DNV·GL

Certificate No:
TAE00003D1

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electric Power Cable

with type designation(s)
BOSTRIG-125 Type P, ...PN,
BOSTRIG-125 Type P, SP2kV(HD),
BOSTRIG P - VFD 2kV w/reduced grds

Issued to
Prysmian Cables and Systems USA, LLC
Highland Heights, KY, USA

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Power, Lighting and Control including VFD variants.

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Type	Rated voltage (kV)	Temp. class (°C)
BOSTRIG-125 Type P, ...PN	**0,6/1**	**95**
BOSTRIG-125 Type P, SP2kV(HD)	**2**	**95**
BOSTRIG P - VFD 2kV w/reduced grds	**2**	**95**

Issued at **Høvik** on **2020-11-17**
This Certificate is valid until **2024-12-31**.
DNV GL local station: **New York**

for **DNV GL**

Approval Engineer: **Ivar Bull**

Marta Alonso Pontes
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-007168-5**
Certificate No: **TAE00003D1**

Name & place of manufacturer

Prysmian Power Cables and Systems, Taunton, MA 02780, United States.

Product description

Construction:
Conductor: Tinned stranded copper
Insulation: XLPO
Filler: Flame Retardant, non hygroscopic (as needed)
Outer sheath: SP1 (type N)

Number of cores x conductor cross-section		Type designation
mm^2	AWG/MCM	
1 x 112,6	4/0	SP2KV(HD)-4/0
1 x 133,0	262	SP2KV(HD)-262
1 x 158,6	313	SP2KV(HD)-313
1 x 189,3	373	SP2KV(HD)-373
1 x 225,1	444	SP2KV(HD)-444
1 x 271,2	535	SP2KV(HD)-535
1 x 327,5	646	SP2KV(HD)-646
1 x 393,8	777	SP2KV(HD)-777
1 x 562,8	1111	SP2KV(HD)-1111
2 x 7,57	8	DPN-8
2 x 12,5	6	DPN-6
2 x 18,6	5	DPN-5
2 x 21,5	4	DPN-4
2 x 25,6	3	DPN-3
2 x 30,7	2	DPN-2
2 x 46,0	1	DPN-1
2 x 56,3	1/0	DPN-1/0
2 x 66,5	2/0	DPN-2/0
2 x 92,1	3/0	DPN-3/0
2 x 112,6	4/0	DPN-4/0
2 x 133,0	262	DPN-262
2 x 158,6	313	DPN-313
2 x 189,3	373	DPN-373
2 x 225,1	444	DPN-444
2 x 271,2	535	DPN-535
2 x 327,5	646	DPN-646
2 x 393,8	777	DPN-777
3 x 7,57	8	TPN-8
3 x 12,5	6	TPN-6
3 x 18,6	5	TPN-5
3 x 21,5	4	TPN-4
3 x 25,6	3	TPN-3
3 x 30,7	2	TPN-2
3 x 46,0	1	TPN-1
3 x 56,3	1/0	TPN-1/0
3 x 66,5	2/0	TPN-2/0
3 x 92,1	3/0	TPN-3/0
3 x 112,6	4/0	TPN-4/0
3 x 133,0	262	TPN-262

Number of cores x conductor cross-section		Type designation
mm^2	AWG/MCM	
3 x 158,6	313	TPN-313
3 x 189,3	373	TPN-373
3 x 225,1	444	TPN-444
3 x 271,2	535	TPN-535
3 x 327,5	646	TPN-646
3 x 393,8	777	TPN-777
4 x 7,57	8	FPN-8
4 x 12,5	6	FPN-6
4 x 18,6	5	FPN-5
4 x 21,5	4	FPN-4
4 x 25,6	3	FPN-3
4 x 30,7	2	FPN-2
4 x 46,0	1	FPN-1
4 x 56,3	1/0	FPN-1/0
4 x 66,5	2/0	FPN-2/0
4 x 92,1	3/0	FPN-3/0
4 x 112,6	4/0	FPN-4/0
4 x 133,0	262	FPN-262
4 x 158,6	313	FPN-313
4 x 189,3	373	FPN-373
4 x 225,1	444	FPN-444
4 x 271,2	535	FPN-535
4 x 327,5	646	FPN-646
4 x 393,8	777	FPN-777
5 x 7,57	8	QPN-8
5 x 12,5	6	QPN-6
5 x 18,6	5	QPN-5
5 x 21,5	4	QPN-4
5 x 25,6	3	QPN-3
5 x 30,7	2	QPN-2
5 x 46,0	1	QPN-1
5 x 56,3	1/0	QPN-1/0
5 x 66,5	2/0	QPN-2/0
5 x 92,1	3/0	QPN-3/0
5 x 112,6	4/0	QPN-4/0
7 x 7,57	8	7PN-8
4 x 3,08	12	[FP-12/C(OS)14P-4]N-8

