

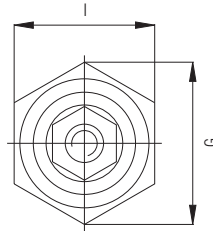


Bushing conductor studs

Features

- 16 A to 630 A
- 690 V, 1000 V and 1600 V
- Max. ambient temperature 130 °C
- Different types of terminals
- Standard thread M16 x 1.5 to M42 x 1.5

Dimensions



Description

A bushing conductor stud is a component with which the electrical connection between an enclosure in type of protection "Flameproof enclosure d" and its connection enclosure in type of protection "Increased Safety e" is established.

The cable bushing includes a threaded metal sleeve, a ceramic insulation, terminals and a stud.

Standard threaded sleeves from M16 to M42 are included in the delivery of bushing conductor studs.

The diameter of the stud depends on current and the terminal size on the cable diameter.

Thanks to different types of terminals, vertical as well as horizontal cable connection is possible. Special terminals are available on request.

After installation, the bushing conductor stud needs to be secured by means of a nut or adhesive to prevent self-loosening.



Explosion protection

Ex protection type

- II 2G Ex de IIC Gb
I M2 Ex de I Mb

Certification

PTB 04 ATEX 1099 U

Ambient temperature at place of installation

-50 °C to +130 °C

Technical data

Protection class

EN 60079-0: 2009; EN 60079-1: 2007

Material

Insulation ceramic, C610

Stud

16 A to 250 A CuZn39Pb2
400 A to 630 A E-Cu

Current

16 A to 630 A

Voltage

690 V, 1000 V and 1600 V

Connection

1.5 mm² to 300 mm²

Stud size

4 mm to 20 mm

Thread size

M16 x 1.5 to M42 x 1.5

Selection chart

Table with 4 columns: Type, Current, Type of terminal, Thread size. Rows include models like TOS4.16A, TOS5.25A, TOS6.63A, TOS8.100A, TOS10.160A, TOS12.250A, TOS16.400A, TOS20.630A.

Example- Complete order no.

Please insert code number. Technical data subject to change without notice.

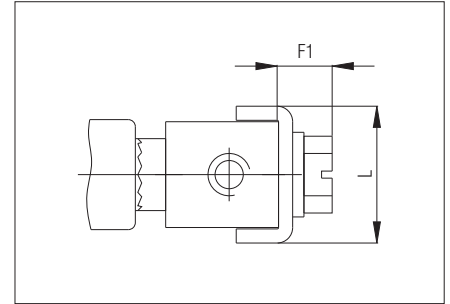
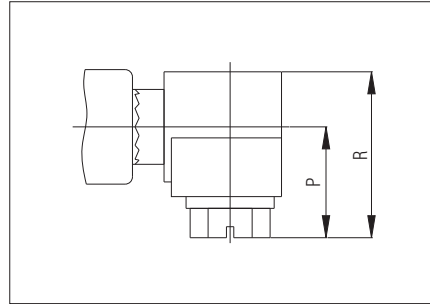
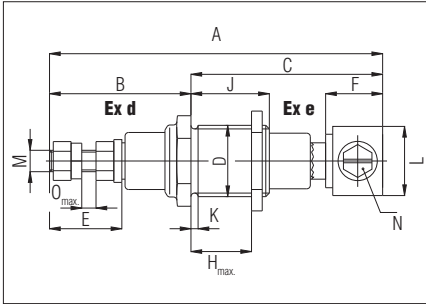
TOS8.100A.690V - RF

Specify voltage.

