



## Type Approval Certificate Extension

This is to certify that Certificate No. 05/60005(E2) for the under noted products is extended and renumbered as shown.

This certificate is issued to:

<b>PRODUCER</b>	Nexans Brasil S.A. Av Coronel Phidias Tavora 100-Km 2 Via Dutra Pavuna 21535-510 Rio De Janeiro Brazil																				
<b>DESCRIPTION</b>	Flame retardant and fire resistant single and multiconductor control, instrumentation and power cables, HF XLPE insulated, thermoplastic compound type SHFI sheath.																				
<b>TYPES</b>	<table><thead><tr><th><u>Flame Retardant</u></th><th><u>Fire Resistant</u></th></tr></thead><tbody><tr><td>AFITOX XP</td><td>AFITOX SM BMIBC / SM BMCBC</td></tr><tr><td>AFITOX XPS</td><td>AFITOX SM BMIS / SM BMCS</td></tr><tr><td>AFITOX XPBC</td><td>AFITOX SM</td></tr><tr><td>AFITOX XP BMI / XP BMC</td><td>AFITOX SM BC</td></tr><tr><td>AFITOX XP BMM</td><td>AFITOX SM AS</td></tr><tr><td>AFITOX XP BMIBC / XP BMCBC</td><td></td></tr><tr><td>AFITOX XP BMIS / XP BMCS</td><td></td></tr><tr><td>AFITOX XP BMMBC</td><td></td></tr><tr><td>AFITOX XP BMMS</td><td></td></tr></tbody></table>	<u>Flame Retardant</u>	<u>Fire Resistant</u>	AFITOX XP	AFITOX SM BMIBC / SM BMCBC	AFITOX XPS	AFITOX SM BMIS / SM BMCS	AFITOX XPBC	AFITOX SM	AFITOX XP BMI / XP BMC	AFITOX SM BC	AFITOX XP BMM	AFITOX SM AS	AFITOX XP BMIBC / XP BMCBC		AFITOX XP BMIS / XP BMCS		AFITOX XP BMMBC		AFITOX XP BMMS	
<u>Flame Retardant</u>	<u>Fire Resistant</u>																				
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AFITOX XP BMMS																					
<b>APPLICATION</b>	Marine, offshore and industrial electrical installations.																				
<b>SPECIFIED STANDARDS</b>	See rating below.																				
<b>Certificate No.</b>	05/60005(E3)																				
<b>Issue Date</b>	21 June 2011																				
<b>Expiry Date</b>	10 August 2015																				
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## RATINGS

### AFITOX SM

#### Construction

Unarmored, flame retardant, fire resistant, halogen free, low smoke electric cables. Stranded plain or tinned annealed copper conductor, mica tape, HF XLPE insulation, thermoplastic compound type SHF1 outer sheathing.

#### Sizes

1x4mm<sup>2</sup> to 1x240mm<sup>2</sup>; 2x1.5mm<sup>2</sup> to 2x25mm<sup>2</sup>; 3x1.5mm<sup>2</sup> to 3x240mm<sup>2</sup>; 4x1.5mm<sup>2</sup> to 4x120mm<sup>2</sup>; (4 to 37)x1.0mm<sup>2</sup>; (5 to 37)x1.5mm<sup>2</sup> and 2.5mm<sup>2</sup>

Voltage rating: 0.6/1 kV

Max. Conductor Temp: 90°C

#### Standards

IEC60092-350(1998), 60092-351(2004), 60092-353(1995), 60092-359(1999), 60331, 60332-3(1992), 60754-1(1994), 60754-2(1991), 61034-2

### AFITOX SM BMIBC / SM BMCBC / SM BMIS / SM BMCS

#### Construction

Armored, flame retardant, fire resistant, halogen free, low smoke electric cables. Stranded plain or tinned annealed copper conductor, mica tape, HF XLPE insulation, aluminum polyester tape shielding with copper drain conductor, extruded or lapped inner covering; copper or galvanized steel braid, thermoplastic compound type SHF1 outer sheathing.

