

FNC MIR Series



Features

- Robust mechanical & electrical construction
- Protection up to IP67
- Aluminum stainless steel body

Technical data-electrical ratings

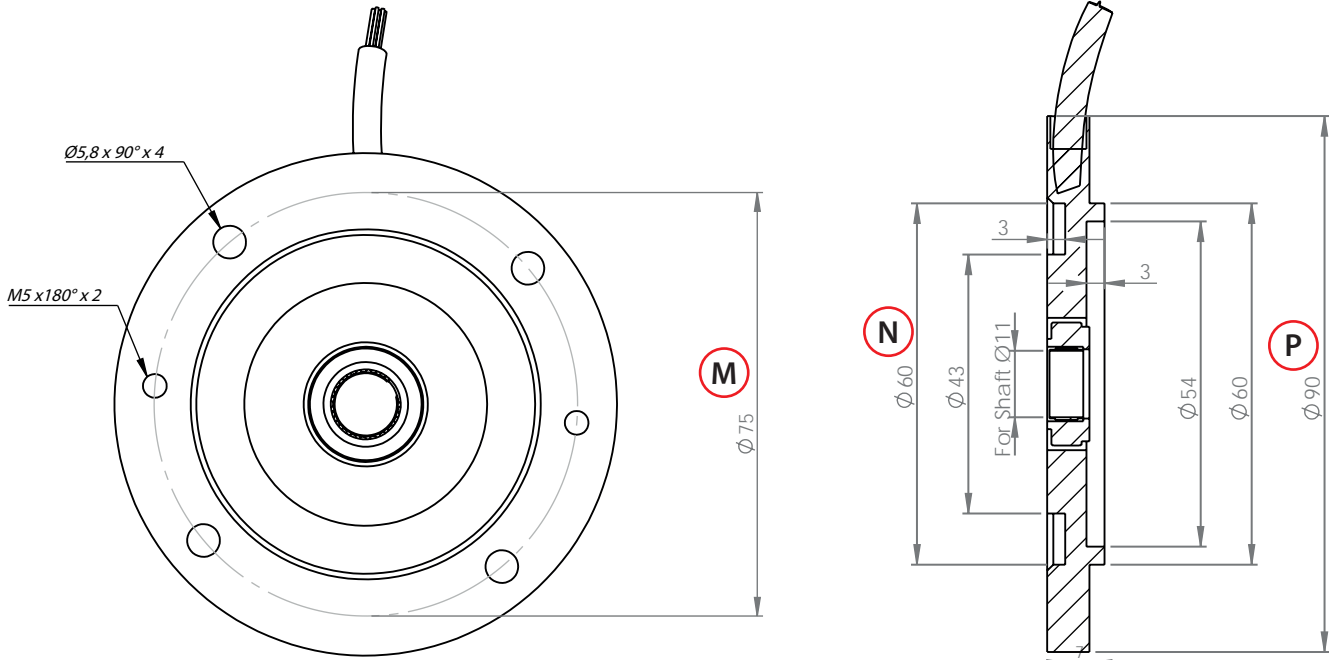
Voltage supply	5 - 30 VDC
Protection	Output short circuit protection. Reverse polarity protection (except 5V version)
Consumption w/o load	≤60 mA
Resolution (steps/turn)	1 - 16,384
Output signals	90° shifted A and B, + inverted
Output circuit	Linedriver / RS422 Push-pull short-circuit proof
Max. speed	6000 rpm (1024 ppr) 3000 rpm (2048 ppr)
Interface	HTL (Push-Pull), TTL
External evaluation	NPN, PNP, RS422
Cable length	2 m standard
Max. cable length	max 100 m (5 VDC) max 20 m (30VDC) max 50 m (30 VDC f_{max} 50 kHz)

Technical data-mechanical ratings

Pole length	2 mm for MRR200 tape
Protection DIN EN 60529	IP67
Travel speed	≤10,000 rpm standard >20,000 rpm (on request)
Starting torque	≤0.025 Nm (IP67)
Materials	Ring : Stainless steel
System accuracy	0.3° mm depends on mechanical tolerance
Repeat	±10μ
Operating temperature	-30°C up to +100°C
Storage temperature	-30°C up to +125°C
Weight approx.	250 g

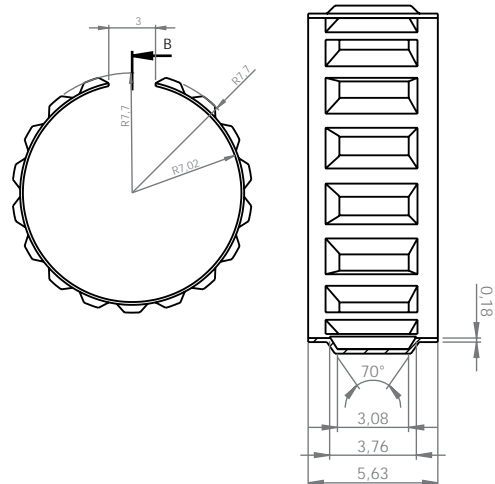
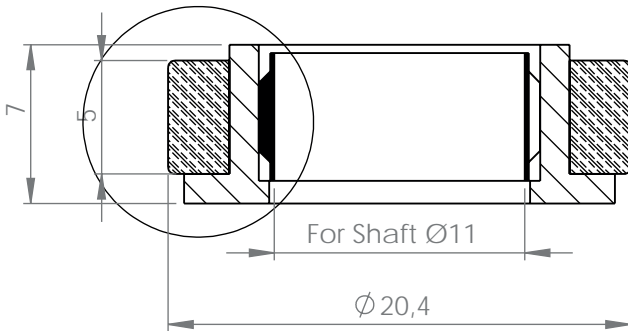
Mechanical Dimensions

