



**FIRE RESISTANT CABLES**



**FP300™**

**Fire resistant LSOH® power  
cables for fixed wiring**

# FIRE RESISTANT CABLES

## FP300™



FP300™

### APPROVALS

### INSTALLATION



LPCB Ref No: 077e/01



- > Prysmian FP300 is designed for cabling essential safety circuits associated with life safety, fire fighting or property protection applications used in a wide range of public access and industrial complexes where continued circuit operation in the event of fire is required. These include critical circuits associated with fire detection and fire alarm systems, emergency lighting systems, smoke control, fire suppression systems, evacuation lifts, sprinkler and riser pumps.
- > Prysmian FP300 is an unarmoured cable with inherent fire resistance providing an easy to install and terminate fire resistant wiring system. In addition to maintaining circuit integrity during a fire, FP300 produces very low levels of smoke and virtually no (less than 0.5%) acidic gases, thus safeguarding human life and protecting equipment.
- > FP300 handles like a standard unarmoured cable and can be installed just as easily. No special tools or accessories are needed for installation or termination of FP300.
- > FP300 is suitable for indoor or outdoor installation. For external exposure the use of a black sheath is recommended.
- > Prysmian FP300 is Loss Prevention Certification Board (LPCB) listed as a fire resistant cable and is approved to BS6387 Category CWZ at an enhanced voltage of 600/1000V and IEC 331 at an enhanced temperature of 950°C.
- > All Prysmian FP300 cables are manufactured under an ISO 9001 Quality System certified by BASEC and LPCB.
- > Prysmian FP300 is particularly suitable for tray, ladder, trunking and clipped direct applications. It should be installed in accordance with BS7671/IEE Wiring Regulations or any other appropriate national regulations. Although standard cable fixings and glands, nylon or brass, may be used, it is important to ensure that, when the cable system is required to maintain circuit integrity in a fire, any fixing used to support the cable can also withstand that fire.
- > Minimum recommended installation temperature 0°C.



**Temperature Range**  
-25 to +90°C



**Bending Radius**  
up to 25mm<sup>2</sup> diameter  $r = 4D$   
above 25mm<sup>2</sup> diameter  $r = 6D$



**Mechanical Impact**  
Medium



**Fire Performance**  
BSEN60332-1-2



**Flexibility**  
Rigid



**Halogen Free**  
BSEN50267-2-1



**Low Smoke Emissions**  
BSEN61034-2



**Fire Resistant**  
BS6387 Category CWZ\*  
IEC 331-21  
SS299 Category CWZ  
\*When tested in Steel Conduit

## FIRE RESISTANT CABLES

600/1000V

## KEY APPLICATIONS

- > Essential safety circuits
- > Fire detection, alarm and evacuation
- > Emergency lighting
- > Life safety and fire fighting systems

## CABLE DESCRIPTION

## CONDUCTOR

Plain annealed copper stranded (Class 2) conductor

## INSULATION

- > Dual layer Insulation - primary layer mineral ceramic (Mica / Glass) fire resistant tape.
- > Dual layer Insulation - secondary layer 90°C cross linked insulation (XLPE).

## CORE IDENTIFICATION

o Black

Other core colours available on request

## SHEATH

Robust LSOH sheath

Colour - Black

(Other sheath colours available on request)

**Details of the full range of multicore FP300 cables are available on request.**

Nominal cross-sectional area mm <sup>2</sup>	Mean overall diameter mm	Approximate cable weight kg/km	Minimum bending radius (fixed) mm	Maximum conductor resistance at 20°C ohms/km	Short circuit rating (1 sec) KA	Current rating DC or Single phase AC Clipped direct Amps	Current rating AC in Trefoil Free Air Amps	Volt drop Single phase AC mV/A/m	Volt drop Three phase AC in Trefoil mV/A/m
SINGLE CORE									
1.0	6.6	55	40	18.1	0.14	19	-	46.0	40.0
1.5	6.8	65	40	12.1	0.21	25	-	31.0	27.0
2.5	7.3	75	45	7.41	0.35	34	-	19.0	16.0
4.0	7.8	95	50	4.61	0.57	46	-	12.0	10.0
6.0	8.4	120	50	3.08	0.85	59	-	7.9	6.8
10	9.5	170	55	1.83	1.4	81	-	4.7	4.0
16	10.5	230	65	1.15	2.2	109	-	2.9	2.5
25	12.0	375	75	0.727	3.5	143	138	1.85	1.60
35	13.0	450	75	0.524	5.0	176	171	1.35	1.15
50	15.0	580	85	0.387	7.1	228	209	1.00	0.87
70	17.5	800	100	0.268	10.0	293	270	0.71	0.61
95	19.0	1065	110	0.193	13.5	355	330	0.52	0.45
120	20.5	1360	120	0.153	17.1	413	385	0.43	0.37
150	22.5	1615	130	0.124	21.4	476	445	0.36	0.31
185	24.5	2000	150	0.0991	26.4	545	511	0.30	0.25
240	27.5	2680	170	0.0754	34.3	644	606	0.25	0.22
300	30.5	3270	190	0.0601	42.9	743	701	0.22	0.195
400	35.0	4260	210	0.0470	57.2	868	820	0.20	0.175
500	38.5	5345	240	0.0366	71.5	990	936	0.185	0.160
630	43.0	6710	260	0.0283	90.1	1130	1069	0.175	0.150
800	46.5	8210	280	0.0221	114.4	1288	1214	0.170	0.145
1000	52.0	10275	320	0.0176	143.0	1443	1346	0.165	0.140

The tabulated ratings are based upon a 30°C ambient temperature and a 90°C operating temperature.

