

BLUELINE - CABLES

FOR SHIPBUILDING



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APPLICATIONS

Our halogen-free SABIX® BlueLine cables are appropriate for flexible use below deck as well as on deck of ships with protected laying without being in permanent contact with oils and fuels. The flexible construction and small diameter enables a comfortable laying even in narrow spaces.

Our type BlueLine TA 180 C is appropriate for use under extreme ambient conditions. It is applied in machine rooms on ships for example as connection cable for the control of ships diesel engines. It shows a very good resistance against high temperatures as well as against oils and chemicals.

The DR 750 P Offshore is a DNV-GL approved reeling cable for the application on ships and for offshore use. The robust construction is appropriate for reeling applications with high mechanical stress. Application fields of the DR 750 P Offshore are offshore cranes, deck machines, working platforms, lifts, lifting and conveyor technique on ships and offshore facilities.

WHO WE ARE

A SURVEY

70 years of experience in temperature measurement and control technique as well as in cable production have made a one man business a company with nearly 500 staff members. Our strength is not only the production of standard products but also the development and manufacturing of special products acc. to customers' specifications. Every year we manufacture more than 1500 special products on our customers' request. Every single product is a challenge for our technical team. We at **SAB** Bröckskes see ourselves as manufacturer and service provider - in the sense of real partnership and customer oriented work.

The quality of our products is known in more than 40 countries worldwide. Our customers have tested our products intensively and confirm that they have a longer service life than others. In all product ranges we are certified acc. to ISO 9001:2008. Besides we established an environmental management system for our company acc. to ISO 14001:2004, an occupational health and safety management acc. to NLF/ILO-OSH 2001 and OHSAS 18001:2007 as well as an energy management system acc. to DIN EN ISO 50001:2011. And our future slogan is:

WE GO FORWARD!

FOUNDED:	1947 by Peter Bröckskes sen. an independent, medium-sized company.
CEO:	Peter Bröckskes and Sabine Bröckskes-Wetten
PLANT/LOCATION:	In Viersen (Lower Rhine) 110.000 m ² company site. Own manufacturing from copper conductor to outer sheath. VDE proved burnchamber and laboratory within the company.
EMPLOYEES/WORKERS:	Approx. 420 at the plant in Viersen, 500 worldwide
YEARLY SALES:	Approx. 95 Mio. € worldwide
PRODUCTS:	Special Cables Temperature Measurement Cable Harnessing

CERTIFICATES AND APPROVALS:



Quality management system acc. to ISO 9001:2008 for every manufacturing field

Environmental management system acc. to ISO 14001:2004

Occupational health and safety management acc. to NLF/ILO-OSH 2001 and OHSAS 18001:2007

Energy management system acc. to DIN EN ISO 50001:2011

TYPE APPROVALS



DNV-GL
Certificate No: **TAE0000002**

TYPE APPROVAL CERTIFICATE

This is to certify:
That the Electric Power Cable
with type designation(s)
DR 750 P Offshore,
Issued to
SAB Bröckskes GmbH & Co. KG
Viersen, Germany
is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards
IEC 60092-353 (2011-08)
IEC 60332-1-2 (2004-07)
IEC 60754-1 (2011-11)

Application :
Shipboard and offshore reeling power cables. Flame retardant, low halogen.

Type	Voltage class (kV)	Temp. class (°C)
DR 750 P Offshore	0,6/1	90

This Certificate is valid until **2019-06-30**.
Issued at **Høvik** on **2015-07-08**

DNV GL local station: **Essen**

Approval Engineer: **Ludovico Gullifa**

for **DNV GL**
Quality Support to Owners, and Type
Approval (DNV GL Class, Rules,
Pricing) since 10.07.2010, as member of
Mart Laumann
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.

Form code: 1A 1413a Revision: 2015-05 www.dnvgl.com Page 1 of 3
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Lloyd's Register

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	SAB BRÖCKSKES GmbH & Co. KG
PLACE OF PRODUCTION	Greifrather Str. 204 - 212 b 41749 Viersen Germany
DESCRIPTION	Halogen free, flame retardant data cable with optional screen U ₀ /U = 150/250V U ₀ = 350V (maximum)
TYPE	SABIX BL 405 FRNC (without screen) SABIX BL 415 C FRNC (with screen) SABIX BL 445 C FRNC TP (with screen and twisted pairs)
APPLICATION	Flexible data cable for instrumentation circuits for fixed electrical installation in ships and on offshore platforms.
STANDARDS	Product Specification SABIX BL 405, 415 and 445 - Version C (06/05/2011) EN 50290-2-26 (VDE 0819-106): 2008 EN 50290-2-27 (VDE 0819-107): 2008 EN 50288-7 (VDE0819-7)2006
RATING	Cross section: 0.14...2,5mm ²
OTHER CONDITIONS	An overall tinned copper braid is recommended whenever electrical interference distorts signal transmission or when EMI emissions need to be suppressed.
Certificate No.	11/20026
Issue Date	29 June 2011
Expiry Date	28 June 2016
Sheet	1 of 2

Martin Lange
Martin Lange
Hamburg Design Support Centre
Lloyd's Register EMEA

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

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ABS

CERTIFICATE NUMBER: 16-HG1617003-PDA DATE: 12 May 2016

ABS TECHNICAL OFFICE
Hamburg Engineering Department

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of **SAB BROECKSKES GMBH** assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: Cable, Flame Retardant Halogen Free Electric Cables
Model: SABIX BL 400 FRNC; SABIX BL 438 C FRNC screened
This Product Design Assessment (PDA) Certificate 16-HG1617003-PDA, dated 12/May/2016 remains valid until 11/May/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING
U. Numeraki
Uf Numeraki
Engineer/Consultant

NOTES: This certificate and/or compliance with one or more of the Rules, Codes, standards or other content of ABS is a statement, subject to the conditions stated herein, that the design of the product, as shown, complies with the applicable sections of the Rules. This assessment does not constitute a warranty of fitness for use or a guarantee of performance. The assessment is based on the information provided to the Bureau and is not intended to be a substitute for a full review of the design and construction of the product. The assessment is based on the information provided to the Bureau and is not intended to be a substitute for a full review of the design and construction of the product. The assessment is based on the information provided to the Bureau and is not intended to be a substitute for a full review of the design and construction of the product.

