

ASSUN

DRIVING THE FUTURE



TOTAL SOLUTION for Precision
DC Drive System 2020

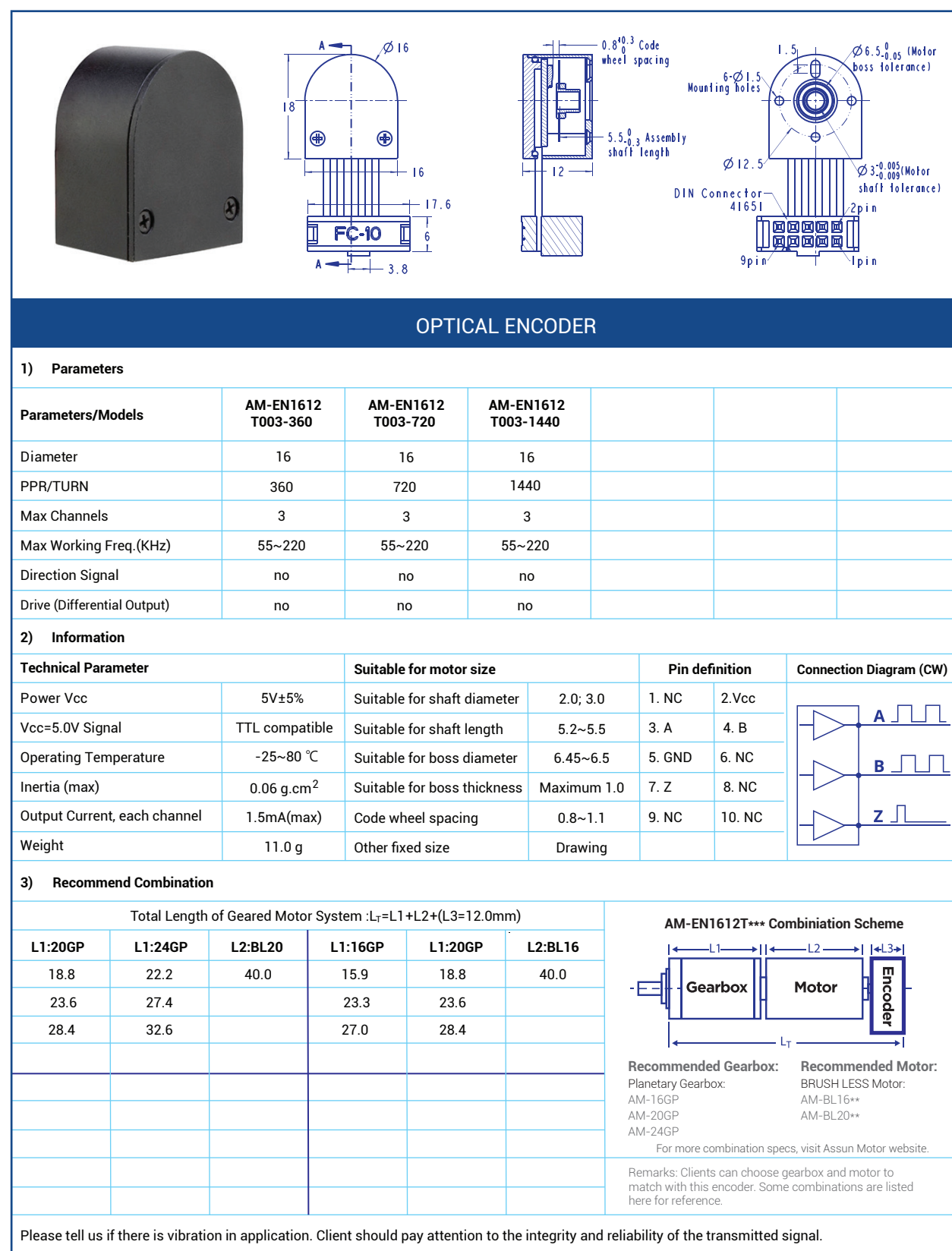
ENCODER

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.

