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TOTAL SOLUTION for Precision
DC Drive System 2020

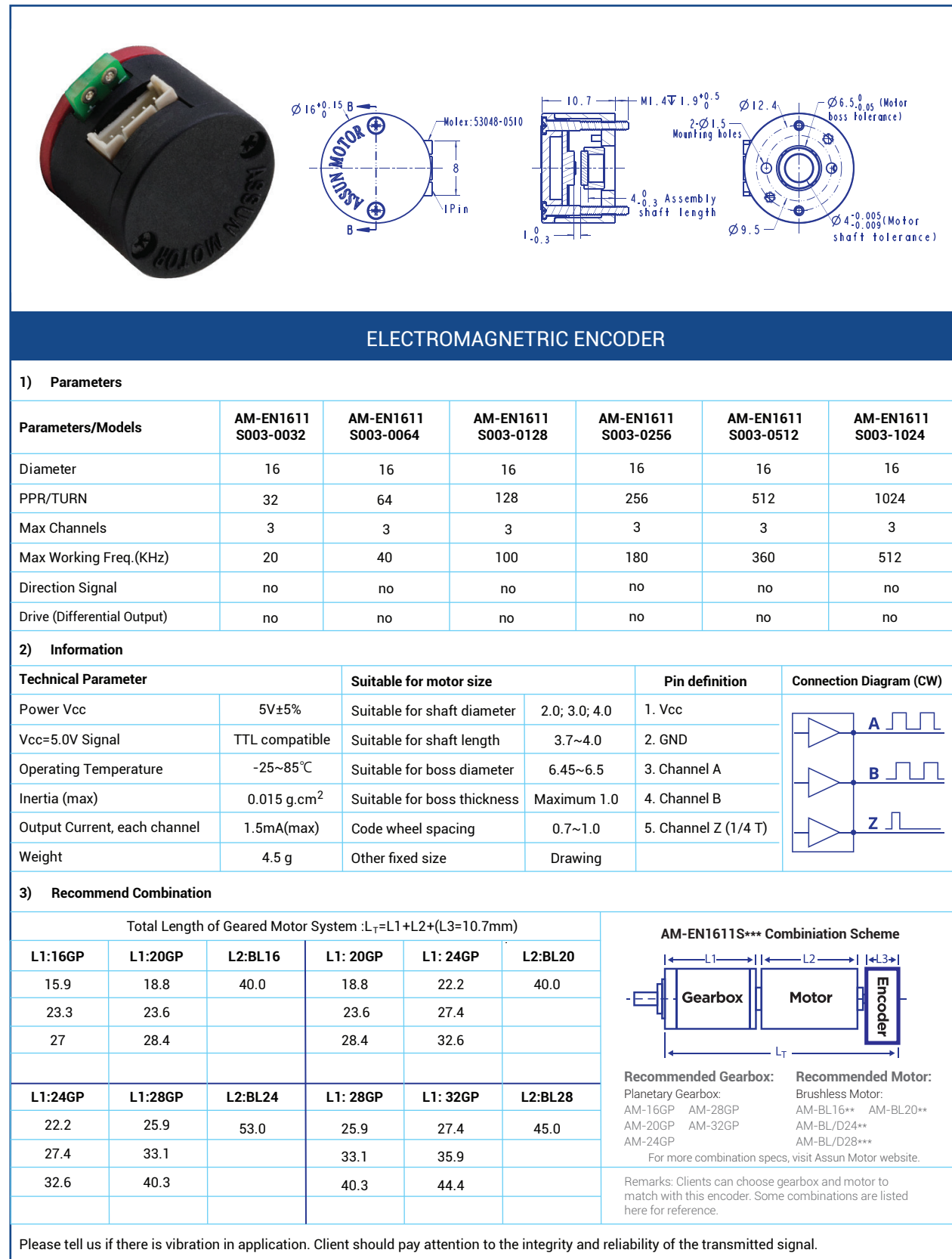
ENCODER

INCREMENTAL ENCODER

Incremental encoders by Assun are used for providing feedback information of motion to controllers and resolutions can be from 32 ppr/turn to 4096 ppr/turn. Cable drive and differential types of encoders can be chosen based on actual needs.

