

Ethernet Slip Ring

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Cosmau's Ethernet slip ring with advanced design that can transfer Ethernet data through a rotating interface reliably, our designs can meet the challenge of matching impedance, controlling crosstalk and managing losses.

Ethernet slip ring specially designed for 250Mhz frequency to transmit 100M/1000M Ethernet signals, with advantages of reliable transmitting, no packet loss, no string code, low return loss, low insertion loss, and PoE also available. In addition, this Ethernet slip ring can combine with power and other signal transmission, and special requires can be customized.



Features:

- Continuous 360° rotation of signal or data
- With RJ45 connectors
- Gold-on-gold contact
- No require lubrication
- Max 8 channels Ethernet in one slip ring
- 100M/1000M Ethernet transmission

ETW SERIES MODEL#

Model#	ID(mm)	OD(mm)	100M/1000M Ethenret	Power / Signal
ETW221	-	22	1~2	2~26
ETW12	12.7	56	1~4	2~22
ETW25	25.4	86	1~4	2~48
ETW38	38.1	99	1~4	2~56
ETW50	50	119	1~4	2~72

ETW221 Series Overview

Description

Slip ring is a precision device can be used in any electromechanical system that transfer signal and power from a stationary to a rotating structure, and the power and all kinds of signal can combine in one slip ring.

ETW221 Ethernet slip ring with compact design, 22mm OD, 1~2 channel Ethernet, can combine with 2A signal. Gold-gold plating which ensures low BER(bit-error rate)and high signal-noise ratio.



Specifications

Item	
Operating Speed	Max.250 RPM*
Number of Circuits	1x Ethernet + 2~26 wires
Lead Wire	CAT7, AWG28# Teflon, 300mm
Voltage	240V AC/DC
Operating Temperature	-20℃ to 60℃
Current Rating	Signal / 2A circuits
Noise	<0.01Ω
Torque	0.02N.m
Housing Material	Plastic
Protection Grade	IP51

* Please note that the operational life of the unit is dependent upon rotational speed, environment and temperature

Options

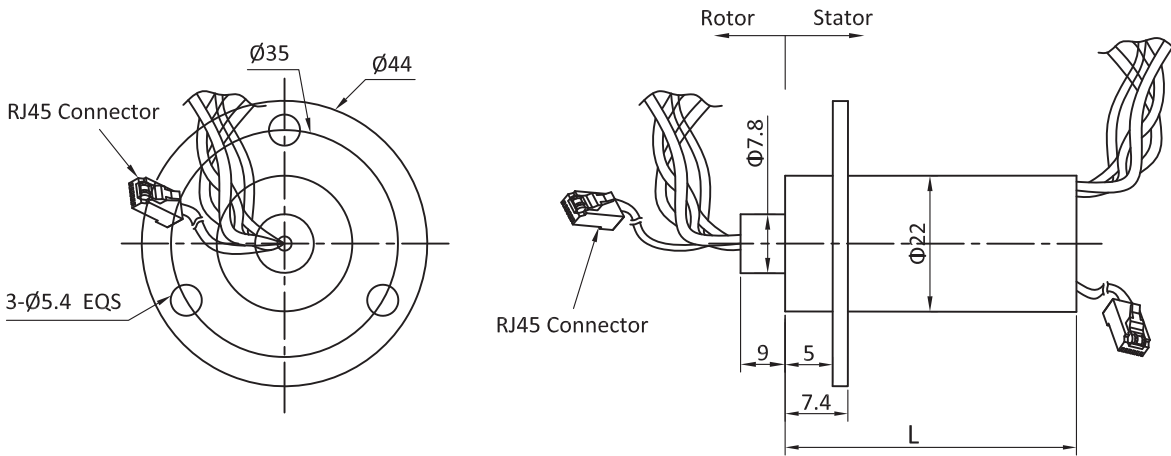
- Support hybrid high speed data transmission
- Longer lead lengths are available
- Hybrid Pneumatic/hydraulic and electric slip ring can be mixed.
- Terminal and heat-shrink tube are optional

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ETW221

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ETW221 Series Dimensions



Notes:

- 1. Drawings not actual size, dimensions are in millimeters

Part# List

Model#	Power Circuits(5A/10A)	Signal (2A)	100/1000M Ethernet	OD(mm)	Length(mm)
ETW221-06S	-	6	1	22	35
ETW221-14S	-	14	1	22	42.5
ETW221-26S	-	26	1	22	48.4

Lead wire color code(From the rotor)					
Ring#	Color	Description/AWG	Ring#	Color	Description/AWG
1	BLK	Signal / 2A, AWG28#	7	BLU	Signal / 2A, AWG28#
2	BRN		8	VIO	
3	RED		9	GRY	
4	ORN		10	WHT	
5	YEL		11	PINK	
6	GRN		12	SOFT-BLU	

Notes:

12 wires for 1 group color, from 12~24 circuits would repeat the same color.

