



ENGLISH

Datasheet

RS PRO 2m Power cable

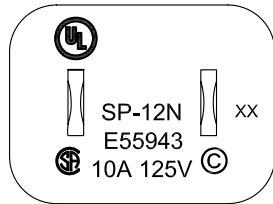
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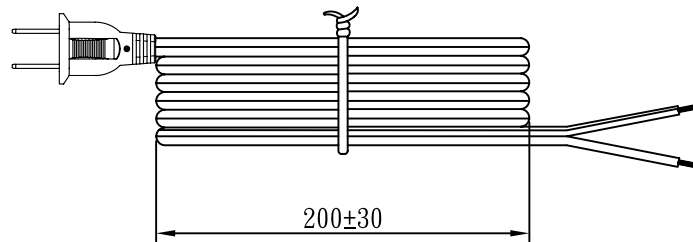
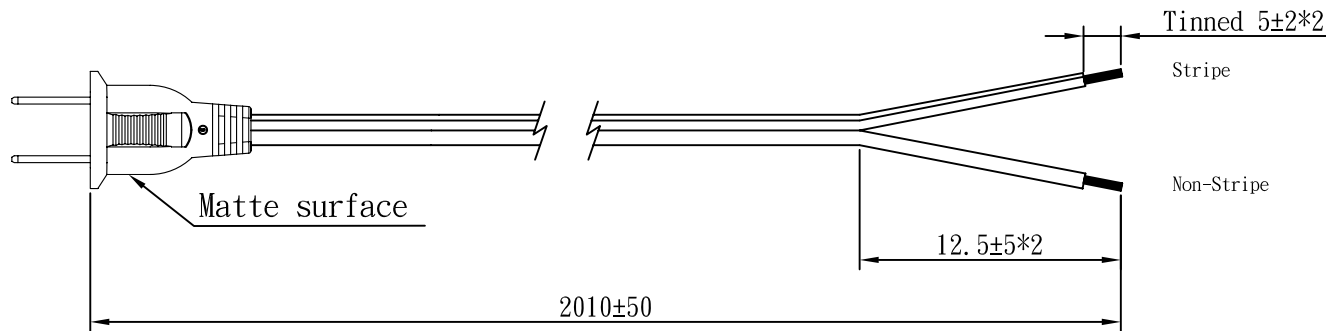
CONTENT

1. Finished Production Drawing
2. Plug Drawing
3. Product Specification
4. Characteristic
5. Safety Certification

MARKING:



No	BOM ITEM	Q' TY	P/N
1	KWC-50T BLADE	2 pcs	BBN50T02
2	PVC 35P (SA93, SP-12N)	11.5 g	RPP03512
3	PE TIE (BLACK, 6 inch)	1 pcs	KBB10006

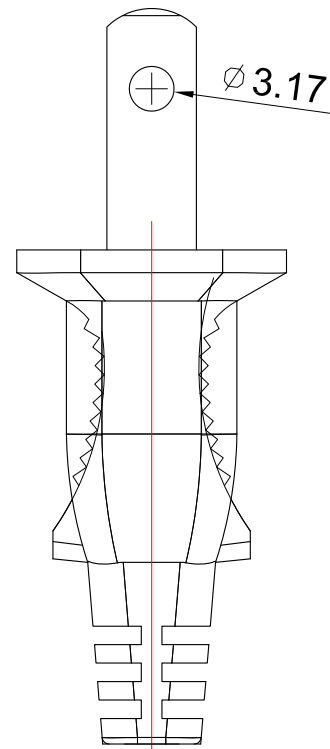
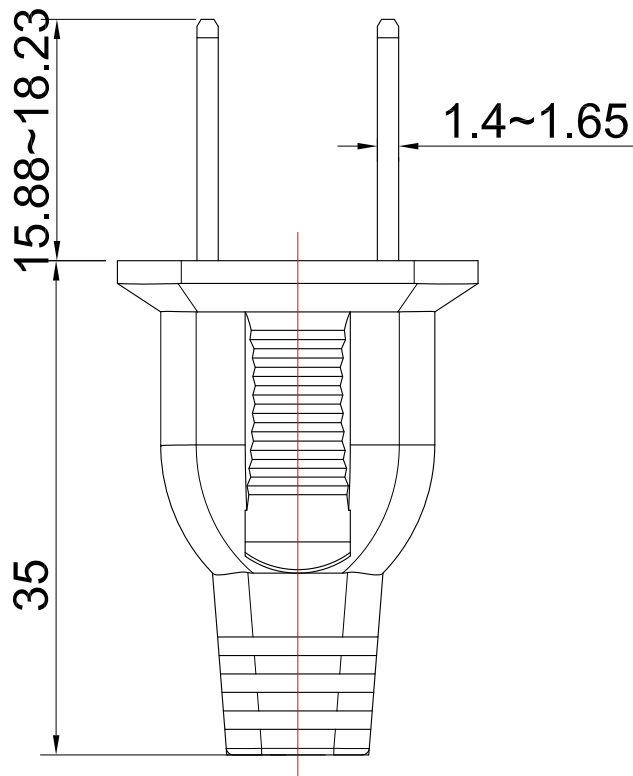
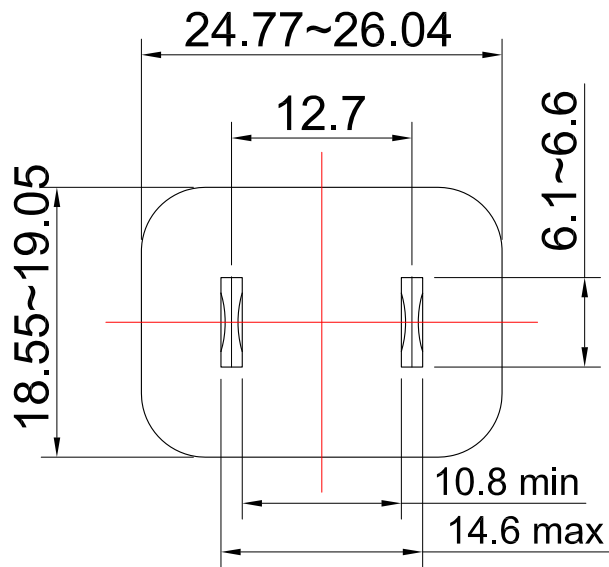


WIRING COLOR:

N: Stripe
L: Non-Stripe

<p>LENGTH ON CORD: (604-14)</p> <p>(UL) E315167 SPT-2 105°C 2X18AWG(0.824mm²) 300V VW-1 I-SHENG CSA LL81924 TYPE SPT-2 105°C 2X0.824mm²(18AWG) 300V VW-1</p>
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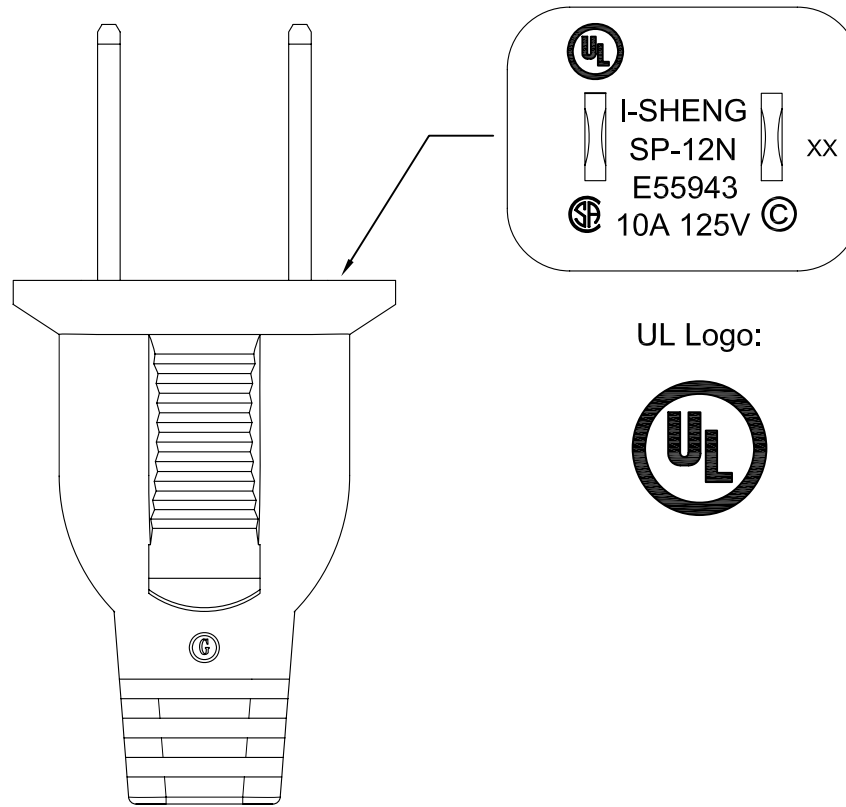
CABLE						SPT-2 18AWGx2C 105°C DENT PRINT CT-12 (BLACK)					
PLUG		SP-12N		LENGTH		2010		UNIT		mm	
CLIENT	NAME		first connectivity		N/W		UNIT		kg		
	P/N		7316179		SG DWG		SR-141239-1		VER. A		
								Design. by		賀艷紅 (2014.05.26)	
								Review. by		朱曉玲 (2014.05.26)	
								Approval. by		周德雲 (2014.01.16)	
A2N		2S2516		12		201		00			