Voltage 690 V, 1000 V or 1600 V



Type of terminal A from 690 V to 1000 V



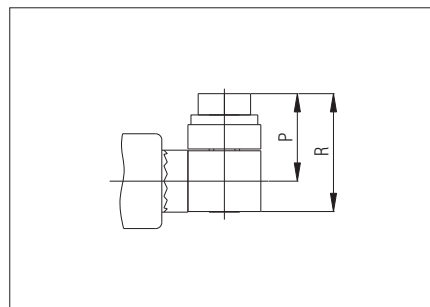
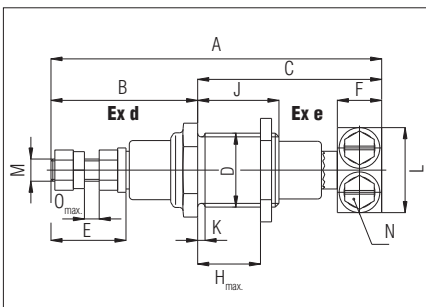
Selection chart Type of terminal A to 690 V

Type	D	A	B	C	E	F/F1	G	H _{max}	I	J	K	L	M	N	O _{max}	P	R	Terminals
TOS4.16.690 V	M16 x 1.5	81.5	33	48.5	13.4	12/5.5	19.6	18	17	22	2	13.4	M4	M4 x 10	4	10.7	15.7	1.5 - 6 mm ²
TOS5.25.690 V	M18 x 1.5	87	36	51	16.5	14/5.5	21.9	18	19	22	2	15.4	M5	M5 x 10	4	11.7	17.7	2.5 - 10 mm ²
TOS6.63A.690 V	M20 x 1.5	93.5	39.5	54	20.3	16/7.6	25.4	18	22	22	2	19.4	M6	M6 x 10	4	15.1	22.6	2.5 - 16 mm ²

Selection chart Type of terminal A to 1000 V

Type	D	A	B	C	E	F/F1	G	H _{max}	I	J	K	L	M	N	O _{max}	P	R	Terminals
TOS4.16.1000 V	M16 x 1.5	97.5	41	56.5	13.4	12/5.5	19.6	18	17	22	2	13.4	M4	M4 x 10	4	10.7	15.7	1.5 - 6 mm ²
TOS5.25.1000 V	M18 x 1.5	103	44	59	16.5	14/5.5	21.9	18	19	22	2	15.4	M5	M5 x 10	4	11.7	17.7	2.5 - 10 mm ²
TOS6.63A.1000 V	M20 x 1.5	109.5	47.5	62	20.3	16/7.6	25.4	18	22	22	2	19.4	M6	M6 x 10	4	15.1	22.6	2.5 - 16 mm ²

Type of terminal F from 690 V to 1000 V



Selection chart Type of terminal F to 690 V

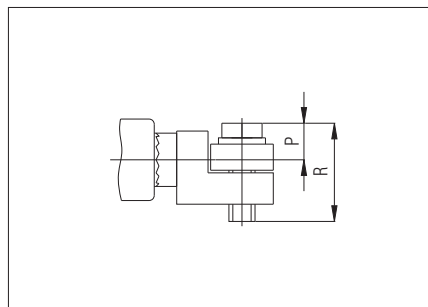
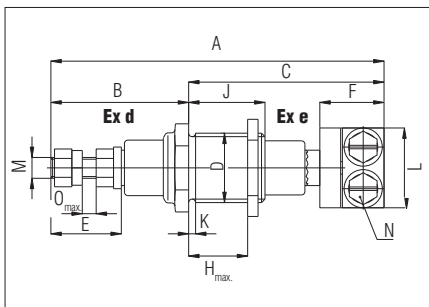
Type	D	A	B	C	E	F/F1	G	H _{max}	I	J	K	L	M	N	O _{max}	P	R	Terminals
TOS5.25.690 V	M18 x 1.5	83.5	36	47.5	16.5	10	21.9	18	19	22	2	19	M5	M4 x 12	4	11	15	2.5 - 25 mm ²
TOS6.63A.690 V	M20 x 1.5	89.5	39.5	50	20.3	12	25.4	18	22	22	2	23	M6	M5 x 16	4	14	19.5	2.5 - 25 mm ²
TOS8.100A.690 V	M24 x 1.5	97.5	43.5	54	24.3	15	31.2	18	27	22	2	26	M8	M6 x 25	4	17	29	6 - 50 mm ²
TOS10.160A.690 V	M27 x 1.5	110	50	60	30	20	34.6	18	30	22	2	36	M10	M8 x 30	5	21	35.5	10 - 95 mm ²
TOS12.250A.690 V	M33 x 1.5	122	55.5	66.5	35.5	25	41.6	18	36	22	2	42	M12	M8 x 35	5	24.5	40.5	16 - 185 mm ²
TOS16.400A.690 V	M36 x 1.5	139	65	74	45	30	47.3	18	41	22	2	50	M16	M10 x 40	5	32	47	25 - 300 mm ²
TOS20.630A.690 V	M42 x 1.5	153	75	78	55.1	32	53.1	18	46	22	2	50	M20	M10 x 45	6	34.5	51.5	25 - 300 mm ²



