



TOGETHER WE GROW

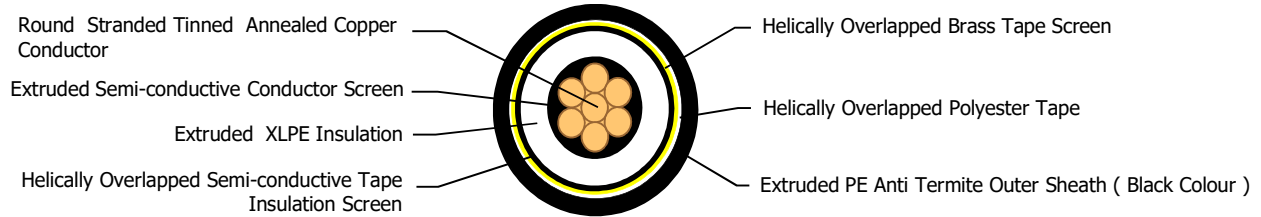
PT JEMBO CABLE COMPANY Tbk.

Schedule of Technical Data

I/N : DSXB7PE0001006MC

**AIRFIELD LIGHTING PRIMARY CABLE
SXB7Pe 1 x 6 mm² 5 kV**

Ref. Spec : FAA Spec for L-824, AC 150/5345-7F



Cable Construction

1 Conductor	:	Round stranded Tinned Annealed copper wire
Number of wire	:	7
Dia of wire	:	1,04
Appr. Outer Diameter	:	3,12 mm
2 Conductor Screen	:	Extruded Semi-conductive
Nom. thickness	:	0,3 mm
3 Insulation	:	Extruded XLPE
Min. Average Thickness	:	2,3 mm
Min. Point Thickness	:	1,97 mm
4 Insulation Screen	:	Helically Overlapped Semi-conductive Tape
Nom. thickness	:	0,02 mm
Appr. Outer Diameter	:	8,5 mm
5 Metallic screen	:	Helically Overlapped Brass Tape
Nom. thickness	:	0,1 mm
6 Core Wrapping	:	Helically Overlapped Polyester Tape
7 Outer Sheath	:	Extruded PE Anti Termite (Black Colour)
Min. Average Thickness	:	1,2 mm
Min. Point Thickness	:	0,76 mm
Outer Diameter	:	11,4 mm
8 Cable Marking by Foil Printing	:	JEMBO CABLE SXB7Pe 1 x 6 mm ² 5 kV "Year"
Minimum bending radius	:	137 mm

Electrical Characteristic

1 Max. DC Conductor Resistance at 20°C	:	3,11 Ohm/km
2 AC Dielectric Strength at 12,5 kV/ 5 min	:	No Break Down Shall Occur
3 Min. Insulation resistance	:	4000 Meg.Ohm.km
4 Max. Current Rating in Ground at 40°C	:	86 A
5 Short Circuit Current at,		
1 sec.	:	0,85 kA
0.5 sec.	:	1,20 kA
0.3 sec	:	1,56 kA
0.1 sec	:	2,69 kA

Packing

1 Type of Packing	:	Wooden Drum
2 Standard Length	:	1000 m
3 Dimension of Drum	:	960 mm x 570 mm
4 Net Weight	:	187 kg
5 Gross Weight	:	256 kg

TYPE TEST CERTIFICATE

SERTIFIKAT PENGUJIAN JENIS

Certificate No.: QI-23/01/0185
Nomor Sertifikat

Issued date: 18 January 2023
Diterbitkan tanggal

TESTING OBJECT : Underground Electrical Cable for Airport Lighting Circuits
Objek pengujian
TYPE : AIRFIELD LIGHTING PRIMARY CABLE- Type C (SXB7Pe)
Jenis
SIZE : 1 x 6 mm²
Ukuran
RATED VOLTAGE : 5 kV
Tegangan
BRAND : JEMBO CABLE
Merek
TESTED FOR : PT JEMBO CABLE COMPANY, Tbk.
Diuji untuk
ADDRESS : Jl. Pajajaran Desa Gandasari , Kec. Jatiuwung, Tangerang 15137
Alamat
DATE OF TEST : 03 January 2023 – 17 January 2023
Tanggal uji