MIR 90 Series Compatible with IEC063 B14 Flange



Magnetic Ring
P.N. MIRM3911

Magnetic Ring Spring
P.N. MIRS11



Encoder Part Number

FNC **MIR** **90** **11** **4** **30V** **32** - **R2**

Material
Standard Aluminum
SS : If Stainless Steel is requested

Output Channels
1 : A
2 : AB
4 : AB+A'B'

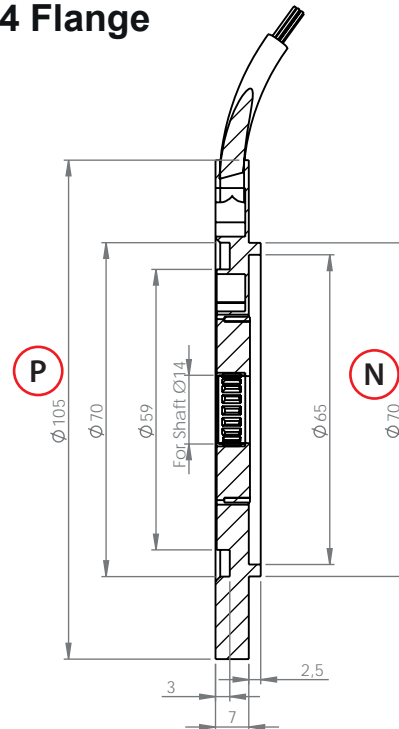
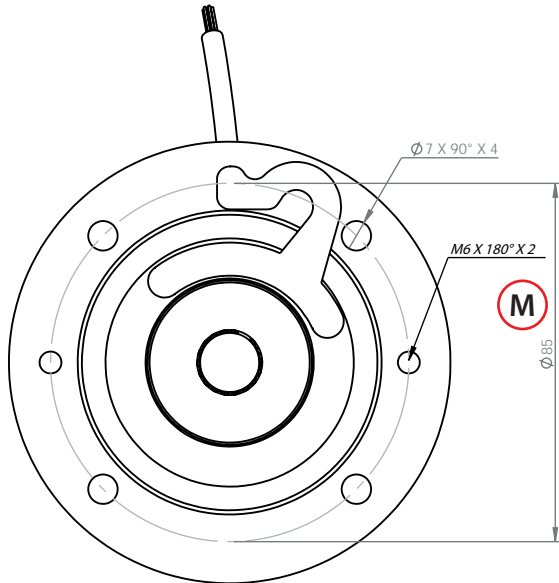
Cable
R2 : radial 2m, shield not connected (standard)

PPR Options
32, 64, 128, 256, 512, 1024, 2048, 4096, 8192, 16,384

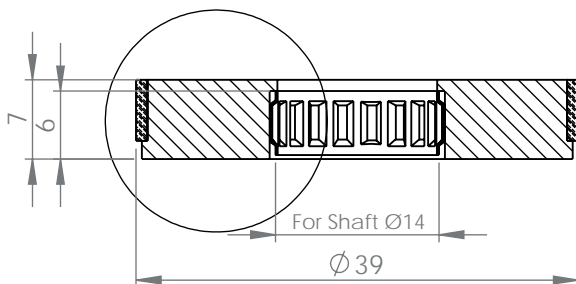
Supply Voltage and Output Circuit
5V : 5V in / out 245V : 5-30V in 5V out 30V : 5-30V in / out

Mechanical Dimensions

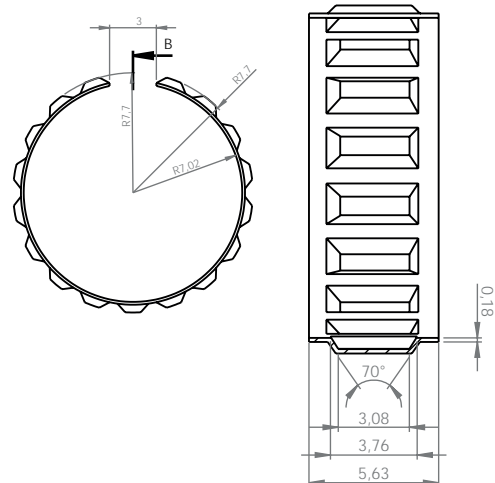
MIR 105 Series Compatible with IEC071 B14 Flange



Magnetic Ring P.N. MIRM3914



Magnetic Ring Spring P.N. MIRS14



Encoder Part Number

FNC MIR 105 14 4 30V 32 - R2

Material

Standard Aluminum
SS : If Stainless Steel is requested

Output Channels

1 : A
2 : AB
4 : AB+A'B'

Cable

R2 : radial 2m, shield not connected (standard)

