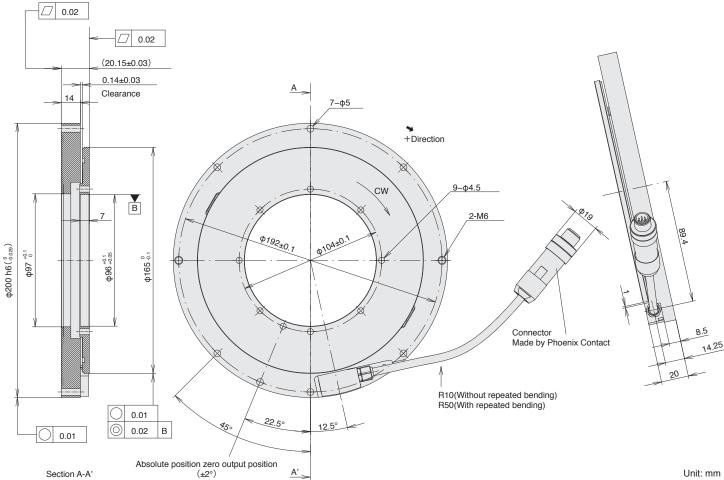
## Absolute rotary magnescale Rotary exposed type RS97-1024 · Amp-less design enables direct communication using the protocol of each supporting manufacturer Magnetic system enables use even in environments with condensation and oil and other adverse conditions

- 96mm diameter through-hole allows for design and mounting flexibility
- Use of two heads provides resistance to axial runout

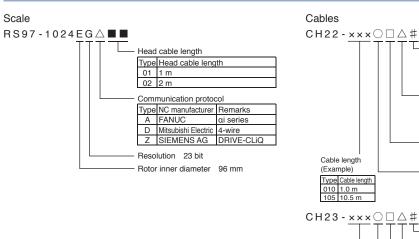
## Dimensions



## Specifications

Model name	RS97-1024EGA	RS97-1024EGD	RS97-1024EGZ
Output wave number		1,024 waves/revolution	
Through hole diameter		φ96 mm	
Accuracy(at 20°C)		±2.5"	
Output signal	Absolute serial bidirectional s	ignal, compliant with EIA-485	Compliant with DRIVE-CLiQ
Compatible controllers	FANUC	Mitsubishi Electric	SIEMENS AG
Resolution		23 bits (8,388,608 pulses/revolution)	
Maximum response revolutions		5,000 min <sup>-1</sup>	
Functional safety	Please consult with eac	h controller manufacturer regarding supp	oort for functional safety.
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 +60°C	
Storage temperature range		-10 to +60°C	
Vibration resistance		150 m/s <sup>2</sup> (50 Hz to 2,000 Hz)	
Impact resistance	1,000 m/s² (11 ms)		
Protective design grade		IP65	
Power supply voltage range	DC+4.75 t	o +5.25 V	DC+17 to +30.8 V
Maximum power consumption	1.25W or less (4.75V) 1.2W or less (5.25V)		2.3W or less (17V) 3.1W or less (30.8V)
Power consumption	240mA (5V) (when the	controller is connected)	120mA (24V) (when the controller is connected)
Moment of inertia		9×10 <sup>-4</sup> kgm <sup>2</sup> or less	•
Starting torque (at 20°C)		_	
Mass	Ар	prox. 2kg (rotor: 0.2kg/ stator: 1.7kg) or le	ess
Compatible cables (types without relay connectors) Maximum cable length	CH23-***NPFA 30 m	CH23-***NPMA 30 m	CH22-***NSFY 30 m
Compatible cables (types with relay connectors) Maximum cable length	CH23-***NPKA + CH23-***NPFA 30 m	CH23-***NPKA + CH23-***NPMA 30 m	CH22-***NSFF + CH22-***NSFY 30 m

