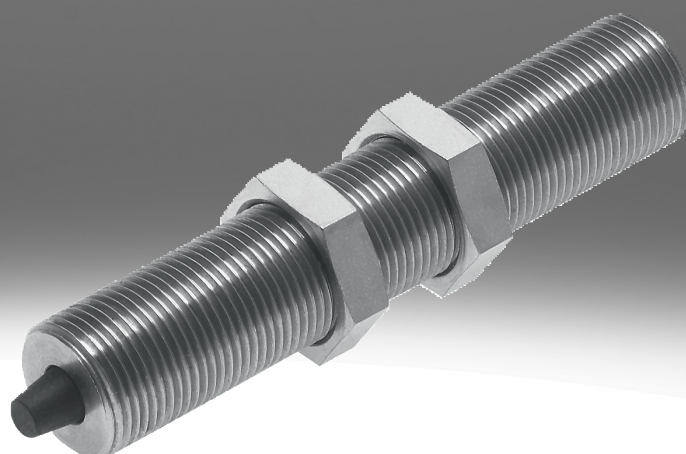


Shock absorber DYEF

FESTO



Characteristics

At a glance Link [dyef](#)

- Mechanical shock absorber with flexible rubber buffer
- Either with adjustable or non-adjustable cushioning stroke
- Optionally with or without fixed stop
- Continuous mounting thread with internal hex

Diagrams Link [dyef](#)



The diagrams shown in this document are also available online. These can be used to display precise values.

Allocation

[G8] Version G8

For mini slides DGST

Design type

[S] Short

Particularly suitable for applications where space is critical

Geometric characteristics

[Y1] Internal hex

The shock absorber can be adjusted using the hexagon socket

Stop

[F] With fixed stop

Metal end position on the shock absorber housing

Special material properties

Type code

001	Series	
DYE	Shock absorber	

002	Allocation	
	None	
G8	Version G8	

003	Design type	
	Standard	
S	Short	

004	Size	
M4	M4x0.5	
M5	M5x0.5	
M6	M6x0.5	
M8	M8x1	
M10	M10x1	
M12	M12x1	
M14	M14x1	
M16	M16x1	
M22	M22x1.5	

005	Geometric characteristics	
Y1	Internal hex	

006	Stop	
	None	
F	With fixed stop	

007	Special material properties	
	None	
F1A	Recommended for production plants for manufacturing lithium-ion batteries, F1A	

Datasheet

General technical data for DYEF-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14	M16
Stroke	0.9 mm	1.5 mm		1.3 mm	1 mm	1.2 mm		1.3 mm
Cushioning	Elastic cushioning rings/pads at both ends without metal fixed stop							
Cushioning length	0.9 mm	1.5 mm		1.3 mm	1 mm	1.2 mm		1.3 mm
Type of mounting	Via threaded sleeve Via lock nut							Via lock nut
Max. impact speed	0.8 m/s							
Mounting position	Any							
Ambient temperature	-10 ... 60°C							0 ... 60°C
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress							

1) More information www.festo.com/x/topic/crc

General technical data for DYEF-...-Y1F

Size	M4	M5	M6	M8	M10	M12	M14	M16	M22
Stroke	1.7 mm	2.8 mm	3.1 mm	3.4 mm	3.7 mm	4.2 mm	5 mm	4.8 mm	7 mm
Cushioning	Elastic cushioning rings/pads at both ends with metal fixed stop								
Cushioning length	1.7 mm	2.8 mm	3.1 mm	3.4 mm	3.7 mm	4.2 mm	5 mm	4.8 mm	7 mm
Type of mounting	Via threaded sleeve Via lock nut					Via lock nut			
Max. impact speed	0.8 m/s								
Mounting position	Any								
Ambient temperature	0 ... 60°C								
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress								

1) More information www.festo.com/x/topic/crc

Energy sources for DYEF-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14	M16
Max. energy consumption per stroke	0.015 J	0.05 J	0.08 J	0.12 J	0.25 J	0.35 J	0.45 J	0.55 J

Energy sources for DYEF-G8-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14
Max. energy consumption per stroke	0.018 J	0.05 J	0.08 J	0.12 J	0.25 J	0.35 J	0.45 J

