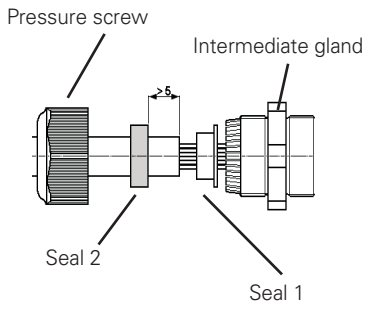
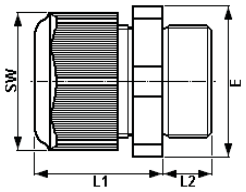
Dimension drawings and dimensions in mm

Fig. A Cable entry z.B. M25x1,5





1 Technical data

1.1 Technical details for: Cable entries (KLE) **M12**x1,5 **to M63**x1,5

ATEX type examination certificate:		PTB 14 ATEX 1015 X[(A)]
Marking acc. to 94/9/EG and standard:		
	EN 60079-0	Ⓔx II 2 G Ex eb IIC Gb
		Ⓔx II 2 D Ex tb IIIC Db
IECEx type examination certificate:		IECEx PTB 14.0027X[(A)]
Category of application:	IEC60079-0	Ex eb IIC Gb
		Ex tb IIIC Db

[(A)] The EC-Type Examination Certificate and any future supplements thereto shall, at the same time, be regarded as supplements to the EC-Type Examination Certificates PTB 99 ATEX 3128 X and PTB 99 ATEX 3101 X

Perm. storage temperature in original packing:	-20° C to +70° C
Degree of protection to IEC/EN 60529:	IP 66 (when fully assembled)

Type	SW	L1	L2	E	weight app.
M12x1,5	15 mm	19,3 mm	12 / 8 mm	16,2 mm	3,4 g
M16x1,5	20 mm	23,0 mm	12 / 8 mm	22,0 mm	6,5 g
M20x1,5	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M25x1,5	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M32x1,5	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g
M40x1,5	46 mm	39,5 mm	15 / 10 mm	50,5 mm	50,3 g
M50x1,5	55 mm	44,0 mm	16 / 12 mm	60,0 mm	75,9 g
M63x1,5	68 mm	47,0 mm	16 / 12 mm	75,0 mm	117,6 g

Type	operating temperature	impact resistance	Cable diameter								Screw-in thread in enclosure	Colour of dust protection cover
			seal 1+2				seal 2					
			min.		max.		min.		max.			
	°C	Joule	Ø	Nm**	Ø[(1)(2)]	Nm**	Ø	Nm**	Ø[(2)]	Nm**	Nm**	
M12x1,5	-20 - 70	4	5,0	0,8	7,0	1,0	without seal 2				1,2	white
M16x1,5	-20 - 70	4	7,0	1,0	10,0	1,4	without seal 2				3,3	white
M20x1,5	-20 - 70	7	7,0	1,5	9,0	1,4	9,5	1,0	13,0	1,7	2,7	white
M20x1,5	-40 - 70	4	7,0	1,5	9,0	1,4	9,5	1,0	11,0	1,7	2,7	green
M25x1,5	-20 - 70	7	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	3,0	white
M25x1,5	-55 - 70	7	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	3,0	green
M32x1,5	-20 - 70	7	14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	5,0	white
M32x1,5	-55 - 70	7	14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	5,0	green
M40x1,5	-55 - 70	7	19,0	3,3	22,0	5,5	22,0	3,3	28,0	6,7	7,5	green
M50x1,5	-55 - 70	7	24,0	6,0	28,0	7,0	28,0	5,0	35,0	7,0	7,5	green
M63x1,5	-55 - 70	7	29,0	12,0	35,0	12,0	36,0	12,0	41,0	13,0	7,5	green
additional seal			41,0	13,0	48,0	7,8						

** Test torques at 20°C

(1) The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 for the intermediate region.

(2) When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.