DWG. NAME	TYPE AND DIMENSIONS			TOLERANCE	
APPLY TO STANDARD	AMERICAN APPROVAL POWER SUPPLY CORD				
ISSUE DATE	2000/08/29	REV.	E	≤ 1.0	±0.3
REVISE DATE	2009/08/10	UNIT	mm		
TYPE	SP-12N	DWG. NO.	A2N-01	≤ 10.0	±0.5
WIRE	SPT-1,SPT-2,NISPT-1,NISPT-2(16~20AWG/2C)				
	DESIGN BY	YUYING WANG		≤ 20.0	±1.0
	REVIEW BY	FANNY WANG			
	APPROVE BY	RYAN LAI		> 20.0	±2.0

MARKING

ISSUED	STD. NAME	UL/CSA APPROVAL POWER SUPPLY CORD	FILE NO.
REVISED A	CAT NO.	SP-12N 成品標識示意圖	PAGE 1



UL Logo:



D. by

Camilla

C. by

Boboan

A. by

Yun

SPECIFICATION

Rev. 1.0

Issued	2013/3/4	Description	File No.	A2N2S2516
Revised		SP-12N SPT-2 18AWGx2C 105°C	Page	1/1

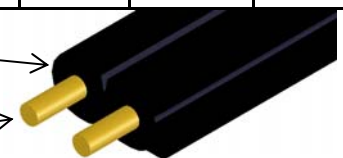
1. Scope :

This specification is applied to power supply cord conforming to:
UL 62 UL 817 CSA C22.2

2. Construction and dimensions:

In accordance with the following tables and attached drawings.

Item	Cat. No.	Rating		Approved No.	
		A	V	UL	CSA
Plug	SP-12N	10	125	E55943	LR 35162

Flexible cord					SPT-2 18AWG 2C			
Approved No.					E88265 、 E314513 、 E315167 、 LL81924			
Rating					300V 105°C			
Conductor		Insulation			Jacket			Conductor Resistance
Nominal (mm ²) (AWG)	Composition (pcs/mm)	Avg. Thickness (mm)	Min Thickness (mm)	Diameter (mm)	Avg. Thickness (mm)	Min Thickness (mm)	Diameter	
18AWG	40/ ϕ 0.162±0.005	1.14	1.02	3.4±0.15 x6.8±0.2	-	-	-	Max 22.4Ω/km at 20°C In case of dispute, Conductor resistance shall be the referee method.
PVC Insulation								
Copper Conductor								

3. Cable marking on the sheath:

Taiwan: (UL) E88265 SPT-2 105°C 2X18AWG(0.824mm ²) 300V VW-1 CSA LL81924 TYPE SPT-2 105°C 2X0.824mm ² (18AWG) 300V VW-1
Shenzhen: (UL) E88265-C SPT-2 105°C 2X18AWG(0.824mm ²) 300V VW-1 CSA LL81924 TYPE SPT-2 105°C 2X0.824mm ² (18AWG) 300V VW-1
(UL) E315167 SPT-2 105°C 2X18AWG(0.824mm ²) 300V VW-1 CSA LL81924 TYPE SPT-2 105°C 2X0.824mm ² (18AWG) 300V VW-1
Kunshan: (UL) E88265-K SPT-2 105°C 2X18AWG(0.824mm ²) 300V VW-1 CSA LL81924 TYPE SPT-2 105°C 2X0.824mm ² (18AWG) 300V VW-1
(UL) E314513 SPT-2 105°C 2X18AWG(0.824mm ²) 300V VW-1 CSA LL81924 TYPE SPT-2 105°C 2X0.824mm ² (18AWG) 300V VW-1

發行 ISSUED 2000.03.05	標準名稱 STD.NAME	SPECIFICATION	檔案編號 FILE NO
修訂 REVISED 2010.05.24	題目 TITLE	THE CHARACTERISTIC OF POWER SUPPLY CORD FOR UL & CSA	SPEC-AC-P

Items 項目	Conditions 條件	Specification 規格	
1 Insulation resistance 絕緣抵抗	The measurement shall be made after an open-circuit output of 500 V for 1 minute at an ambient temperature of 20°C.	The insulation resistance shall not be less than 100 MΩ.	
	a) Live parts of opposite polarity,		
	b) Live parts and dead metal parts that are exposed to contact by persons or that may be grounded in service, and		
	c) Live parts and any surface of insulating material that is exposed to contact by persons or that may be in contact with ground in service.		
2 Electric strength 耐電壓	Each cord set or power-supply cord shall be capable of withstanding without breakdown for a period of 1 minute The application of a 60-Hz potential of 2000 V between any two conductors. Testing transformer capacity (耐壓計容量) :500 VA or more Leakage current (遮斷電流) :2mA frequency (周波數) :50/60 Hz	Between two Conductors 2000V/1min. Between conductors And outside body. 2000V/1min.	There was no dielectric breakdown.
3 Temperature rise 溫昇	A rated current is passed through the circuit. The devices under test were caused to carry the test current continuously for a period of four hours.	The temperature rise shall not exceed 30 degrees above the ambient temperature.	


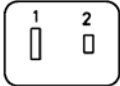
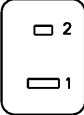

發行 ISSUED 2000.03.05	標準名稱 STD.NAME	SPECIFICATION	檔案編號 FILE NO
修訂 REVISED 2010.05.24	題目 TITLE	THE CHARACTERISTIC OF POWER SUPPLY CORD FOR UL & CSA	SPEC-AC-P

Items 項目	Conditions 條件	Specification 規格															
4 Flexing test 屈曲強度	<p>Samples should be molded to a 20 inch length of flexible cord.</p> <p>The test weights attached to each cord approximately 12 inches from the point of rotation is subjected to 113g for SPT types and 284g for HPN type.</p> <p>A minimum of 2,500 flexing cycles consist of: rotation of the jaws from the vertical position until 90 degrees to one side, back past the vertical position until 90 degrees to the other side, and back to the vertical position. The rate of testing shall be 10 cycles per minute.</p>	After the test the sample shall show no damage except that breakage.															
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 20%;">Load Weight (g)</th> <th style="width: 10%;">Angle $\theta(^{\circ})$</th> <th style="width: 20%;">Furthermore 90° rotational direction (turns)</th> <th style="width: 10%;">Rate of flexing per min (turns)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">plug</td> <td>SPT TYPES 113 HPN TYPES 284</td> <td style="text-align: center;">90</td> <td style="text-align: center;">2500</td> <td style="text-align: center;">10</td> </tr> <tr> <td style="text-align: center;">connect or</td> <td>SPT TYPES 113 HPN TYPES 284</td> <td style="text-align: center;">90</td> <td style="text-align: center;">2500</td> <td style="text-align: center;">10</td> </tr> </tbody> </table>			Load Weight (g)	Angle $\theta(^{\circ})$	Furthermore 90° rotational direction (turns)	Rate of flexing per min (turns)	plug	SPT TYPES 113 HPN TYPES 284	90	2500	10	connect or	SPT TYPES 113 HPN TYPES 284	90	2500	10
			Load Weight (g)	Angle $\theta(^{\circ})$	Furthermore 90° rotational direction (turns)	Rate of flexing per min (turns)											
	plug		SPT TYPES 113 HPN TYPES 284	90	2500	10											
connect or	SPT TYPES 113 HPN TYPES 284	90	2500	10													
<p>Flexing test apparatus FLEXING CYCLE</p> <p>The diagram illustrates the flexing test apparatus. A cord is held between two jaws that rotate through 90-degree arcs. The cord passes through a guide with two cord guides spaced 3/4 inch (19 mm) apart. A test weight is attached to the cord, positioned 9 inches (229 mm) from the rotation point. The total height of the apparatus is 12 inches (305 mm).</p>																	