PPR Options

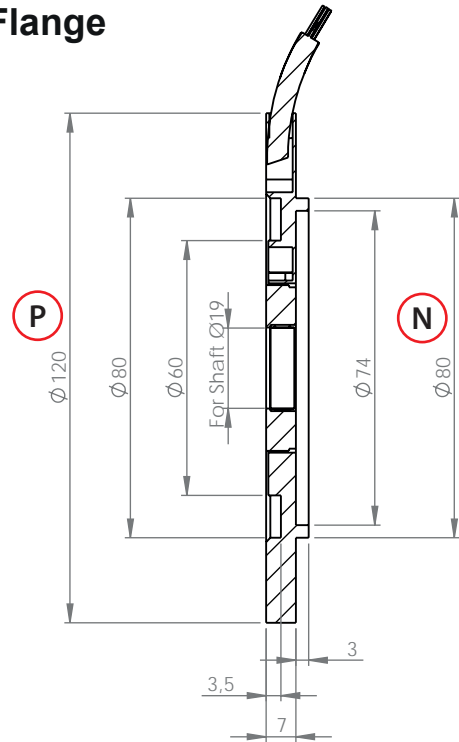
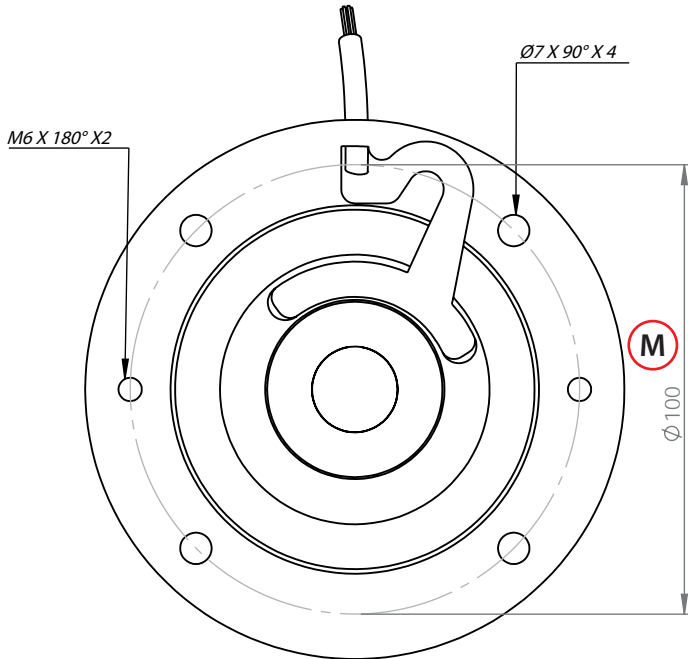
32, 64, 128, 256, 512, 1024, 2048, 4096, 8192, 16,384

Supply Voltage and Output Circuit

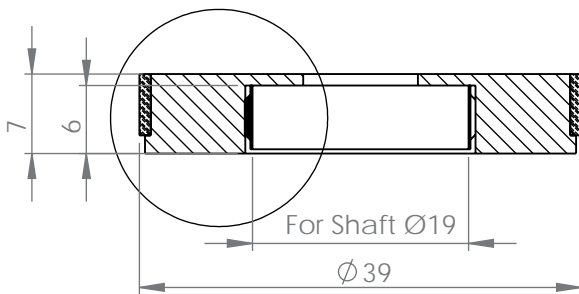
5V : 5V in / out 245V : 5-30V in 5V out 30V : 5-30V in / out

Mechanical Dimensions

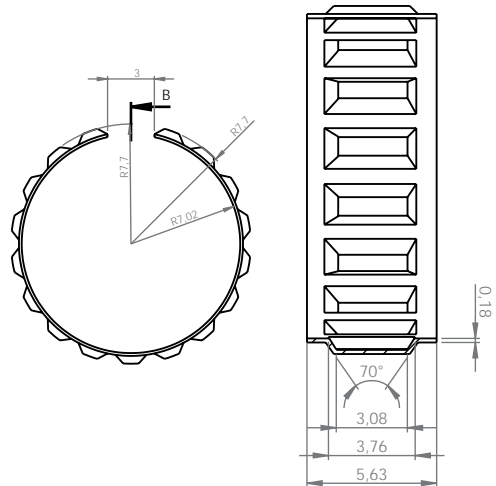
MIR 120 Series Compatible with IEC080 B14 Flange



Magnetic Ring P.N. MIRM3919



Magnetic Ring Spring P.N. MIRS19



Encoder Part Number

FNC MIR 120 19 4 30V 32 - R2

Material

Standard Aluminum
SS : If Stainless Steel is requested

Output Channels

1 : A
2 : AB
4 : AB+A'B'

Cable

R2 : radial 2m, shield not connected (standard)

