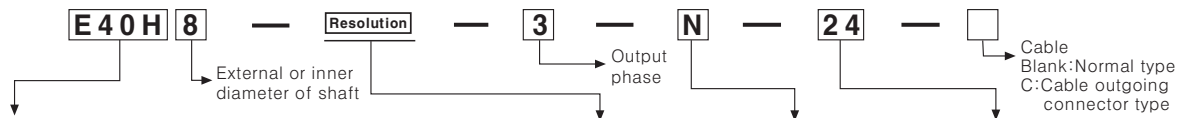









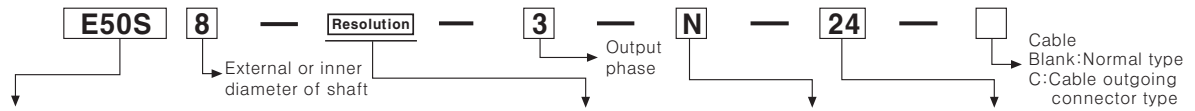
# Product Overview(Incremental Type)









Appearances	Model	Resolution	Control output	Power supply	Page
 CE	<b>E20S2</b> - Resolution - 3-T-5, 12 N *Cable R:Rear side outgoing cable type 6-L-5 S:Side outgoing cable type	100P/R	<b>T (1): Totem pole output</b>	<b>5 :</b> 5VDC ±5%  <b>12 :</b> 12VDC ±5% (Ripple P-P : Max. 5%)  (Note) The output of Line driver is only for 5VDC.	<b>F-5 to 6</b>
 CE	<b>E20HB2</b> - Resolution - 3-T-5, 12 <b>E20HB2.5</b> <b>E20HB3</b> N V 6-L-5 *Cable R:Rear side outgoing cable type S:Side outgoing cable type	200P/R 320P/R 360P/R			
 CE	<b>E30S4</b> - Resolution - 3-T-5, 24 N V 6-L-5	100P/R 1000P/R 200P/R 1024P/R 360P/R 3000P/R 500P/R	<b>N (2): NPN open collector output</b>	<b>5 :</b> 5VDC ±5%	<b>F-7 to 8</b>
 CE Line-up	<b>E40S6</b> - Resolution - 2-T-5, 24 (Standard item) <b>E40S8</b> (Customizable) N V 3-T-5, 24 N V 4-L-5 6	*1P/R 1000P/R *2P/R 1024P/R *5P/R 1200P/R 10P/R 1500P/R *12P/R 1800P/R 15P/R 2000P/R 20P/R 2048P/R 23P/R 2500P/R 25P/R 3000P/R 30P/R 3600P/R 35P/R 5000P/R 40P/R 45P/R 50P/R 60P/R 75P/R			
 CE Line-up	<b>E40H8</b> - Resolution - 2-T-5, 24 (Standard item) <b>E40H6</b> <b>E40H10</b> <b>E40H12</b> (Customizable) N V 3-T-5, 24 N V 4-L-5 6	100P/R 120P/R 125P/R 150P/R 192P/R 200P/R 240P/R 250P/R 256P/R 300P/R 360P/R 400P/R 500P/R 512P/R 600P/R 800P/R	<b>V (3): Voltage output</b>	<b>24 :</b> 12-24VDC ±5% (Ripple P-P : Max. 5%)	<b>F-9 to 11</b>
 CE Line-up	<b>E40HB8</b> - Resolution - 2-T-5, 24 (Standard item) <b>E40HB6</b> <b>E40HB10</b> <b>E40HB12</b> (Customizable) N V 3-T-5, 24 N V 4-L-5 6	192P/R 200P/R 240P/R 250P/R 256P/R 300P/R 360P/R 400P/R 500P/R 512P/R 600P/R 800P/R			
 CE	<b>E40HB8P</b> - Resolution - 2-T-5, 24 N V 3-T-5, 24 N V 4-L-5 6  ※Plastic structure	*1P/R 100P/R *2P/R 120P/R *5P/R 125P/R 10P/R 150P/R *12P/R 192P/R 15P/R 200P/R 20P/R 240P/R 23P/R 250P/R 25P/R 256P/R 30P/R 300P/R 35P/R 360P/R 40P/R 400P/R 45P/R 400P/R 50P/R 500P/R 60P/R 512P/R 75P/R 600P/R	<b>L : Line driver output</b>  (Not included in CE certification)	<b>5 :</b> 5VDC ±5%  <b>24 :</b> 12-24VDC ±5% (Ripple P-P : Max. 5%)  (Note) The output of Line driver is only for 5VDC.	<b>F-12 to 14</b>

※The '\*' marked pulse is only for A, B phase in resolution. (Line Driver output is for A,  $\bar{A}$ , B,  $\bar{B}$  phase.)  
 ※Not indicated pulse in this chart is customizable.