Fig. B Cable diameter 19 mm
e.g. for M32x1,5

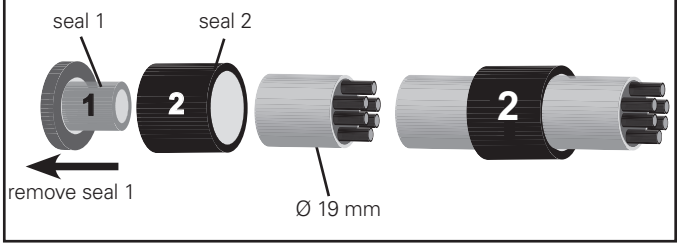
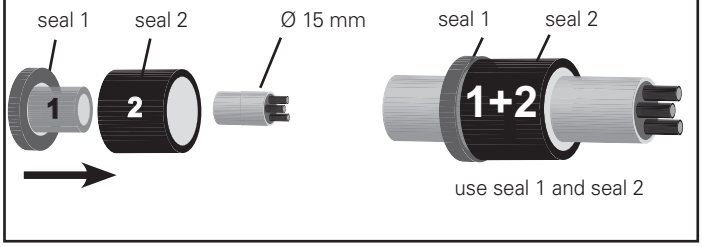
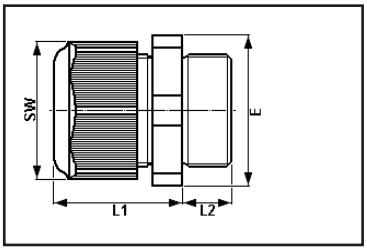


Fig. C Cable diameter 15 mm
e.g. for M32x1,5



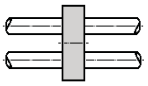
Dimension drawings and dimensions in mm

1.2 Multiple glands



Type	SW	L1	L2	E	weight app.
M25x1,5 2- times	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M32x1,5 4- times	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g

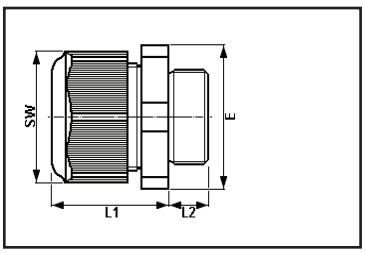
Fig. D/1 Seal insert



for multiple gland

Type	Operating temperature	Impact resistant	Cable diameter				
			Seal 1				
				min.		max.	
	°C	Joule		Ø	Nm	Ø	Nm
M25x1,5 2- times	-20 - 70	< 7	2x	4,5	2,0	7,0	2,0
M32x1,5 4- times	-20 - 70	< 7	4x	4,5	3,0	7,0	3,5

1.3 Enlargement glands



Type	SW	L1	L2	E	weight app.
M16x1,5 / M20x1,5	24 mm	25,0 mm	12 mm	26,5 mm	9,2 g
M20x1,5 / M25x1,5	29 mm	29,5 mm	13 mm	32,0 mm	16,7 g
M25x1,5 / M32x1,5	36 mm	35,5 mm	15 mm	40,0 mm	27,0 g
M32x1,5 / M40x1,5	46 mm	39,5 mm	15 mm	50,5 mm	46,5 g
M40x1,5 / M50x1,5	55 mm	44,0 mm	15 mm	60,0 mm	73,5 g
M50x1,5 / M63x1,5	68 mm	47,0 mm	16 mm	75,0 mm	106,4 g

Type	Operating tempera- ture	Impact resistant	Cable diameter								Screw-in thread in enclosure
			Seal 1+2				Seal 2				
			min.		max.		min.		max.		
	°C	Joule	Ø	Nm**	Ø(1) (2)	Nm**	Ø	Nm**	Ø(1)	Nm**	Nm**
M16x1,5 / M20x1,5	-20 - 70	< 7	7,0	1,5	9,0	1,4	9,5	1,0	13,0	1,7	3,3
	-40 - 70	< 4	7,0	1,5	9,0	1,4	9,5	1,0	11,0	1,7	3,3
M20x1,5 / M25x1,5	-20 - 70	< 7	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	2,7
	-40 - 70	< 4	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	2,7
M25x1,5 / M32x1,5	-55 - 70	< 7	14,0	3,0	17,0	4,0	17,5	1,5	21,0	1,3	3,0
M32x1,5 / M40x1,5	-55 - 70	< 7	19,0	3,3	22,0	5,5	22,0	3,3	28,0	6,7	5,0
M40x1,5 / M50x1,5	-55 - 70	< 7	24,0	6,0	28,0	7,0	28,0	5,0	35,0	7,0	7,5
M50x1,5 / M63x1,5	-55 - 70	< 7	29,0	12,0	35,0	12	36,0	12,0	41,0	13,0	7,5
additional seal			41,0	13,0	48,0	7,8					

** Test torques at 20°C

(1) The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 for the intermediate region.