PPR Options

32, 64, 128, 256, 512, 1024, 2048, 4096, 8192, 16,384

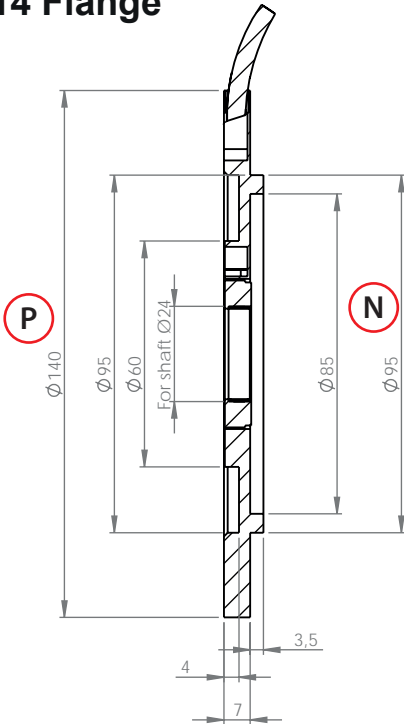
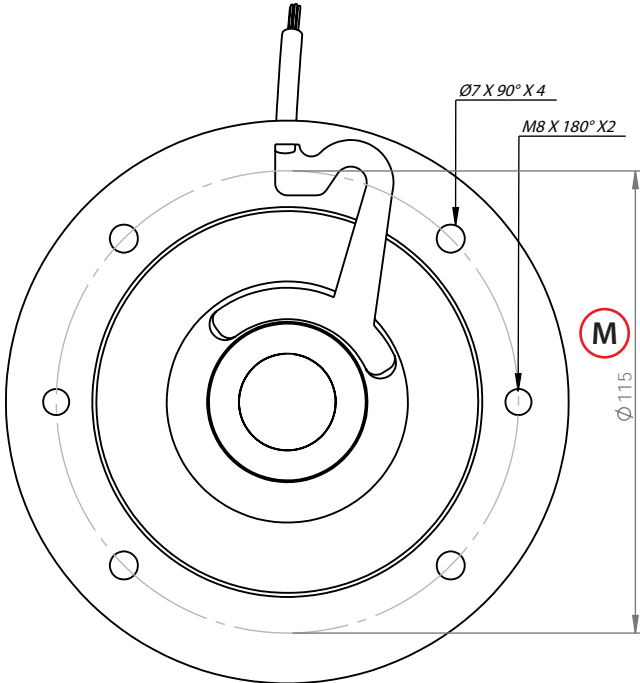
Supply Voltage and Output Circuit

5V : 5V in / out 245V : 5-30V in 5V out 30V : 5-30V in / out



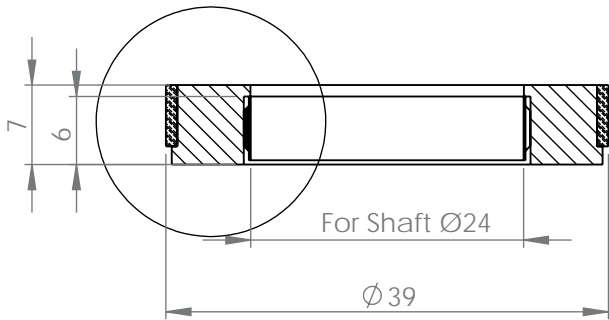
Mechanical Dimensions

MIR 140 Series Compatible with IEC090 B14 Flange



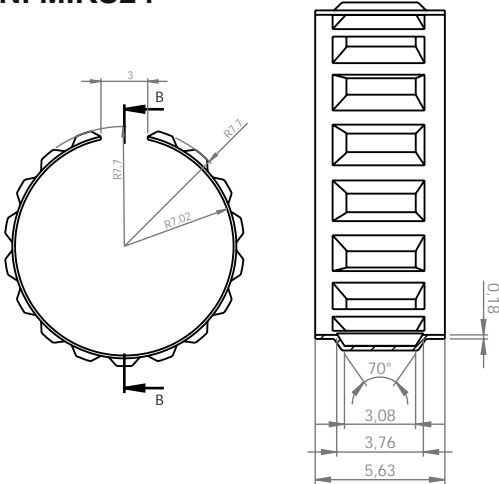
Magnetic Ring

P.N. MIRM3924



Magnetic Ring Spring

P.N. MIRS24



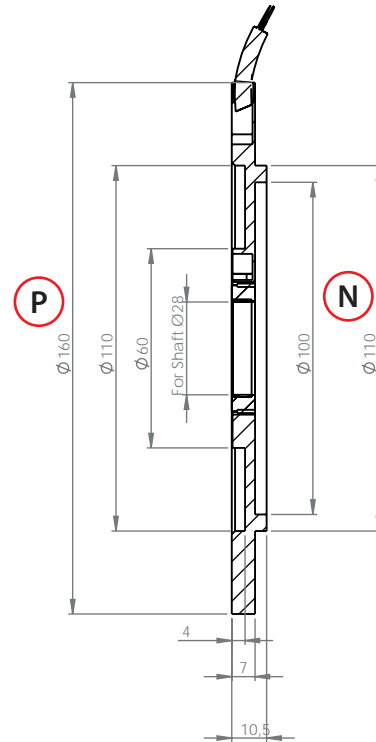
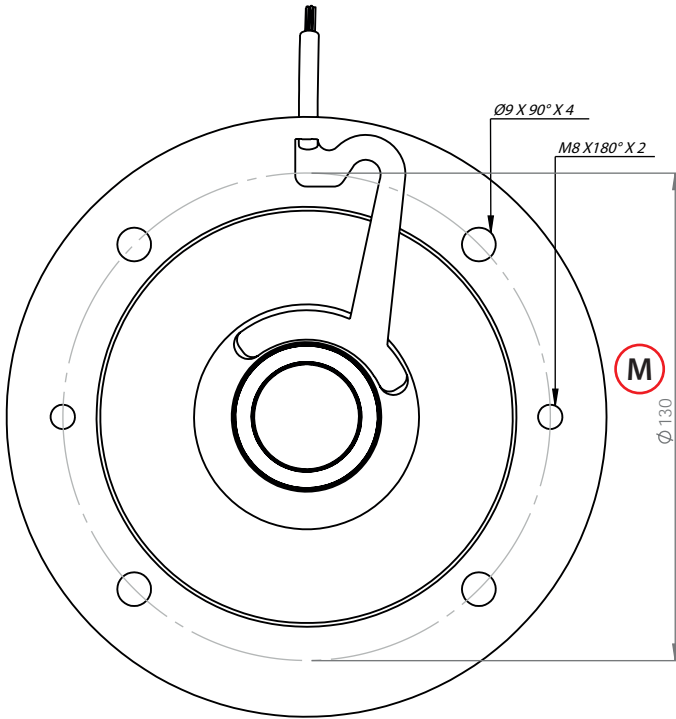
Encoder Part Number

