INDUSTRIAL ETHERNET CABLES PROFINET

PN 662 Profinet type B, for flexible applications

PN 663 Profinet type B, for flexible applications with UL recognition

S PN 668 Profinet type C, continuously flexible

S PN 669 Profinet type C, continuously flexible with UL recognition

Marking for S PN 668:
SAB BRÖCKSKES · D-VIERSEN · S PN 668 Profinet CAT 5 Typ C 2x2x22AWG CE

Construction:	PN 662 Profinet type B *flexible*	S PN 668 Profinet type C *continuously flexible*	PN 663 Profinet type B *flexible*	S PN 669 Profinet type C *continuously flexible*
Dimension:	2 x 2 x 22 AWG			
Conductor:	tinned copper strands, fine wires acc. to VDE 0812	tinned copper strands, extra fine wires	tinned copper strands, fine wires acc. to VDE 0812	tinned copper strands, extra fine wires
Insulation:	PE, L/MD acc. to DIN VDE 0819 part 103	PE	PE, L/MD acc. to DIN VDE 0819 part 103	PE
Colour code:	blue, yellow, white, orange			
Stranding:	in layers			
Wrapping:	PETP foil			
Inner sheath:	thermoplastic material			
Wrapping:	alu foil			
Screen:	tinned copper braiding			
Wrapping:	---	non-woven tape	---	non-woven tape
Sheath material:	PVC	PUR	PVC	PUR
Sheath colour:	green (similar RAL 6018)			

Technical data:	PN 662 Profinet type B *flexible*	S PN 668 Profinet type C *continuously flexible*	PN 663 Profinet type B *flexible*	S PN 669 Profinet type C *continuously flexible*
Item number:	0662-2202	0668-2202	0663-2202	0669-2202
Peak operating voltage VDE:	max. 350 V			
Voltage UL:	---		300 V	
Testing voltage:	core/core 1500 V - core/screen 1200 V			
Temperature range VDE fixed laying: flexible application:	- 30°C / + 70°C - 5°C / + 70°C	- 40°C / + 70°C - 30°C / + 70°C	**UL:** up to + 80°C - 30°C / + 70 °C - 5°C / + 70 °C	**UL:** up to + 80°C - 30°C / + 70 °C - 20°C / + 70 °C
Min. bending radius fixed laying: flexible application: continuously flexible:	5 x d 10 x d	5 x d 10 x d 15 x d	5 x d 10 x d	5 x d 10 x d 15 x d
Characteristic impedance:	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency acc. to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)			
Halogen-free:	---	acc. to DIN VDE 0472 part 815 + IEC 60754-1	---	acc. to DIN VDE 0472 part 815 + IEC 60754-1
Oil resistance:	acc. to internal standard see page N/15	TMPU acc. to DIN VDE 0282 part 10 + HD 22.10	acc. to internal standard see page N/15	acc. to internal standard see page N/15
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17			

item no.	type	no. of cores	cross section AWG	max. core-ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km
06622202	PN 662	4	22	1,55	6,1	33,9	57	58,0
06682202	S PN 668	4	22	1,55	6,4	36,7	58	58,0
06632202	PN 663	4	22	1,55	6,5	36,2	66	58,0
06692202	S PN 669	4	22	1,55	6,9	36,7	69	58,0

Other dimensions and colours are possible on request.

INDUSTRIAL ETHERNET CABLES PROFINET

PN 654 Profinet type A, for fixed installation

PN 655 Profinet type A, for fixed installation with UL recognition

PN 660 Profinet type B, for flexible applications

PN 661 Profinet type B, for flexible applications with UL recognition

Marking for PN 660:
SAB BRÖCKSKES · D-VIERSEN · PN 660 Profinet CAT 5 Typ B 2x2x22AWG CE

