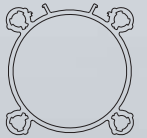




## **KE**\_Cylinders according to ISO15552

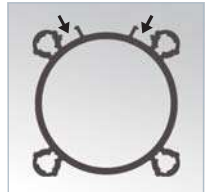


- └ New tube design
- └ Grooves for recessed sensor DF series
- └ Ø 32 ÷ 125 mm

# KE\_Cylinders according to ISO 15552 Ø 32 ÷ 125 mm



Tube grooves for recessed DF series sensors **Original UNIVER** Ø 32 ÷ 125 mm



Recessed sensors DF series (insertable in the grooves from above)



On request different position upon customer requirements



Possibility to mount traditional sensors DH series with bracket

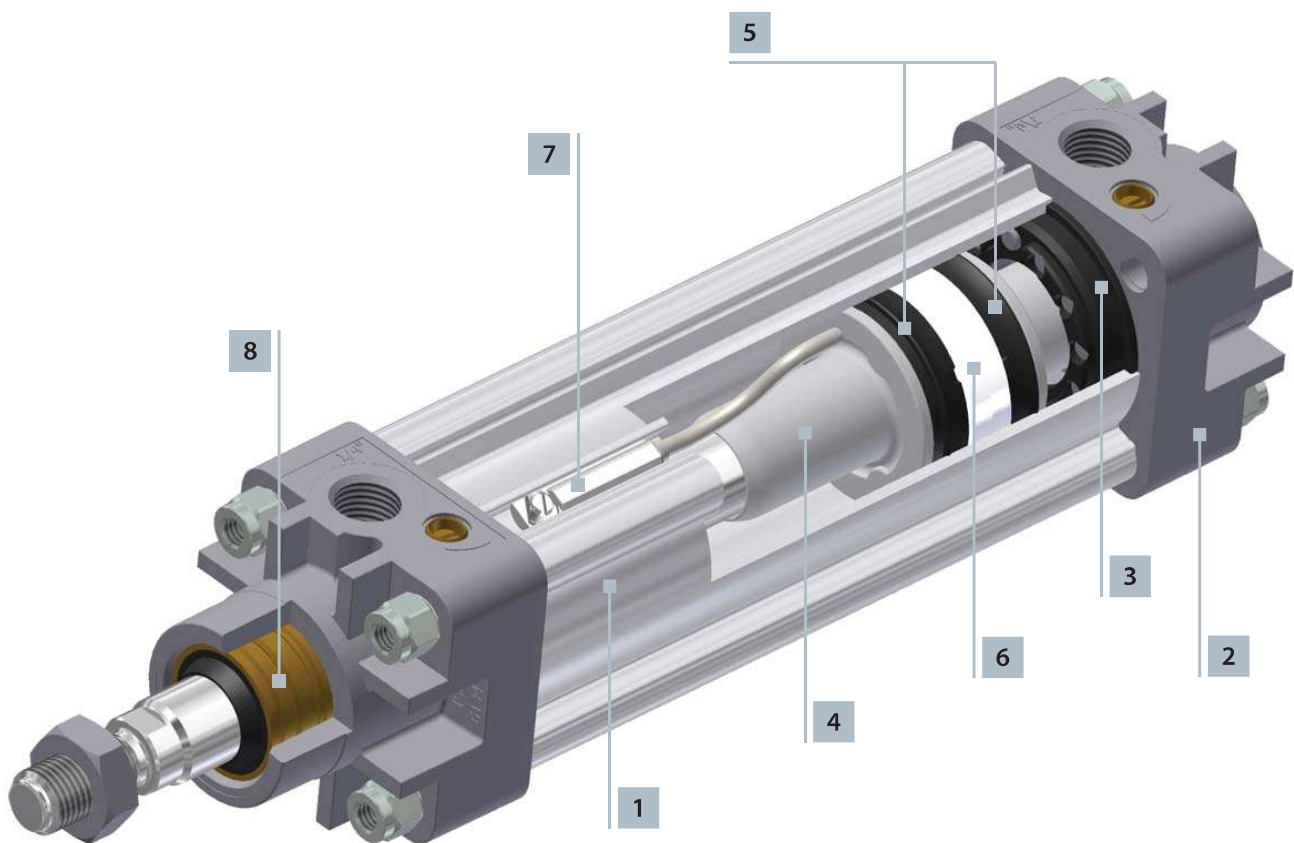


Intermediate hinge with a locking system guaranteed by the experience in the AUTOMOTIVE field