RINA

TYPE APPROVAL CERTIFICATE

No. ELE134015XG/003

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

Description	Halogen free, flame retardant data cable SABIX BL 405 FRNC; SABIX BL 415 C FRNC; SABIX BL 445 C FRNC TP
Applicant	SAB BRÖCKSKES GmbH & Co. KG GREIFRATHER STR. 204-212 B D-41749 VIERSSEN - GERMANY
Manufacturer	SAB BRÖCKSKES GmbH & Co. KG
Place of manufacture	GREIFRATHER STR. 204-212 B D-41749 VIERSSEN - GERMANY
Reference standards	IEC 60228; IEC 60811; IEC 60332-1-2; IEC 60332-3-25; IEC 60332-3-22

Issued in **HAMBURG** on **September 21, 2015**. This Certificate is valid until **September 21, 2020**


Giuseppe Russo
RINA Services S.p.A.
Giuseppe Russo

This certificate consists of this page and 1 enclosure

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CABLES FOR SHIPBUILDING

SELECTION TABLE



		Cable type	CAT ^{Line} CAT 5e BL	CAT ^{Line} CAT 6A BL	CAT ^{Line} CAT 7A BL	SABIX [®] BL 405 FRNC	SABIX [®] BL 415 C FRNC	SABIX [®] BL 445 C FRNC TP	SABIX [®] BL 400 FRNC	SABIX [®] BL 438 C FRNC	SABIX [®] BL 410 FRNC	SABIX [®] BL 412 C FRNC	BlueLine TA 180 C	DR 750 P Offshore
Construction	ethernet cable		•	•	•									
	data cable					•	•	•						
	control cable								•	•			•	•
	power cable										•	•		
	screened		•	•	•		•	•		•		•	•	
	twisted pairs							•						
Temperature range fixed laying*	+180 °C													
	+ 90 °C													
	+ 70 °C													
	- 40 °C		•	•	•	•	•	•	•	•	•	•	•	•
	- 55 °C													1
Voltage range	peak operating voltage max. 90 V		•	•	•									
	peak operating voltage max. 350 V					•	•	•						
	nominal voltage U _o /U 300/500 V								•	•			•	
	nominal voltage U _o /U 0,6/1 kV										•	•		•
	voltage UL 300 V		•	•	•									
	voltage UL/cUL 600 V												•	
Standards	halogen-free acc. to IEC 60754-1 + EN 60332-1-2		•	•	•	•	•	•	•	•	•	•		•
	fire performance: no flame propagation acc. to IEC 60332-3-22 + VDE 0482-332-3-22		•	•	•	•	•	•	•	•	•	•	•	
	fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2		•	•	•	•	•	•	•	•	•	•	•	•
	corrosiveness of conflagration gases: in compliance with IEC 60754-2 + DIN EN 50267-2-2 - no development of corrosive conflagration gases		•	•	•	•	•	•	•	•	•	•		
	smoke density acc. to IEC 61034 + EN 61034		•	•	•	•	•	•	•	•	•	•		
Type approvals	Det Norske Veritas - Germanischer Lloyd					•	•	•	•	•	•	•	•	•
	Lloyd's Register					•	•	•	•	•	•	•		
	American Bureau of Shipping		•	•	•	•	•	•	•	•	•	•		
	Registro Italiano Navale					•	•	•	•	•	•	•		
Characteristics	UL recognized		•	•	•								•	
	cUL recognized												•	
	flexible conductor stranding		•	•	•	•	•	•	•	•	•	•	•	
	extended cross section range					•	•	•						
	oil resistance												•	•
	chemical resistance												•	•
	MUD resistance													•



*The temperature range for flexible application is mentioned on the corresponding catalogue page

¹ lower temperatures on request SAB

CABLES FOR SHIPBUILDING

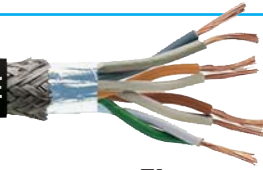


CATLine CAT 5e BL
CAT 6A BL
CAT 7A BL

halogen-free Ethernet cable for maritime use

BL = BlueLine

7AWG 1747-4421 AWM Style 21080 75°C 300V CE



Marking for CATLine CAT 7A BL 17474421:

SAB BRÖCKSKES · D-VIERSEN · CATLine Cat.7A BL 4x2x24/7AWG 1747-4421 AWM Style 21080 75°C 300V CE

Construction:	CATLine CAT 5e BL	CATLine CAT 6A BL	CATLine CAT 7A BL
Dimensions:	2 x 2 x 24 AWG / 2 x 2 x 22 AWG / 4 x 2 x 26 AWG	4 x 2 x 24 AWG / 4 x 2 x 26 AWG	
Conductor:	bare copper strands, fine wires		
Insulation:	special polymer		
Colour code:	blue, yellow, white, orange	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown	
Stranding:	star quad	cores twisted to pairs, pairs together	cores twisted to pairs, pairs screened with foil, pairs together
Wrapping:	alu foil		
Screen:	tinned copper braiding		
Sheath material:	special SABIX®		
Sheath colour:	black		

Technical data:	CATLine CAT 5e BL	CATLine CAT 6A BL	CATLine CAT 7A BL
Item number:	1547-9001 1547-9002	1547-4621	1647-4621 + 1647-4421
Peak operating voltage:	max. 90 V		
Voltage UL:	300 V		
Testing voltage:	core/core 1500 V - core/screen 1200 V		
Temperature range VDE fixed laying: flexible application:	UL: up to +75°C -40/+70 °C -30/+70 °C		
Min. bending radius fixed laying: flexible application (only 7 wires):	5 x d 10 x d		
Characteristic impedance (100 MHz):	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 / CAT 5	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 / CAT 6A	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-9-2 / CAT 7A
Halogen-free:	acc. to IEC 60754-1		
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2, no flame propagation acc. to IEC 60332-3-22 cat. A, UL Horizontal Flame Test FT2, UL AWM Style 21080		
Corrosiveness of conflagration gases:	IEC 60754-2 - no development of corrosive conflagration gases		
Smoke density:	acc. to IEC 61034		
Flexibility:	good		
Absence of harmful substances:	acc. to RoHS directive of the European Union		

Outstanding features:

- ▶ ABS Type Approval
- ▶ TR IEC 60092-370
- ▶ halogen-free
- ▶ asbestos-free
- ▶ flame retardant and self-extinguishing
- ▶ no flame propagation
- ▶ UL recognized
- ▶ EAC approval

item no.	type	no. of cores	cross section AWG	core-ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km
15479001	CATLine CAT 5e BL	4	24/7	approx. 1,25	5,7	22,7	48
15479002	CATLine CAT 5e BL	4	22/7	max. 1,60	6,4	29,7	61
15474621	CATLine CAT 5e BL	8	26/7	max. 1,05	7,3	31,9	64
16474621	CATLine CAT 6A BL	8	26/7	max. 1,05	7,3	31,9	64
16474421	CATLine CAT 6A BL	8	24/7	approx. 1,33	8,3	41,1	81
17474621	CATLine CAT 7A BL	8	26/7	max. 1,60	8,9	38,5	85
17474421	CATLine CAT 7A BL	8	24/7	approx. 1,60	10,5	65,0	116

Other dimensions and colours are possible on request.



