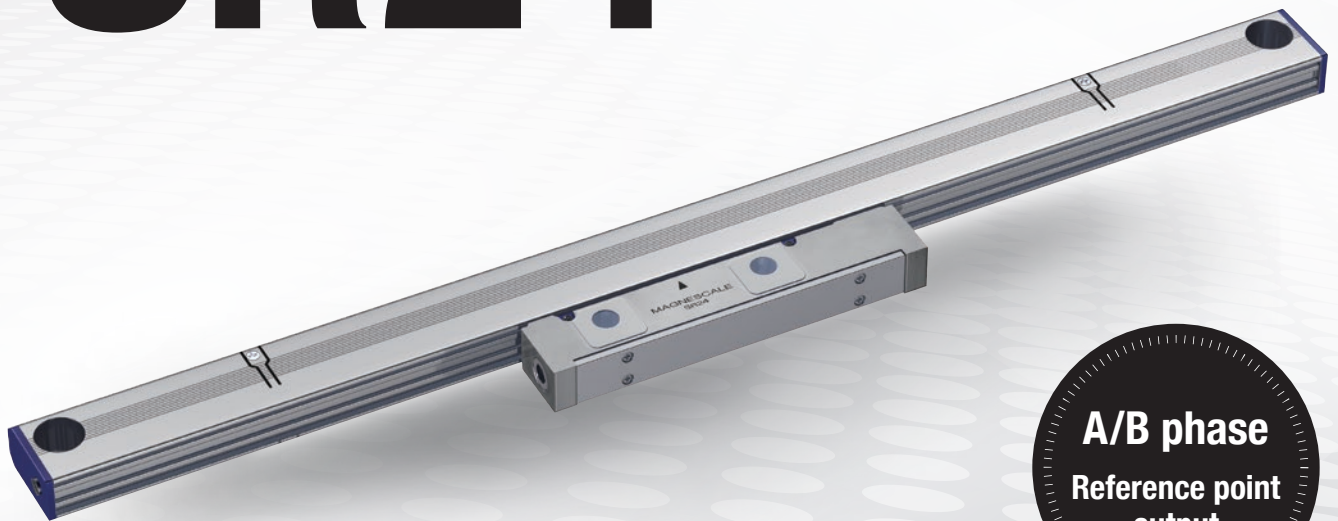


# Magnescale

SPEED X PRECISION

Incremental Magnescale  
Slim type

# SR24



**A/B phase**  
Reference point  
output

**Slim profile allows  
for installation in tight areas.  
Heavy duty low-profile design**

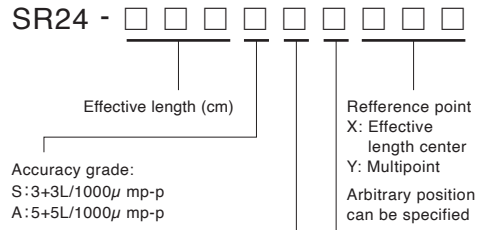
**Magnetic detection technology  
and shielded construction  
allow for use in the harshest  
environments such as oil, dirt  
and condensation.**

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# Specifications

Model name	SR24
Effective length (L)	70 to 2,040 mm
Thermal expansion	$12 \pm 1 \times 10^{-6} / ^\circ\text{C}$
Output signal	A/B/Reference line driver signal, compliant with EIA-422
Minimum phase difference time	Selectable from 50/100/150/200/250/300/400/500/650/1000/1250/2500/3000 ns (Set at time of order)
Accuracy (at 20°C)	$(3+3L/1,000) \mu\text{m p-p}$ or $(5+5L/1,000) \mu\text{m p-p}$ L: Measuring length (mm)
Resolution	Selectable from 0.05/0.1/0.5/1 $\mu\text{m}$ (Set at factory shipping)
Reference point position	Center point, Multi-point (40 mm pitch), User-selected point (1 mm pitch)
Power supply voltage	DC 4.75 to 5.25 V (At cable connection end)
Consumption current	250 mA (with 5 V controller connection)
Inrush current	2A or less (When the power supply rise time is 10 ms)
Maximum response speed	50 m/min (Resolution: 0.1 $\mu\text{m}$ , Minimum phase difference: at 50 ns)
Vibration resistance	150 m/s <sup>2</sup> (50 Hz to 3,000 Hz)
Impact resistance	350 m/s <sup>2</sup> (11 ms)
Protective design grade	IP54 (Air purge not included), IP65 (Air purge included)
Power supply protection	In the case of errors such as a reverse-connected power supply or over-voltage, the internal fuse is cut to protect the power being supplied and wiring.
Product Safety	FCC Part15 Subpart B Class A ICES-003 Class A Digital Device EN/BS 61000-6-2, EN/BS 61000-6-4
Product Environment	EN/BS 63000
Operating temperature	0 to +50 °C
Storage temperature	-20 to +55 °C
Mass	Approx. 0.39 kg + 1.53 kg/m or less
Slider sliding resistance	1 N or less
Compatible cables(types without relay connectors)	CH23-***NV
Maximum cable length	13 m
Compatible cables(types with relay connectors)	CH23-***NVU + CH23-***NPZW
Maximum cable length	30 m

