Инкрементальный энкодер F14
Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70 **Казахстан** +(727)345-47-04 **Беларусь** +(375)257-127-884 **Узбекистан** +998(71)205-18-59 **Киргизия** +996(312)96-26-47

эл.почта: drx@nt-rt.ru || сайт: https://dynapar.nt-rt.ru/

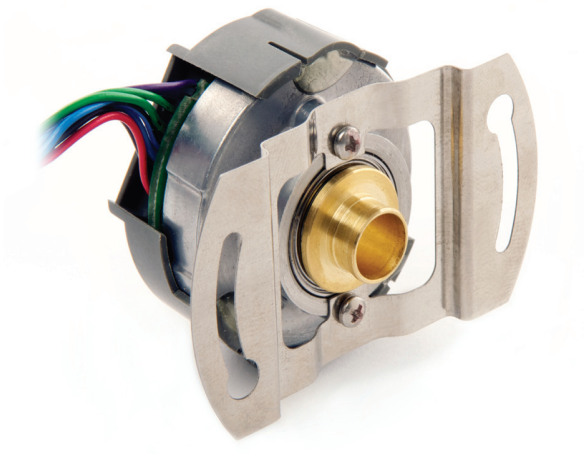
SERIES F14

Dynapar™ brand

For Stepper & Small Servo Motors

Key Features

- **Easy to install non-marring hollowshaft design with flex tether**
- **Up to 5000 PPR for smooth low-speed motor control**
- **Up to 120C temperature range doesn't limit motor performance**



Product shown with optional flex tether

RoHS

SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental with commutation option, Optical
Resolution: 1000 - 5000 PPR incremental with 4, 6 and 8 pole commutation channels
Accuracy: Incremental: ±2.5 arc-mins. max.
edge to any edge; Commutation: ±6 arc-mins. max.
Phasing for CCW rotation of motor shaft (viewing encoder cover): A leads B by 90° and U leads V leads W by 120 °.
Minimum edge separation A to B is 45°.
Index to U channel: +/- 1 °mech. index pulse center to U channel edge.
Index Pulse Width: 90° gated A and B high; (180° gated B high gating options available - consult factory)

ELECTRICAL

Input Power Requirements: 5±10% VDC at 150 mA max (incremental only); 175 mA max. (incremental and commutation), excluding output load
Output Signals:
Incremental: 26LC31 Differential Line Driver, sink / source 40 mA max.
Commutation: Open Collector Commutation 30 mA sink max. (2.0 kΩ pull-ups in encoder)
Frequency Response:
PPR ≤ 1000: 250 kHz; PPR > 1000: 500 kHz
Termination: 16 pin, fully shielded, 2mm pitch, double row header. Accessory mating cable assembly available: 26 AWG twisted pair, jacketed and shielded with copper drain wire

