

Specifications

Model name	SR74
Effective length (L: mm)	70-2,040
Thermal expansion coefficient	12±1 × 10 ⁻⁶ /°C
Accuracy(at 20°C)	3+3L/1,000 μmp-p or 5+5L/1,000 μmp-p L: Effective length (mm)
Reference point	Center point, Multi point (40 mm pitch), Signed-type (standard pitch 20 mm), User-selected point (1 mm pitch)
Output signal	A/B/Reference point line driver signal, compliant with EIA-422
Resolution	Selectable from 0.05, 0.1, 0.5, and 1 μm (Set at factory shipping)
Maximum response speed	50m/ min (Resolution: 0.1 μm, Minimum phase difference: at 50 ns)
Functional safety	—
Legal compliance	FCC Part15 Subpart B Class A ICES-003 Class A Digital Device EN55011 Gp1 Class A, EN61000-6-2(60 V DC or less)
Operating temperature range	0 to +50°C
Storage temperature range	-20 to +55°C
Vibration resistance	150 m/s ² (50 Hz to 3 kHz)
Impact resistance	350 m/s ² (11 ms)
Protective design grade	IP54 (Air purge not included), IP65 (Air purge included)
Power supply voltage range	DC+4.75 to +5.25 V
Maximum power consumption	1.0W or less (4.75V or 5.25V)
Power consumption	190 mA (5V) (when the controller is connected)
Mass	Approx. 0.27kg+ 1.36kg/m or less
Standard compatible cable	CH33-***CP/CE
Maximum cable length	15 m

Details of model designation

Scale

SR74 - xxx★○□◆# # #

Reference point position (Distance from left end of effective length)

Reference point position	Indication method	Reference point position	Indication method	Reference point position	Indication method
Less than 1,000	Number (850 mm → 850)	1,700–1,799 mm	H + lower 2 digits	Center	X
1,000–1,099 mm	A + lower 2 digits (1,050 mm → A50)	1,800–1,899 mm	J + lower 2 digits	Multi	Y
1,100–1,199 mm	B + lower 2 digits	1,900–1,999 mm	K + lower 2 digits	Signed-type	Z
1,200–1,299 mm	C + lower 2 digits	2,000–2,040 mm	L+ lower 2 digits		
1,300–1,399 mm	D + lower 2 digits				
1,400–1,499 mm	E+ lower 2 digits				
1,500–1,599 mm	F + lower 2 digits				
1,600–1,699 mm	G+ lower 2 digits				

Minimum phase difference

Type	Phase difference (ns)	Type	Phase difference (ns)	Type	Phase difference (ns)
A	50	F	300	L	1,250
B	100	G	400	M	2,500
C	150	H	500	N	3,000
D	200	J	650		
E	250	K	1,000		

Resolution and direction (μm)

Type	Direction	Resolution	Type	Direction	Resolution
B	+ (plus)	0.05	G	- (minus)	0.05
C		0.1	H		0.1
D		0.5	J		0.5
E		1.0	K		1

Accuracy grade

Type	Accuracy grade
A	5+5L/1,000 μm
S	3+3L/1,000 μm

L: Effective length(mm)

Cable lead-out direction

Type	Lead-out direction
R	Right
L	Left

Effective length (L): cm units

Cable

CH33 - * * * ○ ▽ * #

Scale side connector

Type	
A	Circular connector

Controller side connector

Type	
P	PVC (Polyvinyl chloride)
E	PU (Polyurethane)

Cable sheath (covering)

Type	
C	With conduit (standard)
N	Without conduit

Conduit

Type	
C	With conduit (standard)
N	Without conduit

Cable length

Written by flush right, indication in "m" units, up to 30 m, 1 m pitch

Note: CH33 for Yaskawa Electric is up to a cable length of 20 m.