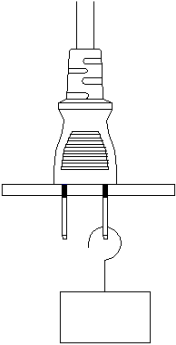
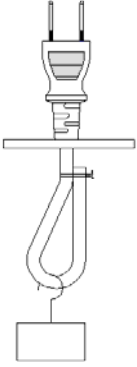
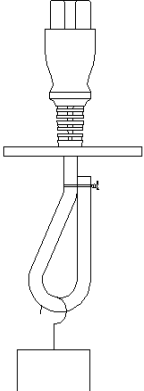
發行 ISSUED 2000.03.05	標準名稱 STD.NAME	SPECIFICATION	檔案編號 FILE NO
修訂 REVISED 2010.05.24	題目 TITLE	THE CHARACTERISTIC OF POWER SUPPLY CORD FOR UL & CSA	SPEC-AC-P

Items 項目	Conditions 條件	Specification 規格
5 Resistance to Aging 老化試驗	Samples of each catalog number were placed in an air-circulating oven maintained at 100 °C for 96 hours.	There was no cracking or deformation.
6 Polarity/Continuity 導通	The power cord shall be test polarity and continuity, the test voltage is 24V DC	Without breakdown
7 Resistance to heat 耐熱試驗	<p>The test being made in a heating cabinet at a temperature of 100 ±2°C.</p> <p>The specimen is clamped between steel jaws, having a cylindrical face of 25mm radius, a width of 15mm and a length of 50mm. The corners are rounded with a radius of 2.5mm.</p> <p>The specimen is clamped in such a way that the jaws press against it in the area where it is gripped in normal use, the centre line of the jaws coinciding as nearly as possible with the centre of this area.</p> <p>The force applied through the jaws is 20N</p>	After 1h, the jaws are removed and the specimen shall show no damage within the meaning of this standard.
8 Moisture resistance 耐濕性	<p>The humidity treatment is carried out in a humidity cabinet containing air with a relative humidity maintained between 91% and 95%. The temperature of the air, at all places where specimens can be located, is maintained within ±1°C of any convenient value t°C between 20°C and 30°C.</p> <p>Before being placed in the humidity cabinet, the specimens are brought to a temperature between t°C and (t+4) °C.</p> <p>The specimens are kept in the cabinet for</p> <ul style="list-style-type: none"> - 168h (7 days) for connector with earthing contact and for appliance inlets with earthing contact, which are submitted as individual accessories, not incorporated in other equipment. - 48h (2 day) in all other cases. 	After this treatment, the specimen shall show no damage.

發行 ISSUED 2000.03.05	標準名稱 STD.NAME	SPECIFICATION	檔案編號 FILE NO
修訂 REVISED 2010.05.24	題目 TITLE	THE CHARACTERISTIC OF POWER SUPPLY CORD FOR UL & CSA	SPEC-AC-P

9	Blade Connection Secureness 銅片與線材壓著力測試		The connection shall not break under a pull applied for 1 minute between the element and the conductor before the element has been assembled into the fittings..
		A pull of 20 lbf (89 N) shall be applied if the conductor is No. 18 AWG or larger in size. If a smaller cord is used, the pull shall be 8 lbf (36 N).	
10	Abrupt Pull 突拉測試	The sample being tested shall be subjected to an impact by rasing and releasing a 1.1kg weight, allowing it to fall freely from distance of 7 inches to impact the strike plate. Each of six representative devices required, two is to be tested in each of the following orientations. a) Blades in the vertical position, b) Fitting rotated 90° to the right of the vertical position, and c) Fitting rotated 90° to the left of the vertical position. Exception No. 1: The abrupt pull test is not required for power-supply cords employing Types XTW, CXTW, TPT, TST, shaver, and clock cords. Exception No. 2: The abrupt pull test is not required for cord sets and power-supply cords employing 10 AWG and larger flexible cords.	No damage is allowed after impact 5 times test.
		<p>Figure 99.3 Orientations for abrupt pull test for two conductor representative devices</p> <p>STARTING POSITION</p>  <p>90° TO LEFT</p>  <p>90° TO RIGHT</p> 	

發行 ISSUED 2000.03.05	標準名稱 STD.NAME	SPECIFICATION	檔案編號 FILE NO
修訂 REVISED 2010.05.24	題目 TITLE	THE CHARACTERISTIC OF POWER SUPPLY CORD FOR UL & CSA	SPEC-AC-P

Items 項目	Conditions 條件	Specification 規格
11 Blade security 銅片牢固力測試	Apply a straight pull of 98 Newton for 2 min between an attachment plug and blade(s). 	After the test, the blades shall not be displaced by more than 2.4mm.
12 Strain relief 外部拉力測試	Apply a straight pull of 137.2 Newton for 1 min between an attachment plug and a flexible cord and between a cord connector and a flexible cord.  Between an attachment plug and a flexible cord  Between a cord connector and a flexible cord	Without damage, such as displacement or looseness or detachment of metal parts, conductor break, insulation damage etc.



File E55943

Vol 1

Issued: 1983-08-18

Revised: 2008-01-23

FOLLOW-UP SERVICE PROCEDURE
(TYPE L)

CORD SETS AND POWER-SUPPLY CORDS
(ELBZ,ELBZ7)

Manufacturer: SEE ADDENDUM FOR MANUFACTURING
LOCATIONS

Applicant:
(153371-001)

SAME AS APPLICANT

Listee:
(153371-001)

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

This PROCEDURE, and any subsequent revision, is the property of Underwriters Laboratories Inc.(UL) and the authorized licensee of UL and is not transferable.

Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program



File E55943

Vol 1

ADDENDUM TO PAGE 1
AUTHORIZATION PAGE

ISSUED: 1983-08-18
REVISED: 2008-01-23

(100225-395)

(153371-001)

(628100-001)

(628100-003)



GENERALPRODUCT COVERED:

Power Supply Cords.

FACTORY LOCATION AND IDENTIFICATION:

<u>Location</u>	<u>Identification</u>
(153371-001)	NONE
(628100-001)	"C"
(628100-003)	"K"
(100225-395)	"V"

TEST EQUIPMENT PROVIDED BY MANUFACTURER:

Test equipment is provided in accordance with the Standard for Cord Sets and Power Supply Cords. The oven used for the Blade Pull At Elevated Temperature Test manufactured by Kao Tieh Machinery Industrial Co., Ltd., Model 7062, calibrated annually.

TESTS TO BE CONDUCTED AT THE FACTORY:

This manufacturer is authorized to perform the Blade Pull at Elevated Temperature Test and the Flexing Test as described in Part III of the Follow-Up and Inspection Instructions for UL 817 at his factory located at Tao Yuang Hsien, Taiwan twice yearly using their own test equipment while being witnessed by our local UL representative.

GENERAL CONSTRUCTION:

Products bearing one of the following Listing Marks shall comply with the Standard of Underwriters Laboratories Inc. for Cord Sets And Power Supply Cords (UL 817), the Canadian National Standard for Cord Sets and Power Supply Cords (C22.2 No. 21-95) and with the applicable description, if any, given elsewhere in this Volume or in the "SP" Volume of this Procedure.

Flexible cord intended for use with C-UL Listed Cord Sets and Power Supply Cords shall be UL Listed and meet the requirements of CSA C22.2 No. 21-95.



MARKING:

Listee's name, trade name or E55943 and factory identification in combination with any one of the following Listing Marks.

Detachable Power Supply Cords intended for shipment to Original Equipment Manufacturers, shall have any applicable makings provided on the outer surface of the shipping carton, or on a tag or the equivalent inside the carton. For Detachable Power Supply Cords intended for shipment to original equipment manufacturer, the electrical rating shall be on a tag, or an equivalent, on each individual Detachable Power Supply Cord unless the ampere rating of the flexible cord is equal to or greater than the ampere rating of the attachment plug.

LISTING MARKS:

UNDERWRITERS LABORATORIES INC.

®

LISTED

and/or

POWER SUPPLY CORD

and/or

DETACHABLE POWER SUPPLY CORD

and/or

NON-DETACHABLE POWER SUPPLY CORDS - SPECIAL PURPOSE

- Note: The Listing Mark to be used for Special Purpose Power Supply Cords consists of either the "Power Supply Cord - Special Purpose" combination label, or the "Detachable Power Supply Cord - Special Purpose" combination label in conjunction with engineering marking per the applicable Section (Sections 62 and 77) of the Standard for Cord Sets and Power Supply Cords and described in this procedure.

This engineering marking may be printed on the label bearing the Listing Mark or on a separate label.

Refer to individual sections for C-UL acceptance models.