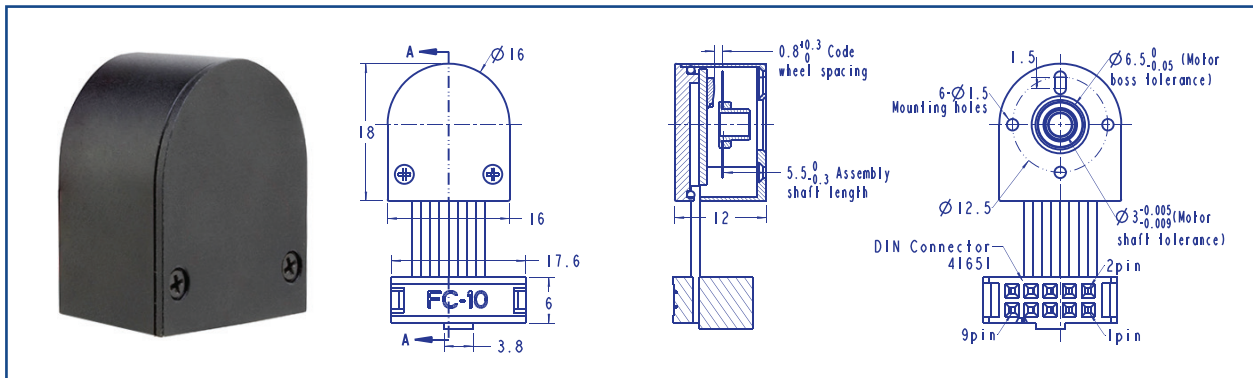


AM-EN1612T003 SERIES



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AM-EN1612T103 SERIES



OPTICAL ENCODER

1) Parameters

Parameters/Models	AM-EN1612 T103-360	AM-EN1612 T103-720	AM-EN1612 T103-1440			
Diameter	16	16	16			
PPR/TURN	360	720	1440			
Max Channels	3	3	3			
Max Working Freq.(KHz)	55~220	55~220	55~220			
Direction Signal	no	no	no			
Drive (Differential Output)	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	1. NC	2.Vcc	
Vcc=5.0V Signal	ISL32179	Suitable for shaft length	5.2~5.5	3. GND	4. NC	
Operating Temperature	-25~80 °C	Suitable for boss diameter	6.45~6.5	5. A-	6. A+	
Inertia (max)	0.06 g.cm ²	Suitable for boss thickness	Maximum 1.0	7. B-	8. B+	
Output Current, each channel	20mA(max)	Code wheel spacing	0.8~1.1	9. Z-	10. Z+	
Weight	11.0 g	Other fixed size	Drawing			

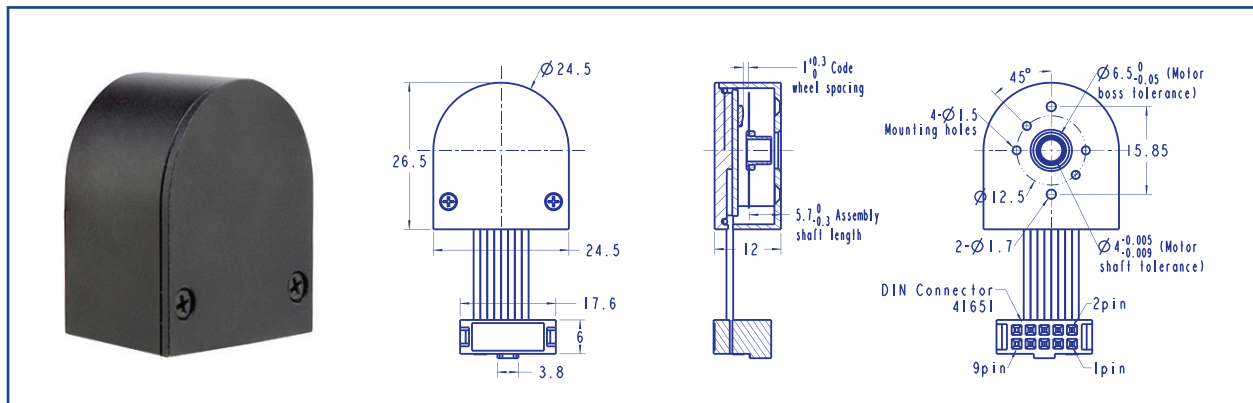
3) Recommend Combination

Total Length of Geared Motor System :L _T =L ₁ +L ₂ +(L ₃ =12.0mm)						AM-EN1612T*** Combination Scheme Recommended Gearbox: Planetary Gearbox: AM-16GP AM-20GP AM-24GP Recommended Motor: BRUSH LESS Motor: AM-BL16** AM-BL20** 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.
L1:20GP	L1:24GP	L2:BL20	L1:16GP	L1:20GP	L2:BL16	
18.8	22.2	40.0	15.9	18.8	40.0	
23.6	27.4		23.3	23.6		
28.4	32.6		27.0	28.4		

