

# Dynapar Product Brochure

V2021JAN



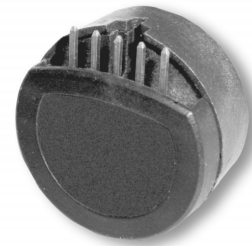
18.1 Incremental Shafted Encoder



18.2 Incremental Hub-Shaft Encoder



18.3 Incremental Hollow-Shaft Encoder



18.4 Modular or Kit Encoder



18.5 Bearingless Encoder

**Dynapar** is a 50 year old company in the encoder industry. Dynapar has widest range of encoders and resolvers along with accessories for motion feedback control.

# Table of contents

<b>18.1 Incremental Shafted Encoder</b>		<b>18.1 - 18.6</b>	<b>18.4 Modular or Kit Encoder</b>		<b>18.9 - 18.10</b>
18.1.1	Series E12	18.1	18.4.1	Series E9	18.9
18.1.2	Series E14	18.1	18.4.2	Series M9	18.10
18.1.3	Series E14IC	18.1	18.4.3	Series M15	18.10
18.1.4	Series H20	18.2	18.4.4	Series M53	18.10
18.1.5	Series HD20	18.2	18.4.5	Series M602/M832	18.10
18.1.6	NEXGen Series 22	18.2			
18.1.7	Series H58	18.2			
18.1.8	Series E23	18.3	<b>18.5 Bearingless Encoder</b>		<b>18.11</b>
18.1.9	Series EC23	18.3			
18.1.10	Series HD25	18.3	18.5.1	Series R45	18.11
18.1.11	Series HA725	18.3			
18.1.12	Series HA25	18.4			
18.1.13	Series HC25	18.4			
18.1.14	Series HR25	18.4			
18.1.15	Series HA26	18.4			
18.1.16	Series HC26	18.5			
18.1.17	Series HR26	18.5			
18.1.18	Series H42	18.5			
18.1.19	Series 60	18.5			
18.1.20	Series 60P	18.6			
<b>18.2 Incremental Hub-Shaft Encoder</b>		<b>18.6 - 18.7</b>			
18.2.1	Series E14H	18.6			
18.2.2	Series H20 Hubshaft	18.7			
18.2.3	Series RR25	18.7			
<b>18.3 Incremental Hollow-Shaft Encoder</b>		<b>18.7 - 18.9</b>			
18.3.1	Series F10	18.7			
18.3.2	Series F15	18.7			
18.3.3	Series F14	18.8			
18.3.4	Series F18	18.8			
18.3.5	Series HS20	18.8			
18.3.6	Series HC20	18.8			
18.3.7	Series HS35R	18.9			
18.3.8	Series HS35M	18.9			

## 18.1 Incremental Shafted Encoder

The shafted incremental encoders from Dynapar come in different variants like E12, HD20, HC26 etc. These encoders can be interfaced with the driven shaft by coupling or by belt.

### Industries it caters to

- Automation Equipment Manufacturer
- Pharma Plant & Equipment Manufacturer
- Automobile Manufacturer
- Steel & Aluminium Manufacturer
- Paper Manufacturing

### Product application

- Printing Equipment
- Medical Equipment
- Pickling Equipment
- CNC Machines
- Processing Equipment

#### 18.1.1 SERIES E12



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/8 inch	
Input Voltage	5VDC	15 VDC
Revolutions	250 PPR	1024 PPR
Temperature	0 °C	70 °C

Series E12 is a miniature encoder having rugged metal housing. It is available upto 1024 PPR with optional index.

#### 18.1.2 SERIES E14



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/8 inch	1/4 inch
Input Voltage	5VDC	15 VDC
Revolutions	100 PPR	2540 PPR
Temperature	0 °C	70 °C

Series E14 is a miniature encoder having rugged metal housing. It is available upto 2540 PPR with optional index.

#### 18.1.3 SERIES E14IC



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	3/8 inch
Input Voltage	5VDC	15 VDC
Revolutions	100 PPR	2540 PPR
Temperature	0 °C	70 °C

Series E14IC is a miniature encoder with integrated coupling. It is compatible with NEMA 23 and 24 size motors.

## 18.1 Incremental Shafted Encoder (continued)

### 18.1.4 SERIES H20



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	3/8 inch
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	2540 PPR
Temperature	0 °C	70 °C

Series H20 features dual row bearing design which is a reliable design. It is available with IP66 sealing option.

### 18.1.5 SERIES HD20



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	3/8 inch	10 mm
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	3600 PPR
Temperature	- 40 °C	100 °C

Series HD20 is a harsh duty optical encoder. It is available upto 3600 PPR. It comes with special housing for IP67 rating.