Test results on the object tested comply with the standard requirement:
Hasil pengujian pada objek yang diuji memenuhi persyaratan standar:

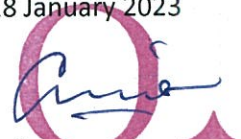
**FAA AC 150/5345-7F; Specification for L-824, Type C, NEMA WC 71/ICEA S-96-639;
AS/NZS1660**

Referring to test report no.: QI-23/01/0185
Berdasarkan laporan pengujian nomor : QI-23/01/0185

The certificate applies only the object tested. The responsibility for conformity of any object having the same designations with that tested rests with manufacturer.

Sertifikat ini hanya berlaku untuk objek yang diuji. Tanggung jawab kesesuaian pada setiap objek yang diuji memiliki penunjukan yang sama dengan objek yang diuji dengan pabrikan.

Tangerang, 18 January 2023



Sugiyanto
Electric Manager
Lab.

Valid until : 18 January 2028
Berlaku hingga : 18 January 2028

This certificate is good as long as the related standard is valid
Sertifikat ini berlaku sepanjang standar uji terkait masih berlaku

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Head Office & Laboratory

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TEST REPORT

LAPORAN HASIL UJI

Test Category <i>Kategori uji</i>	TYPE TEST <i>Uji Jenis</i>	Test report no. <i>No. laporan uji</i>	QI-23/01/0185
Work order no. <i>No. order kerja</i>	WO/2023010230	Issue date <i>Tanggal penerbitan</i>	18 February 2023
Test performance date <i>Tanggal pengujian</i>	03 January 2023 – 17 January 2023	Valid until <i>Berlaku hingga</i>	18 February 2028
Client's name <i>Namaklien</i>	PT JEMBO CABLE COMPANY, Tbk.		
Address <i>Alamat</i>	Jl. Pajajaran Desa Gandasari , Kec. Jatiuwung, Tangerang 15137		
Product under test <i>Produk uji</i>	Underground Electrical Cable for Airport Lighting Circuits		
Type <i>Jenis</i>	AIRFIELD LIGHTING PRIMARY CABLE- Type C (SXB7Pe)		
Size <i>Ukuran</i>	1 x 6 mm ²		
Rated voltage <i>Tegangan</i>	5 kV		
Brand <i>Merek</i>	JEMBO CABLE		
Customer <i>Pelanggan</i>	PT JEMBO CABLE COMPANY, Tbk.		
Sample submission date <i>Tanggal penerimaan sampel</i>	02 January 2023		
Test method <i>Metode uji</i>	FAA AC 150/5345-7F; Specification for L-824, Type C, NEMA WC 71/ICEA S-96-639; AS/NZS1660		
Sample condition <i>Kondisi sampel</i>	The sample was submitted by customer, received in good condition and with no defect observed		
Test laboratory <i>Laboratorium penguji</i>	PT. Qualis Indonesia		

Tested by
Diuji oleh




Suhartono
Technician

Reviewed by
Diperiksa oleh



Sugihartono
Supervisor

Approved by
Disahkan oleh



Sugiyanto
Laboratory Manager

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Description sample

Keterangan contoh uji

Description sample <i>Keterangan contoh uji</i>	
Type <i>Jenis</i>	: SXB7Pe
Size <i>Ukuran</i>	: 1 x 6mm ²
Rated voltage <i>Tegangan pengenal</i>	: 5 k V
Total core <i>Jumlah inti</i>	: 1
Cross sectional area <i>Luas penampang area</i>	: 6 mm ²
Conductor material <i>Bahan konduktor</i>	: Copper
Insulation material <i>Bahan insulasi</i>	: Crosslinked Polyethylene (XLPE)
Sheath material <i>Bahan selubung</i>	: Polyethylene Anti Termite (PE AT)
Color <i>Warna</i>	: Black/ Hitam
Quantity of sample <i>Jumlah sampel</i>	: 68 m