ETW121 Series Overview

Description

Slip ring is a precision device can be used in any electromechanical system that transfer signal and power from a statinary to a state structive, and the power and all kinds of signal can combination in one slip ring.

ETW12 Ethernet slip ring with compact design, 12.7 mm routing space for shaft mounting, 1~4 channel Ethernet can combine with 2A signal and power(5A,8A). Gold-gold plating which ensures low BER(bit-error rate)and high signal-noise ratio.



Specifications

Item	
Operating Speed	Max.300 RPM*
Number of Circuits	1x Ethernet + 2~22 wires
Lead Wire	CAT7, AWG22#, AWG18# Teflon, 300mm
Voltage	380V AC/DC
Operating Temperature	-30℃ to 80℃
Current Rating	5A and 8A
Noise	<0.01Ω
Torque	0.1N.m; + 0.06N.m/6rings
Housing Material	Al Alloy
Protection Grade	IP51

* Please note that the operational life of the unit is dependent upon rotational speed, environment and temperature

Options

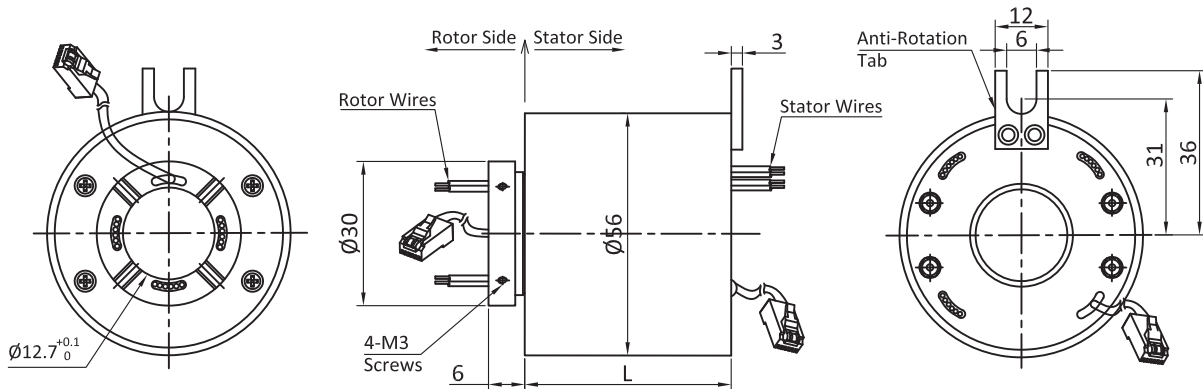
- Flange with 4 mounting holes
- Splash seals for dust and moisture resistance
- Various axial and radial lead exits are available
- Longer lead lengths are available
- Higher current and voltage capacity per circuit
- Support mixed high speed data transmission
- Hybrid Pneumatic/hydraulic and electric slip ring can be mixed.
- Aviation plug, terminal and heat-shrink tube are optional
- IP 65 rated slip ring available

INTRODUCE

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ETW121 Series Dimensions



Notes:

1. Drawings not actual size, dimensions are in millimeters
2. Rotor and stator leads exit 4 places, 90° apart
3. Flange mounting is options

Part# List

Model#	Power Circuits(10A)	Signal (2A/5A)	100/1000M Ethernet	OD(mm)	Length(mm)
ETW121-S04	-	6	1	56	56.9
ETW121-P04	4	-	1	56	56.9
ETW121-S10	-	10	1	56	74.3
ETW121-P04S06	2	8	1	56	74.3
ETW121-S16	-	16	1	56	91.7
ETW121-P04S12	4	12	1	56	91.7
ETW121-S22	-	22	1	56	109.1

Notes: Not all of the part number are list in this table, if can not find suitable products, please contact us!