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-EN2412T003 SERIES



OPTICAL ENCODER

1) Parameters

Parameters/Models	AM-EN2412 T003-500	AM-EN2412 T003-512	AM-EN2412 T003-1000	AM-EN2412 T003-1024	AM-EN2412 T003-2000	AM-EN2412 T003-2048
Diameter	24.5	24.5	24.5	24.5	24.5	24.5
PPR/TURN	500	512	1000	1024	2000	2048
Max Channels	3	3	3	3	3	3
Max Working Freq.(KHz)	55~220	55~220	55~220	55~220	55~220	55~220
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	3.0; 4.0	1. NC	.Vcc	
Vcc=5.0V Signal	TTL compatible	Suitable for shaft length	5.2~5.5	3. A	4. B	
Operating Temperature	-25~80 °C	Suitable for boss diameter	6.45~6.5	5. GND	6. NC	
Inertia (max)	0.23 g.cm ²	Suitable for boss thickness	Maximum 1.0	7. Z	8. NC	
Output Current, each channel	1.5mA(max)	Code wheel spacing	0.8~1.1	9. NC	10. NC	
Weight	17.0 g	Other fixed size	Drawing			

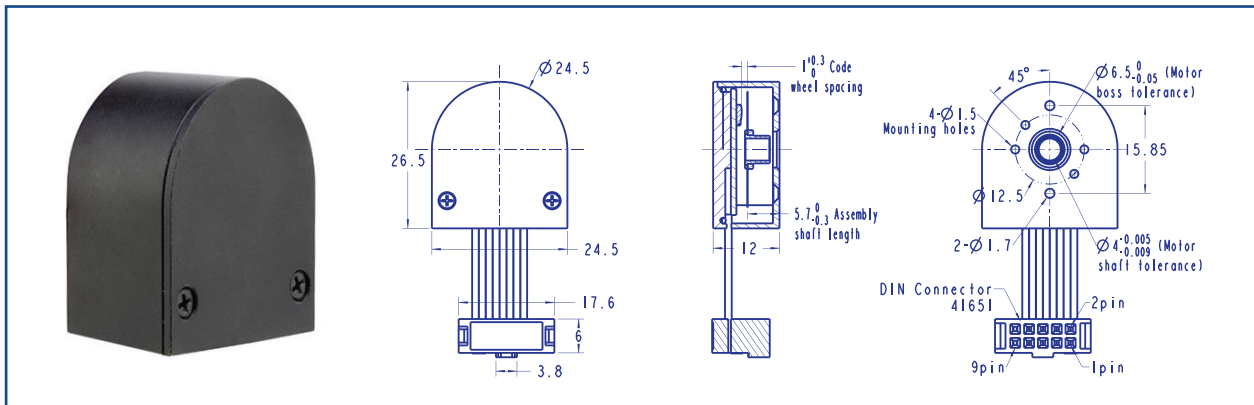
3) Recommend Combination

Total Length of Geared Motor System :L _T =L ₁ +L ₂ +(L ₃ =12.0mm)						AM-EN2412*** Combination Scheme Recommended Gearbox: Planetary Gearbox: AM-24GP AM-28GP AM-32GP AM-36GP For more combination specs, visit Assun Motor website.
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		
L1:32GP	L1:36GP	L2:BL32				Recommended Motor: BRUSH LESS Motor: AM-BL/D24** AM-BL/D28** AM-BL/D32**
27.4	39.6	60.0				
35.9	48.6	70.0				
44.4	57.6					
Remarks: Clients can choose gearbox and motor to match with this encoder. Some combinations are listed here for reference.						

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AM-EN2412T103 SERIES

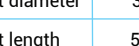


OPTICAL ENCODER

1) Parameters

Parameters/Models	AM-EN2412 T103-500	AM-EN2412 T103-512	AM-EN2412 T103-1000	AM-EN2412 T103-1024	AM-EN2412 T103-2000	AM-EN2412 T103-2048
Diameter	24.5	24.5	24.5	24.5	24.5	24.5
PPR/TURN	500	512	1000	1024	2000	2048
Max Channels	3	3	3	3	3	3
Max Working Freq.(KHz)	55~220	55~220	55~220	55~220	55~220	55~220
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	3.0; 4.0	1. NC	2.Vcc	
Vcc=5.0V Signal	ISL 32179	Suitable for shaft length	5.2~5.5	3. GND	4. NC	
Operating Temperature	-25~80 °C	Suitable for boss diameter	6.45~6.5	5. A-	6. A+	
Inertia (max)	0.23 g.cm ²	Suitable for boss thickness	Maximum 1.0	7. B-	8. B+	
Output Current, each channel	20mA(max)	Code wheel spacing	0.8~1.1	9. Z-	10. Z+	
Weight	17.0 g	Other fixed size	Drawing			