For other ambient temperatures or where several circuits are grouped together, the following rating factors should be applied.

## Ambient temperature correction factor

Ambient Temperature °C	25	30	35	40	45	50	55	60
Correction factor	1.02	1.00	0.96	0.91	0.87	0.82	0.76	0.71

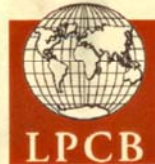
## Correction factor for groups of more than one circuit of single core cables

Number of circuits	2	3	4	5	6	7	8	9
Single layer clipped direct to a non-metallic surface (touching)	0.85	0.79	0.75	0.73	0.72	0.72	0.71	0.70
Single layer on perforated cable tray Horizontal (touching)	0.90	0.85	-	-	-	-	-	-
Single layer on perforated cable tray Vertical (touching)	0.85	-	-	-	-	-	-	2.9

**UK Sales enquiries****Tel: +44 (0) 845 767 8345****Fax: +44 (0) 23 8029 5465****Overseas Sales enquiries****Tel: +44 (0) 23 8029 5481****Fax: +44 (0) 23 8029 5465****Information hotline****Tel: +44 (0) 23 8029 5029****Fax: +44 (0) 23 8029 5437****[cables.marketing.uk@prysmian.com](mailto:cables.marketing.uk@prysmian.com)****[www.prysmian.co.uk](http://www.prysmian.co.uk)****UK Technical helpline****Tel: +44 (0) 845 767 8345****Fax: +44 (0) 23 8029 5002****Overseas Technical helpline****Tel: +44 (0) 23 8029 5481****Fax: +44 (0) 23 8029 5002****Prysmian Cables & Systems Limited****Chickenhall Lane****Eastleigh****Hampshire****SO50 6YU****United Kingdom**



# Loss Prevention Certification Board



## This is to certify

**PRYSMIAN CABLES & SYSTEMS LTD**  
**(Formerly Pirelli Cables Ltd (Eastleigh))**  
Energy Cables, Chickenhall Lane, Bishopstoke,  
Eastleigh, Hants, SO50 6YU

is authorised to use the LPCB mark in association with the  
product(s) listed in this certificate and appendix.

**FP 300 and FP300MI fire resistant cables**  
(Refer to attached Appendix for details)

which have complied with the requirements of the following:

**BS 6387: 1994 – Performance requirements for cables required to maintain  
circuit integrity under fire conditions.**

**IEC 60331-21: 1999 – Fire resisting characteristics of electric cables**  
and achieved:

**<0.5%HCl when tested in accordance with BS EN 50267-2-1: 1999 – Method  
of test for Gases evolved during combustion of electric cables**

Certificate No. 077e

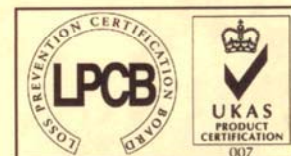
Issue No. 05

Date of Issue 21 April 2006

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Signed on behalf of the LPCB

Name: R PHILLIPS



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# Loss Prevention Certification Board



APPENDIX TO CERTIFICATE NO. 077e

**PRYSMIAN CABLES & SYSTEMS LTD**  
(Formerly Pirelli Cables Ltd (Eastleigh))

## Products

LPCB Ref. No.

FP 300 single core cable

077e/01

Nominal csa of conductor (mm <sup>2</sup> )	Core construction	BS 6387 (see notes 1, 2 & 5)	BS EN 50267-2-1 (outer covering)	IEC 60331-21 (see note 7)
1.0	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
1.5	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
2.5	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
4.0	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
6.0	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
10.0	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
16.0	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
25	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
35	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
50	one	C <sup>(4)</sup>	<0.5% HCl	complies
70	one	C <sup>(4)</sup>	<0.5% HCl	complies
95	one	C <sup>(4)</sup>	<0.5% HCl	complies
120	one	C <sup>(4)</sup>	<0.5% HCl	complies
150	one	C <sup>(4)</sup>	<0.5% HCl	complies
185	one	C <sup>(4)</sup>	<0.5% HCl	complies
240	one	C <sup>(4)</sup>	<0.5% HCl	complies
300	one	complies <sup>(6)</sup>	<0.5% HCl	complies
400	one	complies <sup>(6)</sup>	<0.5% HCl	complies
500	one	complies <sup>(6)</sup>	<0.5% HCl	complies
630	one	complies <sup>(6)</sup>	<0.5% HCl	complies

Uo/U 450/750 V

Continued . . . . .

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Signed on behalf of the LPCB

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# Loss Prevention Certification Board



APPENDIX TO CERTIFICATE NO. 077e

**PRYSMIAN CABLES & SYSTEMS LTD**  
**(Formerly Pirelli Cables Ltd (Eastleigh))**

## Products

LPCB Ref. No.

- Note 1: Clause 8 (Bending) and 9.1 & 9.2 (Impact) of the BS 6387 standard cannot be conducted due to the cable having only one core.  
Note 2: The single core cable also met category C, W, Z when tested for voltage rating 600/1000 V which is not recognised by BS 6387.  
Note 3: To satisfy the requirement of BS 6387, testing for C, W and Z categories was conducted using a 20mm steel conduit as the other metallic element.  
Note 4: To satisfy the requirement of BS 6387, testing for C category was conducted using a 38mm steel conduit as the other metallic element.  
Note 5: Where a single cable is fitted in a conduit, only phase to earth voltage was applied.  
Note 6: Only clause 10 of BS 6387 was conducted.  
Note 7: Testing to IEC 60331 was conducted at voltage rating of 600/1000V and at 950°C which is not recognised by the standard.