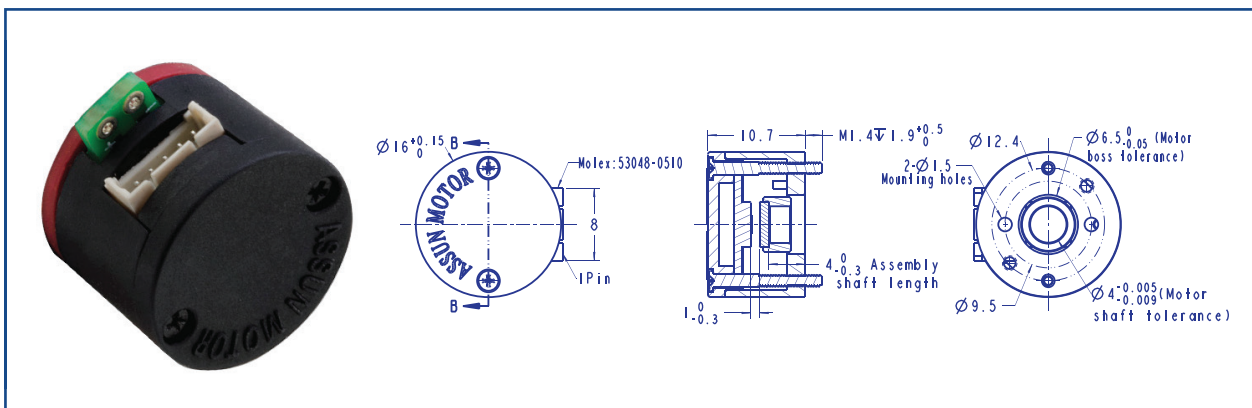


AM-EN1611S003(BL) SERIES



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AM-EN1611S003(CL) SERIES



ELECTROMAGNETIC ENCODER

1) Parameters

Parameters/Models	AM-EN1611 S003-0032	AM-EN1611 S003-0064	AM-EN1611 S003-0128	AM-EN1611 S003-0256	AM-EN1611 S003-0512	AM-EN1611 S003-1024
Diameter	16	16	16	16	16	16
PPR/TURN	32	64	128	256	512	1024
Max Channels	3	3	3	3	3	3
Max Working Freq.(KHz)	20	40	100	180	360	512
Direction Signal	no	no	no	no	no	no
Drive (Differential Output)	no	no	no	no	no	no

2) Information

Technical Parameter		Suitable for motor size		Pin definition	Connection Diagram (CW)
Power Vcc	5V±5%	Suitable for shaft diameter	1.5; 2.0	1. Vcc	
Vcc=5.0V Signal	TTL compatible	Suitable for shaft length	3.7~4.0	2. GND	
Operating Temperature	-25~85°C	Suitable for boss diameter	6.45~6.5	3. Channel A	
Inertia (max)	0.015 g.cm ²	Suitable for boss thickness	Maximum 1.0	4. Channel B	
Output Current, each channel	1.5mA(max)	Code wheel spacing	0.7~1.0	5. Channel Z (1/4 T)	
Weight	5.0 g	Other fixed size	Drawing		

