



Lloyd's  
Register

## LR Type Approval Certificate Extension

*This is to certify that Certificate No. 03/30014 (E3) for the undernoted products is extended, amended and renumbered as shown.*

This certificate is issued to:

<b>PRODUCER</b>	B.V. Twentsche Kabelfabriek Spinnerstraat 15 7480 AA HAAKSBERGEN The Netherlands
<b>PLACE OF PRODUCTION</b>	Spinnerstraat 15 7480 AA HAAKSBERGEN The Netherlands
<b>DESCRIPTION</b>	<ul style="list-style-type: none"><li>- CU conductor, XLPE insulated, braiding and SHF 1 sheathed</li><li>- CU conductor, XLPE insulated, pair aluminium foil, braiding and SHF 1 outer sheathed.</li><li>- CU conductor, XLPE insulated, pair aluminium foil, aluminium screen and SHF 1 outer sheathed.</li></ul>
<b>TYPE</b>	<ul style="list-style-type: none"><li>- CS90 mbzh MarineCom HALOGENFREE, type YOZc 150/250V</li><li>- CS90 mbzh MarineCom HALOGENFREE, type YZafc 150/250V</li><li>- CS90 mbzh Marine2Com HALOGENFREE, type YOZ2c 150/250V</li><li>- CS90 mbzh Marine2Com HALOGENFREE, type YZ2afc 150/250V</li></ul>
<b>APPLICATION</b>	Fixed instrumentation and communication wiring for Marine and Offshore installation.
<b>Certificate No.</b>	16/30019 (E4)
<b>Issue Date</b>	02 January 2017
<b>Expiry Date</b>	01 January 2022
<b>Sheet</b>	1 of 2

H.L. Reekers  
Rotterdam Type Approval  
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**RATINGS**

No. of pairs: 1 to 37      Cross Section Area (mm2)  
0.5, 0.75, 1.0, 1.5, 2.5

Voltage rating : 150/250V  
Maximum rated conductor temp. : 90 °C

**SPECIFIED STANDARDS**

Construction: according IEC 60092-350,  
60092-376, 60092-375  
Conductor: stranded copper to IEC 60228, class  
2 round  
Insulation: XLPE to IEC 60092-351  
Inner sheath: -  
< 6 pairs foil  
> 6 pairs foil  
Pairs aluminium foil screening for  
Marine2Com only  
Braiding: copper wire braiding  
Outer Sheath: SHF 1 to IEC 60092-359  
Flame Retardant: to IEC 60332-3-22 Cat. A  
IEC 60332-1  
Halogen-acid content: to IEC 60754-1  
Smoke Density: to IEC 61034

*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 LR of any modification or changes to the equipment in order to obtain a valid certificate."*

*The attached Design Appraisal Document No. GRO.TA.1605204/1 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

*This certificate is no longer valid when Standards or Rules are amended.*

*All other details remain as the previous certificate no 03/30014(E3) to which this extension should be attached.*

**Certificate No.** 16/30019 (E4)  
**Issue Date** 02 January 2017  
**Expiry Date** 01 January 2022  
**Sheet** 2 of 2

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