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APPENDIX TO CERTIFICATE NO. 077e

**PRYSMIAN CABLES & SYSTEMS LTD**  
(Formerly Pirelli Cables Ltd (Eastleigh))

## Products

LPCB Ref. No.

FP 300MI single core cable

077e/02

Nominal csa of conductor (mm <sup>2</sup> )	Core construction	BS 6387 (see notes 1, 2 & 5)	BS EN 50267-2-1 (outer covering)	IEC 60331-21 (see note 7)
1.0	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
1.5	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
2.5	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
4.0	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
6.0	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
10.0	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
16.0	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
25	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
35	one	C,W,Z <sup>(3)</sup>	<0.5% HCl	complies
50	one	C <sup>(4)</sup>	<0.5% HCl	complies
70	one	C <sup>(4)</sup>	<0.5% HCl	complies
95	one	C <sup>(4)</sup>	<0.5% HCl	complies
120	one	C <sup>(4)</sup>	<0.5% HCl	complies
150	one	C <sup>(4)</sup>	<0.5% HCl	complies
185	one	C <sup>(4)</sup>	<0.5% HCl	complies
240	one	C <sup>(4)</sup>	<0.5% HCl	complies
300	one	complies <sup>(6)</sup>	<0.5% HCl	complies
400	one	complies <sup>(6)</sup>	<0.5% HCl	complies
500	one	complies <sup>(6)</sup>	<0.5% HCl	complies
630	one	complies <sup>(6)</sup>	<0.5% HCl	complies

Uo/U 450/750 V

Continued . . . . .

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APPENDIX TO CERTIFICATE NO. 077e

**PRYSMIAN CABLES & SYSTEMS LTD**  
**(Formerly Pirelli Cables Ltd (Eastleigh))**

## Products

LPCB Ref. No.

- Note 1: Clause 8 (Bending) and 9.1 & 9.2 (Impact) of the BS 6387 standard cannot be conducted due to the cable having only one core.  
Note 2: The single core cable also met category C, W, Z when tested for voltage rating 600/1000 V which is not recognised by BS 6387.  
Note 3: To satisfy the requirement of BS 6387, testing for C, W and Z categories was conducted using a 20mm steel conduit as the other metallic element.  
Note 4: To satisfy the requirement of BS 6387, testing for C category was conducted using a 38mm steel conduit as the other metallic element.  
Note 5: Where a single cable is fitted in a conduit, only phase to earth voltage was applied.  
Note 6: Only clause 10 of BS 6387 was conducted.  
Note 7: Testing to IEC 60331 was conducted at voltage rating of 600/1000V and at 950°C which is not recognised by the standard.

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# Loss Prevention Certification Board



## This is to certify

### **PRYSMIAN CABLES & SYSTEMS LTD (Formerly Pirelli Cables Ltd (Wrexham))**

Energy Cables Unit, Wrexham Industrial Estate, Wrexham LL13 9PH

is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix.

### **FP300 Single Core LSZH Cable**

(Refer to attached Appendix for details)

which has complied with the requirements of the following:

**BS 6387: 1994 – Performance requirements for cables required to maintain circuit integrity under fire conditions.**

**IEC 60331 – Fire resisting characteristics of electric cables.**

and achieved:

**<0.5%HCI when tested in accordance with BS EN 50267-2-1: 1999 – Method of test for Gases evolved during combustion of electric cables.**

Certificate No. 517a

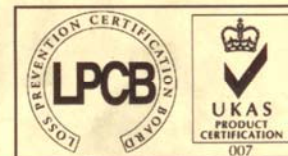
Issue No. 03

Date of Issue 21 April 2006

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Signed on behalf of the LPCB

Name: R PHILLIPS



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# Loss Prevention Certification Board



## APPENDIX TO CERTIFICATE NO. 517a

### PRYSMIAN CABLES & SYSTEMS LTD (Formerly Pirelli Cables Ltd (Wrexham))

#### Products

LPCB Ref. No.

#### FP300 Single Core LSZH Cable

LPCB Ref. No. 517a/01

Nominal csa of conductor (mm <sup>2</sup> )	Core constriction	BS 6387 (see notes 1 to 4)	BS EN 50267-2-1 (outer covering)	IEC 60331-21 (see note 6)
50	One	C	<0.5%HCl	Complies
70	One	C	<0.5%HCl	Complies
95	One	C	<0.5%HCl	Complies
120	One	C	<0.5%HCl	Complies
185	One	C	<0.5%HCl	Complies
240	One	C	<0.5%HCl	Complies
300	One	Complies <sup>(5)</sup>	<0.5%HCl	Complies
400	One	Complies <sup>(5)</sup>	<0.5%HCl	Complies
630	One	Complies <sup>(5)</sup>	<0.5%HCl	Complies
800	One	Complies <sup>(5)</sup>	<0.5%HCl	Complies
1000	One	Complies <sup>(5)</sup>	<0.5%HCl	Complies

Uo/U 450/750

Note 1: These cables also met category C when tested for voltage rating 600/1000V which is not recognised by BS 6387.

Note 2: Clause 8 (bending) and 9.1 & 9.2 (impact) can not be conducted due to the cable having only one core.

Note 3: To satisfy the requirement of BS 6387, testing for category C was conducted using 38mm steel conduit as the other metallic element.

Note 4: Where single cable is fitted in conduit, only phase to earth voltage was applied.

Note 5: Only clause 10 of BS 6387 was conducted.

Note 6: These cables met the requirements of IEC 60331 when tested at a temperature of 950°C (which is not recognised by IEC 60331) and at a voltage rating of 600/1000V.