DESCRIPTION

PRODUCT COVERED:

USU - Unlisted Component - Attachment Plug Caps, Cat. Nos. SP-12, SP-12A, SP-12N, SP-13, SP-13N, SP-14, SP-14N, SP-15, SP-15P, SP-16, SP-16B, SP-17, SP-18, SP-18N, SP-18H, SP-18HN, SP-19, SP-20, SP-20N, SP-30, SP-77, SP-301, SP-301A, SP-302, SP-303, SP-304, SP-305, SP-305A, SP-305B, SP-306, SP-306A, SP-306B, SP-306C, SP-307, SP-307A, SP-308, SP-308A, SP-308C, SP-308D, SP-309, SP-309A, SP-310, SP-310A, SP-30H, SP-L142, SP-L143, SP-301B, IH-115, SP-71A, **SP-74, SP-103, SP-105, SP-143, SP-145.**

CNU - Unlisted Component - Attachment Plug Caps, Cat. No. SP-13, SP-13N, SP-14, SP-14N, SP-18H, SP-18HN, SP-19, SP-77, SP-301, SP-301A, SP-305, SP-305A, SP-305B, SP-16B, SP-30H, SP-309, SP-306, SP-306A, SP-306B, SP-306C, SP-307, SP-307A, SP-308, SP-308A, SP-308C, SP-308D, SP-309A, SP-310, SP-310A, SP-L142, SP-L143, IH-115, SP-301B, SP-71A, SP-74.

NOTE TO THE INSPECTOR:

INSPECTOR SHALL VERIFY that blades described in Figs. 1 through 12 are crimped and soldered unless specifically described as a R/C blade (AXNU2) including manufacturers name and Catalog Number. Inspector shall verify that soldering shall flow through the crimp area and that solder is shiny and smooth, denoting a proper solder joint. This requirement only applies to blades used on No. 18 AWG through No. 10 AWG type flexible cord.

ELECTRICAL RATING:

Cat. No.	Cord, AWG	Current, A	Volts, V
IH-115, SP-301B	16,14, 12	13,15, 15	125
SP-12, -12N	20, 18, 16	3, 10, 13	125
SP-12A	18, 16	10, 13	125
SP-13, -13N	18	10	125
SP-14, -14N	18, 16	10, 13	125
SP-15, -15P	18	10	125
SP-16, -17	20, 18	3, 10	125
SP-16B	18	7	125
SP-18, -18N	18, 16	10, 13	125
SP-18H, -18HN	16, 14	13, 15	125
SP-19	18	10	125
SP-20, -20N	18, 16	10, 13	125
SP-30	18	10	125
SP-30H	18, 16, 14	10, 13, 15	125
SP-301, SP-301A	18, 16, 14, 12	10, 13, 15, 15	125
SP-77	18, 16	10, 13	125
SP-302	18, 16, 14	10, 13, 15	250
SP303, -304	18, 16, 14	10, 13, 15	125
SP-305	18	10	125
SP-305A	18, 16	10, 13	125
SP-305B	18	10	125
SP-306	14, 12	18, 20	125



ELECTRICAL RATING (Continued):

Cat. No.	Cord, AWG	Current, A	Volts, V
SP-309	14, 12	18, 20	125
SP-309A	14, 12	18, 20	250
SP-306A	14, 12	18, 20	250
SP-307	14, 12	18, 20	125
SP-307A	14, 12	18, 20	250
SP-308	18, 16, 14	10, 13, 15	125
SP-308A	18, 16, 14	10, 13, 15	125
SP-308C	14, 12	15, 15	125
SP-308D	18, 16, 14, 12	10, 13, 15, 15	125
SP-310	14, 12, 10	18, 25, 30	125
SP-310A	14, 12, 10	18, 25, 30	250
SP-L142	12, 10	20, 20	250
SP-L143	10	30	250
SP-306B	14, 12	18, 20	125
SP-306C	14, 12	18, 20	250
SP-71A	10, 13	18, 16	125
SP-74	10, 13	18, 16	125
SP-103	10/3	30	125/250
SP-105	10/4	30	125/250
SP-143	8/2 - 10/1	40	125/250
SP-145	8/2 - 10/2	40	125/250

TECHNICAL CONSIDERATIONS:

For use only in Applicant's cord sets and power supply cords where the acceptability is determined by Underwriters Laboratories Inc.

USU - Indicates investigation to United States UL 817, Eleventh Edition.

CNU - Indicates investigation to Canadian National Standard C22.2 No. 21-95, Eighth Edition.

CONDITIONS OF ACCEPTABILITY:

1. The devices have been evaluated when molded on the specific conductor size specified in this Procedure.
2. Use with any other size cord may require additional evaluation.
3. These fittings should be used only within their electrical rating.
4. Cat. No. IH-115, SP-301B, SP-301, SP-301A, SP-306B, SP-306C, SP-L142, SP-L143 are also evaluated for outdoor use. For outdoor use, the cord type should be type "W".
5. Body material, SEBS/PP, Type 9203 by TSRC CORP (E238027), is not suitable for outdoor application.



CAT. NO. SP-12 AND SP-12N - FIG. 1 (R86-597)

General - The general design, shape, and arrangement shall be as shown except where variations are specifically described. Cat. No. SP-12N is identical to Cat. No. SP-12 except for the use of polarized blades.

1. Blades - R/C (AXNU2), Solid and Folded, Polarized and Non-polarized, Cat. Nos. 97675, 98661, 98662, 98648, 98673, 98675, 98677 and 98699 manufactured by Gem Machinery Ind., Cat. Nos. KDG-50T, KDG-50P, KDF-50T, KDF-50T-1, KDB-20T and KDB-30T manufactured by Kuo Chie Precision Industrial Co., Cat. Nos. SH-998 and SH-998-1 manufactured by Shian Hwi Enterprise Co., Ltd., suitable for use with the conductor types and sizes, insulation class and curing method as specified in the installation instructions provided with the blade. Blade is secured to conductors using the tools, method and recommended crimp height as specified in the blade installation instruction sheet for the blade employed.
2. Front Ledge - Minimum 1.6 mm, maximum 4.8 mm thick.
3. Gripping Area - Minimum 17.5 mm long measured from inside surfaces of front and rear ledges.
4. Rear Ledge - Minimum 1.6 mm thick, edge minimum 2.4 mm high measured from bottom of gripping area surface.
5. Body - R/C (QMFZ2), PVC, Type IS-PVC01 manufactured by ; Types CF-00128, CF-00228 manufactured by Chyi Feng Plastics Enterprises Co., Ltd.; Type A-01310A manufactured by Shin Ho Chemicals Co., Ltd.; Type YT-01 manufactured by Yung Tern Industrial Corp.; Type KJ-94V0 manufactured by Kaiy Jerng Enterprise Co., Ltd. or Type HL-30128 manufactured by Huey Lung Plastic Industry Co., Ltd., minimum 2.4 mm thick over live parts, overall dimensions: 33.8 mm long including strain relief, 25.4 mm wide by 19 mm high. Strain Relief -11.8 mm by 9.2 mm tapering to 8.5 mm by 6.2 mm after 10.0 mm length. See ILL. 7 (C0004615.I00) for details. Alternate Body - R/C (QMFZ2), PVC, Type CDT-00128 manufactured by Kuen San Chan Dan Tong Plastic; Type TT-01 manufactured by Dongguan Tai Tung Electric Wire Co., Ltd., Type KT006 manufactured by Kau Tai Plastic Industrial Co Ltd., Type Flex 60C manufactured by Pure Friend Business Enterprise Corp, Type 8080 or 8105 manufactured by Men Wai Plastic (Shenzhen) Co Ltd. (Note - These materials are not suitable for use with HPN cord).
6. Marking - See Section General.
7. Face - Minimum 24.8 mm, maximum 26.04 mm wide by minimum 18.5 mm, maximum 19.0 mm high. Maximum corner radius 5.6 mm.
8. Cord - USR - Listed, No. 20/2 AWG-XT; No. 18/2 AWG-SPT-1, SPT-2, SPT-2 Non Integral or R/C AWM Style 20288; No. 16/2 AWG-SPT-2 type flexible cord CNR - C-UL or CSA Certified, N/A.



CAT. NO. SP-12A - FIG. 13 (C0100189.P00)

General - Cat. No. SP-12A is identical to SP-12 and SP-12N except the items shown below. Refer to ILL. 8 (C0100163.I00) for dimensional details.

1. Strain Relief - 12.0 mm by 9.0 mm tapering to 10.6 mm by 7.0 mm after 15.0 mm length. See ILL. 8 (C0100163.I00) for details.
2. Cord - USL - Listed, No. 18/2 AWG **SPT-1, NISPT-1, SPT-2, NISPT-2 and 16 AWG SPT-2** type flexible cord.



DESCRIPTION

PRODUCT COVERED:

USU - Unlisted Component - Cord Connector Bodies, Cat. Nos. IH-505, IS-013B, **IS-013B (A.C.1)**, **IS-013C**, IH-505A, IS-07, -08, -010, -012, -012L, -013, -013L, -013A, -14, **-14 (A.C.1)**, -14E, -14A, 14B, -15, -16, 16B, -17 -19, -19L, -020, -033, IS-033A, -034, -036, -037, -037A, -037L, -038, -038A, -039, -039A, -08A, IS-L142, IS-L143, IS-L52, IS-L53, IS-L63, PT-013, PT-114, PT-905A, PT-907A, PT-907B, PT-907C.