### 18.1.6 NEXGEN SERIES 22



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	6 mm	3/8 inch
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	3600 PPR
Temperature	- 40 °C	100 °C

NEXGen Series 22 is a square encoder with upto 3600 PPR. It has unbreakable code disc and IP67 sealing option.

### 18.1.7 SERIES H58



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	6 mm	10 mm
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	2540 PPR
Temperature	0 °C	70 °C

Series H58 has rugged design with long life bearings. It has multiple connection options.

## 18.1 Incremental Shafted Encoder (continued)

### 18.1.8 SERIES E23



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	2540 PPR
Temperature	0 °C	70 °C

Series E23 is a miniature encoder having optional screw terminal connections. It features upto 2540 PPR with optional index.

### 18.1.9 SERIES EC23



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	
Input Voltage	5VDC	26 VDC
Revolutions	3000 PPR	5000 PPR
Temperature	0 °C	70 °C

Series EC23 is a miniature encoder with high 5000 PPR capacity. It has screw terminal connections as an option.

### 18.1.10 SERIES HD25



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	3/8 inch	12 mm
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	5000 PPR
Temperature	-40 °C	100 °C

Series HD25 is a harsh duty optical encoder. It has unbreakable code disc upto 5000 PPR. It comes with special housing for IP67 rating.

### 18.1.11 SERIES HA725



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	3/8 inch	
Input Voltage	5VDC	30 VDC
Revolutions	8192 PPR	10000 PPR
Temperature	0 °C	70 °C

Series HA725 has direct-read high resolutions upto 10000 PPR. It has IP66 sealing.

## 18.1 Incremental Shafted Encoder (continued)

### 18.1.12 SERIES HA25



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	3/8 inch
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	2540 PPR
Temperature	0 °C	70 °C

Series HA25 comes with industry standard size 25. It has variable range of resolutions upto 2540 PPR.

### 18.1.13 SERIES HC25



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	3/8 inch
Input Voltage	5VDC	26 VDC
Revolutions	3000 PPR	5000 PPR
Temperature	0 °C	70 °C

Series HC25 comes with industry standard size 25. It has high resolution upto 5000 PPR.

### 18.1.14 SERIES HR25



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	3/8 inch
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	1024 PPR
Temperature	0 °C	70 °C

Series HR25 has reliable dual row bearing design. It has unbreakable code disc.

### 18.1.15 SERIES HA26



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	1/2 inch
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	2540 PPR
Temperature	0 °C	70 °C

Series HA26 is a rugged encoder with integral coupling. It provides thermal and electrical isolation.

## 18.1 Incremental Shafted Encoder (continued)

### 18.1.16 SERIES HC26



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	1/2 inch
Input Voltage	5VDC	26 VDC
Revolutions	3000 PPR	5000 PPR
Temperature	0 °C	70 °C

Series HC26 is a rugged encoder with integral coupling. It provides thermal and electrical isolation. It is available in high resolution upto 5000 PPR.

### 18.1.17 SERIES HR26



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	1/2 inch
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	1024 PPR
Temperature	0 °C	70 °C

Series HR26 is a rugged encoder with dual row bearings and unbreakable code disc. It comes with integral coupling that provides thermal and electrical isolation.

### 18.1.18 SERIES H42



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	3/8 inch	
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	600 PPR
Temperature	0 °C	70 °C

Series H42 encoder has rugged cast aluminium housing with unbreakable code disc.

### 18.1.19 SERIES 60



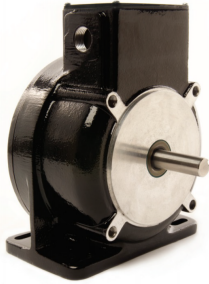
#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	1/2 inch
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	2540 PPR
Temperature	0 °C	70 °C

Series 60 is a heavy duty Rotopulser® encoder with unbreakable disc. It has a wide range of resolutions upto 2500 PPR. It comes with servo ring and face mount options.

## 18.1 Incremental Shafted Encoder (continued)

### 18.1.20 SERIES 60P



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	5/8 inch	
Input Voltage	5VDC	15 VDC
Revolutions	1 PPR	2500 PPR
Temperature	0 °C	54 °C

Series 60P is a heavy duty Rotopulser® encoder with unbreakable code disc. It is available with or without purse plugs.

## 18.2 Incremental Hub-Shaft Encoder

The hubshaft encoder is similar to hollowshaft encoder, except it doesn't extend through the encoder. Dynapar has series E14H, H20 Hubshaft and RR25.