Construction:	PN 654 Profinet type A *fixed laying*	PN 660 Profinet type B *flexible*	PN 655 Profinet type A *fixed laying*	PN 661 Profinet type B *flexible*
Dimension:	2 x 2 x 22 AWG			
Conductor:	bare copper wire	bare copper strands, fine wires acc. to VDE 0812	bare copper wire	bare copper strands, fine wires acc. to VDE 0812
Insulation:	PE, L/MD acc. to DIN VDE 0819 part 103			
Colour code:	blue, yellow, white, orange			
Stranding:	in layers			
Wrapping:	PETP foil			
Inner sheat:	---	thermoplastic material	---	thermoplastic material
Wrapping:	---	alu foil	---	alu foil
Screen:	tinned copper braiding			
Wrapping:	---	non-woven tape	---	non-woven tape
Sheath material:	PVC	SABIX®	PVC	SABIX®
Sheath colour:	green (similar RAL 6018)			

Technical data:	PN 654 Profinet type A *fixed laying*	PN 660 Profinet type B *flexible*	PN 655 Profinet type A *fixed laying*	PN 661 Profinet type B *flexible*
Item number:	0654-2202	0660-2202	0655-2202	0661-2202
Peak operating voltage VDE:	max. 350 V			
Voltage UL:	---		300 V	
Testing voltage:	core/core 1500 V - core/screen 1200 V			
Temperature range VDE fixed laying: flexible application:	- 30°C / + 70°C - 5°C / + 70°C	- 30°C / + 70°C - 20°C / + 70°C	**UL:** up to + 80°C - 30°C / + 70 °C - 5°C / + 70 °C	**UL:** up to + 75°C - 40°C / + 70 °C - 30°C / + 70 °C
Min. bending radius fixed laying: flexible application:	5 x d	5 x d 12 x d	5 x d	5 x d 12 x d
Characteristic impedance:	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency acc. to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)			
Halogen-free:	---	acc. to DIN VDE 0472 part 815 + IEC 60754-1	---	acc. to DIN VDE 0472 part 815 + IEC 60754-1
Oil resistance:	acc. to internal standard see page N/15	---	acc. to internal standard see page N/15	---
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17			

item no.	type	no. of cores	cross section AWG	max. core-ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km
06542202	PN 654	4	22	1,55	5,3	28,0	43	58,0
06602202	PN 660	4	22	1,55	6,6	36,2	67	58,0
06552202	PN 655	4	22	1,55	5,9	30,4	51	58,0
06612202	PN 661	4	22	1,55	6,6	36,2	70	58,0

Other dimensions and colours are possible on request.

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with „Fast Connect" construction

S PN 667 Profinet type C, continuously flexible with UL recognition, CSA approval

Marking for S PN 667:

SAB BRÖCKSKES · D-VIERSEN · S PN 667 Industrial Ethernet FC Cat 5 Typ C 2x2x22AWG AWM Style 21198 80°C 300V CSA AWM I/II A/B 80°C 300V FT2 CE

Construction:

Conductor:	tinned copper strands, 7 wires
Insulation:	special polymer
Colour code:	blue, yellow, white, orange
Stranding:	in layers
Wrapping:	PETP foil
Inner sheath:	thermoplastic material
Wrapping:	alu foil
Screen:	tinned copper braiding
Wrapping:	non-woven tape
Sheath material:	PUR
Sheath colour:	green (similar RAL 6018)

Technical data:

Peak operating voltage VDE:	max. 350 V
Voltage UL/CSA:	300 V
Testing voltage:	core/core 1500 V core/screen 1200 V
Min. bending radius *fixed laying:* *flexible application:* *continuously flexible:*	 5 x d 10 x d 15 x d
Temperature range *fixed laying:* *flexible application:*	**UL/CSA:** up to +80 °C -40/+70 °C -40/+70 °C
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1
Characteristic impedance:	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency acc. to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)
Oil resistance:	TMPU acc. to DIN VDE 0282 part 10 + HD 22.10
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/17

item no.	type	no. of cores	cross section AWG	max. core-ø mm	outer-ø mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km
06672202	S PN 667	4	22	1,55	6,5 ± 0,2	33,8	60	58,8

Other dimensions and colours are possible on request.