3) Recommend Combination

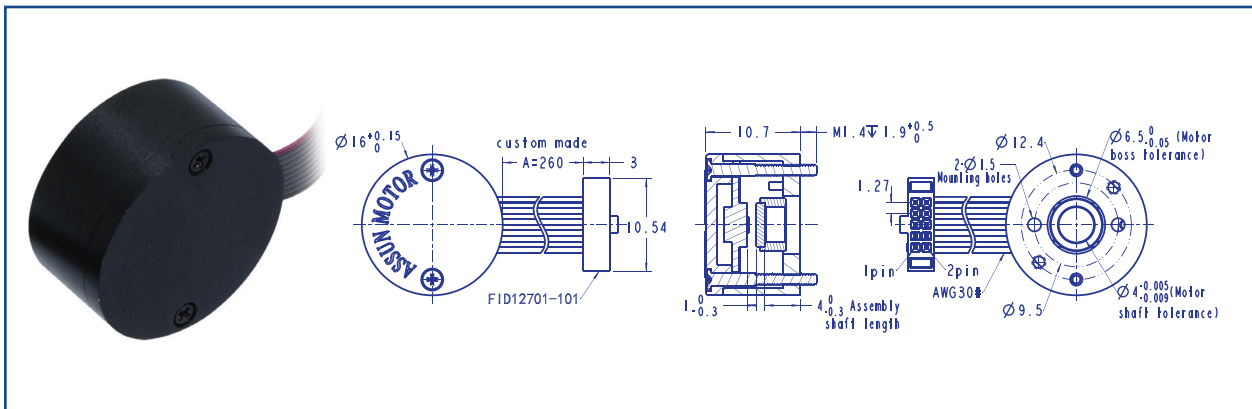
Total Length of Geared Motor System :L _T =L ₁ +L ₂ +(L ₃ =10.7mm)						AM-EN1611S*** Combination Scheme Recommended Gearbox: Planetary Gearbox: AM-16GP AM-28GP AM-20GP AM-32GP AM-24GP Recommended Motor: Coreless Motor: AM-CL16** AM-CL25** AM-CL28** For more combination specs, visit Assun Motor website. Remarks: Clients can choose gearbox and motor to match with this encoder. Some combinations are listed here for reference.
L1:16GP	L1:20GP	L2:CL16	L1: 24GP	L1: 28GP	L2:CL25	
15.9	18.8	33.0	22.2	25.9	32.0	
23.3	23.6	43.0	27.4	33.1	45.3	
27	28.4		32.6	40.3		
L1:28GP	L1:28GP	L2:CL28				
25.9	27.4	31.0				
33.1	35.9	45.0				
40.3	44.4					

Please tell us if there is vibration in application. Client should pay attention to the integrity and reliability of the transmitted signal.

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AM-EN1611S103(BL) SERIES



ELECTROMAGNETIC ENCODER

1) Parameters

Parameters/Models	AM-EN1611 S103-0032	AM-EN1611 S103-0064	AM-EN1611 S103-0128	AM-EN1611 S103-0256	AM-EN1611 S103-0512	AM-EN1611 S103-1024
Diameter	16	16	16	16	16	16
PPR/TURN	32	64	128	256	512	1024
Max Channels	3	3	3	3	3	3
Max Working Freq.(KHz)	20	40	100	180	360	512
Direction Signal	no	no	no	no	no	no
Drive (Differential Output)	yes	yes	yes	yes	yes	yes

2) Information

Technical Parameter		Suitable for motor size		Pin definition		Connection Diagram (CW)
Power Vcc	5V±5%	Suitable for shaft diameter	2.0; 3.0; 4.0	1. NC	2. Vcc	
Vcc=5.0V Signal	ISL32179	Suitable for shaft length	3.7~4.0	3. GND	4. NC	
Operating Temperature	-40~125°C	Suitable for boss diameter	6.45~6.5	5. A-	6. A+	
Inertia (max)	0.015 g.cm ²	Suitable for boss thickness	Maximum 1.0	7. B-	8. B+	
Output Current, each channel	1.5mA(max)	Code wheel spacing	0.7~1.0	9. Z-	10. Z+	
Weight	6.5 g	Other fixed size	Drawing			