FNC MIR 140 24 4 30V 32 - R2

Material Standard Aluminum SS : If Stainless Steel is requested	Cable R2 : radial 2m, shield not connected (standard)
Output Channels 1 : A 2 : AB 4 : AB+A'B'	PPR Options 32, 64, 128, 256, 512, 1024, 2048, 4096, 8192, 16,384
	Supply Voltage and Output Circuit 5V : 5V in / out 245V : 5-30V in 5V out 30V : 5-30V in / out

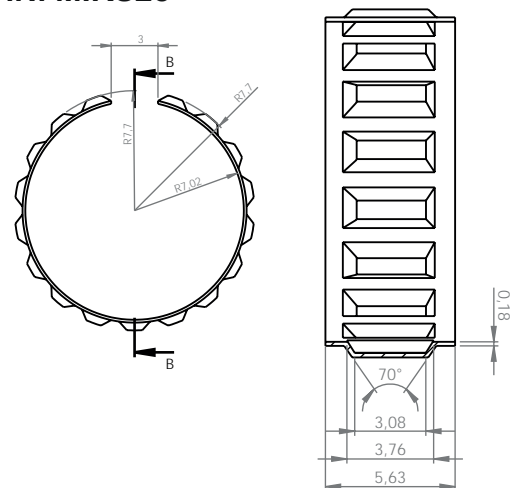
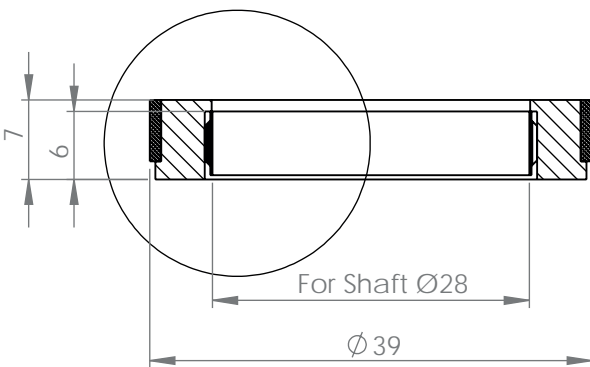
Mechanical Dimensions

MIR 160 Series Compatible with IEC100 & IEC112 B14 Flange



Magnetic Ring
P.N. MIRM3928

Magnetic Ring Spring
P.N. MIRS28



Encoder Part Number

FNC MIR 160 28 4 30V 32 - R2

Material

Standard Aluminum
SS : If Stainless Steel is requested

Output Channels

1 : A
2 : AB
4 : AB+A'B'

Cable

R2 : radial 2m, shield not connected (standard)

PPR Options

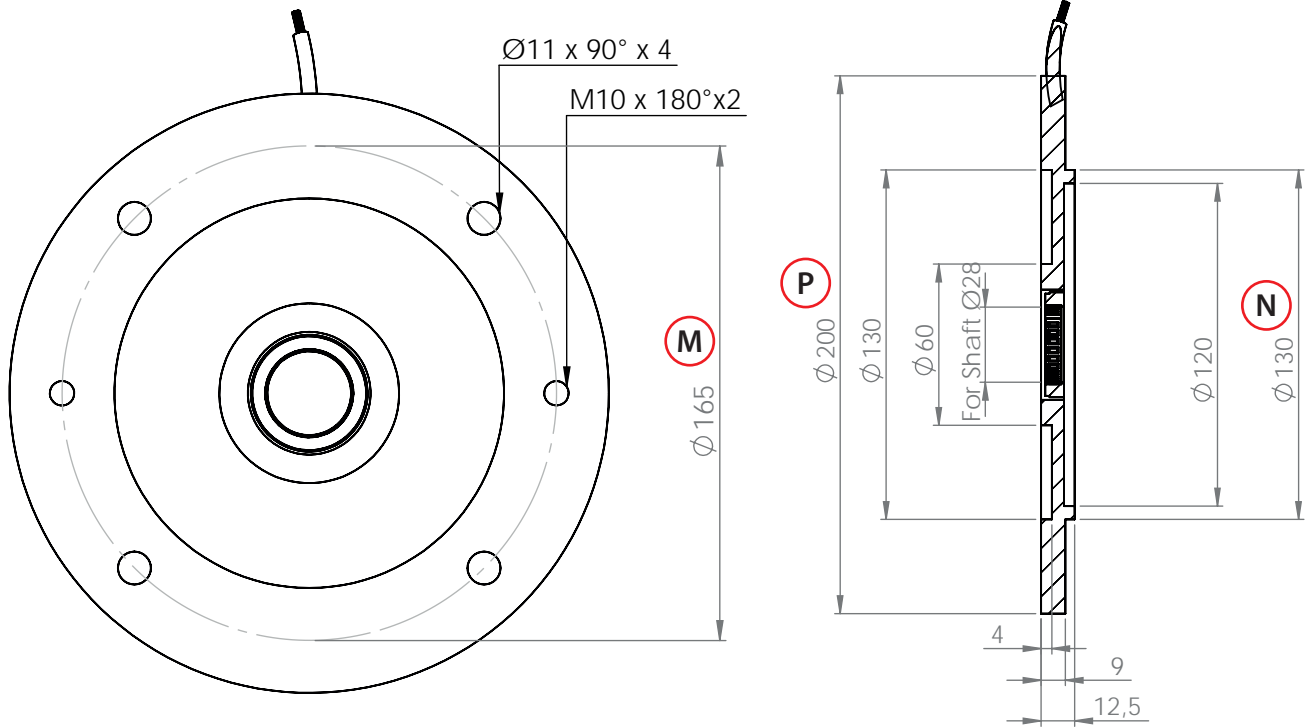
32, 64, 128, 256, 512, 1024, 2048, 4096, 8192, 16,384