CNU - Unlisted Component - Cord Connector Bodies, IH-505, IS-013B, **IS-013B (A.C.1)**, **IS-013C**, IH-505A, IS-012L, -013, -013A, -013L, -15, -16, 16B, -020, -08A, IS-033A, -034, -036, PT-905A, IS-14B, IS-L142, IS-L143, IS-L52, IS-L53, IS-L63, PT-013 and PT-114.

Note: A.C.1 - Alternate Construction No. 1.

ELECTRICAL RATING:

Cat. No.	Cord, AWG	Current, A	Volts, V
IH-505, IS-013B, IS-013B (A.C.1) , IS-013C , IH-505A	16, 14, 12	13, 15, 15	125
IS-07	18	7	125
IS-08	18	7	125
IS-010	18	10	125 or 250
IS-020	18	10	125 or 250
IS-012	18,16	10,13	125
IS-013, IS-013A	18(see note), 16,14, 12	10, 13,15,15	125
IS-14, IS-14 (A.C.1)	18,16,14	10,13,15	125 or 250
IS-14E	18,16	10,13	125
IS-14E	18	10	250
IS-14A	18,16,14	10,13,15	125 or 250
IS-14B	14, 12	15,15	125
IS-14B	14, 12	10,10	250
IS-15	18,16,14	10,13,15	125 or 250
IS-16	16, 14, 12	13, 15, 20	125 or 250
IS-16B	16, 14, 12	13, 15, 20	125 or 250
IS-17	18, 16	10, 13	125 or 250
IS-19, IS-19L	18,16,14	10,13,15	125 or 250
IS-023	16, 14, 12	13, 18, 20	125
IS-033	18	7, 10	125
IS-033A	18	10	125
IS-034	18	7, 10	125
IS-036	18, 18, 16, 16, 16	7, 10, 7, 10, 13,	125
IS-037, -038, -038A	18	7, 10	125
IS-08A	18	7, 10	125

ELECTRICAL RATING (CONTINUED):

Cat. No.	Cord, AWG	Current, A	Volts, V
IS-037A	18	7, 10	125
IS-037L	18	7, 10	125
IS-039, -039A	18	7, 10	125
IS-L142	12, 10	20, 20	250
IS-L143	10	30	250
PT-013	16, 14	13, 15	125
PT-905A	16, 14, 12	13, 15, 15	125
PT-907A, PT-907B, PT-907C	14, 12	15, 15	125
PT-114	16	13	125
IS-L52	14, 12	18, 20	125
IS-L53	12, 10	20, 30	125
IS-L63	12, 10	20, 30	250
IS-012L	16	13	125
IS-013L	16, 14, 12	13, 15, 15	125

TECHNICAL CONSIDERATIONS: (Not For Field Representative's Use)

For use only in applicant's cord sets and power supply cords where the acceptability is determined by Underwriters Laboratories Inc.

USU - Indicates investigation to United States UL 817, Eleventh Edition.

CNU - Indicates investigation to Canadian National Standard C22.2 No. 21-95, Eighth Edition.

CONDITIONS OF ACCEPTABILITY:

1. These devices have been evaluated when molded-on the specific size and type cord specified in this Procedure.
2. Use with any other size or type cord will require additional evaluation.
3. These devices should be used only within their electrical rating.
4. A general-use cord set employing flexible cord having No. 18 or No. 17 AWG conductors shall be provided with overcurrent protection (short circuit and overload protection) rated equal to or less than the ampacity of the flexible cord.
5. Model IH-505, IS-013B, **IS-013B (A.C.1)**, **IS-013C**, IH-505A, IS-L142, IS-L143, PT-905A, PT-907A, PT-907B, PT-907C were also evaluated for outdoor use. For outdoor use, the cord type should be type "W".
6. When Cat. No. IS-013 is used with No. 18 AWG flexible cord, a Special Use label must be applied to each product.
7. Body material, SEBS/PP, Type 9203 by TSRC CORP (E238027), is not suitable for outdoor application.





CERTIFICATION RECORD

The company named below has been authorized by CSA International to represent the products listed in this record as “CSA Certified” and to affix the CSA Mark to these products according to the terms and conditions of the CSA Service Agreement and applicable CSA program requirements (including additional Markings).

File No: 035162_0_000

Class No: 5842 02 CORD SETS Power Supply Cords

SUBMITTOR

4501124

FACTORIES

4501124

4651426

4709892





Certification Record

CUSTOMER	CLASS	FILE
		035162_0_000
	CORD SETS -Power Supply Cords	
Refer to Class Description for program details		

THE FOLLOWING COMPLY WITH CSA STD C22.2 NO 21-95, CERTIFICATION NOTICE - WIRING PRODUCTS NO. 6.

Cat No	Conf.	Rating	Cord Size (AWG)	Cord Type
IS-010	S-use Female (IEC C13)	10A, 125/250V	18/3	SVT (S&U), SJT (S&U), SJTW
IS-020	S-use Female (IEC C17)	10A, 125/250V	18/3	SVT (S&U), SJT (S&U)
IS-011, IS-011A	S-use Male (IEC C14)	13A, 125/250V	14/3	SJT, SJTW, SJTO, SJTOW
		13A, 125/250V	16/3	SJT (S&U), SJTW, SJTO, SJTOW
		10A, 125/250V	18/3	SJT, SVT (S&U), SJTW, SJTO, SJTOW
IS-14, IS-14E	S-use Female (IEC C13)	15A, 125/250 V	14/3	SPT-3, SJT, SJTW
		13A, 125/250V	16/3	SPT-2, SPT-3, SJT (S&U), SJTW
		10A, 125/250V	18/3	SPT-2, SPT-3, SJT, SVT (S&U), SJTW
IS-14A	S-use Female (IEC C17)	10A, 125/250V	18/2	SVT, SJT
IS-14B	S-use Female (IEC C13)	15A, 125/250V	14/3, 12/3	SJT (S&U), SJTO, SJTW, SJTOW, SJTOOW
IS-19, IS-19L	S-use Female (IEC C15)	15A, 125/250 V	14/3	SJT, SJTW
		13 A, 125/250 V	16/3	SJT (S&U), SJTW
		10 A, 125.250 V	18/3	SJT, SVT (S&U), SJTW
IS-021	S-use Male	6A/10A, 250V	18/3	SJT, SVT (S&U)
IS-034	S-use Female	7A, 125V	18/3	SPT-1, -2, SVT (S&U), SJT, SJTW, SJTO, SJTOW
IS-036	S-use Female	7A, 125/250V	18/2	SPT-2, NISPT-2, SVT

	(IEC C7)		16/2	SPT-2, NISPT-2
IS-039, IS-039A	S-use Female	7A, 125V	18/3	SPT-1, -2, SVT (S & U), SJT SJTW, SJTO, SJTOW
SP-15P	1-15P	-	18/2	SPT-1, -2
SP-20, SP-20N	1-15P	-	16/2 18/2	SJT, SJTW, SJTOW SJ, SVT, SJT, SJTW, SJTOW
SP-30, SP-30A	5-15P	-	18/3	SPT-2, SJT, SVT (S&U)
SP-30H	5-15P	-	18/3, 16/3	SJT
SP-301, SP-301A	5-15P	-	12/3	SJT, SJTO, SJTW, SJTOW
			14/3	SPT-3, SJT (S&U), SJTW (S&U), SJTOW (S&U), S (S&U), SJ (S&U)
			16/3	SPT-2, SJT (S&U), SJTW (S&U), SJTOW (S&U), S (S&U), SJ (S&U)
			18/3	SPT-1, -2, -3, SVT (S&U), SJT(S&U), SJTW (S&U), SJTOW(S&U), S (S&U), SJ (S&U)
			14/3, 16/3, 18/3	HPN
SP-302	6-15P	-	14/3, 16/3, 18/3 18/3	SJT SJT SVT
SP-303, SP-304	5-15P	-	18/3 14/3, 16/3	SVT, SJT, S, SJ SJT, S, SJ
SP-305, SP-305B	5-15P	-	18/3	SVT (S & U), SJT, SJTW, SJTO, SJTOW
SP-305A	5-15P	-	18/3 16/3	SPT-1, -2, SJT, SJTW, SJTO, SJTOW SPT-2, SJT, SJTW, SJTO, SJTOW
SP-306,SP-307	5-20P	18A, 125V 20A, 125V	14/3 12/3	ST, SJT, SJTW ST, SJT, SJTW
SP-306A, SP-307A	6-20P	18A, 250V	14/3	ST, SJT, SJTW