Energy sources for DYEF-...-Y1F

Size	M4	M5	M6	M8	M10	M12	M14	M16	M22
Max. energy consumption per stroke	0.005 J	0.02 J	0.03 J	0.04 J	0.06 J	0.12 J	0.2 J	0.25 J	1.2 J

Weight for DYEF-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14	M16
Product weight	2.1 g	3.6 g	6 g	14 g	23 g	45.5 g	82.5 g	106 g

Weights for DYEF-G8-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14
Product weight	5 g	8.4 g	11.7 g	23 g	41 g	72.5 g	136.5 g

Weight for DYEF-...-S-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14	M16
Product weight	1.1 g	2 g	3 g	8.6 g	12 g	15 g	31 g	40 g

Datasheet

Weight for DYEF-G8-S-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14
Product weight	3.5 g	4.8 g	6.9 g	14.6 g	26 g	41 g	67 g

Weight for DYEF-...-Y1F

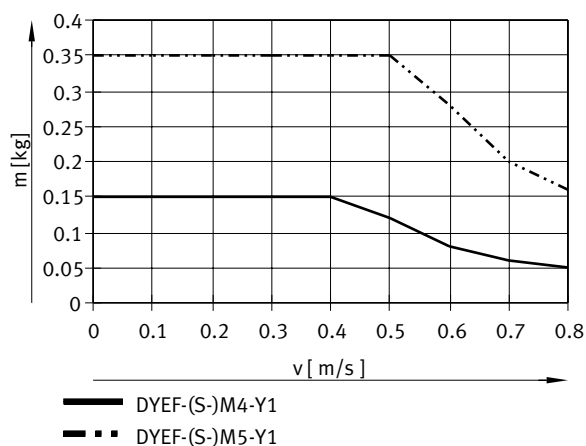
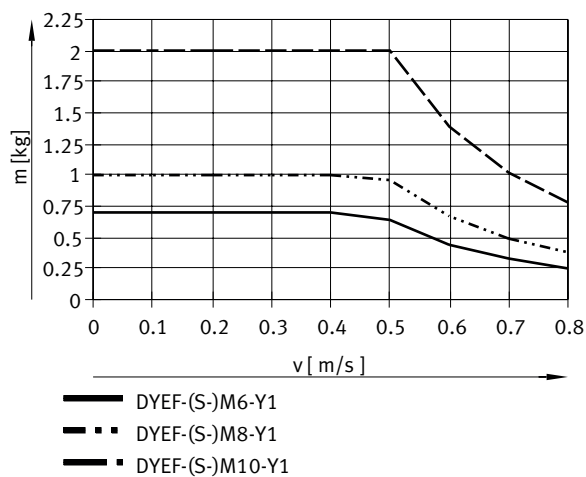
Size	M4	M5	M6	M8	M10	M12	M14	M16	M22
Product weight	1.6 g	2.9 g	5.1 g	11.9 g	19.7 g	39.6 g	77.3 g	104 g	200 g