3) Recommend Combination

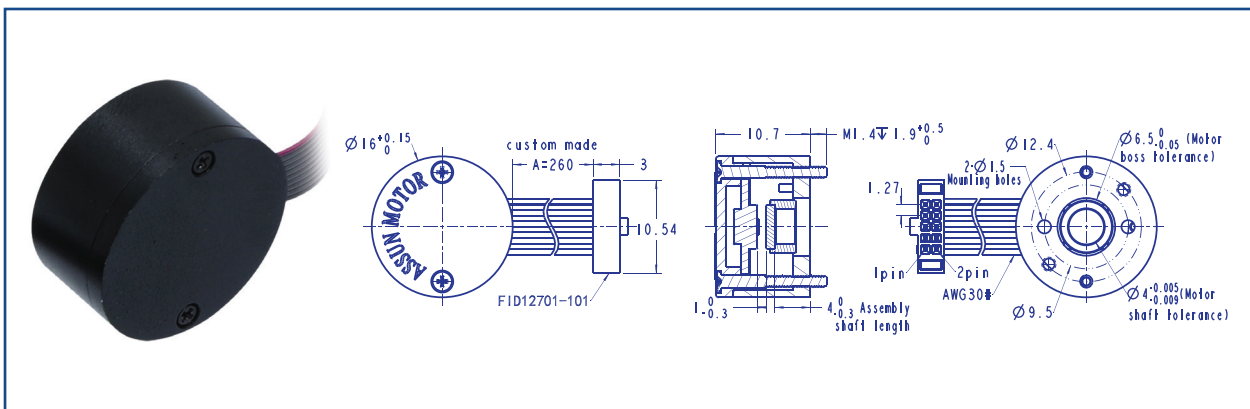
Total Length of Geared Motor System :L _T =L ₁ +L ₂ +(L ₃ =10.7mm)						AM-EN1611S*** Combination Scheme Recommended Gearbox: Planetary Gearbox: AM-16GP AM-28GP AM-20GP AM-32GP AM-24GP Recommended Motor: Brushless Motor: AM-BL16*** AM-BL20** AM-BL/D24** AM-BL/D28*** For more combination specs, visit Assun Motor website. Remarks: Clients can choose gearbox and motor to match with this encoder. Some combinations are listed here for reference.
L1:16GP	L1:20GP	L2:BL16	L1: 20GP	L1: 24GP	L2:BL20	
15.9	18.8	40.0	18.8	22.2	40.0	
23.3	23.6		23.6	27.4		
27	28.4		28.4	32.6		
L1:24GP	L1:28GP	L2:BL24	L1: 28GP	L1: 32GP	L2:BL28	
22.2	25.9	53.0	25.9	27.4	45.0	
27.4	33.1		33.1	35.9		
32.6	40.3		40.3	44.4		

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AM-EN1611S103(CL) SERIES



ELECTROMAGNETIC ENCODER

1) Parameters

Parameters/Models	AM-EN1611 S103-0032	AM-EN1611 S103-0064	AM-EN1611 S103-0128	AM-EN1611 S103-0256	AM-EN1611 S103-0512	AM-EN1611 S103-1024
Diameter	16	16	16	16	16	16
PPR/TURN	32	64	128	256	512	1024
Max Channels	3	3	3	3	3	3
Max Working Freq.(KHz)	20	40	100	180	360	512
Direction Signal	no	no	no	no	no	no
Drive (Differential Output)	yes	yes	yes	yes	yes	yes

2) Information

Technical Parameter		Suitable for motor size		Pin definition		Connection Diagram (CW)
Power Vcc	5V±5%	Suitable for shaft diameter	1.5; 2.0	1. NC	2. Vcc	
Vcc=5.0V Signal	ISL32179	Suitable for shaft length	3.7~4.0	3. GND	4. NC	
Operating Temperature	-40~125°C	Suitable for boss diameter	6.45~6.5	5. A-	6. A+	
Inertia (max)	0.015 g.cm ²	Suitable for boss thickness	Maximum 1.0	7. B-	8. B+	
Output Current, each channel	1.5mA(max)	Code wheel spacing	0.7~1.0	9. Z-	10. Z+	
Weight	6.5 g	Other fixed size	Drawing			

