SPECIFICATION

FOR

EUROPEAN JUMPER CORDSET (PB FR)

CORD : H05VV-F 3X1.00mm² PVC LEAD FREE

CUSTOMER

: VPE/FARNELL

CUSTOMER'S PART No. : 1702766

VOLEX'S SPEC. REF. No.: 143023/7

ISSUE No.

: 001

DATE

: 30TH OCTOBER 2014

CUSTOMER APPROVED :

APPROVED BY	:	
SIGNATURE	:	
APPROVED DATE	:	
No. OF PAGES	:	



Volex (Asia) Pte Ltd

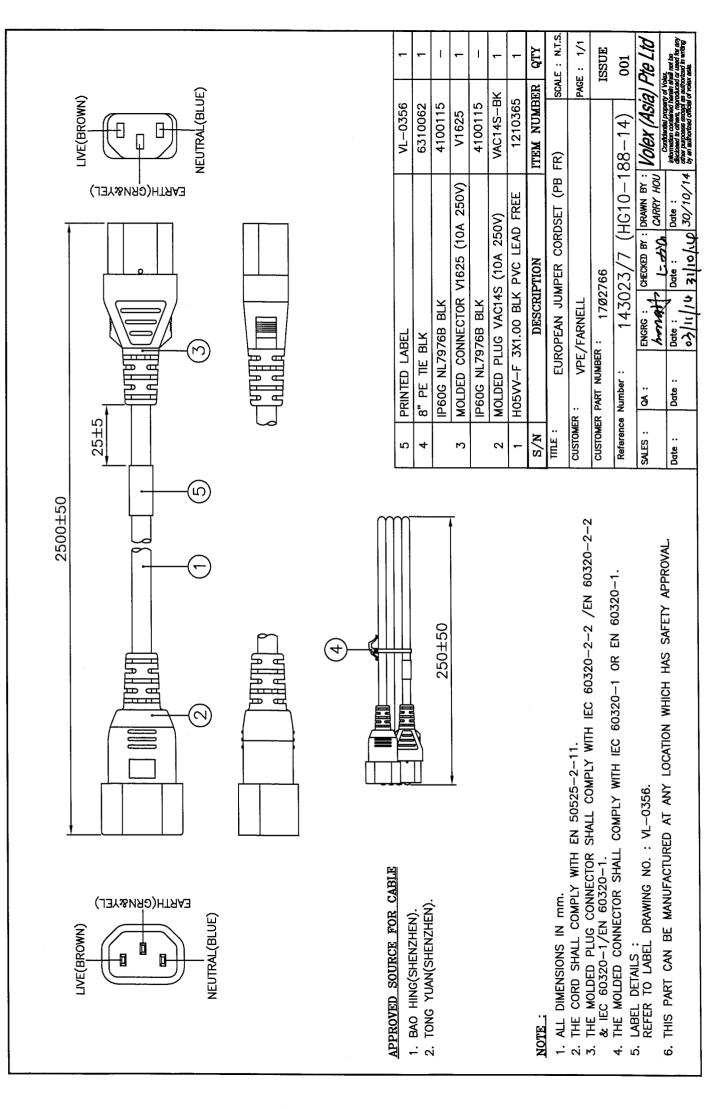
35 Tampines St. 92 Singapore 528880

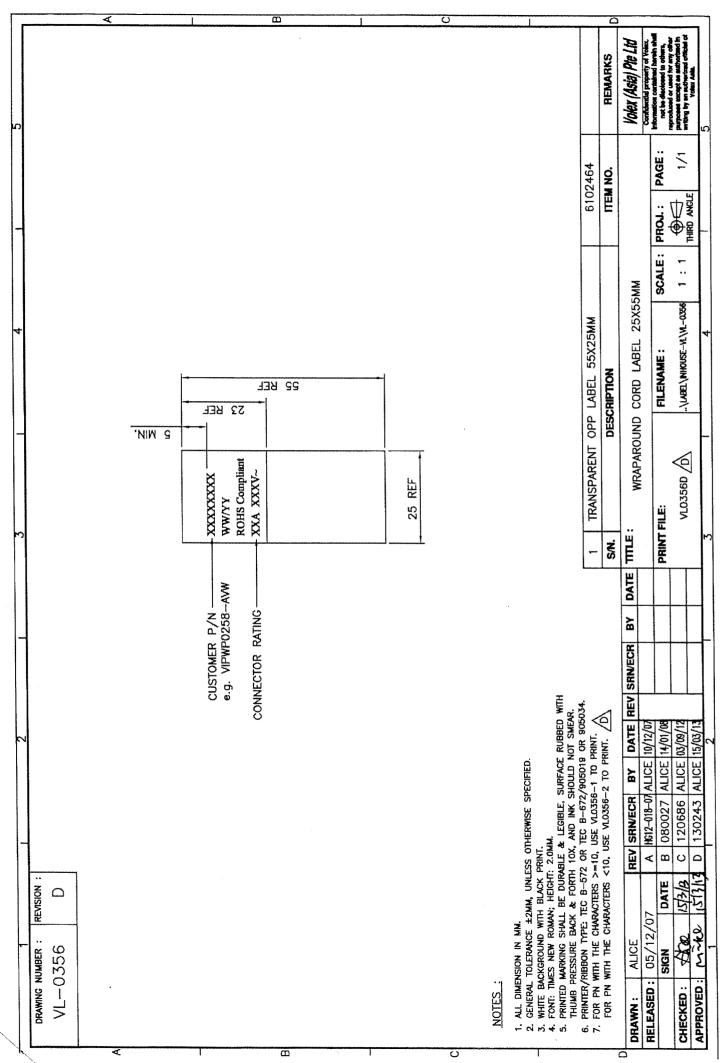
Tel: (65) 6788 7833 Fax: (65) 6788 7822

AMENDMENT RECORD

REF. No.	DESCRIPTION OF CHANGES	DATE
143023/7	(1) FIRST SUBMISSION.	30/10/14
(HG10-188-14)		
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Form Number: Ol-ENG-057-FM005(B)

REV.	DESCRIPTION	DATE
	REMOVE INSULATION COLOR 'BLUE, BROWN, BLACK'	
1	FM. REV. H PER HD STANDARD.	01/09/06
	CHANGE THE COMPLIANCE STANDARD	
	PER SAFETY.	
J	UPDATE FORMAT AS SHOWN.	23/12/13

1. PVC FLEXIBLE CORD

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, BROWN, GREEN&YELLOW)
JACKET	PVC

ITEM	UNIT	SPEC. VALUE	
TEMPERATURE RATING		•c	70