Supply Voltage and Output Circuit

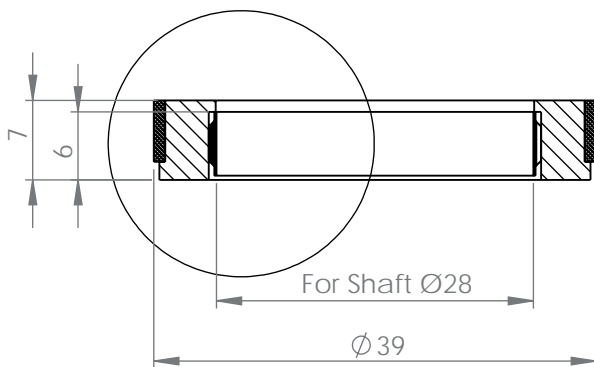
5V : 5V in / out 245V : 5-30V in 5V out 30V : 5-30V in / out

Mechanical Dimensions

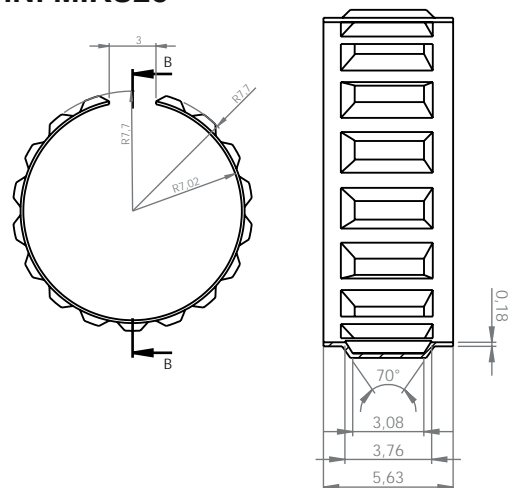
MIR 200 Series Compatible with IEC132 & IEC112 B14 Flange



Magnetic Ring
P.N. MIRM3928



Magnetic Ring Spring
P.N. MIRS28



Encoder Part Number

FNC MIR 200 28 4 30V 32 - R2

Material

Standard Aluminum
SS : If Stainless Steel is requested

Output Channels

1 : A
2 : AB
4 : AB+A'B'

Cable

R2 : radial 2m, shield not connected (standard)

PPR Options

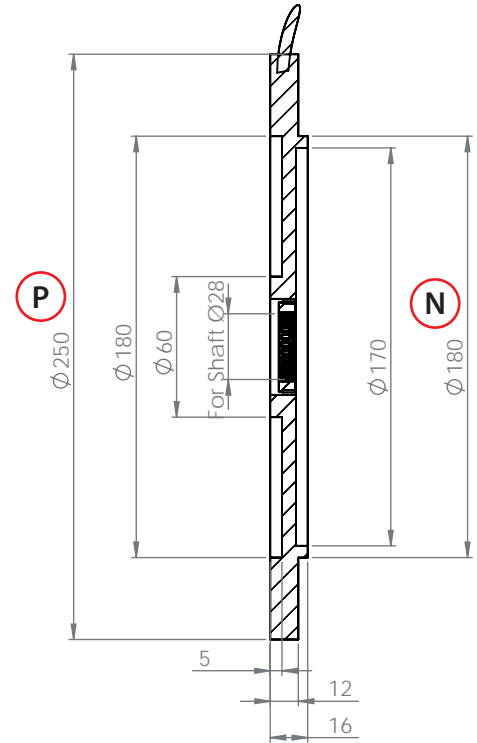
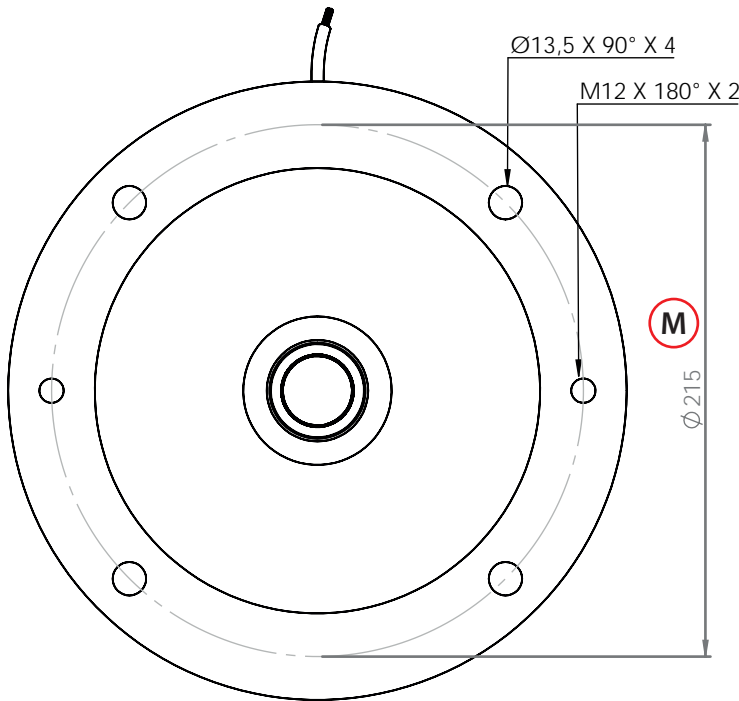
32, 64, 128, 256, 512, 1024, 2048, 4096, 8192, 16,384

