Installation Material and Accessories

01895E00

Post Type Bushings
Series 8171

- Explosion protection to
  – CENELEC
  – IEC
- For use in Zone 1 and Zone 2
- Means of supplying power to lead-in for Ex d enclosures
- Sealed to prevent propagation of flame on explosion and insulated from wall
- Versions with
  – split post connection
  – clamp connection
  – soldered connection
- For voltages up to max. 1000 V and currents up to max. 630 A

The bushings are permitted to be used as current feeders in enclosures with type of protection ”flameproof”. They are fitted puncture-proof and insulated into the enclosure wall.
Duct bolt is located in the middle of a ring nut and the parts are bonded with a high-quality, track resistant insulating material (epoxy resin) to form an inseparable unit. For the connection points in the Ex e enclosure increased creepage paths and air gaps according to 50 019 are valid. The bushings have to be secured against self-loosening.

Zones 1 & 2

Selection table

Post Type Bushings

Rated cross section (flexible) [mm²]	Number of studs	Current (post) [A]	Rated voltage [V]	Connector thread [mm]	Connector thread tightening torque [Nm]	Cross-section multi-strand [mm²]	Cross-section single-strand [mm²]	**Ordering code**	Weight kg
1	1	10	400	M 10 x 1	8	Z: 2.5 L: 1.0	Z: 2.5 L: 1.5	8171/20-ZL	0,011
2.5	1	10	400	M 10 x 1	8	Z: 2.5 G: 2.5 **)	Z: 2.5 G: 2.5 **)	8171/20-ZG	0,011
	1	26	400	M 15 x 1.5	15	A: 2.5 L: 2.5	A: 2.5 L: 2.5	8171/17-AL	0,225
	1	54	400	M 14 x 1.5	12	A: 2.5	A: 2.5	8171/15-AA	0,330
	1	54	630	M 15 x 1.5	15	A: 2.5	A: 2.5	8171/02-AA	0,034
	1	54	630	M 15 x 1.5	15	K: 2.5	K: 4	8171/01-KK	0,330
	6	17	400	M 42 x 1.5	50	R: 4 L: 2.5	R: 6 L: 4	8171/06-RL	0,150
	1	54	800	M 15 x 1.5	15	A: 2.5	A: 2.5	8171/42-AA	0,040
4	4	54	500	M 42 x 1.5	50	R: 4	R: 6	8171/14-RR	0,195
6	1	54	800	M 15 x 1.5	15	K: 6 B: 10 *)	K: 10 B: 10 *)	8171/43-KB	0,051
	1	54	630	M 15 x 1.5	15	K: 6	K: 10	8171/03-KK	0,535
16	1	120	630	M 20 x 1.5	40	K: 16	K: 25	8171/18-KK	0,420
	1	120	630	M 20 x 1.5	40	K: 16	K: 25	8171/24-KK	0,570
	1	120	800	M 20 x 1.5	40	K: 16 B: 25 *)	K: 25 B: 25 *)	8171/48-KB	0,140
25	1	250	1000	M 42 x 1.5	50	K: 25 B: 35 *)	K: 35 B: 35 *)	8171/07-KB	0,350
35	1	250	1000	M 42 x 1.5	50	K: 35 B: 35 *)	K: 50 B: 35 *)	8171/09-KB	0,700
70	1	200	1000	M 42 x 1.5	50	C: 70 B: 120 *)	C: 95 B: 120 *)	8171/51-CB	0,520
150	1	250	1000	M 42 x 1.5	50	D: 150 B: 150 *)	D: 150 B: 150 *)	8171/56-DB	0,530
240	1	630	1000	M 42 x 1.5	50	Flat cable max. 25 x 30 mm		8171/55-FF	1,800

*) with cable lug
**) with cable lug thread M3

Comments:

Type of connection in an EEx e enclosure **8171/..-□ .**

Type of connection in an EEx d enclosure **8171/..-.□**

Further information on the different types of connection: see **Terminals**

Earthing Terminals

Rated cross section (flexible) [mm²]	Number of studs	Current (post) [A]	Rated voltage [V]	Connector thread [mm]	Connector thread tightening torque [Nm]	Max. conductor capacity flexible [mm²]	Max. conductor capacity single-wire or multiwire [mm²]	**Ordering code**	Weight kg
16	- -	- -	- -	M 20 x 1.5	40	16 50 *)	25 50 *)	8171/PE-16	0,140
50	- -	- -	- -	M 33 x 1.5	50	50 50 *)	70 50 *)	8171/PE-50	0,200

*) with cable lug

Post Type Bushings
Series 8171

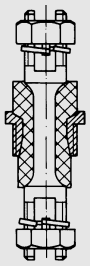
Technical Data

Explosion protection	Ⓔx II 2 G Ex de II suitable for group IIC Ⓔx I M 2 Ex de I
Certificates	PTB 00 ATEX 1066 U
Other certificates	IECEx, CSA (Canada)
Material	
Post terminal	8171/..-.. brass 8171/55-FF, 8171/56-DB copper
Insulating material	Epoxy resin
Rated operational voltage U_e	400 V, 500 V, 690 V, 1000 V, see selection table
Rated operational current I_e	max. 630 A, see selection table
Number of post terminal	1-, 4- and 6-pole
Ambient temperature	- 55°C ... + 130 °C
Terminal capacity	Terminal capacity: 0,75 mm² bis 300 mm² Flat cable: 25 mm x 30 mm

