



- Analogue and digital
- For measuring and positioning
- For use with pneumatic components

# Displacement encoders

Key features

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## Analogue displacement encoders

### MLO-POT-...-TLF

- Conductive plastic potentiometer
- Absolute measurements with high resolution
- High speeds of travel and long service life
- Several mounting options on pneumatic linear drives DGPL
- Plug-in connections
- Stroke: 225 ... 2000 mm



### MLO-POT-...-LWG

- Connecting rod potentiometer
- Absolute measurements with high resolution
- Long service life
- High degree of protection
- Plug-in connections
- Stroke: 100 ... 750 mm



## Digital displacement encoders

### MME-MTS-...-AIF


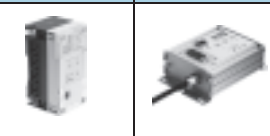




- Magnetostrictive measuring principle
- Contactless with absolute measurements
- High speeds of travel
- Long service life
- High degree of protection
- Several mounting options on pneumatic linear drives DGPL
- Plug-in connections
- Stroke: 225 ... 2000 mm




# Displacement encoders

Selection aid

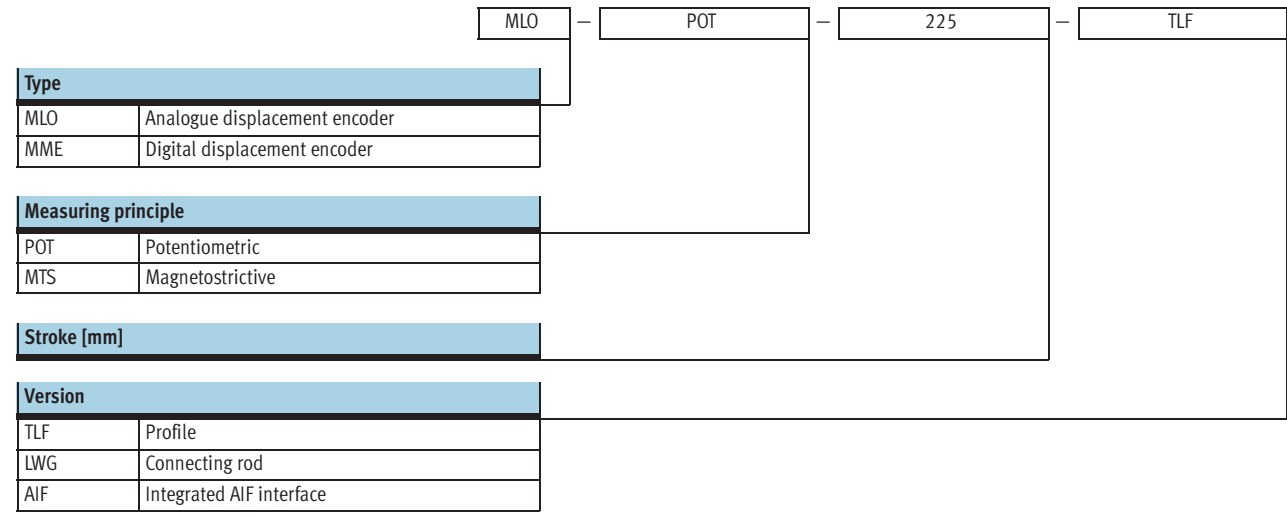
## Recommended combinations of displacement encoder, drive and controller

Function	Version	Linear drive		End position controller		Axis controller		→ Page/ Internet
		DGPL	Standard cylinder DNC	CPX-CMPX	SPC11	CPX-CMAX	SPC200	
								
Analogue	MLO-POT-TLF 	■ 1)	-	■	■	■	■	4
	MLO-POT-LWG 	-	■ 2)	■	■	■	■	6
Digital	MME-MTS-AIF 	■ 1)	-	■	■	■	■	8

- 1) Mounting kits → 11
- 2) No mounting kits available.

 Note  
The displacement encoders can be combined with any linear drive provided that the installation conditions are adhered to and the customer uses the appropriate mounting.

## Type code



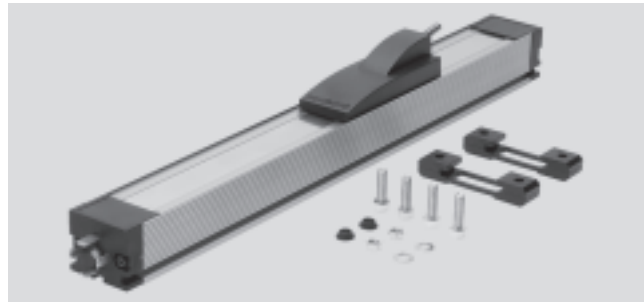
# Displacement encoders MLO-POT, analogue

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Technical data

## MLO-POT...-TLF

- Stroke length  
225 ... 2000 mm



General technical data													
Stroke		225	300	360	450	500	600	750	1000	1250	1500	1750	2000
Constructional design		Open profile with cover strip and sliding cartridge											
Measuring principle		Analogue displacement encoder, with contact and absolute measurement											
Resolution	[mm]	0.01											
Max. speed of travel	[m/s]	10											
Max. acceleration	[m/s <sup>2</sup> ]	200											
Mounting position		Any											
Driver, ball coupling	Angle offset [°]	±1											
	Parallel offset [mm]	±1.5											
Service life	Strokes [10 <sup>6</sup> ]	Typical 100											
Connection		4-pin plug, type A DIN 43 650											
Product weight	[g]	900	1000	1100	1200	1300	1500	1800	2200	2500	3000	3500	3900

General electrical data													
Stroke		225	300	360	450	500	600	750	1000	1250	1500	1750	2000
Power supply	[V DC]	10 <sup>1)</sup>											
Max. current consumption	[mA]	4											
Wiper current	recommended [µA]	< 1											
	maximum [mA]	10 <sup>2)</sup>											
Connection resistance	[kΩ]	5	5	5	5	5	5	10	10	10	20	20	20
Connection resistance tolerance	[%]	±20											
Independent linearity	[%]	0.07	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.03	0.03	0.03	0.02
Temperature coefficient	[ppm/°K]	5											
Interface		Analogue											

- 1) Stabilised power supply is recommended, max. 42 VDC permissible.
- 2) Only permissible in the short-term in the event of a fault.

