

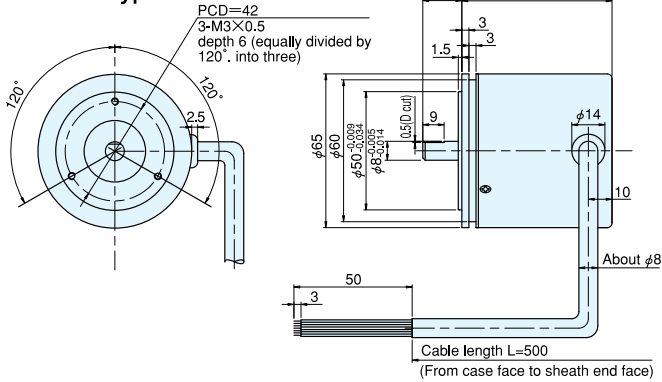
MXS-series

[High-resolution Multiple-rotation
(64 rotations max) Absolute Type Encoder]

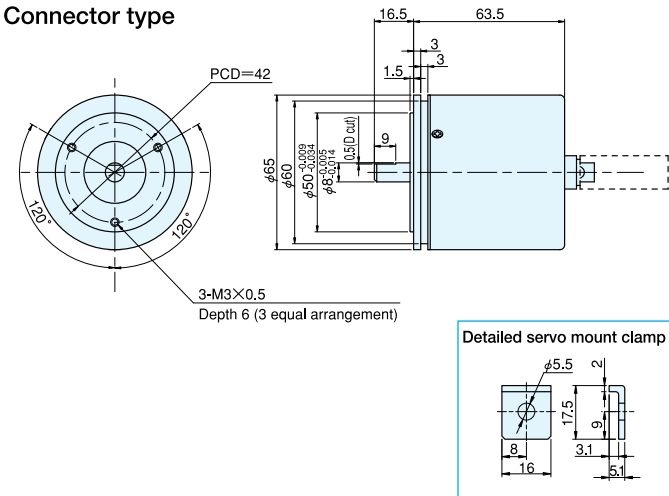
- High-reliability operation without internal battery is possible. (Batteryless)
- Permitting a total count of 2^{18} max. high-resolution
- O.D. $\phi 65 \times 63.5$
- Multiple-rotation (64 rotations max.) absolute output
- Selection of gray code output without reading error or pure binary code
- Selection of side-cable, rear-cable, or connector type
- IP64 drip-proof option possible (rear-cable type)

Outside dimensions

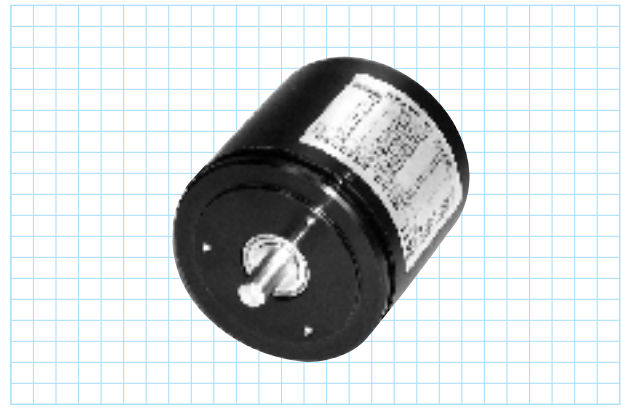
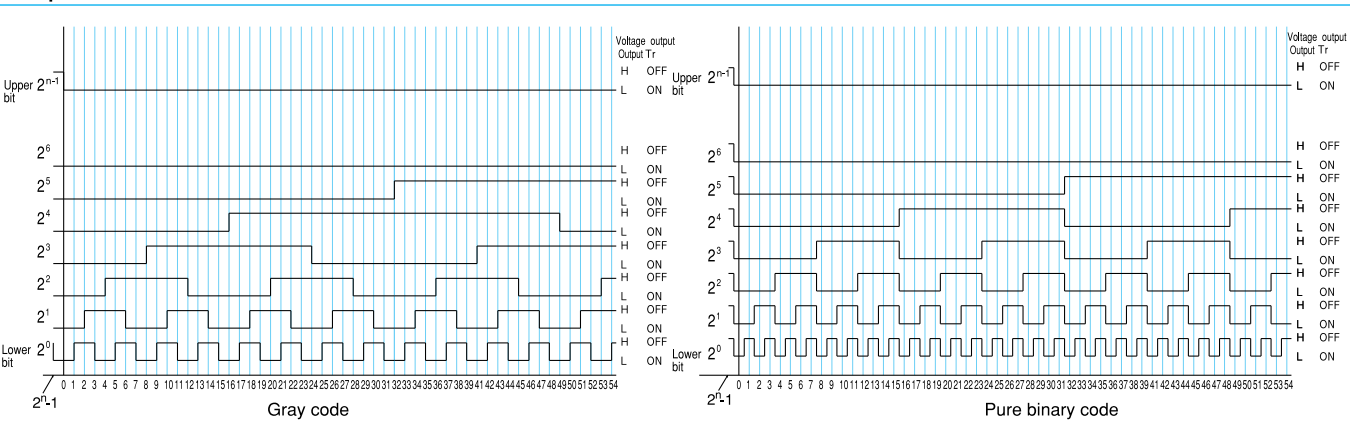
Standard type