Weight for DYEF-G8-...-Y1F

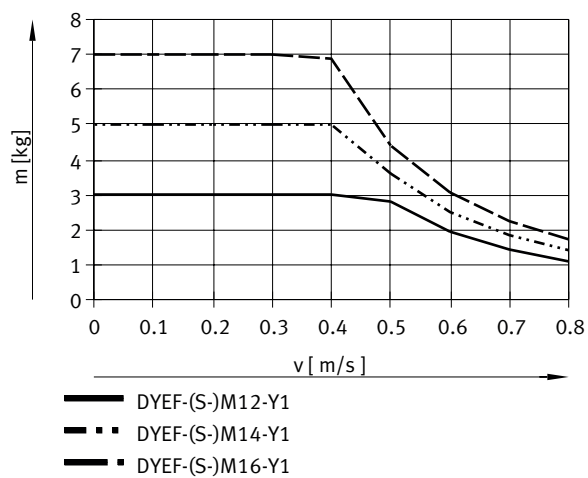
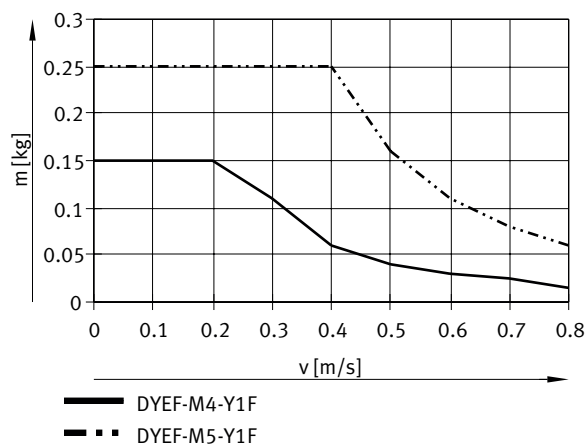
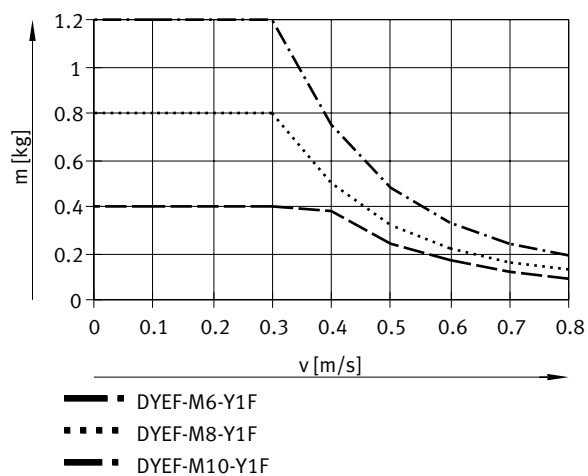
Size	M4	M5	M6	M8	M10
Product weight	4.5 g	7.6 g	10.8 g	20.9 g	37.6 g

Materials

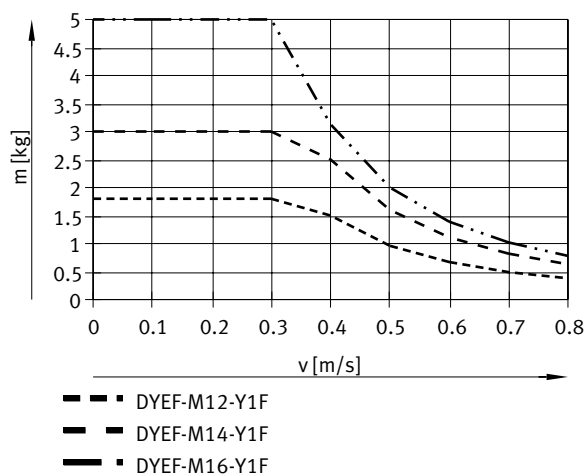
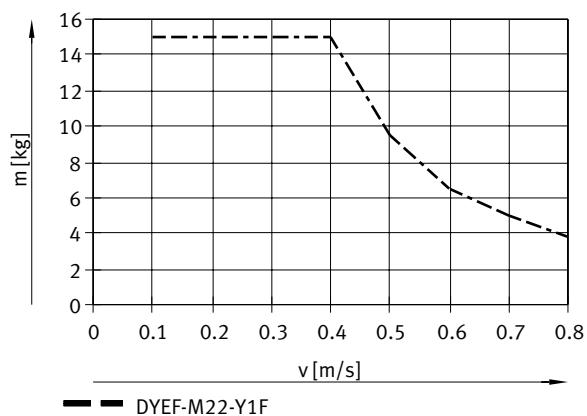
Size	M4	M5	M6	M8	M10	M12	M14	M16	M22
Material housing	High-alloy steel								
Material seals	NBR								
Note on materials	RoHS compliant								
LABS (PWIS) conformity	VDMA24364-B2-L VDMA24364-B1/B2-L							VDMA24364-B1/B2-L	

Impact velocity v as a function of mass m – DYEF-(S-)M4/M5-Y1Impact velocity v as a function of mass m – DYEF-(S-)M6/M8/M10-Y1