3) Recommend Combination

Total Length of Geared Motor System :L _T =L ₁ +L ₂ +(L ₃ =12.0mm)					
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	
L1:32GP	L1:36GP	L2:BL32			
27.4	39.6	60.0			
35.9	48.6	70.0			
44.4	57.6				

AM-EN2412T* Combination Scheme**

Recommended Gearbox:
Planetary Gearbox:
AM-24GP
AM-28GP
AM-32GP
AM-36GP
For more combination specs, visit Assun Motor website.

Recommended Motor:
BRUSH LESS Motor:
AM-BL/D24**
AM-BL/D28**
AM-BL/D32**

Remarks: Clients can choose gearbox and motor to match with this encoder. Some combinations are listed here for reference.

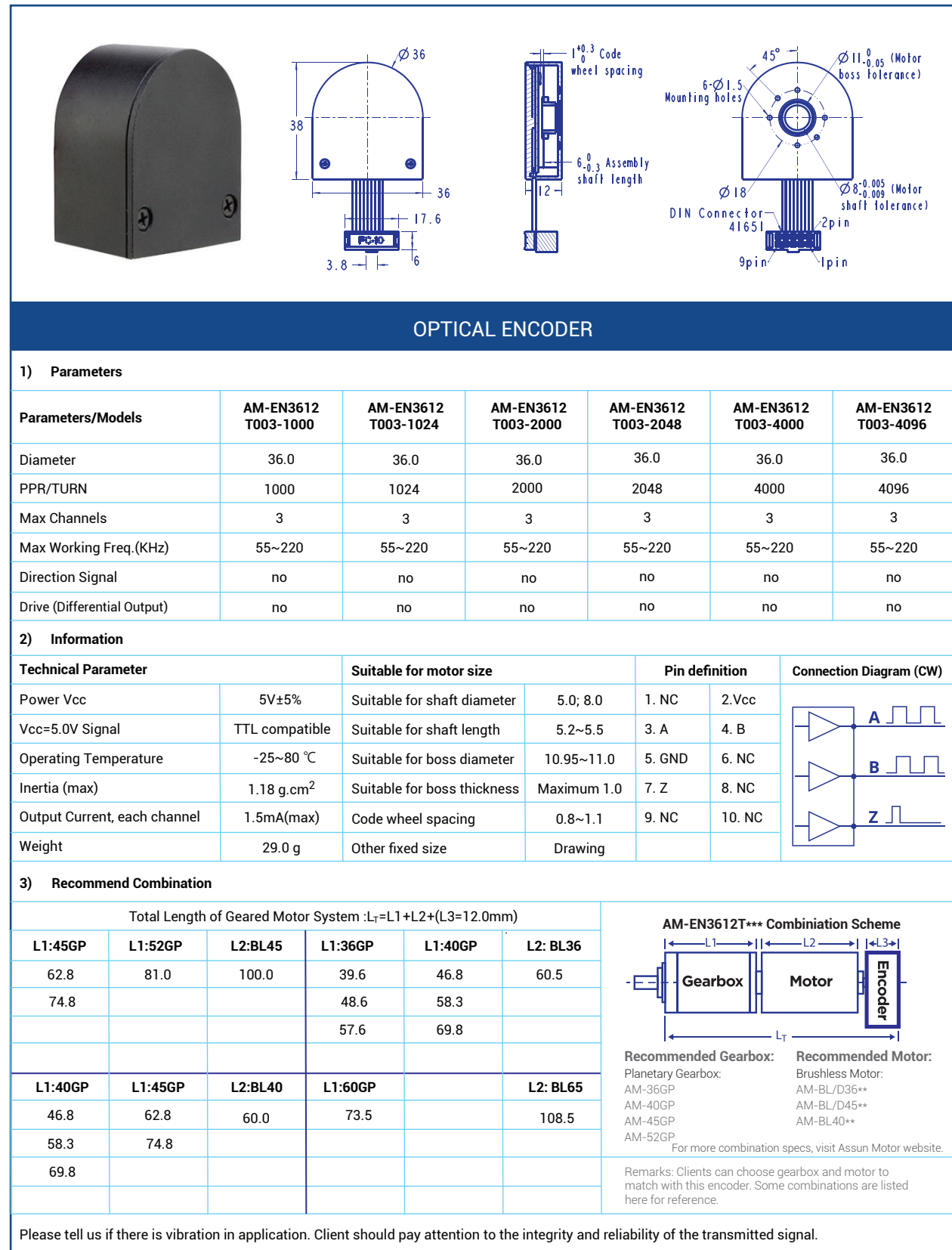
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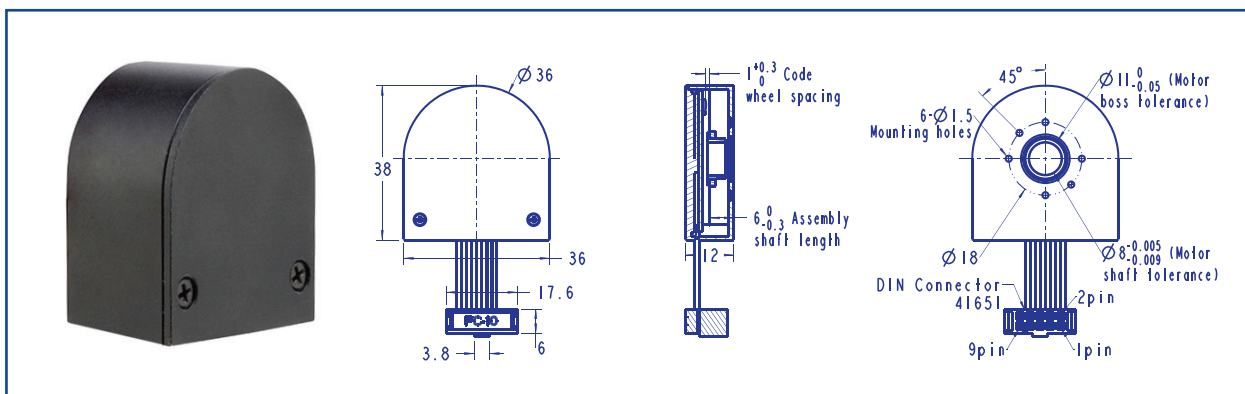
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AM-EN3612T003 SERIES