RATED VOLTAGE		٧	300/500
NO. OF CORE		NO.	3
CONDUCTOR NOMINAL AREA		mm ²	1.00
MIN. AVE. THICKNESS OF IN	ISULATION	mm	0.60
MIN. THICKNESS AT ANY POINT	OF INSULATION	mm	0.44
MIN. AVE. THICKNESS OF JA	ACKET	mm	0.80
MIN. THICKNESS AT ANY POIN	T OF JACKET	mm	0.58
OVERALL DIAMETER OF JAC	KET	mm	6.3~8.0
DIELECTRIC-STRENGTH TEST IMMERSED	ON COMPLETED CABLE	-	2000 V FOR 15 MINS (MINIMUM)
IN WATER, 20±5°C FOR MINIMUM 1HR ON CORES		_	1500 V FOR 5 MINS (MINIMUM)
VOLTAGE TEST (D.C)		_	2000 Va.c FOR 5 MINS (MINIMUM) OR 5000 Vd.c FOR 5 MINS (MINIMUM)
INSULATION RESISTANCE TE	MΩ km	> 0.01	
CONDUCTOR RESISTANCE TE	EST (20°C)	Ω/km	<= 19.5

TITLE: CABLE SPECIFICATION EUROPEAN APPROVED POWER SUPPLY CABLE H05VV-F 3X1.00mm² APPROVED BY : CHECKED BY : DRAWN BY : REVISION : SPEC NO. : △ Volex (Asia) Pte Ltd monal HONGYAN CS-048EU DATE : DATE : DATE : PAGE : information contained herein shall not be disclosed to othe reproduced or used for any other purposes except as authorized in writing by an authorized official of volex asia. 30/12/14/27/12/13/23/12/13 1/1