Lead wire color code(From the rotor)

Ring#	Color	Description/AWG	Ring#	Color	Description/AWG
1	-	1000_T / CAT7 cable	9	RED	Signal / 5A, AWG22# Power/8A, AWG18#
2	-		10	BLK	
3	-		11	BLU	
4	-		12	BRN	
5	-		13	WHT	
6	-		14	GRY	
7	-				
8	-				

Notes:

6 wires for 1 group color, from 6~12 circuits would repeat the same color.

ETW251 Series Overview

Description

Slip ring is a precision device can be used in any electromechanical system that transfer signal and power from a stationary to a rotating structure, and the power and all kinds of signal can combination in one slip ring.

ETW25 with 25.4 mm through hole, 1~4 Ethernet channel, 1000M Ethernet + power/signal.

Gold-gold plating which ensures low BER(bit-error rate)and high signal-noise ratio.



Specifications

Item	
Operating Speed	Max.300 RPM*
Number of Circuits	1x Ethernet + 2~40 wires
Lead Wire	CAT7, AWG22#, AWG16# Teflon, 300mm
Voltage	440V AC/DC
Operating Temperature	-30 ℃ to 80 ℃
Current Rating	5A and 10A
Noise	<0.01Ω
Torque	0.1N.m; + 0.06N.m/6rings
Housing Material	Al Alloy
Protection Grade	IP51

* Please note that the operational life of the unit is dependent upon rotational speed, environment and temperature

Options

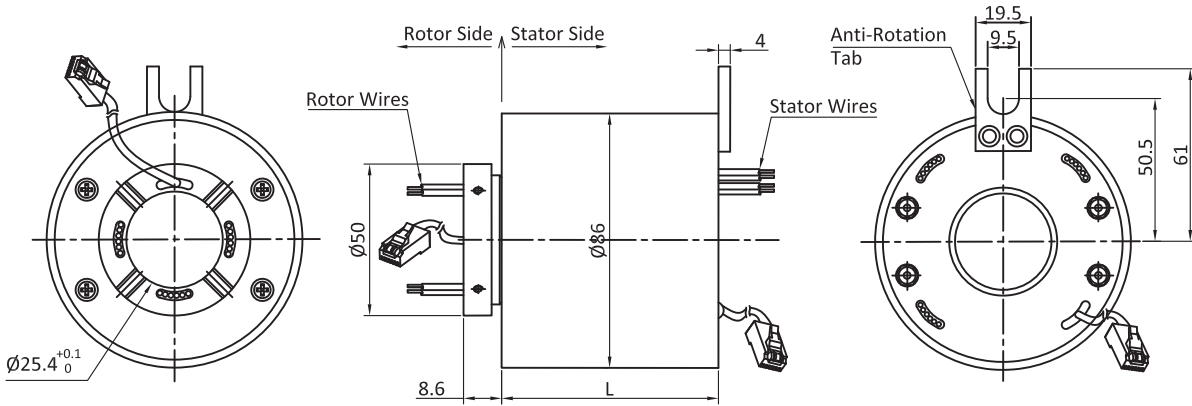
- Flange with 4 mounting holes
- Splash seals for dust and moisture resistance
- Various axial and radial lead exits are available
- Longer lead lengths are available
- Higher current and voltage capacity per circuit
- Support mixed high speed data transmission
- Hybrid Pneumatic/hydraulic and electric slip ring can be mixed.
- Aviation plug, terminal and heat-shrink tube are optional
- IP 65 rated slip ring available

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ETW251 Series Dimensions



Notes:

1. Drawings not actual size, dimensions are in millimeters
2. Rotor and stator leads exit 4 places, 90° apart
3. Flange mounting is options

Part# List

Model#	Power Circuits(10A)	Signal (2A/5A)	100/1000M Ethernet	OD(mm)	Length(mm)
ETW251-S04	-	6	1	86	68.7
ETW251-P04	4	-	1	86	68.7
ETW251-S10	-	10	1	86	89.7
ETW251-P04S06	4	6	1	86	89.7
ETW251-S16	-	16	1	86	110.7
ETW251-P04S12	4	12	1	86	110.7
ETW251-S22	-	22	1	86	131.7

Notes: Not all of the part number are list in this table, if can not find suitable products, please contact us!

Lead wire color code(From the rotor)

Ring#	Color	Description/AWG	Ring#	Color	Description/AWG
1	-	1000_T / CAT6 cable	9	RED	Signal / 5A, AWG22# Power/10A, AWG16#
2	-		10	BLK	
3	-		11	BLU	
4	-		12	BRN	
5	-		13	WHT	
6	-		14	GRY	
7	-				
8	-				

Notes:

6 wires for 1 group color, from 6~12 circuits would repeat the same color.