Summary of test result

Ringkasan laporan hasil uji

The type test results for this cable are comply to standard requirements FAA AC 150/5345-7F; Specification for L-824, Type C, NEMA WC 71/ICEA S-96-639; AS/NZS1660

Hasil pengujian jenis untuk kabel tersebut memenuhi persyaratan standar FAA AC 150/5345-7F; Specification for L-824, Type C, NEMA WC 71/ICEA S-96-639; AS/NZS1660

Testing and measuring equipment:

Peralatan pengujian dan pengukuran

No.	Equipment
1	Precision Double Bridge
2	ACWithstandVoltage Tester
3	HighVoltage Insulation Hi Tester
4	PD Tester
5	AC Dielectric Test Set
6	Profile ProjectorForDimensionMeasurement
7	Micrometer
8	Vernier caliper
9	Thermohygrometer
10	Tensile Strength Machine
11	Analitical Balance
12	Heat deformation tester
13	Oven
14	Solvent extraction test set
15	ESCR Test set





APPENDIX DATA OF TEST RESULTS
LAMPIRAN DATA HASIL UJI

1. Electrical Test.

1.1 Volume Resistivity of conductor shield

Itemtest	Unit	Requirement	Measurement	Conformity
Conductor screen - Without ageing	$\Omega.m$	Max.500	7.8	Passed
-After ageing on complete cable for $121\pm 1^\circ C / 7 \times 24$ h	$\Omega.m$	Max.500	10.4	Passed

1.2 Insulation Resistance test

Itemtest	Unit	Requirement	Measurement	Conformity
-Insulation Resistance at $15.5^\circ C$.	M. Ω ./km	Min. 20000	65000	Passed

1.3 Resistance of conductor at $20^\circ C$

Itemtest	Unit	Requirement	Measurement	Conformity
Resistance of conductor at $20^\circ C$	M. Ω ./km	Max : 3.08	2.85	Passed
Continuity of earth screen test	-	Passed	Passed	Passed

1.4 Partial discharge test

Itemtest	Unit	Requirement	Measurement	Conformity
- Background noise	pC	Max : 5	0.25	Passed
- Partial Discharge at 9 kV	pC	Max : 5	0.50	passed

1.5 Bending test followed by partial discharge test

Itemtest	Unit	Requirement	Measurement	Conformity
- Bending test	-	No breakdown	No breakdown	Passed
- Partial Discharge after bending test	pC	Max : 5	0.75	Passed

1.6 Voltage test for 4 hours at $4U_0$

Itemtest	Unit	Requirement	Measurement	Conformity
- Voltage test for 4 hours at $4U_0(15)kV$	-	No breakdown	No breakdown	Passed

1.7 High voltage test at 17.5 kV

Itemtest	Unit	Requirement	Measurement	Conformity
High voltage test at 17.5 kV/ 5 minutes	-	No breakdown	No breakdown	Passed

2 Construction & Dimension Test.

2.1 Conductor

Itemtest	Unit	Requirement	Measurement	Conformity
- Number of wire	n/mm	Min. :7/1.04	7/1.04	Passed
- Outer diameter	mm	Apx.3.12	3.06	Passed
- Material	-	Coated and uncoated copper	Uncoated copper	Passed

2.2 XLPE Insulation

Itemtest	Unit	Requirement	Measurement	Conformity
- Nominal thickness	mm	Nom. :-	Avg. : 2.34	-
- Minimum	mm	Min. :2.3	Min. : 2.23	Passed