Datasheet

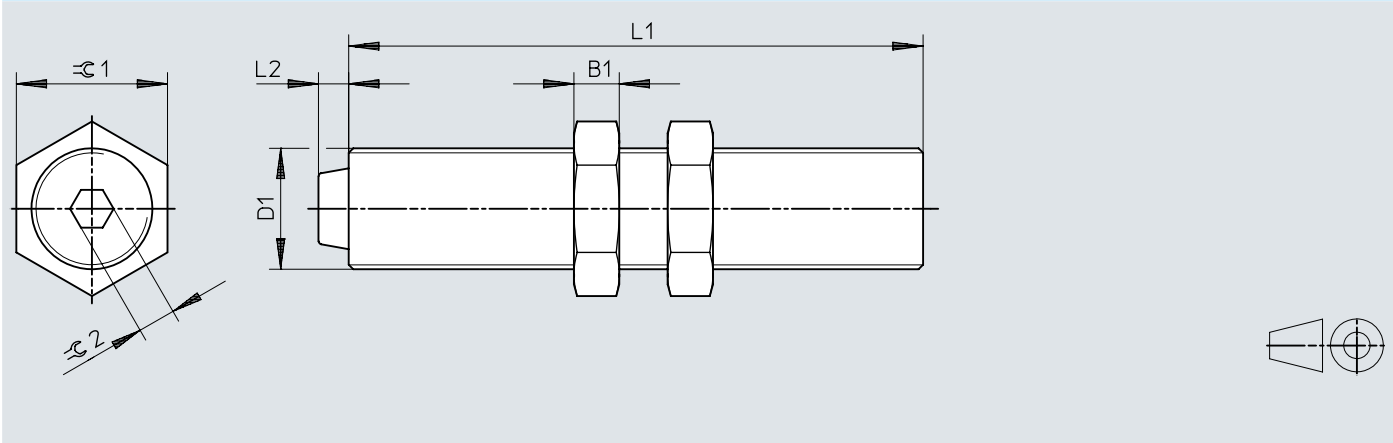
Impact velocity v as a function of mass m – DYE(S)-M12/M14/M16-Y1Impact velocity v as a function of mass m – DYE-M4/M5-Y1FImpact velocity v as a function of mass m – DYE-M6/M8/M10-Y1F

Datasheet

Impact velocity v as a function of mass m – DYEF-M12/M14/M16-Y1FImpact velocity v as a function of mass m – DYEF-M22-Y1F

Dimensions

Dimensions – DYEF-...-Y1 – long version Download CAD data www.festo.com

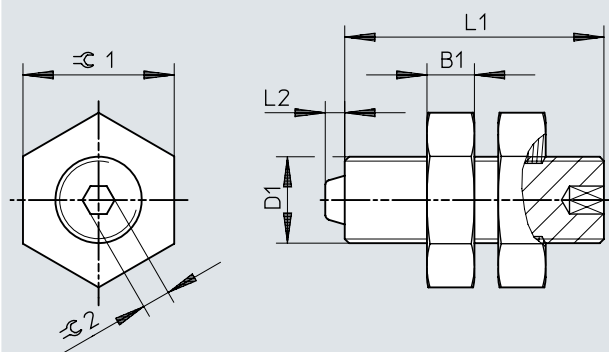


	B1	D1	L1	L2	$\varnothing 1$	$\varnothing 2$
				+0,3		
DYEF-M4-Y1	2,2	M4x0,5	22	0,9	7	1,5
DYEF-M5-Y1	2,7	M5x0,5	26	1,8	8	1,5
DYEF-M6-Y1	2,5	M6x0,5	30	1,8	8	2
DYEF-M8-Y1	3	M8x1	38	2	10	2,5
DYEF-M10-Y1	3,5	M10x1	41	1,8	13	3
DYEF-M12-Y1	4	M12x1	54	2	15	4
DYEF-M14-Y1	5	M14x1	72	2	17	4
DYEF-M16-Y1	5	M16x1	75	2	19	5