**UNIVER original** standard fixing





- 1 Extruded aluminium barrel, new design, with grooves for recessed sensor DF series
- 2 Die-cast end caps in aluminium alloy (K series)
- 3 Rubber cushions in NBR
- 4 Die-cast piston in aluminium alloy with integrated conical cushions (K series)
- 5 Double lip piston seals in NBR with
- 6 Piston rod guide in acetalic resin
- 7 Recessed sensor DF series
- 8 UNIVER original self-lubricating and self-aligning piston rod bush<sup>(\*)</sup>

(\*) Rigid piston rod bush upon request



# KE

## Cylinders according to ISO 15552 Ø 32 ÷ 125 mm

KE Series cylinders are designed with the UNIVER traditional construction technology of K series; they can fully satisfy the most demanding users. KE series adopts a new design tube tested for specific solutions since 2005, provided with grooves for integration of recessed DF sensors.



### TECHNICAL CHARACTERISTICS

Ambient temperature	-20 ÷ 80 °C
Fluid	filtered air lubricated or not lubricated
Working pressure	1,5 ÷ 10 bar
Bores	Ø 32 - 40 - 50 - 63 - 80 - 100 - 125 mm
Cushions	adjustable pneumatic cushions on both sides

### CONSTRUCTIVE CHARACTERISTICS

End caps	die-cast aluminium alloy
Barrel	anodized aluminium
Piston	die-cast aluminium alloy
Piston rod guide	acetalic resin
Piston rod	chromium-plate steel standard, stainless steel upon request
Piston rod seal	double-lip seal in nitrile rubber
Piston rod bush	UNIVER original self-lubricating and self-aligning
Rubber cushions	nitrile rubber
Magnetic rings	plastroferrite

### CODIFICATION KEY

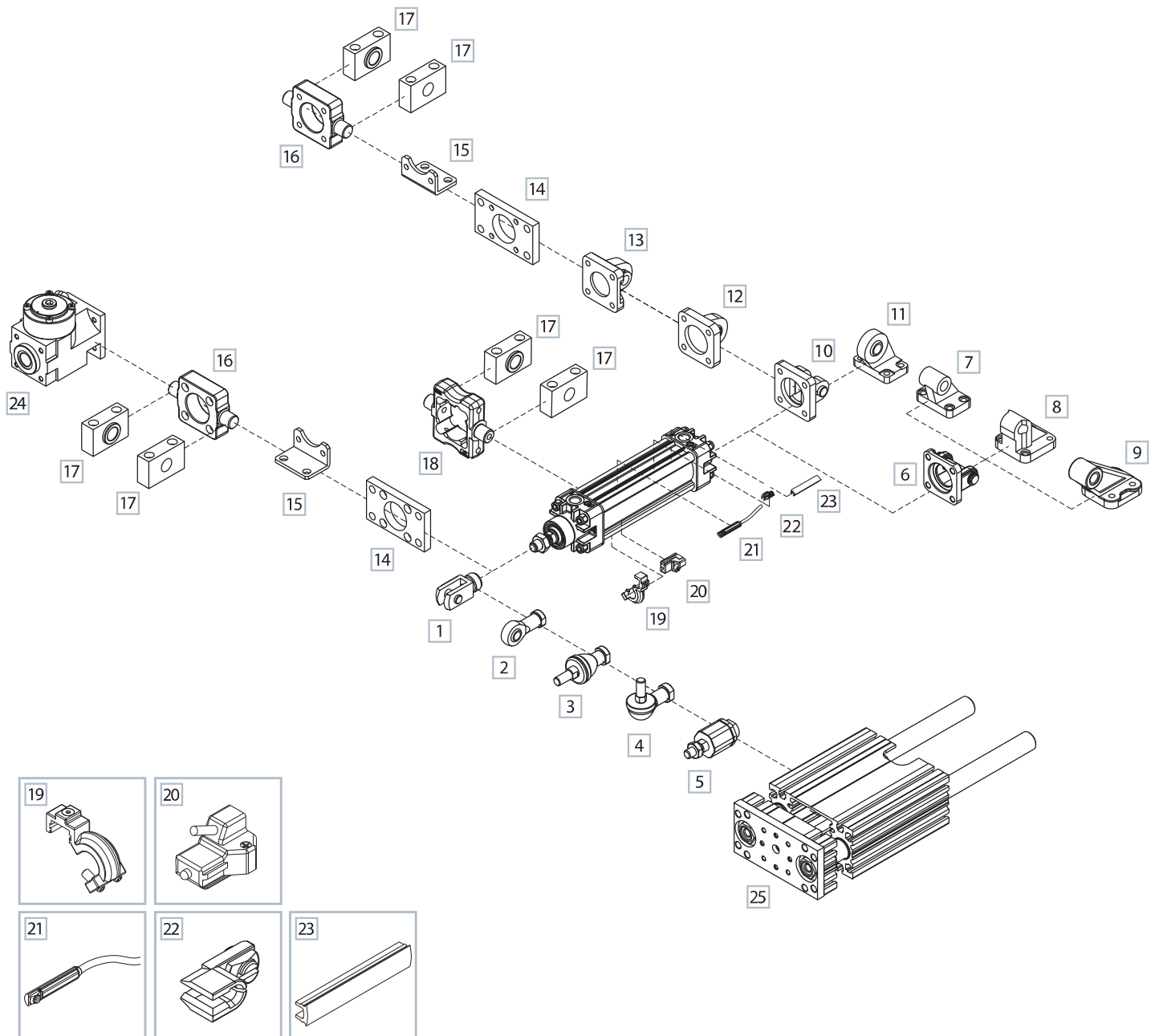
K	E	2	0	0	0	3	2	0	0	5	0	G	M
1	2	3	4		5			6					

