

MAGNESCALE

digital magnetic scale



Series GB-ER

Key-Features:

- available measurement ranges: 50 to 2200 mm
- Resolution up to 0.5 μm
- Linearity $\pm 5 \mu\text{m}$
- Output signal A/ B/ reference point, TTL-Linedriver according to EIA-422
- integrated reference point
- Displacement speed up to 60 m/min
- Working temperature 0...+40 °C
- Protection class IP54
- very robust and resistant against vibrations
- easy mounting
- resistant against water and oil

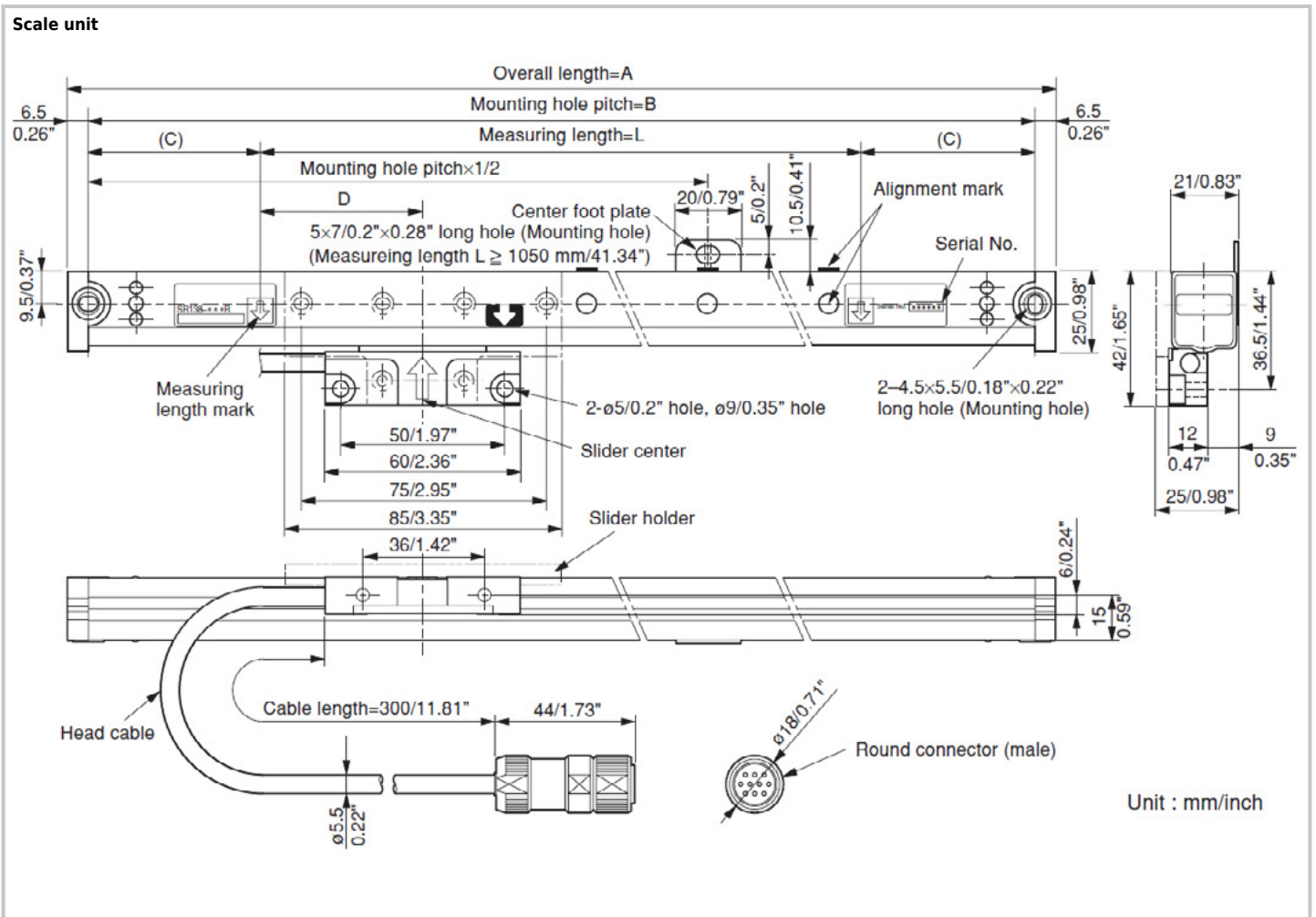
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TECHNICAL DATA