Selection chart Type of terminal F to 1000 V

Type	D	A	B	C	E	F/F1	G	H _{max.}	I	J	K	L	M	N	O _{max.}	P	R	Terminals
TOS5.25.1000 V	M18 x 1.5	99.5	44	55.5	16.5	10	21.9	18	19	22	2	19	M5	M4 x 12	4	11	15	2.5 - 25 mm ²
TOS6.63A.1000 V	M20 x 1.5	105.5	47.5	58	20.3	12	25.4	18	22	22	2	23	M6	M5 x 16	4	14	19.5	2.5 - 25 mm ²
TOS8.100A.1000 V	M24 x 1.5	113.5	51.5	62	24.3	15	31.2	18	27	22	2	26	M8	M6 x 25	4	17	29	6 - 50 mm ²
TOS10.160A.1000 V	M27 x 1.5	126	57.5	68.5	30	20	34.6	18	30	22	2	36	M10	M8 x 30	5	21	35.5	10 - 95 mm ²
TOS12.250A.1000 V	M33 x 1.5	138	63.5	74.5	35.5	25	41.6	18	36	22	2	42	M12	M8 x 35	5	24.5	40.5	16 - 185 mm ²
TOS16.400A.1000 V	M36 x 1.5	155	73	82	45	30	47.3	18	41	22	2	50	M16	M10 x 40	5	32	47	25 - 300 mm ²
TOS20.630A.1000 V	M42 x 1.5	169	83	86	55.1	32	53.1	18	46	22	2	50	M20	M10 x 45	6	34.5	51.5	25 - 300 mm ²

Type of terminal FL from 690 V to 1000 V



Selection chart Type of terminal FL to 690 V

Type	D	A	B	C	E	F/F1	G	H _{max.}	I	J	K	L	M	N	O _{max.}	P	R	Terminals
TOS5.25.690 V	M18 x 1.5	88.5	36	52.5	16.5	15.5	21.9	18	19	22	2	19	M5	M4 x 12	4	6	14.8	2.5 - 25 mm ²
TOS6.63A.690 V	M20 x 1.5	96	39.5	56.5	20.3	18.5	25.4	18	22	22	2	23	M6	M5 x 16	4	6.5	18.8	2.5 - 25 mm ²
TOS8.100A.690 V	M24 x 1.5	106.5	43.5	63	24.3	24	31.2	18	27	22	2	26	M8	M6 x 20	4	8	24	6 - 50 mm ²
TOS10.160A.690 V	M27 x 1.5	121	50	71	30	31	34.6	18	30	22	2	36	M10	M8 x 30	5	11	35.5	10 - 95 mm ²
TOS12.250A.690 V	M33 x 1.5	130	55.5	74.5	35.5	33	41.6	18	36	22	2	42	M12	M8 x 30	5	10	35.5	16 - 185 mm ²
TOS16.400A.690 V	M36 x 1.5	151	65	86	45	42	47.3	18	41	22	2	49	M16	M10 x 40	5	12.5	47	25 - 300 mm ²
TOS20.630A.690 V	M42 x 1.5	172	75	97	55.1	51	53.1	18	46	22	2	55	M20	M10 x 45	6	10.5	52	25 - 300 mm ²

