

The scale boasts superior speed and accuracy in addition to its conventional high level of reliability in a hostile environment

SR33: ■ Stable output of 40µm low-distortion sine waves and enhanced interpolation accuracy achieved by a magnetic head exclusively developed for the SR33.

- Resolution: 0.05µm to 1µm
- Accuracy: ±3µm

SR34: ■ Necessary circuits built into the head part. Model for AB quadrature output of 0.1µm resolution.

CN33: ■ Interpolator for SR33. The resolution of the AB quadrature signals can be switched between 0.05, 0.1, 0.5, and 1µm.

- SR33 + CH33: Sinusoidal output
- SR34 + CH33: AB quadrature output
- SR33 + CN33: AB quadrature output



Specifications

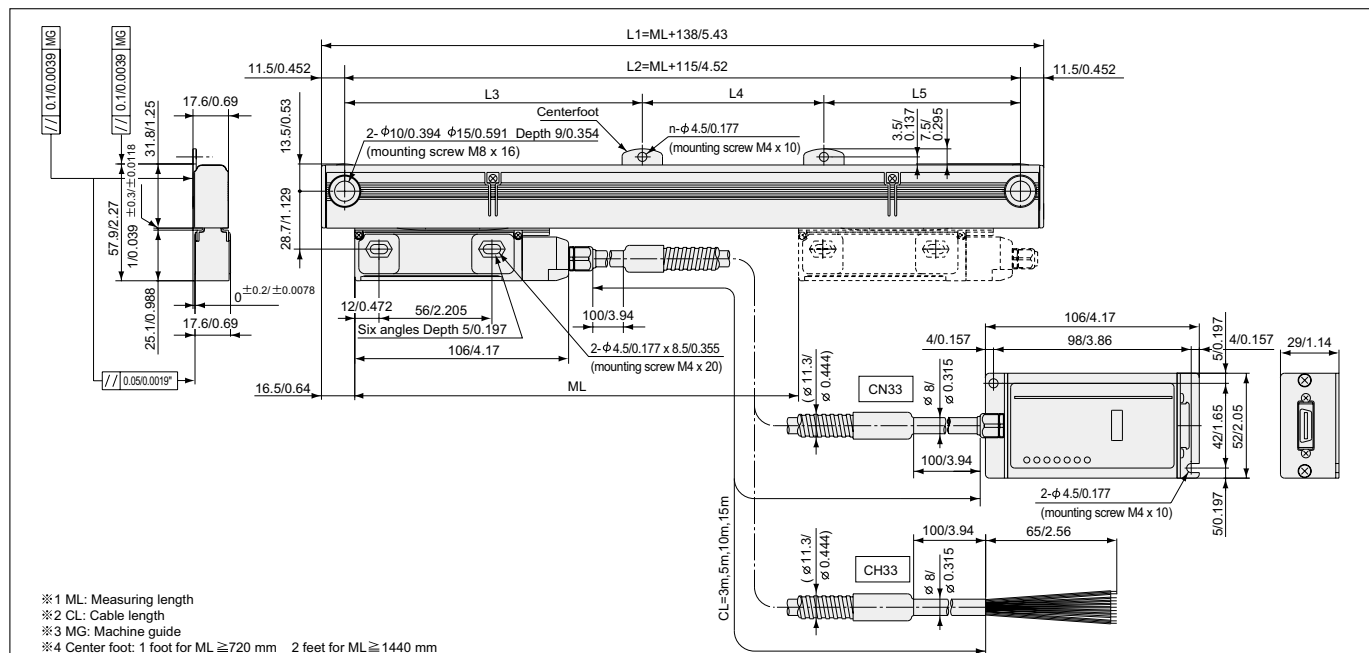
	SR33	SR33 with CN33	SR34
Measuring length (ML)(mm/inch)	70,120,170,220,270,320,370,420,470,520,570,620,720,770,820,920,1020,1140,1240,1340,1440,1540,1640,1740,1840,2040		
Output signal	Sine wave (1Vp-p)	AB quadrature	
Signal pitch	40 µm		
Resolution	-	0.05/0.1/0.5/1µm(selectable using a switch)	0.1µm
Minimum phase difference	-	62.5,125,187.5, 250 ns*3	100ns
Accuracy*1*2	±3µm, ±5µm		±5µm
Reference point*2	One point (1 mm unit), Multi point (40 mm pitch), Reference mark (absolute position value is established with a maximum traverse of 20 mm)		
Maximum response speed	150m/min	150m/min Resolution 1µm Minimum phase difference: 250 ns	47m/min Resolution 0.1µm Minimum phase difference: 100 ns
Vibration resistance (50-3000 Hz)	150m/s ²		
Impact resistance (11 ms)	350m/s ²		
Thermal expansion coefficient	(12±1) x10 ⁻⁶ /°C		
Protective design grade	Equivalent to IP54 (when air is not supplied) /Equivalent to IP65 (when air is supplied) CN33: no grade		
Operating temperature range	0 to 50°C / 32 to 122°F		
Power supply voltage	DC +5V±5%		
Power consumption	150mA (at 120 Ω termination)	400mA (at 120 Ω termination)	
Output cable length	150m max. (when using CH33)	30m max. (selected based on the length of CN33)	30m max. (when using CH33)

*1 at 20°C / 68°F *2 Specified upon ordering. *3 For wider phase difference, please consult on our sales.

Model	CH33-**CP	CH33-**CE	CN33-**CP	CN33-**CE
Description	Cable with open end	Cable with open end	Cable with interpolator	Cable with interpolator
Cable length		3.5,10,15m/9.8',16.4',32.8',49.2'		
Material	PVC	PU	PVC	PU
Armor	YES	YES	YES	YES

*Please consult with our sales for the cable length other than above.

Dimensions



- *1 ML: Measuring length
- *2 CL: Cable length
- *3 MG: Machine guide
- *4 Center foot: 1 foot for ML ≥ 720 mm 2 feet for ML ≥ 1440 mm

ML	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	1320	1370	1420	1470	1520	1570	1620	1670	1720	1770	1820	1870	1920	1970	2020
L1	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908	1958	2008	2058		
L2	185	235	285	335	385	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385	1435	1485	1535	1585	1635	1685	1735	1785	1835	1885	1935	1985	2035	2085	
L3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	417.5	442.5	467.5	492.5	517.5	542.5	567.5	592.5	617.5	642.5	667.5	692.5	717.5	742.5	767.5	792.5	817.5	842.5	867.5	892.5	917.5	942.5	967.5	992.5	1017.5	
L4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	417.5	442.5	467.5	492.5	517.5	542.5	567.5	592.5	617.5	642.5	667.5	692.5	717.5	742.5	767.5	792.5	817.5	842.5	867.5	892.5	917.5	942.5	967.5	992.5	1017.5	
n	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2		

Unit:mm/inch