



# DET NORSKE VERITAS

## TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. E-11180

This is to certify that the  
**Electric Power Cable**

with type designation(s)

**Polyrad XT-125, Type P, TP..PCPBS, TP(I/S)..PCPBS, TT(I/S)..PCPBS 0,6/1 kV, Polyrad XT-125, Type P, TP(OS)..PCPBS, TP(I/S-OS)..PCPBS, TT(I/S-OS)..PCPBS 0,6/1 kV**

Manufactured by

**General Cable**  
**WILLIMANTIC CT, United States**

is found to comply with

Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

IEEE 45 1998

Application  
Control.

**Type**

**Voltage class  
(kV)**

**Temp. class  
(°C)**

**Polyrad XT-125, Type P, TP..PCPBS, TP(I/S)..PCPBS, TT(I/S)..PCPBS 0,6/1 kV**  
**Polyrad XT-125, Type P, TP(OS)..PCPBS, TP(I/S-OS)..PCPBS, TT(I/S-OS)..PCPBS**  
**0,6/1 kV**

**0,6/1**  
**0,6/1**

**95**  
**95**

Høvik, 2011-06-22  
for Det Norske Veritas AS



This Certificate is valid until  
**2015-06-30**

*Marit Laumann*

**Marit Laumann**  
**Head of Section**

DNV local office:  
**New York**

*Ivar Bull*

**Ivar Bull**  
**Surveyor**

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.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Certificate No.: E-11180  
 File No.: 827.10  
 Job Id.: 262.1-004504-2

## Product description

Type:

POLYRAD XT-125, Type P, TP..PCPBS, TP(I/S)..PCPBS, TT(I/S)..PCPBS 0,6/1 kV

POLYRAD XT-125, Type P, TP(OS)..PCPBS, TP(I/S-OS)..PCPBS, TT(I/S\_OS)..PCPBS 0,6/1 kV

Conductors:	Tinned stranded copper
Insulation:	XLPO (Cross-linked Polyethylene) (Type P)
Filler:	Flame Retardant, Non-hygroscopic Polypropylene (as needed)
Screen:	Aluminium/Mylar tape w/ tinned copper drain wire or a tinned Copper wire braid. (I/S and O/S only)
Inner Sheath:	Chlorosulfonated Polyethylene (Type CP)
Metal covering:	Bronze wire braid
Outer Sheath:	Chlorosulfonated Polyethylene (Type CP)

### TP..PCPBS TP(OS)..PCPBS

Number of cores x conductor cross- section		Overall diameter	
mm <sup>2</sup>	AWG/ MCM	mm	inches
1 x 2 x 0,62	20	13,06	0,514
2 x 2 x 0,62	20	16,16	0,636
4 x 2 x 0,62	20	17,87	0,704
7 x 2 x 0,62	20	20,31	0,800
10 x 2 x 0,62	20	25,47	1,003
1 x 2 x 0,96	18	13,56	0,534
2 x 2 x 0,96	18	16,98	0,668
4 x 2 x 0,96	18	18,85	0,742
7 x 2 x 0,96	18	22,55	0,888
10 x 2 x 0,96	18	28,11	1,107
1 x 2 x 1,22	16	13,92	0,548

Number of cores x conductor cross- section		Overall diameter	
mm <sup>2</sup>	AWG/ MCM	mm	inches
2 x 2 x 1,22	16	17,55	0,691
3 x 2 x 1,22	16	18,27	0,719
4 x 2 x 1,22	16	19,54	0,769
5 x 2 x 1,22	16	22,01	0,866
7 x 2 x 1,22	16	23,40	0,921
8 x 2 x 1,22	16	24,91	0,981
10 x 2 x 1,22	16	29,25	1,152
12 x 2 x 1,22	16	30,01	1,181
14 x 2 x 1,22	16	31,25	1,230
24 x 2 x 1,22	16	38,92	1,532

### TP(I/S)..PCPBS TP(I/S-OS)..PCPBS

Number of cores x conductor cross- section		Overall diameter	
mm <sup>2</sup>	AWG/ MCM	mm	inches
1 x 2 x 0,62	20	13,08	0,515
2 x 2 x 0,62	20	17,40	0,685
3 x 2 x 0,62	20	18,67	0,735
4 x 2 x 0,62	20	19,43	0,765
7 x 2 x 0,62	20	23,24	0,915
10 x 2 x 0,62	20	28,83	1,135
19 x 2 x 0,62	20	33,53	1,320
25 x 2 x 0,62	20	38,86	1,530
1 x 2 x 0,96	18	13,46	0,530
2 x 2 x 0,96	18	18,29	0,720
3 x 2 x 0,96	18	19,30	0,760
4 x 2 x 0,96	18	21,59	0,850
5 x 2 x 0,96	18	22,99	0,905
6 x 2 x 0,96	18	24,64	0,970
7 x 2 x 0,96	18	24,64	0,970
8 x 2 x 0,96	18	25,91	1,020
10 x 2 x 0,96	18	30,48	1,200
12 x 2 x 0,96	18	30,86	1,215
14 x 2 x 0,96	18	33,15	1,305
16 x 2 x 0,96	18	34,54	1,360