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Signed on behalf of the LPCB

Name: R PHILLIPS

Page 2 of 2

Date of Issue 21 April 2006

Issue No. 03

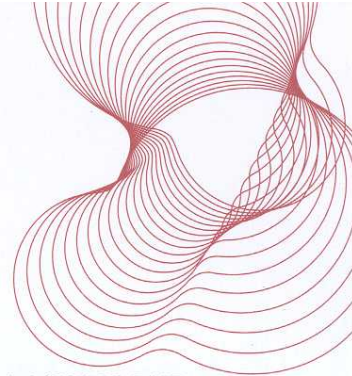
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Mr Terry Journeaux  
Pirelli Cables Ltd  
PO Box 6  
Leigh Road  
Eastleigh  
Hampshire SO50 9YE

Direct tel: 01923 66 5117

Our reference EMS5264

Your reference

27 April 2005

lpcb

Dear Mr Jouneaux

### FP300 Single Core CABLE

Further to your recent request, I can confirm that the samples tested are considered to be representative of the performance of all conductor sizes over the range  $1\text{mm}^2 - 630\text{mm}^2$ , as all conductor sizes in the range are of identical construction and use the same materials and differ only in physical dimension. The different dimensions are covered by choosing sizes for testing that cover the approved range of sizes, from smallest to largest.

Please refer to the LPCB Certificate No. 077e/01 and Product Listing in volume 1 of the list of Approved Fire and Security Products and Services for the limitation of the approval.

The up-date to all product approvals can be obtained on our website ([www.brecertification.co.uk](http://www.brecertification.co.uk)). Red Book Volume 1.

Should you require further assistance, please contact me.

Yours sincerely

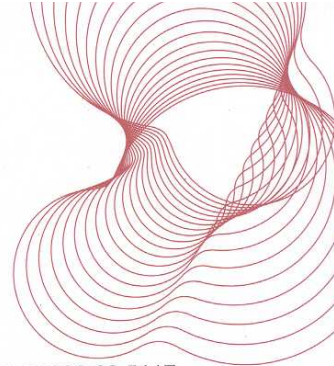
Eman Mattie-Suleiman  
Technical Manager





LPCB

Garston, Watford, Herts WD25 9XX  
T +44 (0)1923 664100 F +44 (0)1923 664994 www.redbooklive.com



Mr Terry Journeaux  
Pirelli Cables Ltd  
PO Box 6  
Leigh Road  
Eastleigh  
Hampshire SO50 9YE

Direct tel: 01923 66 5117

Our reference EMS5265

Your reference

4 May 2005

lpcb

Dear Mr Jouneaux

**FP300 SINGLE CORE CABLE MANUFACTURED AT PIRELLI WREXHAM**

Further to your recent request, I can confirm that the samples tested are considered to be representative of the performance of all conductor sizes over the range  $50\text{mm}^2 - 1000\text{mm}^2$ , as all conductor sizes in the range are of identical construction and use the same materials and differ only in physical dimension. The different dimensions are covered by choosing sizes for testing that cover the approved range of sizes, from smallest to largest.

Please refer to the LPCB Certificate No. 517a/01 and Product Listing in volume 1 of the list of Approved Fire and Security Products and Services for the limitation of the approval.

The up-date to all product approvals can be obtained on our website ([www.brecertification.co.uk](http://www.brecertification.co.uk)). Red Book Volume 1.

Should you require further assistance, please contact me.

Yours sincerely

Eman Mattie-Suleiman  
Technical Manager



消防處  
牌照及審批總區  
通風系統課

九龍尖沙嘴康莊道一號  
消防局總部大樓五樓



FIRE SERVICES DEPARTMENT  
LICENSING & CERTIFICATION  
COMMAND

Ventilation Division  
5/F, Fire Services Headquarters Building,  
1 Hong Chong Road, Tsim Sha Tsui East,

Our Ref. FP (FS) 317/21 V

Your Ref.

Fax. 852-2382 2495

Tel. No. 852-22514140

17 November 2005

Messrs. Pirelli Cables and System S.A.  
Unit A, 18/F.,  
China Overseas Building,  
139 Hennessy Road,  
Wanchai,  
Hong Kong.  
(Attn. Mr. Stephen LAM)

Dear Sir,

**"Pirelli FP300" Fire Resistant Cables**

I refer to your letter dated 1 June 2005 and the meeting in our office on 28 October 2005. It is recognised the difficulties to carry out BS 6387 CWZ for large size single core cables. I generally agree to the conclusions made by LPC Board in the letters of reference EMS5264 dated 27 April 2005 and EMS5265 dated 4 May 2005. As a general application for the cables is not practicable, therefore these large single core size cables would be considered on project basis.

Yours faithfully,

A handwritten signature in black ink, appearing to be 'TSE Kiu-cheung'.

(TSE Kiu-cheung)  
for Director of Fire Services



消防處  
牌照及審批總區  
通風系統課  
九龍尖沙嘴東部康莊道一號  
消防處總部大廈五樓



FIRE SERVICES DEPARTMENT  
LICENSING & CERTIFICATION COMMAND  
Ventilation Division  
5/F, Fire Services Headquarters Building,  
1 Hong Chong Road, Tsim Sha Tsui East, Kowloon

本處檔號 Our Ref.: FP(LC) 317/21  
來函檔號 Your Ref.:  
圖文傳真 Fax No.: (852) 2367 3206  
電話 Tel. No.: (852) 2733 1557

23 June 2011

Prysmian Hong Kong Holding Ltd.  
Room 1008, Lu Plaza  
2 Wing Yip Street  
Kwun Tong  
Kowloon  
Hong Kong  
(Attn. Mr. Stephen LAM)

Dear Sir,

**“Prysmian” Fire Resistant Cables**

I refer to your letter dated 30.5.2011 enclosing a set of test certificates with respect to the captioned cables and the supplementary information supplied under cover of your letter of 16.6.2011.