Supply Voltage and Output Circuit

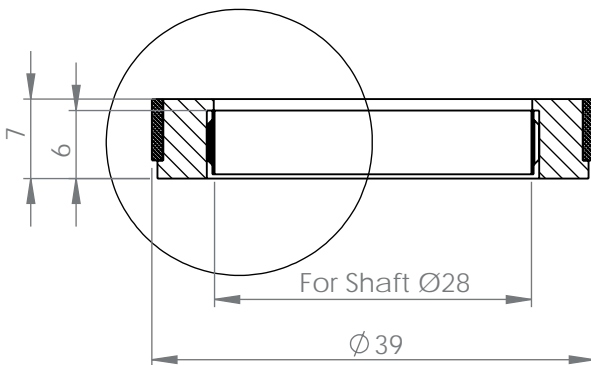
5V : 5V in / out 245V : 5-30V in 5V out 30V : 5-30V in / out

Mechanical Dimensions

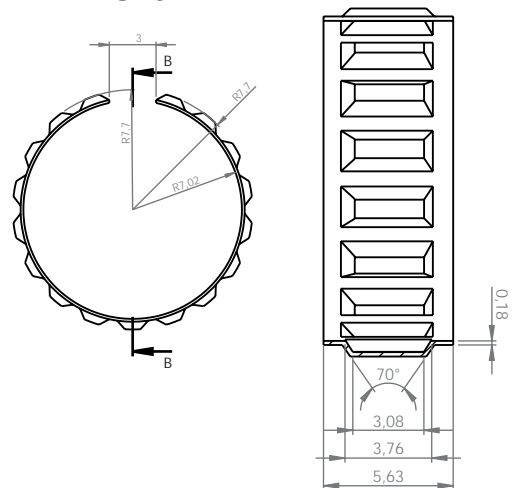
MIR 250 Series Compatible with IEC160 & IEC112 B14 Flange



Magnetic Ring
P.N. MIRM3928



Magnetic Ring Spring
P.N. MIRS28



Encoder Part Number

FNC MIR 250 28 4 30V 32 - R2

Material

Standard Aluminum
SS : If Stainless Steel is requested

Output Channels

1 : A
2 : AB
4 : AB+A'B'

Cable

R2 : radial 2m, shield not connected (standard)

