

SR74/75

This slim type magnetic scale system that outputs position signals for machine tools and other equipment that require high-precision positioning.



- Measuring Length(ML) : 70-2,040mm
- Accuracy : 3+3ML/1,000 μm p-p, 5+5ML/1,000 μm p-p
- Maximum resolution : 0.01 μm
- Maximum response speed : 200m/min.
- Protocol (SR75) : Mitsubishi

T: 021 322 27081

F: 021 6277 5787

Slim type
Maximum resolution 0.01 μm

(SR75 only)

Specifications

Model	SR74	SR75
Measuring length (ML)	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	70-2040mm
Thermal expansion coefficient (/ °C)	12 ± 1 x 10 ⁻⁶ / °C	
Output signal	A/B, Reference point line driver signal (compliant with EIA-422)	Incremental serial bidirectional signal, compliant with EIA-485
Accuracy (at 20 °C) ML:mm	3+3ML/1,000 μm p-p or 5+5ML/1,000 μm p-p	
Resolution	Selectable from 0.05, 0.1, 0.5 and 1.0 μm (Set at factory shipping)	Selectable from 0.01, 0.05, 0.1, 0.5 and 1.0 μm (Set at factory shipping)
Reference point	None, Center point, Multi-point (40 mm pitch), Reference mark (standard pitch: 20 mm), User-selected point (1 mm pitch)	None, Center point, User-selected point (1 mm pitch)
Power supply voltage	DC4.75 - 5.25V(At cable connection end)	
Consumption current	200 mA (at 120 Ω terminal) max.	
Inrush current	2A max. (When the power supply rise time is 10 ms)	
Maximum response speed	50m/min(Resolution: 0.1 μm, Minimum phase difference: at 100 ns)	200m/min (User-selected resolution setting)
Vibration resistance	150m/s ² (50Hz~3kHz)	
Impact resistance	350m/s ² (11ms)	
Protective design grade	IP54 (Air purge not included), IP65 (Air purge included)	
Other protections	Oil lubricant can also be used under severe environmental conditions.	
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.	
Safety standards	FCC Part15 Subpart B Class A, ICES-003 Class A Digital Device, EN55011 Gp1 Class A, EN61000-6-2. Safety standards not applicable (60 V DC or less).	
Operating temperature range(°C)	0 ~ +50 °C	
Storage temperature range(°C)	-20 ~ +55 °C	
Mass	Approx.0.27kg + 1.36kg/m	
Slider sliding resistance	1N or less	

Model	CH33-**CP	CH33-**CE
Description	Cable with open end	Cable with open end
Cable length	3,5,10,15m	
Material	PVC	PU
Armor	YES	YES

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

Details of model designation

SR74-XXXX★○△◆□□□□
SR75-XXXX★○△◆□□□□

Single reference mark shown by mm from left end of ML e.g. 850mm = 850, in case of center then X For 1000mm or longer, 2 left digits shown by alphabet

1,000-1,099mm A	1,400-1,499mm E	1,800-1,899mm J
1,100-1,199mm B	1,500-1,599mm F	1,900-1,999mm K
1,200-1,299mm C	1,600-1,699mm G	2,000-2,040mm L
1,300-1,399mm D	1,700-1,799mm H	Ex: +1,050mm → A50

Specific mark : X=center, SR75 is only single reference mark.

Minimum phase difference

Phase difference (ns)	A	B	C	D	E	F	G	H	K	L	M	N
50	A											
100	B											
150	C											
200	D											
250	E											
300	F											
400	G											

NC Maker Wire

Mitsubishi	2	B
	4	D

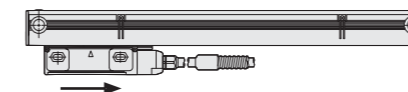
Resolution (μm)

Resolution (μm)	SR74	SR75
0.01	-	-
0.05	B	G
0.1	C	H
0.5	D	J
1.0	E	K

Communication protocol

Resolution & Direction*

Accuracy grade: A : 5+5ML/1000 μm S : 3+3ML/1000 μm
ML : Measuring length by mm
Cable out direction: R= Right, L= Left
Measuring length by cm



*When the slider is moved in the direction of the arrow, the A signal is ahead when the direction is "positive," and B signal is ahead when the direction is "negative."

