

Absolute magnescale

Linear robust type

SR67A

- High rigidity provides resistance to shock and vibration
- Magnetic system allows use even in environments with condensation, oil, and other adverse conditions
- Supports the communication protocol of each supporting manufacturer
- Same thermal expansion as iron

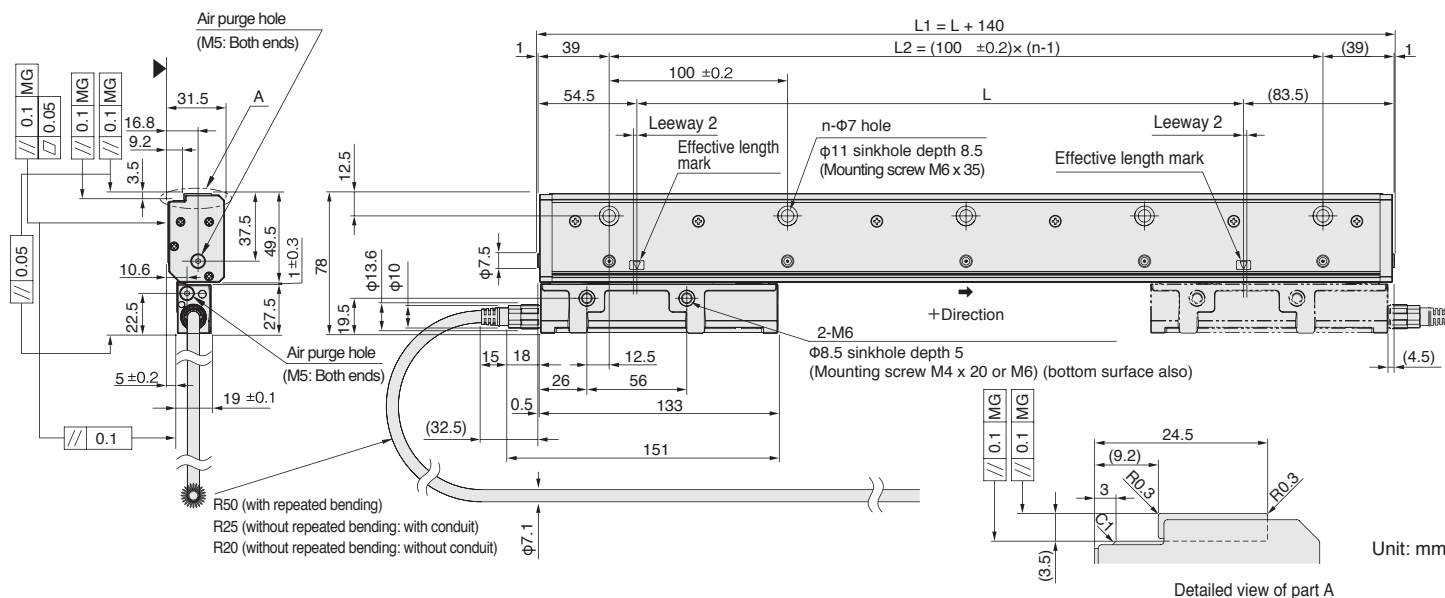


FANUC

Mitsubishi Electric

SIEMENS

Dimensions



Effective length	Total length	Mounting pitch	Number of intermediate foot plates
L	L1	L2	n
140	280	200	3
240	380	300	4
340	480	400	5
440	580	500	6
540	680	600	7
640	780	700	8
740	880	800	9
840	980	900	10
940	1,080	1,000	11
1,040	1,180	1,100	12
1,140	1,280	1,200	13
1,240	1,380	1,300	14
1,340	1,480	1,400	15
1,440	1,580	1,500	16

Effective length	Total length	Mounting pitch	Number of intermediate foot plates
L	L1	L2	n
1,540	1,680	1,600	17
1,640	1,780	1,700	18
1,740	1,880	1,800	19
1,840	1,980	1,900	20
2,040	2,180	2,100	22
2,240	2,380	2,300	24
2,440	2,580	2,500	26
2,640	2,780	2,700	28
2,840	2,980	2,900	30
3,040	3,180	3,100	32
3,240	3,380	3,300	34
3,440	3,580	3,500	36
3,640	3,780	3,700	38

Unit: mm

MG: Machine guide

- Notes**
- The surface indicated by the ▲ marks is the installation surface.
 - Screws indicated in the diagram are supplied as standard accessories.
 - Movement outside the effective length (L) will damage the scale head. It is recommended that the mechanical movable length (stroke) be set to 10 mm or more to the inside of both ends of the effective length (L).

