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Transducer

Catalogue English



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PETER HIRT GmbH, CH-8606 Nänikon

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Some company registered trade names are used in this catalogue. They are used for reference only and have no relationship to PETER HIRT GmbH.



Contact

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Distributors

Please contact us for finding a distributor near to you or visit our homepage www.peterhirt.com for further information.

Overview

Table structured overview of all transducer

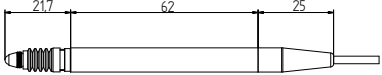
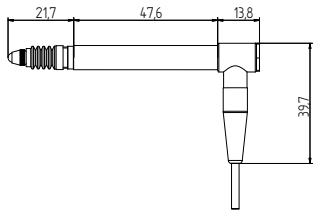
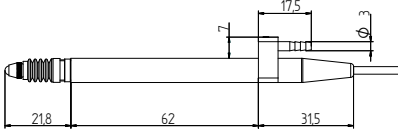
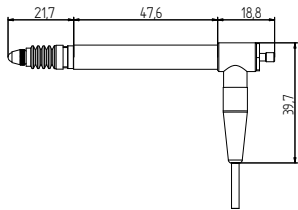
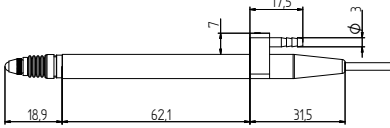
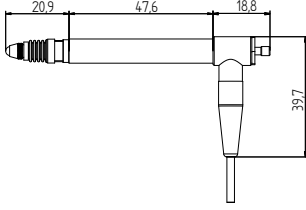
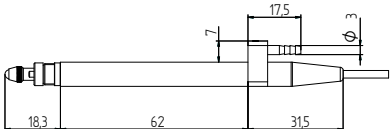
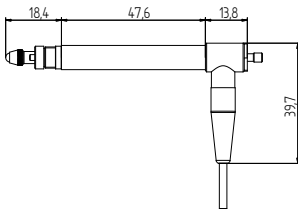
Spring Push	Vacuum Retract	Pneumatic Push Bellow Sealed	Pneumatic Push Air Gap Seal	Cable Exit	Short Description
T101F (T101) T102F (T102)	T101V (T109) T102V (T110)	T101P (T131) T102P (T132)	T101L (T133) T102L (T134)	axial radial	halfbridge, ±2 mm measuring stroke
T151F (T151) T152F (T152)	T151V (T159) T152V (T160)	T151P (T181) T152P (T182)	T151L T152L	axial radial	LVDT, ±2 mm measuring stroke
T151F-024 T152F-024	T151V-024 T152V-024	T151P-024 T152P-024	T151L-024 T152L-024	axial radial	LVDT Marposs® compatible, ±2 mm measuring stroke
T161F (T161) T162F (T162)	T161V (T169) T162V (T170)	T161P (T191) T162P (T192)	T161L T162L	axial radial	Mahr® compatible, ±2 mm measuring stroke
T201F (T201) T202F (T202)	T202V (T210)	T202P (T232)	T202L	axial radial	halfbridge, ±1 mm measuring stroke
T301F (T301) T302F (T302)	T301V T302V	T301P T302P	T301L T302L	axial radial	halfbridge, ±2 mm measuring stroke
T401 (T401) T402 (T402)				axial radial	halfbridge, OEM module, ±2 mm measuring stroke
T451 (T451) T452 (T452)				axial radial	LVDT, OEM module, ±2 mm measuring stroke
T501F (T501) T502F (T502)	T501V T502V	T501P (T531) T502P (T532)	T501L T502L	axial radial	halfbridge, ±5 mm measuring stroke
T521F T522F	T521V (T521) T522V (T522)	T521P (T521P) T522P (T522P)	T521L T522L	axial radial	halfbridge, ±2 mm measuring stroke with 8 mm stroke after electrical zero, setting 1 : 2
T523F (T523) T524F (T524)	T523V T524V	T523P (T523P) T524P (T524P)	T523L T524L	axial radial	halfbridge, ±2 mm measuring stroke with 8 mm stroke after electrical zero, setting 1 : 1
T801 T802				axial radial	halfbridge, ±2 mm measuring stroke
T851 T852				axial radial	LVDT, ±2 mm measuring stroke

old part numbers are written *cursive* and in brackets



Transducer T101 / T102

Overview

Type / Description	Drawing	
<p>T101F T102F</p> <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ halfbridge ■ spring push 	<p>T101F</p> 	<p>T102F</p> 
<p>T101V T102V</p> <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ halfbridge ■ vacuum retract 	<p>T101V</p> 	<p>T102V</p> 
<p>T101P T102P</p> <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ halfbridge ■ pneumatic push bellow sealed 	<p>T101P</p> 	<p>T102P</p> 
<p>T101L T102L</p> <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ halfbridge ■ pneumatic push air gap seal 	<p>T101L</p> 	<p>T102L</p> 

Halfbridge, ± 2 mm Measuring Stroke

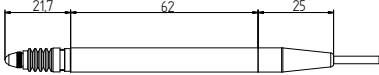
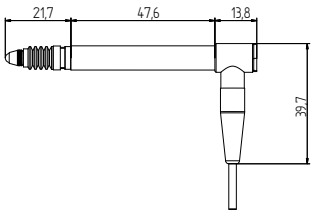
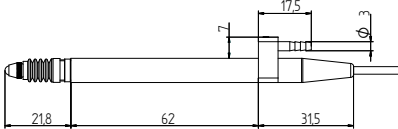
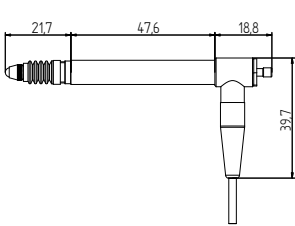
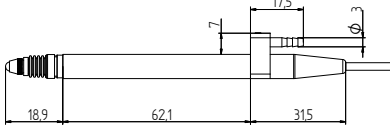
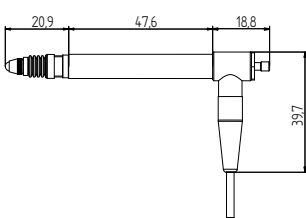
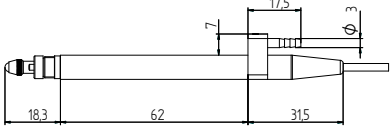
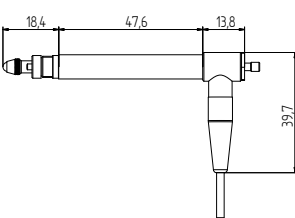
Technical Data ■

	T101F	T102F	T101V	T102V	T101P	T102P	T101L	T102L
cable exit	axial	radial	axial	radial	axial	radial	axial	radial
maximum stroke	4.6 mm		4.6 mm		4.6 mm		4.6 mm	
measuring stroke	± 2 mm		± 2 mm		± 2 mm		± 2 mm	
pretravel	adjustable		adjustable		adjustable		adjustable	
default setting	-1.2 mm		-1.2 mm		+2.8 mm		+2.8 mm	
bearing	ball bearing		ball bearing		ball bearing		ball bearing	
life	>10 Mio. cycles		>10 Mio. cycles		-		>10 Mio. cycles	
tip rotation	1 ° over full stroke		1 ° over full stroke		1 ° over full stroke		1 ° over full stroke	
temperature range	-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation	
mounting position	any		any		any		any	
tip	3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable	
gaiter	FPM / FKM		FPM / FKM		FPM / FKM		-	
body diameter	8h6		8h6		8h6		8h6	
cable	PUR, length 2 m		PUR, length 2 m		PUR, length 2 m		PUR, length 2 m	
plug	5 pin, 270 °		5 pin, 270 °		5 pin, 270 °		5 pin, 270 °	
advance	-		-		pneumatic		pneumatic	
lift off	none		vacuum		-		-	
maximum pressure	-		-		2.0 bar		6.0 bar	
spring rate	0.63 N ± 20 % (at electrical zero), values from 0.25 to 4 N as option		0.63 N ± 20 % (at electrical zero), 0.25 N and 1 N as option		approx. 0.6 N at 0.6 bar approx. 1.0 N at 0.8 bar (both at electrical zero)		approx. 0.6 N at 0.6 bar approx. 1.0 N at 1.1 bar (both at electrical zero)	
repeatability	0.01 μ m		0.01 μ m		0.01 μ m		0.01 μ m	
linearity error	0.25 % FS ± 1000 μm range (at 20 °C ± 1 °C)		0.25 % FS ± 1000 μm range (at 20 °C ± 1 °C)		0.25 % FS ± 1000 μm range (at 20 °C ± 1 °C)		0.25 % FS ± 1000 μm range (at 20 °C ± 1 °C)	
sensitivity	73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)	
drive frequency	13 kHz ± 5 %		13 kHz ± 5 %		13 kHz ± 5 %		13 kHz ± 5 %	
supply voltage	3 V ± 0.5 % RMS		3 V ± 0.5 % RMS		3 V ± 0.5 % RMS		3 V ± 0.5 % RMS	
coil form	halfbridge		halfbridge		halfbridge		halfbridge	
repair	possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled	



Transducer T151 / T152

Overview

Type / Description	Drawing	
T151F T152F <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ fullbridge (LVDT) ■ spring push 	T151F 	T152F 
T151V T152V <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ fullbridge (LVDT) ■ vacuum retract 	T151V 	T152V 
T151P T152P <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ fullbridge (LVDT) ■ pneumatic push bellow sealed 	T151P 	T152P 
T151L T152L <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ fullbridge (LVDT) ■ pneumatic push air gap seal 	T151L 	T152L 

Fullbridge (LVDT), ± 2 mm Measuring Stroke

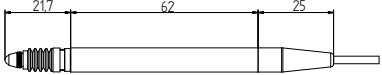
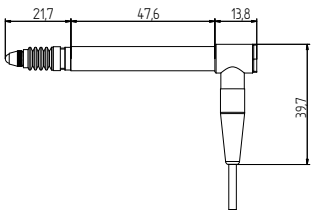
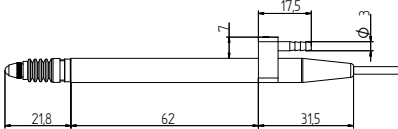
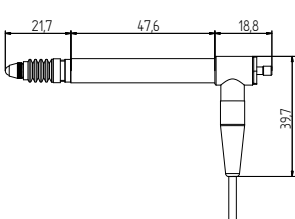
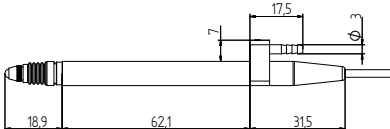
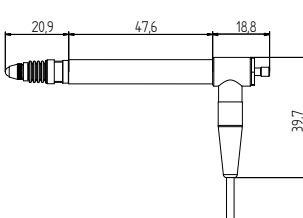
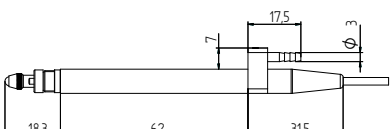
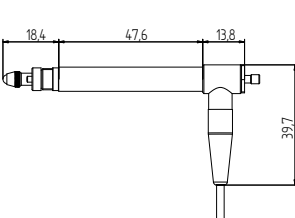
Technical Data ■

	T151F	T152F	T151V	T152V	T151P	T152P	T151L	T152L
cable exit	axial	radial	axial	radial	axial	radial	axial	radial
maximum stroke	4.6 mm		4.6 mm		4.6 mm		4.6 mm	
measuring stroke	± 2 mm		± 2 mm		± 2 mm		± 2 mm	
pretravel	adjustable		adjustable		adjustable		adjustable	
default setting	-1.2 mm		-1.2 mm		+2.8 mm		+2.8 mm	
bearing	ball bearing		ball bearing		ball bearing		ball bearing	
life	>10 Mio. cycles		>10 Mio. cycles		-		>10 Mio. cycles	
tip rotation	1 ° over full stroke		1 ° over full stroke		1 ° over full stroke		1 ° over full stroke	
temperature range	-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation	
mounting position	any		any		any		any	
tip	3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable	
gaiter	FPM / FKM		FPM / FKM		FPM / FKM		-	
body diameter	8h6		8h6		8h6		8h6	
cable	PUR, length 2 m		PUR, length 2 m		PUR, length 2 m		PUR, length 2 m	
plug	5 pin, 270 °		5 pin, 270 °		5 pin, 270 °		5 pin, 270 °	
advance	-		-		pneumatic		pneumatic	
lift off	none		vacuum		-		-	
maximum pressure	-		-		2.0 bar		6.0 bar	
spring rate	0.63 N ± 20 % (at electrical zero), values from 0.25 to 4 N as option		0.63 N ± 20 % (at electrical zero), 0.25 N or 1 N as option		approx. 0.6 N at 0.6 bar approx. 1.0 N at 0.8 bar (both at electrical zero)		approx. 0.6 N at 0.8 bar approx. 1.0 N at 1.1 bar (both at electrical zero)	
repeatability	0.01 μ m		0.01 μ m		0.01 μ m		0.01 μ m	
linearity error	0.25 % FS ± 1000 μm range (at 20 °C ± 1 °C)		0.25 % FS ± 1000 μm range (at 20 °C ± 1 °C)		0.25 % FS ± 1000 μm range (at 20 °C ± 1 °C)		0.25 % FS ± 1000 μm range (at 20 °C ± 1 °C)	
sensitivity	150 mV/(Vmm) (into R = 100 kOhm)		150 mV/(Vmm) (into R = 100 kOhm)		150 mV/(Vmm) (into R = 100 kOhm)		150 mV/(Vmm) (into R = 100 kOhm)	
drive frequency	5 kHz ± 5 %		5 kHz ± 5 %		5 kHz ± 5 %		5 kHz ± 5 %	
supply voltage	3 V ± 0.5 % RMS		3 V ± 0.5 % RMS		3 V ± 0.5 % RMS		3 V ± 0.5 % RMS	
coil form	fullbridge (LVDT)		fullbridge (LVDT)		fullbridge (LVDT)		fullbridge (LVDT)	
repair	possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled	



Transducer T151-024 / T152-024

Overview

Type / Description	Drawing	
<p>T151F-024 T152F-024</p> <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ fullbridge (LVDT) Marposs® compatible ■ spring push 	<p>T151F-024</p> 	<p>T152F-024</p> 
<p>T151V-024 T152V-024</p> <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ fullbridge (LVDT) Marposs® compatible ■ vacuum retract 	<p>T151V-024</p> 	<p>T152V-024</p> 
<p>T151P-024 T152P-024</p> <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ fullbridge (LVDT) Marposs® compatible ■ pneumatic push bellow sealed 	<p>T151P-024</p> 	<p>T152P-024</p> 
<p>T151L-024 T152L-024</p> <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ fullbridge (LVDT) Marposs® compatible ■ pneumatic push air gap seal 	<p>T151L-024</p> 	<p>T152L-024</p> 

LVDT Marposs® Compatible, ±2 mm Measuring Stroke

Technical Data ■

cable exit	T151F-024 T152F-024		T151V-024 T152V-024		T151P-024 T152P-024		T151L-024 T152L-024	
	axial	radial	axial	radial	axial	radial	axial	radial
maximum stroke	4.6 mm		4.6 mm		4.6 mm		4.6 mm	
measuring stroke	±2 mm		±2 mm		±2 mm		±2 mm	
pretravel	adjustable		adjustable		adjustable		adjustable	
default setting	-1.2 mm		-1.2 mm		+2.8 mm		+2.8	
bearing	ball bearing		ball bearing		ball bearing		ball bearing	
life	>10 Mio. cycles		>10 Mio. cycles		-		>10 Mio. cycles	
tip rotation	1 ° over full stroke		1 ° over full stroke		1 ° over full stroke		1 ° over full stroke	
temperature range	-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation	
mounting position	any		any		any		any	
tip	3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable	
gaiter	FPM / FKM		FPM / FKM		FPM / FKM		-	
body diameter	8h6		8h6		8h6		8h6	
cable	PUR, length 2 m		PUR, length 2 m		PUR, length 2 m		PUR, length 2 m	
plug	5 pin, 270 °		5 pin, 270 °		5 pin, 270 °		5 pin, 270 °	
advance	-		-		pneumatic		pneumatic	
lift off	none		vacuum		-		-	
maximum pressure	-		-		2.0 bar		6.0 bar	
spring rate	0.63 N ±20 % (at electrical zero), values from 0.25 to 4 N as option		0.63 N ±20 % (at electrical zero), 0.25 N and 1 N as option		approx. 0.6 N at 0.6 bar approx. 1.0 N at 0.8 bar (both at electrical zero)		approx. 0.6 N at 0.8 bar approx. 1.0 N at 1.1 bar (both at electrical zero)	
repeatability	0.01 µm		0.01 µm		0.01 µm		0.01 µm	
linearity error	0.25 % FS ±1000 µm range (at 20 °C ±1 °C)		0.25 % FS ±1000 µm range (at 20 °C ±1 °C)		0.25 % FS ±1000 µm range (at 20 °C ±1 °C)		0.25 % FS ±1000 µm range (at 20 °C ±1 °C)	
sensitivity	210 mV/(Vmm) (into R = 100 kOhm)		210 mV/(Vmm) (into R = 100 kOhm)		210 mV/(Vmm) (into R = 100 kOhm)		210 mV/(Vmm) (into R = 100 kOhm)	
drive frequency	7.5 kHz ±5 %		7.5 kHz ±5 %		7.5 kHz ±5 %		7.5 kHz ±5 %	
supply voltage	3 V ±0.5 % RMS		3 V ±0.5 % RMS		3 V ±0.5 % RMS		3 V ±0.5 % RMS	
coil form	fullbridge (LVDT)		fullbridge (LVDT)		fullbridge (LVDT)		fullbridge (LVDT)	
repair	possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled	



Transducer T161 / T162

Overview

Type / Description	Drawing	
T161F T162F <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ Mahr® compatible ■ spring push 	T161F 	T162F
T161V T162V <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ Mahr® compatible ■ vacuum retract 	T161V 	T162V
T161P T162P <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ Mahr® compatible ■ pneumatic push bellow sealed 	T161P 	T162P
T161L T162L <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ Mahr® compatible ■ pneumatic push air gap seal 	T161L 	T162L

Mahr® Compatible, ±2 mm Measuring Stroke

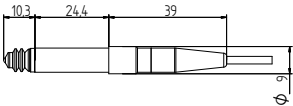
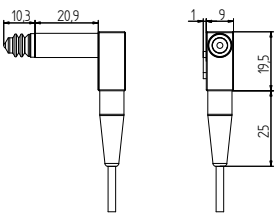
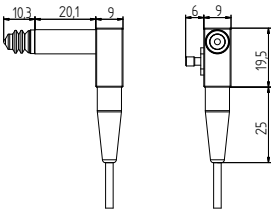
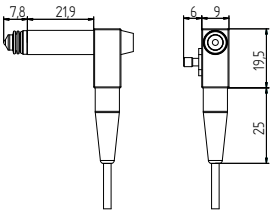
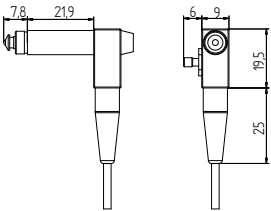
Technical Data

	T161F	T162F	T161V	T162V	T161P	T162P	T161L	T162L
cable exit	axial	radial	axial	radial	axial	radial	axial	radial
maximum stroke	4.6 mm		4.6 mm		4.6 mm		4.6 mm	
measuring stroke	±2 mm		±2 mm		±2 mm		±2 mm	
pretravel	adjustable		adjustable		adjustable		adjustable	
default setting	-1.2 mm		-1.2 mm		+2.8 mm		+2.8 mm	
bearing	ball bearing		ball bearing		ball bearing		ball bearing	
life	>10 Mio. cycles		>10 Mio. cycles		-		>10 Mio. cycles	
tip rotation	1 ° over full stroke		1 ° over full stroke		1 ° over full stroke		1 ° over full stroke	
temperature range	-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation	
mounting position	any		any		any		any	
tip	3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable	
gaiter	FPM / FKM		FPM / FKM		FPM / FKM		-	
body diameter	8h6		8h6		8h6		8h6	
cable	PUR, length 2 m		PUR, length 2 m		PUR, length 2 m		PUR, length 2 m	
plug	5 pin, 270 °		5 pin, 270 °		5 pin, 270 °		5 pin, 270 °	
advance	-		-		pneumatic		pneumatic	
lift off	none		vacuum		-		-	
maximum pressure	-		-		2.0 bar		6.0 bar	
spring rate	0.63 N ±20 % (at electrical zero), values from 0.25 to 4 N as option		0.63 N ±20 % (at electrical zero), 0.25 N and 1 N as option		approx. 0.6 N at 0.6 bar approx. 1.0 N at 0.8 bar (both at electrical zero)		approx. 0.6 N at 0.8 bar approx. 1.0 N at 1.1 bar (both at electrical zero)	
repeatability	0.01 µm		0.01 µm		0.01 µm		0.01 µm	
linearity error	0.3 % FS ±1000 µm range (at 20 °C ±1 °C)		0.3 % FS ±1000 µm range (at 20 °C ±1 °C)		0.3 % FS ±1000 µm range (at 20 °C ±1 °C)		0.3 % FS ±1000 µm range (at 20 °C ±1 °C)	
sensitivity	184 mV/(Vmm) (into normal impedance)		184 mV/(Vmm) (into normal impedance)		184 mV/(Vmm) (into normal impedance)		184 mV/(Vmm) (into normal impedance)	
drive frequency	20 kHz ±5 %		20 kHz ±5 %		20 kHz ±5 %		20 kHz ±5 %	
supply voltage	5 V ±0.5 % RMS		5 V ±0.5 % RMS		5 V ±0.5 % RMS		5 V ±0.5 % RMS	
coil form	Mahr® compatible		Mahr® compatible		Mahr® compatible		Mahr® compatible	
repair	possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled	



Transducer T201 / T202

Overview

Type / Description	Drawing
T201F T202F <ul style="list-style-type: none">■ measuring stroke ± 1 mm■ halfbridge■ spring push	T201F  T202F 
T202V <ul style="list-style-type: none">■ measuring stroke ± 1 mm■ halfbridge■ vacuum retract	T202V 
T202P <ul style="list-style-type: none">■ measuring stroke ± 1 mm■ halfbridge■ pneumatic push■ bellows sealed	T202P 
T202L <ul style="list-style-type: none">■ measuring stroke ± 1 mm■ halfbridge■ pneumatic push■ air gap seal	T202L 

Halfbridge, ± 1 mm Measuring Stroke

Technical Data ■

cable exit	T201F axial	T202F radial	T202V radial	T202P radial	T202L radial
maximum stroke	2.5 mm		2.5 mm	2.5 mm	2.5 mm
measuring stroke	± 1 mm		± 1 mm	± 1 mm	± 1 mm
pretravel	not adjustable		not adjustable	not adjustable	not adjustable
bearing	ball bearing		ball bearing	ball bearing	ball bearing
life	>10 Mio. cycles		>10 Mio. cycles	-	>10 Mio. cycles
tip rotation	1 ° over full stroke		1 ° over full stroke	1 ° over full stroke	1 ° over full stroke
temperature range	-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation	-10 to +65 °C, storage and operation	-10 bis +65 °C, storage and operation
mounting position	any		any	any	any
tip	2 mm tungsten carbide ball, not exchangeable		2 mm tungsten carbide ball, not exchangeable	2 mm tungsten carbide ball, not exchangeable	2 mm tungsten carbide ball, not exchangeable
gaiter	FPM / FKM		FPM / FKM	FPM / FKM	-
body diameter	8h6		8h6	8h6	8h6
cable	PUR, length 2 m		PUR, length 2 m	PUR, length 2 m	PUR, length 2 m
plug	5 pin, 270 °		5 pin, 270 °	5 pin, 270 °	5 pin, 270 °
advance	-		-	pneumatic	pneumatic
lift off	none		vacuum	-	-
maximum pressure	-		-	1.5 bar	6.0 bar
spring rate	0.4 N ± 50 % (at electrical zero)		0.4 N ± 50 % (at electrical zero)	0.6 N at 0.6 bar 1.0 N at 0.8 bar (both at el. zero)	0.6 N at 0.8 bar 1.0 N at 1.1 bar (both at el. zero)
repeatability	0.02 μ m		0.02 μ m	0.02 μ m	0.02 μ m
linearity error	0.6 % FS ± 1000 μm range (at 20 °C ± 1 °C)		0.6 % FS ± 1000 μm range (at 20 °C ± 1 °C)	0.6 % FS ± 1000 μm range (at 20 °C ± 1 °C)	0.6 % FS ± 1000 μm range (at 20 °C ± 1 °C)
sensitivity	73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)	73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)	73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)
drive frequency	13 kHz ± 5 %		13 kHz ± 5 %	13 kHz ± 5 %	13 kHz ± 5 %
supply voltage	3 V ± 0.5 % RMS		3 V ± 0.5 % RMS	3 V ± 0.5 % RMS	3 V ± 0.5 % RMS
coil form	halfbridge		halfbridge	halfbridge	halfbridge



Transducer T301 / T302

Overview

Type / Description	Drawing	
T301F T302F <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ halfbridge ■ spring push 	T301F 	T302F
T301V T302V <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ halfbridge ■ vacuum retract 	T301V 	T302V
T301P T302P <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ halfbridge ■ pneumatic push bellow sealed 	T301P 	T302P
T301L T302L <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ halfbridge ■ pneumatic push air gap seal 	T301L 	T302L

Halfbridge, ± 2 mm Measuring Stroke

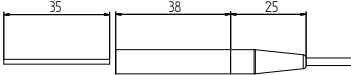
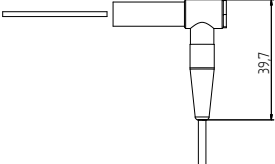
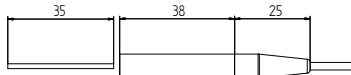
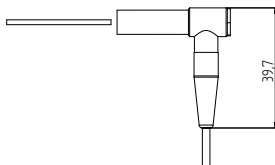
Technical Data ■

cable exit	T301F axial	T302F radial	T301V axial	T302V radial	T301P axial	T302P radial	T301L axial	T302L radial
maximum stroke	5.0 mm		5.0 mm		5.0 mm		5.0 mm	
measuring stroke	± 2 mm		± 2 mm		± 2 mm		± 2 mm	
pretravel	adjustable		adjustable		adjustable		adjustable	
default setting	-2.25 mm		-2.25 mm		+2.25 mm		+2.25 mm	
bearing	ball bearing		ball bearing		ball bearing		ball bearing	
life	>10 Mio. cycles		>10 Mio. cycles		-		>10 Mio. cycles	
tip rotation	1 ° over full stroke		1 ° over full stroke		1 ° over full stroke		1 ° over full stroke	
temperature range	-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation	
mounting position	any		any		any		any	
tip	3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable	
gaiter	FPM / FKM		FPM / FKM		FPM / FKM		-	
body diameter	8h6		8h6		8h6		8h6	
cable	PUR, length 2 m		PUR, length 2 m		PUR, length 2 m		PUR, length 2 m	
plug	5 pin, 270 °		5 pin, 270 °		5 pin, 270 °		5 pin, 270 °	
advance	-		-		pneumatic		pneumatic	
lift off	none		vacuum		-		-	
maximum pressure	-		-		2.0 bar		6.0 bar	
spring rate	0.63 N ± 20 % (at electrical zero), values from 0.25 to 4 N as option		0.63 N ± 20 % (at electrical zero), 0.25 and 1 N as option		0.6 N at 0.5 bar 1.0 N at 0.7 bar (both at electrical zero)		0.6 N at 0.8 bar 1.0 N at 1.1 bar (both at electrical zero)	
repeatability	0.01 μ m		0.01 μ m		0.01 μ m		0.01 μ m	
linearity error	0.5 % FS ± 2000 μm range (at 20 °C ± 1 °C)		0.5 % FS ± 2000 μm range (at 20 °C ± 1 °C)		0.5 % FS ± 2000 μm range (at 20 °C ± 1 °C)		0.5 % FS ± 2000 μm range (at 20 °C ± 1 °C)	
sensitivity	36.88 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		36.88 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		36.88 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		36.88 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)	
drive frequency	13 kHz ± 5 %		13 kHz ± 5 %		13 kHz ± 5 %		13 kHz ± 5 %	
supply voltage	3 V ± 0.5 % RMS		3 V ± 0.5 % RMS		3 V ± 0.5 % RMS		3 V ± 0.5 % RMS	
coil form	halfbridge		halfbridge		halfbridge		halfbridge	
repair	possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled	



Transducer T401 / T402, T451 / T452

Overview

Type / Description	Drawing
T401 T402 <ul style="list-style-type: none">■ measuring stroke ± 2 mm■ halfbridge■ OEM module	T401  T402 
T451 T452 <ul style="list-style-type: none">■ measuring stroke ± 2 mm■ fullbridge (LVDT)■ OEM module	T451  T452 

T401 / T402 Halfbridge, T451 / T452 Fullbridge (LVDT)

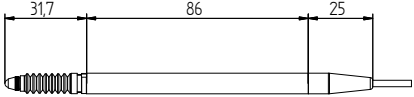
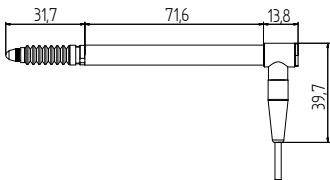
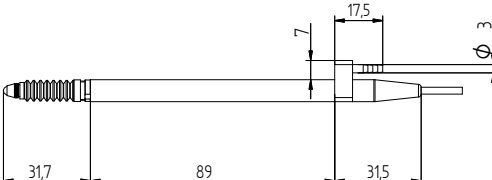
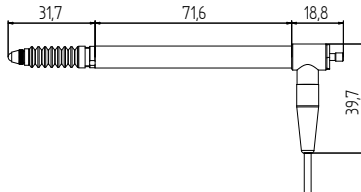
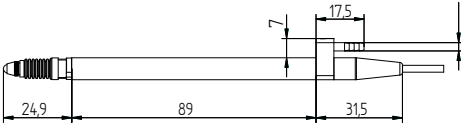
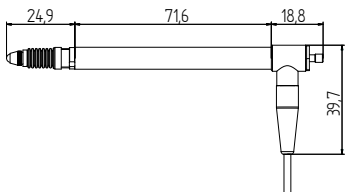
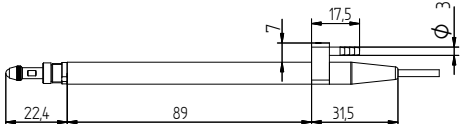
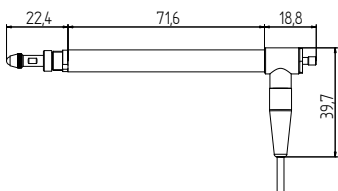
Technical Data ■

cable exit	T401 axial	T402 radial	T451 axial	T452 radial
measuring stroke	±2 mm	±2 mm	±2 mm	±2 mm
bearing	none / external	none / external	none / external	none / external
temperature range	-10 to +65 °C, storage and operation	-10 to +65 °C, storage and operation	-10 to +65 °C, storage and operation	-10 to +65 °C, storage and operation
mounting position	any	any	any	any
body diameter	8h6	8h6	8h6	8h6
cable	PUR, length 2 m	PUR, length 2 m	PUR, length 2 m	PUR, length 2 m
plug	5 pin, 270 °	5 pin, 270 °	5 pin, 270 °	5 pin, 270 °
repeatability	0.01 µm with corresponding external linear bearing	0.01 µm with corresponding external linear bearing	0.01 µm with corresponding external linear bearing	0.01 µm with corresponding external linear bearing
linearity error	0.25 % FS ±1000 µm range (at 20 °C ±1 °C)	0.25 % FS ±1000 µm range (at 20 °C ±1 °C)	0.25 % FS ±1000 µm range (at 20 °C ±1 °C)	0.25 % FS ±1000 µm (at 20 °C ±1 °C)
sensitivity	73.75 ±0.15 mV/(Vmm) (into R = 2 kOhm ±0.1 %)	73.75 ±0.15 mV/(Vmm) (into R = 2 kOhm ±0.1 %)	150 mV/(Vmm) (into R = 100 kOhm)	150 mV/(Vmm) (into R = 100 kOhm)
drive frequency	13 kHz ±5 %	13 kHz ±5 %	5 kHz ±5 %	5 kHz ±5 %
supply voltage	3 V ±0.5 % RMS	3 V ±0.5 % RMS	3 V ±0.5 % RMS	3 V ±0.5 % RMS
coil form	halfbridge	halfbridge	fullbridge (LVDT)	fullbridge (LVDT)
repair	possible, unit can be disassembled	possible, unit can be disassembled	possible, unit can be disassembled	possible, unit can be disassembled



Transducer T501 / T502

Overview

Type / Description	Drawing	
<p>T501F T502F</p> <ul style="list-style-type: none"> ■ measuring stroke ± 5 mm ■ halfbridge ■ spring push 	<p>T501F</p> 	<p>T502F</p> 
<p>T501V T502V</p> <ul style="list-style-type: none"> ■ measuring stroke ± 5 mm ■ halfbridge ■ vacuum retract 	<p>T501V</p> 	<p>T502V</p> 
<p>T501P T502P</p> <ul style="list-style-type: none"> ■ measuring stroke ± 5 mm ■ halfbridge ■ pneumatic push bellow sealed 	<p>T501P</p> 	<p>T502P</p> 
<p>T501L T502L</p> <ul style="list-style-type: none"> ■ measuring stroke ± 5 mm ■ halfbridge ■ pneumatic push air gap seal 	<p>T501L</p> 	<p>T502L</p> 

Halfbridge, ± 5 mm Measuring Stroke

Technical Data

	T501F	T502F	T501V	T502V	T501P	T502P	T501L	T502L
cable exit	axial	radial	axial	radial	axial	radial	axial	radial
maximum stroke	10.6 mm		10.6 mm		10.6 mm		10.6 mm	
measuring stroke	± 5 mm		± 5 mm		± 5 mm		± 5 mm	
pretravel	adjustable		adjustable		adjustable		adjustable	
default setting	-5.5 mm		-5.5 mm		+5.5 mm		+5.5 mm	
bearing	ball bearing		ball bearing		ball bearing		ball bearing	
life	>10 Mio. cycles		>10 Mio. cycles		-		>10 Mio. cycles	
tip rotation	1° over full stroke		1° over full stroke		1° over full stroke		1° over full stroke	
temperature range	-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation	
mounting position	any		any		any		any	
tip	3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable	
gaiter	FPM / FKM		FPM / FKM		FPM / FKM		-	
body diameter	8h6		8h6		8h6		8h6	
cable	PUR, length 2 m		PUR, length 2 m		PUR, length 2 m		PUR, length 2 m	
plug	5 pin, 270°		5 pin, 270°		5 pin, 270°		5 pin, 270°	
advance	-		-		pneumatic		pneumatic	
lift off	none		vacuum		-		-	
maximum pressure	-		-		2.0 bar		6.0 bar	
spring rate	1 N ± 15 % (at electrical zero), 1.6 N as option		1 N ± 15 % (at electrical zero), 1.6 N as option		1.5 N at 0.9 bar 2.0 N at 1.2 bar (both at el. zero)		1.0 N at 1.3 bar 1.6 N at 1.7 bar (both at el. zero)	
repeatability	0.02 μ m		0.02 μ m		0.02 μ m		0.02 μ m	
linearity error	0.3 % FS ± 5000 μm range (at 20 °C ± 1 °C)		0.3 % FS ± 5000 μm range (at 20 °C ± 1 °C)		0.3 % FS ± 5000 μm range (at 20 °C ± 1 °C)		0.3 % FS ± 5000 μm range (at 20 °C ± 1 °C)	
sensitivity	standard setting 1:10 7.38 ± 0.02 mV/(Vmm) (into R = 2 kOhm ± 0.1 %), optional setting 1:5 14.76 ± 0.04 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		standard setting 1:10 7.38 ± 0.02 mV/(Vmm) (into R = 2 kOhm ± 0.1 %), optional setting 1:5 14.76 ± 0.04 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		standard setting 1:10 7.38 ± 0.02 mV/(Vmm) (into R = 2 kOhm ± 0.1 %), optional setting 1:5 14.76 ± 0.04 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		standard setting 1:10 7.38 ± 0.02 mV/(Vmm) (into R = 2 kOhm ± 0.1 %), optional setting 1:5 14.76 ± 0.04 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)	
drive frequency	13 kHz ± 5 %		13 kHz ± 5 %		13 kHz ± 5 %		13 kHz ± 5 %	
voltage supply	3 V ± 0.5 % RMS		3 V ± 0.5 % RMS		3 V ± 0.5 % RMS		3 V ± 0.5 % RMS	
coil form	halfbridge		halfbridge		halfbridge		halfbridge	
repair	possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled	



Transducer T521 / T522

Overview

Type / Description	Drawing	
T521F T522F <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ setting 1 : 2 ■ halfbridge ■ spring push 	T521F 	T522F
T521V T522V <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ setting 1 : 2 ■ halfbridge ■ vacuum retract 	T521V 	T522V
T521P T522P <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ setting 1 : 2 ■ halfbridge ■ pneumatic push bellow sealed 	T521P 	T522P
T521L T522L <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ setting 1 : 2 ■ halfbridge ■ pneumatic push air gap seal 	T521L 	T522L

8 mm After Electrical Zero, Halfbridge, ± 2 mm Measuring Stroke, Setting 1 : 2

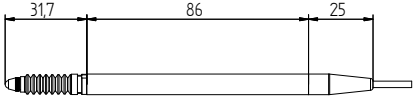
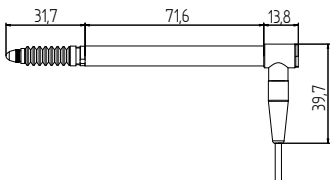
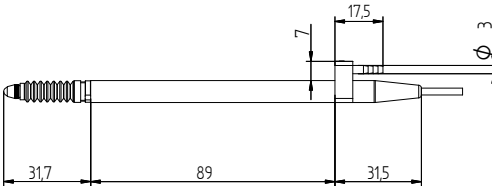
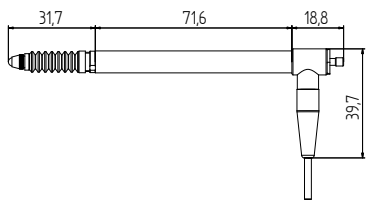
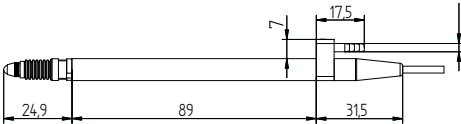
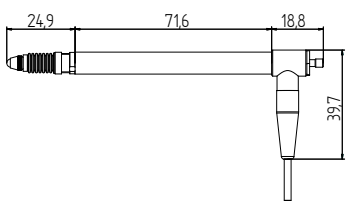
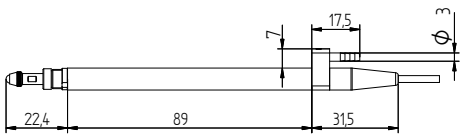
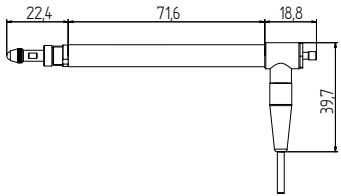
Technical Data ■

	T521F	T522F	T521V	T522V	T521P	T522P	T521L	T522L
cable exit	axial	radial	axial	radial	axial	radial	axial	radial
maximum stroke	10.6 mm		10.6 mm		10.6 mm		10.6 mm	
measuring stroke	± 2 mm		± 2 mm		± 2 mm		± 2 mm	
pretravel	adjustable		adjustable		adjustable		adjustable	
default setting	-2.25 mm		-2.25 mm		+8 mm		+8 mm	
bearing	ball bearing		ball bearing		ball bearing		ball bearing	
life	>10 Mio. cycles		>10 Mio. cycles		-		>10 Mio. cycles	
tip rotation	1 ° over full stroke		1 ° over full stroke		1 ° over full stroke		1 ° over full stroke	
temperature range	-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation	
mounting position	any		any		any		any	
tip	3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable	
gaiter	FPM / FKM		FPM / FKM		FPM / FKM		-	
body diameter	8h6		8h6		8h6		8h6	
cable	PUR, length 2 m		PUR, length 2 m		PUR, length 2 m		PUR, length 2 m	
plug	5 pin, 270 °		5 pin, 270 °		5 pin, 270 °		5 pin, 270 °	
advance	-		-		pneumatic		pneumatic	
lift off	none		vacuum		-		-	
maximum pressure	-		-		2.0 bar		6.0 bar	
spring rate	1 N ± 15 % (at electrical zero), 1.6 N as option		1 N ± 15 % (at electrical zero), 1.6 N as option		1.5 N at 0.9 bar 2.0 N at 1.2 bar (both at el. zero)		1.0 N at 1.3 bar 1.6 N at 1.7 bar (both at el. zero)	
repeatability	0.02 μ m		0.02 μ m		0.02 μ m		0.02 μ m	
linearity error	0.5 % FS ± 2000 μm range (at 20 °C ± 1 °C)		0.5 % FS ± 2000 μm range (at 20 °C ± 1 °C)		0.5 % FS ± 2000 μm range (at 20 °C ± 1 °C)		0.5 % FS ± 2000 μm range (at 20 °C ± 1 °C)	
sensitivity	36.88 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		36.88 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		36.88 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		36.88 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)	
drive frequency	13 kHz ± 5 %		13 kHz ± 5 %		13 kHz ± 5 %		13 kHz ± 5 %	
supply voltage	3 V ± 0.5 % RMS		3 V ± 0.5 % RMS		3 V ± 0.5 % RMS		3 V ± 0.5 % RMS	
coil form	halfbridge		halfbridge		halfbridge		halfbridge	
repair	possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled	



Transducer T523 / T524

Overview

Type / Description	Drawing	
T523F T524F <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ setting 1 : 1 ■ halfbridge ■ spring push 	T523F 	T524F 
T523V T524V <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ setting 1 : 1 ■ halfbridge ■ vacuum retract 	T523V 	T524V 
T523P T524P <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ setting 1 : 1 ■ halfbridge ■ pneumatic push bellow sealed 	T523P 	T524P 
T523L T524L <ul style="list-style-type: none"> ■ measuring stroke ± 2 mm ■ setting 1 : 1 ■ halfbridge ■ pneumatic push air gap seal 	T523L 	T524L 

8 mm Stroke After Electrical Zero, Halfbridge, ± 2 mm Measuring Stroke, Setting 1 : 1

Technical Data ■

	T523F	T524F	T523V	T524V	T523P	T524P	T523L	T524L
cable exit	axial	radial	axial	radial	axial	radial	axial	radial
maximum stroke	10.6 mm		10.6 mm		10.6 mm		10.6 mm	
measuring stroke	± 2 mm		± 2 mm		± 2 mm		± 2 mm	
pretravel	adjustable		adjustable		adjustable		adjustable	
default setting	-2.25 mm		-2.25 mm		+8 mm		+8 mm	
bearing	ball bearing		ball bearing		ball bearing		ball bearing	
life	>10 Mio. cycles		>10 Mio. cycles		-		>10 Mio. cycles	
tip rotation	1 ° over full stroke		1 ° over full stroke		1 ° over full stroke		1 ° over full stroke	
temperature range	-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation		-10 to +65 °C, storage and operation	
mounting position	any		any		any		any	
tip	3 m tungsten carbide ball, M2.5 fixing thread, exchangeable		3 m tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable		3 mm tungsten carbide ball, M2.5 fixing thread, exchangeable	
gaiter	FPM / FKM		FPM / FKM		FPM / FKM		-	
body diameter	8h6		8h6		8h6		8h6	
cable	PUR, length 2 m		PUR, length 2 m		PUR, length 2 m		PUR, length 2 m	
plug	5 pin, 270 °		5 pin, 270 °		5 pin, 270 °		5 pin, 270 °	
advance	-		-		pneumatic		pneumatic	
lift off	none		vacuum		-		-	
maximum pressure	-		-		2.0 bar		6.0 bar	
spring rate	1 N ± 15 % (at electrical zero), 1.6 N as option		1 N ± 15 % (at electrical zero), 1.6 N as option		1.5 N at 0.9 bar 2.0 N at 1.2 bar (both at el. zero)		1.0 N at 1.3 bar 1.6 N at 1.7 bar (both at el. zero)	
repeatability	0.02 μ m		0.02 μ m		0.02 μ m		0.02 μ m	
linearity error	0.25 % FS ± 1000 μm range (at 20 °C ± 1 °C)		0.25 % FS ± 1000 μm range (at 20 °C ± 1 °C)		0.25 % FS ± 1000 μm range (at 20 °C ± 1 °C)		0.25 % FS ± 1000 μm range (at 20 °C ± 1 °C)	
sensitivity	73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)		73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)	
drive frequency	13 kHz ± 5 %		13 kHz ± 5 %		13 kHz ± 5 %		13 kHz ± 5 %	
supply voltage	3 V ± 0.5 % RMS		3 V ± 0.5 % RMS		3 V ± 0.5 % RMS		3 V ± 0.5 % RMS	
coil form	halfbridge		halfbridge		halfbridge		halfbridge	
repair	possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled		possible, unit can be disassembled	



Transducer T801 / T802, T851 / T852

Overview

Type / Description	Drawing
T801 T802 <ul style="list-style-type: none">■ measuring stroke ± 2 mm■ halfbridge■ push depends on used accessories	<p>T801</p> <p>T802</p>
T851 T852 <ul style="list-style-type: none">■ measuring stroke ± 2 mm■ fullbridge (LVDT)■ push depends on used accessories	<p>T851</p> <p>T852</p>

T801 / T802 Halfbridge, T851 / T852 Fullbridge (LVDT)

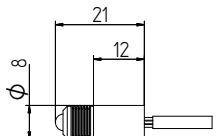
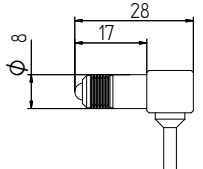
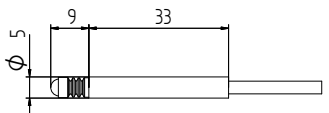
Technical Data ■

cable exit	T801 axial	T802 radial	T851 axial	T852 radial
maximum stroke	6.0 mm	6.0 mm	6.0 mm	6.0 mm
measuring stroke	±2 mm	±2 mm	±2 mm	±2 mm
pretravel default setting	adjustable -1.2 mm	adjustable -1.2 mm	adjustable -1.2 mm	adjustable -1.2 mm
bearing	ball bearing	ball bearing	ball bearing	ball bearing
life	>10 Mio. cycles	>10 Mio. cycles	>10 Mio. cycles	>10 Mio. cycles
tip rotation	1 ° over full stroke	1 ° over full stroke	1 ° over full stroke	1 ° over full stroke
temperature range	-10 to +65 °C, storage and operation	-10 to +65 °C, storage and operation	-10 to +65 °C, storage and operation	-10 to +65 °C, storage and operation
mounting position	any	any	any	any
tip	mountable	mountable	mountable	mountable
dimension	70 x 14 x 12 mm	70 x 14 x 12 mm	70 x 14 x 12 mm	70 x 14 x 12 mm
cable	PUR, length 2 m	PUR, length 2 m	PUR, length 2 m	PUR, length 2 m
plug	5 pin, 270 °	5 pin, 270 °	5 pin, 270 °	5 pin, 270 °
advance	mountable	mountable	mountable	mountable
spring rate	1 N ±15 % (at electrical zero), 1.6 N as option	1 N ±15 % (at electrical zero), 1.6 N as option	1 N ±15 % (at electrical zero), 1.6 N as option	1 N ±15 % (at electrical zero), 1.6 N as option
repeatability	0.01 µm	0.01 µm	0.01 µm	0.01 µm
linearity error	0.25 % FS ±1000 µm range (at 20 °C ±1 °C)	0.25 % FS ±1000 µm range (at 20 °C ±1 °C)	0.25 % FS ±1000 µm range (at 20 °C ±1 °C)	0.25 % FS ±1000 µm range (at 20 °C ±1 °C)
sensitivity	73.75 ±0.15 mV/(Vmm) (into R = 2 kOhm ±0.1 %)	73.75 ±0.15 mV/(Vmm) (into R = 2 kOhm ±0.1 %)	150 mV/(Vmm) (into R = 100 kOhm)	150 mV/(Vmm) (into R = 100 kOhm)
drive frequency	13 kHz ±5 %	13 kHz ±5 %	5 kHz ±5 %	5 kHz ±5 %
supply voltage	3 V ±0.5 % RMS	3 V ±0.5 % RMS	3 V ±0.5 % RMS	3 V ±0.5 % RMS
coil form	halfbridge	halfbridge	fullbridge (LVDT)	fullbridge (LVDT)
repair	possible, unit can be disassembled	possible, unit can be disassembled	possible, unit can be disassembled	possible, unit can be disassembled



Transducer 10P0 / 10P1 / 1P0

Overview

Type / Description	Drawing
10P0 <ul style="list-style-type: none">■ measuring stroke ± 0.25 mm■ halfbridge■ spring push	10P0 
10P1 <ul style="list-style-type: none">■ measuring stroke ± 0.25 mm■ halfbridge■ spring push	10P1 
1P0 <ul style="list-style-type: none">■ measuring stroke ± 0.4 mm■ halfbridge■ spring push	1P0 

Halfbridge, 10P0 / 10P1 ± 0.25 mm Measuring Stroke, 1P0 ± 0.4 mm Measuring Stroke

Technical Data ■

cable exit	10P0 axial, no pull out protection	10P1 radial	1P0 axial
maximum stroke	0.8 mm	0.8 mm	1.5 mm
measuring stroke	± 0.25 mm	± 0.25 mm	± 0.4 mm
pretravel	0.35 mm	0.35 mm	0.40 mm
bearing	ball bearing	ball bearing	ball bearing
life	>10 Mio. cycles	>10 Mio. cycles	>10 Mio. cycles
tip rotation	0.5 ° over full stroke	0.5 ° over full stroke	1.5 ° over full stroke
temperature range	-10 to +65 °C, storage and operation	-10 to +65 °C, storage and operation	-10 to +65 °C, storage and operation
mounting position	any	any	any
tip	4 mm tungsten carbide ball	4 mm tungsten carbide ball	2 mm tungsten carbide ball
gaiter	Nickel	Nickel	Nitrile
body diameter	8h6	8h6	5h6
cable	PUR, length 2 m	PUR, length 2 m	PUR, length 2 m
plug	5 pin, 270 °	5 pin, 270 °	5 pin, 270 °
advance	none	none	none
spring rate	0.63 N ± 20 % (at electrical zero)	0.63 N ± 20 % (at electrical zero)	0.78 N ± 20 % (at electrical zero)
repeatability	0.01 μ m	0.01 μ m	0.01 μ m
linearity error	0.6 % FS ± 250 μm range (at 20 °C ± 1 °C)	0.6 % FS ± 250 μm (at 20 °C ± 1 °C)	0.2 % FS ± 400 μm (at 20 °C ± 1 °C)
sensitivity	73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)	73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)	73.75 ± 0.15 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)
drive frequency	13 kHz ± 5 %	13 kHz ± 5 %	13 kHz ± 5 %
supply voltage	3 V ± 0.5 % RMS	3 V ± 0.5 % RMS	3 V ± 0.5 % RMS
coil form	halfbridge	halfbridge	halfbridge

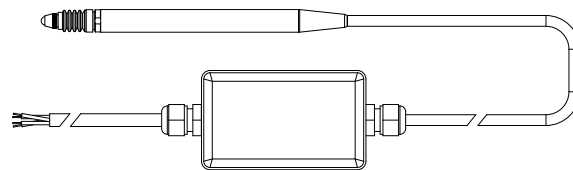


DC-Transducer

T-series transducer with in-cable box signal conditioning, signal output ± 10 VDC for full specification displacement

application	the same as T-series transducers	
body diameter	8h6	
dimension	in-cable box 58 x 35 x 16 mm	
supply voltage	supply voltage 5, 12 or 24 VDC (± 10 %) (<i>please specify with order</i>) current consumption 120, 50 or 25 mA	
signal output	± 10 VDC for full specification displacement (other specifications upon request)	
connection	supply and signal output: cable PVC, length 1 m, prepared wires Transducer connected fix to the box, cable PUR, length 2 m	
models	Transducer T101/T102	measuring stroke ± 1 mm
	Transducer T201/T202	measuring stroke ± 1 mm
	Transducer T301/T302	measuring stroke ± 2 mm
	Transducer T501/T502	measuring stroke ± 5 mm
	Transducer T521/T522	measuring stroke ± 2 mm
	Transducer T523/T524	measuring stroke ± 1 mm
examples for ordering	T101F as DC-Transducer with supply voltage 24V:	T101FDC24V
	T302P as DC-Transducer with supply voltage 5V:	T302PDC5V

drawing



Cable Module

- signal conditioning for T-series transducers,
- socket to accept transducer plug,
- output signal ± 10 VDC or ± 5 VDC, for full specification displacement of the transducer

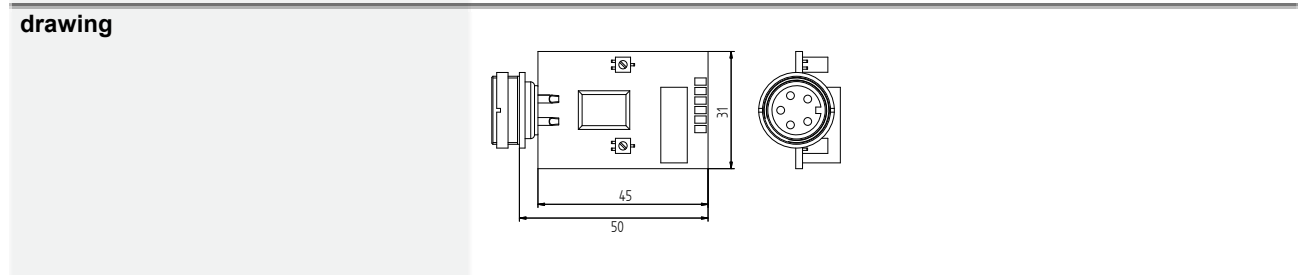
application	signal conditioning for T-series transducer for TESA® compatible halfbridge models	
dimension	box 73 x 51 x 25 mm	
supply voltage	supply voltage 5, 12 or 24 VDC (± 10 %) (<i>please specify with order</i>) current consumption 120, 50 or 25 mA	
signal output	± 10 VDC for transducer T101 / T102 measuring stroke ± 1 mm T201 / T202 measuring stroke ± 1 mm T301 / T302 measuring stroke ± 2 mm T401 / T402 measuring stroke ± 1 mm T501 / T502 measuring stroke ± 5 mm (for setting 1:5) T521 / T522 measuring stroke ± 2 mm T523 / T524 measuring stroke ± 1 mm ± 5 VDC for transducer T501 / T502 measuring stroke ± 5 mm (for standard setting 1:10) other specifications upon request	
connection	supply and signal: cable PVC, length 1 m, prepared wires Transducer: socket 5 pin, 270 °	
transducer supply	3 V ± 0.5 % RMS / 13 kHz ± 5 %	
sensitivity	73.75 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)	
examples for ordering	specification	order text
	cable module with 12 V supply voltage signal output ± 10 V measuring stroke ± 1 mm for a T101	KABMOD12V ± 10 V ± 1 mm (T101)
	cable module with 24 V supply voltage signal output 0-10 V measuring stroke ± 5 mm for a T501 (with setting 1:10)	KABMOD24V 0-10V ± 5 mm (T501, 1:10)
drawing		



T-Module

■ signal conditioning electronic for halfbridge transducers, mountable into frontpanels, output signal ± 10 VDC or ± 5 VDC, for full specification displacement of the transducer

application	signal conditioning for T-series transducers for TESA® compatible halfbridge transducers	
dimension	31 x 50 mm (no casing)	
fixing	with threaded ring, hole diameter for socket fixing 18 mm	
supply voltage	supply voltage 5, 12 or 24 VDC (± 10 %) (<i>please specify with order</i>) current consumption 120, 50 or 25 mA	
signal output	± 10 VDC for transducers T101 / T102 measuring stroke ± 1 mm T201 / T202 measuring stroke ± 1 mm T301 / T302 measuring stroke ± 2 mm T401 / T402 measuring stroke ± 1 mm T501 / T502 measuring stroke ± 5 mm (for setting 1:5) T521 / T522 measuring stroke ± 2 mm T523 / T524 measuring stroke ± 1 mm ± 5 VDC for transducers T501 / T502 measuring stroke ± 5 mm (for standard setting 1:10) other specifications upon request	
connection	supply and signal: pads on PCB transducer: socket 5 pin, 270 °	
transducer supply	3 V ± 0.5 % RMS / 13 kHz ± 5 %	
sensitivity	73.75 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)	
examples for ordering	specification	order text
	T-module with 12 V supply voltage signal output ± 10 V measuring stroke ± 1 mm for a T101	TMOD12V ± 10 V ± 1 mm (T101)
	T-module with 24 V supply voltage signal output 0-10 V measuring stroke ± 5 mm for a T501 (with setting 1:10)	TMOD24V 0-10V ± 5 mm (T501, 1:10)

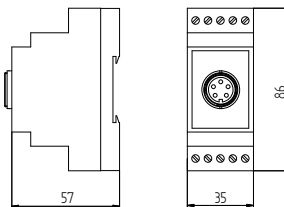


DIN-Rail Module

■ signal conditioning electronic for halfbridge transducers, housed in DIN-Rail case, signal output ± 10 VDC or ± 5 VDC, for full specification displacement of the transducer

application	signal conditioning for T-series transducers for TESA® compatible halfbridge transducers	
dimension	86 x 35 x 58 mm (height from rail top surface)	
supply voltage	supply voltage 5, 12 or 24 VDC (± 10 %) (please specify when ordering) current consumption 120, 50 or 25 mA	
signal output	± 10 VDC for transducer T101 / T102 measuring stroke ± 1 mm T201 / T202 measuring stroke ± 1 mm T301 / T302 measuring stroke ± 2 mm T401 / T402 measuring stroke ± 1 mm T501 / T502 measuring stroke ± 5 mm (setting 1:5) T521 / T522 measuring stroke ± 2 mm T523 / T524 measuring stroke ± 1 mm ± 5 VDC for transducer T501 / T502 measuring stroke ± 5 mm (for standard setting 1:10) other specifications upon request	
connection	supply and signal: screw terminals transducer: socket 5 pin, 270 °	
transducer supply	3 V ± 0.5 % RMS / 15 kHz ± 5 %	
sensitivity	73.75 mV/(Vmm) (into R = 2 kOhm ± 0.1 %)	
examples for ordering	specification	order text
	DIN-Rail module with 12 V supply voltage signal output ± 10 V measuring stroke ± 1 mm for a T101	DINMOD12V ± 10 V ± 1 mm (T101)
	DIN-Rail modul with 24 V supply voltage signal output 0-10 V measuring stroke ± 5 mm for a T501 (with setting 1:10)	DINMOD24V 0-10V ± 5 mm (T501, 1:10)

drawing



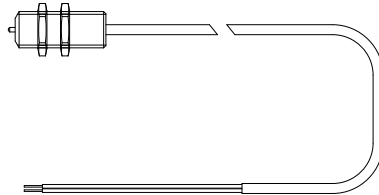


MICRON Switch

small signal switch with highest repeatability of the crossover position

application	reference switch for position stages precision end stops reference settings etc.
repeatability	±0.001 mm
overtravel	1.5 mm (longer overtravel upon request)
operation force	0.7 N (other values upon request)
temperature range	-20 to +70 °C, storage and operation
current rating	50 mA
lifetime	>10 Mio. cycles
mounting position	any
function	NC (normally closed)
cable	PUR, length 1 m, prepared wires
wires	2 x 0.14 mm ²
body OD	M8 x 0.5
case material	stainless steel (1.4305)
clamping nuts	2 pieces included

drawing

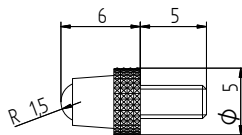


Accessories

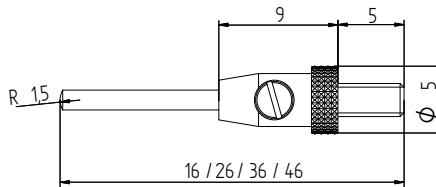
■ accessories for T-series transducers

Tips with fixing thread M2.5

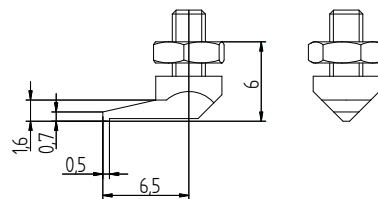
TN10W



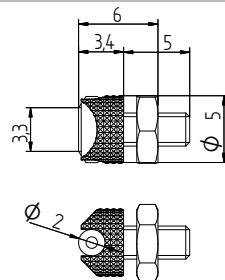
TN12



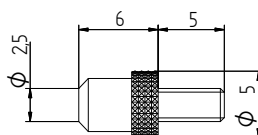
TN20



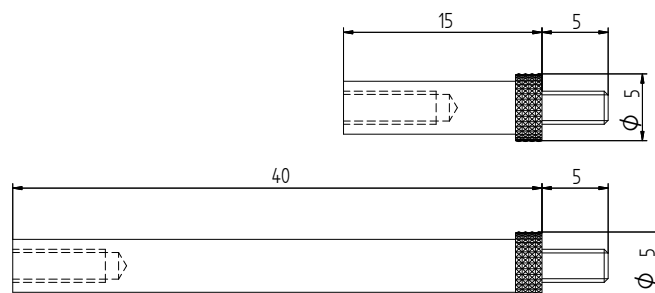
TN30W



TN70



TN91 X = 15 mm
TN93 X = 40 mm



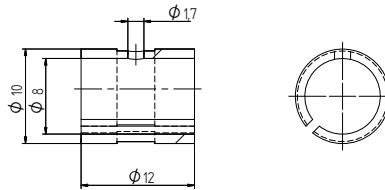


Accessories

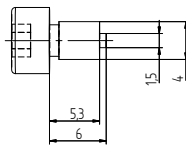
accessories for T-series transducers

Fixing elements

T100/630 clampbush

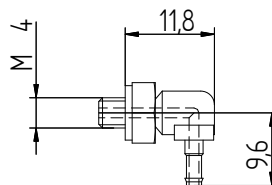


T100/631 clampscrew



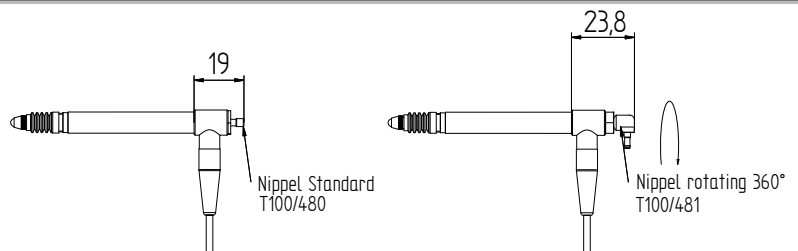
Pneumatic Connection

T100/481 nipple, rotating



Comparison

standard T100/480
rotating T100/481

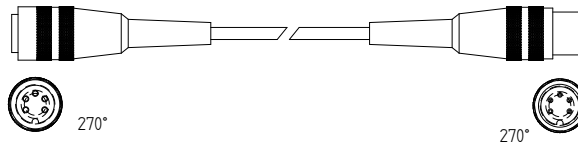


Accessories



Extension Cables

T100/781	1.0 meter
T100/782	2.5 meter
T100/785	5.0 meter
T100/787	7.5 meter
T100/790	10.0 meter



T800 Pneumatic cylinder

T800/880
 Pneumatic cylinder for T800 - series
 can be used for either pneumatic retraction
 or advance
 operating pressure app. 4.5 bar