#### Sizes

1x2x 0.75mm<sup>2</sup> ; (1 to 30 pairs)x2x(1.0mm<sup>2</sup> and 1.5mm<sup>2</sup>); (1 to 19 triads)x3x(1.0 mm<sup>2</sup> and 1.5mm<sup>2</sup>); 1x4x(1.0 mm<sup>2</sup> and 1.5mm<sup>2</sup>)

Voltage rating: 150/250(300)V

Max. Conductor Temp: 90°C

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## RATINGS ( cont. )

### Standards

IEC 60092-350(1998), 60092-351(2004), 60092-359(1999), 60331, 60332-3(1992), 60754-1(1994), 60754-2(1991), 61034-2, 60092-376

### AFITOX SM BC / SM AS

#### Construction

Armored, flame retardant, fire resistant, halogen free, low smoke electric cables. Stranded plain or tinned annealed copper conductor, mica tape, HF XLPE insulation, extruded or lapped inner covering, copper or galvanized steel braid, thermoplastic compound type SHF1 outer sheathing.

#### Sizes

1x2.5mm<sup>2</sup> to 1x240mm<sup>2</sup>; 2x1.5mm<sup>2</sup> to 2x25mm<sup>2</sup>; 3x1.5mm<sup>2</sup> to 3x240mm<sup>2</sup>; 4x1.5mm<sup>2</sup> to 4x120mm<sup>2</sup>; (4 to 37 conductors)x1.0mm<sup>2</sup>; (5 to 37 conductors)x1.5mm<sup>2</sup> and 2.5mm<sup>2</sup>

Voltage rating: 0.6/1kV

Max. Conductor Temp: 90°C

### Standards

IEC60092-350(1998), 60092-351(2004), 60092-353(1995), 60092-359(1999), 60331, 60332-3(1992), 60754-1(1994), 60754-2(1991), 61034-2

### AFITOX XP

#### Construction

Unarmored, flame retardant, halogen free, low smoke electric cables. Stranded plain or tinned annealed copper conductor, HF XLPE insulation, thermoplastic compound type SHF1 outer sheathing.

#### Sizes

1x2.5mm<sup>2</sup> to 1x240mm<sup>2</sup>; 2x1.5mm<sup>2</sup> to 2x120mm<sup>2</sup>; 3x1.5mm<sup>2</sup> to 3x240mm<sup>2</sup>; 4x1.5mm<sup>2</sup> to 4x120mm<sup>2</sup>; (4 to 37 conductors)x1.0 mm<sup>2</sup>; (5 to 37 conductors)x1.5mm<sup>2</sup> and 2.5mm<sup>2</sup>

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## RATINGS ( cont. )

Voltage rating: 0.6/1kV  
Max. Conductor Temp: 90°C

### Standards

IEC 60092-350 (1998), 60092-351 (2004), 60092-353 (1995), 60092-359 (1999), 60332-3 (1992), 60754-1 (1994), 60754-2 (1991), 61034-2

AFITOX XPBC / XPS / XP BMIBC / XP BMCBC / XP BMIS / XP BMCS / XP BMMBC / XP BMMS (60V)

### Construction

Armored, flame retardant, halogen free, low smoke electric cables. Stranded plain or tinned annealed copper conductor, HF XLPE insulation, aluminum polyester tape shielding with copper drain conductor, extruded or lapped inner covering, copper or galvanized steel braid, thermoplastic compound type SHF1 outer sheathing.

### Sizes

(1 to 30 pairs)x2x0,5 mm<sup>2</sup>; 1x4x0.5mm<sup>2</sup>

Voltage rating: 60V  
Max. Conductor Temp: 90°C

### Standards

IEC 60092-350 (1998), 60092-351 (2004), 60092-375, 60092-359 (1999), 60332-3 (1992), 60754-1 (1994), 60754-2 (1991), 61034-2

AFITOX XPBC / XPS / XP BMIBC / XP BMCBC / XP BMIS / XP BMCS / XP BMMBC / XP BMMS (150/250(300)V)

### Construction

Armored, flame retardant, halogen free, low smoke electric cables. Stranded plain or tinned annealed copper conductor, HF XLPE insulation, aluminum polyester tape shielding with copper drain conductor, extruded or lapped inner covering, copper or galvanized steel braid, thermoplastic compound type SHF1 outer sheathing.