SABIX® BL 405 FRNC

halogen-free flexible data cable

BL = BlueLine



350V DNV-GL ABS Assessed Lloyd's Register

Marking for SABIX BL 405 FRNC 64051650: SAB BRÖCKSKES · D-VIERSEN ·
SABIX BL 405 FRNC 16x0,5mm² - IEC 60332-3-22 - 350V DNV-GL ABS Assessed Lloyd's Register CE and current meter marking

Construction:

Conductor:	tinned copper strands acc. to DIN VDE 0812 resp. IEC 60228, EN 60228, VDE 0295, class 5
Insulation:	special SABIX®
Colour code:	with reference to DIN 47100
Stranding:	in layers
Sheath material:	special SABIX® SHF 1 compound acc. to IEC 60092-359
Sheath colour:	pigeon blue (RAL 5014)

Outstanding features:

- ▶ halogen-free
- ▶ asbestos-free
- ▶ no flame propagation
- ▶ flame retardant and self-extinguishing
- ▶ flexible
- ▶ for applications
acc. to Hong Kong Convention
ingredients tested acc. to the requirements
of the Hong Kong Convention (2009) of the IMO
- ▶ approvals:
Det Norske Veritas - Germanischer Lloyd
Lloyd's Register
American Bureau of Shipping
Registro Italiano Navale
- ▶ EAC approval

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius <i>fixed laying:</i>	5 x d
<i>flexible application:</i>	10 x d
Temperature range <i>fixed laying:</i>	-40/+90 °C
<i>flexible application:</i>	-30/+90 °C
Halogen-free:	acc. to EN 50267-2-1 + IEC 60754-1
Fire performance:	no flame propagation acc. to IEC 60332-3-22 + DIN EN 60332-3-22 cat. A. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + DIN EN 60332-1-2
Corrosiveness of conflagration gases:	in compliance with IEC 60754-2 + DIN EN 50267-2-2 - no development of corrosive conflagration gases
Smoke density:	acc. to IEC 61034 + EN 61034
Flexibility:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Possible on request:



- ▶ bare copper strands
- ▶ alternative colour code
and sheath colour

item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
64050214	2 x 0,14	3,6	2,7	18
64050314	3 x 0,14	3,8	4,0	21
64050414	4 x 0,14	4,1	5,4	24
64050514	5 x 0,14	4,5	6,7	29
64050614	6 x 0,14	4,8	8,1	33
64050714	7 x 0,14	4,8	9,4	35
64050814	8 x 0,14	5,5	10,8	42
64051214	12 x 0,14	6,3	16,1	56
64051614	16 x 0,14	7,0	21,5	70
64050225	2 x 0,25	3,9	4,8	22
64050325	3 x 0,25	4,1	7,2	26
64050425	4 x 0,25	4,5	9,6	31
64050525	5 x 0,25	4,9	12,0	37
64050625	6 x 0,25	5,3	14,4	43
64050725	7 x 0,25	5,3	16,8	46
64050825	8 x 0,25	6,2	19,2	57
64051225	12 x 0,25	7,0	28,8	74
64051625	16 x 0,25	7,7	38,4	93
64050234	2 x 0,34	4,3	6,5	28
64050334	3 x 0,34	4,6	9,8	33
64050434	4 x 0,34	5,0	13,1	39
64050534	5 x 0,34	5,4	16,3	47
64050634	6 x 0,34	6,1	19,6	58

item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
64050734	7 x 0,34	6,1	22,8	61
64050834	8 x 0,34	7,0	26,1	73
64051234	12 x 0,34	7,8	39,2	95
64051634	16 x 0,34	9,0	52,5	129
64050250	2 x 0,50	4,7	9,6	35
64050350	3 x 0,50	5,0	14,4	42
64050450	4 x 0,50	5,4	19,2	50
64050550	5 x 0,50	6,1	24,0	64
64050650	6 x 0,50	6,7	28,8	74
64050750	7 x 0,50	6,7	33,6	79
64050850	8 x 0,50	7,7	38,4	95
64051250	12 x 0,50	9,0	57,6	133
64051650	16 x 0,50	10,0	76,8	169
64050275	2 x 0,75	5,2	14,4	43
64050375	3 x 0,75	5,5	21,6	52
64050475	4 x 0,75	6,2	28,8	66
64050575	5 x 0,75	6,8	36,0	79
64050675	6 x 0,75	7,4	43,2	92
64050775	7 x 0,75	7,4	50,4	99
64050875	8 x 0,75	8,8	57,6	126
64051275	12 x 0,75	10,1	86,4	166
64051675	16 x 0,75	11,1	115,2	212

Other dimensions and colours are possible on request.



SABIX® BL 415 C FRNC

halogen-free flexible data cable with overall copper screen

BL = BlueLine



Marking for SABIX BL 415 C FRNC 64150750: SAB BRÖCKSKES · D-VIERSEN ·

SABIX BL 415 C FRNC 7x0,5mm² - IEC 60332-3-22 - 350V DNV-GL ABS Assessed Lloyd's Register CE and current meter marking

Construction:

Conductor:	tinned copper strands acc. to DIN VDE 0812 resp. IEC 60228, EN 60228, VDE 0295, class 5
Insulation:	special SABIX®
Colour code:	with reference to DIN 47100
Stranding:	in layers
Wrapping:	PETP foil
Screen:	tinned copper braiding
Sheath material:	special SABIX® SHF 1 compound acc. to IEC 60092-359
Sheath colour:	pigeon blue (RAL 5014)

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	conductor/conductor 1500 V conductor/screen 1200 V
Min. bending radius	
fixed laying:	5 x d
flexible application:	10 x d
Temperature range	
fixed laying:	-40/+90 °C
flexible application:	-30/+90 °C
Halogen-free:	acc. to EN 50267-2-1 + IEC 60754-1
Fire performance:	no flame propagation acc. to IEC 60332-3-22 + DIN EN 60332-3-22 cat. A. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + DIN EN 60332-1-2
Corrosiveness of conflagration gases:	in compliance with IEC 60754-2 + DIN EN 50267-2-2 - no development of corrosive conflagration gases
Smoke density:	acc. to IEC 61034 + EN 61034
Flexibility:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:

- ▶ halogen-free
- ▶ asbestos-free
- ▶ good EMC characteristics*
- ▶ no flame propagation
- ▶ flame retardant and self-extinguishing
- ▶ flexible
- ▶ for applications
acc. to Hong Kong Convention
ingredients tested acc. to the requirements
of the Hong Kong Convention (2009) of the IMO
- ▶ approvals:
Det Norske Veritas - Germanischer Lloyd
Lloyd's Register
American Bureau of Shipping
Registro Italiano Navale
- ▶ EAC approval

* Copper braiding should be connected circularly to optimize the EMC characteristics

Possible on request:



- ▶ bare copper strands
- ▶ alternative colour code
and sheath colour

item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km	item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
64150214	2 x 0,14	4,1	13,0	25	64150734	7 x 0,34	6,6	42,4	75
64150314	3 x 0,14	4,3	14,4	29	64150834	8 x 0,34	7,5	47,6	88
64150414	4 x 0,14	4,6	19,3	35	64151234	12 x 0,34	8,7	65,3	121
64150514	5 x 0,14	5,0	20,7	40	64151634	16 x 0,34	9,5	81,2	149
64150614	6 x 0,14	5,3	22,2	43	64150250	2 x 0,50	5,2	23,7	43
64150714	7 x 0,14	5,3	23,5	45	64150350	3 x 0,50	5,5	30,3	52
64150814	8 x 0,14	6,2	28,4	57	64150450	4 x 0,50	6,1	35,3	64
64151214	12 x 0,14	6,8	35,8	70	64150550	5 x 0,50	6,6	43,5	77
64151614	16 x 0,14	7,5	43,0	85	64150650	6 x 0,50	7,2	50,1	85
64150225	2 x 0,25	4,4	18,6	32	64150750	7 x 0,50	7,2	54,9	90
64150325	3 x 0,25	4,6	21,1	36	64150850	8 x 0,50	8,6	62,2	116
64150425	4 x 0,25	5,0	23,6	41	64151250	12 x 0,50	9,5	86,6	152
64150525	5 x 0,25	5,4	27,9	49	64151650	16 x 0,50	10,7	124,5	201
64150625	6 x 0,25	5,8	30,5	54	64150275	2 x 0,75	5,7	30,4	52
64150725	7 x 0,25	5,8	32,9	57	64150375	3 x 0,75	6,2	39,2	65
64150825	8 x 0,25	6,7	38,8	71	64150475	4 x 0,75	6,7	48,4	78
64151225	12 x 0,25	7,5	50,3	89	64150575	5 x 0,75	7,3	57,4	93
64151625	16 x 0,25	8,6	62,2	118	64150675	6 x 0,75	7,9	66,9	106
64150234	2 x 0,34	4,8	20,5	37	64150775	7 x 0,75	7,9	74,1	114
64150334	3 x 0,34	5,1	23,8	42	64150875	8 x 0,75	9,3	83,9	142
64150434	4 x 0,34	5,5	29,0	50	64151275	12 x 0,75	10,8	134,2	194
64150534	5 x 0,34	6,1	32,4	61	64151675	16 x 0,75	11,8	169,6	247
64150634	6 x 0,34	6,6	39,1	71					

Other dimensions and colours are possible on request.



SABIX® BL 445 C FRNC TP

halogen-free flexible paired data cable with overall copper screen

BL = BlueLine



Marking for SABIX BL 445 C FRNC TP 64450325: SAB BRÖCKSKES · D-VIERSEN ·
SABIX BL 445 C FRNC TP 3x2x0,25mm² - IEC 60332-3-22 - 350V DNV-GL ABS Assessed Lloyd's Register CE and current meter marking

Construction:

Conductor:	tinned copper strands acc. to DIN VDE 0812 resp. IEC 60228, EN 60228, VDE 0295, class 5
Insulation:	special SABIX®
Colour code:	with reference to DIN 47100
Stranding:	pairwise, pairs in layers
Wrapping:	PETP foil
Screen:	tinned copper braiding
Sheath material:	special SABIX® SHF 1 compound acc. to IEC 60092-359
Sheath colour:	pigeon blue (RAL 5014)

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	conductor/conductor 1500 V conductor/screen 1200 V
Min. bending radius <i>fixed laying:</i>	5 x d
<i>flexible application:</i>	10 x d
Temperature range <i>fixed laying:</i>	-40/+90 °C
<i>flexible application:</i>	-30/+90 °C
Halogen-free:	acc. to EN 50267-2-1 + IEC 60754-1
Fire performance:	no flame propagation acc. to IEC 60332-3-22 + DIN EN 60332-3-22 cat. A. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + DIN EN 60332-1-2
Corrosiveness of conflagration gases:	in compliance with IEC 60754-2 + DIN EN 50267-2-2 - no development of corrosive conflagration gases
Smoke density:	acc. to IEC 61034 + EN 61034
Flexibility:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:

- ▶ halogen-free
- ▶ asbestos-free
- ▶ good EMC characteristics*
- ▶ good transmission rates and crosstalk attenuation
- ▶ no flame propagation
- ▶ flame retardant and self-extinguishing
- ▶ flexible
- ▶ for applications
acc. to Hong Kong Convention
ingredients tested acc. to the requirements
of the Hong Kong Convention (2009) of the IMO
- ▶ approvals:
Det Norske Veritas - Germanischer Lloyd
Lloyd's Register
American Bureau of Shipping
Registro Italiano Navale
- ▶ EAC approval

* Copper braiding should be connected circularly to optimize the EMC characteristics

Possible on request:



- ▶ bare copper strands
- ▶ alternative colour code and sheath colour

item no.	no. of pairs x cross section n x 2 x mm ²	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
64450214	2 x 2 x 0,14	5,3	19,5	37
64450314	3 x 2 x 0,14	5,8	21,4	44
64450414	4 x 2 x 0,14	6,8	30,4	58
64450514	5 x 2 x 0,14	7,4	34,9	68
64450614	6 x 2 x 0,14	7,6	39,8	76
64450814	8 x 2 x 0,14	8,7	47,6	98
64451014	10 x 2 x 0,14	9,5	55,9	114
64451214	12 x 2 x 0,14	10,6	79,9	142
64451814	18 x 2 x 0,14	12,4	102,9	200
64450225	2 x 2 x 0,25	5,8	25,7	44
64450325	3 x 2 x 0,25	6,5	32,1	57
64450425	4 x 2 x 0,25	7,4	40,6	71
64450525	5 x 2 x 0,25	8,7	50,1	96
64450625	6 x 2 x 0,25	8,7	54,9	104
64450825	8 x 2 x 0,25	9,1	67,4	121
64451025	10 x 2 x 0,25	10,6	95,7	156
64451225	12 x 2 x 0,25	11,6	111,9	180
64451825	18 x 2 x 0,25	13,8	171,9	272
64452625	26 x 2 x 0,25	16,3	223,2	368
64450234	2 x 2 x 0,34	6,4	30,7	56
64450334	3 x 2 x 0,34	7,2	40,9	71
64450434	4 x 2 x 0,34	8,7	52,3	97
64450534	5 x 2 x 0,34	9,4	61,6	115

item no.	no. of pairs x cross section n x 2 x mm ²	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
64450634	6 x 2 x 0,34	9,6	68,2	128
64450834	8 x 2 x 0,34	10,8	100,0	164
64451034	10 x 2 x 0,34	11,8	119,7	194
64451234	12 x 2 x 0,34	13,4	138,2	238
64451834	18 x 2 x 0,34	15,8	215,3	357
64450250	2 x 2 x 0,50	7,2	40,5	70
64450350	3 x 2 x 0,50	7,9	52,5	88
64450450	4 x 2 x 0,50	9,5	67,4	120
64450550	5 x 2 x 0,50	10,5	95,6	154
64450650	6 x 2 x 0,50	10,8	105,4	171
64450850	8 x 2 x 0,50	11,9	131,3	207
64451050	10 x 2 x 0,50	13,4	155,9	259
64451250	12 x 2 x 0,50	15,0	212,6	322
64451850	18 x 2 x 0,50	17,4	283,5	451
64450275	2 x 2 x 0,75	7,9	52,5	87
64450375	3 x 2 x 0,75	9,2	69,5	115
64450475	4 x 2 x 0,75	10,7	105,3	156
64450575	5 x 2 x 0,75	11,6	126,3	186
64450675	6 x 2 x 0,75	12,4	141,0	221
64450875	8 x 2 x 0,75	13,8	200,7	284
64451075	10 x 2 x 0,75	15,2	241,6	338
64451275	12 x 2 x 0,75	17,2	283,2	411
64451875	18 x 2 x 0,75	19,4	384,0	553

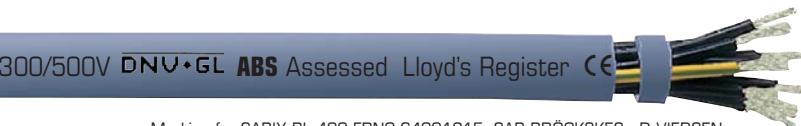
Other dimensions and colours are possible on request.