3) Recommend Combination

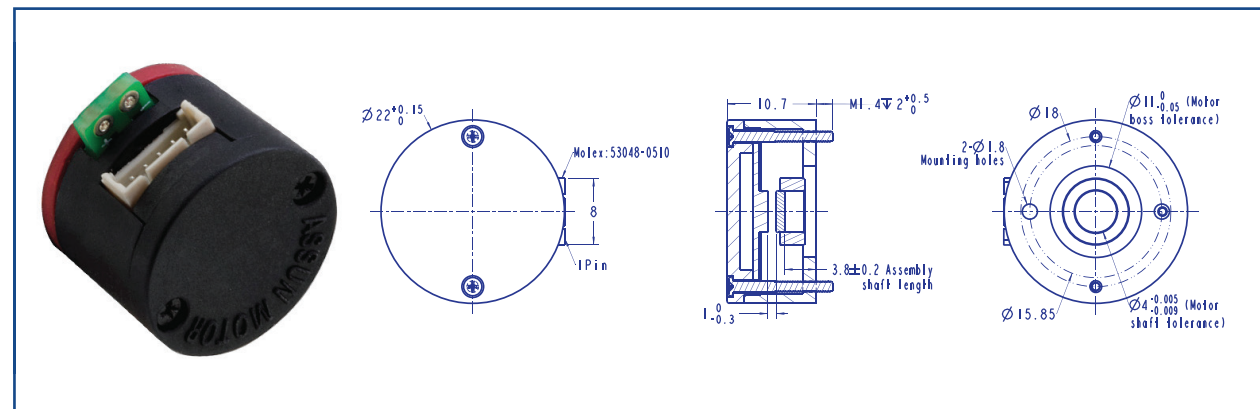
Total Length of Geared Motor System :L _T =L ₁ +L ₂ +(L ₃ =10.7mm)						AM-EN1611S*** Combination Scheme Recommended Gearbox: Planetary Gearbox: AM-16GP AM-28GP AM-20GP AM-32GP AM-24GP Recommended Motor: Coreless Motor: AM-CL16** AM-CL25** AM-CL28** For more combination specs, visit Assun Motor website. Remarks: Clients can choose gearbox and motor to match with this encoder. Some combinations are listed here for reference.
L1:16GP	L1:20GP	L2:CL16	L1: 24GP	L1: 28GP	L2:CL25	
15.9	18.8	33.0	22.2	25.9	32.0	
23.3	23.6	43.0	27.4	33.1	45.3	
27	28.4		32.6	40.3		
L1:28GP	L1:32GP	L2:CL28				
25.9	27.4	31.0				
33.1	35.9	45.0				
40.3	44.4					

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AM-EN2211S003(BL) SERIES



ELECTROMAGNETIC ENCODER

1) Parameters

Parameters/Models	AM-EN2211 S003-0032	AM-EN2211 S003-0064	AM-EN2211 S003-0128	AM-EN2211 S003-0256	AM-EN2211 S003-0512	AM-EN2211 S003-1024
Diameter	22	22	22	22	22	22
PPR/TURN	32	64	128	256	512	1024
Max Channels	3	3	3	3	3	3
Max Working Freq.(KHz)	20	40	100	180	360	512
Direction Signal	no	no	no	no	no	no
Drive (Differential Output)	no	no	no	no	no	no

2) Information

Technical Parameter		Suitable for motor size		Pin definition	Connection Diagram (CW)
Power Vcc	5V±5%	Suitable for shaft diameter	4.0; 5.0; 8.0	1. Vcc	
Vcc=5.0V Signal	TTL compatible	Suitable for shaft length	3.7~4.0	2. GND	
Operating Temperature	-25~85℃	Suitable for boss diameter	10.95~11.0	3. Channel A	
Inertia (max)	0.015 g.cm ²	Suitable for boss thickness	Maximum 1.0	4. Channel B	
Output Current, each channel	1.5mA(max)	Code wheel spacing	0.7~1.0	5. Channel Z (1/4 T)	
Weight	7.0 g	Other fixed size	Drawing		