1 Series	2 Type	3 Version	4 Bore (mm)	
<b>KE</b> = Cylinders according to ISO 15552 Ø 32 ÷ 125 mm	<b>1</b> = Stainless steel piston rod <b>2</b> = Chromium-plated steel piston rod	<b>00</b> = <b>D.A.</b> Standard piston rod <b>01</b> = <b>D.A.</b> Through piston rod <b>60</b> = <b>S.A.</b> Retracted piston rod, max stroke 50 mm <b>70</b> = <b>S.A.</b> Extended piston rod, max stroke 50 mm	<b>032</b> = Ø32 <b>040</b> = Ø40 <b>050</b> = Ø50 <b>063</b> = Ø63	<b>080</b> = Ø80 <b>100</b> = Ø100 <b>125</b> = Ø125

5 Stroke						6 Variant
<b>0025</b> = 25 mm <b>0050</b> = 50 mm <b>0075</b> = 75 mm <b>0080</b> = 80 mm <b>0100</b> = 100 mm	<b>0125</b> = 125 mm <b>0150</b> = 150 mm <b>0160</b> = 160 mm <b>0175</b> = 175 mm <b>0200</b> = 200 mm	<b>0250</b> = 250 mm <b>0300</b> = 300 mm <b>0320</b> = 320 mm <b>0350</b> = 350 mm <b>0400</b> = 400 mm	<b>0450</b> = 450 mm <b>0500</b> = 500 mm <b>0600</b> = 600 mm <b>0700</b> = 700 mm <b>0800</b> = 800 mm	<b>0900</b> = 900 mm <b>1000</b> = 1000 mm		<b>F</b> = For use with locking unit with reduced dimensions <b>G</b> = For use with locking unit with ISO dimensions <b>M</b> = Magnetic version