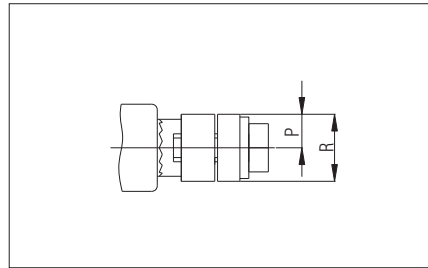
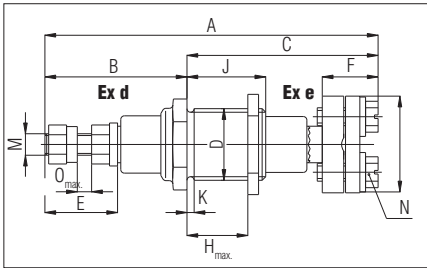
Selection chart Type of terminal FL to 1000 V

Type	D	A	B	C	E	F/F1	G	H _{max.}	I	J	K	L	M	N	O _{max.}	P	R	Terminals
TOS5.25.1000 V	M18 x 1.5	104.5	44	60.5	16.5	15.5	21.9	18	19	22	2	19	M5	M4 x 12	4	6	14.8	2.5 - 25 mm ²
TOS6.63A.1000 V	M20 x 1.5	112	47.5	64.5	20.3	18.5	25.4	18	22	22	2	23	M6	M5 x 16	4	6.5	18.8	2.5 - 25 mm ²
TOS8.100A.1000 V	M24 x 1.5	122.5	51.5	71	24.3	24	31.2	18	27	22	2	26	M8	M6 x 20	4	8	24	6 - 50 mm ²
TOS10.160A.1000 V	M27 x 1.5	137	57.5	79.5	30	31	34.6	18	30	22	2	36	M10	M8 x 30	5	11	35.5	10 - 95 mm ²
TOS12.250A.1000 V	M33 x 1.5	146	63.5	82.5	35.5	33	41.6	18	36	22	2	42	M12	M8 x 30	5	10	35.5	16 - 185 mm ²
TOS16.400A.1000 V	M36 x 1.5	167	73	94	45	42	47.3	18	41	22	2	49	M16	M10 x 40	5	12.5	47	25 - 300 mm ²
TOS20.630A.1000 V	M42 x 1.5	188	83	105	55.1	51	53.1	18	46	22	2	55	M20	M10 x 45	6	10.5	52	25 - 300 mm ²

03-0330-0482/A-09/10-BCS-240910/4



Type of terminal RF from 690 V to 1000 V



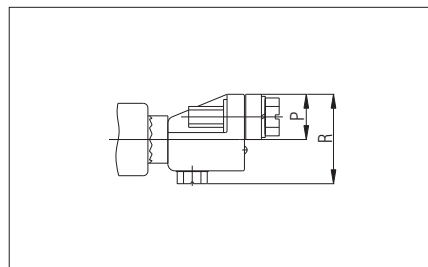
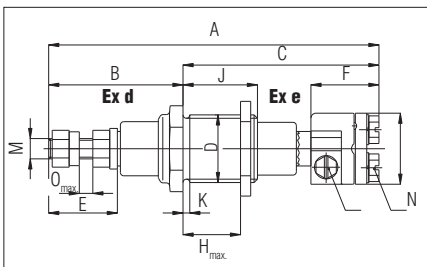
Selection chart Type of terminal RF to 690 V