ML	L1	L2	L3	L4	L5	n
770	908	885	442.5	-	442.5	1
820	958	935	467.5	-	467.5	1
870	1008	1015	517.5	-	517.5	1
920	1058	1035	517.5	-	517.5	1
970	1108	1135	567.5	-	567.5	1
1020	1158	1255	627.5	-	627.5	1
1070	1208	1355	677.5	-	677.5	1
1120	1258	1455	727.5	-	727.5	1
1170	1308	1555	777.5	-	777.5	1
1220	1358	1655	827.5	-	827.5	1
1270	1408	1755	877.5	-	877.5	1
1320	1458	1855	927.5	-	927.5	1
1370	1508	1955	977.5	-	977.5	1
1420	1558	2055	1027.5	-	1027.5	1
1470	1608	2155	1077.5	-	1077.5	1
1520	1658	2255	1127.5	-	1127.5	1
1570	1708	2355	1177.5	-	1177.5	1
1620	1758	2455	1227.5	-	1227.5	1
1670	1808	2555	1277.5	-	1277.5	1
1720	1858	2655	1327.5	-	1327.5	1
1770	1908	2755	1377.5	-	1377.5	1
1820	1958	2855	1427.5	-	1427.5	1
1870	2008	2955	1477.5	-	1477.5	1
1920	2058	3055	1527.5	-	1527.5	1
1970	2108	3155	1577.5	-	1577.5	1
2020	2158	3255	1627.5	-	1627.5	1
2070	2208	3355	1677.5	-	1677.5	1
2120	2258	3455	1727.5	-	1727.5	1
2170	2308	3555	1777.5	-	1777.5	1
2220	2358	3655	1827.5	-	1827.5	1
2270	2408	3755	1877.5	-	1877.5	1
2320	2458	3855	1927.5	-	1927.5	1
2370	2508	3955	1977.5	-	1977.5	1
2420	2558	4055	2027.5	-	2027.5	1
2470	2608	4155	2077.5	-	2077.5	1
2520	2658	4255	2127.5	-	2127.5	1
2570	2708	4355	2177.5	-	2177.5	1
2620	2758	4455	2227.5	-	2227.5	1
2670	2808	4555	2277.5	-	2277.5	1
2720	2858	4655	2327.5	-	2327.5	1
2770	2908	4755	2377.5	-	2377.5	1
2820	2958	4855	2427.5	-	2427.5	1
2870	3008	4955	2477.5	-	2477.5	1
2920	3058	5055	2527.5	-	2527.5	1
2970	3108	5155	2577.5	-	2577.5	1
3020	3158	5255	2627.5	-	2627.5	1
3070	3208	5355	2677.5	-	2677.5	1
3120	3258	5455	2727.5	-	2727.5	1
3170	3308	5555	2777.5	-	2777.5	1
3220	3358	5655	2827.5	-	2827.5	1
3270	3408	5755	2877.5	-	2877.5	1
3320	3458	5855	2927.5	-	2927.5	1
3370	3508	5955	2977.5	-	2977.5	1
3420	3558	6055	3027.5	-	3027.5	1
3470	3608	6155	3077.5	-	3077.5	1
3520	3658	6255	3127.5	-	3127.5	1
3570	3708	6355	3177.5	-	3177.5	1
3620	3758	6455	3227.5	-	3227.5	1
3670	3808	6555	3277.5	-	3277.5	1
3720	3858	6655	3327.5	-	3327.5	1
3770	3908	6755	3377.5	-	3377.5	1
3820	3958	6855	3427.5	-	3427.5	1
3870	4008	6955	3477.5	-	3477.5	1
3920	4058	7055	3527.5	-	3527.5	1
3970	4108	7155	3577.5	-	3577.5	1
4020	4158	7255	3627.5	-	3627.5	1
4070	4208	7355	3677.5	-	3677.5	1
4120	4258	7455	3727.5	-	3727.5	1
4170	4308	7555	3777.5	-	3777.5	1
4220	4358	7655	3827.5	-	3827.5	1
4270	4408	7755	3877.5	-	3877.5	1
4320	4458	7855	3927.5	-	3927.5	1
4370	4508	7955	3977.5	-	3977.5	1
4420	4558	8055	4027.5	-	4027.5	1
4470	4608	8155	4077.5	-	4077.5	1
4520	4658	8255	4127.5	-	4127.5	1
4570	4708	8355	4177.5	-	4177.5	1
4620	4758	8455	4227.5	-	4227.5	1
4670	4808	8555	4277.5	-	4277.5	1
4720	4858	8655	4327.5	-	4327.5	1
4770	4908	8755	4377.5	-	4377.5	1
4820	4958	8855	4427.5	-	4427.5	1
4870	5008	8955	4477.5	-	4477.5	1
4920	5058	9055	4527.5	-	4527.5	1
4970	5108	9155	4577.5	-	4577.5	1
5020	5158	9255	4627.5	-	4627.5	1
5070	5208	9355	4677.5	-	4677.5	1
5120	5258	9455	4727.5	-	4727.5	1
5170	5308	9555	4777.5	-	4777.5	1
5220	5358	9655	4827.5	-	4827.5	1
5270	5408	9755	4877.5	-	4877.5	1
5320	5458	9855	4927.5	-	4927.5	1
5370	5508	9955	4977.5	-	4977.5	1
5420	5558	10055	5027.5	-	5027.5	1
5470	5608	10155	5077.5	-	5077.5	1