**D.A.** = Double acting      **S.A.** = Single acting

## > Accessories and fixing elements

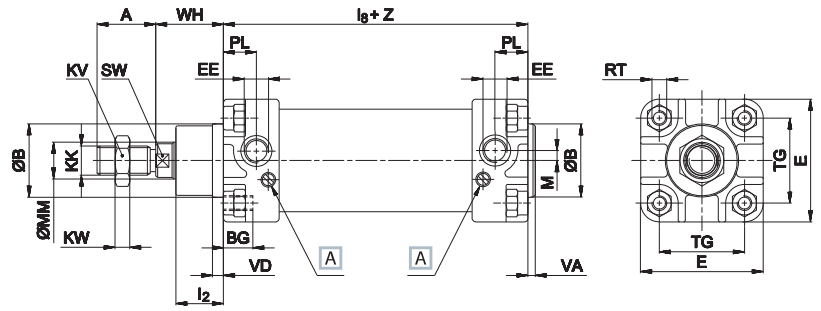


DESCRIPTION	PART NO.
1 Female fork with clips	KF-15 ___
2 Articulated self-lubricating fork	KF-17 ___
3 Fork with axially mounted articulated pin	KF-22 ___
4 Fork with angle-mounted articulated pin	KF-23 ___
5 Floating joint	KF-24 ___
6 Female rear hinge with pin	KF-10 ___ A
7 Counter hinge 90° (CETOP)	KF-19 ___ -CTA
8 Counter hinge 90°	KF-19 ___
9 Counter hinge 90° (CNOMO)	KF-19 ___ CN
10 Narrow female hinge with clips	KF-10 ___ AS
11 Articulated counter-hinge 90° DIN	KF-19 ___ SC
12 Male rear hinge (MP4)	KF-11 ___ S
13 Narrow male articulated hinge	KF-11 ___

DESCRIPTION	PART NO.
14 Front (MF1), rear (MF2) flange	KF-12 ___
15 Bracket MS1	KF-13 ___
16 Front- rear hinge	KF-14 ___ -AP
17 Support for intermediate hinge	KF-41 ___
18 Intermediate hinge ISO MT4	KLF-14 ___
19 Mounting bracket magnetic sensor DH series	DH-K...
20 Magnetic sensor DH series	DH-220
21 Magnetic sensor DF series	DF-220
22 Cable clamping magnetic sensor DF series	DF-001
23 Strip cover magnetic sensor DF series	DHF-0020100
24 Locking units (screws not included)	L1-N...
25 Slide units	J12...