3) Recommend Combination

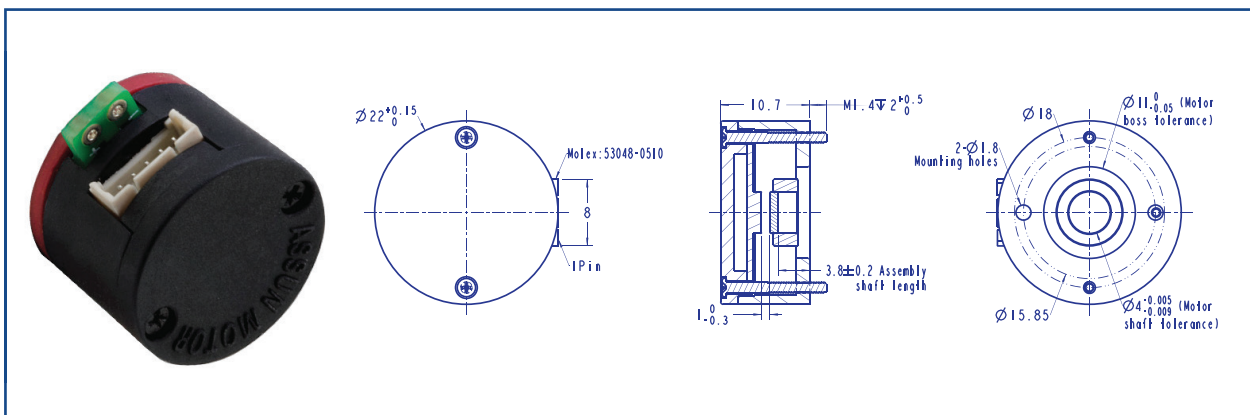
Total Length of Geared Motor System :L _T =L ₁ +L ₂ +(L ₃ =10.7mm)						AM-EN2211S*** Combination Scheme Recommended Gearbox: Planetary Gearbox: AM-32GP AM-45GP AM-36GP AM-52GP AM-40GP Recommended Motor: BRUSH LESS Motor: AM-BL/D32** AM-BL40** AM-BL/D36** AM-BL/D45*** For more combination specs, visit Assun Motor website. Remarks: Clients can choose gearbox and motor to match with this encoder. Some combinations are listed here for reference.
L1:32GP	L1:36GP	L1: BL32	L1: 36GP	L1: 40GP	L2:BL36	
27.4	39.6	60.0	39.6	46.8	60.5	
35.9	48.6	70.0	48.6	58.3		
44.4	57.6		57.6	69.8		
L1:45GP	L1:52GP	L2:BL45	L1: 60GP		L2:BL65	
62.8	81.0	100.0	73.5		108.5	
74.8						

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AM-EN2211S003(CL) SERIES



ELECTROMAGNETIC ENCODER

1) Parameters

Parameters/Models	AM-EN2211 S003-0032	AM-EN2211 S003-0064	AM-EN2211 S003-0128	AM-EN2211 S003-0256	AM-EN2211 S003-0512	AM-EN2211 S003-1024
Diameter	22	22	22	22	22	22
PPR/TURN	32	64	128	256	512	1024
Max Channels	3	3	3	3	3	3
Max Working Freq.(KHz)	20	40	100	180	360	512
Direction Signal	no	no	no	no	no	no
Drive (Differential Output)	no	no	no	no	no	no

2) Information

Technical Parameter		Suitable for motor size		Pin definition	Connection Diagram (CW)
Power Vcc	5V±5%	Suitable for shaft diameter	4.0; 5.0; 8.0	1. Vcc	
Vcc=5.0V Signal	TTL compatible	Suitable for shaft length	3.7~4.0	2. GND	
Operating Temperature	-25~85°C	Suitable for boss diameter	10.95~11.0	3. Channel A	
Inertia (max)	0.015 g.cm ²	Suitable for boss thickness	Maximum 1.0	4. Channel B	
Output Current, each channel	1.5mA(max)	Code wheel spacing	0.7~1.0	5. Channel Z (1/4 T)	
Weight	7.0 g	Other fixed size	Drawing		