		20A, 250V	12/3	ST, SJT, SJTW
SP-308	5-15P	-	18/3	SPT-2, SPT-3, SVT, SJT, SJTO, SJTW, SJTOW, SJTOOW
			16/3	SPT-2, SPT-3, SJT, SJTO, SJTW, SJTOW, SJTOOW
			14/3	SPT-3, SJT, SJTO, SJTW, SJTOW, SJTOOW
SP-308A	5-15P	-	18/3 16/3, 18/3 14/3, 16/3, 18/3	NISPT-1 SPT-2, NISPT-2 SPT-3
SP-308C	5-15P	-	14/3, 12/3	SJT (S&U), SJTO, SJTW, SJTOW, SJTOOW
SP-309	L5-20P	20A, 125V 18A, 125V	12/3 14/3	SJT, SJTW
SP-309A	L6-20P	20 A, 250 V 18 A, 250 V	12/3 14/3	SJT, SJTW
SP-310	L5-30P	30 A, 125 V	10/3	SJT, SJTW
SP310A	L6-30P	30 A, 250 V	10/3	SJT, SJTW
SP-12, SP-12N	1-15	-	16/2 18/2	SPT-2 SPT-1, SPT-2, NISPT-2
SP-12A	1-15P	-	18/2	SPT-1, NISPT-1, SPT-2, NISPT-2
SP-13, SP-13N, SP-14, SP-14N	1-15P	-	18/2 18/2, 16/2	SVT SJT, SJTW, SJTO, SJTOW, SJTOO, SJTOOW
SP-15	1-15P	-	18/2	SPT-1, SPT-2
SP-16, SP-17	1-15P	-	20/2	SPT-1
SP-16B	1-15P	7 A. 125 V	18/2	SPT-1, SPT-2, NISPT-2
IS-018	S-use Male	18 A, 250 V 20 A, 250 V	14/3 12/3	SJT SJT
SP-18, SP-18N	1-15P	-	18/2 16/2, 18/2	SPT-1, SPT-2, NISPT-2 HPN
SP-18H, SP-18HN	1-15P	15 A, 125 V	16/2, 14/2	HPN
SP-77	5-15P	-	18/3	SPT-2, SPT-3

			16/3	SJT, SJTO, SJTW, SJTOO, SJTOW, SJTOOW
BS-SR-01	Bushing	-	18/2	SPT-2
IS-SR-05	Bushing	-	14/3	SJT
SP-SR-01	Bushing	-	18	SPT-1, -2
SP-SR-02	Bushing	-	18	SPT-1, -2
ZTC-SR-01	Bushing	-	18/2	SPT-2

Notes:

1. These are Certified only for supply to manufacturers for the assembly, as components, of Certified electrical equipment where the suitability of the combination is determined by the CSA International.
2. "(S & U)" denotes shielded and unshielded; (N) denotes non-integral; (I&N) denotes integral and non-integral.
3. Bushing may be a part of a Certified power supply cord.

Cat No	Conf.	Rating	Cord Size (AWG)	Cord Type
IS-15, IS-17	S-use Female	7A/10A, 125V/250V	18/3	SVT, SJT (S&U)
		13A, 125 V/250V	16/3	SJT (S&U)
		15A, 125 V/250V	14/3	SJT (S&U)
IS-16, IS-16B	S-use Female (IEC C19)	13A, 125/250 V	16/3	SJT, SJTW,
		18 A, 125/250 V	14/3	SJTO, SJTOW,
		20 A, 125/250 V	12/3	SJTOOW

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PROFILE OF REPORTS

File No:041230_0_000

MASTER CONTRACT: 151686

SUBMITTOR

le

Date: January 19, 2005
Replaces: July 29, 2004
Main File: Vancouver

Attention: Mr. I.H. Fang
President

FACTORIES	INSPECTION OFFICE	FILE/FACTORY CONTRACT NO
MASTER		
4501124 F1	CTS	41230/151687

NOW SINGLE FILE FORMAT. NO EFFECTIVE SATELLITES.

4546628 F2		41230/151688
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4558038 F3		41230/-
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4651426 F4		41230/207446
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4709892 F5		41230/228142
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REPORT NO-APPL. NO/ FACTORY NOS SUBJECT



Certification Record

CUSTOMER	CLASS	FILE
	5841-03	041230_0_000
	CORD SETS -Special-use Cord Sets	
	Refer to Class Description for program details	

TO THE REQUIREMENTS OF CSA STDS C22.2 NO 21-95, 42-99, 182.3-M1987:

Female Cat No	Config./ Cord AWG, Type	Male Cat No	Config.	Max Rating of Cord Set	Cord AWG	Cord Type
	<ul style="list-style-type: none"> • Single Connector Body per Cord Set. 					
IS-037, IS-038	S-use	Certified	1-15P	7A, 125V	18/2	SPT-1, -2*, SVT, SJT
IS-14, IS-14E	C13	Certified	5-15P, 6-15P, S-use	15A, 125/250V 13A, 125/250V 10A, 125/250V	14/3 16/3 18/3	SJT SJT# SJT, SVT#, SJTW
IS-14E	C13	IS-011A	5-15P	13A, 125/250V 10A, 125/250V	16/3 18/3	SJT#, SJT, SVT#,
IS-14, -15	C13	IS-011, IS-021	C14	13A, 125V, 10A, 250V max	18/3 16/3	SJT#, SVT#, SJTW
IS-16	S-use	Certified	5-15P	7/10A, 125V	18/3	SJT, SVT
IS-033	C7	SP-12, SP-12N	1-15P 1-15P	7A, 125V	18/2	SPT-1, -2*
IS-034, IS-039, IS-039A	S-use	SP-30, SP-302, SP-305	5-15P	7A, 125V	18/3	SVT# , SJT
IS-038A	S-use	SP-12A	1-15P	7A, 125V	18/2	SPT-2 non-integral
IS-037A	S-use	SP-12N	1-15P	7A, 125 V	18/2	SPT-2 non-integral
IS-14B	S-use C13	SP-308C	5-15P	15A, 125V	14/3, 12/3	SJT (S&U), SJTO, SJTW, SJTO,

						SJTOOW SJT, SJTW
IS-14	S-use C13	SP-309A	L6-20P	15A, 250V	14/3	
• Two Connector Bodies per Cord Set.						
IS-14 (or IS-15) and IS-37	C13/16,18 SJT	SP-301 (or IS-011)	5-15P (C14)	10A, 125V	14, 16	SJT++
IS-14 and IS-15	C7/18 SPT-2, SJT C13/ 18 SVT+ C13/ 18 SVT	SW-011	C14	10A, 125V	16	SJT++

Legend:

"C7", "C13", "C14" IEC320 Type configurations.

*Integral and non-integral.

#Shielded and non-shielded.

"Two Connector Bodies per Cord Set" These cord sets each incorporate two connector bodies and a plug cap moulded on flexible cords connected together by a Y-Junction, Cat No SY-03.

+Has strain relief bushing moulded on the flexible cord.

++Flexible cord from plug cap to Y-Junction.



the standard in safety

Underwriters
Laboratories

File E88265

Vol 1

Issued: 1984-10-26

Revised: 2007-10-22

FOLLOW-UP SERVICE PROCEDURE
(TYPE L)

FLEXIBLE CORD
(ZJCZ,ZJCZ7)

Manufacturer:
(153371-001)

Applicant: SAME AS MANUFACTURER
(153371-001)

Listee: SAME AS MANUFACTURER
(153371-001)

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

This PROCEDURE, and any subsequent revision, is the property of Underwriters Laboratories Inc.(UL) and the authorized licensee of UL and is not transferable.

Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program

INDEX

<u>Construction</u>	<u>United States Type</u>	<u>Canadian Type</u>	<u>Section</u>
Parallel Cords: Thermoplastic	SPT-1, SPT-2, SPT-3 NISPT-1, NISPT-2, SPT-1W, SPT-2W	SPT-1, SPT-2, SPT-3	1
* Jacketed Cords: Thermoplastic	SVT SJT, SJTW, SJTOW ST, STW, SJTO, STO, STOW	SVT SJT, SJTW, ST, STW, SJTO, STO, STOW	2
Decorative - Lighting Cords & Wires	XTW, CXTW	N/A	3
Miscellaneous	Clock Cord	N/A	4
Christmas Tree Cord:	N/A	TX, PXT	5
Range & Dryer Cord	SRDT	DRT	6

N/A - Not Applicable



File E88265

Vol 2

Issued: 1998-10-12

Revised: 2007-07-10

FOLLOW-UP SERVICE PROCEDURE
(TYPE L)

FLEXIBLE CORD
(ZJCZ,ZJCZ7)

Manufacturer:
(628100-001)

Applicant:
(153371-001)

Listee: SAME AS APPLICANT
(153371-001)

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

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Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program



LISTEE'S IDENTIFICATION:

Surface printing of Listee's name or "E88265" on surface of the insulation or jacket.