MECHANICAL

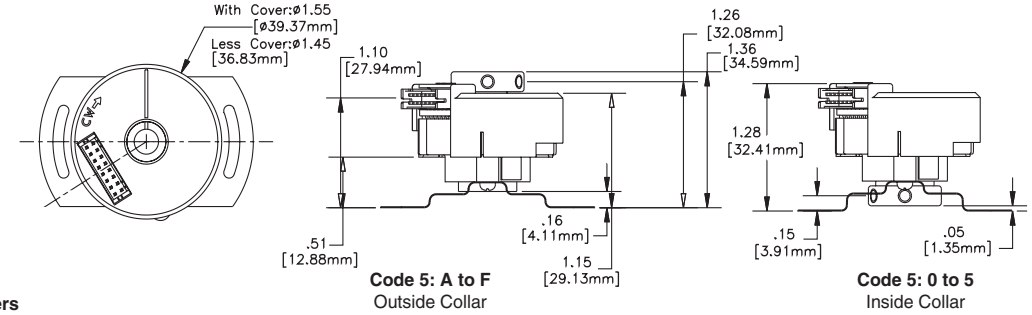
Bore Diameters: 1/4", 6mm, 8mm standard
Bore Dia. Tolerance: +0.001"/-0.000" (+0.025 mm/-0.000 mm)
Dimensions: Outside Diameter with cover: 1.55" (39.8mm), without cover 1.45" (36.8mm); Outside collar height 1.36" (34.6mm), inside collar height 1.28" (32.4mm)
Mating Shaft Length: 1.35" (34.3 mm) minimum for outside shaft collar. 0.50 inch minimum for inside shaft collar
Mating Shaft Runout: 0.002" (0.05 mm) max. (Includes shaft perpendicularity to mounting surface)
Mating Shaft Axial movement: ±0.060"
(±1.52 mm)
Mounting Configuration: Two standard configurations are available for tethers. A choice of U.S. or Metric screws are included. Mounting holes should be 0.01" (0.254 mm) true position to shaft for best encoder operation.
Shaft clamp: 2 #6-32 set screws in collar around hub shaft (will not mar shaft)
Electrical/Mechanical Alignment Range:
±15° mechanical typical (see tether options)
Acceleration: 100,000 rad/sec.^{2} max.
Max. Velocity: RPM= (Frequency / PPR)x 60; or 12,000 RPM, whichever is less
Moment of Inertia: 8.2X10^{-5} in-oz sec.^{2} (5.8 gm-cm^2)
Housing & Cover Material: Bearing housing: aluminum; Cover: high temperature, glass filled polymer;
Hub: Brass; Disk: 0.030" thick glass; Cover Finish: RAL 7010 (dark grey)
Weight: 1.6 oz. (45gm) typ.

ENVIRONMENTAL

Operating Temperature: 0° to +120°C
Storage Temperature: -40° to +120°C
Shock: 100 Gs for 6 msec duration
Vibration: 2.5 Gs at 5 to 2000 Hz
Humidity: 90% (non-condensing)
Enclosure Rating: NEMA 1 / IP40 (for models with cover)

Dynapar™ brand SERIES F14

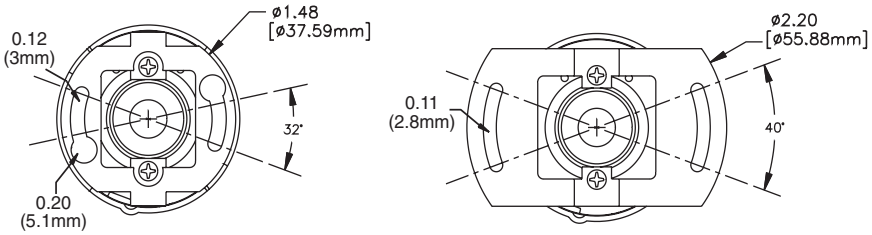
Dimensions



Code 5: A to F
Outside Collar

Code 5: 0 to 5
Inside Collar

Code 3: Tethers



1: 1.142" (29mm)BC

3: 1.811" (46mm) BC

Electrical Connections

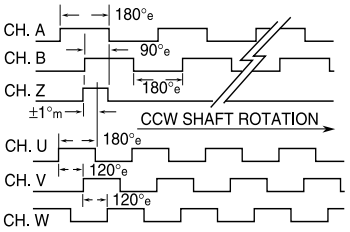
Pin	Function*	Cable Wire Color
1	VCC	RED
2	U	Brown
3	GND	BLACK
4	V	GRAY
5	A	BLUE
6	W	WHITE
7	$\bar{A}$	BLUE/BLACK
8	NONE	NONE
9	B	GREEN
10	$\bar{U}$	BROWN/BLACK
11	$\bar{B}$	GREEN/BLACK
12	$\bar{V}$	GRAY/BLACK
13	Z	VIOLET
14	$\bar{W}$	WHITE/BLACK
15	$\bar{Z}$	VIOLET/BLACK
16	NONE	NONE

* Function availability dependant on Model

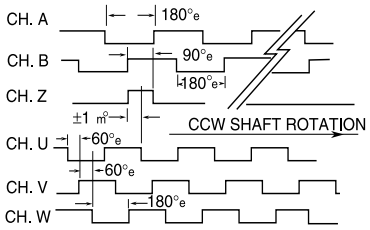
Mating Cable Assembly:
Incremental only, 111752-000x
Incremental + Comm., 111753-000x
x= length in feet