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## RATINGS (cont.)

### Sizes

(1 to 30 pairs)x2x(0.75 mm<sup>2</sup> to 2.5mm<sup>2</sup>), (1 or 2 pairs)x0.5mm<sup>2</sup>, (1 to 19 triads)x3x(1.0mm<sup>2</sup> and 1.5mm<sup>2</sup>), 1x4x(0.75 mm<sup>2</sup> to 1.5 mm<sup>2</sup>)

Voltage rating: 150/250(300)V

Max. Conductor Temp: 90°C

### Standards

IEC 60092-350 (1998), 60092-351 (2004), 60092-359 (1999), 60332-3 (1992), 60754-1 (1994), 60754-2 (1991), 61034-2, 60092-376

### AFITOX XP BMI / XP BMC / XPBMM (150/250(300)V)

#### Construction

Unarmored, flame retardant, halogen free, low smoke electric cables. Stranded plain or tinned annealed copper conductor, HF XLPE insulation, aluminum polyester tape shielding with copper drain conductor, thermoplastic compound type SHF1 outer sheathing.

### Sizes

(1 to 30 pairs)x2x(0.75mm<sup>2</sup> to 2.5mm<sup>2</sup>); (1 or 2 pairs)x0.5mm<sup>2</sup>; (1 to 20 triads)x3x(1.0mm<sup>2</sup> and 1.5 mm<sup>2</sup>); 1x4x(0.75mm<sup>2</sup> to 1.5mm<sup>2</sup>)

Voltage rating: 150/250(300)V

Max. Conductor Temp: 90°C

### Standards

IEC 60092-3, 60092-350 (1998), 60092-351 (2004), 60092-359 (1999), 60332-3 (1992), 60754-1 (1994), 60754-2 (1991), 61034-2, 60092-376

### AFITOX XP BMI / XP BMC / XPBMM (60V)

#### Construction

Unarmored, flame retardant, halogen free, low smoke electric cables. Stranded plain or tinned annealed copper conductor, HF XLPE insulation, aluminum polyester tape shielding with copper drain conductor, thermoplastic compound SHF1 outer sheathing.

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## RATINGS ( cont. )

### Sizes

(1 to 30 pairs)x2x0,5 mm<sup>2</sup>; 1x4x0.5mm<sup>2</sup>

Voltage rating: 60V

Max. Conductor Temp: 90°C

### Standards

IEC 60092-350 (1998), 60092-351 (2004), 60092-375, 60092-359 (1999), 60332-3 (1992), 60754-1 (1994), 60754-2 (1991), 61034-2

### AFTOX XPS/XPBC

#### Construction

Armored, flame retardant, halogen free, low smoke electric cables. Stranded plain or tinned annealed copper, HF- XLPE insulation, extruded or lapped inner covering with copper or galvanized steel braid, thermoplastic compound type SHF1 outer sheathing.

### Sizes

1x2.5mm<sup>2</sup> to 1x240mm<sup>2</sup>; 2x1.5mm<sup>2</sup> to 2x150mm<sup>2</sup>; 3x1.5 mm<sup>2</sup> to 3x240mm<sup>2</sup>; 4x1.5 mm<sup>2</sup> to 4x120mm<sup>2</sup>; (4 to 37 conductors) x1.0 mm<sup>2</sup>; (5 to 37 conductors) x1.5 mm<sup>2</sup> and 2.5mm<sup>2</sup>

Voltage rating: 0.6/1 kV

Max. Conductor Temp: 90°C

### Standards

IEC 60092-350 (1998), 60092-351 (2004), 60092-353 (1995), 60092-359 (1999), 60332-3 (1992), 60754-1 (1994), 60754-2 (1991), 61034-2

*"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid certificate."*

*The Design Appraisal Document No. 05/60005(E3) and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

All other details remain as the previous Certificate No. 05/60005(E2) to which this extension should be attached.

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