Manufacturer Identification - The manufacturers listed below must be identified by using the following codes after the Listee identification as noted above (ex. "E88265-C", where "-C" is the factory identification code). If the factory is the same as the Listee's, no code is required.

<u>Factory Location</u>	<u>Factory Identification Code</u>
-------------------------	------------------------------------

“C”

TESTS TO BE CONDUCTED WHILE IN PROCESS:

As described in the Standard for Flexible Cord and Fixture Wire, UL 62.

COMPOUND IDENTIFICATION WHILE IN PROCESS:

While in the process of manufacture, prior to the application of labels, the cables described in this Procedure shall be identified with a tag or shop order or similar means so that the UL Representative can determine what compound has been used for insulation and jacket. Either a factory code available to the representative or the actual compound designation may be used.

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<u>Construction</u>	<u>United States Type</u>	<u>Canadian Type</u>	<u>Section</u>
Decorative Lighting Cords and Wires:	XTW, CXTW	N/A	1
Parallel Cords: Thermoplastic	SPT-1, SPT-2, SPT-3 NISPT-1, NISPT-2	SPT-1, SPT-2, SPT-3	2
Jacketed Cords: Thermoplastic	SVT, SJT, SJTW, ST STW	SVT, SJT, SJTW, ST STW	3
* Range & Dryer Cord	SRDT	DRT	4



File E88265

Vol 4

Issued: 2004-10-01

Revised: 2007-07-10

FOLLOW-UP SERVICE PROCEDURE
(TYPE L)

FLEXIBLE CORD
(ZJCZ, ZJCZ7)

Manufacturer:
(628100-003)

Applicant:
(153371-001)

Listee: SAME AS APPLICANT
(153371-001)

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

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Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program

An independent organization working for a safer world with integrity, precision and knowledge.



LISTEE'S IDENTIFICATION:

Listee's name or File number "E88265" surface marked or indent printed.

Manufacturer Identification - The manufacturers listed below must be identified by using the following codes after the Listee identification as noted above (ex. "E88265-^", where "-^" is the factory identification code). If the factory is the same as the Listee's, no code is required.

Location	Factory Identification Code
	"K"

COMPOUND IDENTIFICATION WHILE IN PROCESS:

While in the process of manufacture, prior to the application of labels, the cables described in this Procedure shall be identified with a tag or shop order or similar means so that the UL Representative can determine what compound has been used for insulation and jacket. Either a factory code available to the representative or the actual compound designation may be used.

SURFACE MARKINGS:

For products meeting the requirements in this procedure, both the UL Logo or UL in parenthesis and the Canadian UL Logo or c (UL) shall appear in surface print legend. The U.S. surface print legend shall appear first, followed by the Canadian surface print legend. The two legends shall be separated by an "or," a dash, a wide space or other acceptable means. All surface print markings are in accordance with UL 62, and any requirements specified in the descriptive sections of the Procedure.

INDEX

Construction	United States Type	Canadian Type	Section
Heater Cord	HPN	HPN	1
Jacketed Cords: Thermoplastic	SVT, SJT, ST, SJTW, STW	SVT, SJT, ST SJTW, STW	2
Parallel Cords: Thermoplastic	SPT-1, SPT-2, SPT-3 SPT-1W, SPT-2W NISPT-1, NISPT-2	SPT-1, SPT-2, SPT-3	3
Jacketed Cords: Thermoset	S, SO, SOO, SOW, SOOW, SJ, SJO, SJOO, SJOW, SJOOW, SV, SVO, SVOO	S, SO, SOO, SOW, SOOW, SJ, SJO, SJOO, SJOW, SJOOW, SV, SVO, SVOO	4

DESCRIPTION

PRODUCT COVERED:

* USL: PVC Insulated Parallel Cords, Types SPT-1, SPT-2, SPT-3, SPT-1W, SPT-2W, NISPT-1, and NISPT-2.

CNL: PVC Insulated Parallel Cords, Types SPT-1, SPT-2, and SPT-3.

ENGINEERING CONSIDERATIONS (NOT FOR UL FIELD REPRESENTATIVE'S USE):

USL indicates investigation to United States Standard for UL 62, for Flexible Cords and Fixture Wires.

CNL indicates investigation to Canadian Standard C22.2 No. 49-92 for Flexible Cords and Cables.

INTEGRAL/NONINTEGRAL INSULATION:

USL: Class 2.9 PVC (60°C), Class 2.29 PVC (75°C), Class 2.22 PVC (90°C), and Class 2.11 PVC (105°C).

CNL: Class 8 PVC (60°C) or Class 11 PVC (105°C).

* Outdoor use cords, Types SPT-1W and SPT-2W must use a Recognized Component - Polymeric Materials for Use in Wire and Cable (QMTT2) PVC insulation material rated for 60°C water resistance and 720 hr. sunlight resistance.

NONINTEGRAL JACKET:

USL: Class 1.7 PVC (60°C), Class 1.19 PVC (75°C), Class 1.16 PVC (90°C), and Class 1.8 PVC (105°C).

CNL: Class 1.5 PVC (60°C) or Class 1.8 PVC (105°C).

CONSTRUCTION DETAILS:

USL: These cords are constructed in accordance with the latest edition of Underwriters Laboratories Inc. Standard for Flexible Cord and Fixture Wire, UL 62 and the Reference Standard for Electrical Wires, Cables and Flexible Cords, UL 1581.

CNL: These cords are constructed in accordance with the latest edition of Canadian Standard for Flexible Cords and Cables, C22.2, No. 49 for Flexible Cords and Cables. Integral and Nonintegral Constructions.

SCDLS

NON-INTEGRAL GROUND CONDUCTOR:

Cords may include non-integral green grounding conductor in addition to two circuit conductors but not in addition to three circuit conductors.

USL: PVC Class 2.9 (60°C), Class 2.29 (75°), Class 2.22 (90°) or Class 2.11 (105°C).

CNL: PVC: Class 8 (60°C) or Class 11 (105°C).

OPTIONAL MARKING:

USL: May be marked "VW-1" or "FT-1" when complies with flame test.

CNL: May be marked "FT1" when complies with flame test.

* USL: Types SPT-1 and SPT-2 may be marked with the suffix "W" (For Example: "SPT-2W") if the integral insulation is a Recognized Component - Polymeric Materials for Use in Wire and Cable (QMTT2) PVC for 60°C water resistance and 720 hr. sunlightr resistance. Optional wording "OUTDOOR" may be marked on cables with the "W" suffix.

DESCRIPTIONPRODUCT COVERED:

- * USL: PVC Jacketed Cords, Types SVT, SJT, ST, SJTW, SJTOW, STW, rated 60, 75, 90, or 105°C.
- * CNL: PVC Jacketed Cords, Types SVT, SJT, ST, SJTW, SJTOW, STW, rated 60 or 105°C.

ENGINEERING CONSIDERATIONS: (Not For UL Representative's Use)

USL indicates investigation to United States Standard UL 62.

CNL indicates investigation to Canadian Standard C22.2 No. 49.

- * CONSTRUCTION DETAILS:

These cords are constructed in accordance with the Standard for Flexible Cord and Fixture Wire, UL 62, and the following:

Insulation on "W" Types - Any Recognized Component (QMTT2) PVC compound acceptable for use on either wet location Flexible Cord or on an NEC Type with a "W" in its Type letter designation.

Jacket on "W" Types - Any Recognized Component (QMTT2) PVC 720 hour sunlight resistant compound.

- * MARKING:

These cords are marked in accordance with the Standard for Flexible Cord and Fixture Wire, UL 62. In addition, CNL Types must be marked "FT2" unless they comply with the FT1 flame test in which case they are marked "FT1".

CADLS

DESCRIPTION

PRODUCT COVERED:

Type XTW employing Class 2.11 insulation.

Type CXTW; single conductor or twisted pair construction, employing Class 2.11 insulation.

CONSTRUCTION DETAILS:

These cords are constructed in accordance with the latest edition of UL 62, Standard for Flexible Cord and Fixture Wire.

Insulation - Any Recognized Component (QMTT2) PVC Flexible Cord Wet-Location compound suitable for Type XTW or Type CXTW.

MARKING:

These cords are marked "VW-1" in accordance with the Standard for Flexible Cords and Fixture Wire, UL62.

*

D E S C R I P T I O N

PRODUCT COVERED:

Clock Cord.

CONSTRUCTION:

Parallel only.

INSULATION:

* Class 2.9 PVC, 60°C.

CONDUCTOR SIZE:

20 AWG.

MARKINGS:

Tags must be marked "Clock Cord." Cords may be surface printed "Clock Cord." Other marking requirements per UL 62.

D E S C R I P T I O N

PRODUCT COVERED:

CNL: Christmas Tree Cord - Types TX and PXT,
rated 60°C.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S
USE):

CNL indicates investigations to Canadian Standard
C22.2, No. 49-92, for Flexible Cords and Cables.