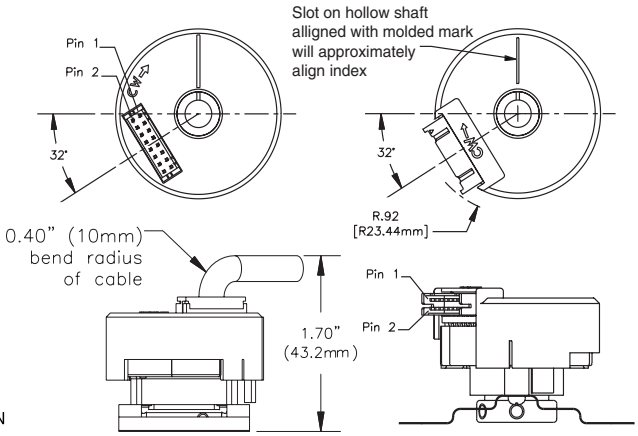
Output Waveforms

Signal Format A



Signal Format B





0, 1, 2
Axial Connector
JST #B16B-PHDSS

Z, A, B
Radial Connector
JST #S16B-PHDSS

Ordering Information

To order, complete the model number with code numbers from the table below:

Code 1: Model	Code 2: PPR, Poles	Code 3: Tether	Code 4: Electrical	Code 5: Bore	Code 6: Termination
F14	□□□□/□	□	□	□	□

Ordering Information

F14 Size 14 Commutating Encoder

Incremental channels only

1000/0	**2500/0**
2000/0	**4096/0**
2048/0	**5000/0**

Incremental plus Commutation channels

1000/†	**2500/†**
2000/†	**4096/†**
2048/†	**5000/†**

† Available with 4, 6 or 8 pole.
e.g. 1000/6 is 1000PPR with 6 poles

- **0** No Tether
- **1** 2 #2 on 1.181" Diameter
- **3** 2 #4 on 1.811" Diameter
- **6** 2 M2.5 on 30 mm Diameter
- **8** 2 M3 on 46 mm Diameter

Available when Code 2 is ≤ 1024/0
- **0** 5V in, open collector out incremental only - Formzat A
- **C** 5V in, open collector out incremental only - Format B

Available when Code 2 is XXXX/0
- **3** 5V in, line driver out incremental only - Format A
- **D** 5V in, line driver out incremental only - Format B

Available when Code 2 is XXXX/4, XXXX/6, or XXXX/8
- **6** 5V in, line driver out incr.; 5V in, open collector out comm. Format A
- **E** 5V in, line driver out incr.; 5V in, open collector out comm. - Format B
- **9** 5V in, line driver out incr.; 5V in, line driver out comm. Format A
- **F** 5V in, line driver out incr.; 5V in, line driver out comm. - Format B

Inside Collar:
- **0** 1/4 in.
- **4** 6 mm
- **5** 8 mm

Outside Collar:
- **A** 1/4 in.
- **E** 6 mm
- **F** 8 mm

Code			Length
Connector/Cable		Wire	
Axial	Radial	Pigtail	
0	Z	*N/A*	None
1	A	J	1 Ft.
2	B	K	2 Ft.
3	C	L	3 Ft.
4	D	M	4 Ft.
5	E	N	5 Ft.
6	F	P	6 Ft.
7	G	Q	7 Ft.
8	H	R	8 Ft.

CONNECTION OPTIONS

You may choose an integral connector mounted in axial or radial position. Available with or without mating connector/cable.

Alternativly, a direct-solder pigtail cable is offered.

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70 **Казахстан** +(727)345-47-04 **Беларусь** +(375)257-127-884 **Узбекистан** +998(71)205-18-59 **Киргизия** +996(312)96-26-47

эл.почта: drx@nt-rt.ru || сайт: https://dynapar.nt-rt.ru/