Connector type



Output code



Specifications

Item	Type name	MXS□-□○□-△□□□□□◇
	Drip-proof (W)	Rotation
		One rotation resolution
		Output signal code
		●G=gray code ●N=pure binary code
		◇C:open collector output
Supply voltage	Voltage output:DC5V-5%~12V+10% Open collector output:C DC5V-5%~24V+15%	
Current consumption	Voltage output:400mA or less Open collector output:C 200mA or less	
Output code	G:gray code N:pure binary code	
Output logic	No mark: positive logic; N: negative logic	
Output pulse number (Standard)	128	1,024
[Pulse number/rotation]	256	2,048
	512	4,096
Rotation number	2·4·8·16·32·64·100(N only)	
Maximum response frequency	40kbit/s	
Starting torque	2mN·m (typ) Drip-proof 9.8mN·m (typ)	
Shaft allowable load (electrical)	Radial	49N (5kgf)
	Thrust	29.4N (3kgf)
Working temperature/humidity	-10°C~70°C/RH95%以下 (no dewing)	
Storage temperature	-20°C~80°C	
Vibration resistance	Durability 0-500Hz, double amplitude 1.52mm 2 hours each in X, Y, and Z directions	
Impact resistance	Durability 11msec (about 50G) 3 times each in X, Y, and Z directions	

Connection

a) Cable				b) Connector			
Cable color	Output signal	Cable color	Output signal	Pin No.	Output signal	Pin No.	Output signal
Brown	2 ⁰	Brown/White	2 ¹⁰	1	2 ⁰	13	2 ¹²
Red	2 ¹	Red/White	2 ¹¹	2	2 ¹	14	2 ¹³
Orange	2 ²	Orange/White	2 ¹²	3	2 ²	15	2 ¹⁴
Yellow	2 ³	Yellow/White	2 ¹³	4	2 ³	16	2 ¹⁵
Green	2 ⁴	Green/White	2 ¹⁴	5	2 ⁴	17	2 ¹⁶
Blue	2 ⁵	Blue/White	2 ¹⁵	6	2 ⁵	18	2 ¹⁷
Purple	2 ⁶	Purple/White	2 ¹⁶	7	2 ⁶	19	Vcc
Gray	2 ⁷	Gray/White	2 ¹⁷	8	2 ⁷	20	Vcc
White	2 ⁸	Yellow/Black	Vcc	9	2 ⁸	21	COMMON
Black	2 ⁹	White/Black	COMMON	10	2 ⁹	22	COMMON
		Shield	Cable shield	11	2 ¹⁰	23	NC
				12	2 ¹¹	24	Frame ground
						25	NC

Note:

- shielding cable is non-connected in encoder.
- Those cable which are unnecessary for signals are to be cut.
- The form below indicate 64 multy-turn and 4096P/R. When resolution is not enough, it becomes NC.

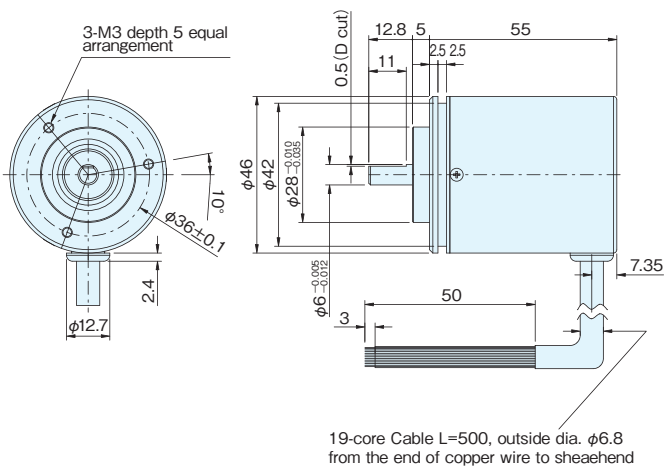
MXS-36-series

[High-resolution Multiple-rotation
(64 rotations max) Absolute Type Encoder]

NEW



Outside dimensions



Specifications

Item	Type name	MXS-36-□□□□□△C6-◇◇
	Number of turns	One rotation resolution
	Output signal code	●G ●N Option: No mark, V Option: No mark, N
Supply voltage	DC5V-5%~24V+15%	
Current consumption	150mA or less (under no load)	
Output code	G: gray code N: pure binary code	
Output circuit	NPN open collector	
Output logic	No mark: positive logic; N: negative logic	
Output pulse number (Standard) [Pulse number/rotation]	128 1,024 256 512	
Rotation number	2·4·8·16·32·64	
Maximum response frequency	40kbit/s (10kbit/s at guaranteed accuracy)	
Starting torque	10×10 ⁻³ N·m (100gf·cm) or less	
Shaft allowable load (electrical)	Radial	19.6N (2kgf)
	Thrust	9.8N (1kgf)
Working temperature/humidity	-10°C~70°C/RH95% or less (no dewing)	
Storage temperature	-20°C~80°C	
Vibration resistance	Durability 0-500Hz, double amplitude 1.52mm 2 hours each in X, Y, and Z directions	
Impact resistance	Durability 11 msec (about 50G) 3 times each in X, Y, and Z directions	
Mass	170g or less (excluding cable)	

Connection

Cable color	Output signal	Cable color	Output signal
Brown	2 ⁰	Purple	2 ¹⁰
Brown/Black	2 ¹	Purple/Black	2 ¹¹
Orange	2 ²	Gray	2 ¹²
Orange/Black	2 ³	Gray/Black	2 ¹³
Yellow	2 ⁴	White	2 ¹⁴
Yellow/Black	2 ⁵	White/Black	2 ¹⁵
Green	2 ⁶	Red	Vcc
Green/Black	2 ⁷	Black	COMMON
Blue	2 ⁸	Shield(*)	Cable shield
Blue/Black	2 ⁹	-	-

(*)shielding cable is non-connected in encoder.