Number of cores x conductor cross- section		Overall diameter	
mm <sup>2</sup>	AWG/ MCM	mm	inches
20 x 2 x 0,96	18	37,85	1,490
24 x 2 x 0,96	18	41,66	1,640
1 x 2 x 1,22	16	13,72	0,540
2 x 2 x 1,22	16	18,80	0,740
3 x 2 x 1,22	16	19,68	0,775
4 x 2 x 1,22	16	21,97	0,865
5 x 2 x 1,22	16	23,75	0,935
6 x 2 x 1,22	16	25,27	0,995
7 x 2 x 1,22	16	26,31	1,036
8 x 2 x 1,22	16	28,07	1,105
10 x 2 x 1,22	16	31,75	1,250
12 x 2 x 1,22	16	32,64	1,285
14 x 2 x 1,22	16	34,04	1,340
15 x 2 x 1,22	16	34,92	1,375
16 x 2 x 1,22	16	35,94	1,415
20 x 2 x 1,22	16	39,37	1,550
22 x 2 x 1,22	16	41,02	1,615
24 x 2 x 1,22	16	44,58	1,755
1 x 2 x 1,94	14	14,60	0,575
2 x 2 x 1,94	14	20,32	0,800



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Number of cores x conductor cross- section		Overall diameter	
mm <sup>2</sup>	AWG/ MCM	mm	inches
3 x 2 x 1,94	14	21,97	0,865
4 x 2 x 1,94	14	24,13	0,950
5 x 2 x 1,94	14	26,03	1,025
6 x 2 x 1,94	14	28,32	1,115
7 x 2 x 1,94	14	28,32	1,115
12 x 2 x 1,94	14	36,19	1,425

Number of cores x conductor cross- section		Overall diameter	
mm <sup>2</sup>	AWG/ MCM	mm	inches
20 x 2 x 1,94	14	39,24	1,545
30 x 2 x 1,94	14	53,85	2,120
1 x 2 x 3,08	12	15,62	0,615
10 x 2 x 3,08	12	38,73	1,525
12 x 2 x 3,08	12	39,75	1,565
1 x 2 x 5,52	10	17,14	0,675

TT(I/S)..PCPBS TT(I/S-OS)..PCPBS

Number of cores x conductor cross- section		Overall diameter	
mm <sup>2</sup>	AWG/ MCM	mm	inches
1 x 3 x 0,96	18	13,84	0,545
2 x 3 x 0,96	18	18,29	0,720
3 x 3 x 0,96	18	20,45	0,805
4 x 3 x 0,96	18	22,86	0,900
5 x 3 x 0,96	18	24,51	0,965
6 x 3 x 0,96	18	26,29	1,035
7 x 3 x 0,96	18	26,29	1,035
1 x 3 x 1,22	16	14,22	0,560
2 x 3 x 1,22	16	19,30	0,760
3 x 3 x 1,22	16	21,21	0,835

Number of cores x conductor cross- section		Overall diameter	
mm <sup>2</sup>	AWG/ MCM	mm	inches
4 x 3 x 1,22	16	23,75	0,935
5 x 3 x 1,22	16	25,53	1,005
6 x 3 x 1,22	16	29,72	1,170
7 x 3 x 1,22	16	29,72	1,170
8 x 3 x 1,22	16	32,26	1,270
12 x 3 x 1,22	16	37,46	1,475
16 x 3 x 1,22	16	40,89	1,610

### 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.

### Type Approval documentation

Data sheets: BR-782 dated 29.03.99  
 Test reports: ITS No: J97007096-001 dated 09.09.97

### Tests carried out

Type tests according to IEEE 45, IEC 60092-3 and IEC 60332-3 cat.A

### Marking of product

POLYRAD XT-125, Type P TP..PCPBS or TP(I/S)..PCPBS or TT(I/S)..PCPBS or TP(OS)..PCPBS or TP(I/S-OS)..PCPBS or TT(I/S-OS)..PCPBS size, 0,6/1 kV

### Certificate retention survey

The scope of the retention/renewal survey is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the survey are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and RT to 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.

Survey to be performed at least every second year.

END OF CERTIFICATE