

MAGNESCALE

digital magnetic scale



Series PL60 with MJ100/110, SL110, SL331

Key-Features:

- Measurement ranges: 200 - 8000 mm
- Resolution up to 2 μm
- MJ100/110: A/B TTL output signal or HTL open collector output
- Resistant against dirt, water, oil, vibrations and shock
- Protection class PL60: IP65
- High displacement speed
- Working temperature 0...+45 °C
- Easy mounting

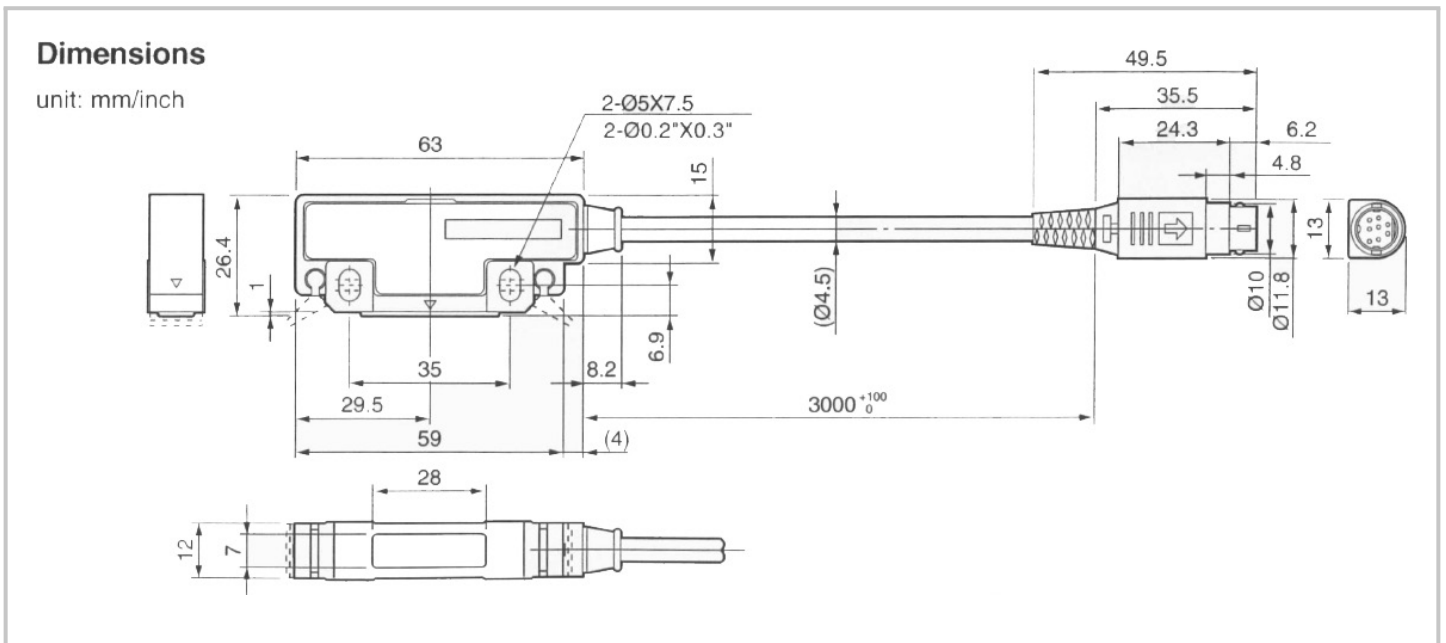
Content:

Technical Data PL602
Technical Data SL1303
Technical Data MJ100/1104
Order Code5

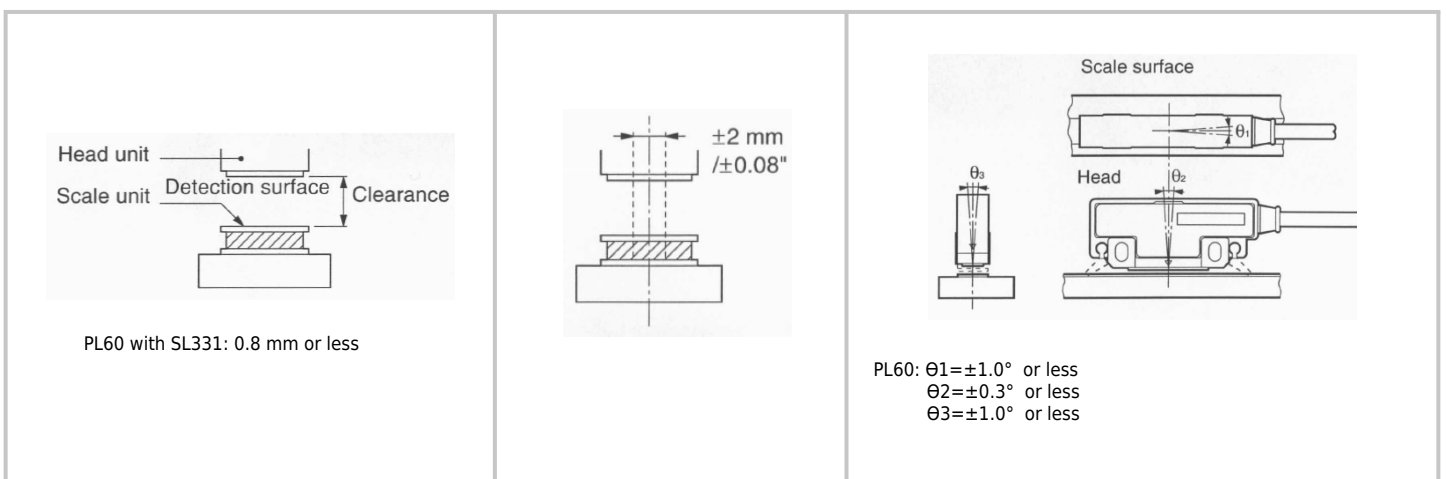
TECHNICAL DATA PL60

Model	PL60
Cable length	3 m
Resolution (20°C)	up to 2 µm (depending on the settings of the MJ interpolator)
Output signal	A/B quadrature signal (according to RS422)
Screw tightening torque	0.7 to 1.1 Nm
Working temperature	0 to 45 °C
Storage temperature	-10 to 50 °C
Protection class	IP65
Displacement speed	dependent on chosen resolution of the MJ interpolator
Distance reading head - magnetic tape	max. 0.8 mm (no contact)
Bending radius cable	min. 100 mm
Compatible scales	SL331
Compatible interpolator	MJ100, MJ110

TECHNICAL DRAWING PL60



INSTALLATION PL60

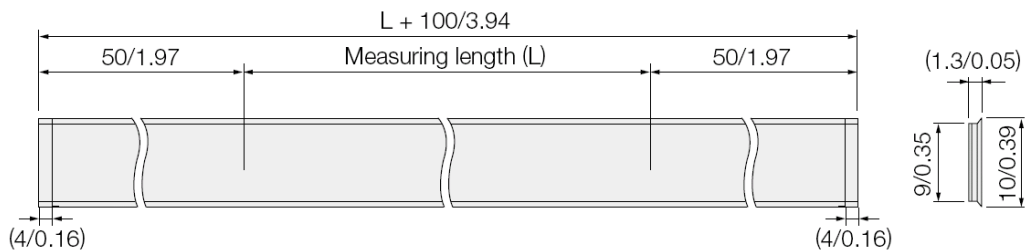


TECHNICAL DATA SL331

Model		SL331
Measurement Range	[mm]	200 / 300 / 400 / 500 / 600 / 700 / 800 / 1000 / 1200 / 1500 / 1600 / 1700 / 1800 / 2000 / 2500 / 3000 / 4000 / 5000 / 6000 / 7000 / 8000
Resolution (20°C)	[µm]	5
Accuracy (20°C)	[µm]	±(15 + 5L/1000)
Reference point		without
Working temperature	[°C]	0 to 45
Storage temperature	[°C]	-10 to 50
Displacement speed	[m/min]	dependent on chosen resolution of the MJ interpolator
Expansion coefficient		(11,1 ±1) x 10 ⁻⁶ /°C
Total length	[mm]	MB + 100
Reading head		PL60

TECHNICAL DRAWING SL331

Magnetic tape SL331



Model	Measuring length	Max. travel	Overall length
SL331-20	200	230	300
SL331-30	300	330	400
SL331-40	400	430	500
SL331-50	500	530	600
SL331-60	600	630	700
SL331-70	700	730	800
SL331-80	800	830	900
SL331-100	1000	1030	1100
SL331-120	1200	1230	1300
SL331-150	1500	1530	1600
SL331-160	1600	1630	1700
SL331-170	1700	1730	1800
SL331-180	1800	1830	1900
SL331-200	2000	2030	2100
SL331-250	2500	2530	1600
SL331-300	3000	3030	3100
SL331-400	4000	4030	4100
SL331-500	5000	5030	5100
SL331-600	6000	6030	6100
SL331-700	7000	7030	7100
SL331-800	8000	8030	8100

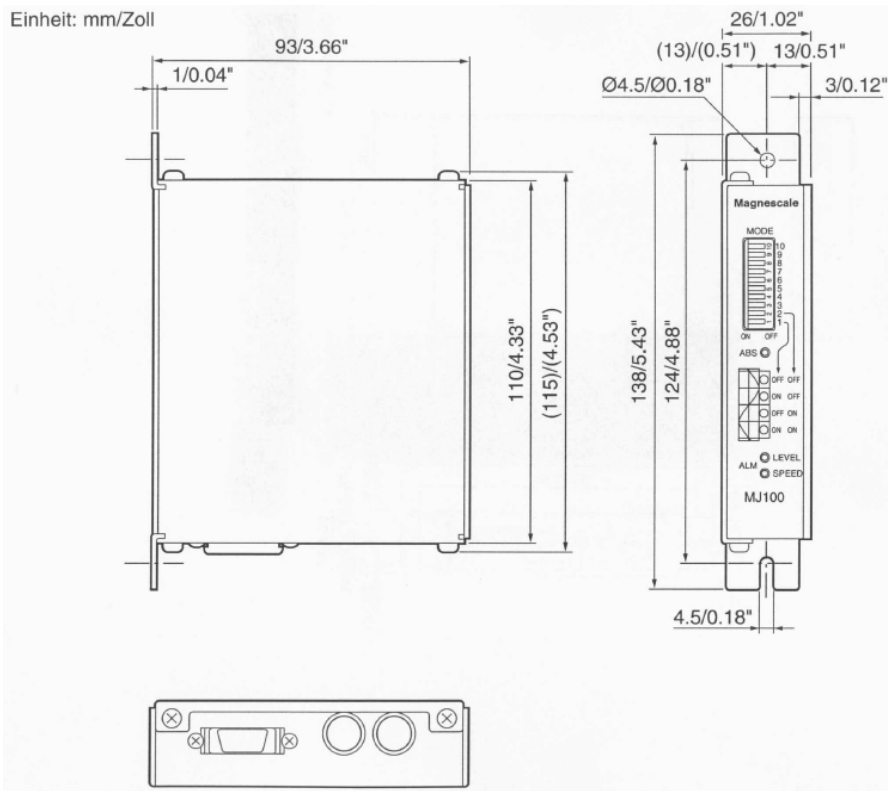
Unit: mm

TECHNICAL DATA INTERPOLATOR MJ100/110

Model	MJ100	MJ110
Power supply	5 V (4,5 to 6 V)	12 to 30 V (11 bis 31 V)
Power consumption	4 W	3 W
Output interface	Line Driver (complies with RS422)	Open Collector (Iol=50 mA max.)
Outputs	AB quadrature, Z phase, U/V/W phases, alarms	AB quadrature, Z phase, alarms
Number of interpolation divisions	1000, 960, 800, 512, 500, 480, 400, 256, 240, 200, 128, 120, 100, 80, 64, 40	
Maximum response frequency		
1000 interpolation divisions	6 kHz, 1800 m/min	0.6 kHz, 180 m/min
500 interpolation divisions	15 kHz, 4500 m/min	1.5 kHz, 450 m/min
200 interpolation divisions	42 kHz, 12600 m/min	4 kHz, 1200 m/min
120 interpolation divisions	70 kHz, 21000 m/min	7.4 kHz, 2220 m/min
Minimum phase difference	100 ns	1 µs
Alarms	Speed alarm (minimum phase difference time or maximum response frequency) Level alarm (0.4 Vp-p or less), Minimum alarm time approx. 400 ms	
System start-up time	within 0.5 seconds after the power is online	
External dimensions	138 x 93 x 26 mm	
Compatible head unit	PL25 and PL60	
Working temperature	0...45°C	
Storage temperature	-20...60°C	
Mass	350 g	
Supplied accessories	Manual, output connector, connector cap, mounting screws	
Options	SET-P16-1 (for external reference point), Scale extension cable, external reference point extension cable, output connector with cable	

TECHNICAL DRAWING INTERPOLATOR MJ100/110

MJ100/110 INTERPOLATOR



ORDER CODE FOR MAGNESCALE MAGNETIC TAPE

SL331 magnetic tape	
SL331-20	Measurement range 200 mm
SL331-30	Measurement range 300 mm
SL331-40	Measurement range 400 mm
SL331-50	Measurement range 500 mm
SL331-60	Measurement range 600 mm
SL331-70	Measurement range 700 mm
SL331-80	Measurement range 800 mm
SL331-100	Measurement range 1000 mm
SL331-120	Measurement range 1200 mm
SL331-150	Measurement range 1500 mm
SL331-160	Measurement range 1600 mm

SL331-170	Measurement range 1700 mm
SL331-180	Measurement range 1800 mm
SL331-200	Measurement range 2000 mm
SL331-250	Measurement range 2500 mm
SL331-300	Measurement range 3000 mm
SL331-400	Measurement range 4000 mm
SL331-500	Measurement range 5000 mm
SL331-600	Measurement range 6000 mm
SL331-700	Measurement range 7000 mm
SL331-800	Measurement range 8000 mm

ORDER CODE MAGNESCALE READING HEAD, INTERPOLATOR

Reading head PL60	PL60-3
CE08-3	CE08-3
CE08-5	CE08-5
CE08-10	CE08-10
CE08-15	CE08-15

Interpolator MJ100	MJ100
Interpolator MJ110	MJ110
Magnetswitch (1.5 m cable)	SET-P16-1
Extension cable 3 m	CE09-3
Extension cable 5 m	CE09-5
Extension cable 10 m	CE09-10



Subject to change without prior notice.

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