

Type Approval Certificate Extension

This is to certify that Certificate No. 99/30002(E1) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

APPLICANT	Kabelbedrijven Draka Nederland B.V. Postbus 1117 1000 BC AMSTERDAM The Netherlands	
PLACES OF PRODUCTION	Draka Kabel B.V. Hamerstraat 2-4 1021 JV AMSTERDAM The Netherlands	Draka Kabel B.V. Abel Tasmanstraat 1 7821 AN EMMEN The Netherlands
DESCRIPTION	Braided, flame retardant, halogen free, low smoke	
TYPE	<u>HUCOM (T) CWB 250V Defence:</u> Cu Conductor, XLPE insulated, multicore overall taped, Screen (tinned) copper wire braiding, SHF 1 outer sheathed <u>HUCOM (T) CWB 250V Defence PSCR:</u> Cu Conductor, XLPE insulated, pair core screened al. taped with tinned copper drain wire, pair overall taped, Screen (tinned) copper wire braiding, SHF1 outer sheathed <u>HUCOM (T) CWB 250V Defence:</u> Cu Conductor, XLPE insulated, pair core, pairs overall taped, screen (tinned) copper wire braiding, SHF1 outer sheathed. <u>HUCOM (T) CWB 250V Defence TSCR:</u> Cu Conductor, XLPE insulated, Triples screened al. taped with tinned copper drain wire, triples overall taped, Screen (tinned) copper wire braiding, SHF1 outer sheathed	

Certificate No.	99/30002(E2)
Issue Date	24 February 2009
Expiry Date	22 January 2014
Sheet	1 of 2

SPECIFIED STANDARD	IEC 60092-350 ed3.0, 351 ed 3.0, 353 ed 2.0, 359 ed1.2 and 375 ed 1.0 IEC 60332-3, part 22 (Cat A) ed 1.0 IEC 60332-1 ed 1.0 IEC 60754-1/2 ed 2.0 VG 95218, teil 64, 65 and 66 (2007) IEC 61034-1 & 2 ed 3.0 IEC 60344 ed 3.0 MSV 34410
APPLICATION	Fixed instrumentation, communication, telecommunication and control cables on ships and offshore installations.
VOLTAGE RATING	250V
MAXIMUM RATED CONDUCTOR TEMP.	90°C

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

The attached Design Appraisal Document No.ROT.TA.0990321/1 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 99/30002(E1) to which this extension should be attached.

This certificate is no longer valid when Standards or Rules are amended.

Certificate No.	99/30002(E2)
Issue Date	24 February 2009
Expiry Date	22 January 2014
Sheet	2 of 2

Type Approval Certificate Extension

This is to certify that Certificate No. 99/30002 for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	Kabelbedrijven Draka Nederland B.V. Postbus 1117 1000 BC AMSTERDAM The Netherlands	
PLACES OF PRODUCTION	Draka Kabel B.V. Hamerstraat 2-4 1021 JV AMSTERDAM The Netherlands	Draka Kabel B.V. Abel Tasmanstraat 1 7821 AN EMMEN The Netherlands
DESCRIPTION	Braided, flame retardant, halogen free, low smoke	
TYPE	<u>HUCOM (T) CWB 250V Defence:</u> Cu Conductor, XLPE insulated, multicore overall taped, Screen (tinned) copper wire braiding, SHF 1 outer sheathed <u>HUCOM (T) CWB 250V Defence PSCR:</u> Cu Conductor, XLPE insulated, pair core screened al. taped with tinned copper drain wire, pair overall taped, Screen (tinned) copper wire braiding, SHF1 outer sheathed <u>HUCOM (T) CWB 250V Defence:</u> Cu Conductor, XLPE insulated, pair core, pairs overall taped, screen (tinned) copper wire braiding, SHF1 outer sheathed. <u>HUCOM (T) CWB 250V Defence TSCR:</u> Cu Conductor, XLPE insulated, Triples screened al. taped with tinned copper drain wire, triples overall taped, Screen (tinned) copper wire braiding, SHF1 outer sheathed	

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SPECIFIED STANDARD	IEC 60092-350, 351, 353, 359 and 375 IEC 60332-3, part 22 (Cat A) IEC 60332-1 IEC 60754-1/2 VG 95218, teil 64, 65 and 66 IEC 61034-1 & 2 IEC 60344
APPLICATION	Fixed instrumentation, communication, telecommunication and control cables on ships and offshore installations.
VOLTAGE RATING	250V
MAXIMUM RATED CONDUCTOR TEMP.	85°C


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

The attached Design Appraisal Document No.ROT.TA.0390358 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 99/30002 to which this extension should be attached.