3) Recommend Combination

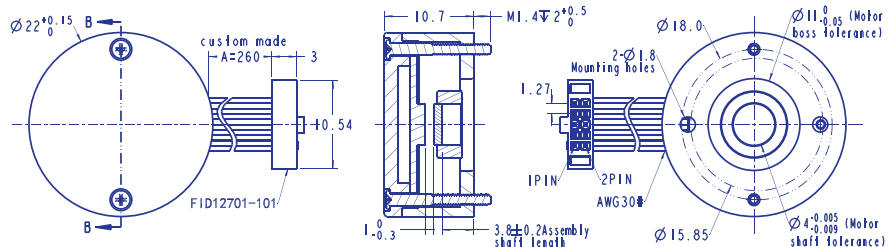
Total Length of Geared Motor System :L _T =L ₁ +L ₂ +(L ₃ =10.7mm)						AM-EN2211S*** Combination Scheme Recommended Gearbox: Planetary Gearbox: AM-20GP AM-40GP AM-24GP AM-45GP AM-36GP Recommended Motor: Coreless Motor: AM-CL22** AM-CL35**
L1:20GP	L1:24GP	L2:CL22	L1:36GP	L1:40GP	L2:CL35	
18.8	22.2	32.2	39.6	46.8	70.5	
23.6	27.4	42.0	48.6	58.3		
28.4	32.6		57.6	69.8		
L1:45GP		L2:CL35				For more combination specs, visit Assun Motor website. Remarks: Clients can choose gearbox and motor to match with this encoder. Some combinations are listed here for reference.
62.8		70.5				
74.8						

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AM-EN2211S103(BL) SERIES



ELECTROMAGNETIC ENCODER

1) Parameters

Parameters/Models	AM-EN2211 S103-0032	AM-EN2211 S103-0064	AM-EN2211 S103-0128	AM-EN2211 S103-0256	AM-EN2211 S103-0512	AM-EN2211 S103-1024
Diameter	22	22	22	22	22	22
PPR/TURN	32	64	128	256	512	1024
Max Channels	3	3	3	3	3	3
Max Working Freq.(KHz)	20	40	100	180	360	512
Direction Signal	no	no	no	no	no	no
Drive (Differential Output)	yes	yes	yes	yes	yes	yes

2) Information

Technical Parameter		Suitable for motor size		Pin definition		Connection Diagram (CW)
Power Vcc	5V±5%	Suitable for shaft diameter	4.0; 5.0; 8.0	1. NC	2. Vcc	
Vcc=5.0V Signal	ISL32179	Suitable for shaft length	3.7~4.0	3. GND	4. NC	
Operating Temperature	-40~125°C	Suitable for boss diameter	10.95~11.0	5. A-	6. A+	
Inertia (max)	0.015 g.cm ²	Suitable for boss thickness	Maximum 1.0	7. B-	8. B+	
Output Current, each channel	1.5mA(max)	Code wheel spacing	0.7~1.0	9. Z-	10. Z+	
Weight	9.0 g	Other fixed size	Drawing			