Type	D	A	B	C	E	F/F1	G	H _{max.}	I	J	K	L	M	N	O _{max.}	P	R	Terminals
TOS5.25.690 V	M18 x 1.5	85.5	36	49.5	16.5	12.5	21.9	18	19	22	2	22	M5	M4 x 12	4	5	10	2.5 - 25 mm ²
TOS6.63A.690 V	M20 x 1.5	93	39.5	53.5	20.3	15.6	25.4	18	22	22	2	27	M6	M5 x 16	4	6	12	2.5 - 25 mm ²
TOS8.100A.690 V	M24 x 1.5	102	43.5	58.5	24.3	19.1	31.2	18	27	22	2	32	M8	M6 x 25	4	7.5	15	6 - 50 mm ²
TOS10.160A.690 V	M27 x 1.5	114	50	64	30	24	34.6	18	30	22	2	41	M10	M8 x 30	5	10	20	10 - 95 mm ²
TOS12.250A.690 V	M33 x 1.5	125	55.5	69.5	35.5	28	41.6	17	36	22	2	43	M12	M8 x 30	5	12.5	25	16 - 185 mm ²
TOS16.400A.690 V	M36 x 1.5	145	65	80	45	36	47.3	17	41	22	2	55	M16	M10 x 40	5	15	30	25 - 300 mm ²
TOS20.630A.690 V	M42 x 1.5	161	75	86	55.1	40	53.1	17	46	22	2	61	M20	M10 x 45	5	15	30	25 - 300 mm ²

Selection chart Type of terminal RF to 1000 V

Type	D	A	B	C	E	F/F1	G	H _{max.}	I	J	K	L	M	N	O _{max.}	P	R	Terminals
TOS5.25.1000 V	M18 x 1.5	101.5	44	57.5	16.5	12.5	21.9	18	19	22	2	∅ 22	M5	M4 x 12	4	5	10	2.5 - 25 mm ²
TOS6.63A.1000 V	M20 x 1.5	109	47.5	61.5	20.3	15.6	25.4	18	22	22	2	∅ 27	M6	M5 x 16	4	6	12	2.5 - 25 mm ²
TOS8.100A.1000 V	M24 x 1.5	118	51.5	66.5	24.3	19.1	31.2	18	27	22	2	∅ 32	M8	M6 x 20	4	7.5	15	6 - 50 mm ²
TOS10.160A.1000 V	M27 x 1.5	130	57.5	72.5	30	24	34.6	18	30	22	2	∅ 41	M10	M8 x 30	5	10	20	10 - 95 mm ²
TOS12.250A.1000 V	M33 x 1.5	141	63.5	77.5	35.5	28	41.6	17	36	22	2	∅ 43	M12	M8 x 30	5	12.5	25	16 - 185 mm ²
TOS16.400A.1000 V	M36 x 1.5	161	73	88	45	36	47.3	17	41	22	2	∅ 55	M16	M10 x 40	5	15	30	25 - 300 mm ²
TOS20.630A.1000 V	M42 x 1.5	177.5	83	94.5	55.1	40	53.1	17	46	22	2	∅ 61	M20	M10 x 45	5	15	30	25 - 300 mm ²

Type of terminal C from 690 V to 1000 V



Selection chart Type of terminal C to 690 V

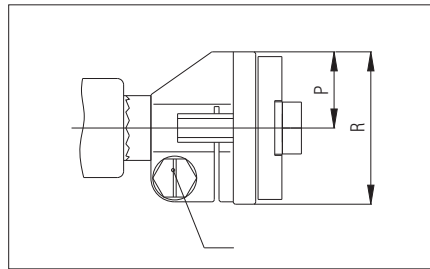
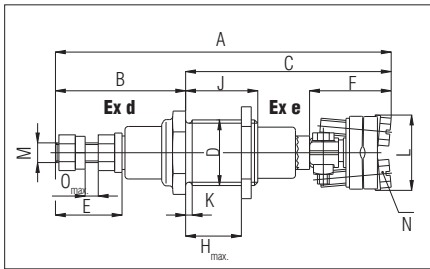
Type	D	A	B	C	E	F/F1	G	H _{max.}	I	J	K	L	M	N	O _{max.}	P	R	Terminals
TOS5.25.690 V	M18 x 1.5	90	36	54	16.5	16.8	21.9	18	19	22	2	17.5	M5	M5 x 20/M4 x 6	4	7	20	2.5 - 25 mm ²
TOS6.63A.690 V	M20 x 1.5	98	39.5	58.5	20.1	20.1	25.4	18	22	22	2	21	M6	M5 x 20/M4 x 5	4	7	20	2.5 - 25 mm ²
TOS8.100A.690 V	M24 x 1.5	110	43.5	66.5	24.3	26.8	31.2	18	27	22	-	28	M8	M6 x 22/M5 x 10	4	12	26	4 - 35 mm ²