	REV.	DESCRIPTION	DATE
	Α	initial release.	12/10/02
ĺ		UPDATE MARKING DETAILS.	
1		UPDATE THE FORMAT AS SHOWN.	
	В	ADD IN '(EU/SAA/SAB/IEC)' ON THE TITLE.	19/01/05

CABLE MARKING

BAO HING (SHENZHEN)

 \triangle H05VV-F 3G1.0mm² \triangleleft VDE \triangleright KEMA-KEUR + \wp + \wp + \wp \triangleleft ÖVE \triangleright CEBEC IEMMEQU SABS 1574 \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc BAOHING GTSA-3 N14586 **C** \bigcirc LF

TITLE :

CABLE MARKING
(EU/SAA/SAB/IEC) 🖄

REFERENCE :

HO5VV-F 3X1.0mm² LF

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REV.	DESCRIPTION	DATE
	UPDATE FORMAT AS SHOWN.	
С	ADD IN '(EU/SAA/SAB/IEC)' ON THE TITLE.	21/01/05
	ADD IN NEW MARKING PER ECNO02-13.	
D	ADD IN NOTE 1.	07/05/13

CABLE MARKING

TONG YUAN (SHENZHEN)

H05VV-F 3G1.0mm² ⊲VDE> KEMA-KEUR CEBEC +\sigma+\sigma+\sigma+\sigma+\sigma\colon \overline{\ove

H05W-F 3G1.0mm² < VDE> KEMA-KEUR CEBEC + \(\sigma + \

NOTES:

1) * - PREFERRED CABLE MARKING.

DRAWN CHECK APPR	HONGYAN Frongt	07/05/13 <i>99/05/13</i> [[[5]]3	FILENAME : C-Marking/Tong Yuan/Ho5/Ho5/W -F 3X1.0 LF-TY-SZ	TITLE : CABLE MARKING (EU/SAA/SAB/IEC)
SCALE	N.T.S.	REV.	D	
	REFERENCE :			Volex (Asia) Pte Ltd
Ho	5W-F 3X	1.0mm²	LF	Confidential property of Volex. Information contained herein shall not be disclosed to others, reproduced or used for any other purposes except as authorized in writing by an authorized official of volex asia.

REV DESCRIPTION DATE 3. CONNECTOR CHANGE TEST RESULT' TO 'ACCEPTANCE CRITERIA'. 11/03/13 3.1. SCOPE T ADD IN CATALOGUE NO. 'VAC14LA'. 03/06/13

The connector shall be in accordance with IEC 60320-2-2 / EN 60320-2-2 & IEC 60320-1 / EN 60320-1: Test specification - appliance couplers.

3.2. CONSTRUCTION

The connector construction shall comply with our catalogue No: VAC14S, VAC14A, VAC20S, VAC14LS, VAC14KC, VAC14KAL, VAC14KAR, *VAC14LA*, VAC20KAL, VAC20KAR & VAC20KC.

"All Connectors complying to Standard Sheet C14 and C20"

3.3. CHARACTERISTICS

NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
1.	Moisture resistance test	Samples are kept in a humidity cabinet containing 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 test	Voltages of 3000V±60V and 1500V±60V, with min. trip current of 100mA is applied for 60s±5s between current-carrying contacts and body and between each contacts respectively after the moisture resistance tests.	No flashover and breakdown
3.	Insulation resistance test	This test is measured with a D.C 500V after the moisture resistance test.Readings are taken after 60s ± 5s of application of voltage.	Min. 5 M Ohm
4.	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.

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REFERENCE:			Volex (Asia) Pte Ltd
REV:	Т		
APPR:	147	216113	PLUG CONNECTOR
CHECK:	honges	03/06/13	EUROPEAN & BRITISH
DRAWN:	XIAOZḤI	03/06/13	TITLE:

NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
5.	Bending test	The sample shall be loaded with a weight of 10N for 0.75mm ² or 20N for 1.00mm ² or bigger and the	There shall be no complete breakage
	test	oscillating member shall be moved backward and	of any of the conductor.
		forward through an angle of 90°(45° on either	Broken conductor shall
		side of the vertical) the number of flexing being	not have pierced the
		20,000.A rated current is applied.	insulation.
		For round cord, the sample is turned 90 degree	
		around the axis of cable after 10,000 cycles.	
1		The flexing is further completed in this axis.	
		Flat cable is flexed only along the bigger axis of	
		the cable.	
6.	Tumbling	The sample is dropped from a height of 50cm onto	No damage to impair
	test	a steel plate(3mm thick) for a total of 500 times.	further use of connector.
7.	Temperature rise	An alternating current at 1.25 times rated current	The temperature
	test	is passed through the current carrying contacts	rise shall not exceed 45K.
		for 1 hour. This is repeated for connector with	
		earth contact passing current between earth	
		and each of the current carrying contacts.	
8.	Cord-anchorage	The cord is subjected to pulls of 50N(2.5A) or	The cord shall not be
	test	60N(others) for 100 times each time for 1 sec.	damaged and shall not
		without jerk. Thereafter the cord is subjected for	been displaced by more
		1 min. to a torque of 0.15Nm(0.75mm ²) or	than 2mm.
ļ		0.25Nm(others).	
9.	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.
10.	Heat pressure	A pressure of 20N is applied at a temperature of	No damage to impair
	test	$100^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1 hour.	further use of connector.
11.	Aging	The samples are kept for 168 hours in a heating	No damage & marking
	test	cabinet at a temperature of 80±2°C.	shall be legible.
12.	Ball pressure	A ball of 5mm in diameter is applied on the	The diameter of the
	test	connector with the following temperature with	impression shall not
		20N force for 1 hour.	exceed 2mm.
		i) 125°C for hot connectors.	
		ii) 125°C for parts retaining current carrying parts	
		and earth circuit.	
		iii) 75°C for other parts for cold connector.	
		The connector is then cooled down to room	
L		temperature with cold water.	l

DRAWN:	XIAOZHI	03/06/13	TITLE:
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APPR:	1/2/4/	3/6/13	PLUG CONNECTOR
REV:	T	•]	
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3. CONNECTOR

3.1. SCOPE

REV	DESCRIPTION	DATE
	CHANGE TEST RESULT TO 'ACCEPTANCE CRITERIA'	
AP	CHANGE FORMAT AS SHOWN.	11/03/14
AQ	ADD IN CATALOGUE NO. VAC17KS.	24/02/14

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: VAC5S, APC5A, APC5S, APC5M, VAC5AR, APC5SM, DLC5A3, V1625, V1625A, VAC19, VAC17S, VSCC13, AVLC13, APC13, APC13S, VSC19, V1625LA, VAC19A, VSCC15, APC5SP, APC13F, V1625BS, APC13G, VAC13A, VAC13S, PIC17S, VIC13A, DLC5U3, VAC13KS,SOC5S, V1625H, VAC19KS, DLC5E3, HPC13A, V1625AT, VAC17A, APC5SF, VCC13, VCC5S, APC13H, VCC17S, VAC19H, APC13FH, APC13HC & VAC17KS "All connectors complying to Standard Sheet C5, C13, C15, C15A, C17 and C19"

3.3. CHARACTERISTICS

NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
1.	Moisture resistance	Samples are kept in a humidity cabinet con-	No damage
	test	taining air with a relative humidity between 91	
		to 95% and a temperature of 20°C-30°C for a	
		duration of 48 hours.	
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	This test is measured with a D.C 500V after the	Min. 5 M Ohm
	test	moisture resistance test.Readings are taken	
		after $60s \pm 5s$ of application of voltage.	
4.	Withdrawal	i) Min. 1.5N (2N for 16A) - A single pin made	i) The pin with the weight
	force	to the minimum dimension is inserted into the	should not be withdrawn
	test	connector. The pin, together with the weight	from the connector for
		should exert a force of 1.5N (2N for 16A	more than 3 seconds.
		connector). Each individual pole of the	
1		connector is tested seperately.	
		ii) Max. 50N (60N for 16A) - Insert and withdraw	ii) The connector shall be
		the connector from a socket having pin dimension	withdrawn from the socket.
		to the maximum and shroud dimension to the	If not the supplementary
		minimum for 10 times. The connector is then	weight is lifted from a
		inserted again into the socket hang with a total	height of 5cm and drop.
		weight of 50N(60N for 16A). The weight consist	The connector must be
		of a principal weight which is 90% of the total	withdrawn.
		weight and a supplementary weight of 10%.	
		The test is repeated for hot connector with	The test is repeated after
		temperature of 120°C±2°C on the pins.	temperature rise test.

