YKAN

Incremental Rotary Encoder

Series KEI-58T

Operation Manual

Thank you for purchasing this series KEI-58T Incremental Rotary Encoders. Please read this Operation Manual carefully before applying this product.

PLEASE KÉEP MANUAL IN SAFE PLACE!

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JELWX-M8588A-E

This indicates contents which can cause large accidents leading to loss of life or severe injury when the indication is disregarded and wrong handling is executed.

This indicates contents which can cause injury or material damage when the indication is disregarded and wrong handling is executed.

Explanation of the pictograms

This symbol indicates a general prohibition.

This symbol indicates a compulsory item or an instruction.

[Operating environment and conditions]

Safety Consideration

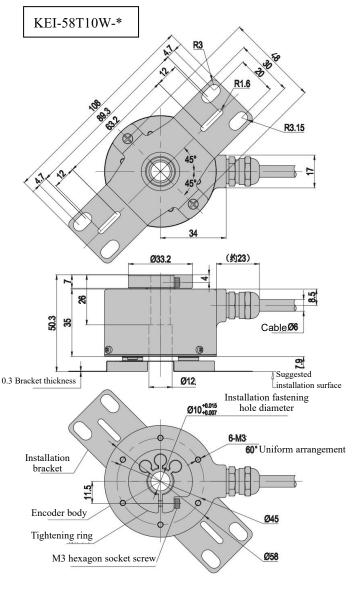
/ Warning

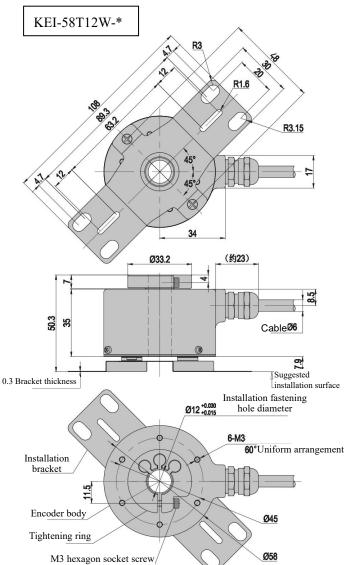
- Do not use in a combustible or explosive atmosphere.

 Otherwise personal injury or fire may be caused.
- Do not use this product for applications related to human safety.

 Use is assumed in an application where an accident or incorrect use will not immediately cause danger to humans.

■ External dimensions





[Operating environment and conditions]

∕!\Caution

Use and store the equipment within the scope of the environment (vibrations, impact, temperature, humidity etc.) specified in the specifications.

Otherwise fire or product damage may be caused.

I Understand the product first before use it.

[Installation and wiring]

/ Warning

- Use only with the power supply voltage listed in the specifications.

 Otherwise fire, electric shock, or accidents may be caused.
- Use only with the wiring and layout specified in the specifications.

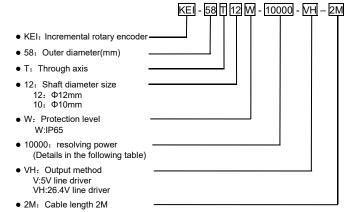
 Otherwise fire, electric shock, or accidents may be caused.
- Do not apply any kind of stress to the wires.

 Otherwise electric shock or fire may be caused.

■ Environmental requirements

Ambient temperature	Operation temperature:-25~+85℃	
	Storage temperature: −30~+85°C	
Ambient humidity	y 35~90%RH (non-condensing)	
Withstand voltage	voltage AC500V 1minute	
Insulation resistance	≥50M Ω (between power supply, signal line and body)	
Vibration resistance	Durable for 1h along 3 axes at 10 to 55Hz with 0.75mm amplitudes	
Shock resistance	11ms with 490m/s ² applied 3 times 3 axes	
Protection construction	Dust proofed:IP65	

■ Composition of model number

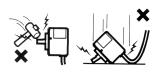


Pulse count/rev	1000	1024	2000	2048	4096	5000	8192	10000

■ Electrical specifications

	Type No.		KEI-58T		
_	Operating voltage		V:DC 5V±0.25V	VH:4.75-26.4VDC	
Power supply	Allowable ripple		≤3%rms		
supply	Current consumption		≤100mA (without load)		
	Signal format		Two phase output plus origin		
Max	Max. response frequency Duty cycle Phase difference amplitude Origin signal amplitude		200kHz		
			50%±25%		
Phase			25% ± 12.5%		
Ori			100%±50%		
	Pulse rise/fall time		Less than 2us (cable length 2m, output current 20mA)		
	Line driven output		26C31 equivalent	IC-HD7 equivalent	
Output	output voltage	"H"	≥ [(power supply voltage) -2.5V]		
		"L"	≤0.5V		
	Output current		≤20mA.		

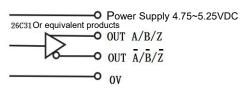
■ Cautions for use



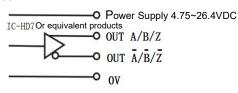
- Do not wire the cable in parallel with other power lines and do not share a duct with other cables.
- Use capacitors or surge absorption elements to remove the sparks caused by relays and switches in the control panel as far as possible.
- Be sure to connect all wires properly, as wrong wiring can damage the internal circuitry.
- The service life of the bearing is largely affected by the amount of load to the shaft. Try to reduce the load as much as possible.
- Do not disassemble the product.
- As the rotary encoder is composed of precision parts, its function will be impaired when it is subjected to
 - shocks. Use sufficient care for handling and mounting.
- Avoid using this product in the following places: the place where there is excessive vibration and shock, the encoder may be damaged; the place where there are devices with strong magnetic and strong electrical interference; the place where there is flammable, corrosive gases, splashing water, oil and dusty; the place where the temperature and humidity exceeds the standard; the place where strong alkali and strong acid materials nearby; the place where receives direct sunlight.

Output circuit

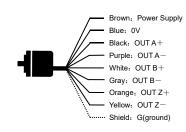
5V line driver



30V line driver



■ Connection



■ Mechanical specifications

Start	ing torque	Max.0.05N • m		
Shaft mo	ment of inertia	5.7×10 ⁻⁶ kg • m²		
Max. allowable	Radial	100N		
shaft load	Thrust	50N		
Max. allo	owable speed	3500rpm		
bearing life		1.2×10 ⁹ revolutions(Calculated value at maximum load)		
	Material	Oil-resistant PVC(with shielded cable)		
Cable	Nominal core cross section	0.2mm² (AWG24)		
	External diameter	Approx. 6.0mm		
V	Veight	Approx320g(cable length 2m)		

■ Output signal timing chart