Operating and environmental conditions													
Stroke		225	300	360	450	500	600	750	1000	1250	1500	1750	2000
Ambient temperature	[°C]	-30 ... +100 <sup>1)</sup>											
Protection class	top	IP40 to IEC 60529											
	bottom	IP42 to IEC 60529 <sup>2)</sup>											
Vibration resistance		To DIN/IEC 68 Parts 2 – 6, severity level 2											
Continuous shock resistance		To DIN/IEC 68 Parts 2 – 27, severity level 2											
CE marking symbol (see conformity declaration)		As per EU EMC directive											

- 1) Please note temperature ranges of individual components used in a complete system solution.
- 2) The encoder slide points downwards in the inverted mounting position.

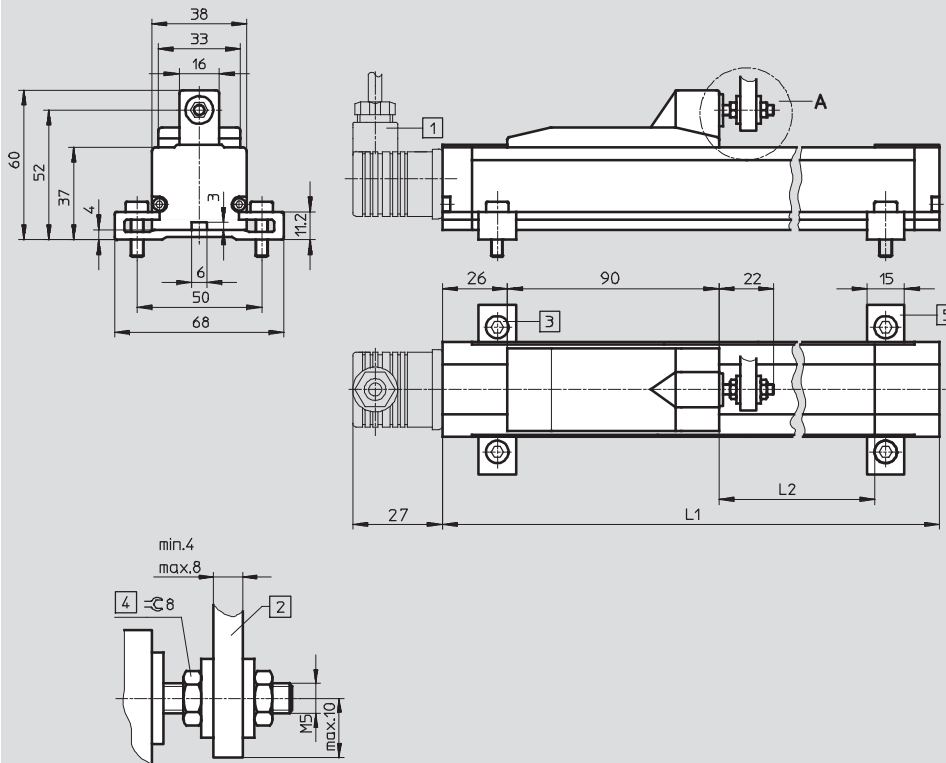
# Displacement encoders MLO-POT, analogue

Technical data and accessories

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## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

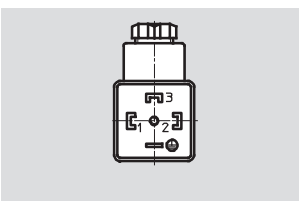


- 1 Plug socket, 4-pin to DIN 43 650  
Insert 90° rotatable  
(not included in scope of delivery)
- 2 Driver  
(not included in scope of delivery)
- 3 Mounting screw M5x18
- 4 Hex nut M5
- 5 Adjustable mounting clips are included

## Dimensions and ordering data

Stroke [mm]	L1	L2 (effective mechanical/electrical displacement)	Part No.	Type
225	376	234/228	152 625	MLO-POT-225-TLF
300	452	310/304	152 626	MLO-POT-300-TLF
360	514	372/366	152 627	MLO-POT-360-TLF
450	605	463/457	152 628	MLO-POT-450-TLF
500	656	514/508	152 629	MLO-POT-500-TLF
600	758	616/610	152 630	MLO-POT-600-TLF
750	910	768/762	152 631	MLO-POT-750-TLF
1000	1164	1022/1016	152 632	MLO-POT-1000-TLF
1250	1418	1276/1270	152 633	MLO-POT-1250-TLF
1500	1668	1526/1520	152 634	MLO-POT-1500-TLF
1750	1918	1776/1770	152 635	MLO-POT-1750-TLF
2000	2168	2026/2020	152 636	MLO-POT-2000-TLF

## Ordering data – Accessories



PIN	Pin allocation	Designation	Part No.	Type
1	Power supply	Connector plug	171 157	MSSD-C-4P
2	Signal			
3	0 V			
PE	PE (yellow), screen			

- Note

Materials → 10

# Displacement encoders MLO-POT, analogue

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Technical data

MLO-POT...-LWG

- | - Stroke length  
100 ... 750 mm



General technical data			100	150	225	300	360	450	500	600	750
Stroke			100	150	225	300	360	450	500	600	750
Constructional design			Round profile with connecting rod								
Measuring principle			Analogue displacement encoder, with contact and absolute measurement								
Resolution	[mm]		0.01								
Max. speed of travel	[m/s]		5								
Max. acceleration	[m/s <sup>2</sup> ]		200								
Mounting position			Any								
Driver, ball coupling	Angle offset	[°]	±12.5								
	Parallel offset	[mm]	-								
Service life	Strokes	[10 <sup>6</sup> ]	Typical 50								
Connection			4-pin square plug								
Product weight	[g]										

General electrical data			100	150	225	300	360	450	500	600	750
Stroke			100	150	225	300	360	450	500	600	750
Power supply	[V DC]		10 <sup>1)</sup>								
Max. current consumption	[mA]		4								
Wiper current	recommended	[µA]	< 1								
	maximum	[mA]	10 <sup>2)</sup>								
Connection resistance	[kΩ]		3	5	5	5	5	5	5	5	10
Connection resistance tolerance	[%]		±20								
Independent linearity	[%]		0.1	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.04
Temperature coefficient	[ppm/°K]		5								
Interface			Analogue								

- 1) Stabilised power supply is recommended, max. 42 VDC permissible.  
2) Only permissible in the short-term in the event of a fault.