SABIX® BL 400 FRNC

halogen-free flexible control cable 300/500 V

BL = BlueLine



Marking for SABIX BL 400 FRNC 64001215: SAB BRÖCKSKES · D-VIERSEN ·

SABIX BL 400 FRNC 12x1,5mm² - IEC 60332-3-22 - 300/500V DNV-GL ABS Assessed Lloyd's Register CE and current meter marking

Construction:

Conductor:	tinned copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 5
Insulation:	special SABIX®
Colour code:	black conductors with consecutive numbers acc. to EN 50334 green-yellow earth wire from 3 conductors
Stranding:	in layers
Sheath material:	special SABIX® SHF 1 compound acc. to IEC 60092-359
Sheath colour:	pigeon blue (RAL 5014)

Outstanding features:

- ▶ halogen-free
- ▶ asbestos-free
- ▶ no flame propagation
- ▶ flame retardant and self-extinguishing
- ▶ flexible
- ▶ for applications acc. to Hong Kong Convention
ingredients tested acc. to the requirements of the Hong Kong Convention (2009) of the IMO
- ▶ approvals:
Det Norske Veritas - Germanischer Lloyd
Lloyd's Register
American Bureau of Shipping
Registro Italiano Navale
- ▶ EAC approval

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Testing voltage U:	2000 V acc. to DIN VDE 0281 part 2 + HD 21.2
Min. bending radius	
fixed laying:	4 x d
flexible application:	6 x d
Temperature range	
fixed laying:	-40/+90°C
flexible application:	-30/+90°C
Halogen-free:	acc. to EN 50267-2-1 + IEC 60754-1
Fire performance:	no flame propagation acc. to IEC 60332-3-22 + DIN EN 60332-3-22 cat. A. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + DIN EN 60332-1-2
Corrosiveness of conflagration gases:	in compliance with IEC 60754-2 + DIN EN 50267-2-2 - no development of corrosive conflagration gases
Smoke density:	acc. to IEC 61034 + EN 61034
Flexibility:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Possible on request:



- ▶ bare copper strands
- ▶ alternative colour code and sheath colour

item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
64000205	2 x 0,50	5,3	9,6	42
64000305	3 x 0,50	5,6	14,4	49
64000405	4 x 0,50	6,0	19,2	59
64000505	5 x 0,50	6,6	24,0	72
64000705	7 x 0,50	7,3	33,6	90
64001205	12 x 0,50	9,6	57,6	147
64001805	18 x 0,50	11,4	86,4	212
64000207	2 x 0,75	5,8	14,4	51
64000307	3 x 0,75	6,1	21,6	60
64000407	4 x 0,75	6,7	28,8	74
64000507	5 x 0,75	7,4	36,0	91
64000707	7 x 0,75	8,1	50,4	113
64001207	12 x 0,75	10,9	86,4	187
64001807	18 x 0,75	12,8	129,6	269
64000210	2 x 1,00	6,0	19,2	57
64000310	3 x 1,00	6,3	28,8	68
64000410	4 x 1,00	7,0	38,4	84
64000510	5 x 1,00	7,8	48,0	105

item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
64000710	7 x 1,00	8,4	67,2	131
64001210	12 x 1,00	11,3	115,2	216
64001810	18 x 1,00	13,5	172,8	318
64000215	2 x 1,50	6,7	28,8	73
64000315	3 x 1,50	7,0	43,2	89
64000415	4 x 1,50	7,9	57,6	112
64000515	5 x 1,50	8,6	72,0	136
64000715	7 x 1,50	9,5	100,8	174
64001215	12 x 1,50	12,7	172,8	287
64001815	18 x 1,50	15,3	259,2	426
64000225	2 x 2,50	8,1	48,0	111
64000325	3 x 2,50	8,6	72,0	137
64000425	4 x 2,50	9,5	96,0	171
64000525	5 x 2,50	10,6	120,0	212
64000725	7 x 2,50	11,7	168,0	272
64001225	12 x 2,50	15,7	288,0	452
64001825	18 x 2,50	18,9	432,0	670

Other dimensions and colours are possible on request.



SABIX® BL 438 C FRNC

halogen-free flexible control cable with overall copper screen 300/500 V

BL = BlueLine



Marking for SABIX BL 438 C FRNC 64380515: SAB BRÖCKSKES · D-VIERSEN ·
SABIX BL 438 C FRNC 5x1,5mm² - IEC 60332-3-22 - 300/500V DNV-GL ABS Assessed Lloyd's Register CE and current meter marking

Construction:

Conductor:	tinned copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 5
Insulation:	special SABIX®
Colour code	black conductors with consecutive numbers acc. to EN 50334 green-yellow earth wire from 3 conductors
Stranding:	in layers
Wrapping:	PETP foil
Screen:	tinned copper braiding
Sheath material:	special SABIX® SHF 1 compound acc. to IEC 60092-359
Sheath colour:	pigeon blue (RAL 5014)

Outstanding features:

- ▶ halogen-free
- ▶ asbestos-free
- ▶ good EMC characteristics*
- ▶ no flame propagation
- ▶ flame retardant and self-extinguishing
- ▶ flexible
- ▶ for applications acc. to Hong Kong Convention
ingredients tested acc. to the requirements of the Hong Kong Convention (2009) of the IMO
- ▶ approvals:
Det Norske Veritas - Germanischer Lloyd
Lloyd's Register
American Bureau of Shipping
Registro Italiano Navale
- ▶ EAC approval

* Copper braiding should be connected circularly to optimize the EMC characteristics

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Testing voltage U:	2000 V acc. to DIN VDE 0281 part 2 + HD 21.2, conductor/screen 2000 V
Min. bending radius <i>fixed laying:</i>	5 x d
<i>flexible application:</i>	10 x d
Temperature range <i>fixed laying:</i>	-40/+90 °C
<i>flexible application:</i>	-30/+90 °C
Halogen-free:	acc. to EN 50267-2-1 + IEC 60754-1
Fire performance:	no flame propagation acc. to IEC 60332-3-22 + DIN EN 60332-3-22 cat. A. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + DIN EN 60332-1-2
Corrosiveness of conflagration gases:	in compliance with IEC 60754-2 + DIN EN 50267-2-2 - no development of corrosive conflagration gases
Smoke density:	acc. to IEC 61034 + EN 61034
Flexibility:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Possible on request:



- ▶ bare copper strands
- ▶ alternative colour code and sheath colour

item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
64380205	2 x 0,50	5,8	25,5	50
64380305	3 x 0,50	6,1	30,4	57
64380405	4 x 0,50	6,6	36,9	69
64380505	5 x 0,50	7,1	43,6	82
64380705	7 x 0,50	7,9	55,0	104
64381205	12 x 0,50	10,2	86,7	165
64381805	18 x 0,50	12,3	140,7	251
64380207	2 x 0,75	6,4	30,5	58
64380307	3 x 0,75	6,7	39,3	69
64380407	4 x 0,75	7,3	48,5	84
64380507	5 x 0,75	8,0	57,5	102
64380707	7 x 0,75	8,7	74,2	126
64381207	12 x 0,75	11,7	140,4	221
64381807	18 x 0,75	13,7	189,4	311
64380210	2 x 1,00	6,6	36,9	65
64380310	3 x 1,00	6,9	48,3	77
64380410	4 x 1,00	7,5	59,7	93
64380510	5 x 1,00	8,4	71,7	118

item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
64380710	7 x 1,00	9,0	93,4	145
64381210	12 x 1,00	12,1	169,4	250
64381810	18 x 1,00	14,6	258,5	378
64380215	2 x 1,50	7,3	48,5	80
64380315	3 x 1,50	7,6	64,5	97
64380415	4 x 1,50	8,4	81,3	120
64380515	5 x 1,50	9,3	98,2	150
64380715	7 x 1,50	10,1	129,9	188
64381215	12 x 1,50	13,5	232,5	323
64381815	18 x 1,50	16,3	357,1	488
64380225	2 x 2,50	8,7	71,8	115
64380325	3 x 2,50	9,3	98,2	145
64380425	4 x 2,50	10,1	125,1	180
64380525	5 x 2,50	11,5	167,9	237
64380725	7 x 2,50	12,5	222,4	299
64381225	12 x 2,50	16,8	386,4	513
64381825	18 x 2,50	20,1	556,3	753

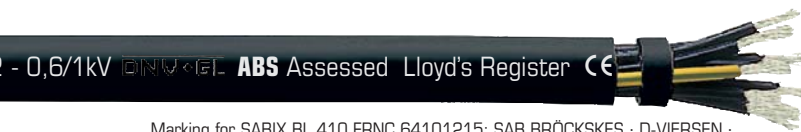
Other dimensions and colours are possible on request.



SABIX® BL 410 FRNC

halogen-free flexible power cable 0,6/1 kV

BL = BlueLine



Marking for SABIX BL 410 FRNC 64101215: SAB BRÖCKSKES · D-VIERSEN ·

SABIX BL 410 FRNC 12x1,5mm² - IEC 60332-3-22 - 0,6/1kV DNV-GL ABS Assessed Lloyd's Register CE and current meter marking

Construction:

Conductor:	tinned copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 5
Insulation:	special SABIX®
Colour code	black conductors with consecutive numbers acc. to EN 50334 green-yellow earth wire from 3 conductors
Stranding:	in layers
Sheath material:	special SABIX® SHF 1 compound acc. to IEC 60092-359
Sheath colour:	black (RAL 9005)

Outstanding features:

- ▶ halogen-free
- ▶ asbestos-free
- ▶ no flame propagation
- ▶ flame retardant and self-extinguishing
- ▶ flexible
- ▶ for applications acc. to Hong Kong Convention
ingredients tested acc. to the requirements of the Hong Kong Convention (2009) of the IMO
- ▶ approvals:
Det Norske Veritas - Germanischer Lloyd
Lloyd's Register
American Bureau of Shipping
Registro Italiano Navale
- ▶ EAC approval

Technical data:

Nominal voltage:	U ₀ /U 0,6/1 kV
Testing voltage U:	4000 V acc. to DIN VDE 0281 part 2 + HD 21.2
Min. bending radius	
fixed laying:	4 x d
flexible application:	6 x d
Temperature range	
fixed laying:	-40/+90 °C
flexible application:	-30/+90 °C
Halogen-free:	acc. to EN 50267-2-1 + IEC 60754-1
Fire performance:	no flame propagation acc. to IEC 60332-3-22 + DIN EN 60332-3-22 cat. A. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + DIN EN 60332-1-2
Corrosiveness of conflagration gases:	in compliance with IEC 60754-2 + DIN EN 50267-2-2 - no development of corrosive conflagration gases
Smoke density:	acc. to IEC 61034 + EN 61034
Flexibility:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Possible on request:



- ▶ bare copper strands
- ▶ alternative colour code and sheath colour

item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
64100215	2 x 1,50	8,9	28,8	120
64100315	3 x 1,50	9,4	43,2	137
64100415	4 x 1,50	10,2	57,6	164
64100515	5 x 1,50	11,4	72,0	205
64100715	7 x 1,50	12,4	100,8	250
64101015	10 x 1,50	15,9	144,0	349
64101215	12 x 1,50	16,6	172,8	407
64101415	14 x 1,50	17,4	201,6	459
64101815	18 x 1,50	19,5	259,2	589
64100225	2 x 2,50	9,7	48,0	151
64100325	3 x 2,50	10,3	72,0	176
64100425	4 x 2,50	11,4	96,0	219
64100525	5 x 2,50	12,5	120,0	266
64100725	7 x 2,50	13,8	168,0	337
64101025	10 x 2,50	17,7	240,0	471
64101225	12 x 2,50	18,2	288,0	540
64101425	14 x 2,50	19,3	336,0	622
64101825	18 x 2,50	21,7	432,0	797
64100240	2 x 4,00	11,9	76,8	230
64100340	3 x 4,00	12,6	115,2	269
64100440	4 x 4,00	14,0	153,6	334

item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
64100540	5 x 4,00	15,4	192,0	410
64100740	7 x 4,00	17,0	268,8	520
64100260	2 x 6,00	12,9	115,2	287
64100360	3 x 6,00	13,9	172,8	349
64100460	4 x 6,00	15,2	230,4	427
64100560	5 x 6,00	17,0	288,0	535
64100760	7 x 6,00	18,5	403,2	674
64100361	3 x 10,0	16,8	288,0	535
64100461	4 x 10,0	18,4	384,0	659
64100561	5 x 10,0	20,5	480,0	825
64100362	3 x 16,0	20,0	460,8	778
64100462	4 x 16,0	22,1	614,4	974
64100562	5 x 16,0	24,7	768,0	1218
64100363	3 x 25,0	24,1	720,0	1158
64100463	4 x 25,0	26,7	960,0	1453
64100563	5 x 25,0	29,9	1200,0	1828
64100364	3 x 35,0	27,5	1008,0	1567
64100464	4 x 35,0	30,4	1344,0	1968
64100365	3 x 50,0	31,1	1440,0	2171
64100465	4 x 50,0	34,3	1920,0	2738

Other dimensions and colours are possible on request.



SABIX® BL 412 C FRNC

halogen-free flexible power cable with overall copper screen 0,6/1 kV

BL = BlueLine



Marking for SABIX BL 412 C FRNC 64121215: SAB BRÖCKSKES · D-VIERSEN ·
SABIX BL 412 C FRNC 12x1,5mm² - IEC 60332-3-22 - 0,6/1kV DNV-GL ABS Assessed Lloyd's Register CE and current meter marking

Construction:

Conductor:	tinned copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 5
Insulation:	special SABIX®
Colour code:	black conductors with consecutive numbers acc. to EN 50334 green-yellow earth wire from 3 conductors
Stranding:	in layers
Screen:	tinned copper braiding
Sheath material:	special SABIX® SHF 1 compound acc. to IEC 60092-359
Sheath colour:	black (RAL 9005)

Outstanding features:

- ▶ halogen-free
- ▶ asbestos-free
- ▶ good EMC characteristics*
- ▶ no flame propagation
- ▶ flame retardant and self-extinguishing
- ▶ flexible
- ▶ for applications acc. to Hong Kong Convention
ingredients tested acc. to the requirements of the Hong Kong Convention (2009) of the IMO
- ▶ approvals:
Det Norske Veritas - Germanischer Lloyd
Lloyd's Register
American Bureau of Shipping
Registro Italiano Navale
- ▶ EAC approval