Dimensions

Dimensions – DYEF-...-S-...-Y1 – short version

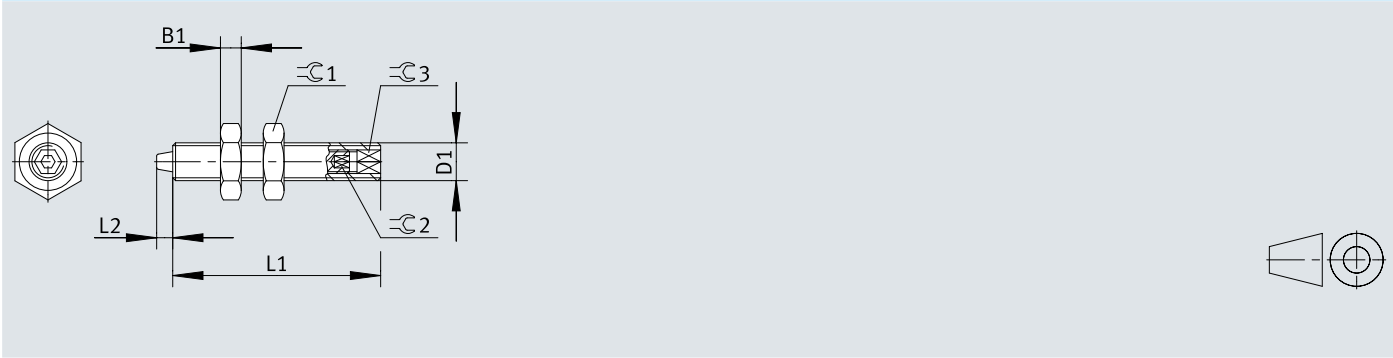
Download CAD data www.festo.com



	B1	D1	L1	L2	$\varnothing 1$	$\varnothing 2$
				+0,3		
DYEF-S-M4-Y1	2,2	M4x0,5	12	0,9	7	1,5
DYEF-S-M5-Y1	2,7	M5x0,5	14,5	1,8	8	1,5
DYEF-S-M6-Y1	2,5	M6x0,5	15	1,8	8	2
DYEF-S-M8-Y1	3	M8x1	23,5	2	10	2,5
DYEF-S-M10-Y1	3,5	M10x1	21	1,8	13	3
DYEF-S-M12-Y1	4	M12x1	20	2	15	4
DYEF-S-M14-Y1	5	M14x1	28	2	17	4
DYEF-S-M16-Y1	5	M16x1	31,5	2	19	5

Dimensions

Dimensions – DYEF-...-Y1F – long version Download CAD data www.festo.com



	B1	D1	L1	L2	⌀C1	⌀C2	⌀C3
DYEF-M4-Y1F ¹⁾	2,2	M4x0,5	22	1,7 $+0,3/-0,2$	7	1,3	2,5
DYEF-M5-Y1F	2,7	M5x0,5	26	2,8 $\pm 0,3$	8	1,5	3
DYEF-M6-Y1F	2,5	M6x0,5	30	3,1 $\pm 0,3$	8	2	4
DYEF-M8-Y1F	3	M8x1	38	3,4 $+0,3/-0,5$	10	2,5	5
DYEF-M10-Y1F	3,5	M10x1	41	3,7 $\pm 0,3$	13	3	6
DYEF-M12-Y1F	4	M12x1	54	4,2 $\pm 0,3$	15	4	8
DYEF-M14-Y1F	5	M14x1	72	5 $\pm 0,3$	17	4	8
DYEF-M16-Y1F	5	M16x1	75	4,8 $\pm 0,3$	19	5	10
DYEF-M22-Y1F	5	M22x1,5	78	7 $\pm 0,3$	27	5	10

Ordering data

DYEF-....Y1 – Long version						
	Size	Stroke	Cushioning	Allocation	Part no.	Type
	M4	0.9 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	None	1179810	DYEF-M4-Y1
	M5	1.5 mm			1179818	DYEF-M5-Y1
	M6				1179831	DYEF-M6-Y1
	M8	1.3 mm			1179834	DYEF-M8-Y1
	M10	1 mm			1179837	DYEF-M10-Y1
	M12	1.2 mm			1179840	DYEF-M12-Y1
	M14				1179863	DYEF-M14-Y1
	M16	1.3 mm			1179879	DYEF-M16-Y1

DYEF-G8-....Y1 – Long version						
	Size	Stroke	Cushioning	Allocation ¹⁾	Part no.	Type
	M4	0.9 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	Version G8	8073902	DYEF-G8-M4-Y1
	M5	1.5 mm			8073903	DYEF-G8-M5-Y1
	M6				8073904	DYEF-G8-M6-Y1
	M8	1.3 mm			8073905	DYEF-G8-M8-Y1
	M10	1 mm			8073906	DYEF-G8-M10-Y1
	M12	1.2 mm			8073907	DYEF-G8-M12-Y1
	M14				8073908	DYEF-G8-M14-Y1