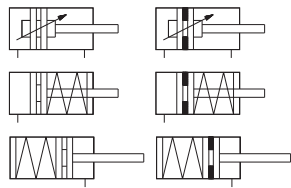


Standard version



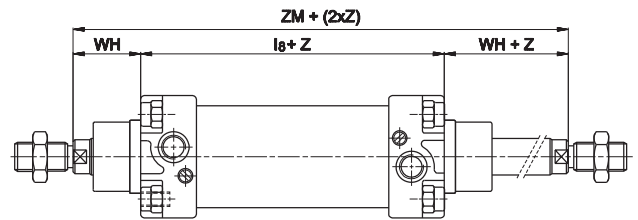
A Adjusting screw pneumatic cushioning

Z = stroke

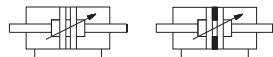


For extended rod version add WH+Z(stroke) dimensions

Through piston rod version



Z = stroke



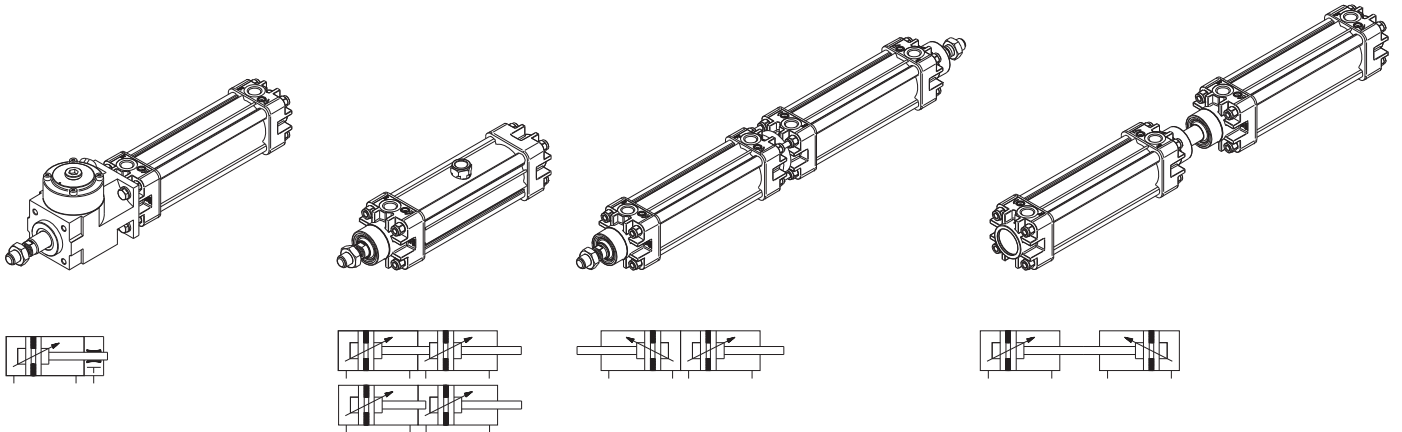
Ø	A <sup>(a)</sup>	B	BG	E	EE <sup>(b)</sup>	KK <sup>(a)</sup>		KV	KW	l <sub>2</sub>	l <sub>8</sub>	
		e11				nom.	toll.				nom.	toll.
32	22	30	14	48	G1/8	M10x1,25		17	6	16	94	±0,4
40	24	35	14	54	G1/4	M12x1,25		19	7	20	105	±0,7
50	32	40	16	67	G1/4	M16x1,5		24	8	26	106	±0,7
63	32	45	16	78	G3/8	M16x1,5		24	8	26	121	±0,8
80	40	45	16	97	G3/8	M20x1,5		30	9	32	128	±0,8
100	40	55	16	115	G1/2	M20x1,5		30	9	35	138	±1
125	54	60	20	140	G1/2	M27x2		41	12	45	160	±1
Ø	M	MM	PL	RT	SW	TG		VA	VD	WH	ZM	
						nom.	toll.					
32	4,5	12	15	M6	10	32,5	±0,5	3	5	26	146	
40	5	16	18	M6	13	38	±0,5	4	6	30	165	
50	6	20	18	M8	17	46,5	±0,6	4	6	37	180	
63	8	20	21,5	M8	17	56,5	±0,7	4	6	37	195	
80	7,5	25	21,5	M10	22	72	±0,7	5*	8	46	220	
100	9	25	21,5	M10	22	89	±0,7	6*	8	51	240	
125	11	32	24,5	M12	27	110	±1,1	7*	10	65	290	