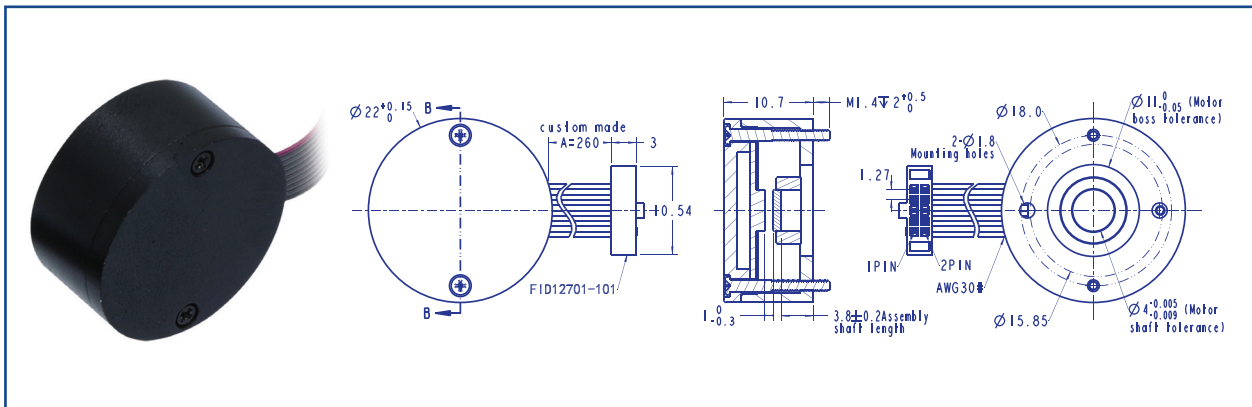
3) Recommend Combination

Total Length of Geared Motor System : L _T =L ₁ +L ₂ +(L ₃ =10.7mm)						AM-EN2211S*** Combination Scheme
L1:32GP	L1:36GP	L2:BL32	L1: 36GP	L1: 40GP	L2:BL36	
27.4	39.6	60.0	39.6	46.8	60.5	
35.9	48.6	70.0	48.6	58.3		
44.4	57.6		57.6	69.8		
L1:45GP	L1:52GP	L2:BL45	L1: 60GP		L2:BL65	Recommended Gearbox: Planetary Gearbox: AM-32GP AM-45GP AM-36GP AM-52GP AM-40GP Recommended Motor: BRUSH LESS Motor: AM-BL/D32** AM-BL40** AM-BL/D36** AM-BL/D45*** For more combination specs, visit Assun Motor website.
62.8	81.0	100.0	73.5		108.5	
74.8					140.0	
Remarks: Clients can choose gearbox and motor to match with this encoder. Some combinations are listed here for reference.						

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AM-EN2211S103(CL) SERIES



ELECTROMAGNETIC ENCODER

1) Parameters

Parameters/Models	AM-EN2211 S103-0032	AM-EN2211 S103-0064	AM-EN2211 S103-0128	AM-EN2211 S103-0256	AM-EN2211 S103-0512	AM-EN2211 S103-1024
Diameter	22	22	22	22	22	22
PPR/TURN	32	64	128	256	512	1024
Max Channels	3	3	3	3	3	3
Max Working Freq.(KHz)	20	40	100	180	360	512
Direction Signal	no	no	no	no	no	no
Drive (Differential Output)	yes	yes	yes	yes	yes	yes

2) Information

Technical Parameter		Suitable for motor size		Pin definition	Connection Diagram (CW)
Power Vcc	5V±5%	Suitable for shaft diameter	2.0; 4.0	1. NC	1. Vcc
Vcc=5.0V Signal	ISL32179	Suitable for shaft length	3.7~4.0	3. GND	4. NC
Operating Temperature	-40~125°C	Suitable for boss diameter	10.95~11.0	5. A-	6. A+
Inertia (max)	0.015 g.cm ²	Suitable for boss thickness	Maximum 1.0	7. B-	8. B+
Output Current, each channel	1.5mA(max)	Code wheel spacing	0.7~1.0	9. Z-	10. Z+
Weight	9.0 g	Other fixed size	Drawing		

3) Recommend Combination

Total Length of Geared Motor System : L _T =L ₁ +L ₂ +(L ₃ =10.7mm)						AM-EN2211S*** Combination Scheme
L1:20GP	L1:24GP	L2:CL22	L2: 36GP	L1:40GP	L2:CL35	
18.8	22.2	32.2	39.6	46.8	70.5	
23.6	27.4	42.0	48.6	58.3		
28.4	32.6		57.6	69.8		
L1:45GP		L2:CL45				Recommended Gearbox: Planetary Gearbox: AM-20GP AM-40GP AM-24GP AM-45GP AM-36GP For more combination specs, visit Assun Motor website. Remarks: Clients can choose gearbox and motor to match with this encoder. Some combinations are listed here for reference.
62.8		70.5				
74.8						

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