Operating and environmental conditions			100	150	225	300	360	450	500	600	750
Stroke			100	150	225	300	360	450	500	600	750
Ambient temperature	[°C]		-30 ... +100 <sup>1)</sup>								
Protection class			IP65								
Vibration resistance			To DIN/IEC 68 Parts 2 – 6, severity level 2								
Continuous shock resistance			To DIN/IEC 68 Parts 2 – 27, severity level 2								
CE marking symbol (see conformity declaration)			As per EU EMC directive								

- 1) Please note temperature ranges of individual components used in a complete system solution.

# Displacement encoders MLO-POT, analogue

Technical data and accessories

**Note**

The mechanical vibrations of the piston rod must not be transmitted to the displacement encoder.  
The displacement encoder is earthed to a screw on the end cap using a

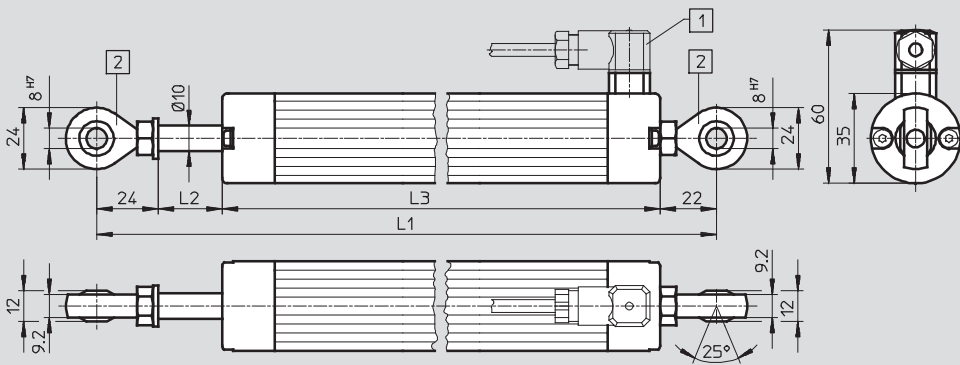
cable lug or earthing strap that must be connected to the earthing screw of the SPC11-...-LWG housing.  
The earthing cable should not be longer than the encoder cable of the

SPC11-...-LWG. The connection must be designed to be low-resistance.  
The conductor cross-section must be at least 1.5 mm<sup>2</sup>.

An earthing strap (braided) should be used instead of a round cable as earthing straps are considerably more effective at dissipating interference.

**Dimensions**

Download CAD data → [www.festo.com](http://www.festo.com)

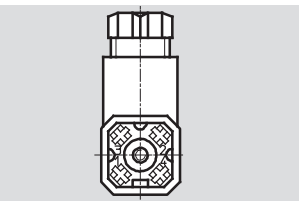


- 1 Plug socket, 4-pin  
Type: SD-4-WD-7  
Insert 90° rotatable  
(not included in scope of delivery)
- 2 Rod eye, backlash-free

**Dimensions and ordering data**

Stroke [mm]	L1	L2 (effective mechanical/electrical displacement)	L3	Part No.	Type
100	273	105/102	227	192 213	MLO-POT-100-LWG
150	323	155/152	277	192 214	MLO-POT-150-LWG
225	400	231/228	354	152 645	MLO-POT-225-LWG
300	476	307/304	430	152 646	MLO-POT-300-LWG
360	551	368/366	505	152 647	MLO-POT-360-LWG
450	665	460/457	619	152 648	MLO-POT-450-LWG
500	730	510/508	684	152 649	MLO-POT-500-LWG
600	856	612/610	810	152 650	MLO-POT-600-LWG
750	1040	764/762	994	152 651	MLO-POT-750-LWG

**Ordering data – Accessories**



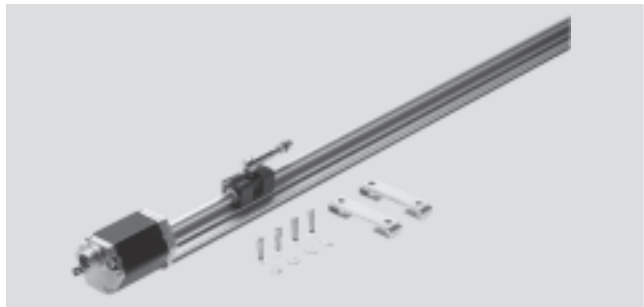
PIN	Pin allocation	Designation	Part No.	Type
1	Power supply	Plug socket	194 332	SD-4-WD-7
2	Signal			
3	0 V			
4	PE (yellow), screen			

# Displacement encoders MME-MTS, digital

Technical data

## MME-MTS-...-AIF

- Stroke length  
225 ... 2000 mm



General technical data													
Stroke		225	300	360	450	500	600	750	1000	1250	1500	1750	2000
Constructional design	Closed profile with outer slide												
Measuring principle	Digital, magnetostrictive, non-contacting and absolute measurement												
Resolution	[mm]	< 0.01											
Max. speed of travel	[m/s]	10											
Max. acceleration	[m/s <sup>2</sup> ]	200											
Mounting position	Any												
Driver,	Angle offset	[°]	±1										
ball coupling	Parallel offset	[mm]	±1.5										
Service life	MTBF	[10 <sup>6</sup> /h]	> 4 <sup>1)</sup>										
Connection	6-pin round plug to DIN 45 322												
Product weight	[g]	620	710	780	890	950	1070	1250	1550	1850	2150	2450	2750

1) For the waveguide

General electrical data		
Power supply	[V DC]	24 (-15/+20%)
Max. current consumption	[mA]	90
Independent linearity	[%]	0.02 <sup>1)</sup>
Temperature coefficient	[ppm/°K]	15
Interface	Digital, CAN with protocol: SPC-AIF	

1) Min. ±50 µm

Operating and environmental conditions		
Ambient temperature	[°C]	-40 ... +75 <sup>1)</sup>
Protection class	IP65	
Vibration resistance	To DIN/IEC 68 Parts 2 – 6, severity level 1	
Continuous shock resistance	To DIN/IEC 68 Parts 2 – 27, severity level 1	
CE marking symbol (see conformity declaration)	As per EU EMC directive	