\* = Dimensions according to ISO upon request

(a) = A and KK dimensions correspond to ISO 4359 long type

(b) = EE dimensions are in inches according to ISO 228/1 standard

Other versions available



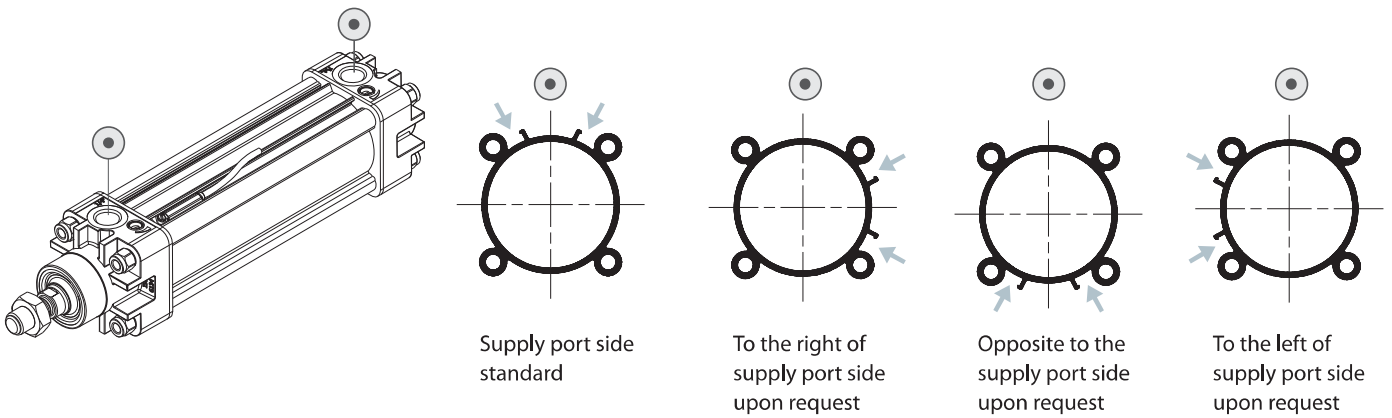
■ cylinder with locking unit

■ tandem cylinder  
■ two-position tandem cylinder

■ Tandem cylinder opposed rod

■ Tandem cylinder common rod

Slot positions for magnetic sensor



☉ supply port

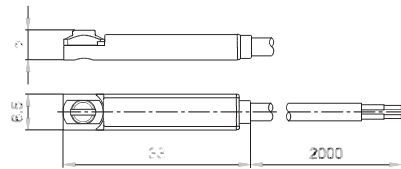


DF sensor

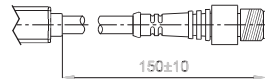
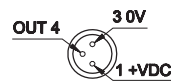


CHARACTERISTICS	TYPE	ELECTROMECHANICAL			ELECTRONIC
		DF-220 2 wires NO	DF-330 3 wires PNP NO	DF-440 3 wires PNP NC	DF-770 3 wires PNP NO
Working voltage	V AC/DC	5÷30 V AC/DC	5÷30 V AC/DC	5÷30 V AC/DC	5÷30 V DC
Max switching current	mA	100	100	100	100
Max switching power	W/VA	3	3	3	3
Max voltage drop	V AC/DC	<3,5V	0,1V	0,1V	0,7V
Minimum magnetic field	gauss	60	60	60	30
Opening response time	ms	< 0,5	< 0,5	< 0,5	0,08
Closing response time	ms	< 1	< 1	< 1	0,03
Electric life with resistive load	cycles	>10 <sup>7</sup>	>10 <sup>7</sup>	>10 <sup>7</sup>	>10 <sup>9</sup>
State indicator	LED	red	red	red	red
Cables number and section	mmq	2x0,14	3x0,14	3x0,14	3x0,14
Electric circuit	-	A	C	D	C
Protection degree	EN60529	IP67			
Working temperature	°C	-20 ÷ +80 °C			

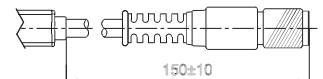
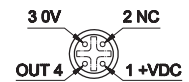
■ Cable version



■ M08 version

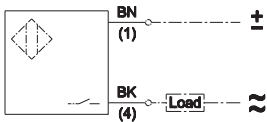


■ M12 version

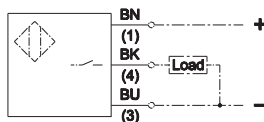


Electrical circuits

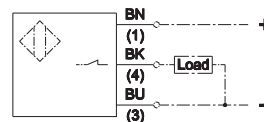
A AC/DC 2 wires NO



C DC 3 wires PNP NO



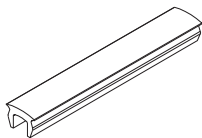
D DC 3 wires PNP NC



BN = brown  
BK = black  
BU = blue

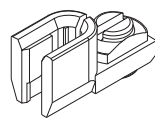
Accessories

> DHF-0020100

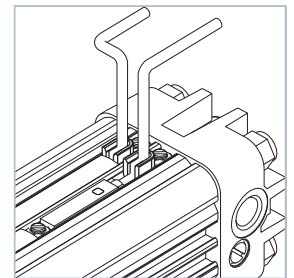
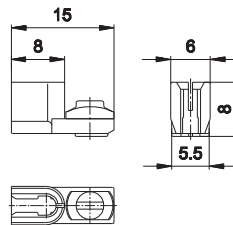


■ Strip cover magnetic sensor

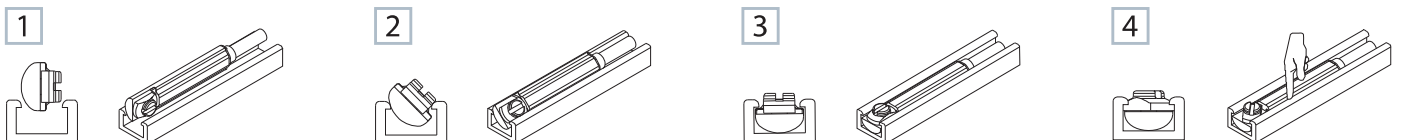
> DF-001



■ Cable clamping



Mounting example



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