We have no in principle objection to the use of “Prysmian” fire resistant cables in fire service installations subject to compliance with the Code of Practice for Minimum Fire Service Installations and Equipment, 2005 Edition and according to the following details:

Manufacturer : Prysmian Cables & Systems Ltd., UK

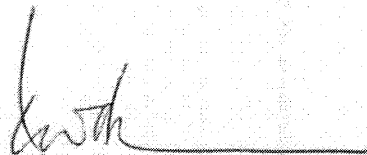
Model : a) FP 100  
b) FP 150  
c) FP 200 Gold  
d) FP 200 Flex  
e) FP 300  
f) FP 300MI  
g) FP 400

Conductor Size : Single Core  
a) “FP100” from 1.0 to 95 mm<sup>2</sup>  
b) “FP300” from 1.0 to 35 mm<sup>2</sup>  
c) “FP300MI” from 1.0 to 35 mm<sup>2</sup>

/2...

- Conductor Size  
(Cont'd)
- : 2, 3, & 4 Core
- d) "FP150" from 1.0 to 2.5 mm<sup>2</sup>
  - e) "FP200 Gold" from 1.0 to 4.0 mm<sup>2</sup>
  - f) "FP200 Flex" from 1.0 to 2.5 mm<sup>2</sup>
  - g) "FP300" from 1.0 to 16 mm<sup>2</sup>
  - h) "FP400" from 1.0 to 400 mm<sup>2</sup>
- Others
- i) "FP200 Gold" 1.0 mm<sup>2</sup>, 7 core; 1.5 mm<sup>2</sup>, 7, 12 & 19 core and 2.5 mm<sup>2</sup>, 7 & 12 core
- Test Certificate
- : By the Loss Prevention Certification Board
- a) No. 077a (Issue No. 10) of 13.7.2006 with Appendix No. 077a/02 and 077a/03
  - b) No. 077b (Issue No. 09) of 21.4.2006 with Appendix No. 077b/01 and 077b/02
  - c) No. 077c (Issue No. 08) of 25.8.2006 with Appendix No. 077c/01
  - d) No. 077d (Issue No. 06) of 21.4.2006 with Appendix No. 077d/01
  - e) No. 077e (Issue No. 05) of 21.4.2006 with Appendix No. 077e/01 and 077e/02
  - f) No. 077f (Issue No. 03) of 21.4.2006 with Appendix No. 077f/01
- Test Standard & Result
- : For all cable sizes mentioned above -  
Comply with BS 6387: 1994, Category C, W, Z
- Remark
- a) Large single core cables mentioned in the above certificates and which comply with BS 6387 Cat. C only will be considered on project basis.
  - b) All cables shall bear the appropriate LPCB markings.
  - c) This assessment is subject to review by June 2016.

Yours faithfully,



(HO Kwok-fu)

for Director of Fire Services

KFH/

FileCode: prysmian fp 20110623.doc



**FP300 Supplementary Multicore Data Sheet**
**600/1000V**

Nominal cross-sectional area	Mean overall diameter	Approximate cable weight	Minimum bending radius (fixed)	Maximum conductor resistance at 20 °C	Short circuit rating (1 sec)	Current rating DC or Single phase AC Clipped direct	Current rating DC or Single phase AC Free Air	Volt drop DC	Volt drop Single phase AC
mm <sup>2</sup>	mm	kg/km	mm	ohms/km	KA	Amps	Amps	mV/A/m	mV/A/m

**TWO CORE**

1.0	10.7	145	65	18.1	0.14	19	21	46	46
1.5	11.2	165	65	12.1	0.20	24	26	31	31
2.5	12.1	200	70	7.41	0.35	33	36	19	19
4.0	13.2	250	80	4.61	0.57	45	49	12	12
6.0	14.3	315	85	3.08	0.86	58	63	7.9	7.9
10	16.2	385	100	1.83	1.4	80	86	4.7	4.7
16	18.3	550	110	1.15	2.2	107	115	2.9	2.9
25	21.4	925	130	0.727	3.5	138	149	1.85	1.9
35	22.9	1080	140	0.524	5.0	171	185	1.35	1.4
50	25.6	1350	160	0.387	7.1	209	225	1.0	1.0
70	29.5	1905	180	0.268	10.0	269	289	0.67	0.69
95	33.2	2455	200	0.193	13.5	328	352	0.49	0.52
120	36.7	3065	220	0.153	17.1	382	410	0.39	0.42
150	40.5	3740	250	0.124	21.4	441	473	0.31	0.35
185	45.8	4730	280	0.0991	25 <sup>2</sup>	506	542	0.25	0.29
240	52.6	6335	320	0.0754	25 <sup>2</sup>	599	641	0.195	0.24
300	58.2	7540	350	0.0601	25 <sup>2</sup>	693	741	0.155	0.21

**SEVEN CORE**

1.0	14.1	265	85	18.1	0.14	19 <sup>1</sup>	21 <sup>1</sup>	46	46
1.5	14.9	405	90	12.1	0.21	24 <sup>1</sup>	26 <sup>1</sup>	31	31
2.5	16.1	560	100	7.41	0.35	33 <sup>1</sup>	36 <sup>1</sup>	19	19

**TWELVE CORE**

1.0	17.9	310	110	18.1	0.14	19 <sup>1</sup>	21 <sup>1</sup>	46	46
1.5	19.0	480	120	12.1	0.21	24 <sup>1</sup>	26 <sup>1</sup>	31	31
2.5	20.8	680	130	7.41	0.35	33 <sup>1</sup>	36 <sup>1</sup>	19	19