For extreme bending stress - conductor construction 19 wires:

item no.	type	no. of cores	cross section AWG	max. core-ø mm	outer-ø mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km
06679001	S PN 667	4	22	1,55	6,5 ± 0,2	33,8	58	58,8

Other dimensions and colours are possible on request.

short assembling time by „Fast Connect" construction (7 wires)

INDUSTRIAL ETHERNET CABLES CAT 5

PN 678 Ethernet cable type A, for fixed installation

PN 679 Ethernet cable type B, for flexible applications

S PN 681 Ethernet cable type C, continuously flexible

Marking for PN 679:
SAB BRÖCKSKES · D-VIERSEN · PN 679 CAT 5 Typ B 4x2x26AWG CE

Construction:	PN 678 Ethernet cable type A *fixed laying*	PN 679 Ethernet cable type B *flexible*	S PN 681 Ethernet cable type C *continuously flexible*
Dimension:	4 x 2 x 26 AWG		
Conductor:	tinned copper wire	tinned copper strands, fine wires acc. to VDE 0812	tinned copper strands, extra fine wires
Insulation:	PE, L/MD acc. to DIN VDE 0819 part 103	PE, L/MD acc. to DIN VDE 0819 part 103	SABIX®
Colour code:	white cores with numbers 1 - 4 + (blue, orange, green, brown)		
Stranding:	twisted pairs		
Wrapping:	alu foil	PETP foil + alu foil	non-woven tapes + alu foil
Screen:	tinned copper braiding		
Wrapping:	---	non-woven tape	
Sheath material:	PVC	PUR	
Sheath colour:	green (similar RAL 6018)		

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Technical data:	PN 678 Ethernet cable type A *fixed laying*	PN 679 Ethernet cable type B *flexible*	S PN 681 Ethernet cable type C *continuously flexible*
Item number:	0678-2604	0679-2604	0681-2604
Peak operating voltage VDE:	max. 350 V		
Testing voltage:	core/core 1500 V, core/screen 1200 V		
Temperature range VDE fixed laying: flexible application:	- 30°C / + 70°C - 5°C / + 70°C	- 40°C / + 70°C - 40°C / + 70°C	- 40°C / + 90°C - 30°C / + 90°C
Min. bending radius fixed laying: flexible application: continuously flexible:	5 x d	5 x d 10 x d	5 x d 10 x d 12 x d
Characteristic impedance:	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency acc. to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)		
Halogen-free:	---	acc. to DIN VDE 0472 part 815 + IEC 60754-1	
Oil resistance:	acc. to internal standard see page N/15	TMPU acc. to DIN VDE 0282 part 10 + HD 22.10	
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17		

item no.	type	no. of pairs	cross section AWG	max. core-ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km
06782604	PN 678	4	26	1,10	6,2	33,0	49	150
06792604	PN 679	4	26	1,05	7,3	35,0	57	148
06812604	S PN 681	4	26	1,10	7,2	35,5	58	145

Other dimensions and colours are possible on request.

DR PN 689 P Highflex reeling Profinet cable / CAT 5 cable

DR CB 689 P Highflex reeling CAN-Bus cable

Marking for DR PN 689 P Highflex:
SAB BRÖCKSKES · D-VIERSEN · DR PN 689 P Highflex 2x2x22AWG

Construction:	DR PN 689 P Highflex *reeling Profinet cable*	DR PN 689 P Highflex *reeling CAT 5 cable*	DR CB 689 P Highflex *reeling CAN-Bus cable*
Dimension:	2 x 2 x 22 AWG	4 x 2 x 26 AWG	2 x 2 x 0,50 mm²
Conductor:	tinned copper strands, fine wires		
Core insulation:	SABIX®		PE
Colour code:	blue, yellow, white, orange	blue, orange, green, brown + 4 white cores with consecutive numbers	acc. to DIN 47100
Stranding:	in layers	in pairs	
Wrapping:	PETP foli		non-woven tape
Inner sheath:	SABIX®		---
Wrapping:	alu foil		---
Screen:	tinned copper braiding		
Wrapping:	non-woven tape		---
Outer sheath:	PUR / supporting braid / PUR		
Sheath colour:	green (similar RAL 6018)	black (similar RAL 9005)	

