

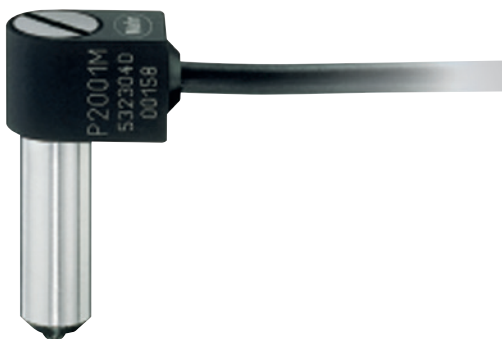
Millimar P2001 M / P2001 T / P2001 F

Inductive Probe



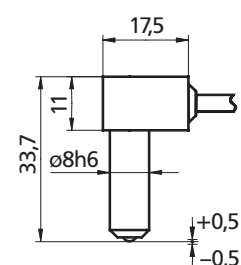
FEATURES

- Compact design
- Plain bearing guide
- High linearity over the entire measuring range
- Excellent electromagnetic shielding (EMC)
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone



TECHNICAL DATA

Order no.		5323040
Product type		P2001 M
Measuring range	mm	± 0.5
Measuring range	inch	± .020"
Measuring force	N	0.75 N +/-0.15 N
Increase in measuring force	N/mm	0.1 N/mm
Sensitivity deviation	%	0.3
Repeatability f_w	μm	0.15
Repeatability f_w	inch	6 μ"
Hysteresis f_u	μm	0.2
Hysteresis f_u	inch	8 μ"
Linearity deviation within +/-0.1 mm	μm	0.6
Linearity deviation within +/-0.0039"	inch	24 μ"
Linearity deviation within +/-0.5 mm	μm	1.5
Linearity deviation within +/-0.020"	inch	60 μ"
IP protection category:		IP 40
Cable length	m	2.5
Temperature coefficient	μm/°C	0.15
Compatibility		Mahr VLDT



ACCESSORIES

Order no.	Product description	Product name	Compatibility	Product type
5323130	Extension cable 2.5 m	Extension cable 2.5 m (Mahr VLDT)	Mahr VLDT	C2025 M
5323140	Extension cable 5 m	Extension cable 5 m (Mahr VLDT)	Mahr VLDT	C2050 M
5323150	Extension cable 7.5 m	Extension cable 7.5 m (Mahr VLDT)	Mahr VLDT	C2075 M
5323160	Extension cable 10 m	Extension cable 10 m (Mahr VLDT)	Mahr VLDT	C2100 M

Millimar P2004 M / P2004 T / P2004 U / P2004 F

Inductive Probe



FEATURES

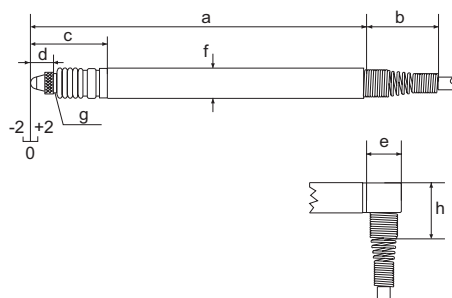
- Models with or without compressed-air (pneumatic) lifter or vacuum retraction
- Measuring pin mounted in ball bearing guide
- High linearity over the entire measuring range
- Excellent electromagnetic shielding (EMC)
- All probes can be easily converted from axial to radial by mounting a slip-on cap (included)
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- **Package contains:** instruction manual, cap for radial cable output, spanner for preliminary stroke setting



TECHNICAL DATA

Order no.	5323010	5323011	5323013	5323014
Product type	P2004 M	P2004 T	P2004 U	P2004 F
Measuring range	mm	± 2		
Measuring range	inch	± .079"		
Distance to upper stop	mm...mm	+2.2 ... 4.4		
Distance to upper stop	inch...inch	+ .09173"		
Distance to lower stop	mm...mm	-2.2 ... 0		
Distance to lower stop	inch...inch	-.09 ... 0"		
Lifter / retraction		Standard model		
Measuring force	N	0.75 N +/-0.15 N		
Increase in measuring force	N/mm	0.2 N/mm		
Sensitivity deviation	%	0.3		
Repeatability f_w	µm	0.1		
Repeatability f_w	inch	4 µ"		
Hysteresis f_u	µm	0.5		
Hysteresis f_u	inch	20 µ"		
Linearity deviation within +/-0.5 mm	µm	0.4		
Linearity deviation within +/-0.020"	inch	16 µ"		
Linearity deviation within +/-1.0 mm	µm	1.5		
Linearity deviation within +/-0.039"	inch	60 µ"		
Linearity deviation within +/-2.0 mm	µm	3		
Linearity deviation within +/-0.079"	inch	120 µ"		
IP protection category		IP 64		
Cable length	m	2.5		
Temperature coefficient	µm/°C	0.15		
Compatibility		Mahr VLDT	Tesa	Marposs Federal

Order no.	g	Dimension f	a	b	c	d	e	f	h
		inch	mm	mm	mm	mm	mm	mm	mm
5323010	M 2.5		88.7	28	21.3	6	9.2	8	14
5323011	M 2.5		88.7	28	21.3	6	9.2	8	14
5323013	M 2.5		88.7	28	21.3	6	9.2	8	14
5323014	4/48 UNF	0.375	88.7	28	21.3	6	9.2		14



Millimar P2004 MA / P2004 TA / P2004 UA / P2004 FA



Inductive Probe

FEATURES

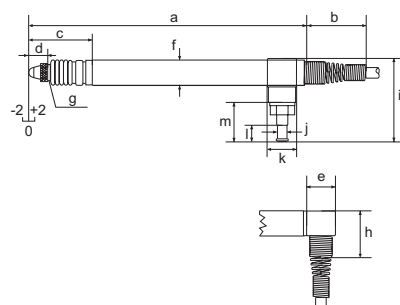
- Models with or without compressed-air (pneumatic) lifter or vacuum retraction
- Measuring pin mounted in ball bearing guide
- High linearity over the entire measuring range
- Excellent electromagnetic shielding (EMC)
- All probes can be easily converted from axial to radial by mounting a slip-on cap (included)
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- **Package contains:** instruction manual, cap for radial cable output, spanner for preliminary stroke setting



TECHNICAL DATA

	Order no.	5323020	5323021	5323023	5323024
Product type		P2004 MA	P2004 TA	P2004 UA	P2004 FA
Measuring range	mm	± 2			
Measuring range	inch	± .079"			
Distance to upper stop	mm...mm	+2.2 ... 4.4			
Distance to upper stop	inch...inch	+ .09173"			
Distance to lower stop	mm...mm	-2.2 ... 0			
Distance to lower stop	inch...inch	-.09 ... 0"			
Lifter / retraction		Vacuum lifter			
Measuring force	N	0.75 N +/-0.15 N			
Increase in measuring force	N/mm	0.2 N/mm			
Sensitivity deviation	%	0.3			
Repeatability f_w	μm	0.1			
Repeatability f_w	inch	4 μm			
Hysteresis f_u	μm	0.5			
Hysteresis f_u	inch	20 μm			
Linearity deviation within +/-0.5 mm	μm	0.4			
Linearity deviation within +/- .020"	inch	16 μm			
Linearity deviation within +/-1.0 mm	μm	1.5			
Linearity deviation within +/- .039"	inch	60 μm			
Linearity deviation within +/-2.0 mm	μm	3			
Linearity deviation within +/- .079"	inch	120 μm			
IP protection category		IP 64			
Cable length	m	2.5			
Temperature coefficient	$\mu\text{m}/^\circ\text{C}$	0.15			
Compatibility		Mahr VLDT	Tesa	Marposs	Federal

Order no.	g	Dimension	f	j	k	l	m	a	b	c	d	e	f	h	i
			inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
5323020	M 2.5			3.6	9	8.3	12.5	88.7	28	21.3	6	9.2	8	14	26.5
5323021	M 2.5			3.6	9	8.3	12.5	88.7	28	21.3	6	9.2	8	14	26.5
5323023	M 2.5			3.6	9	8.3	12.5	88.7	28	21.3	6	9.2	8	14	26.5
5323024	4/48 UNF	0.375		3.6	9	8.3	12.5	88.7	28	21.3	6	9.2		14	26.5



Millimar P2004 MB / P2004 TB / P2004 UB / P2004 FB



Inductive Probe

FEATURES

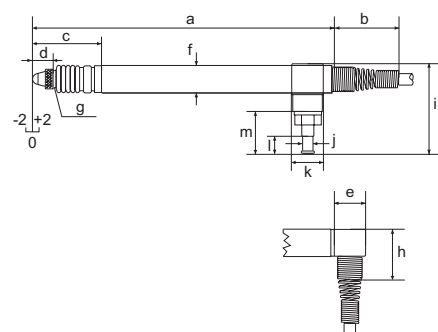
- Models with or without compressed-air (pneumatic) lifter or vacuum retraction
- Measuring pin mounted in ball bearing guide
- High linearity over the entire measuring range
- Excellent electromagnetic shielding (EMC)
- All probes can be easily converted from axial to radial by mounting a slip-on cap (included)
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- **Package contains:** instruction manual, cap for radial cable output, spanner for preliminary stroke setting



TECHNICAL DATA

Order no.	5323030	5323031	5323033	5323034
Product type	P2004 MB	P2004 TB	P2004 UB	P2004 FB
Measuring range	mm	± 2		
Measuring range	inch	± .079"		
Distance to upper stop	mm...mm	+2.2 ... 4.4		
Distance to upper stop	inch...inch	+ .09173"		
Distance to lower stop	mm...mm	-2.2 ... 0		
Distance to lower stop	inch...inch	-.09 ... 0"		
Lifter / retraction		Compressed air retraction (max. 1 bar)		
Measuring force	N	Depending upon air pressure		
Sensitivity deviation	%	0.3		
Repeatability f_w	µm	0.1		
Repeatability f_w	inch	4 µ"		
Hysteresis f_u	µm	0.5		
Hysteresis f_u	inch	20 µ"		
Linearity deviation within +/-0.5 mm	µm	0.4		
Linearity deviation within +/- .020"	inch	16 µ"		
Linearity deviation within +/-1.0 mm	µm	1.5		
Linearity deviation within +/- .039"	inch	60 µ"		
Linearity deviation within +/-2.0 mm	µm	3		
Linearity deviation within +/- .079"	inch	120 µ"		
IP protection category		IP 64		
Cable length	m	2.5		
Temperature coefficient	µm/°C	0.15		
Compatibility		Mahr VLDT	Tesa	Marposs Federal

Order no.	g	Dimension f	j	k	l	m	a	b	c	d	e	f	h	i
		inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
5323030	M 2.5		3.6	9	8.3	12.5	88.7	28	21.3	6	9.2	8	14	26.5
5323031	M 2.5		3.6	9	8.3	12.5	88.7	28	21.3	6	9.2	8	14	26.5
5323033	M 2.5		3.6	9	8.3	12.5	88.7	28	21.3	6	9.2	8	14	26.5
5323034	4/48 UNF	0.375	3.6	9	8.3	12.5	88.7	28	21.3	6	9.2		14	26.5



Millimar P2010 M

Inductive Probe



FEATURES

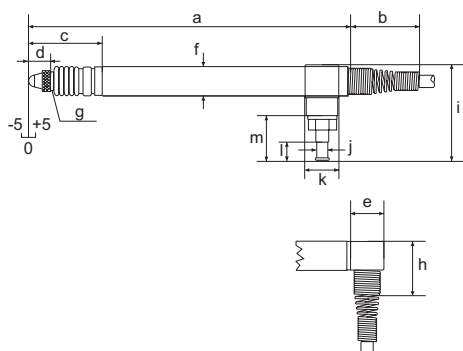
- Models with or without compressed air (pneumatic) lifter or vacuum retraction
- Measuring pin mounted in ball-bearing guide
- High linearity over the entire measuring range
- Excellent electromagnetic shielding (EMC)
- All probes can be easily converted from axial to radial by mounting a slip-on cap (included)
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- **Package contains:** instruction manual, cap for radial cable output, spanner for preliminary stroke setting



TECHNICAL DATA

Order no.		5324010
Product type		P2010 M
Measuring range	mm	± 5
Measuring range	inch	± .197"
Distance to upper stop	mm...mm	+5.3
Distance to upper stop	inch...inch	+ .20"
Distance to lower stop	mm...mm	-5.3
Distance to lower stop	inch...inch	-.20"
Lifter / retraction		Standard model
Measuring force	N	0.75 N +/-0.15N
Increase in measuring force	N/mm	0.1 N/mm
Sensitivity deviation	%	0.3
Repeatability f_w	μm	0.2
Repeatability f_w	inch	8 μm
Hysteresis f_u	μm	1
Hysteresis f_u	inch	40 μm
Linearity deviation within +/-2.0 mm	μm	4
Linearity deviation within +/-0.079"	inch	160 μm
Linearity deviation within +/-5.0 mm	μm	20
Linearity deviation within +/-0.197"	inch	200 μm
IP protection category		IP 64
Cable length	m	2.5
Temperature coefficient	$\mu\text{m}/^\circ\text{C}$	0.15
Compatibility		Mahr

Order no.	g	a	b	c	d	e	f	h
5324010	M 2.5	mm	mm	mm	mm	mm	mm	mm
		125.7	28	34	6	9.2	8	14



Millimar P2010 MA / P2010 TA / P2010 UA / P2010 FA



Inductive Probe

FEATURES

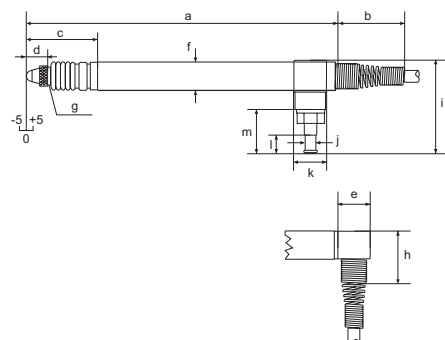
- Models with or without compressed air (pneumatic) lifter or vacuum retraction
- Measuring pin mounted in ball-bearing guide
- High linearity over the entire measuring range
- Excellent electromagnetic shielding (EMC)
- All probes can be easily converted from axial to radial by mounting a slip-on cap (included)
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- **Package contains:** instruction manual, cap for radial cable output, spanner for preliminary stroke setting



TECHNICAL DATA

Order no.	5324020	5324021	5324023	5324024
Product type	P2010 MA	P2010 TA	P2010 UA	P2010 FA
Measuring range	mm	± 5		
Measuring range	inch	± .197"		
Distance to upper stop	mm...mm	+5.3		
Distance to upper stop	inch...inch	+ .20"		
Distance to lower stop	mm...mm	-5.3		
Distance to lower stop	inch...inch	-.20"		
Lifter / retraction		Vacuum lifter		
Measuring force	N	0.75 N +/-0.15 N		
Increase in measuring force	N/mm	0.1 N/mm		
Sensitivity deviation	%	0.3		
Repeatability f _w	µm	0.2		
Repeatability f _w	inch	8 µ"		
Hysteresis f _u	µm	1		
Hysteresis f _u	inch	40 µ"		
Linearity deviation within +/-2.0 mm	µm	4		
Linearity deviation within +/- .079"	inch	160 µ"		
Linearity deviation within +/-5.0 mm	µm	20		
Linearity deviation within +/- .197"	inch	200 µ"		
IP protection category		IP 64		
Cable length	m	2.5		
Temperature coefficient	µm/°C	0.15		
Compatibility		Mahr VLDT	Tesa	Marposs Federal

Order no.	g	Dimension	f	j	k	l	m	a	b	c	d	e	f	h	i
		inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
5324020	M 2.5		3.6	9	8.3	12.5	125.7	28	34	6	9.2	8	14	26.5	
5324021	M 2.5		3.6	9	8.3	12.5	125.7	28	34	6	9.2	8	14	26.5	
5324023	M 2.5		3.6	9	8.3	12.5	125.7	28	34	6	9.2	8	14	26.5	
5324024	4/48 UNF	0.375	3.6	9	8.3	12.5	125.7	28	34	6	9.2		14	26.5	



Millimar P2010 MB / P2010 TB / P2010 UB / P2010 FB



Inductive Probe

FEATURES

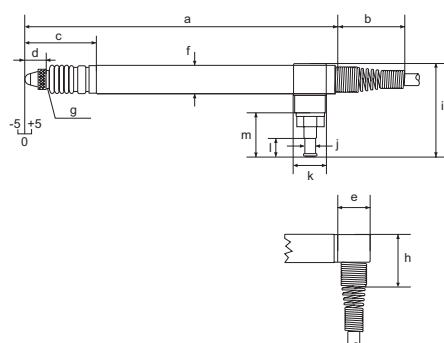
- Models with or without compressed air (pneumatic) lifter or vacuum retraction
- Measuring pin mounted in ball-bearing guide
- High linearity over the entire measuring range
- Excellent electromagnetic shielding (EMC)
- All probes can be easily converted from axial to radial by mounting a slip-on cap (included)
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- **Package contains:** instruction manual, cap for radial cable output, spanner for preliminary stroke setting



TECHNICAL DATA

Order no.	5324030	5324031	5324033	5324034
Product type	P2010 MB	P2010 TB	P2010 UB	P2010 FB
Measuring range	mm	± 5		
Measuring range	inch	± .197"		
Distance to upper stop	mm...mm	+5.3		
Distance to upper stop	inch...inch	+ .20"		
Distance to lower stop	mm...mm	-5.3		
Distance to lower stop	inch...inch	-.20"		
Lifter / retraction		Compressed air retraction (max. 1 bar)		
Measuring force	N	Depending upon air pressure		
Sensitivity deviation	%	0.3		
Repeatability f_w	μm	0.2		
Repeatability f_w	inch	8 μm		
Hysteresis f_u	μm	1		
Hysteresis f_u	inch	40 μm		
Linearity deviation within +/-2.0 mm	μm	4		
Linearity deviation within +/- .079"	inch	160 μm		
Linearity deviation within +/-5.0 mm	μm	20		
Linearity deviation within +/- .197"	inch	200 μm		
IP protection category		IP 64		
Cable length	m	2.5		
Temperature coefficient	$\mu\text{m}/^\circ\text{C}$	0.15		
Compatibility		Mahr VLDT	Tesa	Marposs Federal

Order no.	g	Dimension f	j	k	l	m	a	b	c	d	e	f	h	i
		inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
5324030	M 2.5		3.6	9	8.3	12.5	125.7	28	34	6	9.2	8	14	26.5
5324031	M 2.5		3.6	9	8.3	12.5	125.7	28	34	6	9.2	8	14	26.5
5324033	M 2.5		3.6	9	8.3	12.5	125.7	28	34	6	9.2	8	14	26.5
5324034	4/48 UNF	0.375	3.6	9	8.3	12.5	125.7	28	34	6	9.2		14	26.5



Millimar P2104 MA / P2104 TA / P2104 UA / P2104 FA



Inductive Probe

FEATURES

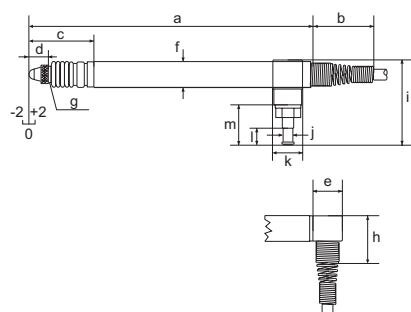
- Models with pneumatic lifter or vacuum retraction
- Measuring pin mounted in ball-bearing guide
- High linearity over the entire measuring range
- Excellent electromagnetic shielding (EMC)
- All probes can be easily converted from axial to radial by mounting a slip on cap (included)
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- **Package contains:** instruction manual, cap for radial cable output, spanner for preliminary stroke setting



TECHNICAL DATA

Order no.	5324070	5324071	5324073	5324074
Product type	P2104 MA	P2104 TA	P2104 UA	P2104 FA
Measuring range	mm	± 2		
Measuring range	inch	± .079"		
Distance to upper stop	mm...mm	+8.4 ... 10.4		
Distance to upper stop	inch...inch	.3341"		
Distance to lower stop	mm...mm	-2.2 ... 0		
Distance to lower stop	inch...inch	-.09 ... 0"		
Lifter / retraction		Vacuum lifter		
Measuring force	N	0.75 N +/-0.15 N		
Increase in measuring force	N/mm	0.1 N/mm		
Sensitivity deviation	%	0.3		
Repeatability f _w	µm	0.2		
Repeatability f _w	inch	8 µ"		
Hysteresis f _u	µm	1		
Hysteresis f _u	inch	20 µ"		
Linearity deviation within +/-0.5 mm	µm	0.5		
Linearity deviation within +/-0.020"	inch	20 µ"		
Linearity deviation within +/-1.0 mm	µm	2		
Linearity deviation within +/-0.039"	inch	80 µ"		
Linearity deviation within +/-2.0 mm	µm	4		
Linearity deviation within +/-0.079"	inch	160 µ"		
IP protection category		IP 64		
Cable length	m	2.5		
Temperature coefficient	µm/°C	0.15		
Compatibility		Mahr VLDT	Tesa	Marposs Federal

Order no.	g	Dimension	f	j	k	l	m	a	b	c	d	e	f	h	i
		inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
5324070	M 2.5		3.6	9	8.3	12.5	128.7	28	37	6	9.2	8	14	26.5	
5324071	M 2.5		3.6	9	8.3	12.5	128.7	28	37	6	9.2	8	14	26.5	
5324073	M 2.5		3.6	9	8.3	12.5	128.7	28	37	6	9.2	8	14	26.5	
5324074	4/48 UNF	0.375	3.6	9	8.3	12.5	128.7	28	37	6	9.2		14	26.5	



Millimar P2104 MB / P2104 TB / P2104 UB / P2104 FB



Inductive Probe

FEATURES

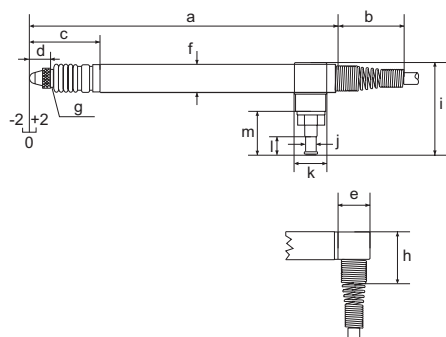
- Models with pneumatic lifter or vacuum retraction
- Measuring pin mounted in ball-bearing guide
- High linearity over the entire measuring range
- Excellent electromagnetic shielding (EMC)
- All probes can be easily converted from axial to radial by mounting a slip on cap (included)
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- **Package contains:** instruction manual, cap for radial cable output, spanner for preliminary stroke setting



TECHNICAL DATA

Order no.	5324080	5324081	5324083	5324084
Product type	P2104 MB	P2104 TB	P2104 UB	P2104 FB
Measuring range	mm	± 2		
Measuring range	inch	± .079"		
Distance to upper stop	mm...mm	+8.4 ... 10.4		
Distance to upper stop	inch...inch	.3341"		
Distance to lower stop	mm...mm	-2.2 ... 0		
Distance to lower stop	inch...inch	-.09 ... 0"		
Lifter / retraction		Compressed air retraction (max. 1 bar)		
Measuring force	N	Depending upon air pressure		
Sensitivity deviation	%	0.3		
Repeatability f_w	μm	0.2		
Repeatability f_w	inch	8 μm		
Hysteresis f_u	μm	1		
Hysteresis f_u	inch	20 μm		
Linearity deviation within +/-0.5 mm	μm	0.5		
Linearity deviation within +/-0.020"	inch	20 μm		
Linearity deviation within +/-1.0 mm	μm	2		
Linearity deviation within +/-0.039"	inch	80 μm		
Linearity deviation within +/-2.0 mm	μm	4		
Linearity deviation within +/-0.079"	inch	160 μm		
IP protection category		IP 64		
Cable length	m	2.5		
Temperature coefficient	$\mu\text{m}/^\circ\text{C}$	0.15		
Compatibility		Mahr VLDT	Tesa	Marposh Federal

Order no.	g	Dimension f	j	k	l	m	a	b	c	d	e	f	h	i
		inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
5324080	M 2.5		3.6	9	8.3	12.5	128.7	28	37	6	9.2	8	14	26.5
5324081	M 2.5		3.6	9	8.3	12.5	128.7	28	37	6	9.2	8	14	26.5
5324083	M 2.5		3.6	9	8.3	12.5	128.7	28	37	6	9.2	8	14	26.5
5324084	4/48 UNF	0.375	3.6	9	8.3	12.5	128.7	28	37	6	9.2		14	26.5

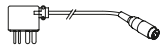


Millimar

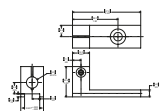
Inductive Probe

ACCESSORIES

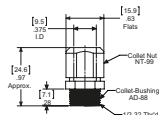
Order no.	For measuring instrument	Product name	Compati-bility	Type
2201605	P2004 F, P2004 FA, P2004 FB, P2010 FA, P2010 FB, P2104 FA, P2104 FB	Adapter, mounting bracket, L-bracket with 0.375" hole		AAD-66
2201801	P2004 F, P2004 FA, P2004 FB, P2010 FA, P2010 FB, P2104 FA, P2104 FB	Adaptor for inductive probes for use on dial indicators (AGD)		AD-138
2201854	P2004 F, P2004 FA, P2004 FB, P2010 FA, P2010 FB, P2104 FA, P2104 FB	Split collet OD is 17,45 mm/ .687"; requires 1/2-32 threaded hole		AD-87
2208626	P2004 F, P2004 FA, P2004 FB, P2010 FA, P2010 FB, P2104 FA, P2104 FB	Adaptor (90°) for mounting .375" diameter inductive/ air probes on ID/OD comparator gage 36B		EAD-1029
2211459	P2004 F, P2004 FA, P2004 FB, P2010 FA, P2010 FB, P2104 FA, P2104 FB	Gagehead adapter cable. Adapts EHE-2XXX and P2XXXF gageheads to older model 432 & 230 amplifiers (5 pin round female to 8 pin square male connector)	Federal	ECB-1852
5313419	P2004 MA, P2004 TA, P2004 FA, P2004 UA, P2010 TA, P2010 MA, P2010 UA, P2010 FA, P2104 UA, P2104 TA, P2104 MA, P2104 FA	Pneumatic foot switch for max. 4 probes		1340/1F
5313420	P2004 MA, P2004 TA, P2004 FA, P2004 UA, P2010 TA, P2010 MA, P2010 UA, P2010 FA, P2104 UA, P2104 TA, P2104 MA, P2104 FA	Pneumatic hand lifter for 1 probe		1340/1
5323130	P2004 MA, P2004 M, P2004 MB, P2010 MA, P2010 M, P2010 MB, P2104 MA, P2104 MB	Extension cable 2.5 m (Mahr VLDT)	Mahr VLDT	C2025 M
5323131	P2004 T, P2004 TA, P2004 TB, P2010 TA, P2010 TB, P2104 TA, P2104 TB	Extension cable 2.5 m (Tesa)	Tesa	C2025 T
5323134	P2004 F, P2004 FA, P2004 FB, P2010 FA, P2010 FB, P2104 FA, P2104 FB	Extension cable 2.5 m (Federal)	Federal	C2025 F
5323140	P2004 MA, P2004 M, P2004 MB, P2010 MA, P2010 M, P2010 MB, P2104 MA, P2104 MB	Extension cable 5 m (Mahr VLDT)	Mahr VLDT	C2050 M
5323141	P2004 T, P2004 TA, P2004 TB, P2010 TA, P2010 TB, P2104 TA, P2104 TB	Extension cable 5 m (Tesa)	Tesa	C2050 T
5323144	P2004 F, P2004 FA, P2004 FB, P2010 FA, P2010 FB, P2104 FA, P2104 FB	Extension cable 5 m (Federal)	Federal	C2050 F
5323150	P2004 MA, P2004 M, P2004 MB, P2010 MA, P2010 M, P2010 MB, P2104 MA, P2104 MB	Extension cable 7.5 m (Mahr VLDT)	Mahr VLDT	C2075 M
5323151	P2004 T, P2004 TA, P2004 TB, P2010 TA, P2010 TB, P2104 TA, P2104 TB	Extension cable 7.5 m (Tesa)	Tesa	C2075 T
5323154	P2004 F, P2004 FA, P2004 FB, P2010 FA, P2010 FB, P2104 FA, P2104 FB	Extension cable 7.5 m (Federal)	Federal	C2075 F
5323160	P2004 MA, P2004 M, P2004 MB, P2010 MA, P2010 M, P2010 MB, P2104 MA, P2104 MB	Extension cable 10 m (Mahr VLDT)	Mahr VLDT	C2100 M
5323161	P2004 T, P2004 TA, P2004 TB, P2010 TA, P2010 TB, P2104 TA, P2104 TB	Extension cable 10 m (Tesa)	Tesa	C2100 T
5323164	P2004 F, P2004 FA, P2004 FB, P2010 FA, P2010 FB, P2104 FA, P2104 FB	Extension cable 10 m (Federal)	Federal	C2100 F
7021546	P2004 MA, P2004 T, P2004 U, P2004 F, P2004 M, P2004 TA, P2004 FA, P2004 UA	Sealing bellows for probes with measuring spring		
7025505	P2004 MA, P2004 T, P2004 U, P2004 F, P2004 M, P2004 TA, P2004 FA, P2004 UA	Measuring spring 1.25 N		
7025579	P2004 MA, P2004 T, P2004 U, P2004 F, P2004 M, P2004 TA, P2004 FA, P2004 UA	Measuring spring 1.0 N		
7026827	P2004 MA, P2004 T, P2004 U, P2004 F, P2004 M, P2004 TA, P2004 FA, P2004 UA	Measuring spring 0.25 N		
7026828	P2004 MA, P2004 T, P2004 U, P2004 M, P2004 TA, P2004 FA, P2004 UA	Measuring spring 0.5 N		
7026849	P2004 MA, P2004 T, P2004 U, P2004 F, P2004 M, P2004 TA, P2004 FA, P2004 UA	Measuring spring 0.75 N		
7027758	P2010 TA, P2010 MA, P2010 UA, P2010 FA, P2010 M, P2104 UA, P2104 TA, P2104 MA, P2104 FA	Sealing bellows long for probes with measuring spring		
7028220	P2004 MB, P2004 TB, P2004 FB, P2004 UB	Sealing bellows for probes with air retraction		
7028221	P2010 MB, P2010 FB, P2010 TB, P2010 UB, P2104 MB, P2104 FB, P2104 TB, P2104 UB	Sealing bellows long for probes with air retraction		



ECB-1852



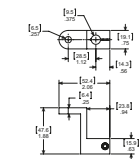
EAD-1029



AD-87



AD-138



AAAD-66

Millimar P1300 MA / P1300 MA without cable

Inductive Probe



FEATURES

- Mahr compatibility
- Well proven and established Mahr half-bridge technology
- Very easy to service: cables and probes can be separated via the plug in connector
- Easy to convert to pneumatic lifting
- Measuring pin mounted in ball-bearing guide
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- **Package contains:** instruction manual, spanner for preliminary stroke setting, hose connector for compressed air

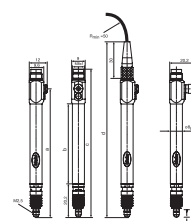


TECHNICAL DATA

Order no.		4400180	4400182
Product type		P1300 MA	P1300 MA without cable
Measuring range	mm	± 2	
Measuring range	inch	± .079"	
Distance to upper stop	mm...mm	+2.2 ... 4.4	
Distance to upper stop	inch...inch	+ .09173"	
Distance to lower stop	mm...mm	-2.2 ... 0	
Distance to lower stop	inch...inch	-.09 ... 0"	
Lifter / retraction		Vacuum lifter (standard option)	
Measuring force	N	0.75 N +/-0.15 N	
Increase in measuring force	N/mm	0.3 N/mm	
Sensitivity deviation	%	0.3	
Repeatability f _w	µm	0.1	

Order no.		4400180	4400182
Repeatability f _w	inch	4 µ"	
Hysteresis f _u	µm	0.5	
Hysteresis f _u	inch	20 µ"	
Linearity deviation within +/-0.5 mm	µm	0.4	
Linearity deviation within +/-0.020"	inch	16 µ"	
Linearity deviation within +/-1.0 mm	µm	1.5	
Linearity deviation within +/-0.039"	inch	60 µ"	
Linearity deviation within +/-2.0 mm	µm	3	
Linearity deviation within +/-0.079"	inch	120 µ"	
IP protection category		IP 64	
Cable length	m	2.5	
Temperature coefficient	µm/°C	0.15	
Compatibility		Mahr half-bridge	

Order no.	a	b	c	d
	mm	mm	mm	mm
4400180	85.6	53.3	98.6	125
4400182	85.6	53.3	98.6	125



ACCESSORIES

Order no.	Product name
4885220	Cable 2.5 m
4885259	Cable 5 m
4885260	Cable 10 m
4885334	Cable 2.5 m, 90° offset
4885335	Cable 5 m 90° offset
4885336	Cable 10 m 90° offset
4400238	Hose connector 90° offset
7021546	Sealing bellows for probes with measuring spring
7026827	Measuring spring 0.25 N
7026828	Measuring spring 0.5 N
7026849	Measuring spring 0.75 N
7025579	Measuring spring 1.0 N
7025505	Measuring spring 1.25 N

Millimar P1300 MB / P1300 MB without cable

Inductive Probe



FEATURES

- Mahr compatibility
- Well proven Mahr half-bridge technology
- Compressed air retraction
- Easy to service: cable and probe can be separated via the plug in connector
- Measuring pin mounted in ball-bearing guide
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- **Package contains:** instruction manual, spanner for preliminary stroke setting, hose connector for compressed air

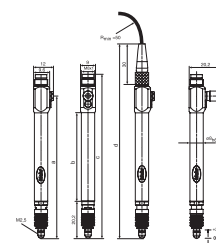


TECHNICAL DATA

Order no.	4400181	4400183
Product type	P1300 MB	P1300 MB without cable
Measuring range	mm	± 2
Measuring range	inch	± .079"
Distance to upper stop	mm...mm	+2.2 . . . 4.4
Distance to upper stop	inch...inch	+ .09173"
Distance to lower stop	mm...mm	-2.2 . . . 0
Distance to lower stop	inch...inch	-.09 ... 0"
Lifter / retraction		Compressed air retraction (max. 1 bar)
Measuring force	N	Depending upon air pressure
Sensitivity deviation	%	0.3
Repeatability f_w	µm	0.1
Repeatability f_w	inch	4 µ"

Order no.	4400181	4400183
Hysteresis f_u	µm	0.5
Hysteresis f_u	inch	20 µ"
Linearity deviation within +/-0.5 mm	µm	0.4
Linearity deviation within +/-0.020"	inch	16 µ"
Linearity deviation within +/-1.0 mm	µm	1.5
Linearity deviation within +/-0.039"	inch	60 µ"
Linearity deviation within +/-2.0 mm	µm	3
Linearity deviation within +/-0.079"	inch	120 µ"
IP protection category		IP 64
Cable length	m	2.5
Temperature coefficient	µm/°C	0.15
Compatibility		Mahr half-bridge

Order no.	a	b	c	d
	mm	mm	mm	mm
4400181	85.6	53.3	98.6	125
4400183	85.6	53.3	98.6	125



ACCESSORIES

Order no.	Product name
4885220	Cable 2.5 m
4885259	Cable 5 m
4885260	Cable 10 m
4885334	Cable 2.5 m, 90° offset
4885335	Cable 5 m 90° offset
4885336	Cable 10 m 90° offset
4400238	Hose connector 90° offset
7028220	Sealing bellows for probes with air retraction

Millimar P1300 TA / P1300 TA without cable

Inductive Probe



FEATURES

- Tesa compatibility
- Tesa half-bridge technology
- Very easy to service; cables and probes can be separated via the plug-in connector
- Easy to convert to pneumatic lifting
- Measuring pin mounted in ball-bearing guide
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- **Package contains:** instruction manual, spanner for preliminary stroke setting, hose connector for compressed air

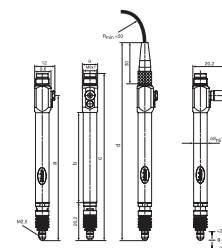


TECHNICAL DATA

Order no.		4400190	4400192
Product type		P1300 TA	P1300 TA without cable
Measuring range	mm	± 2	
Measuring range	inch	± .079"	
Distance to upper stop	mm...mm	+2.2 ... 4.4	
Distance to upper stop	inch...inch	+ .09173"	
Distance to lower stop	mm...mm	-2.2 ... 0	
Distance to lower stop	inch...inch	-.09 ... 0"	
Lifter / retraction		Vacuum lifter (standard option)	
Measuring force	N	0.75 N +/-0.15 N	
Increase in measuring force	N/mm	0.3 N/mm	
Sensitivity deviation	%	0.3	

Order no.		4400190	4400192
Repeatability f_w	µm	0.1	
Repeatability f_w	inch	4 µ"	
Hysteresis f_u	µm	0.5	
Hysteresis f_u	inch	20 µ"	
Linearity deviation within +/-0.5 mm	µm	1	
Linearity deviation within +/-0.020"	inch	40 µ"	
Linearity deviation within +/-1.0 mm	µm	3	
Linearity deviation within +/-0.039"	inch	120 µ"	
IP protection category		IP 64	
Cable length	m	2.5	
Temperature coefficient	µm/°C	0.15	
Compatibility		Tesa	

Order no.	a	b	c	d
	mm	mm	mm	mm
4400190	94.2	61.9	107.2	133.6
4400192	94.2	61.9	107.2	133.6



ACCESSORIES

Order no.	Product name
4885220	Cable 2.5 m
4885259	Cable 5 m
4885260	Cable 10 m
4885334	Cable 2.5 m, 90° offset
4885335	Cable 5 m 90° offset
4885336	Cable 10 m 90° offset
4400238	Hose connector 90° offset
7021546	Sealing bellows for probes with measuring spring
7026827	Measuring spring 0.25 N
7026828	Measuring spring 0.5 N
7026849	Measuring spring 0.75 N
7025579	Measuring spring 1.0 N
7025505	Measuring spring 1.25 N

Millimar P1300 TB / P1300 TB without cable

Inductive Probe



FEATURES

- Tesa compatibility
- Tesa half-bridge technology
- Compressed air retraction
- Easy to service: cable and probe can be separated via the plug in connector
- Measuring pin mounted in ball-bearing guide
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- **Package contains:** instruction manual, spanner for preliminary stroke setting, hose connector for compressed air

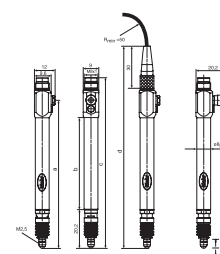


TECHNICAL DATA

Order no.	4400191	4400193
Product type	P1300 TB	P1300 TB without cable
Measuring range	mm	± 2
Measuring range	inch	± .079"
Distance to upper stop	mm...mm	+2.2 ... 4.4
Distance to upper stop	inch...inch	+ .09173"
Distance to lower stop	mm...mm	-2.2 ... 0
Distance to lower stop	inch...inch	-.09 ... 0"
Lifter / retraction		Compressed air retraction (max. 1 bar)
Measuring force	N	Depending upon air pressure
Sensitivity deviation	%	0.3

Order no.	4400191	4400193
Repeatability f_w	µm	0.1
Repeatability f_w	inch	4 µ"
Hysteresis f_u	µm	0.5
Hysteresis f_u	inch	20 µ"
Linearity deviation within +/-0.5 mm	µm	1
Linearity deviation within +/-0.020"	inch	40 µ"
Linearity deviation within +/-1.0 mm	µm	3
Linearity deviation within +/-0.039"	inch	120 µ"
IP protection category		IP 64
Cable length	m	2.5
Temperature coefficient	µm/°C	0.15
Compatibility		Tesa

Order no.	a	b	c	d
	mm	mm	mm	mm
4400191	94.2	61.9	107.2	133.6
4400193	94.2	61.9	107.2	133.6



ACCESSORIES

Order no.	Product name
4885220	Cable 2.5 m
4885259	Cable 5 m
4885260	Cable 10 m
4885334	Cable 2.5 m, 90° offset
4885335	Cable 5 m 90° offset
4885336	Cable 10 m 90° offset
4400238	Hose connector 90° offset
7028220	Sealing bellows for probes with air retraction

Millimar 1301 / 1303

Inductive Probe



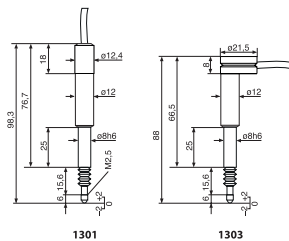
FEATURES

- Highly robust as the measuring system is offset from the guide and mounting shaft
- Outstanding clamping properties
- Measuring pin mounted in ball-bearing guide
- Measuring pin can be lifted using wire lifter
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone
- Package contains: spanner for preliminary stroke setting



TECHNICAL DATA

Order no.		5313010	5313030
Product type		1301	1303
Measuring range	mm		± 1
Measuring range	inch		± .039"
Distance to upper stop	mm...mm		+2.7
Distance to upper stop	inch...inch		+ .106"
Distance to lower stop	mm...mm		-1.1 ... 0
Distance to lower stop	inch...inch		-.043 ... 0"
Lifter / retraction			Cable release
Measuring force	N		0.75 N +/-0.15 N
Increase in measuring force	N/mm		0.4 N/mm
Sensitivity deviation	%		0.3
Repeatability f_w	μm		0.1
Repeatability f_w	inch		4 μ "
Hysteresis f_u	μm		0.2
Hysteresis f_u	inch		8 μ "
Linearity deviation within +/-0.5 mm	μm		0.5
Linearity deviation within +/-0.020"	inch		20 μ "
Linearity deviation within +/-1.0 mm	μm		2
Linearity deviation within +/-0.039"	inch		80 μ "
IP protection category			IP 64
Cable length	m		1.5
Temperature coefficient	$\mu\text{m}/^\circ\text{C}$		0.09
Compatibility			Mahr LVDT



ACCESSORIES

Order no.	Product name	Compatibility	Product type
5312881	Extension cable 1 m (Mahr LVDT)	Mahr LVDT	1288/1
5312882	Extension cable 2.5 m (Mahr LVDT)	Mahr LVDT	1288/2.5
5312885	Extension cable 5 m (Mahr LVDT)	Mahr LVDT	1288/5
5312887	Extension cable 7.5 m (Mahr LVDT)	Mahr LVDT	1288/7.5
5312889	Extension cable 10 m (Mahr LVDT)	Mahr LVDT	1288/10
5313990	Cable release with clamp for 1301 / 1303		1399

Millimar 1304 K

Inductive Probe



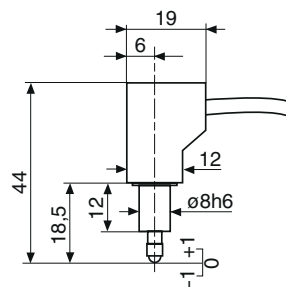
FEATURES

- Highly robust as the measuring system is offset from the guide and mounting shaft
- Outstanding clamping properties
- Measuring pin mounted in ball-bearing guide
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone



TECHNICAL DATA

Order no.	5313049	
Product type		1304 K
Measuring range	mm	± 1
Measuring range	inch	± .039"
Distance to upper stop	mm...mm	+1.1
Distance to upper stop	inch...inch	+ .043"
Distance to lower stop	mm...mm	1.1
Distance to lower stop	inch...inch	-.043"
Measuring force	N	0.75 N +/-0.15 N
Increase in measuring force	N/mm	0.15 N/mm
Sensitivity deviation	%	1
Repeatability f_w	μm	0.15
Repeatability f_w	inch	6 μm
Hysteresis f_u	μm	0.2
Hysteresis f_u	inch	8 μm
Linearity deviation within +/-0.5 mm	μm	1
Linearity deviation within +/-0.020"	inch	40 μm
Linearity deviation within +/-1.0 mm	μm	4
Linearity deviation within +/-0.039"	inch	160 μm
IP protection category		IP 62
Cable length	m	1.5
Temperature coefficient	$\mu\text{m}/^\circ\text{C}$	0.15
Compatibility		Mahr LVDT



ACCESSORIES

Order no.	Product name	Compatibility	Product type
5312881	Extension cable 1 m (Mahr LVDT)	Mahr LVDT	1288/1
5312882	Extension cable 2.5 m (Mahr LVDT)	Mahr LVDT	1288/2.5
5312885	Extension cable 5 m (Mahr LVDT)	Mahr LVDT	1288/5
5312887	Extension cable 7.5 m (Mahr LVDT)	Mahr LVDT	1288/7.5
5312889	Extension cable 10 m (Mahr LVDT)	Mahr LVDT	1288/10

Millimar 1318

Inductive Probe

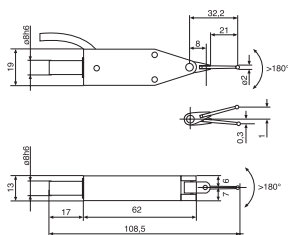
FEATURES

- Dial test indicator inductive probe
- Flexible probe adjustment to contact surface
- Highly robust as the measuring system is offset from the guide and mounting shaft
- Outstanding clamping properties
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone



TECHNICAL DATA

Order no.	5313180	
Product type		1318
Measuring range	mm	-0.3 ... 1
Measuring range	inch	-.12 ... +.39"
Distance to upper stop	mm...mm	+1.6
Distance to upper stop	inch...inch	+ .063"
Distance to lower stop	mm...mm	-0.37
Distance to lower stop	inch...inch	-.0146"
Measuring force	N	0.25 N +/-0.05 N
Increase in measuring force	N/mm	0.04 N/mm
Sensitivity deviation	%	0.5
Repeatability f_w	μm	0.03
Repeatability f_w	inch	1.2 μm
Hysteresis f_u	μm	0.5
Hysteresis f_u	inch	20 μm
Linearity deviation within +/-0.3 mm	μm	0.9
Linearity deviation within +/-0.012"	inch	36 μm
IP protection category:		IP 50
Cable length	m	1.5
Compatibility		Mahr LVDT



ACCESSORIES

Order no.	Product name	Compatibility	Product type
5312881	Extension cable 1 m (Mahr LVDT)	Mahr LVDT	1288/1
5312882	Extension cable 2.5 m (Mahr LVDT)	Mahr LVDT	1288/2.5
5312885	Extension cable 5 m (Mahr LVDT)	Mahr LVDT	1288/5
5312887	Extension cable 7.5 m (Mahr LVDT)	Mahr LVDT	1288/7.5
5312889	Extension cable 10 m (Mahr LVDT)	Mahr LVDT	1288/10
7003901	Stylus \varnothing 0.5 mm, carbide, l = 21 mm		
7003902	Stylus \varnothing 1.0 mm, carbide, l = 21 mm		
3005223	Stylus \varnothing 2.0 mm, carbide, l = 21 mm		
7003903	Stylus \varnothing 3.0 mm, carbide, l = 21 mm		
8004231	Stylus \varnothing 2.0 mm, ruby, l = 21 mm		

Millimar 1340

Inductive Probe



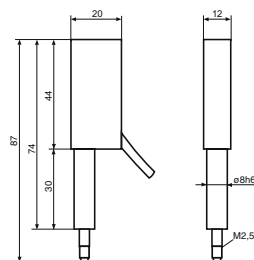
FEATURES

- Only for use in conjunction with the Millimar C 1240 M compact length measuring instrument
- Maximum measuring accuracy and minimum linearity deviation < 0.01 %, i.e. 0.4 μm over the entire measuring range
- Probe protected against dirt and moisture, can therefore be used close to production
- Chemical resistance data: resistant to oil, gasoline, water and aliphatics. Moderately resistant to acids, bases, solvents and ozone



TECHNICAL DATA

Order no.	5313400	
Product type		1340
Measuring range	mm	± 2
Measuring range	inch	$\pm .079''$
Distance to upper stop	mm...mm	+3
Distance to upper stop	inch...inch	+ .118''
Distance to lower stop	mm...mm	-2.2
Distance to lower stop	inch...inch	-.09''
Lifter / retraction		Vacuum lifter
Measuring force	N	0.75 N
Increase in measuring force	N/mm	0.08 N/mm
Sensitivity deviation	%	0.3
Repeatability f_w	μm	0.08
Repeatability f_w	inch	3.15 μ''
Hysteresis f_u	μm	0.08
Hysteresis f_u	inch	3.15 μ''
Linearity deviation within ± 1.0 mm	μm	0.15
Linearity deviation within $\pm .039''$	inch	6 μ''
Linearity deviation within ± 2.0 mm	μm	0.4
Linearity deviation within $\pm .079''$	inch	16 μ''
IP protection category		IP 64
Cable length	m	1.5
Temperature coefficient	$\mu\text{m}/^\circ\text{C}$	0.6
Compatibility		Mahr 1340



ACCESSORIES

Order no.	Product name	Product type
5313420	Pneumatic hand lifter for 1 probe	1340/1
5313419	Pneumatic foot switch for max. 4 probes	1340/1F

Millimar EHE-2048

Inductive probe

FEATURES

- Clutch mounted contact swivels through 280° arc for easy positioning
- Involute tip (normally furnished) automatically corrects for cosine error when finger is at an angle up to 20°. Simplifies "reach over" jobs.

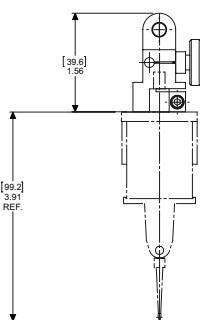


Application:

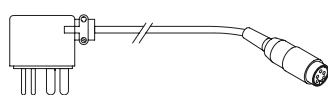
For use on test stands, surface plate work, or where light pressure is needed

TECHNICAL DATA

Order no.	2120417	
Product type	EHE-2048	
Probe type	Post bracket back, (BK-108) tamper-proof mounted	
Measuring range	mm	± 0.25
Measuring range	inch	± .010"
Measuring force	N	0,04 N (.14 oz.) in either direction
Increase in measuring force	N/mm	0,001 N / 25µm
Repeatability f _w	µm	0.1
Repeatability f _w	inch	4 µ"
Linearity deviation within +/-0,250 mm	0.1% (over full range)	
Linearity deviation within +/- .010"	0.1% (over full range)	
Cable length	m	1.2
Compatibility	Federal	

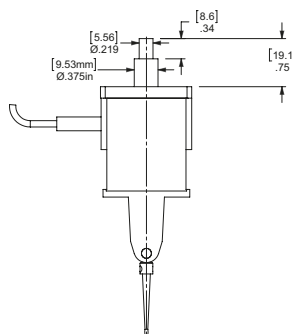


EAT-1026



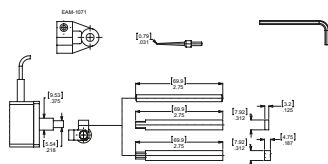
ECB-1852

Order no.
2120417



ACCESSORIES

Order no.	Product name	Compatibility	Product type
2216178	Stylus ø 1.6 mm/.062", steel, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1004
2216180	Stylus ø 1.6 mm/.062" involute, steel, l = 27.6 mm/1.085", 1:1 ratio up to 20°, involute tip	Federal	EPT-1008
2216179	Stylus ø 0.787 mm/.031", carbide, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1007
2216184	Stylus ø 0.787 mm/.031", steel, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1013
2216217	Stylus ø 1.6 mm/.062", Sapphire, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1059-W1
2185448	Stylus ø 1.6 mm/.062", Sapphire, l = 122.8 mm/4.835", 4:1 ratio	Federal	EPT-1059-W4
2216218	Stylus ø 1.6 mm/.062", Sapphire, l = 59.3 mm/2.335", 2:1 ratio	Federal	EPT-1059-W2
2185449	Stylus ø 1.6 mm/.062", Sapphire, l = 154.6 mm/6.085", 5:1 ratio	Federal	EPT-1059-W5
2216219	Stylus ø 1.6 mm/.062", Sapphire, l = 91.1 mm/3.585", 4:1 ratio	Federal	EPT-1059-W3
2208685	Adaptor to mount EHE-2048 on model 2400 stand		EAM-1071
2208910	Accessories kit for EHE-2048. Includes EAM-1071, CP-116, EPT-1013, two rectangular holding bars and a holding rod		EAS-1333
2210400	Fine adjust attachment for EHE-2048		EAT-1026
2206061	Clamp for mounting EHE-2048 on model 2300 stand		CP-116
2211459	Gagehead adapter cable. Adapts EHE-2XXX and P2XXXF gageheads to older model 432 & 230 amplifiers (5 pin round female to 8 pin square male connector)	Federal	ECB-1852



EAS-1333

Millimar EHE-2050

Inductive probe

FEATURES

- Clutch mounted contact swivels through 280° arc for easy positioning
- Involute tip (normally furnished) automatically corrects for cosine error when finger is at an angle up to 20°. Simplifies "reach over" jobs.



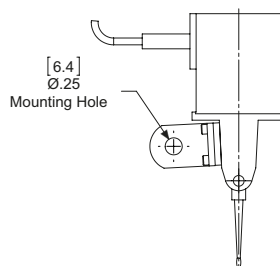
Application:

For use on test stands, surface plate work, or where light pressure is needed

TECHNICAL DATA

Order no.	2120419	
Product type	EHE-2050	
Probe type	Fixed nose mount (EAM-1045), tamper-proof mounted	
Measuring range	mm	± 0.25
Measuring range	inch	± .010"
Measuring force	N	0.04 N (.14 oz.) in either direction
Increase in measuring force	N/mm	0.001 N / 25µm
Repeatability f_w	µm	0.1
Repeatability f_w	inch	4 µ"
Linearity deviation within +/-0.250 mm	0.1% (over full range)	
Linearity deviation within +/-0.010"	0.1% (over full range)	
Cable length	m	1.2
Compatibility	Federal	

Order no.
2120419



ACCESSORIES

Order no.	Product name	Compatibility	Product type
2216178	Stylus \varnothing 1.6 mm/.062", steel, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1004
2216180	Stylus \varnothing 1.6 mm/.062" involute, steel, l = 27.6 mm/1.085", 1:1 ratio up to 20°, involute tip	Federal	EPT-1008
2216179	Stylus \varnothing 0.787 mm/.031", carbide, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1007
2216184	Stylus \varnothing 0.787 mm/.031", steel, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1013
2216217	Stylus \varnothing 1.6 mm/.062", sapphire, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1059-W1
2185448	Stylus \varnothing 1.6 mm/.062", sapphire, l = 122.8 mm/4.835", 4:1 ratio	Federal	EPT-1059-W4
2216218	Stylus \varnothing 1.6 mm/.062", sapphire, l = 59.3 mm/2.335", 2:1 ratio	Federal	EPT-1059-W2
2185449	Stylus \varnothing 1.6 mm/.062", sapphire, l = 154.6 mm/6.085", 5:1 ratio	Federal	EPT-1059-W5
2216219	Stylus \varnothing 1.6 mm/.062", sapphire, l = 91.1 mm/3.585", 4:1 ratio	Federal	EPT-1059-W3
2208685	Adaptor to mount EHE-2048 on model 2400 stand		EAM-1071

Millimar EHE-2052

Inductive probe

FEATURES

- Clutch mounted contact swivels through 280° arc for easy positioning
- Involute tip (normally furnished) automatically corrects for cosine error when finger is at an angle up to 20°. Simplifies "reach over" jobs.



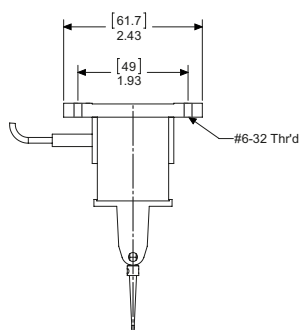
Application:

For use on test stands, surface plate work, or where light pressure is needed

TECHNICAL DATA

Order no.	2120420	
Product type	EHE-2052	
Probe type	Fixed back plate, (EPL-1140) tamper-proof mounted	
Measuring range	mm	± 0.25
Measuring range	inch	± .010"
Measuring force	N	0.04 N (.14 oz.) in either direction
Increase in measuring force	N/mm	0.001 N / 25µm
Repeatability f_w	µm	0.1
Repeatability f_w	inch	4 µ"
Linearity deviation within +/-0.250 mm	0.1% (over full range)	
Linearity deviation within +/- .010"	0.1% (over full range)	
Cable length	m	1.2
Compatibility	Federal	

Order no.
2120420



ACCESSORIES

Order no.	Product name	Compatibility	Product type
2216178	Stylus ø 1.6 mm/.062", steel, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1004
2216180	Stylus ø 1.6 mm/.062" involute, steel, l = 27.6 mm/1.085", 1:1 ratio up to 20°, involute tip	Federal	EPT-1008
2216179	Stylus ø 0.787 mm/.031", carbide, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1007
2216184	Stylus ø 0.787 mm/.031", steel, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1013
2216217	Stylus ø 1.6 mm/.062", Sapphire, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1059-W1
2185448	Stylus ø 1.6 mm/.062", Sapphire, l = 122.8 mm/4.835", 4:1 ratio	Federal	EPT-1059-W4
2216218	Stylus ø 1.6 mm/.062", Sapphire, l = 59.3 mm/2.335", 2:1 ratio	Federal	EPT-1059-W2
2185449	Stylus ø 1.6 mm/.062", Sapphire, l = 154.6 mm/6.085", 5:1 ratio	Federal	EPT-1059-W5
2216219	Stylus ø 1.6 mm/.062", Sapphire, l = 91.1 mm/3.585", 4:1 ratio	Federal	EPT-1059-W3
2208685	Adaptor to mount EHE-2048 on model 2400 stand		EAM-1071
2215585	Back plate mounting bracket for EHE-2052		EPL-1140

Millimar EHE-2056

Inductive probe

FEATURES

- Clutch mounted contact swivels through 280° arc for easy positioning
- Involute tip (normally furnished) automatically corrects for cosine error when finger is at an angle up to 20°. Simplifies "reach over" jobs.



Application:

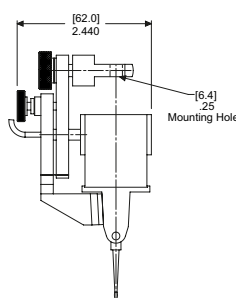
For use on test stands, surface plate work, or where light pressure is needed

TECHNICAL DATA

Order no.	2120422	
Product type	EHE-2056	
Probe type	Adjustable nose mount (EAT-1010), tamper-proof mounted. 3.8 mm / .150" fine adjustment for quick setup	
Measuring range	mm	± 0.25
Measuring range	inch	± .010"
Measuring force	N	0,04 N (.14 oz.) in either direction
Increase in measuring force	N/mm	0,001 N / 25µm
Repeatability f_w	µm	0.1
Repeatability f_w	inch	4 µ"
Linearity deviation within +/-0,250 mm	0.1% (over full range)	
Linearity deviation within +/--.010"	0.1% (over full range)	
Cable length	m	1.2
Compatibility	Federal	

Order no.

2120422



ACCESSORIES

Order no.	Product name	Compatibility	Product type
2216178	Stylus \varnothing 1.6 mm/.062", steel, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1004
2216180	Stylus \varnothing 1.6 mm/.062" involute, steel, l = 27.6 mm/1.085", 1:1 ratio up to 20°, involute tip	Federal	EPT-1008
2216179	Stylus \varnothing 0.787 mm/.031", carbide, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1007
2216184	Stylus \varnothing 0.787 mm/.031", steel, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1013
2216217	Stylus \varnothing 1.6 mm/.062", Sapphire, l = 27.6 mm/1.085", 1:1 ratio	Federal	EPT-1059-W1
2185448	Stylus \varnothing 1.6 mm/.062", Sapphire, l = 122.8 mm/4.835", 4:1 ratio	Federal	EPT-1059-W4
2216218	Stylus \varnothing 1.6 mm/.062", Sapphire, l = 59.3 mm/2.335", 2:1 ratio	Federal	EPT-1059-W2
2185449	Stylus \varnothing 1.6 mm/.062", Sapphire, l = 154.6 mm/6.085", 5:1 ratio	Federal	EPT-1059-W5
2216219	Stylus \varnothing 1.6 mm/.062", Sapphire, l = 91.1 mm/3.585", 4:1 ratio	Federal	EPT-1059-W3
2210399	Adjustable nose mounting bracket for EHE-2056		EAT-1010

Millimar EGH-2011

Inductive probe

FEATURES

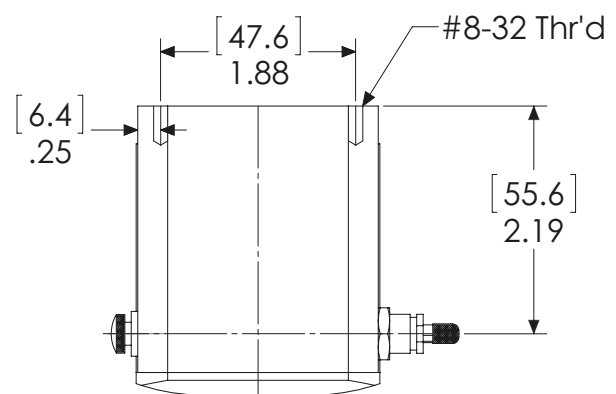
- Friction-free, straight line motion
- Adjustable pre-travel
- Gaging pressure provided by external spring, adjustable
- Contact points (PT-223 normally furnished)



TECHNICAL DATA

Order no.		2213259
Product type		EGH-2011
Probe type		Protective housing encloses head in tamper-proof mounting. Permits adjustment of both gaging pressure and pre-travel.
Measuring range	mm	± 0.25
Measuring range	inch	$\pm .010''$
Measuring force	N	Adjustable 0.85 – 4N (3oz. – 14 oz.)
Repeatability f_w	μm	0.01
Repeatability f_w	inch	.5 μ''
Linearity deviation within ± 0.250 mm		0.05% (over full range)
Linearity deviation within $\pm .010''$		0.05% (over full range)
Cable length	m	2.4
Compatibility		Federal

Order no.
2213259

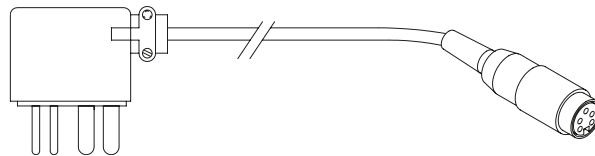


Millimar EGH-2011

Inductive probe

ACCESSORIES

Order no.	Product type
2211459	ECB-1852



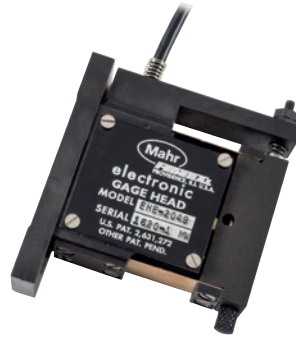
ECB-1852

Millimar EHE-2049

Inductive probe

FEATURES

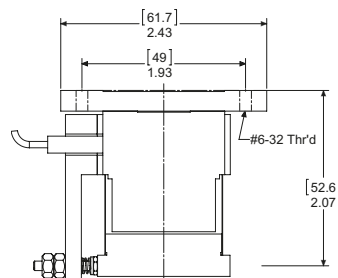
- Friction-free, straight line motion
- Adjustable pre-travel
- Gaging pressure provided by external spring, adjustable
- Contact points (PT-223 normally furnished)



TECHNICAL DATA

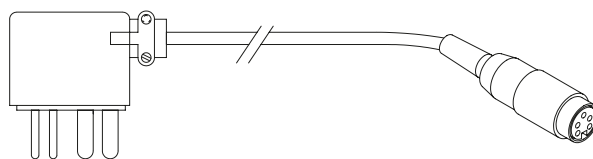
Order no.	2120418	
Product type	EHE-2049	
Probe type	Pressure spring mount, tamper-proof mounted. Permits setting pre-travel and provides ample gaging pressure regardless of gagehead position	
Measuring range	mm	± 0.25
Measuring range	inch	± .010"
Measuring force	N	Adjustable 0.85 – 4N (3oz. – 14 oz.)
Repeatability f_w	µm	0.01
Repeatability f_w	inch	.5 µ"
Linearity deviation within +/- 0.250 mm	0.05% (over full range)	
Linearity deviation within +/- .010"	0.05% (over full range)	
Cable length	m	2.4
Compatibility	Federal	

Order no.
2120418



ACCESSORIES

Order no.	Product type
2211459	ECB-1852



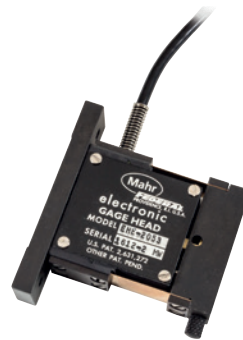
ECB-1852

Millimar EHE-2053

Inductive probe

FEATURES

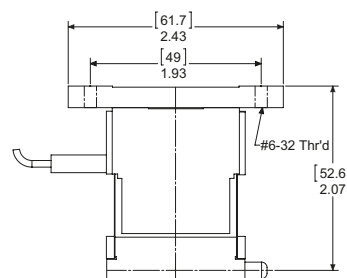
- Friction-free, straight line motion
- Adjustable pre-travel
- Gaging pressure provided by external spring, adjustable
- Contact points (PT-223 normally furnished)



TECHNICAL DATA

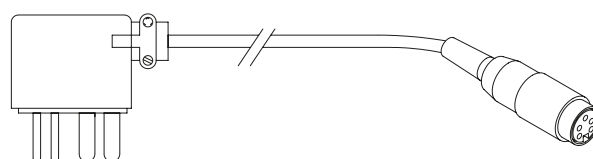
Order no.	2120421	
Product type	EHE-2053	
Probe type	Fixed back plate EPL-1140 (15.8 mm / 0.625" wide), tamper-proof mounted. Provides means of attachment for mounting on adjustable plates or slides in fixtures for continuous duty application.	
Measuring range	mm	± 0.25
Measuring range	inch	± .010"
Measuring force	N	Adjustable 0.85 –4N (3oz. –14 oz.)
Repeatability f_w	µm	0.01
Repeatability f_w	inch	.5 µ"
Linearity deviation within +/-0.250 mm	0.05% (over full range)	
Linearity deviation within +/-0.010"	0.05% (over full range)	
Cable length	m	2.4
Compatibility	Federal	

Order no.
2120421



ACCESSORIES

Order no.	Product type
2211459	ECB-1852



ECB-1852