Model		
Measurement range MR	[mm]	50/ 100/ 150/ 200/ 250/ 300/ 350/ 400/ 450/ 500/ 550/ 600/ 650/ 750/ 850/ 950/ 1050/ 1250/ 1400/ 1600/ 1850/ 2050/ 2200
Resolution (20°C)	[μm]	0.5
Linearity (20°C)	[μm]	(5 + 5 MB/ 1000)
Reference point		Standard: center of scale, user-defined position also available
Working temperature	[°C]	0 to 40
Storage temperature	[°C]	-20 to 50
Displacement speed	[m/min]	maximum 60
Expansion coefficient		(11 ±1) × 10 ⁻⁶ /°C
Protection class		IP54
Mounting parallelism	[mm]	±0.1
Head cable length	[m]	0.3
Cable length	[m]	3 (armoured, contains Interpolator unit)
Scale length	[mm]	MR + 104 (for MR ≤ 200), MR + 120 (for MR ≥ 250)
Output signal		TTL Linedriver (RS422), AB / quadrature signal, Z
Power supply	[VDC]	5 ±5%
Connector		Sub-D connector, 9-pole
Current consumption	[mA]	maximum 200

TECHNICAL DRAWING

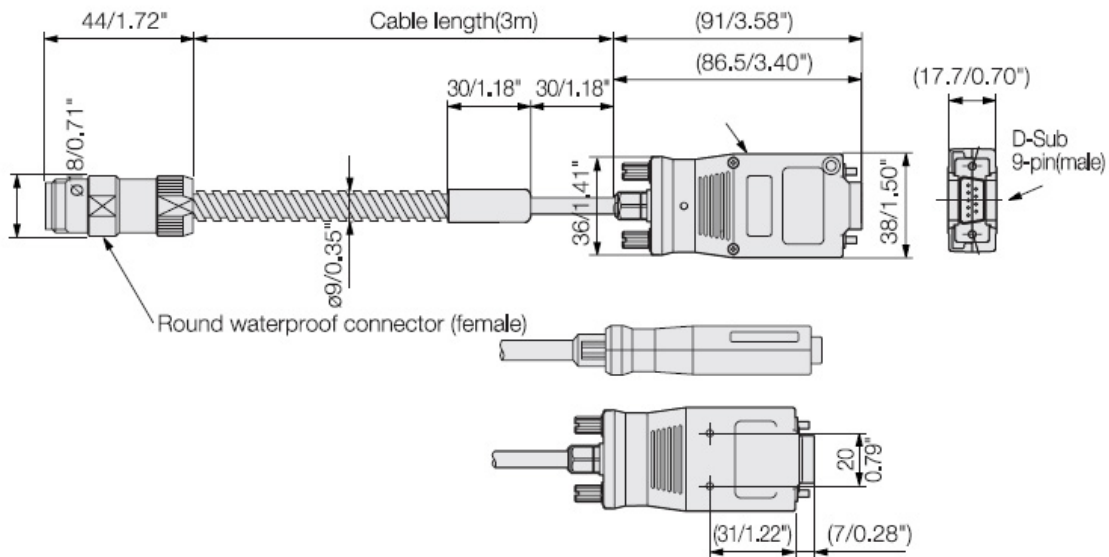


SCALE

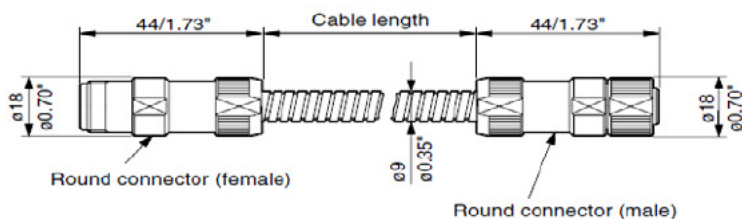
Model name	Measuring length (L)	Overall length (A)	Mounting hole pitch (B)	C	D
GB-005ER / SR138-005R	50 mm/1.9"	Measuring length + 104 mm/4.1"	Measuring length + 91 mm/3.6"	45.5 mm/1.8"	Measuring length x ½
GB-010ER / SR138-010R	100 mm/3.9"				
GB-015ER / SR138-015R	150 mm/5.9"				
GB-020ER / SR138-020R	200 mm/7.8"	Measuring length + 120 mm/4.7"	Messlänge + 107 Measuring length + 107 mm/4.2"	53.5 mm/2.1"	50 mm/2"
GB-025ER / SR138-025R	250 mm/9.8"				
GB-030ER / SR138-030R	300 mm/11.8"				
GB-035ER / SR138-035R	350 mm/13.7"				
GB-040ER / SR138-040R	400 mm/15.7"				
GB-045ER / SR138-045R	450 mm/17.7"				
GB-050ER / SR138-050R	500 mm/19.6"				
GB-055ER / SR138-055R	550 mm/21.6"				
GB-060ER / SR138-060R	600 mm/23.6"				
GB-065ER / SR138-065R	650 mm/25.5"				
GB-075ER / SR138-075R	750 mm/29.5"				
GB-085ER / SR138-085R	850 mm/33.4"				
GB-095ER / SR138-095R	950 mm/37.4"				
GB-105ER / SR138-105R	1050 mm/41.3"				
GB-125ER / SR138-125R	1250 mm/49.2"				
GB-140ER / SR138-140R	1400 mm/55.1"				
GB-160ER / SR138-160R	1600 mm/62.9"				
GB-185ER / SR138-185R	1850 mm/72.8"				
GB-205ER / SR138-205R	2050 mm/80.7"				
GB-220ER / SR138-220R	2200 mm/88.6"				