Technical data:	DR PN 689 P Highflex *reeling Profinet cable*	DR PN 689 P Highflex *reeling CAT 5 cable*	DR CB 689 P Highflex *reeling CAN-Bus cable*
Item number:	0689-2202	0689-9001	0689-9005
Peak operating voltage VDE:	max. 350 V		
Testing voltage:	core/core 1500 V - core/screen 1200 V		
Temperature range VDE fixed laying: flexible application:	- 40°C / + 90°C - 30°C / + 90°C		- 40°C / + 70°C - 40°C / + 70°C
Min. bending radius	for laying and installation (fixed laying): 5 x d for repeated winding action (flexible): 10 x d guided on deflection pulleys (flexible): 12 x d		for laying and installation (fixed laying): 5 x d for repeated winding action (flexible): 7,5 x d guided on deflection pulleys (flexible): 10 x d
Characteristic impedance:	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)		120Ω (95 - 140Ω) at 1 MHz
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1		
Oil resistance:	TMPU acc. to EN 50363-10-2		
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17		

item no.	type	dimension	outer-ø approx. mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max. Ω/km	tensile strength max. N	characteristic impedance
06892202	DR PN 689 P Highflex	2 x 2 x 22 AWG	7,8	36,2	78	58,8	200	100Ω
06899001	DR PN 689 P Highflex	4 x 2 x 26 AWG	8,7	34,3	85	139	200	100Ω
06899005	DR CB 689 P Highflex	2 x 2 x 0,50 mm²	13,0	48,8	175	39,0	200	120Ω

Other dimensions and colours are possible on request.

S PN 668 Hybrid Hybrid cable with UL recognition

RT PN 668 Profinet cable suitable for robots

Marking for RT PN 668:
SAB BRÖCKSKES · D-VIERSEN · RT PN 668 Profinet 2x2x22AWG · Robot Cable · CE

Construction:	S PN 668 Hybrid *Hybrid cable type C continuously flexible*	RT PN 668 *Profinet cable suitable for robots*
Dimension:	2 x 2 x 22 AWG + 4 x 1,5 mm²	2 x 2 x 22 AWG
Conductor:	22 AWG: tinned copper strands, extra fine wires 1,5 mm²: bare copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 6	tinned copper strands, extra fine wires
Insulation:	22 AWG: SABIX® . 1,5 mm²: TPE	PE
Colour code:	22 AWG: blue, yellow, white, orange. 1,5 mm²: black cores with consecutive numbers acc. to EN 50334	blue, yellow, white, orange
Stranding:	22 AWG: in layers together in layers	in layers
Wrapping:	PETP foli	netting tape, alu foil
Inner sheath:	SABIX®	---
Wrapping:	alu foil	---
Abschirmung:	tinned copper braiding	
Screen:	non-woven tape	
Sheath material:	PUR	
Sheath colour:	green (similar RAL 6018)	

Technical data:	S PN 668 Hybrid *Hybrid cable type C continuously flexible*	RT PN 668 *Profinet cable suitable for robots*
Item number:	0668-9010	0668-9001
Peak operating voltage:	max. 350 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 + 80°C - 40°C / + 90°C - 30°C / + 90°C	- 40°C / + 70°C - 30°C / + 70°C
Min. bending radius	fixed laying: 5 x d flexible application: 10 x d continuously flexible: 12 x d	fixed laying: 5 x d flexible application: 10 x d torsion angle: ± 180°/m
Characteristic impedance:	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)	
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1	
Oil resistance:	PUR, TMPU acc. to DIN VDE 0282 part 10 + HD 22.10	
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17	

item no.	type	no. of cores	cross section AWG	approx. core-ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km
06689010	S PN 668 Hybrid	8	22 + 16	1,50 / 2,15	10,0	94,1	158	58,0 / 13,3
06689001	RT PN 668 suitable for robots	4	22	1,50	7,0	36,3	62	58,0

Other dimensions and colours are possible on request.