Terminals

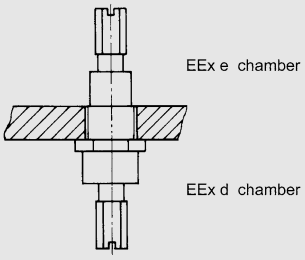
Design	Symbol	Description	Design	Symbol	Description
 07346E00	A	Hexagon head screw with spring washer and clamp	 07344E00	L	Solder socket
  07339E00	B	Cheese hd. or hex. hd. screw with spring washer (permissible only on Ex d side)	 07337E00	R	Cap or hood type terminal (round) on split post
 07342E00	C	Saddle clamp to DIN 46 223	 07341E00	Z	Cheese head screw with spring washer and clamp
 07343E00	K	Split post with hexagon nut and pressure plate DIN 22 412	 07340E00	F	Flat terminal
 07345E00	D	Terminal piece for cable bracket connection	 06790E00	G	Thread connector

Fitting



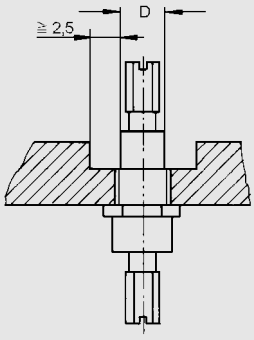
06367E00

Principles of construction



09143E02

Mounting arrangement



09117E00

Illustration of creepages

Instructions for fitting the feed-through connectors:

When fitting feed-through connectors to a Flameproof protection type enclosure, the requirements of EN 50018 must be observed.

The number of threads available must be at least 5. If the enclosure volume is ≥ 100 cm^3 , then the thread depth must be at least 8 mm.

The tapped holes into which the feed-through connectors will be screwed must fulfil the mimimum requirements of Section 5.3, table 3.

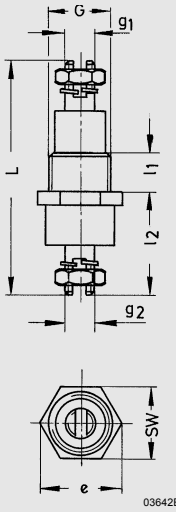
The feed-through connectors are screwed in from the inside of the flameproof enclosure and must be prevented from rotating or unscrewing (e.g. with a locking plate or by gluing the threaded surface).

When screwing in the feed-through connectors, the specified tightening torques must be observed to avoid any damage. If necessary, use spacers to align the terminal positions.

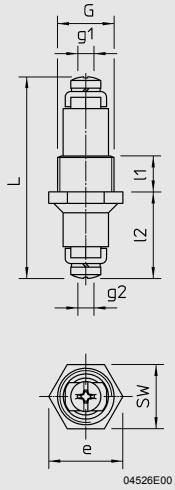
Further, when fitting the feed-through connectors, the air gaps and tracking distances must be related to the rated voltage. If the sides of the enclosure are too thick, the tracking distances can be reduced to an impermissible value. This can be avoided by reducing the thickness of the enclosure side (see sketches).

Post Type Bushings
Series 8171

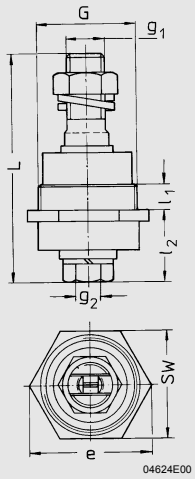
Dimension drawings (all dimensions in mm) - subject to alterations



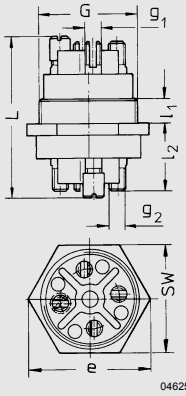
8171/01-KK
8171/03-KK
8171/18-KK
8171/24-KK