2.3 Semi-conducting screen thickness

Itemtest	Unit	Requirement	Measurement	Conformity
- Conductor shield thickness	mm	Nom. 0.3	Avg. : 0.66	Passed
- Insulation screen thickness (Helically Overlapped Semi-ConductiveTape)	mm	Nom. 0.12	Avg. : 0.12	Passed

2.4 Dimension of metallic screen (brass tape)

Itemtest	Unit	Requirement	Measurement	Conformity
-Nominal thickness	mm	Nom. :0.1	Avg. : 0.113	Passed
-Tape width	mm	Nom. :15	Avg. : 15	Passed
- Percent overlap	%	Min : 20	23.39	Passed

2.5 Thickness of Outer sheath

Itemtest	Unit	Requirement	Measurement	Conformity
-Nominal thickness	mm	-	Avg. : 1.22	-
-minimum thickness	mm	Min : 1.2	0.98	Passed
- material	-	Polyethylene Anti Termite (PE AT)	Polyethylene Anti Termite (PE AT)	Passed

2.5 Outer sheath

Itemtest	Unit	Requirement	Measurement	Conformity
-Diameter of Outersheath	mm	Apx.: 11.4	Avg. : 11.5	Passed

2.6 Cable Marking :

JEMBO CABLE SXB7Pe 1x6 mm² 5 kV 2022

3 Non Electrical Test

Itemtest	Unit	Requirement	Measurement	Conformity
3.1 Mechanicaltest of XLPE insulation				
3.1.1 Without ageing				
a. Tensile strength	psi	Min. 1800	3292.4	Passed
b. Elongation at break	%	Min. 250	590.4	Passed
3.1.2 After ageing in air oven without conductor				
a. Treatment				
-Temperature	°C	121	121	
-Duration	H	168	168	
3.1.3 Tensile Strength				
a. Value after ageing	psi	N/A	3220.0	Passed
b. Percentage	%	Min. 75	97.8	Passed
3.1.4 Elongation at break				
a. Value after ageing	%	N/A	584.4	Passed
b. Percentage	%	Min. 75	99.0	Passed
3.2 Mechanical test of PE outer sheath				
3.2.1 Without ageing				
a. Tensile strength	Mpa	Min. 17.2	24.2	Passed
b. Elongation at break	%	Min. 300	642.2	Passed
3.2.2 After ageing in air oven without conductor				
a. Treatment				
-Temperature	°C	100	100	
-Duration	H	48	48	

3.2.3 Tensile Strength	Mpa	N/A	23.6	Passed
a. Valueafterageing	%	Min. 75	97.5	Passed
b. Percentage				
3.2.4 Elongationatbreak	%	N/A	631.4	Passed
a. Valueafterageing	%	Min. 75	98.3	Passed
b. Percentage				
3.3 ShrinkagetestforXLPE				
-DistanceL betweenmarks	mm	200	200	
-Temperature	°C	130±3	130±2	
-Duration	h	1	1	
-Shrinkage	%	Max.4	1.2	Passed
3.4 Hottest for XLPE				
Insulation				
-Air temperature	°C	150±2	150±2	
-Time underload	Minutes	15	15	
-Mechanical stress	N/cm ²	20	20	
a. Elongation underload	%	Max.175	82.4	Passed
b. Permanent elongation	%	Max.15	1.2	Passed
3.5 Hot creep test				
- Temperature	°C	150±2	150	
- Elongation	%	Max : 175	78.4	Passed
- Set	-	Max : 10	1.2	Passed

3.6 Solvent Extraction

Itemtest	Unit	Requirement	Measurement	Conformity
-Solvent Extraction	%	Max : 30	23.4	Passed

3.7 ECSR

Itemtest	Unit	Requirement	Measurement	Conformity
-ECSR	-	Passed	Passed	Passed

3.8 Heat Distortion of HDPE

Itemtest	Unit	Requirement	Measurement	Conformity
-Heat Distortion at 110°C	%	Max : 30	11.4	Passed

--AKHIR LAPORAN HASIL UJI--
- END OF THE TEST REPORT -