cord is subjected for 1 min. to a torque of $0.1Nm(0.50mm^2)$ or $0.15Nm(0.75mm^2)$ or $0.25Nm(others)$ .	The cord shall not be damaged and shall not been displaced by more than 2mm.
12.	Heat deformation test	Samples are kept for 1 hour in a heating cabinet at temperature of 100±2°C.	No damage to impair further use of connector.
13.	Heat pressure test	A pressure of 20N is applied at a temperature of $100^{\circ}C \pm 2^{\circ}C$ for 1 hour.	No damage to impair further use of connector.
		DRAWN:PEIYUAN07/08/19CHECK:Peiyuan07/08/19APPR:Jianying07/08/19REV:AFREFERENCE:	TITLE : EUROPEAN & BRITISH APPLIANCE COUPLERS

מענוסו ובכע ווו אוונוווץ שי מוו מענוסו ובכע סוווטומו טו אסובא משום

NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
14.	Aging test	The samples are kept for 168 hours in a heating cabinet at a temperature of 80±2°C.	No damage & marking shall be legible.
15.	Ball pressure test	<ul> <li>A ball of 5mm in diameter is applied on the connector with the following temperature with 20N force for 1 hour.</li> <li>i) 125°C for hot connectors.</li> <li>ii) 125°C for parts retaining current carrying parts and earth circuit.</li> <li>iii) 75°C for other parts for cold connector.</li> <li>The connector is then cooled down to room temperature with cold water.</li> </ul>	The diameter of the impression shall not exceed 2mm.
16.	Deformation test	Rectangular blades(A &B) as specified in IEC/EN60320-1 fig.22 are used to apply pressure on the front portion of the connector.Blade A is applied on the side with groove with 10N force. Blade B is applied on the side of the connector with 5N force.The force is applied at a temperature of 70°C±2°C for 2 hours.The connector is then cooled down to room temperature with cold water.	The impression shall not be greater than 0.2mm.

DRAWN: CHECK:	PEIYUAN Peiyuan	07/08/19 07/08/19	TITLE : EUROPEAN & BRITISH
APPR:	Jianying	07/08/19	APPLIANCE COUPLERS
REV:	AF		
REFERENCE:			

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	REV. DESCRIPTION	DATE
· · ·	A INITIAL RELEASE.	30/03/1
Volex VNC7S XXX 2.5A 250V~		
PVC-P<		
<u>NOTES :</u> 1.) ALL DIMENSIONS IN mm. 2.) X — CAVITY NO. (OPTIONAL) 3.) XXX — MANUFACTURING LOCATION.	HG       HENG GANG (CHINA)       DRAWN       HUI GRONG       30/03/15       FILE NAME : A-CONNECTOR/ BURO/GENERAL/       TITLE : MOLDED         SM1/SMI       ZHONGSHAN (CHINA)       X       CHECK       Hui (I'(M-3U/03/1))       BURO/GENERAL/       MOLDED       MOLDED         VH       HANOI (VIETNAM)       REV.       A       SCALE       N.T.S.       VIIC         B       BATAM (INDONESIA)       REFERENCE :       VIICOPEAN       APPROVAL       EUROPEAN       APPROVAL         MANUFACTURE LOCATION MARK       (' X ' IS APPLICABLE ONLY)       FUROPEAN       APPROVAL       FUROPEAN	CONNECTOR 27S