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AM-EN3612T103 SERIES



OPTICAL ENCODER

1) Parameters

Parameters/Models	AM-EN3612 T103-1000	AM-EN3612 T103-1024	AM-EN3612 T103-2000	AM-EN3612 T103-2048	AM-EN3612 T103-4000	AM-EN3612 T103-4096
Diameter	36.0	36.0	36.0	36.0	36.0	36.0
PPR/TURN	1000	1024	2000	2048	4000	4096
Max Channels	3	3	3	3	3	3
Max Working Freq.(KHz)	55~220	55~220	55~220	55~220	55~220	55~220
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	5.0; 8.0	1. NC	2.Vcc	
Vcc=5.0V Signal	ISL 32179	Suitable for shaft length	5.2~5.5	3. GND	4. NC	
Operating Temperature	-25~80 °C	Suitable for boss diameter	10.95~11.0	5. A-	6. A+	
Inertia (max)	1.18 g.cm ²	Suitable for boss thickness	Maximum 1.0	7. B-	8. B+	
Output Current, each channel	20mA(max)	Code wheel spacing	0.8~1.1	9. Z-	10. Z+	
Weight	29.0 g	Other fixed size	Drawing			

3) Recommend Combination

Total Length of Geared Motor System :L _T =L ₁ +L ₂ +(L ₃ =12.0mm)						AM-EN3612T*** Combination Scheme Recommended Gearbox: Planetary Gearbox: AM-36GP AM-40GP AM-45GP AM-52GP Recommended Motor: Brushless Motor: AM-BL/D36** AM-BL/D45** AM-BL40** 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.
L1:45GP	L1:52GP	L2:BL45	L1:36GP	L1: 40GP	L2: BL36	
62.8	81.0	100.0	39.6	46.8	60.5	
74.8			48.6	58.3		
			57.6	69.8		
L1:40GP	L1:45GP	L2:BL40	L1:60GP		L2: BL65	
46.8	62.8	60.0	73.5		108.5	
58.3	74.8				140.0	
69.8						

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