#### Industries it caters to

- Oil, Gas Exploration & Refinery
- Food and Beverage Industry
- Steel & Aluminium Manufacturer
- Paper Manufacturing
- Mining

#### Product application

- Coil Tubing
- Propulsion Systems
- Bottling Machines
- Coal Dust Environments
- Winch

### 18.2.1 SERIES E14H



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch / 6 mm	5/8 inch / 14 mm
Input Voltage	5VDC	15 VDC
Revolutions	100 PPR	2540 PPR
Temperature	0 °C	70 °C

Series E14H is a miniature encoder with upto 2540 PPR with optional index. It has rugged metal housing.

### 18.2.2 SERIES H20 HUBSHAFT



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	5/8 inch
Input Voltage	5VDC	26 VDC
Revolutions	1 PPR	2540 PPR
Temperature	0 °C	70 °C

Series H20 Hubshaft encoder comes with industry standard 2.0 inch size. It has IP66 sealing option.

## 18.2 Incremental Hub-Shaft Encoder (continued)

### 18.2.3 SERIES RR25



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1 inch	1-1/8 inch
Input Voltage	5VDC	28 VDC
Revolutions	180 PPR	512 PPR
Temperature	-20 °C	85 °C

Series RR25 is a heavy duty encoder with ball bearingless hubshaft design. It is corrosion resistant.

## 18.3 Incremental Hollow-Shaft Encoder

The Hollow shaft encoders eliminate the need for a coupling. Dynapar hollow shaft encoder includes series F10, F15, HS20, HC20 etc.

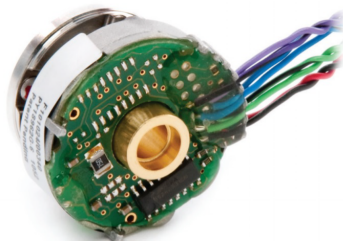
#### Industries it caters to

- Automation Equipment Manufacturer
- Pharma Plant & Equipment Manufacturer
- Automobile Manufacturer
- Steel & Aluminium Manufacturer
- Paper Manufacturing

#### Product application

- Printing Equipment
- Medical Equipment
- Pickling Equipment
- CNC Machines
- Processing Equipment

### 18.3.1 SERIES F10

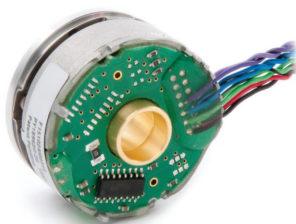


#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	6 mm	
Input Voltage	5VDC	
Revolutions	1024 PPR	2048 PPR
Temperature	0 °C	120 °C

Series F10 is a digital encoder for stepper and small servo motors. It has upto 2048 PPR with commutation tracks.

### 18.3.2 SERIES F15



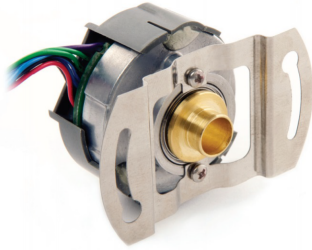
#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	3/8 inch	
Input Voltage	5VDC	
Revolutions	1024 PPR	2048 PPR
Temperature	0 °C	120 °C

Series F15 is a digital encoder for stepper and small servo motors. It has superior +/-2.5° Arc-Min Accuracy.

## 18.3 Incremental Hollow-Shaft Encoder (continued)

### 18.3.3 SERIES F14



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch	8 mm
Input Voltage	5VDC	
Revolutions	1000 PPR	5000 PPR
Temperature	0 °C	120 °C

Series F14 is used for stepper and small servo motors. It has upto 5000 PPR resolution for smooth and low speed motor control.

### 18.3.4 SERIES F18



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch / 6 mm	1/2 inch / 12 mm
Input Voltage	5VDC	
Revolutions	500 PPR	4096 PPR
Temperature	0 °C"	120 °C

Series F18 is used for stepper and small servo motors. It has upto 4096 PPR resolution.

### 18.3.5 SERIES HS20



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch / 6 mm	5/8 inch / 16 mm
Input Voltage	5VDC	26VDC
Revolutions	50 PPR	2540 PPR
Temperature	0 °C	70 °C

Series HS20 is a sealed hollow shaft encoder. It has electrically isolated shaft design.

### 18.3.6 SERIES HC20



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	6 mm	8 mm
Input Voltage	5VDC	26VDC
Revolutions	50 PPR	2500 PPR
Temperature	0 °C	120 °C

Series HC20 is used for stepper and small servo motors. It has upto 2500 PPR resolution.