1) Please note temperature ranges of individual components used in a complete system solution



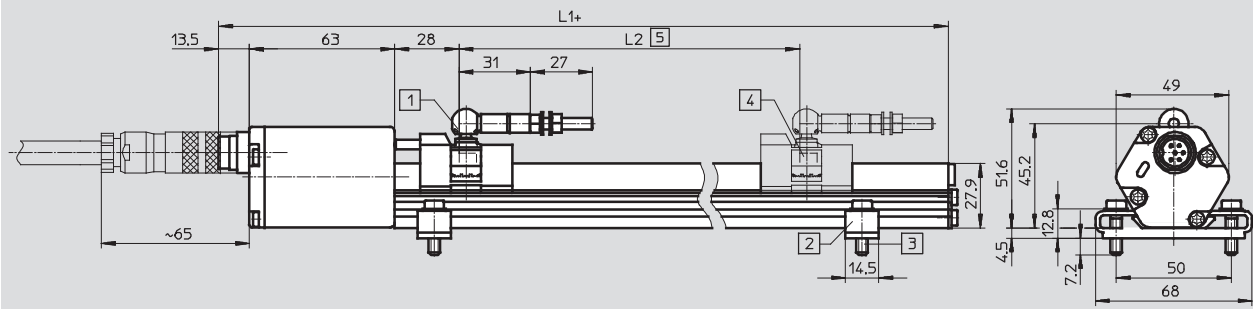
# Displacement encoders MME-MTS, digital

Technical data

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## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)



- 1 Slide positions
- 2 Adjustable mounting clips are included
- 3 Socket head screw M5x20
- 4 Magnet
- 5 Effective displacement
- 6 Plug is a component of the axis interface SPC-AIF-MTS and Soft Stop SPC11-MTS-AIF

## Dimensions and ordering data

Stroke [mm]	L1	L2 (effective path)	Part No.	Type
225	395	225	178 310	MME-MTS-225-TLF-AIF
300	470	300	178 309	MME-MTS-300-TLF-AIF
360	530	360	178 308	MME-MTS-360-TLF-AIF
450	620	450	178 307	MME-MTS-450-TLF-AIF
500	670	500	178 306	MME-MTS-500-TLF-AIF
600	770	600	178 305	MME-MTS-600-TLF-AIF
750	920	750	178 304	MME-MTS-750-TLF-AIF
1000	1170	1000	178 303	MME-MTS-1000-TLF-AIF
1250	1420	1250	178 302	MME-MTS-1250-TLF-AIF
1500	1670	1500	178 301	MME-MTS-1500-TLF-AIF
1750	1920	1750	178 300	MME-MTS-1750-TLF-AIF
2000	2170	2000	178 299	MME-MTS-2000-TLF-AIF

## Pin allocation

PIN	
1	CAN LOW
2	CAN HIGH
3	Unused
4	Unused
5	+24 V
6	0 V
PE	Screen

-  - Note  
Materials → 10

# Displacement encoders

Technical data

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## Materials

MLO-POT-...-TLF		
Housing		Anodised aluminium
Cover		Plastic
Moving slide	Housing	Aluminium, plastic
	Connection	Steel ball, carbide plate
Cover		Steel band
Resistor element		Conductive plastic
Wiper	Contact	Stainless steel
	Silencer	Elastomer
Mounting clip		Polyetherimide

MLO-POT-...-LWG		
Housing		Anodised aluminium
Bearing cap		Reinforced polyester
Bearing seal		Nitrile rubber
Connecting rod		Corrosion resistant steel
Rod seal		Polytetrafluoroethylene
Lubricant		ISOFLEX Topas MB52
Resistor element		Conductive plastic
Wiper	Contact	Stainless steel
	Silencer	Elastomer

MME-MTS-...-AIF		
Housing		Wrought aluminium alloy, anodised
Cover		Die-cast aluminium, painted
Sensor head housing		Die-cast aluminium
Housing seal		Nitrile rubber
Moving slide	Housing	Reinforced polyester, permanent magnet
	Connection	Steel ball, hard metal plate
Mounting clip		Polyetherimide

# Displacement encoders

Accessories

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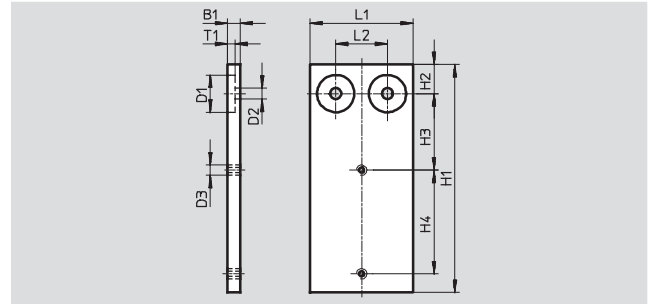
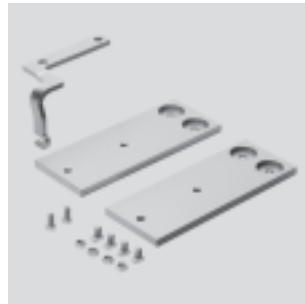
## Mounting kit

BB-TLF-DGPL-...-B

Material:

∅ 25: Steel

∅ 32 ... 63: Wrought aluminium alloy



Dimensions and ordering data															
for ∅	Type	B1	D1 ∅	D2 ∅	D3	H1	H2	H3	H4	H5	L1	L2	T1	Part No.	Type
25	1	6	18	5.3	M5	129	14	56	50	-	50	25	3.5	178 441	BB-TLF-DGPL-25-1-B
	2	6	18	5.3	M5	110	14	37	50	-	50	25	3.5	178 442	BB-TLF-DGPL-25-2-B
	3	6	18	5.3	M5	129	14	56	50	-	50	25	3.5	188 515	BB-TLF-DGPL-25-3-B
	4	6	18	5.3	M5	110	14	37	50	-	50	25	3.5	188 516	BB-TLF-DGPL-25-4-B
32	1	8	10	5.5	M5	130	30	41	50	22	40	-	3.5	178 443	BB-TLF-DGPL-32-1-B
	2	8	10	5.5	M5	116	30	27	50	22	40	-	3.5	178 444	BB-TLF-DGPL-32-2-B
40	1	8	-	5.5	M5	142	34	49	50	24	40	-	-	178 445	BB-TLF-DGPL-40-1-B
	2	8	-	5.5	M5	126	34	33	50	24	40	-	-	178 446	BB-TLF-DGPL-40-2-B
50	1	10	-	6.6	M5	173	54.7	60.8	50	40	40	-	-	188 829	BB-TLF-DGPL-50-1-B
	2	10	-	6.6	M5	150.5	54	39	50	40	40	-	-	188 830	BB-TLF-DGPL-50-2-B
63	1	10	-	6.6	M5	178	60	59	50	50	40	-	-	188 831	BB-TLF-DGPL-63-1-B
	2	10	-	6.6	M5	161	60	42	50	50	40	-	-	188 832	BB-TLF-DGPL-63-2-B