(2) When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.

Dimension drawings and dimensions in mm **1.4 Cable entries in special versions**

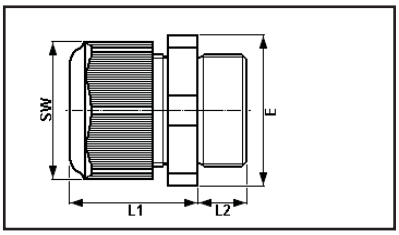
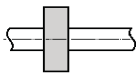


Fig. D/2 Seal insert



for gland for flat cables

Type	SW	L1	L2	E	weight app.
M20 with seal Ø 2 mm	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M20 with slotted seal Ø 7,0- 13 mm	24 mm	25,0 mm	13 / 8 mm	26,5 mm	10,1 g
M25 flat cable	29 mm	29,5 mm	13 / 8 mm	32,0 mm	16,9 g
M25 with PG 16 thread	36 mm	35,5 mm	15 / 10 mm	40,0 mm	27,6 g

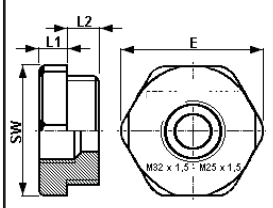
Type	Operating temperature	Impact resistant	Cable-diameter								Screw-in thread in enclosure
			Seal 1+2				Seal 2				
			min.		max.		min.		max.		
	°C	Joule	Ø	Nm**	Ø(1)(2)	Nm**	Ø	Nm**	Ø(1)(2)	Nm**	Nm**
M20 with seal Ø 2 mm	-20 - 60	< 7	2,0	3,5							2,7
M20x1,5 with slotted seal Ø 7,0- 13 mm	-5 - 45		Breakout-Innenkabel Typ: orange								2,7
	-20 - 60		Ultra-Fox Plus Typ: 903 AG 621 02 709								2,7
	-20 - 60		Ehret / ICS 24 Typ: 84 305								2,7
M25x1,5 with PG 16 thread	-20 - 70	< 7	10,0	2,3	13,0	2,6	13,5	1,3	17,5	2,3	3,0
	-55 - 70	< 7	10,0	2,3	13,0	2,6	13,5	1,5	15,0	2,3	3,0
M25x1,5 flat cable	-55 - 70 (110)	< 7	G18 = 5-8x9-12,5 Flachkabel			5,0					3,0
M25x1,5 flat cable	-55 - 70 (110)	< 7	G26 = 6-8x11-14 Flachkabel			3,5					3,0
	Cable type		Seal dimensions				Cable dimensions				
M25 flat cable	Raychem XTV-4XTV 2 ...		8,0	x	11,0	mm	7,5	x	11,0	mm	3,0
M25 flat cablel	Raychem VPL-5VPL 2 ...		8,0	x	11,0	mm	7,5	x	11,5	mm	3,0
M25 flat cable	Raychem BTV-3BTV 2 ...		8,0	x	11,0	mm	6,0	x	11,0	mm	3,0
M25 flat cable	Raychem QTV-10QTVR2		8,0	x	11,0	mm	5,0	x	12,5	mm	3,0
M25 flat cable Raychem	Raychem BTV-10BTV 2 ...		8,0	x	14,0	mm	6,0	x	14,0	mm	3,0
M25 flat cable	Raychem KTV-5KTV 2 ...		8,0	x	14,0	mm	7,5	x	13,5	mm	3,0

** Test torques at 20°C

(1) The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use the combination of sealing 1 + 2 for the intermediate region.

(2) When selecting the seal rubber, ensure that the cap nut can be tightened when carrying out any future maintenance work on the cable entry.

Dimension drawings and dimensions in mm **1.5 Reducing glands**

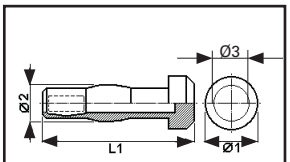


Reducing-gland have to protect against twisting (gluing, ...)