ETW381 Series Overview

Description

Slip ring is a precision device can be used in any electromechanical system that transfer signal and power from a stationary to a rotating structure, and the power and all kinds of signal can combination in one slip ring.

Gold-gold plating which ensures low BER(bit-error rate)and high signal-noise ratio.
ETW38 with 38.1mm through hole, 1~4 Ethernet channel, signal and power combination options. More Ethernet channel can be customized.



Specifications

Item	
Operating Speed	Max.300 RPM*
Number of Circuits	1x Ethernet + 2~40 wires
Lead Wire	CAT7, AWG22#, AWG16# Teflon, 300mm
Voltage	440V AC/DC
Operating Temperature	-30 ℃ to 80 ℃
Current Rating	5A and 10A
Noise	<0.01Ω
Torque	0.1N.m; + 0.06N.m/6rings
Housing Material	Al Alloy
Protection Grade	IP51

* Please note that the operational life of the unit is dependent upon rotational speed, environment and temperature

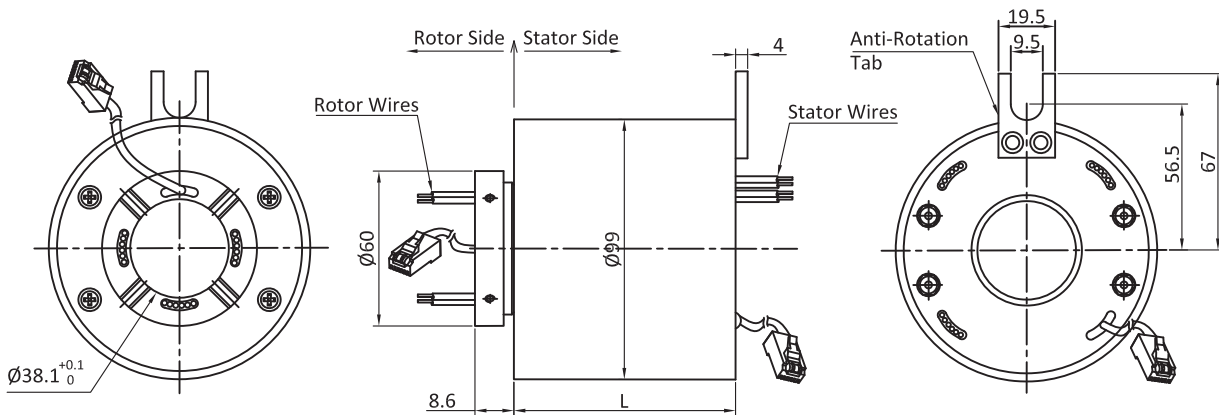
Options

- Flange with 4 mounting holes
- Splash seals for dust and moisture resistance
- Various axial and radial lead exits are available
- Longer lead lengths are available
- Higher current and voltage capacity per circuit
- Support mixed high speed data transmission
- Hybrid Pneumatic/hydraulic and electric slip ring can be mixed.
- Aviation plug, terminal and heat-shrink tube are optional
- IP 65 rated slip ring available

INTRODUCE

ETW381

ETW381 Series Dimensions



Notes:

1. Drawings not actual size, dimensions are in millimeters
2. Rotor and stator leads exit 4 places, 90° apart
3. Flange mounting is options

Part# List

Model#	Power Circuits(10A)	Signal (2A/5A)	100/1000M Ethernet	OD(mm)	Length(mm)
ETW381-S04	-	6	1	99	68.7
ETW381-P04	4	-	1	99	68.7
ETW381-S10	-	10	1	99	89.7
ETW381-P04S06	4	6	1	99	89.7
ETW381-S16	-	16	1	99	110.7
ETW381-P04S12	4	12	1	99	110.7
ETW381-S22	-	22	1	99	131.7

Notes: Not all of the part number are list in this table, if can not find suitable products, please contact us!

Lead wire color code(From the rotor)

Ring#	Color	Description/AWG	Ring#	Color	Description/AWG
1	-	1000_T / CAT6 cable	9	RED	Signal / 5A, AWG22# Power/10A, AWG16#
2	-		10	BLK	
3	-		11	BLU	
4	-		12	BRN	
5	-		13	WHT	
6	-		14	GRY	
7	-				
8	-				

Notes:

6 wires for 1 group color, from 6~12 circuits would repeat the same color.