* Copper braiding should be connected circularly to optimize the EMC characteristics

Technical data:

Nominal voltage:	U ₀ /U 0,6/1 kV
Testing voltage U:	4000 V acc. to DIN VDE 0281 part 2 + HD 21.2 conductor/screen 2000 V
Min. bending radius <i>fixed laying</i>	5 x d
<i>flexible application:</i>	10 x d
Temperature range <i>fixed laying</i>	-40/+90 °C
<i>flexible application:</i>	-30/+90 °C
Halogen-free:	acc. to EN 50267-2-1 + IEC 60754-1
Fire performance:	no flame propagation acc. to IEC 60332-3-22 + DIN EN 60332-3-22 cat. A. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + DIN EN 60332-1-2
Corrosiveness of conflagration gases:	in compliance with IEC 60754-2 + DIN EN 50267-2-2 - no development of corrosive conflagration gases
Smoke density:	acc. to IEC 61034 + EN 61034
Flexibility:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Possible on request:



- ▶ bare copper strands
- ▶ alternative colour code and sheath colour

item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable- weight ≈ kg/km
64120215	2 x 1,50	9,4	55,0	114
64120315	3 x 1,50	9,9	72,2	141
64120415	4 x 1,50	10,9	105,2	181
64120515	5 x 1,50	12,1	126,2	227
64120715	7 x 1,50	13,1	160,4	275
64121015	10 x 1,50	17,0	253,8	416
64121215	12 x 1,50	17,5	283,2	465
64121415	14 x 1,50	18,3	313,1	516
64121815	18 x 1,50	20,4	384,8	654
64120225	2 x 2,50	10,2	77,1	140
64120325	3 x 2,50	11,0	119,6	189
64120425	4 x 2,50	12,1	150,2	236
64120525	5 x 2,50	13,2	179,6	287
64120725	7 x 2,50	14,7	253,9	376
64121025	10 x 2,50	18,6	351,9	525
64121225	12 x 2,50	19,1	411,8	600
64121425	14 x 2,50	20,2	461,2	683
64121825	18 x 2,50	22,6	572,7	865
64120240	2 x 4,00	12,6	131,3	222
64120340	3 x 4,00	13,3	174,9	275
64120440	4 x 4,00	14,9	239,6	361

item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
64120540	5 x 4,00	16,3	290,3	444
64120740	7 x 4,00	17,9	379,7	560
64120260	2 x 6,00	13,8	175,0	278
64120360	3 x 6,00	14,8	258,8	366
64120460	4 x 6,00	16,1	328,4	453
64120560	5 x 6,00	17,9	398,9	568
64120760	7 x 6,00	19,6	527,5	723
64120361	3 x 10,0	17,7	398,7	542
64120461	4 x 10,0	19,5	508,1	688
64120561	5 x 10,0	21,4	618,8	853
64120362	3 x 16,0	20,9	598,7	769
64120462	4 x 16,0	23,0	755,9	970
64120562	5 x 16,0	25,6	938,8	1232
64120363	3 x 25,0	25,2	889,8	1126
64120463	4 x 25,0	27,8	1135,9	1431
64120563	5 x 25,0	30,8	1400,7	1805
64120364	3 x 35,0	28,4	1185,4	1475
64120464	4 x 35,0	31,3	1546,6	1899
64120365	3 x 50,0	32,0	1645,3	2029
64120465	4 x 50,0	35,2	2149,1	2619

Other dimensions and colours are possible on request.



BlueLine TA 180 C

flexible FEP-Connection cables with overall copper screen



Marking for BlueLine TA 180 C 37530715: SAB BRÜCKSKES · D-VIERSEN ·

BL TA 180 C 7 x 1,5 mm² - IEC 60332-3-22 - 300/500V DNV-GL RL AWM Style 21618 150°C 600V RL AWM I/II A/B 150°C 600V FT1 FT2 CE

Construction:

Conductor:	tinned copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 5
Insulation:	FEP
Colour code:	black conductors with consecutive numbers acc. to EN 50334, without green-yellow earth wire
Stranding:	in layers
Inner sheath:	Besilen®
Screen:	tinned copper braiding
Sheath material:	FEP
Sheath colour:	black (RAL 9005)

Outstanding features:

- ▶ no flame propagation
- ▶ flame retardant and self-extinguishing
- ▶ good EMC characteristics*
- ▶ oil and fuel resistant
- ▶ good chemical resistance
- ▶ high cold and heat resistance
- ▶ asbestos-free
- ▶ approval:
Det Norske Veritas - Germanischer Lloyd
UL/cUL recognized
- ▶ EAC approval

* Copper braiding should be connected circularly to optimize the EMC characteristics

Technical data:

Nominal voltage U₀/U:	300/500 V	
Nominal voltage UL/cUL:	600 V	
Testing voltage:	2000 V (AC)	
Min. bending radius		
<i>fixed laying</i>	5 x d	
<i>flexible application:</i>	10 x d	
Radiation resistance:	1 x 10 ⁷ cJ/kg	
Temperature range	DIN VDE	UL/cUL: up to +150 °C
<i>fixed laying:</i>	-55/+180 °C	
<i>flexible application:</i>	-55/+180 °C	
Fire performance:	no flame propagation acc. to IEC 60332-3-22 + DIN EN 60332-3-22 cat. A. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + DIN EN 60332-1-2	
Chem. resistance:	very good against acids, halogens, bases, chlorinated solvents as well as organic and inorganic compounds	
Oil and fuel resistance:	very good	
Flexibility:	good	
Halogen-free:	not fulfilled	
Absence of harmful substances:	acc. to RoHS directive of the European Union	

item no.	no. of cores x cross section n x mm ²	outer-ø approx. mm	copper figure kg/km	cable weight ≈ kg/km
37530207	2 x 0,75	5,7	32,9	63
37530307	3 x 0,75	6,0	40,2	68
37530407	4 x 0,75	6,2	50,3	81
37530507	5 x 0,75	7,1	59,6	99
37530607	6 x 0,75	7,7	67,0	116
37530707	7 x 0,75	7,7	74,2	121
37530807	8 x 0,75	8,9	86,7	152
37531207	12 x 0,75	10,2	134,3	203
37531607	16 x 0,75	11,4	169,8	261
37532007	20 x 0,75	12,8	229,5	334
37530210	2 x 1,00	5,9	37,8	64
37530215	2 x 1,50	6,6	50,4	81
37530315	3 x 1,50	6,9	64,6	97
37530515	5 x 1,50	8,2	98,2	145
37530615	6 x 1,50	9,0	115,5	171
37530715	7 x 1,50	9,0	129,9	182
37531215	12 x 1,50	12,0	232,5	309
37530220	2 x 2,00	7,5	62,2	107
37530320	3 x 2,00	8,1	83,8	130

Other dimensions and colours are possible on request.