PPR Options

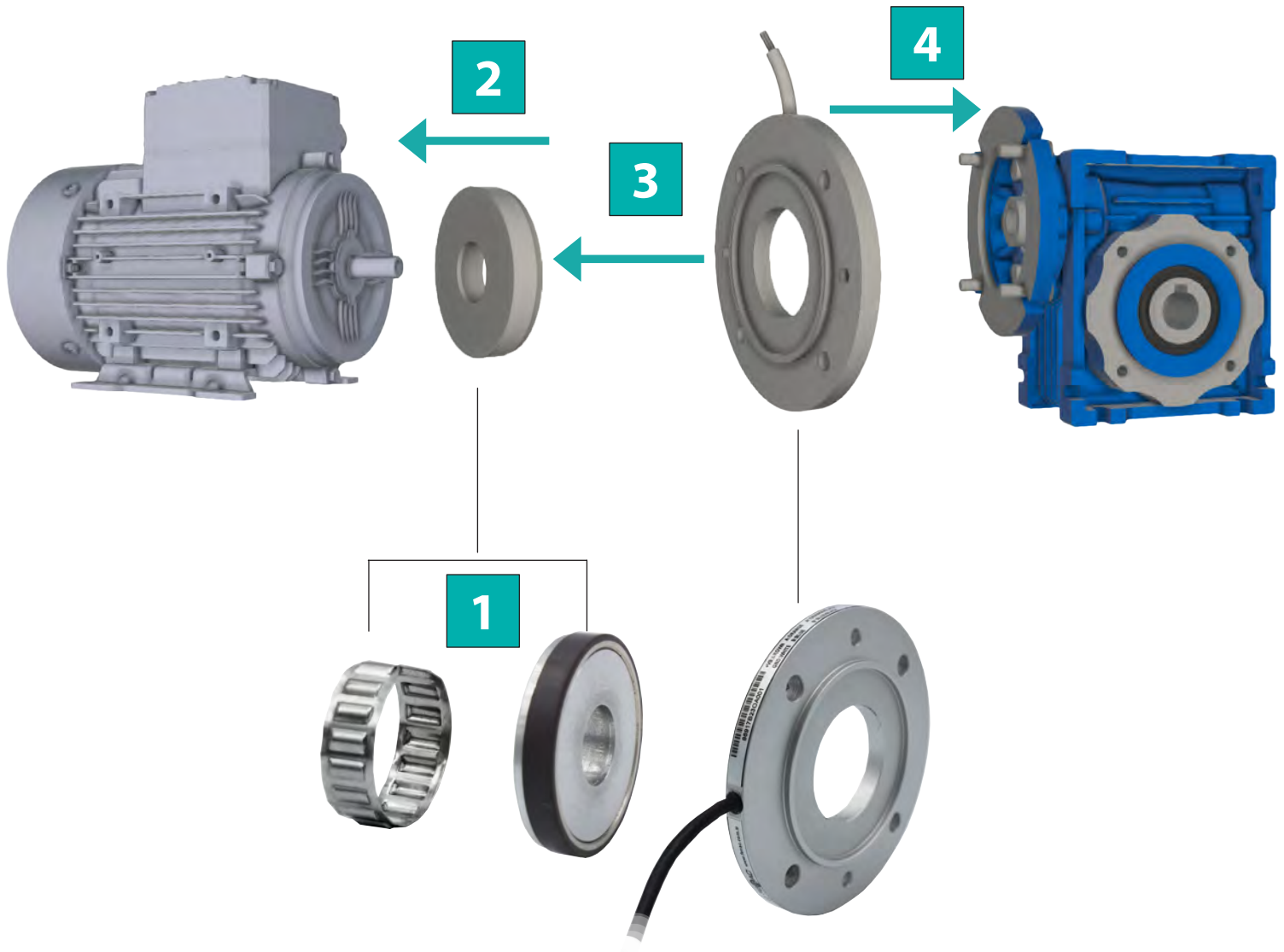
32, 64, 128, 256, 512, 1024, 2048, 4096, 8192, 16,384

Supply Voltage and Output Circuit

5V : 5V in / out 245V : 5-30V in 5V out 30V : 5-30V in / out

FNC MIR Series

Mechanical Application



1 Mount spring inside the magnetic ring







2 Mount magnetic ring on motor flange

3 Mount encoder on motor

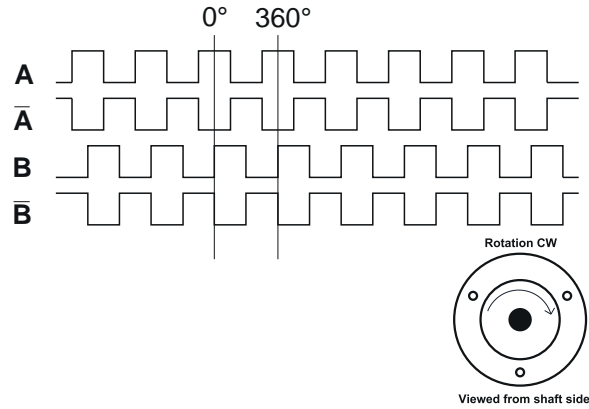
4 Mount motor on gear unit

FNC MIR Series

Cable Connection

Function	Color	Renk
+VB	 Brown	Kahve
GND	 White	Beyaz
A	 Orange	Turuncu
A'	 Orange-Black	Turuncu-Siyah
B	 Blue	Mavi
B'	 Blue-Black	Mavi-Siyah

Pulse Diagram



Motor Body - Shaft Options

IEC Motor Size	Shaft Diameter	B14 Flange			1 Flange Encoder Part Number	2 Magnet Ring Part Number	3 Fixing Spring Part Number	1 + 2 + 3 Total Set Part Number
		M	N	P				
IEC063	11	75	60	90	MIR 90 11430V1024-R2	MIRM2011	MIRS11	MIRS 90 11430V1024-R2
IEC071	14	85	70	105	MIR 105 14430V1024-R2	MIRM3914	MIRS14	MIRS 105 14430V1024-R2
IEC080	19	100	80	120	MIR 120 19430V1024-R2	MIRM3919	MIRS19	MIRS 120 19430V1024-R2
IEC090	24	115	95	140	MIR 140 24430V1024-R2	MIRM3924	MIRS24	MIRS 140 24430V1024-R2
IEC100	28	130	110	160	MIR 160 28430V1024-R2	MIRM3928	MIRS28	MIRS 160 28430V1024-R2
IEC112	28	130	110	160	MIR 160 28430V1024-R2	MIRM3928	MIRS28	MIRS 160 28430V1024-R2
IEC132	28	165	130	200	MIR 200 28430V1024-R2	MIRM3928	MIRS28	MIRS 200 28430V1024-R2
IEC160	28	215	180	250	MIR 250 28430V1024-R2	MIRM3928	MIRS28	MIRS 250 28430V1024-R2