INTRODUCE

ETW501

ETW501 Series Overview

Description

Slip ring is a precision device can be used in any electromechanical system that transfer signal and power from a stationary to a rotating structure, and the power and all kinds of signal can combination in one slip ring.

Gold-gold plating which ensures low BER(bit-error rate)and high signal-noise ratio. ETW50 with 50 mm through hole, 1~4 Ethernet channel, signal and power combination options. More Ethernet channel can be customized.



Specifications

Item	
Operating Speed	Max.300 RPM*
Number of Circuits	1x Ethernet + 2~40 wires
Lead Wire	CAT7, AWG22#, AWG16# Teflon, 300mm
Voltage	600V AC/DC
Operating Temperature	-30 ℃ to 80 ℃
Current Rating	5A and 10A
Noise	<0.01Ω
Torque	0.1N.m; + 0.06N.m/6rings
Housing Material	Al Alloy
Protection Grade	IP51

* Please note that the operational life of the unit is dependent upon rotational speed, environment and temperature

Options

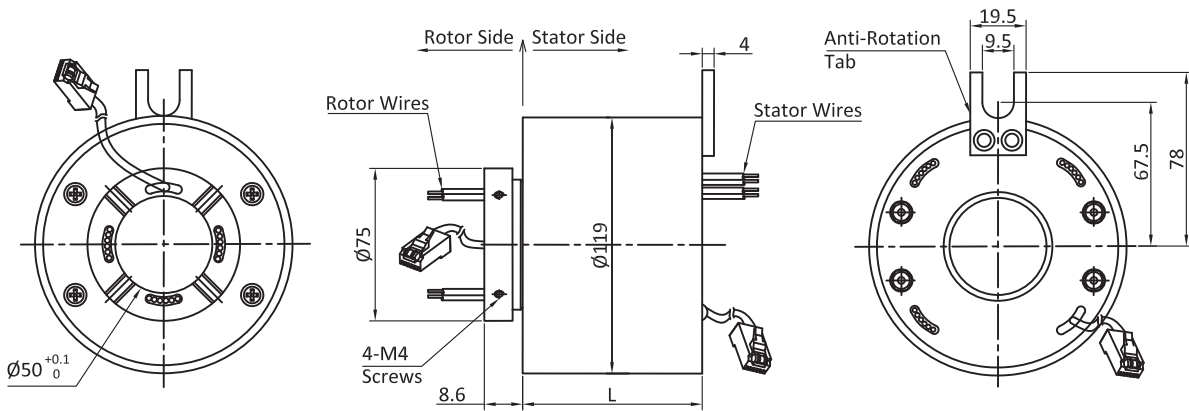
- Flange with 4 mounting holes
- Splash seals for dust and moisture resistance
- Various axial and radial lead exits are available
- Longer lead lengths are available
- Higher current and voltage capacity per circuit
- Support mixed high speed data transmission
- Hybrid Pneumatic/hydraulic and electric slip ring can be mixed.
- Aviation plug, terminal and heat-shrink tube are optional
- IP 65 rated slip ring available

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ETW501 Series Dimensions



Notes:

- 1. Drawings not actual size, dimensions are in millimeters
- 2. Rotor and stator leads exit 4 places, 90° apart
- 3. Flange mounting is options

Part# List

Model#	Power Circuits(10A)	Signal (2A/5A)	100/1000M Ethernet	OD(mm)	Length(mm)
ETW501-S04	-	6	1	119	78.8
ETW501-P04	4	-	1	119	78.8
ETW501-S10	-	10	1	119	101.6
ETW501-P04S06	4	6	1	119	101.6
ETW501-S16	-	16	1	119	124.4
ETW501-0410-12S	4	12	1	119	124.4
ETW501-S22	-	22	1	119	147.2

Notes: Not all of the part number are list in this table, if can not find suitable products, please contact us!

Lead wire color code(From the rotor)					
Ring#	Color	Description/AWG	Ring#	Color	Description/AWG
1	-	1000_T / CAT6 cable	9	RED	Signal / 5A, AWG22# Power/10A, AWG16#
2	-		10	BLK	
3	-		11	BLU	
4	-		12	BRN	
5	-		13	WHT	
6	-		14	GRY	
7	-				
8	-				

Notes:

6 wires for 1 group color, from 6~12 circuits would repeat the same color.