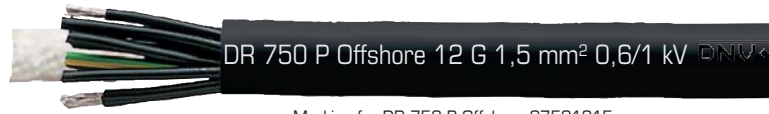
Possible on request:



- ▶ without overall copper screen
- ▶ alternative colour code and sheath colour

DR 750 P OFFSHORE

PUR reeling cable for offshore applications



Marking for DR 750 P Offshore 07501215:
SAB BRÖCKSKES · D-VIERSEN · DR 750 P Offshore 12 G 1,5 mm² 0,6/1 kV DNV-GL CE

Construction:

Conductor:	tinned copper strands acc. to IEC 60228 EN 60228, VDE 0295, class 6
Insulation:	special polymer
Colour code:	coloured acc. to HD 308 (VDE 0293 part 308); from 6 cores black cores with consecutive numbers acc. to EN 50334; green-yellow earth wire from 3 cores
Stranding:	specially adjusted layering
Inner sheath:	PUR
Supporting screen:	high-tech yarn
Outer sheath:	PUR
Sheath colour:	black (RAL 9005) mat

Outstanding features:

- ▶ DNV-GL Type Approval
- ▶ suitable for offshore applications
- ▶ extrem highly winding and unwinding strength
- ▶ small outer diameter
- ▶ small cable weight
- ▶ flame retardant and self-extinguishing
- ▶ halogen-free
- ▶ asbestos-free
- ▶ EAC approval

Applications:

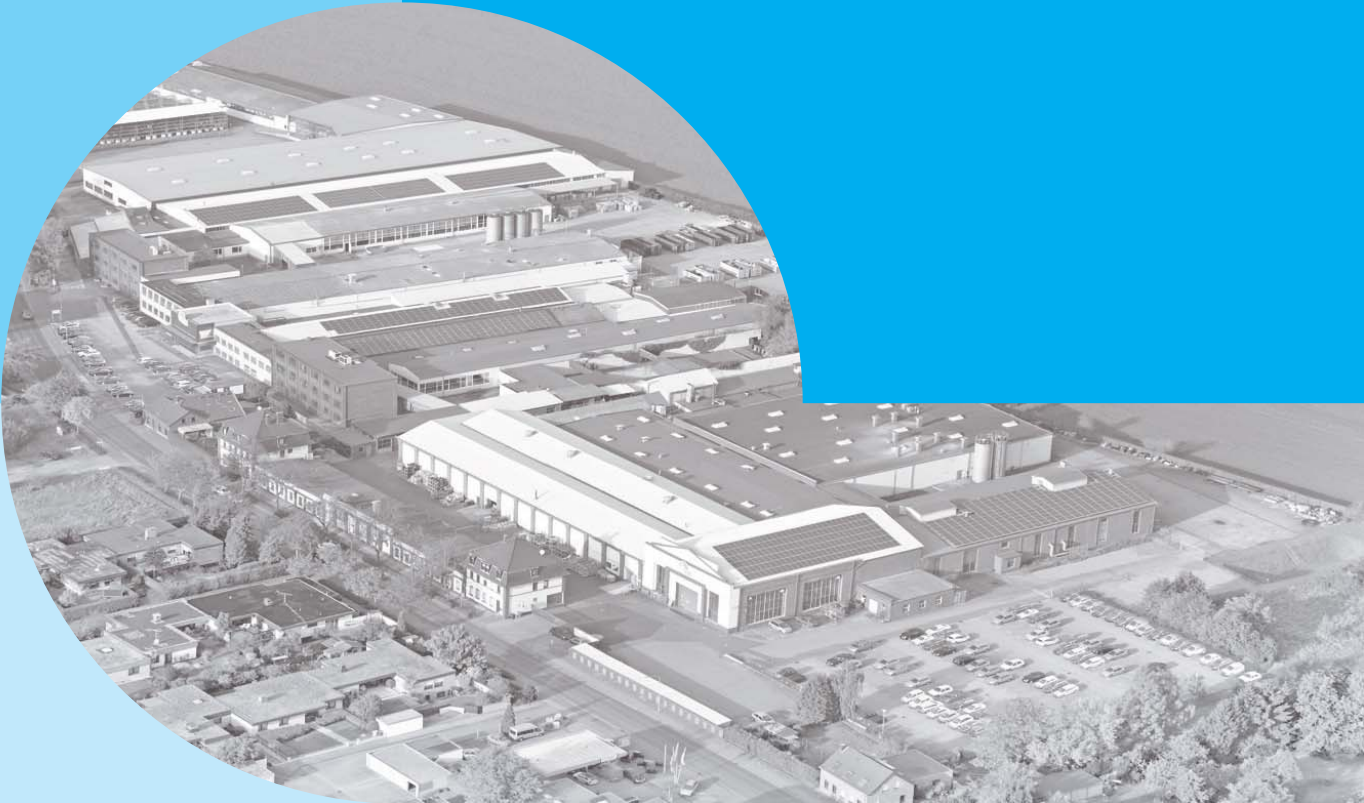
- ▶ The DR 750 P Offshore is used as reeling cable in offshore areas, for spring and motor cable reels in lifting and handling equipment on offshore platforms or ships.

Technical data:

Nominal voltage:	0,6/1 kV
Testing voltage:	core/core 4000 V
Min. bending radius:	
<i>fixed laying:</i>	5 x d
<i>flexible:</i>	10 x d
<i>for repeated winding action (flexible):</i>	10 x d
<i>guided on deflection pulleys: (flexible):</i>	15 x d
Temperature range:	
<i>flexible:</i>	-40/+90 °C lower temperatures on request SAB
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2
Oil resistance:	very good - TMPU acc. to EN 5036310-2
MUD resistance:	very good - acc. to IEC 60092-350, IEC 61892-4, NEK TS 606
Chemical resistance:	very good against acids, alkaline solutions, solvents and hydraulic liquids, etc.
Weather resistance:	very good
Sunlight resistance:	very good - enhanced due to black sheath colour
Absence of harmful substances:	acc. to RoHS directive of the European Union

item no.	no. of cores cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km	min breaking load of suspension unit N
07500210	2 x 1,00	10,3	19,2	118	500
07500410	4 G 1,00	10,9	38,4	140	1100
07501210	12 G 1,00	18,6	115,2	410	2000
07500315	3 G 1,50	10,9	43,2	144	1000
07500415	4 G 1,50	11,6	57,6	167	1340
07500715	7 G 1,50	14,7	100,8	273	2150
07501215	12 G 1,50	20,0	172,8	510	2600
07501815	18 G 1,50	20,0	259,2	523	3375
07500325	3 G 2,50	11,7	72,0	181	1200
07500425	4 G 2,50	13,0	96,0	220	1345
07500440	4 G 4,00	14,4	153,6	296	2000
07500460	4 G 6,00	15,8	230,4	390	3000
07500461	4 G 10,0	19,0	384,0	611	5000
07500462	4 G 16,0	22,9	614,4	907	8000
07500463	4 G 25,0	27,0	960,0	1362	12500
07500464	4 G 35,0	30,8	1344,0	1804	17500
07500465	4 G 50,0	34,6	1920,0	2548	25000
07500466	4 G 70,0	41,2	2688,0	3449	35000

Other dimensions and colours are possible on request.



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