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REFERENCE:			Volex (Asia) Pte Ltd
REV:	AQ	,	
APPR:	Hy.	24/2/14	APPLIANCE COUPLERS
CHECK:	monato	N1/20/14	EUROPEAN & BRITISH
DRAWN:	MOLLY	24/02/14	TITLE:

PAGE 1 OF 3

NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE
			CRITERIA
5.	Glow wire test	Glow wire is applied for 30s with temperature of	Flame (if any) shall be self-
		750°C on inserts and housings retaining contacts	extinguished within 30s.
		and 650°C on elsewhere.	upon the removal of the
			glow wire and molten
			droplets shall not ignite
			paper.
6.	Bending	The sample shall be loaded with a weight of 10N	There shall be no complete
	test	for 0.75mm ² or 20N for 1.00mm ² or bigger and the	breakage of any of the
		oscillating member shall be moved backward and	conductor. Broken
		forward through an angle of 90°(45° on either	conductor shall not have
		side of the vertical) the number of flexing being	pierced the insulation.
		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.	
7.	Tumbling	The sample is dropped from a height of 50cm onto	No damage to impair
	test	a steel plate(3mm thick) for a total of 500 times.	further use of connector.
8.	Breaking capacity	The connector is connected and disconnected 50	No flashover or sustained
	test	times (100 strokes) with the inlet at a rate of 30	arcing during the test and
		strokes per minute with 275V and 1.25 times of	no damage to impair
		rated current.	further use of connector.
9.	Normal operation	Test is similar to breaking capacity except that	Withstand electric
	test	the test voltage is 250V with the connector	strength at 1500V for
		connnected and disconnected with the inlet for	1 min, and show no
		1000 times (2000 strokes) with rated current and	damage.
		3000 times (6000 strokes) without current.	
10.	Temperature rise	An alternating current at 1.25 times rated current	The temperature
	test	is passed through the current carrying contacts	rise shall not exceed 45K.
1		for 1 hour. This is repeated for connector with	
		earth contact passing current between earth	
	~ 4	and each of the current carrying contacts.	
11.	Cord-anchorage	The cord is subjected to pulls of 50N(2.5A) or	The cord shall not be
	test	60N(others) for 100 times each time for 1 sec.	damaged and shall not
		without jerk. Thereafter the cord is subjected for	been displaced by more
		1 min. to a torque of 0.15Nm(0.75mm ²) or	than 2mm.
12	TV . 1 C	0.25Nm(others).	
12.	Heat deformation	Samples are kept for 1 hour in a heating cabinet	No damage to impair
	test	at temperature of 100±2°C.	further use of connector.
13.	Heat pressure	A pressure of 20N is applied at a temperature of	No damage to impair
	test	100°C ± 2°C for 1 hour.	further use of connector.

DRAWN:	MOLLY	24/02/14	TIT
СНЕСК:	hongits	24/02/14	EU
APPR:	And	24/2/14	API
REV:	AQ		

TITLE: EUROPEAN & BRITISH APPLIANCE COUPLERS

REFERENCE:

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NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
14.	Aging	The samples are kept for 168 hours in a heating	No damage & marking
	test	cabinet at a temperature of 80±2°C.	shall be legible.
15.	Ball pressure	A ball of 5mm in diameter is applied on the	The diameter of the
	test	connector with the following temperature with	impression shall not
		20N force for 1 hour.	exceed 2mm.
	i) 125°C for hot connectors.		
	ii) 125°C for parts retaining current carrying parts		
		and earth circuit.	
		iii) 75°C for other parts for cold connector.	
		The connector is then cooled down to room	
		temperature with cold water.	

REFERENCE:			Volex (Asia) Pte Ltd
REV:	AQ		
APPR:	Huy	24/2/14	APPLIANCE COUPLERS
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DRAWN:	MOLLY	24/02/14	TITLE:

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