Number of cores x conductor cross-section		Type designation
mm²	AWG/MCM	
4 x 1,94	14	
4 x 7,57	8	[FP-8/C(OS)14P-4]N-8
4 x 1,94	14	
4 x 21,5	4	[FP-4/C(OS)14P-4]N-8
4 x 1,94	14	
4 x 30,7	2	[FP-2/C(OS)14P-4]N-8
4 x 1,94	14	
4 x 46,0	1	[FP-1/C(OS)14P-4]N-8
4 x 1,94	14	
2 x 18,6	5	[DP-2/FP-8/C14P-26/
4 x 7,57	8	TP(I/S)14P-3]N-38
26 x 1,94	14	
3 x2 x1,94	14	
7 x 6,0	9	[C9P-7/C13P-7/
7 x 2,5	13	C15P-12]N-26
12 x 1,5	15	
2 x 0,96	18	C18PN-2
3 x 0,96	18	C18PN-3
4 x 0,96	18	C18PN-4
5 x 0,96	18	C18PN-5
6 x 0,96	18	C18PN-6
7 x 0,96	18	C18PN-7
8 x 0,96	18	C18PN-8
10 x 0,96	18	C18PN-10
12 x 0,96	18	C18PN-12
16 x 0,96	18	C18PN-16
20 x 0,96	18	C18PN-20
24 x 0,96	18	C18PN-24
30 x 0,96	18	C18PN-30
37 x 0,96	18	C18PN-37
44 x 0,96	18	C18PN-44
45 x 0,96	18	C18PN-45
60 x 0,96	18	C18PN-60
91 x 0,96	18	C18PN-91
2 x 1,23	16	C16PN-2
3 x 1,23	16	C16PN-3
4 x 1,23	16	C16PN-4
5 x 1,23	16	C16PN-5
6 x 1,23	16	C16PN-6
7 x 1,23	16	C16PN-7
8 x 1,23	16	C16PN-8
10 x 1,23	16	C16PN-10
12 x 1,23	16	C16PN-12
16 x 1,23	16	C16PN-16
18 x 1,23	16	C16PN-18
20 x 1,23	16	C16PN-20

Number of cores x conductor cross-section		Type designation
mm²	AWG/MCM	
22 x 1,23	16	C16PN-22
24 x 1,23	16	C16PN-24
30 x 1,23	16	C16PN-30
37 x 1,23	16	C16PN-37
44 x 1,23	16	C16PN-44
60 x 1,23	16	C16PN-60
91 x 1,23	16	C16PN-91
2 x 1,94	14	C14PN-2 or DPN-14
3 x 1,94	14	C14PN-3 or TPN-14
4 x 1,94	14	C14PN-4 or FPN-14
5 x 1,94	14	C14PN-5 or QPN-14
6 x 1,94	14	C14PN-6
7 x 1,94	14	C14PN-7
8 x 1,94	14	C14PN-8
10 x 1,94	14	C14PN-10
12 x 1,94	14	C14PN-12
14 x 1,94	14	C14PN-14
16 x 1,94	14	C14PN-16
19 x 1,94	14	C14PN-19
20 x 1,94	14	C14PN-20
24 x 1,94	14	C14PN-24
30 x 1,94	14	C14PN-30
37 x 1,94	14	C14PN-37
44 x 1,94	14	C14PN-44
60 x 1,94	14	C14PN-60
91 x 1,94	14	C14PN-91
2 x 3,08	12	C12PN-2 or DPN-12
3 x 3,08	12	C12PN-3 or TPN-12
4 x 3,08	12	C12PN-4 or FPN-12
5 x 3,08	12	C12PN-5 or QPN-12
6 x 3,08	12	C12PN-6
7 x 3,08	12	C12PN-7
8 x 3,08	12	C12PN-8
10 x 3,08	12	C12PN-10
12 x 3,08	12	C12PN-12
16 x 3,08	12	C12PN-16
20 x 3,08	12	C12PN-20
24 x 3,08	12	C12PN-24
30 x 3,08	12	C12PN-30
37 x 3,08	12	C12PN-37
44 x 3,08	12	C12PN-44
60 x 3,08	12	C12PN-60
91 x 3,08	12	C12PN-91
2 x 5,53	10	C10PN-2 or DPN-10
3 x 5,53	10	C10PN-3 or TPN-10
4 x 5,53	10	C10PN-4 or FPN-10
5 x 5,53	10	C10PN-5 or QPN-10
6 x 5,53	10	C10PN-6