**NINETEEN CORE**

1.0	20.7	395	130	18.1	0.14	19 <sup>1</sup>	21 <sup>1</sup>	46	46
1.5	22.1	620	140	12.1	0.21	24 <sup>1</sup>	26 <sup>1</sup>	31	31
2.5	24.2	900	150	7.41	0.35	33 <sup>1</sup>	36 <sup>1</sup>	19	19

**TWENTY SEVEN CORE**

1.0	24.6	735	150	18.1	0.14	19 <sup>1</sup>	21 <sup>1</sup>	46	46
1.5	26.0	920	160	12.1	0.21	24 <sup>1</sup>	26 <sup>1</sup>	31	31
2.5	28.8	1190	180	7.41	0.35	33 <sup>1</sup>	36 <sup>1</sup>	19	19

**THIRTY SEVEN CORE**

1.0	27.3	950	170	18.1	0.14	19 <sup>1</sup>	21 <sup>1</sup>	46	46
1.5	29.4	1195	180	12.1	0.21	24 <sup>1</sup>	26 <sup>1</sup>	31	31
2.5	32.6	1575	200	7.41	0.35	33 <sup>1</sup>	36 <sup>1</sup>	19	19

**Note 1.** The majority of cores in a multicore auxiliary cable carry only small or intermittent current and a current rating based on the assumption that only 2 cores, the positive and negative (or line and neutral) feed cores approach the maximum permitted current loading is given. Where all cores in a cable are equally loaded the following factors should be applied to the 2 core rating.

Number of cores	2	7	12	19	27	37
Rating factor	1.00	0.63	0.53	0.45	0.40	0.36

**Note 2.** The short circuit rating is limited by the bursting strength of the unarmoured cable design.

Nominal cross-sectional area	Mean overall diameter	Approximate cable weight	Minimum bending radius (fixed)	Maximum conductor resistance at 20 °C	Short circuit rating (1 sec)	Current rating Three phase AC Clipped direct	Current rating Three phase AC Free Air	Volt drop Three phase AC
mm <sup>2</sup>	mm	kg/km	mm	ohms/km	KA	Amps	Amps	mV/A/m
<b>THREE CORE</b>								
1.0	11.2	165	70	18.1	0.14	17	18	40
1.5	11.8	185	70	12.1	0.20	22	23	27
2.5	12.7	230	80	7.41	0.35	30	32	16
4.0	13.9	300	85	4.61	0.57	40	42	10
6.0	15.1	380	90	3.08	0.86	52	54	6.8
10	17.1	540	110	1.83	1.4	71	75	4.0
16	19.4	760	120	1.15	2.2	96	100	2.5
25	22.8	1185	140	0.727	3.5	119	127	1.65
35	24.4	1410	150	0.524	5.0	147	158	1.15
50	27.3	1810	170	0.387	7.1	179	192	0.87
70	31.7	2595	190	0.268	10.0	229	246	0.60
95	35.7	3400	220	0.193	13.5	278	298	0.45
120	39.4	4300	240	0.153	17.1	322	346	0.37
150	43.5	5215	270	0.124	21.4	371	399	0.30
185	49.2	6430	300	0.0991	25 <sup>2</sup>	424	456	0.26
240	56.7	8700	340	0.0754	25 <sup>2</sup>	500	538	0.21
300	62.6	10470	380	0.0601	25 <sup>2</sup>	576	621	0.185
<b>FOUR CORE</b>								
1.0	12.1	195	75	18.1	0.14	17	18	40
1.5	12.7	220	80	12.1	0.20	22	23	27
2.5	13.8	280	85	7.41	0.35	30	32	16
4.0	15.1	365	90	4.61	0.57	40	42	10
6.0	16.4	465	100	3.08	0.86	52	54	6.8
10	18.7	625	120	1.83	1.4	71	75	4.0
16	21.2	925	130	1.15	2.2	96	100	2.5
25	25.0	1485	150	0.727	3.5	119	127	1.65
35	26.8	1860	160	0.524	5.0	147	158	1.15
50	30.3	2380	190	0.387	7.1	179	192	0.87
70	35.2	3280	220	0.268	10.0	229	246	0.60
95	39.6	4535	240	0.193	13.5	278	298	0.45
120	43.8	5730	270	0.153	17.1	322	346	0.37
150	48.5	6745	300	0.124	21.4	371	399	0.30
185	54.8	8355	330	0.0991	25 <sup>2</sup>	424	456	0.26
240	63.2	11345	380	0.0754	25 <sup>2</sup>	500	538	0.21
300	69.8	13725	420	0.0601	25 <sup>2</sup>	576	621	0.185

Note 2. The short circuit rating is limited by the bursting strength of the unarmoured cable design.



# Loss Prevention Certification Board



APPENDIX TO CERTIFICATE NO. 077b

**PRYSMIAN CABLES & SYSTEMS LTD**  
(Formerly Pirelli Cables Ltd (Eastleigh))

## Products

LPCB Ref. No.

FP 300 fire resistant cable LSOH outer covering

077b/01

Nominal csa of conductor (mm <sup>2</sup> )	Core construction	BS 6387	BS EN 50267-2-1 (outer covering)
1.0	2, 3 & 4	C, W, Z	<0.5% HCl
1.5	2, 3 & 4	C, W, Z	<0.5% HCl
2.5	2, 3 & 4	C, W, Z	<0.5% HCl
4.0	2, 3 & 4	C, W, Z	<0.5% HCl
6.0	2, 3 & 4	C, W, Z	<0.5% HCl
10.0	2, 3 & 4	C, W, Z	<0.5% HCl
16.0	2, 3 & 4	C, W, Z	<0.5% HCl

Uo/U 450/750 V

Note: The FP 300 LSOH cable also met category C, W, Z when tested for voltage rating 600/1000V which is not recognised by BS 6387.