## 18.3 Incremental Hollow-Shaft Encoder (continued)

### 18.3.7 SERIES HS35R



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch / 6 mm	1-1/4 inch / 28 mm
Input Voltage	5VDC	26VDC
Revolutions	1 PPR	5000 PPR
Temperature	-40 °C	85 °C

Series HS35R is a heavy duty hollow shaft encoder is designed to take upto 400G shock and 20G vibration. It has unbreakable code disc and upto 5000 PPR.

### 18.3.8 SERIES HS35M



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch / 6 mm	1-1/4 inch / 28 mm
Input Voltage	5VDC	26VDC
Revolutions	256 PPR	2048 PPR
Temperature	-40 °C	120 °C

Series HS35M is a heavy duty hollow shaft encoder is designed to take upto 400G shock and 20G vibration. It is available with IP67 rating.

## 18.4 Modular or Kit Encoder

Dynapar Modular or Kit encoders are compact encoders. These include Series E9, M9, M15, M53 and M602/M832.

#### Industries it caters to

- Automation Equipment Manufacturer
- Pharma Plant & Equipment Manufacturer
- Automobile Manufacturer
- Steel & Aluminium Manufacturer
- Paper Manufacturing

#### Product application

- Printing Equipment
- Medical Equipment
- Pickling Equipment
- CNC Machines
- Processing Equipment

### 18.4.1 SERIES E9



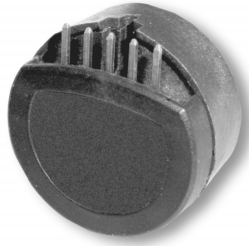
#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1.5 mm / 0.125 inch	4 mm / 0.156 inch
Input Voltage	5VDC	
Revolutions	100 PPR	512 PPR
Temperature	-20 °C	100 °C

Series E9 is a miniature encoder for small servo and stepper motor feedback. It has integrated ASIC for enhanced reliability and accuracy.

## 18.4 Modular or Kit Encoder (continued)

### 18.4.2 SERIES M9

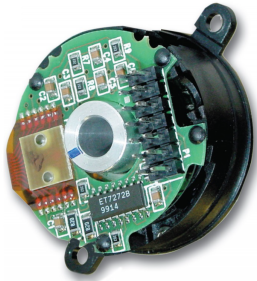


#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1.5 mm / 0.125 inch	4 mm / 0.156 inch
Input Voltage	5VDC	
Revolutions	100 PPR	512 PPR
Temperature	-20 °C	100 °C

Series M9 is a miniature encoder for small servo and stepper motor feedback. It has integrated ASIC for enhanced reliability and accuracy. It has upto 512 PPR resolution.

### 18.4.3 SERIES M15



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/8 inch / 6 mm	3/8 inch / 10 mm
Input Voltage	5VDC	
Revolutions	200 PPR	1024 PPR
Temperature	-20 °C	120 °C

Series M15 is a modular encoder for stepper and small servo motors. It has wide range of operating temperature from -20 °C to 120 °C.

### 18.4.4 SERIES M53

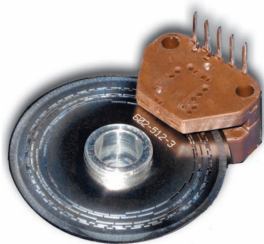


#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch / 6 mm	1/2 inch / 12 mm
Input Voltage	5VDC	12VDC
Revolutions	500 PPR	2048 PPR
Temperature	0 °C	120 °C

Series M53 is a modular encoder for stepper and small servo motors. It has upto 2048 PPR with commutation tracks.

### 18.4.4 SERIES M602/M832



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	1/4 inch / 6 mm	3/8 inch / 10 mm
Input Voltage	5VDC	
Revolutions	1 PPR	5000 PPR
Temperature	-40 °C	100 °C

Series M602/M832 is a compact size kit encoder. It is available with stainless or plastic unbreakable discs.

## 18.5 Bearingless Encoder

Bearingless encoders have design mounts to C-face motors.

### Industries it caters to

- Automation Equipment Manufacturer
- Pharma Plant & Equipment Manufacturer
- Automobile Manufacturer
- Steel & Aluminium Manufacturer
- Paper Manufacturing

### Product application

- Printing Equipment
- Medical Equipment
- Pickling Equipment
- CNC Machines
- Processing Equipment

#### 18.5.1 SERIES R45



#### Selection Parameters

Parameters	Min	Max
Shaft Diameter	5/8 inch	7/8 inch
Input Voltage	5VDC	26 VDC
Revolutions	60 PPR	
Temperature	-40 °C	85 °C

Series R45 is a bearingless kit encoder. It has a gear tooth and pickup design.