# Model name



### Resolution and Polarity:

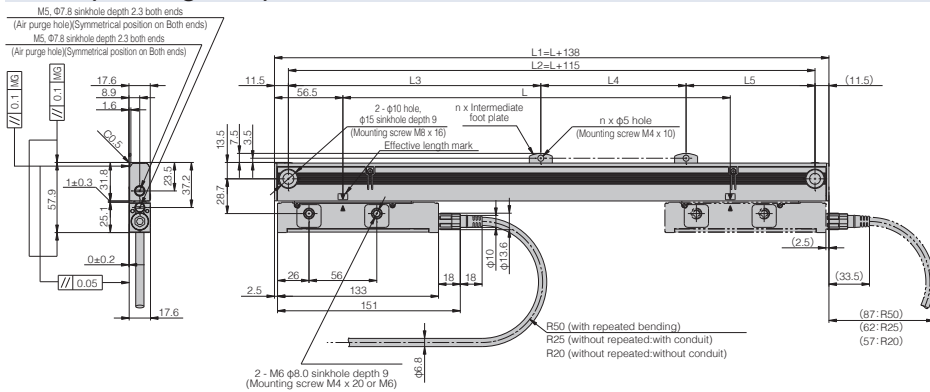
Resolution ( $\mu\text{m}$ )	Polarity	
	+	-
0.05	B	G
0.1	C	H
0.5	D	J
1.0	E	K

### Phase difference:

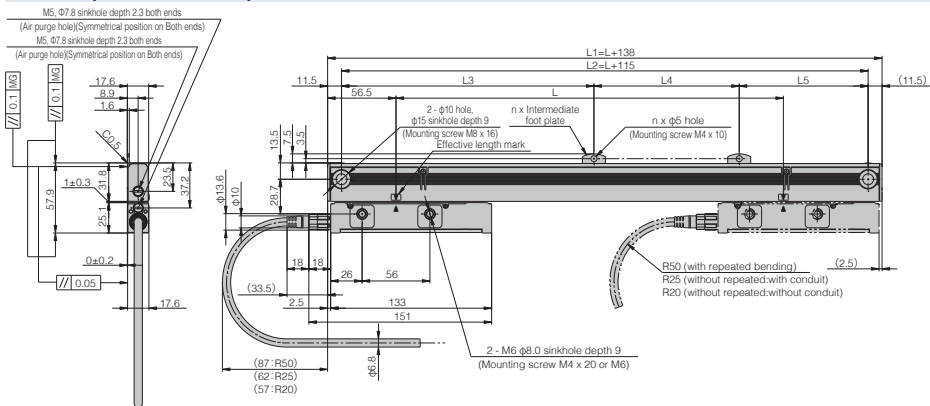
Phase (ns)	
50	A
100	B
150	C
200	D
250	E
300	F
400	G
500	H
650	J
1000	K
1250	L
2500	M
3000	N

# Dimensions

## SR24 (cable right out)



## SR24 (cable left out)



unit: mm

L	L1	L2	L3	L4	L5	n
70	208	185	-	-	-	0
120	258	235	-	-	-	0
170	308	285	-	-	-	0
220	358	335	-	-	-	0
270	408	385	-	-	-	0
320	458	435	-	-	-	0
370	508	485	-	-	-	0
420	558	535	-	-	-	0
470	608	585	-	-	-	0
520	658	635	-	-	-	0
570	708	685	-	-	-	0
620	758	735	-	-	-	0
670	808	785	392.5	-	392.5	1
720	858	835	417.5	-	417.5	1
770	908	885	442.5	-	442.5	1
820	958	935	467.5	-	467.5	1
920	1058	1035	517.5	-	517.5	1
1020	1158	1135	567.5	-	567.5	1
1140	1278	1255	627.5	-	627.5	1
1240	1378	1355	677.5	-	677.5	1
1340	1478	1455	727.5	-	727.5	1
1440	1578	1555	777.5	520	777.5	2
1540	1678	1655	827.5	550	827.5	2
1640	1778	1755	877.5	585	877.5	2
1740	1878	1855	927.5	620	927.5	2
1840	1978	1955	977.5	650	977.5	2
2040	2178	2155	1027.5	720	1027.5	2

\*L: Effective length

\*MG: Machine guide

\*Intermediate foot plate: One location when  $L \geq 670$  mm, two locations when  $L \geq 1440$  mm

⚠ To use this product safely, please read the instruction manual carefully and thoroughly prior to usage. •Magnescale reserves the right to change products and specifications without prior notice.

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