## Details of model designation





		Control side connector
		Туре
		Y RJ45 connector made by Yamaichi Electric
		Z RJ45 connector (water-proof) made by Yamaichi Electric
		F M12 connector (male) made by Phoenix Contact
		Scale side connector
		Туре
		M Scale head connector
		F M12 connector (male) made by Phoenix Contact
		E M12 connector (female) with panel mount relay made by Phoenix Contact
		Cable specification
		Type Cable specification
		Conduit specification
		Type Conduit specification
		C With conduit
		N Without conduit
<u> </u>	_# T┖	Scale side connector
Ī	$\square_{\perp}^{\#}$	Type None Original of Magnescale
Ī	<u> </u>	Type None Original of Magnescale A 10P JN2 (female) made by Japan Aviation Electronics Industry
		Type     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
Ī		Type     None Original of Magnescale     A   10P JN2 (female) made by Japan Aviation Electronics Industry     C   12P R04-9125.112F8.5 (flange, female) made by Tajimi Electronics     Control side connector   Control side connector
		Type     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     Control side connector   Type
		Type     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     Control side connector   Type     None   Unterminated end
		Type     None Original of Magnescale     A   10P JN2 (female) made by Japan Aviation Electronics Industry     C   12P R04-9125.112F8.5 (flange, female) made by Tajimi Electronics     Control side connector   Type     None Unterminated end   K     K   10P JN1 (male) made by Japan Aviation Electronics Industry
		Type     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     Control side connector   Type     None Unterminated end   K     K   10P JN1 (male) made by Japan Aviation Electronics Industry     M   10P made by Sumitomo 3M
	 	Type     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     Control side connector   Type     None Unterminated end   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     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     Control side connector   Type     None   Unterminated end     K   10P JN1 (male) made by Japan Aviation Electronics Industry     M   10P made by Sumitorno 3M     N   12P R04 (male) made by Tajimi Electronics     Cable specification   Cable specification
		Type     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     Control side connector     Type     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     Cable specification     Type[ Zable specification
		Type     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     Control side connector   Trype     None Unterminated end   None Unterminated end     M   10P JN1 (male) made by Japan Aviation Electronics Industry     M   10P made by Samitomo 3M     N   12P R04 (male) made by Tajimi Electronics     Cable specification   Type Cable specification     E   Urethane q6 made by Yoshinogawa Electric Wire & Cable
		Type     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     Control side connector   Type     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     Cable specification   Type Cable specification     E   Urethane $\phi$ 8 made by Yoshinogawa Electric Wire & Cable     P   PVC $\phi$ 8 made by Hirakawa Hewtech
		Type     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     Control side connector   Trype     None Unterminated end   None Unterminated end     M   10P JN1 (male) made by Japan Aviation Electronics Industry     M   10P made by Samitomo 3M     N   12P R04 (male) made by Tajimi Electronics     Cable specification   Type Cable specification     E   Urethane q6 made by Yoshinogawa Electric Wire & Cable
		Type     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     Control side connector   Type     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     Cable specification   Type Cable specification     E   Urethane $\phi$ 8 made by Yoshinogawa Electric Wire & Cable     P   PVC $\phi$ 8 made by Hirakawa Hewtech
		Type     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     Control side connector   Type     None Unterminated end   None Unterminated end     M 10P JN1 (male) made by Japan Aviation Electronics Industry   M     M 10P made by Sumitorno 3M   N     N 12P R04 (male) made by Tajimi Electronics   Cable specification     Type Cable specification   E     E Urethane $\phi$ 8 made by Voshinogawa Electric Wire & Cable   P     P VC $\phi$ 8 made by Hirakawa Hewtech   Z     Z PVC $\phi$ 6.8 made by Hirakawa Hewtech   Conduit specification
		Type   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   Control side connector Type   None Unterminated end 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   Cable specification E   E Urethane $\phi$ 8 made by Yoshinogawa Electric Wire & Cable   P PVC $\phi$ 8 made by Hirakawa Hewtech   Z PVC $\phi$ 6 made by Hirakawa Hewtech   Z PVC $\phi$ 6 made by Hirakawa Hewtech   Z PUC doult specification   Type[Conduit specification Type[Conduit specification
		Type   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   Control side connector Type   None Unterminated end None Unterminated end   K 10P JN1 (male) made by Japan Aviation Electronics Industry   M 10P R04 (male) made by Japan Aviation Electronics   Cable specification Cable specification   E Urethane $\phi$ 8 made by Yoshinogawa Electric Wire & Cable   P PVC $\phi$ 8 made by Hirakawa Hewtech   Z PVC $\phi$ 8 made by Hirakawa Hewtech   Z Conduit specification   Type/Conduit specification Type/Conduit specification
		Type     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     Control side connector   Type     None   Unterminated end     K   10P JN1 (male) made by Japan Aviation Electronics Industry     M   10P made by Sumitomo 3M     N   12P R04-04 (male) made by Tajimi Electronics     Cable specification   Type Cable specification     E   Urethane $\phi$ 8 made by Voshinogawa Electric Wire & Cable     P   PVC $\phi$ 8 made by Hirakawa Hewtech     Z   PVG $\phi$ 6.8 made by Hirakawa Hewtech     Conduit specification   Type Conduit specification     Type Conduit specification   C