CONSTRUCTION DETAILS:

General - Constructed in accordance with the latest
edition of CSA C22.2 No. 49, Standard for Flexible Cord.

Conductor - No. 20 AWG in accordance with the standard.

Insulation - Class 8, PVC, 60°C, minimum average
thickness 27 mils.

Flame Rating - Must be marked "FT2" if not marked
"FT1". May be marked "FT1" when complies with the FT1 Flame
Test.

Marking - In accordance with the Standard, FUII Pages,
and Section General.

DESCRIPTION

PRODUCT COVERED:

USL: PVC Jacketed Range & Dryer Cord, Type SRDT, Rated 60°C or 90°C.

CNL: PVC Jacketed Range & Dryer Cord, Type DRT, Rated 60°C.

ENGINEERING CONSIDERATIONS: (Not For UL Field Representative's Use)

USL indicates investigations to United States Standard UL 62, for Flexible Cords and Fixture Wires.

CNL indicates investigations to Canadian Standard C22.2, No. 49 for Flexible Cords and Cables.

CONSTRUCTION DETAILS:

USL: These cords are constructed in accordance with the latest edition of Underwriters Laboratories Inc. Standard for Flexible Cord and Fixture Wire, UL 62 and the Reference Standard for Electrical Wires, Cables and Flexible Cords, UL1581.

CNL: These cords are constructed in accordance with the latest edition of Canadian Standard for Flexible Cord and Cables, C22.2 No. 49.

INSULATION:

USL: Class 2.9 or 2.22 PVC

CNL: Class 2.9 PVC

JACKET:

USL: Class 1.7 or 1.16 PVC

CNL: Class 1.7

FLAME RATING MARKING:

USL/CNL: May be marked "VW-1" or "FT1" when complies with Flame Test. Must be marked "FT2" if not marked "FT1."



the standard in safety

Underwriters
Laboratories

File E315167

Vol 1

Issued: 2007-09-13

Revised:

FOLLOW-UP SERVICE PROCEDURE
(TYPE L)

FLEXIBLE CORD
(ZJCZ, ZJCZ7)

Manufacturer:
(628100-001)

Applicant: SAME AS MANUFACTURER
(628100-001)

Listee: SAME AS MANUFACTURER
(628100-001)

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<u>Construction</u>	<u>United States Type</u>	<u>Canadian Type</u>	<u>Section</u>
Jacketed Cords, Thermoplastic	SVT, SJT, ST	SVT, SJT, ST	1
Parallel Cords, Thermoplastic	SPT-1, SPT-2, SPT-3, NISPT-1, NISPT-2	SPT-1, SPT-2, SPT-3, NISPT-1, NISPT-2	2
Range and Dryer Cords	SRDT	DRT	3

N/A - Not Applicable



the standard in safety

Underwriters
Laboratories

File E314513

Vol 1

Issued: 2007-09-07

Revised:

FOLLOW-UP SERVICE PROCEDURE
(TYPE L)

FLEXIBLE CORD
(ZJCZ, ZJCZ7)

Manufacturer:
(628100-003)

Applicant: SAME AS MANUFACTURER
(628100-003)

Listee: SAME AS MANUFACTURER
(628100-003)

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

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Jacketed Cords, Thermoplastic	SVT, SJT, ST	SVT, SJT, ST	1
Parallel Cords, Thermoplastic	SPT-1, SPT-2, SPT-3, NISPT-1, NISPT-2	SPT-1, SPT-2, SPT-3, NISPT-1, NISPT-2	2
Jacketed Cords, Thermoset	S, SO, SOO, SOW, SOOW, SJ, SJO, SJOO, SJOW, SJOOW, SV, SVO, SVOO	S, SO, SOO, SOW, SOOW, SJ, SJO, SJOO, SJOW, SJOOW, SV, SVO, SVOO	3
Heater Cords	HPN	HPN	4

N/A - Not Applicable



CERTIFICATION RECORD

The company named below has been authorized by CSA International to represent the products listed in this record as "CSA Certified" and to affix the CSA Mark to these products according to the terms and conditions of the CSA Service Agreement and applicable CSA program requirements (including additional Markings).

File No: 081924_0_000

Class No: 5831 01 WIRES Flexible Cord

SUBMITTOR

4501124

FACTORIES

4501124

4651426

4709892



Certification Record

CUSTOMER

CLASS

FILE

[5831-01](#)

081924_0_000

WIRES -Flexible Cord

Refer to Class Description for program details

TO THE REQUIREMENTS OF CSA STANDARD C22.2 NO 49-06:

Type	Max Volt (V)	Size of Conductors (AWG*)	No of Conductors	Insul. Type	Jacket Type	Notes
<ul style="list-style-type: none"> Max temperature rating 60C: 						
SPT-1	300	20,18	2,3	PVC	-	1,2,3
NISPT-1	300	20,18	2,3	PVC	PVC	1,2,6
SPT-2	300	18,16	2,3	PVC	-	1,2,3
NISPT-2	300	18,16	2,3	PVC	PVC	1,2,6
SPT-3	300	18-10	2,3	PVC	-	1, 2
SVT	300	18,17,16	2,3	PVC	PVC	1,2,4
SJT	300	18-10	2-6	PVC	PVC	1,2,4
SJTO	300	18-10	2-6	PVC	PVC	1,2
SJTW, SJTOW	300	18-10	2-6	PVC	PVC	1,2,4,5
ST	600	18-2	2 or more	PVC	PVC	1,2,4
STW, STOW	600	18-2	2 or more	PVC	PVC	1,2,4,5
PXT	125	20	2	PVC	-	1,2,7
PXWT	300	18, 16	2	PVC	-	1,2,5,7
S	600	18-2	2 or more	EP	CPE	1,2,7
SO	600	18-2	2 or more	EP	CPE	1,2,7
SOO	600	18-2	2 or more	EP	CPE	1,2,7
SOW	600	18-2	2 or more	EP	CPE	1,2,7
SOOW	600	18-2	2 or more	EP	CPE	1,2,7
SJ	300	18-10	2-6	EP	CPE	1,2,7
SJO	300	18-10	2-6	EP	CPE	1,2,7
SJOO	300	18-10	2-6	EP	CPE	1,2,7
SV	300	18,17,16	2 or 3	EP	CPE	1,2,7
SVO	300	18,17,16	2 or 3	EP	CPE	1,2,7
SVOO	300	18,17,16	2 or 3	EP	CPE	1,2,7

• Max temperature 90C:

HPN	300	14	2	CPE	-	1,2
SV	300	18, 17, 16	2 or 3	EP	CPE	1, 2, 7
SVO	300	18, 17, 16	2 or 3	EP	CPE	1, 2, 7
SVOO	300	18, 17, 16	2 or 3	EP	CPE	1, 2, 7
HPN	300	16, 18	2 or 3	CPE	-	1, 2, 8

- Max temperature 105C:

SPT-1	300	20,18	2,3	PVC	-	1,2,3
NISPT-1	300	20,18	2,3	PVC	PVC	1,2,6
SPT-2	300	18,16	2,3	PVC	-	1,2,3
NISPT-2	300	18,16	2,3	PVC	PVC	1,2,6
SPT-3	300	18-10	2,3	PVC	-	1, 2
SVT	300	18,17,16	2,3	PVC	PVC	1,2,4
SJT	300	18-10	2-6	PVC	PVC	1,2,4
SJTO	300	18-10	2-6	PVC	PVC	1,2
SJTW, SJTOW	300	18-10	2 -6	PVC	PVC	1,2,4,5
ST	600	18-2	2 or more	PVC	PVC	1,2,4
STW, STOW	600	18-2	2 or more	PVC	PVC	1,2,4,5
HPN	300	14	2	CPE	-	1,2
HPN	300	16, 18	2 or 3	CPE	-	1,2,8
S	600	18-2	2 or more	EP	CPE	1,2,7
SO	600	18-2	2 or more	EP	CPE	1,2,7
SOO	600	18-2	2 or more	EP	CPE	1,2,7
SOW	600	18-2	2 or more	EP	CPE	1,2,7
SOOW	600	18-2	2 or more	EP	CPE	1,2,7
SJ	300	18-10	2-6	EP	CPE	1,2,7
SJO	300	18-10	2-6	EP	CPE	1,2,7
SJOO	300	18-10	2-6	EP	CPE	1,2,7
HPN						

*mm² sizes also apply.

Notes:

1. In all colours except for clear and translucent.
2. Flame classification - FT2.
3. Includes two-conductor constructions in clear or translucent.
4. Optional shielding.
5. Low temperature rating: -40C.
6. Non-integral construction.
7. Flame classification - FT1.
8. HPN with 16 or 18 AWG, 3 conductor, EP ground conductor insulation.

\j