Specifications

Model name	SR67A - xxx□□A #	SR67A - xxx□□BX SR67A - xxx□□DX	SR67A - xxx□AZY
Effective length (L: mm)	140 - 3,640		
Thermal expansion coefficient	12±1 × 10 ⁻⁶ /°C		
Accuracy (at 20°C)	3+3L/1,000 μm-p (effective length 140 to 3,040 mm) or 5+5L/1,000 μm-p (effective length 140 to 3,640 mm), L: Effective length (mm)		
Reference point	Center, or user-selected position (Set at factory shipping)	Fixed to center	Fixed to 10 mm from left end of effective length
Output signal	Absolute serial bidirectional signal, compliant with EIA-485		Compliant with DRIVE-CLiQ
Compatible controllers	FANUC ai interface compatible	Mitsubishi Electric	SIEMENS AG
Resolution	Selectable from 0.01, 0.05, 0.1, 0.5 and 1 μm (Set at factory shipping)	Selectable from 0.01, 0.05 and 0.1 μm (Set at factory shipping)	0.01 μm
Maximum response speed	200 m/min		
Functional safety	Please consult with each controller manufacturer regarding support for functional safety.		EN ISO13849-1:2008 Cat.3 EN 62061:2005 / IEC 61508:2010 EN61800-5-2:2007
Legal compliance	FCC Part15 Subpart B Class A ICES-003 Class A Digital Device EN55011 Gp1 Class A, EN61000-6-2		
Operating temperature range	0 to +50°C		
Storage temperature range	-20 to +55°C		
Vibration resistance	250 m/s ² (50 Hz to 3,000 Hz)		
Impact resistance	450 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		DC+17 to +30.8 V
Maximum power consumption	1.3W or less (4.75V or 5.25V)		1.75W or less (17V) 1.9W or less (30.8V)
Power consumption	250mA (5V) (when the controller is connected)		75mA (24V) (when the controller is connected)
Mass	Approx. 0.9kg+ 5.2kg/m or less		
Compatible cables (types without relay connectors) Maximum cable length	CH23-***NVF 13 m	CH23-***NVM 13 m	CH22-***NSMY 30 m
Compatible cables (types with relay connectors) Maximum cable length	CH23-***NVK + CH23-***NPFA 30 m	CH23-***NVK + CH23-***NPMA 30 m	CH22-***NSMF + CH22-***NSFY 30 m

Details of model designation

Scale

SR67A - xxx□□A #

Type	Reference point position
X	Center
Y	Zero position

SIEMENS AG: Y only
Mitsubishi Electric, FANUC: X only
* Please consult our representative separately for arbitrary positions.

Type	NC manufacture	Remarks
A	FANUC	
B	Mitsubishi Electric	2-wire
D	Mitsubishi Electric	4-wire
Z	SIEMENS AG	DRIVE-CLiQ

Type	Direction	Resolution	Type	Direction	Resolution
A		0.01	F		0.01
B		0.05	G		0.05
C	(plus)	0.1	H	(minus)	0.1
D		0.5	J		0.5
E		1	K		1

SIEMENS AG: A only
Mitsubishi Electric: A, B, C
FANUC: A, B, C, D, E, F, G, H, J, K

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

L: Effective length (mm)
Effective length (cm)

Cables

CH22 - xxx□□A #

Type	Control side connector
Y	RJ45 connector made by Yamaichi Electric
Z	RJ45 connector (water-proof) made by Yamaichi Electric
F	M12 connector (male) made by Phoenix Contact

Type	Scale side connector
M	Scale head connector
F	M12 connector (male) made by Phoenix Contact
E	M12 connector (female) with panel mount relay made by Phoenix Contact

Type	Cable specification
S	SIEMENS Motion Connect 800Plus (green)

Type	Conduit specification
C	With conduit
N	Without conduit

Cable length (Example)

Type	Cable length
010	1.0 m
105	10.5 m

CH23 - xxx□□A #

Type	Scale side connector
None	Original of Magnescale
A	10P JN2 (female) made by Japan Aviation Electronics Industry
C	12P R04-9125J12F8.5 (flange, female) made by Tajimi Electronics

Type	Control side connector
None	Unterminated end
K	10P JN1 (male) made by Japan Aviation Electronics Industry
M	10P made by Sumitomo 3M
N	12P R04 (male) made by Tajimi Electronics

Type	Cable specification
E	Polyurethane φ8 made by Yoshinogawa Electric Wire & Cable
P	PVC φ8 made by Hirakawa Hewtech
Z	PVC φ6.8 made by Hirakawa Hewtech

Type	Conduit specification
C	With conduit
N	Without conduit
R	With plastic tube

Cable length (Example)

Type	Cable length
010	1.0 m
105	10.5 m