## Additional mounting plate

BB-TLF-DGPL-...-ZU

Material:

∅ 25: Steel

∅ 32 ... 63: Wrought aluminium alloy



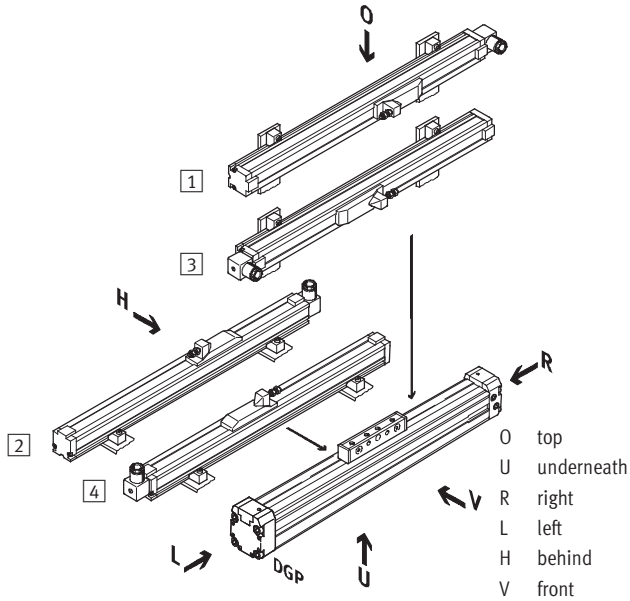
Dimensions and ordering data															
for ∅	Type	B1	D1 ∅	D2 ∅	D3	H1	H2	H3	H4	H5	L1	L2	T1	Part No.	Type
25	1	6	18	5.3	M5	129	14	56	50	-	50	25	3.5	161 048	BB-TLF-DGPL-25-1-ZU
	2	6	18	5.3	M5	110	14	37	50	-	50	25	3.5	161 049	BB-TLF-DGPL-25-2-ZU
32	1	8	10	5.5	M5	130	30	41	50	22	40	-	3.5	161 050	BB-TLF-DGPL-32-1-ZU
	2	8	10	5.5	M5	116	30	27	50	22	40	-	3.5	161 051	BB-TLF-DGPL-32-2-ZU
40	1	8	-	5.5	M5	142	34	49	50	24	40	-	-	161 052	BB-TLF-DGPL-40-1-ZU
	2	8	-	5.5	M5	126	34	33	50	24	40	-	-	161 053	BB-TLF-DGPL-40-2-ZU
50	1	10	-	6.6	M5	173	54.7	60.8	50	40	40	-	-	188 849	BB-TLF-DGPL-50-1-ZU
	2	10	-	6.6	M5	150.5	54	39	50	40	40	-	-	188 850	BB-TLF-DGPL-50-2-ZU
63	1	10	-	6.6	M5	178	60	59	50	50	40	-	-	188 851	BB-TLF-DGPL-63-1-ZU
	2	10	-	6.6	M5	161	60	42	50	50	40	-	-	188 852	BB-TLF-DGPL-63-2-ZU

# Displacement encoders

Accessories

## Additional mounting plates for attaching displacement encoder MLO-POT-...-TLF/MME-MTS-...-AIF to linear drive DGP

### Mounting variants




Variant **1** Attachment from above / Variant **2** Attachment from behind

Supply ports on right  
Electrical connection on right

Variant **3** Attachment from above / Variant **4** Attachment from behind

Supply ports on right  
Electrical connection on left

For DGP ∅	Variant	Additional mounting plates Type	Number of additional plates as a function of displacement encoder length			
			10 ... 500	600 ... 1000	1250 ... 1500	1750 ... 2000
25	1/3	BB-TLF-DGPL-25-1-ZU	2	3	4	5
	2/4	BB-TLF-DGPL-25-2-ZU				
32	1/3	BB-TLF-DGPL-32-1-ZU	2	3	4	5
	2/4	BB-TLF-DGPL-32-2-ZU				
40	1/3	BB-TLF-DGPL-40-1-ZU	2	3	4	5
	2/4	BB-TLF-DGPL-40-2-ZU				
50	1/3	BB-TLF-DGPL-50-1-ZU	2	3	4	5
	2/4	BB-TLF-DGPL-50-2-ZU				
63	1/3	BB-TLF-DGPL-63-1-ZU	2	3	4	5
	2/4	BB-TLF-DGPL-63-2-ZU				

-  - Note  
There is no connecting bracket for the combination with the linear drive DGP.