Type L1	L2	Operating temperature / °C	SW	L1	L2	E	Screw-in thread in enclosure / Nm	weight app.
M16x1,5	/ M12x1,5	-55 - 70					3,3 Nm	
M20x1,5	/ M12x1,5	-55 - 70	24 mm	6,0 mm	8 mm	26,5 mm	2,7 Nm	9,0 g
M20x1,5	/ M16x1,5	-55 - 70	24 mm	6,0 mm	8 mm	26,5 mm	2,7 Nm	9,0 g
M25x1,5	/ M12x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M25x1,5	/ M16x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M25x1,5	/ M20x1,5	-55 - 70	29 mm	6,0 mm	8 mm	32,0 mm	3,0 Nm	12,5 g
M32x1,5	/ M12x1,5	-55 - 70	29 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5	/ M16x1,5	-55 - 70	29 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5	/ M20x1,5	-55 - 70	29 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,5 g
M32x1,5	/ M25x1,5	-55 - 70	36 mm	6,0 mm	10 mm	40,0 mm	5,0 Nm	13,0 g
M40x1,5	/ M16x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M40x1,5	/ M20x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M40x1,5	/ M25x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	23,0 g
M40x1,5	/ M32x1,5	-55 - 70	46 mm	6,0 mm	10 mm	50,5 mm	7,5 Nm	21,0 g
M50x1,5	/ M20x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5	/ M25x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5	/ M32x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	72,0 g
M50x1,5	/ M40x1,5	-55 - 70	55 mm	6,0 mm	12 mm	60,0 mm	7,5 Nm	65,0 g
M63x1,5	/ M25x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5	/ M32x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5	/ M40x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	40,0 g
M63x1,5	/ M50x1,5	-55 - 70	68 mm	6,0 mm	12 mm	75,0 mm	7,5 Nm	30,0 g

L1 = Screw-in thread in enclosure
L2 = Reducing thread

1.6 Blanking plug for multiple glands



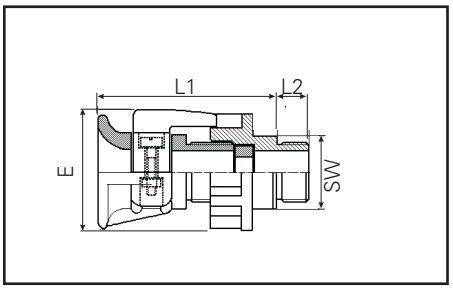
Type	Operating temperature / °C	Ø 1	Ø 2	L1	Ø 3	weight app.
M12x1,5*	-55 / +70	7,0 mm	6,0 mm	30,3 mm	5,0 mm	1,0 g
M16x1,5	-55 / +70	8,0 mm	7,0 mm	33,0 mm	6,0 mm	1,3 g
M20x1,5	-55 / +70	12,0 mm	8,5 mm	34,5 mm	7,0 mm	6,6 g
M25x1,5	-55 / +70	16,0 mm	11,0 mm	36,0 mm	10,0 mm	2,8 g
M32x1,5	-55 / +70	20,0 mm	14,0 mm	39,5 mm	13,0 mm	4,6 g
M40x1,5	-55 / +70	24,0 mm	20,0 mm	42,0 mm	19,0 mm	7,0 g
M50x1,5	-55 / +70	32,0 mm	26,0 mm	44,0 mm	25,0 mm	8,0 g
M63x1,5	-55 / +70	39,0 mm	34,0 mm	45,0 mm	32,0 mm	9,0 g

* for multiple glands M25x1,5 and M32x1,5

Dimension drawings and dimensions in mm

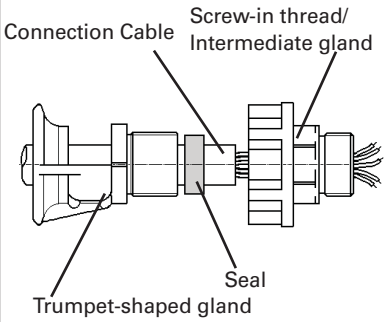
1.7 Trumpet-shaped glands M20 to M63

ATEX type examination certificate:	PTB 00 ATEX 3121
Marking acc. to 94/9/EG and standard:	
EN 60079-0	Ⓔx II 2 G Ex e II
	Ⓔx II 2 D Ex tD A21 IP66
IECEx type examination certificate:	IECEx BKI 08.0007
Category of application:	
IEC60079-0	Ex e II
	Ex tD A21 T85°C IP66
Perm. storage temperature in original packing:	-20° C +40° C
Degree of protection to EN/IEC 60529:	IP 66 (fully assembled)