Certificate No.	99/30002(E1)
Issue Date	23 January 2004
Expiry Date	22 January 2009
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Lloyd's Register EMEA
P.O. Box 701, 3000 AS Rotterdam


W.J. Dijke
Marine Support Group
Lloyd's Register EMEA/Rotterdam Office



LR Type Approval Certificate

This is to certify

that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the LR Type Approval System.

This Certificate is issued to:

PRODUCER Draka Nederland B.V.
Hamerstraat 2-4
1021 JV Amsterdam
The Netherlands

PLACE OF PRODUCTION Draka Kabel B.V.
Hamerstraat 2-4
1021 JV Amsterdam
The Netherlands

PRODUCT DESCRIPTION Braided, flame retardant, halogen free, low smoke

TYPE HUCOM (T) CWB 250V Defence:
Cu Conductor, XLPE insulated, multicore overall taped,
Screen (tinned) copper wire braiding, SHF 1 outer sheathed
HUCOM (T) CWB 250V Defence PSCR:
Cu Conductor, XLPE insulated, pair core screened al. taped
with tinned copper drain wire, pairs
overall taped, Screen (tinned) copper wire braiding, SHF1
outer sheathed

Certificate No. 99/30002

Issue Date 27 January 1999

Expiry Date 26 January 2004

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Lloyd's Register of Shipping
71 Fenchurch Street, London EC3M 4BS


G.J. Vromans
Lloyd's Register



Continuation

HUCOM (T) CWB 250V Defence:

Cu Conductor, XLPE insulated, pair core, pairs overall taped, screen (tinned) copper wire braiding, SHF1 outer sheathed.

HUCOM (T) CWB 250V Defence TSCR:

Cu Conductor, XLPE insulated, Triples screened al. taped with tinned copper drain wire, triples overall taped, Screen (tinned) copper wire braiding, SHF1 outer sheathed

**SPECIFIED
STANDARDS**

Construction:

IEC 92-350, VG 95 218 Teil 64, 65, 66; IEC 92-353

Conductor:

Stranded copper to IEC 344

Insulation:

XLPE to IEC 92-351

Screen:

Aluminium laminate tape, with tinned copper drain wire

Pairs overall tape:

Halogen Free (non-hygroscopic)

Braiding:

(Tinned) copper braided screen to IEC 92.375

Outer Sheath:

SHF1 to IEC 92-359

Flame Retardance:

IEC 332-3 Cat. A to C and IEC 332-1

Smoke density index:

IEC 61034-2

Halogen Content:

IEC 754-1

Acidity of Fumes:

IEC 754-2

Limited Oxygen Index:

IEC 332-3, Annex B

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Continuation

**ADDITIONAL
TEST**

Nato F76 to MSV 34410
ASTM-2 to MSV 34410
Mutual capacitance to IEC 92-375
Characteristic impedance to test spec. CCiTIII.1 to
manufacturer's spec.
Attenuation to test spec. CCiTIII.2 to manufacturer's spec.
Crosstalk to test spec. CCiTIII.4 to manufacturer's spec.

APPLICATION

Fixed instrumentation, communication, telecommunication
and control cables on ships and offshore installations.

RATINGS

Unshielded twisted pairs

<u>No. of pairs</u>	<u>Cross Section Area (in mm²)</u>
1, 2, 3, 4, 5, 7, 10, 14, 18, 24, 30	0,35

Shielded twisted pairs

<u>No. of pairs:</u>	<u>Cross Section Area (in mm²)</u>
3, 4, 7, 12, 14, 20, 24, 30	0,35

Shielded twisted triples

<u>No. of triples:</u>	<u>Cross Section Area (in mm²)</u>
3, 7, 10, 14, 20, 24, 30	0,35

Multicore


<u>No. of cores:</u>	<u>Cross Section Area (in mm²)</u>
5, 7, 10, 14, 24, 30, 36, 44, 60	0,35

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 G.J. Vromans



Continuation

VOLTAGE RATING 250V

**MAXIMUM RATED
CONDUCTOR TEMP.** 85°C

*"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. ROT.TA.9751523 forms a part of this Certificate.

Certificate No. 98/30002

Issue Date 27 January 1999

Expiry Date 26 January 2004

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G.J. Vromans