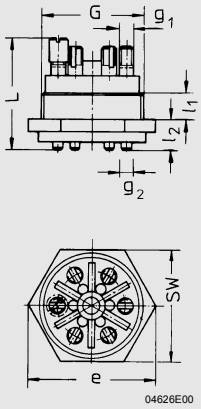
8171/02-AA
8171/15-AA
8171/42-AA



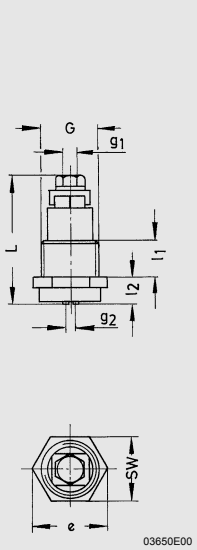
8171/07-KB
8171/09-KB



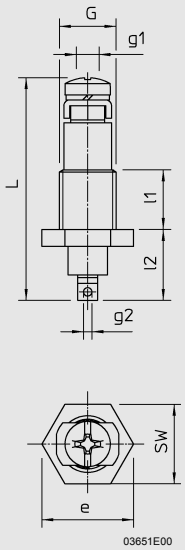
8171/14-RR



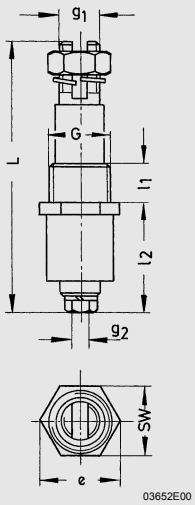
8171/06-RL



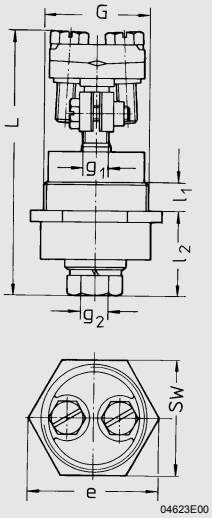
8171/17-AL



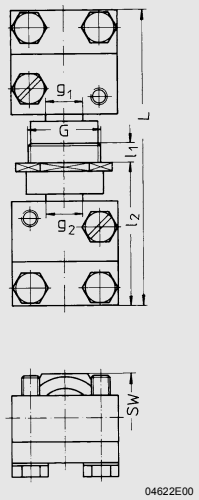
8171/20-ZL



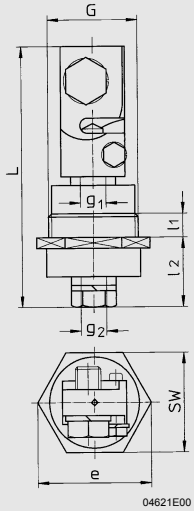
8171/43-KB
8171/48-KB



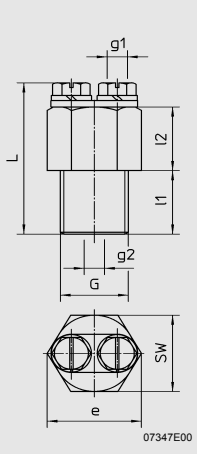
8171/51-CB



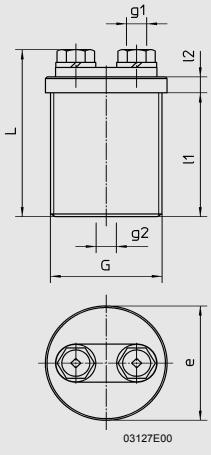
8171/55-FF



8171/56-DB



8171/PE-16



8171/PE-50

Dimension drawings (all dimensions in mm) - subject to alterations								
Type	**L**	**l1**	**l2**	**G**	**g1**	**g2**	**e**	**SW**
8171/01-KK	55.5	9.5	24.5	M 15 x 1.5	M 7 x 0.75	M 7 x 0.75	19.6	17
8171/02-AA	53	9.5	23	M 15 x 1.5	M 4	M 4	19.6	17
8171/03-KK	70.5	9.5	32.5	M 15 x 1.5	M 10 x 1	M 10 x 1	19.6	17
8171/06-RL	47	12.5	11	M 42 x 1.5	M 7 x 0.75	∅ 4.2	53.1	46
8171/07-KB	99.5	11	31.5	M 42 x 1.5	S 18 x 1.5	M 12	53.1	46
8171/09-KB	106.5	11	31.5	M 42 x 1.5	S 22 x 1.5	M 12	53.1	46
8171/14-RR	78.5	11	30	M 42 x 1.5	M 8.5 x 1	M 8.5 x 1	53.1	46
8171/15-AA	49.5	13.5	19	M 14 x 1.5	M 4	M 4	19.6	17
8171/17-AL	33	9.5	7	M 15 x 1.5	M 4	∅ 2.5	19.6	17
8171/18-KK	82	10.5	38	M 20 x 1.5	S 13 x 1	S 13 x 1	25.4	22
8171/20-ZL	39	10.5	12.5	M 10 x 1	M 4	∅ 1.5	16.2	14
8171/24-KK	87.5	16	38	M 20 x 1.5	S 13 x 1	S 13 x 1	25.4	22
8171/42-AA	63.5	9,5	29.5	M 15 x 1.5	M 4	M 4	19.6	17
8171/43-KB	66	9,5	24	M 15 x 1.5	S 13 x 1	M 5	19.6	17
8171/48-KB	75.5	10.5	27	M 20 x 1.5	S 13 x 1	M 6	25.4	22
8171/51-CB	102	11	31.5	M 42 x 1.5	M 10 x 1	M 12 x 1.75	53.1	46
8171/55-FF	175	11	84.5	M 42 x 1.5	M 20 x 2.5	M 20 x 2.5	53.1	46
8171/56-DB	120	11	32	M 42 x 1.5	M 12 x 1.75	M 12 x 1.75	53.1	46
8171/PE-16	47.6	20	27.6	M 20 x 1.5	M 6	M 6	27.7	24
8171/PE-50	52.6	39	13.6	M 33 x 1.5	M 6	M 6	47.3	41