Type	SW	L1	L2	E width across corners	weight app.
M20x1,5	27 mm	64 mm	15 mm	47 mm	100 g
M25x1,5	32 mm	65 mm	15 mm	51 mm	110 g
M32x1,5	41 mm	80 mm	15 mm	68 mm	170 g
M40x1,5	50 mm	86 mm	15 mm	81 mm	230 g
M50x1,5	60 mm	95 mm	16 mm	96 mm	450 g
M63x1,5	75 mm	105 mm	16 mm	107 mm	550 g

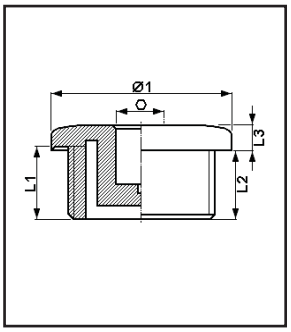
Fig E



Type	Operating temperature	Impact resistant	Cable diameter				strain Relief (screws)	Screw-in thread
			Trumpet-shaped gland					
			min.		max.			
	°C	Joule	Ø	Nm	Ø	Nm	Nm	Nm
M20x1,5	-40 - 85	< 7	8,0	3,5	13,0	2,5	1,5	2,7
M25x1,5	-40 - 85	< 7	11,0	5,0	16,0	3,5	2,0	3,0
M32x1,5	-40 - 85	< 7	15,0	8,0	20,0	5,0	4,0	7,5
M40x1,5	-40 - 85	< 7	19,0	6,0	27,0	5,0	6,0	7,5
M50x1,5	-40 - 85	< 7	28,0	16,0	34,0	5,0	10,0	7,5
M63x1,5	-40 - 85	< 7	38,0	22,0	46,0	5,0	15,0	7,5

Dimension drawings and dimensions in mm

1.8 Screw plugs

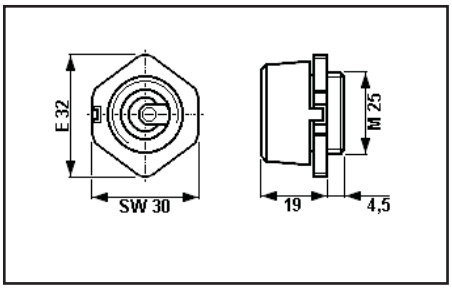


ATEX type examination certificate:	PTB 98 ATEX 3130	
Marking acc. to 94/9/EG and standard:		
EN 60079-0	Ex II 2 G Ex IIC Gb	
	Ex II 2 D Ex tb IIIC Db IP66	(not for M63x1,5)
IECEx type examination certificate::	IECEx PTB 03.0000	
Category of application:		
IEC60079-0	Ex IIC Gb	(not for M63x1,5)
	Ex tb IIIC Db IP 66	(not for M63x1,5)
Perm. storage temperature in original packing:	-20° C +40° C	
Degree of protection to EN/IEC 60529:	IP 54 (fully assembled)	

Type	Operating temperature / °C	Ø 1	L1	L2	L3	Screw-in thread in enclosure / Nm	weight app.
M16x1,5	-55 / +95	21 mm	12 mm	11 mm	4,0 mm	3,3	2,4 g
M20x1,5	-55 / +95	25 mm	13 mm	12 mm	4,0 mm	2,7	4,3 g
M25x1,5	-55 / +95	30 mm	13 mm	12 mm	4,0 mm	3,0	6,6 g
M32x1,5	-55 / +95	37 mm	15 mm	14 mm	5,5 mm	5,0	12,0 g
M40x1,5	-55 / +95	45 mm	15 mm	14 mm	5,5 mm	7,5	36,6 g
M50x1,5	-55 / +95	55 mm	16 mm	15 mm	5,5 mm	7,5	56,6 g
M63x1,5	-20 / +80	72 mm	/ mm	12 mm	11,0 mm	7,5	64,5 g

O = Socket head spanner or screw driver, size 8 mm

1.9 Drain plug



ATEX type examination certificate:	PTB 01 ATEX 1128 X
Marking acc. to 94/9/EG and standard:	
EN 60079-0	Ex II 2 G Ex e II
Einsatztemperaturbereich:	-20° C +40° C
Perm. storage temperature in original packing:	-20° C +40° C
Degree of protection to EN/IEC 60529:	IP 66 (fully assembled)
Einschraubgewinde in Gehäuse:	M25x1,5
Prüfdrehmoment:	5,0 Nm