This certificate is valid until withdrawn by LPCB.  
To check the validity and the authenticity of this certificate please visit our website [www.RedBookLive.com](http://www.RedBookLive.com) or contact us.

Signed on behalf of the LPCB

Name: R PHILLIPS

Page 2 of 4

Date of Issue 21 April 2006

Issue No. 09

LPCB is part of BRE Certification Ltd., Garston, Watford WD25 9XX. Tel +44 (0)1923 664100  
Fax +44 (0)1923 664603 [www.RedBookLive.com](http://www.RedBookLive.com)

This certificate remains the property of BRE Certification Ltd and is issued subject to terms and conditions and is maintained and held in force through regular surveillance activities.

消防處  
牌照及審批總區  
通風系統課  
九龍尖沙嘴東部康莊道一號  
消防處總部大廈五樓



FIRE SERVICES DEPARTMENT  
LICENSING & CERTIFICATION COMMAND  
Ventilation Division  
5/F, Fire Services Headquarters Building,  
1 Hong Chong Road, Tsim Sha Tsui East, Kowloon.

本處檔號 Our Ref.: FP(LC) 317/21  
來函檔號 Your Ref.:  
圖文傳真 Fax No.: (852) 2367 3206  
電話 Tel. No.: (852) 2733 1557

23 June 2011

Prysmian Hong Kong Holding Ltd.  
Room 1008, Lu Plaza  
2 Wing Yip Street  
Kwun Tong  
Kowloon  
Hong Kong  
(Attn. Mr. Stephen LAM)

Dear Sir,

**“Prysmian” Fire Resistant Cables**

I refer to your letter dated 30.5.2011 enclosing a set of test certificates with respect to the captioned cables and the supplementary information supplied under cover of your letter of 16.6.2011.

We have no in principle objection to the use of “Prysmian” fire resistant cables in fire service installations subject to compliance with the Code of Practice for Minimum Fire Service Installations and Equipment, 2005 Edition and according to the following details:

Manufacturer : Prysmian Cables & Systems Ltd., UK

Model : a) FP 100  
b) FP 150  
c) FP 200 Gold  
d) FP 200 Flex  
e) FP 300  
f) FP 300MI  
g) FP 400

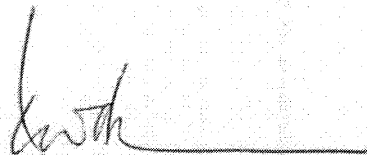
Conductor Size : Single Core  
a) “FP100” from 1.0 to 95 mm<sup>2</sup>  
b) “FP300” from 1.0 to 35 mm<sup>2</sup>  
c) “FP300MI” from 1.0 to 35 mm<sup>2</sup>

/2...



- Conductor Size  
(Cont'd)
- : 2, 3, & 4 Core
- d) "FP150" from 1.0 to 2.5 mm<sup>2</sup>
  - e) "FP200 Gold" from 1.0 to 4.0 mm<sup>2</sup>
  - f) "FP200 Flex" from 1.0 to 2.5 mm<sup>2</sup>
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  - h) "FP400" from 1.0 to 400 mm<sup>2</sup>
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- a) No. 077a (Issue No. 10) of 13.7.2006 with Appendix No. 077a/02 and 077a/03
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- Test Standard & Result
- : For all cable sizes mentioned above -  
Comply with BS 6387: 1994, Category C, W, Z
- Remark
- a) Large single core cables mentioned in the above certificates and which comply with BS 6387 Cat. C only will be considered on project basis.
  - b) All cables shall bear the appropriate LPCB markings.
  - c) This assessment is subject to review by June 2016.

Yours faithfully,



(HO Kwok-fu)

for Director of Fire Services

KFH/

FileCode: prysmian fp 20110623.doc

19<sup>th</sup> June 2014

**Alfred Leung**  
**Building Services Engineer/KLE**  
**Housing Authority,**  
**Hong Kong.**

**RE: Use of Prysmian Cables FP300**

Prysmian Cables FP300 is a FR/XLPE/LSOH cable and so is very similar in construction to XLPE/LSOH. FR, FR/XLPE/LSOH and XLPE/LSOH cables have not got a BS product specification and therefore have no BASEC certificate.

For these cables only a LPCB test certificate for fire performance can be provided which Prysmian Cables FP300 has. Please find Prysmian Cables FP300 LPCB test certificate attached.

Prysmian Cables FP300 cables have seen widespread use and acceptance in Hong Kong being used in projects at HK Airport, the MTRC system, HK Hospital Authority and ASD and EMSD projects.

So we would recommend the use of FP300 cables instead of XLPE/LSOH cables.

Regards

Signed.....



Date.....

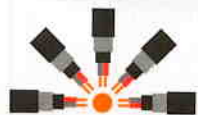
19/6/14.

Name...Andrew Chilton.