5520	5658	10255	5127.5	-	5127.5	1
5570	5708	10355	5177.5	-	5177.5	1
5620	5758	10455	5227.5	-	5227.5	1
5670	5808	10555	5277.5	-	5277.5	1
5720	5858	10655	5327.5	-	5327.5	1
5770	5908	10755	5377.5	-	5377.5	1
5820	5958	10855	5427.5	-	5427.5	1
5870	6008	10955	5477.5	-	5477.5	1
5920	6058	11055	5527.5	-	5527.5	1
5970	6108	11155	5577.5	-	5577.5	1
6020	6158	11255	5627.5	-	5627.5	1
6070	6208	11355	5677.5	-	5677.5	1
6120	6258	11455	5727.5	-	5727.5	1
6170	6308	11555	5777.5	-	5777.5	1
6220	6358	11655	5827.5	-	5827.5	1
6270	6408	11755	5877.5	-	5877.5	1
6320	6458	11855	5927.5	-	5927.5	1
6370	6508	11955	5977.5	-	5977.5	1
6420	6558	12055	6027.5	-	6027.5	1
6470	6608	12155	6077.5	-	6077.5	1
6520	6658	12255	6127.5	-	6127.5	1
6570	6708	12355	6177.5	-	6177.5	1
6620	6758	12455	6227.5	-	6227.5	1
6670	6808	12555	6277.5	-	6277.5	1
6720	6858	12655	6327.5	-	6327.5	1
6770	6908	12755	6377.5	-	6377.5	1
6820	6958	12855	6427.5	-	6427.5	1
6870	7008	12955	6477.5	-	6477.5	1
6920	7058	13055	6527.5	-	6527.5	1
6970	7108	13155	6577.5	-	6577.5	1
7020	7158	13255	6627.5	-	6627.5	1
7070	7208	13355	6677.5	-	6677.5	1
7120	7258	13455	6727.5	-	6727.5	1
7170	7308	13555	6777.5	-	6777.5	1
7220	7358	13655	6827.5	-	6827.5	1
7270	7408	13755	6877.5	-	6877.5	1
7320	7458	13855	6927.5	-	6927.5	1
7370	7508	13955	6977.5	-	6977.5	1
7420	7558	14055	7027.5	-	7027.5	1
7470	7608	14155	7077.5	-	7077.5	1
7520	7658	14255	7127.5	-	7127.5	1
7570	7708	14355	7177.5	-	7177.5	1
7620	7758	14455	7227.5	-	7227.5	1
7670	7808	14555	7277.5	-	7277.5	1
7720	7858	14655	7327.5	-	7327.5	1
7770	7908	14755	7377.5	-	7377.5	1
7820	7958	14855	7427.5	-	7427.5	1
7870	8008	14955	7477.5	-	7477.5	1
7920	8058	15055	7527.5	-	7527.5	1
7970	8108	15155	7577.5	-	7577.5	1
8020	8158	15255	7627.5	-	7627.5	1
8070	8208	15355	7677.5	-	7677.5	1
8120	8258	15455	7727.5	-	7727.5	1
8170	8308	15555	7777.5	-	7777.5	1
8220	8358	15655	7827.5	-	7827.5	1
8270	8408	15755	7877.5	-	7877.5	1
8320	8458	15855	7927.5	-	7927.5	1
8370	8508	15955	7977.5	-	7977.5	1
8420	8558	16055	8027.5	-	8027.5	1
8470	8608	16155	8077.5	-	8077.5	1
8520	8658	16255	8127.5	-	8127.5	1
8570	8708	16355	8177.5	-	8177.5	1
8620	8758	16455	8227.5	-	8227.5	1
8670	8808	16555	8277.5	-	8277.5	1
8720	8858	16655	8327.5	-	8327.5	1
8770	8908	16755	8377.5	-	8377.5	1
8820	8958	16855	8427.5	-	8427.5	1
8870	9008	16955	8477.5	-	8477.5	1
8920	9058	17055	8527.5	-	8527.5	1
8970	9108	17155	8577.5	-	8577.5	1
9020	9158	17255	8627.5	-	8627.5	1
9070	9208	17355	8677.5	-	8677.5	1
9120	9258	17455	8727.5	-	8727.5	1
9170	9308	17555	8777.5	-	8777.5	1
9220	9358	17655	8827.5	-	8827.5	1
9270	9408	17755	8877.5	-	8877.5	1
9320	9458	17855	8927.5	-	8927.5	1
9370	9508	17955	8977.5	-	8977.5	1
9420	9558	18055	9027.5	-	9027.5	1
9470	9608	18155	9077.5	-	9077.5	1
9520	9658	18255	9127.5	-	9127.5	1
9570	9708	18355	9177.5	-	9177.5	1
9620	9758	18455	9227.5	-	9227.5	1
9670	9808	18555	9277.5	-	9277.5	1
9720	9858	18655	9327.5	-	9327.5	1
9770	9908	18755	9377.5	-	9377.5	1
9820	9958	18855	9427.5	-	9427.5	1
9870	10008	18955	9477.5	-	9477.5	1
9920	10058	19055	9527.5	-	9527.5	1
9970	10108	19155	9577.5	-	9577.5	1
10020	10158	19255	9627.5	-	9627.5	1
10070	10208	19355	9677.5	-	9677.5	1
10120						