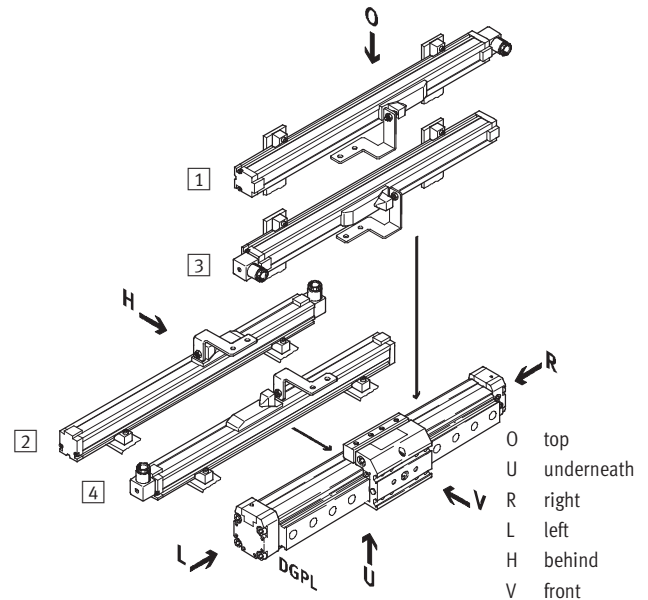
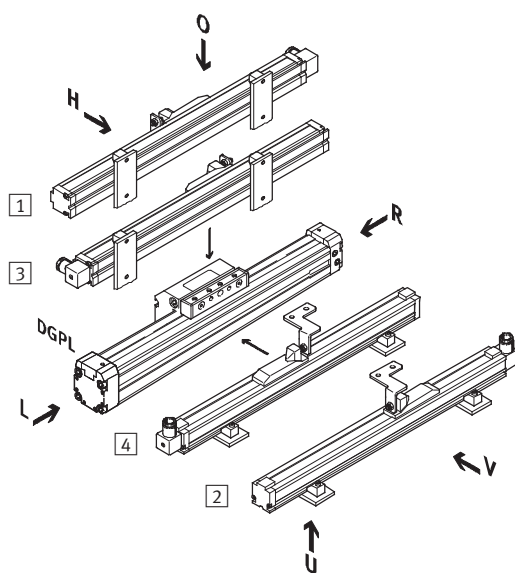
# Displacement encoders

Accessories

## Mounting kits for attaching displacement encoder MLO-POT-...-TLF/MME-MTS-...-AIF to linear drive DGPL

Attachment to drive variant with slide at rear (SH)<sup>1)</sup>

Attachment to drive variant with slide at front (SV)<sup>1)</sup>



Variant **1** Attachment from above / Variant **2** Attachment from behind

Supply ports on right  
Electrical connection on right

Variant **1** Attachment from above / Variant **2** Attachment from behind

Supply ports on right  
Electrical connection on right

Variant **3** Attachment from above / Variant **4** Attachment from behind

Supply ports on right  
Electrical connection on left

Variant **3** Attachment from above / Variant **4** Attachment from behind

Supply ports on right  
Electrical connection on left

For DGPL Ø	Variant	Mounting kits Type	Additional mounting plates Type	Number of additional plates as a function of displacement encoder length			
				10 ... 500	600 ... 1000	1250 ... 1500	1750 ... 2000
25	<b>1</b>	BB-TLF-DGPL-25-1-B	BB-TLF-DGPL-25-1-ZU	-	1	2	3
	<b>2</b>	BB-TLF-DGPL-25-2-B	BB-TLF-DGPL-25-2-ZU				
	<b>3</b>	BB-TLF-DGPL-25-3-B	BB-TLF-DGPL-25-1-ZU				
	<b>4</b>	BB-TLF-DGPL-25-4-B	BB-TLF-DGPL-25-2-ZU				
32	<b>1/3</b>	BB-TLF-DGPL-32-1-B	BB-TLF-DGPL-32-1-ZU	-	1	2	3
	<b>2/4</b>	BB-TLF-DGPL-32-2-B	BB-TLF-DGPL-32-2-ZU				
40	<b>1/3</b>	BB-TLF-DGPL-40-1-B	BB-TLF-DGPL-40-1-ZU	-	1	2	3
	<b>2/4</b>	BB-TLF-DGPL-40-2-B	BB-TLF-DGPL-40-2-ZU				
50	<b>1/3</b>	BB-TLF-DGPL-50-1-B	BB-TLF-DGPL-50-1-ZU	-	1	2	3
	<b>2/4</b>	BB-TLF-DGPL-50-2-B	BB-TLF-DGPL-50-2-ZU				
63	<b>1/3</b>	BB-TLF-DGPL-63-1-B	BB-TLF-DGPL-63-1-ZU	-	1	2	3
	<b>2/4</b>	BB-TLF-DGPL-63-2-B	BB-TLF-DGPL-63-2-ZU				

- Note  
1) Corresponds to ordering data for modular product DGPL  
→ Internet: dgpl

# Displacement encoders

Accessories

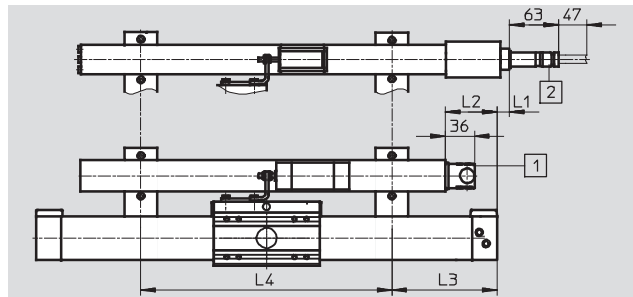
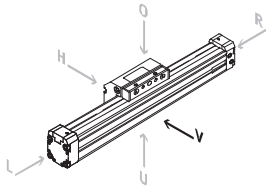
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## Dimensions

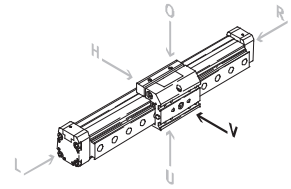
Slide at rear (SH)

Slide at front (SV)

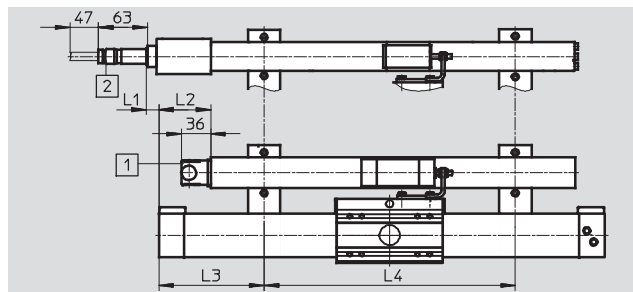
Variant 3<sup>1)</sup>



Variant 1

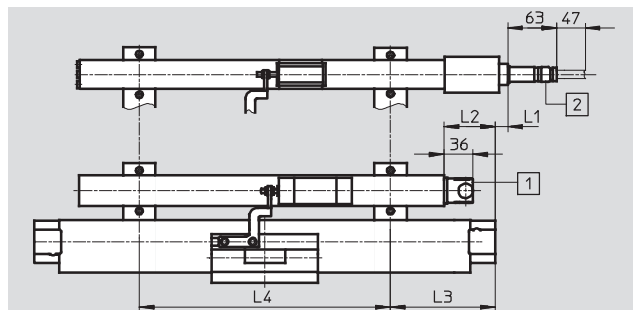
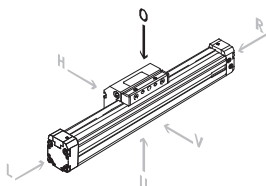


Variant 1<sup>1)</sup>

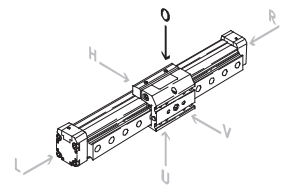


Variant 3

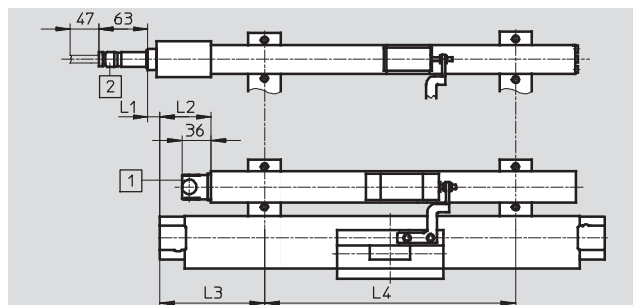
Variant 4<sup>1)</sup>



Variant 2



Variant 2<sup>1)</sup>



Variant 4

1) The dimensions shown correspond to the slide at front variants. All dimensions can be transferred to the guided slide at rear variants.

The correct mounting position for the displacement encoder can be found in the overview and order data for slide at rear variants.

- 1) Angled plug socket, 4-pin to DIN 43 650 for type MLO-...-TLF
- 2) Round plug, straight, 6 pin to DIN 45 322 for type MME-...-AIF

# Displacement encoders

Accessories

Analogue displacement encoders MLO-POT-...-TLF													
DGPL piston Ø [mm]		L2					L3					L4 approx.	n <sup>1)</sup>
		25	32	40	50	63	25	32	40	50	63		
Displacement encoder	225	18.5	18	21.5	92.5	132	93	135	175	168	207	255	-
Stroke [mm]	300	17.5	17	20.5	92	131	92	133	173	167	206	300	-
for	360	16.5	16	19.5	91	130	91	132	172	166	205	365	-
slide at rear (SH):	450	15.5	15	19.5	91	129	90	132	172	166	205	455	-
Variant 1/2	500	14.5	14	18.5	90	128	89	131	171	165	204	505	-
slide at front (SV):	600	13.5	13	17.5	89	127	88	130	170	164	203	305	1
Variant 3/4	750	11.5	11	16.5	88	125	86	129	169	163	202	380	1
	1000	9.5	9	14.5	86	123	84	127	167	161	200	507	1
	1250	9.5	7	12.5	84	123	84	125	165	159	198	423	2
	1500	9.5	7	12.5	84	123	84	125	165	159	198	505	2
	1750	9.5	7	12.5	84	123	84	125	165	159	198	442	3
	2000	9.5	7	12.5	84	123	84	125	165	159	198	505	3
Displacement encoder	225	18.5	59.5	99.5	92.5	132	93	62	96	168	207	225	-
Stroke [mm]	300	17.5	58.5	98.5	92	131	92	61	95	167	206	300	-
for	360	16.5	57.5	97.5	91	130	91	60	94	166	205	365	-
slide at rear (SH):	450	15.5	57.5	97.5	91	129	90	60	94	166	205	455	-
Variant 3/4	500	14.5	56.5	96.5	90	128	89	59	93	165	204	505	-
slide at front (SV):	600	13.5	55.5	95.5	89	127	88	58	92	164	203	305	1
Variant 1/2	750	11.5	54.5	94.5	88	125	86	57	91	163	202	380	1
	1000	9.5	52.5	92.5	86	123	84	55	89	161	200	507	1
	1250	9.5	50.5	90.5	84	123	84	53	87	159	198	423	2
	1500	9.5	50.5	90.5	84	123	84	53	87	159	198	505	2
	1750	9.5	50.5	90.5	84	123	84	53	87	159	198	442	3
	2000	9.5	50.5	90.5	84	123	84	53	87	159	198	505	3

Digital displacement encoders MME-MTS-...-AIF													
DGPL piston Ø [mm]		L1		L2			L3					L4 approx.	n <sup>1)</sup>
		25	32	40	50	63	25	32	40	50	63		
Displacement encoder	225	4	31	0	70	110.5	113	155	195	190	230	208	-
Stroke [mm]	300	4	31	0	70	110.5	113	155	195	190	230	280	-
for	360	4	31	0	70	110.5	113	155	195	190	230	340	-
slide at rear (SH):	450	4	31	0	70	110.5	113	155	195	190	230	430	-
Variant 1/2	500	4	31	0	70	110.5	113	155	195	190	230	480	-
slide at front (SV):	600	4	31	0	70	110.5	113	155	195	190	230	290	1
Variant 3/4	750	4	31	0	70	110.5	113	155	195	190	230	365	1
	1000	4	31	0	70	110.5	113	155	195	190	230	490	1
	1250	4	31	0	70	110.5	113	155	195	190	230	410	2
	1500	4	31	0	70	110.5	113	155	195	190	230	495	2
	1750	4	31	0	70	110.5	113	155	195	190	230	433	3
	2000	4	31	0	70	110.5	113	155	195	190	230	495	3
Displacement encoder	225	4	37	77	70	110.5	113	87	120	190	230	208	-
Stroke [mm]	300	4	37	77	70	110.5	113	87	120	190	230	280	-
for	360	4	37	77	70	110.5	113	87	120	190	230	340	-
slide at rear (SH):	450	4	37	77	70	110.5	113	87	120	190	230	430	-
Variant 3/4	500	4	37	77	70	110.5	113	87	120	190	230	480	-
slide at front (SV):	600	4	37	77	70	110.5	113	87	120	190	230	290	1
Variant 1/2	750	4	37	77	70	110.5	113	87	120	190	230	365	1
	1000	4	37	77	70	110.5	113	87	120	190	230	490	1
	1250	4	37	77	70	110.5	113	87	120	190	230	410	2
	1500	4	37	77	70	110.5	113	87	120	190	230	495	2
	1750	4	37	77	70	110.5	113	87	120	190	230	433	3
	2000	4	37	77	70	110.5	113	87	120	190	230	495	3