For and on behalf of:  
Prysmian Cables & Systems Ltd  
Chickenhall Lane  
Bishopstoke  
Eastleigh  
Hampshire  
SO50 6YU

 **PRYSMIAN**  
CABLES & SYSTEMS  
CHICKENHALL LANE  
BISHOPSTOKE  
EASTLEIGH, HAMPSHIRE  
SO50 6YU





**B B C 電 纜 工 程 有 限 公 司**  
**BBC CABLE ENGINEERING COMPANY LIMITED**



**PRYSMIAN**  
CABLES & SYSTEMS

中低壓電纜香港總代理  
CABLES HONG KONG SOLE AGENT

## **MAJOR JOB REFERENCES OF "PRYSMIAN" CABLES**

### **FP300 1/C XLPE/LSOH FR CABLE**

50MM2:

- ▶ 2012- KAI TAK TAK CRUISE TERMINAL - BYME
- ▶ 2012- HONG KONG BAPTIST UNIVERSITY - HSIN CHONG

70MM2:

- ▶ 2012- KAI TAK TAK CRUISE TERMINAL - BYME

95MM2:

- ▶ 2013- SHATIN FUNG WO ESTATE – GRANDEUR

120MM2:

- ▶ 2011- CIVIL AVIATION DEPARTMENT HEADQUARTERS, TUNG FAI ROAD – BYME
- ▶ 2012- KAI TAK TAK CRUISE TERMINAL - BYME
- ▶ 2013- INTERNATIONAL MAIL CENTRE(KOWLOON BAY) - KRUEGER
- ▶ 2013- NO. 38, REPULSE BAY ROAD – ILE

150MM2:

- ▶ 2011- CIVIL AVIATION DEPARTMENT HEADQUARTERS, TUNG FAI ROAD – BYME
- ▶ 2012- HONG KONG BAPTIST UNIVERSITY - HSIN CHONG
- ▶ 2013- SHATIN FUNG WO ESTATE – GRANDEUR

185MM2:

- ▶ 2012- KAI TAK TAK CRUISE TERMINAL - BYME
- ▶ 2013- INTERNATIONAL MAIL CENTRE (KOWLOON BAY) - KRUEGER



# BBC 電 纜 工 程 有 限 公 司 BBC CABLE ENGINEERING COMPANY LIMITED



**PRYSMIAN**  
CABLES & SYSTEMS

中低壓電纜香港總代理  
CABLES HONG KONG SOLE AGENT

## 240MM2:

- ▶ 2002- MA ON SHAN LINE SHEK MUN STATION - JARDINE
- ▶ 2004- NO.416- 426, KWUN TONG ROAD - BEAUTY SPARK
- ▶ 2005- PACIFIC PLACE – SHINRYO (HK)
- ▶ 2007- MARSH ROAD, WAN CHAI - A. LIBERTY
- ▶ 2010- DEUTSCHE BANK, KOWLOON STATION – SHINRYO CORPORATION
- ▶ 2011- CIVIL AVIATION DEPARTMENT HEADQUARTERS, TUNG FAI ROAD – BYME
- ▶ 2012- KAI TAK TAK CRUISE TERMINAL - BYME
- ▶ 2013- INTERNATIONAL MAIL CENTRE (KOWLOON BAY) – KRUEGER
- ▶ 2013- SHATIN FUNG WO ESTATE – GRANDEUR
- ▶ 2013- NO. 38, REPULSE BAY ROAD – ILE

## 300MM2:

- ▶ 2002- HONG KONG SCIENCE & TECHNOLOGY PARKS - TRIDANT
- ▶ 2009- HSBC MAIN BUILDING - SHUN LING (E&M)
- ▶ 2012- KAI TAK TAK CRUISE TERMINAL - BYME
- ▶ 2012- BANK OF CHINA (FO TAN) - KING FEI
- ▶ 2013- INTERNATIONAL MAIL CENTRE (KOWLOON BAY) - KRUEGER

## 400MM2:

- ▶ 2002- ALEXANDRA HOUSE - CHAT HORN
- ▶ 2005- LOK MA CHAU CONTROL POINT - BYME
- ▶ 2009- NO.100, NATHAN ROAD (THE ONE) - GAMMON
- ▶ 2010- HSBC MAIN BUILDING - GAMMON
- ▶ 2011- CIVIL AVIATION DEPARTMENT HEADQUARTERS, TUNG FAI ROAD – BYME
- ▶ 2012- HONG KONG BAPTIST UNIVERSITY - HSIN CHONG

## 500MM2:

- ▶ 2002- ALEXANDRA HOUSE - CHAT HORN

## 630MM2:

- ▶ 2006- TUEN MUN HIGHWAY - GAMMON
- ▶ 2007- SHAU KEI WAN ALDRICH BAY - NISHIMATSU
- ▶ 2009- HAECO - SMARTPOWER
- ▶ 2011- CIVIL AVIATION DEPARTMENT HEADQUARTERS, TUNG FAI ROAD – BYME





# B B C 電 纜 工 程 有 限 公 司

## BBC CABLE ENGINEERING COMPANY LIMITED



PRYSMIAN  
CABLES & SYSTEMS

中低壓電纜香港總代理  
CABLES HONG KONG SOLE AGENT

### 800MM2:

- ▶ 2002- TSEUNG KWAN O AREA 57 - BEAUTY SPARK
- ▶ 2004- MTR KOWLOON BAY DEPOT - ABB
- ▶ 2005- SKYPIER - CHUN WO
- ▶ 2006- NO.7, AH KUNG KOK FISHMEN'S VILLAGE – GAMMON
- ▶ 2007- MARSH ROAD, WAN CHAI - A. LIBERTY
- ▶ 2008- HONG KONG SKYCITY MARRIOTT HOTEL – BYME
- ▶ 2010- THE UNIVERSITY OF HONG KONG - HSIN CHONG
- ▶ 2010- KWAI CHUNG CUSTOMHOUSE, - MAJESTIC
- ▶ 2014- SOUTH ISLAND LINE WONG CHUK HANG STATION – CHUN WO

### 1000MM2:

- ▶ 2005- THE HIGH COURT - YORDLAND
- ▶ 2006- PRINCE OF WALES HOSPITAL - CHAT HORN
- ▶ 2007- MARSH ROAD, WAN CHAI - A. LIBERTY