CABLE

Connection cable CH04-03C (included in delivery), armoured, contains the interpolator unit



Extension cable CE10-01C/03C/05C/10C (1, 3, 5, 10 m), armoured



Unit : mm/inch

Model	Cable length
CE10-01C	1 m/3.2 ft
CE10-03C	3 m/9.8 ft
CE10-05C	5 m/16.4 ft
CE10-10C	10 m/32.8 ft

Max. cable length with CE10 ext. cables: 30m

DISPLAYS MAGNESCALE

LG20:

General purpose display. The LG20 offers a Reset/Preset function

LH70 Series:

High performance counter for Mille (LH70/LH71) and Lathe (LH70-3/ LH71-3) applications.

LH71A-3

Can be user for milling machines and lathes applications by switching initial settings.

LH72

Designed especially for lathes.



Overview Magnescale Series

	LG20	LH70/LH71	LH72
Display axes		1, 2, 3	3
Display	7 digits, orange LEDs, floating minus sign		
Display resolution	0.1 / 0.5 / 1 / 5 / 10 µm	0.1 / 0.5 / 1 / 5 / 10 µm	
		1 s / 10 s / 1 min / 10 min	
Input signal	TTL Line driver RS422		
Power supply	12 VDC using separate power supply unit PSC23 with 100 - 240 VAC		
Weight	1.5 kg		

Functions of the displays

	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		■	■	■	
Linearity error compensation	■	■	■	■	■
Segment error compensation			■	■	■
Data storage	■	■	■	■	■
Energy saving function	■	■	■	■	■
Navigation function		■	■	■	■
External reset				■	■
Touch sensor function				■	

* only 3-axes display

ORDER CODE

GB-005ER	Measurement range 50 mm
GB-010ER	Measurement range 100 mm
GB-015ER	Measurement range 150 mm
GB-020ER	Measurement range 200 mm
GB-025ER	Measurement range 250 mm
GB-030ER	Measurement range 300 mm
GB-035ER	Measurement range 350 mm
GB-040ER	Measurement range 400 mm
GB-045ER	Measurement range 450 mm
GB-050ER	Measurement range 500 mm
GB-055ER	Measurement range 550 mm
GB-060ER	Measurement range 600 mm

Display	
LG20-1	Digital display 1 axis
LG20-2	Digital display 2 axes
LG20-3	Digital display 3 axes
LH70-1	High performance display 1 axis
LH70-2	High performance display 2 axes
LH70-3	High performance display 3 axes
LH71-1	High performance display 1 axis
LH71-2	High performance display 2 axes
LH71-3	High performance display 3 axes
LH71A	High performance display 3 axes
LH72-3	High performance display 3 axes
LY71	2 channel multifunctional Display
LY72	2 channel multifunctional Display, RS232C
PSC23	Power supply unit

GB-065ER	Measurement range 650 mm
GB-075ER	Measurement range 750 mm
GB-085ER	Measurement range 850 mm
GB-095ER	Measurement range 950 mm
GB-105ER	Measurement range 1050 mm
GB-125ER	Measurement range 1250 mm
GB-140ER	Measurement range 1400 mm
GB-160ER	Measurement range 1600 mm
GB-185ER	Measurement range 1850 mm
GB-205ER	Measurement range 2050 mm
GB-220ER	Measurement range 2200 mm

Extension cable	
CE10-01C	1 m, armoured hose
CE10-03C	3 m, armoured hose
CE10-05C	5 m, armoured hose
CE10-10C	10 m, armoured hose

Connection cable (included in delivery)	
CH04-03C	3 m, armoured hose



Subject to change without prior notice.

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