1) Version G8 = for mini slide DGST

DYEF-G8-....Y1 – Long version, for manufacturing Li-ion batteries						
	Size	Stroke	Cushioning	Allocation ¹⁾	Part no.	Type
	M4	0.9 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	Version G8	8131070	DYEF-G8-M4-Y1-F1A
	M5	1.5 mm			8131071	DYEF-G8-M5-Y1-F1A
	M6				8131072	DYEF-G8-M6-Y1-F1A
	M8	1.3 mm			8131073	DYEF-G8-M8-Y1-F1A
	M10	1 mm			8131074	DYEF-G8-M10-Y1-F1A
	M12	1.2 mm			8132355	DYEF-G8-M12-Y1-F1A
	M14				8132356	DYEF-G8-M14-Y1-F1A

1) Version G8 = for mini slide DGST

DYEF-S-....Y1 – Short version						
	Size	Stroke	Cushioning	Allocation	Part no.	Type
	M4	0.9 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	None	1152500	DYEF-S-M4-Y1
	M5	1.5 mm			1152507	DYEF-S-M5-Y1
	M6				1152524	DYEF-S-M6-Y1
	M8	1.3 mm			1152536	DYEF-S-M8-Y1
	M10	1 mm			1152959	DYEF-S-M10-Y1
	M12	1.2 mm			1153004	DYEF-S-M12-Y1
	M14				1153017	DYEF-S-M14-Y1
	M16	1.3 mm			1153023	DYEF-S-M16-Y1

DYEF-G8-S-....Y1 – Short version						
	Size	Stroke	Cushioning	Allocation ¹⁾	Part no.	Type
	M4	0.9 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	Version G8	8159470	DYEF-G8-S-M4-Y1
	M5	1.5 mm			8159471	DYEF-G8-S-M5-Y1
	M6				8159472	DYEF-G8-S-M6-Y1
	M8	1.3 mm			8159473	DYEF-G8-S-M8-Y1
	M10	1 mm			8159474	DYEF-G8-S-M10-Y1
	M12	1.2 mm			8159475	DYEF-G8-S-M12-Y1
	M14				8159476	DYEF-G8-S-M14-Y1

1) Version G8 = for mini slide DGST

Ordering data

DYEF-...-Y1F – Long version						
	Size	Stroke	Cushioning	Allocation	Part no.	Type
	M4	1.7 mm	Elastic cushioning rings/pads at both ends with metal fixed stop	None	548370	DYEF-M4-Y1F
	M5	2.8 mm			548371	DYEF-M5-Y1F
	M6	3.1 mm			548372	DYEF-M6-Y1F
	M8	3.4 mm			548373	DYEF-M8-Y1F
	M10	3.7 mm			548374	DYEF-M10-Y1F
	M12	4.2 mm			548375	DYEF-M12-Y1F
	M14	5 mm			548376	DYEF-M14-Y1F
	M16	4.8 mm			548377	DYEF-M16-Y1F
	M22	7 mm			1113706	DYEF-M22-Y1F

DYEF-G8-...-Y1F – Long version						
	Size	Stroke	Cushioning	Allocation ¹⁾	Part no.	Type
	M4	1.7 mm	Elastic cushioning rings/pads at both ends with metal fixed stop	Version G8	8160234	DYEF-G8-M4-Y1F
	M5	2.8 mm			8160235	DYEF-G8-M5-Y1F
	M6	3.1 mm			8160236	DYEF-G8-M6-Y1F
	M8	3.4 mm			8160237	DYEF-G8-M8-Y1F
	M10	3.7 mm			8160238	DYEF-G8-M10-Y1F

1) Version G8 = for mini slide DGST

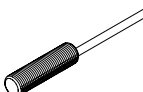
Accessories

Monitoring with distance sensor SOIA

To monitor the application and condition of the cushioning components. Enables predictive maintenance and increases reliability and precision.

The following parameters can be monitored:

- Impact velocity
- End position
- Energy absorption
- Residual energy
- Cushioning reserve

Distance sensor SOIA, inductive						Link soia		
	Mounting type	Displacement measuring range	Switching output	Electrical connection	Part no.	Type		
	Flush	0 ... 2 mm	PNP/NPN, switchable, Push-pull	Open end	8161194	SOIA-M8PB-PNLK-LE		
		0 ... 4 mm			8161198	SOIA-M12PB-PNLK-LE		
	Not flush	0 ... 7 mm			8161196	SOIA-M8PNB-PNLK-LE		
					8161200	SOIA-M12PNB-PNLK-LE		