Number of cores x conductor cross-section		Type designation
mm²	AWG/MCM	
7 x 5,53	10	C10PN-7
8 x 5,53	10	C10PN-8

Number of cores x conductor cross-section		Type designation
mm²	AWG/MCM	
9 x 5,53	10	C10PN-9
10 x 5,53	10	C10PN-10

VFD Cables:

Construction:

Conductor: Tinned stranded copper

Insulation: XLPO

Ground conductors: Three symmetrically distributed reduced ground conductors in interstices

Filler: Flame Retardant, non hygroscopic (as needed)

Outer sheath: SP1 (type N)

Number of cores x conductor cross-section:		Reduced grounds	Type designation
mm2	AWG/MCM	SIZE (3)	
3x 7.6 + 3x 3,3	3x 8 AWG	12 AWG	TP(OBS)N-8 w/grds
3x 12.5 + 3x 3,3	3x 6 AWG	12 AWG	TP(OBS)N-6 w/grds
3x 18.5 + 3x 5,2	3x 5 AWG	10 AWG	TP(OBS)N-5 w/grds
3x 21.1 + 3x 5,2	3x 4 AWG	10 AWG	TP(OBS)N-4 w/grds
3x 27.2 + 3x 5,2	3x 3 AWG	10 AWG	TP(OBS)N-3 w/grds
3x 34.0 + 3x 5,2	3x 2 AWG	10 AWG	TP(OBS)N-2 w/grds
3x 43.0 + 3x 5,2	3x 1 AWG	10 AWG	TP(OBS)N-1 w/grds
3x 54.0 + 3x 5,2	3x 1/0 AWG	10 AWG	TP(OBS)N-1/0 w/grds
3x 70.0 + 3x 7,6	3x 2/0 AWG	8 AWG	TP(OBS)N-2/0 w/grds
3x 86.0 + 3x 7,6	3x 3/0 AWG	8 AWG	TP(OBS)N-3/0 w/grds
3x 109.0 + 3x 12,5	3x 4/0 AWG	6 AWG	TP(OBS)N-4/0 w/grds
3x 132.0 + 3x 12,5	3x 262 KCMIL	6 AWG	TP(OBS)N-262 w/grds
3x 159.0 + 3x 12,5	3x 313 KCMIL	6 AWG	TP(OBS)N-313 w/grds
3x 189.0 + 3x 12,5	3x 373 KCMIL	6 AWG	TP(OBS)N-373 w/grds
3x 227.0 + 3x 18,6	3x 444 KCMIL	5 AWG	TP(OBS)N-444 w/grds
3x 273.0 + 3x 18,6	3x 535 KCMIL	5 AWG	TP(OBS)N-535 w/grds
3x 326.0 + 3x 18,6	3x 646 KCMIL	5 AWG	TP(OBS)N-646 w/grds
3x 394.0 + 3x 18,6	3x 777 KCMIL	5 AWG	TP(OBS)N-777 w/grds
3x 562.0 + 3x 21,1	3x 1111 KCMIL	4 AWG	TP(OBS)N-1111 w/grds

Application/Limitation

The requirements of SOLAS Amendments 1981 Chapter II-1, Part D, Reg. 45, 5.2 (provision to be taken to limit Fire Propagation along Bunches of Cables or Wires) are fulfilled without any additional measures.

When HD cables are installed outside enclosure, precautions are to be taken to avoid mechanical damage.

Type Approval documentation

Tests carried out
Test according to IEEE 45 (2002), IEEE 1580 (2010) and IEC 60332-3 cat. A.

Marking of product
Draka 32 BOSTRIG P -Type designation - Number and size of conductors – Voltage or
Draka 32 BOSTRIG P – VFD -Type designation - Number and size of conductors - Voltage.

Periodical assessment
The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine tests (RT) and selected type tests (ref. to applicable class programs) checked (if not available these tests shall be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE