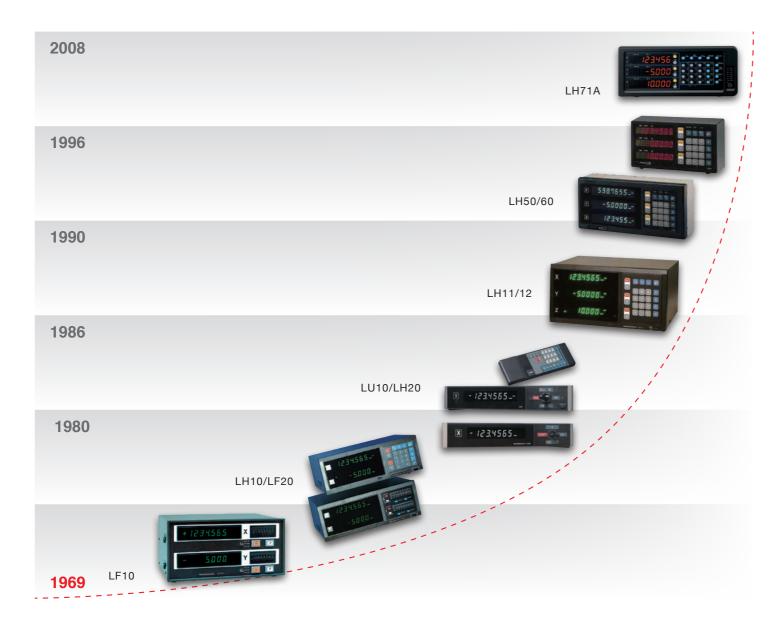
Digital Readout General Catalog

Magnescale

SPEED X PRECISION

Over Fifty Years of Legendary Reliability Magnescale counter history



Some old models may require adapter or other accessories. If you have any question, please contact us.

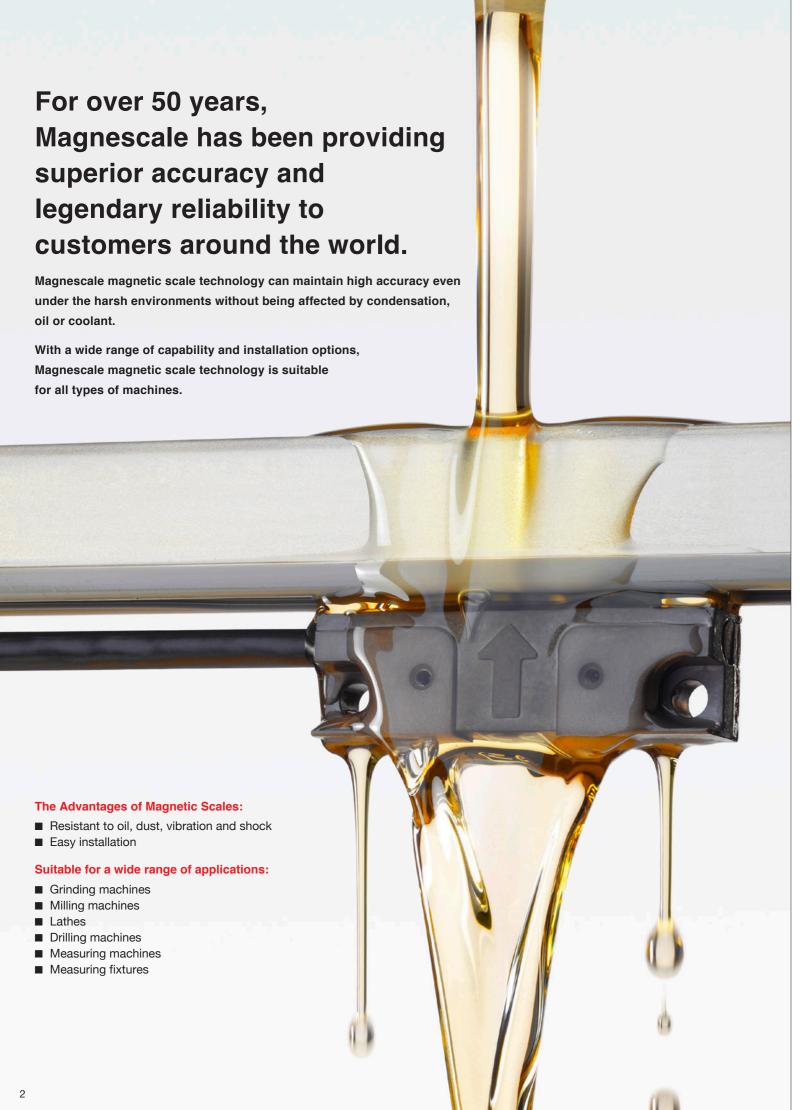
Magnescale Co., Ltd.

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Digital Readouts



Multifunctional counters LG20, LH70, LH71, LH71A, LH72

The LH70 Series are position counters developed for general-purpose machine tools. LH71A-3 can be used for milling machines and lathes applications by switching initial settings. LH72 is designed for lathes.

Multifunct	Multifunction units LG20 / LH70/71/72 series				
	LG20	LH70	LH71 / LH71A	LH72	
Display axes	1, 2, 3			2	
Display	7 digits, ora	nge LEDs, flo	ating minus sign		
Display resolution	0.1/0.5/1/ 5/10 µm	0.1/0.5/1/5/ 1 s /10 s/ 1			
Input signal	A/B quadrat	ture/Z signal (EIA-422)		
Compatible measuring systems	GB-ER, SJ7	'00A and PL2	20C with SL110 /	130	
Power supply		ng separate p PSC-2*A with	ower 100-240 VAC		
Mass	1.5 kg			·	

0 0 . 0 4-	_ЕИТ					
Functions at a glance						
Model	LG20	LH70	LH71	LH71A	LH72	
Reset	•	•		•	-	
Preset						
Absolute/Incremental						
Diameter display						
Angle display						
Alarm display						
Zero point detection						
Datum points		10	150	150		
Tool memory*		12	99	99	99	
Midpoint calculation						
Scaling						
Addition function*						
Programming function						
Bolt hole circle						
Line hole						
Simple R cutting						
Linear error compensation						
Segment error compensation						
Data storage						
Energy saving function	•			-		
Navigation function						
External reset				-		
Touch sensor function						
				_		

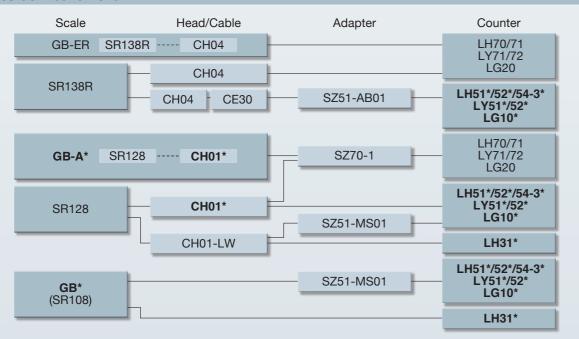
GB-ER

Renowned for its legendary accuracy and reliability, the GB-ER is suitable for precise, high-resolution applications.

- Excellent durability against workshop conditions resistant to oil, dirt, shock and vibration
- · Compact design for easy installation
- Resolution: 0.5 μm
- Accuracy: (5+5L/1000) µm
- · Output signal : A/B quadrature, Z signal



GB Series Connection Chart



Products marked * are discontinued

SJ700A

Reliable magnetic scale general purpose applications

- Same coefficient of expansion as machine tools
- Measuring length: 150 mm to 1600 mm / 5.9" to 62.9"
- Resolution: 5 µm
- Accuracy: ±10 μm, ±15 μm
- · Output signal: A/B quadrature



SL130

SL110/130

Digiruler is a non-contact, flexible magnetic tape scale. This design creates unparalleled durability and easy installation for all types of measurement applications.

- Available in lengths up to 30 m (SL130)
- Cost efficient for applications from woodworking to metal cutting
- Resolution: 10 µm (with PL20C)
- · Max. response speed: 300 m/min (with PL20C)

PL20C

Reader Head with Cable (for SL110/SL130)

- Excellent resistance to workshop conditions (IP65)
- · Resistant to oil, dirt, vibration, and shock
- Resolution:10 µm (with SL110/130)
- Max. response speed: 300 m/min
- Output signal: A/B quadrature



GB-ER

Specification	S				
Model		GB-ER			
Measurement Length (ML) L: mm(inch)		50 (1.9"), 100 (3.9"), 150 (5.9"), 200 (7.8"), 250 (9.8"), 300 (11.8"), 350 (13.7"), 400 (15.7"), 450 (17.7"), 500 (19.6"), 550 (21.6"), 600 (23.6"), 650 (25.7"), 850 (33.4"), 950 (37.4"), 1050 (41.3"), 1250 (49.2"), 1400 (55.1"), 1600 (62.9"), 1850 (72.8"), 2050 (80.7"), 2200 (88.6")			
Overall length		Measuring length + 104 mm (4.1") (ML: 50 to 200 mm) Measuring length + 120 mm (4.7") (ML: 250 to 2200 mm)			
Max. travel		L + 14 mm (ML : 50 to 200 mm) L + 30 mm (ML : 250 to 2200 mm)			
With or without Centerfootplate		Included with ML: 1050 mm to 2200 mm Excluded ML: 50 mm to 950 mm			
Accuracy at 20 °C		(5 + 5L / 1000) μm			
Resolution		0.5 µm			
Max. response speed (scale signal, reference signal)		60 m/min			
Reference point		Standard: Center of scale, User-defined position also available			
Mounting parallelism		± 0.1 mm			
Thermal expansion coeffi	cient	(11±1) x 10 ⁻⁶ / °C			
Operating temperature		0 °C to 40 °C/ 32 °F to 104 °F			
Storage temperature		-10 °C to 50 °C/ 14 °F to 122 °F			
Head cable length		0.3 m			
Cable length		3 m			
Protection grade		Scale: IP65 (Interpolation Unit: IP30)			
Input/Output signal	Output signal	A/B quadrature signal, Z signal			
	Power supply	+5 VDC ±5 %			
	Connector	D-sub 9 pin			
Power consumption		Max. 200 mA			

SJ700A

Specification	ns				
Model		SJ700A			
Measurement Length (N	ML) L: mm(inch)	150 (5.9"), 250 (9.8"), 350 (13.7"), 400 (15.7"), 500 (19.6"), 650 (25.5"), 800 (31.5"), 950 (37.4"), 1050 (41.3"), 1250 (49.2"), 1400 (55.1"), 1600 (62.9")			
Overall length		Measuring length + 120 mm (4.73")			
Max. travel		Measuring length + 20 mm (0.78*)			
With or without Centerfootplate		Included with ML: 1250 mm to 1600 mm Excluded ML: 150 mm to 1050 mm			
Accuracy at 20 °C		±10 µm (Measuring length 1250 mm (49.21") or less) ±15 µm (Measuring length 1400 mm (55.12") or more)			
Resolution		5 µm			
Thermal expansion coefficient		(12 ±1) x 10 ⁶ /°C			
Operating temperature		0 °C to 40 °C/ 32 °F to 104 °F			
Storage temperature		-20 °C to 60 °C/ -4 °F to 140 °F			
Cable length		3 m (SJ700A-015 to 080) 5 m (SJ700A-095 to 160)			
Protection grade		IP54 (except interpolation unit)			
Input/Output signal	Output signal	A/B quadrature signal			
	Power supply	+5 VDC ±5 %			
	Connector	D-sub 9 pin			
Power consumption		Max. 200 mA			

SL110/130

Specifications					
Model	SL110	SL130			
	-20 to -200	-20 to -700	-800 to -3000		
Measurement length L mm (inch)	200/300/400/500/600/700/800/1000/1200/ 1500/1600/1700/1800/2000 (7.8/11.8/15.7/19.6/23.6/27.5/31.4/39.3/47.2/ 59.0/62.9/66.9/70.8/78.7)	200/300/400/500/600/700/800/1000/1200/ 1500/1600/1700/1800/2000/2500/3000/ 4000/5000/6000/7000 (7.8/11.8/15.7/19.6/23.6/27.5/31.4/39.3/ 47.2/59.0/62.9/66.9/70.8/78.7/98.4/118.1/ 157.4/196.8/236.2/275.5)	8000/9000/10000/20000/30000 (314.9/354.3/393.7/787.4/1181.1)		
Overall length	L+103 mm (4.1")	m (3.9")			
Accuracy at 20 °C	± (25 + 5L/ 1000) µm		± (25 + 5L/ 1000 + 10N) µm N=1when L=8000 /9000/10000 , N=2 when L=20000 , N=3 when L=300		
Resolution	10 µm				
Max. response speed	300 m/min				
Thermal expansion coefficient	(10.4 ± 1) x 10 °/ °C				
Operating temperature	-5 °C to 45 °C / 23 °F to 113 °F				
Storage temperature	-10 °C to 50 °C / 14 °F to 122 °F				
Compatible reader head	PL20C				

 $^{^*\}mbox{Accuracy}$ shows the value when used with PL20C reader head.

PL20C

PL20C-3/-3C	PL20C-5/-5C	PL20C-10/-10C	PL20C-15/-15C	PL20C-20/-20C	PL20C-30
3 m	5 m	10 m	15 m	20 m	30 m
AB quadrature signal					
10 µm					
300 m/min					
IP65 (except interpolation unit)					
0.7 to 1.1 N·m					
0 °C to 45 °C/32 °F to 113 °F					
-10 °C to 50 °C/14 °F to 122 °F					
			3 m 5 m 10 m AB quadra 10 300 r IP65 (except in 0.7 to 1) 0 °C to 45 °C/3	3 m 5 m 10 m 15 m AB quadrature signal 10 µm 300 m/min IP65 (except interpolation unit) 0.7 to 1.1 N·m 0 °C to 45 °C/32 °F to 113 °F	3 m 5 m 10 m 15 m 20 m AB quadrature signal 10 µm 300 m/min IP65 (except interpolation unit) 0.7 to 1.1 N·m 0 °C to 45 °C/32 °F to 113 °F