03-0330-0482/A-09/10-BCS-240910/5



Selection chart Type of terminal C to 1000 V																		
Type	D	A	B	C	E	F/F1	G	H _{max.}	I	J	K	L	M	N	O _{max.}	P	R	Terminals
TOS5.25.1000 V	M18 x 1.5	106	44	62	16.5	16.8	21.9	18	19	22	2	17.5	M5	M5 x 20/M4 x 6	4	7	20	2.5 - 25 mm ²
TOS6.63A.1000 V	M20 x 1.5	114	47.5	66.5	20.1	20.1	25.4	18	22	22	2	21	M6	M5 x 20/M4 x 5	4	7	20	2.5 - 25 mm ²
TOS8.100A.1000 V	M24 x 1.5	126	51.5	74.5	24.3	26.8	31.2	18	27	22	2	28	M8	M6 x 22/M5 x 10	4	12	26	4 - 35 mm ²

Type of terminal R from 690 V to 1000 V



Selection chart Type of terminal R to 690 V																		
Type	D	A	B	C	E	F/F1	G	H _{max.}	I	J	K	L	M	N	O _{max.}	P	R	Terminals
TOS10.160A.690 V	M27 x 1.5	130.5	50	80.5	30	41.5	34.6	18	30	22	2	37	M10	M8 x 30/M6 x 22	5	19.5	39	6-70 or 10-95 mm ²
TOS12.250A.690 V	M33 x 1.5	145.5	55.5	92	35.5	48.8	41.6	17	36	22	2	46.6	M12	M10 x 35/M6 x 22	5	23.5	47	10-95 or 16-150 mm ²
TOS16.400A.690 V	M36 x 1.5	161.5	65	96.5	45	52.3	47.3	17	41	22	2	51	M16	M10 x 40/M8 x 30	5	26	52	16-150 or 16-300 mm ²
TOS20.630A.690 V	M42 x 1.5	175	75	100	55.1	53.3	53.1	17	46	22	2	59	M30	M10 x 45/M8 x 30	5	29.5	59	16 - 300 mm ²

Selection chart Type of terminal R to 1000 V																		
Type	D	A	B	C	E	F/F1	G	H _{max.}	I	J	K	L	M	N	O _{max.}	P	R	Terminals
TOS10.160A.1000 V	M27 x 1.5	146,5	57,5	89	30	41,5	4,6	18	30	22	2	37	M10	M8 x 30/M6 x 22	5	19,5	39	6-70 or 10-95 mm ²
TOS12.250A.1000 V	M33 x 1,5	161,5	63,5	98	35,5	48,8	1,6	17	36	22	2	6,6	M12	M10 x 35/M6 x 22	5	23,5	47	10-95 or 16-150 mm ²
TOS16.400A.1000 V	M36 x 1,5	177,5	73	104,5	45	52,3	7,3	17	41	22	2	51	M16	M10 x 40/M8 x 30	5	26	52	16-150 or 16-300 mm ²
TOS20.630A.1000 V	M42 x 1,5	191	83	108	55,1	53,3	3,1	17	46	22	2	59	M30	M10 x 45/M8 x 30	5	29,5	59	16-300 mm ²