1) Number of additional mounting plates

# Displacement encoders

Accessories

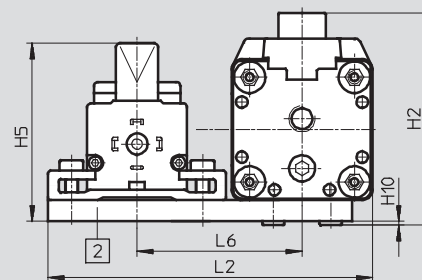
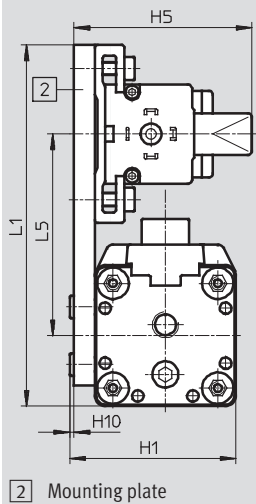
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## Analogue displacement encoder MLO-POT-...-TLF

With linear drive DGP

Variant 1/3

Variant 2/4

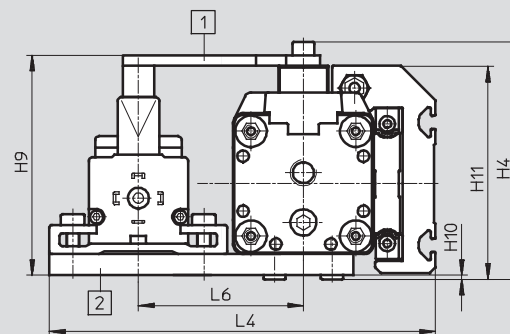
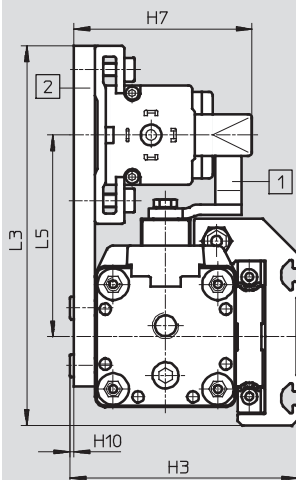


2 Mounting plate

With linear drive DGPL

Variant 1/3

Variant 2/4



1 Connecting bracket  
2 Mounting plate

∅	H1	H2	H3	H4	H5	H7	H9	H10	H11	L1	L2	L3	L4	L5	L6
[mm]															
25	52	70	75.5	79	66	66	73	1	70	137.5	118.5	141.5	142	81	62
32	64	82	87.5	91	68	68	84	2	82	138	124	145	147.5	77	63
40	78	100	104.5	110	68	68	98	6	100	152	136	162.5	162.5	86	70
50	104	129	132.5	134.5	70	83	129	4	125	183.3	161.5	192	195.5	105.8	84
63	120	145	155	150.5	70	82	145	4	141	196	179	207	218	109	92



# Displacement encoders

Accessories

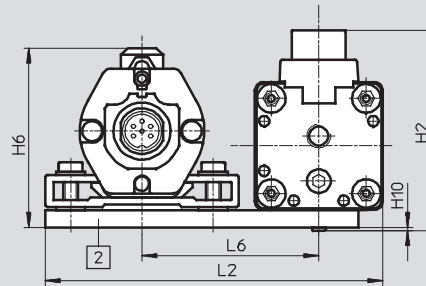
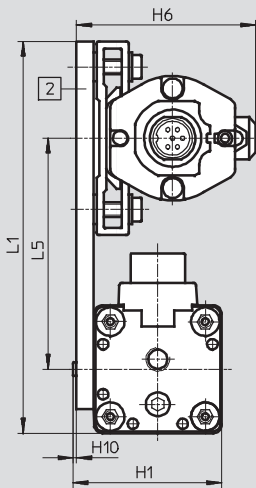
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## Digital displacement encoder MME-MTS-...-AIF

With linear drive DGP

Variant 1/3

Variant 2/4

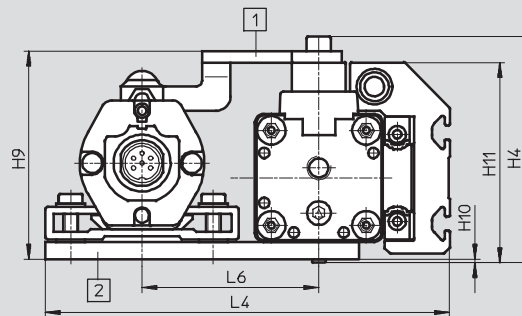
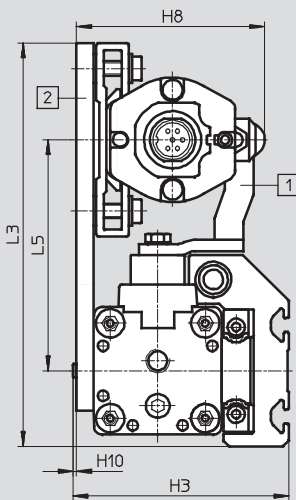


2 Mounting plate

With linear drive DGPL

Variant 1/3

Variant 2/4



1 Driver  
2 Mounting plate

∅	H1	H2	H3	H4	H6	H8	H9	H10	H11	L1	L2	L3	L4	L5	L6
[mm]															
25	52	70	75.5	79	62.8	71.5	73	1	70	137.5	118.5	141.5	142	81	62
32	64	82	87.5	91	64.8	73.5	84	2	82	138	124	145	147.5	77	63
40	78	100	104.5	110	64.8	73.5	98	6	100	152	136	162.5	162.5	86	70
50	104	129	132.5	134.5	66.8	83	129	4	125	183.3	161.5	192	195.5	105.8	84
63	120	145	155	150.5	66.8	82	145	4	141	196	179	207	218	109	92