# Product Overview(Incremental Type)

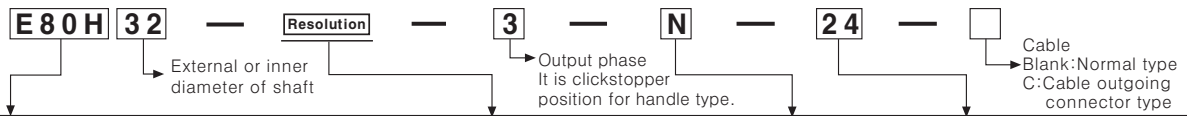


Appearances	Model	Resolution	Control output	Power supply	Page
φ 50mm Shaft type <b>CE</b> Line-up 	<b>E50S8</b> - <b>Resolution</b> - <b>2-T-5, 24</b> (Former name : ENB) N V <b>3-T-5, 24</b> N V <b>4-L-5</b> <b>6</b> *Cable CR: Axial connector integrated type CS: Radial connector integrated type	*1P/R 75P/R 600P/R *2P/R 100P/R 800P/R *5P/R 120P/R 1000P/R 10P/R 125P/R 1024P/R *12P/R 150P/R 1200P/R 15P/R 192P/R 1500P/R 20P/R 200P/R 1800P/R 23P/R 240P/R 2000P/R 25P/R 250P/R 2048P/R 30P/R 256P/R 2500P/R 35P/R 300P/R 3000P/R 40P/R 360P/R 3600P/R 45P/R 400P/R 5000P/R 50P/R 500P/R 6000P/R 60P/R 512P/R 8000P/R	<b>T (1) : Totem pole output</b>	<b>5 :</b> 5VDC ±5%  <b>24 :</b> 12-24VDC ±5% (Ripple P-P : Max. 5%)	<b>F-15 to 17</b>
φ 50mm Shaft type 	<b>E50S8P</b> - <b>Resolution</b> - <b>2-T-5, 24</b> (Standard item) <b>E50S6P</b> (Customizable) N V <b>3-T-5, 24</b> N V <b>4-L-5</b> <b>6</b> *Plastic structure	*1P/R 40P/R 200P/R *2P/R 45P/R 240P/R *5P/R 50P/R 250P/R 10P/R 60P/R 256P/R *12P/R 75P/R 300P/R 15P/R 100P/R 360P/R 20P/R 120P/R 400P/R 23P/R 125P/R 500P/R 25P/R 150P/R 512P/R 30P/R 192P/R 600P/R 35P/R			
φ 58mm Shaft type <b>CE</b> 	<b>E58SC10</b> - <b>Resolution</b> - <b>2-T-5, 24</b> (Shaft Clamping) N V <b>E58SC6</b> (Shaft Synchro) <b>3-T-5, 24</b> N V <b>4-L-5</b> <b>6</b> *Cable CR: Axial connector integrated type CS: Radial connector integrated type	*1P/R 250P/R *2P/R 256P/R *5P/R 300P/R 10P/R 360P/R *12P/R 400P/R 15P/R 500P/R 20P/R 512P/R 23P/R 600P/R 25P/R 800P/R 30P/R 1000P/R 35P/R 1024P/R 40P/R 1200P/R 45P/R 1500P/R 50P/R 1800P/R 60P/R 2000P/R 75P/R 2048P/R 100P/R 2500P/R 120P/R 3000P/R 125P/R 3600P/R 150P/R 5000P/R 192P/R 6000P/R 200P/R 8000P/R 240P/R	<b>V (3): Voltage output</b>	<b>24 :</b> 12-24VDC ±5% (Ripple P-P : Max. 5%)	<b>F-21 to 24</b>
φ 58mm Hollow shaft type <b>CE</b> 	<b>E58H12</b> - <b>Resolution</b> - <b>2-T-5, 24</b> N V <b>3-T-5, 24</b> N V <b>4-L-5</b> <b>6</b>	*Cable CR: Axial connector integrated type CS: Radial connector integrated type			
φ 58mm Hollow shaft built-in type <b>CE</b> 	<b>E58HB12</b> - <b>Resolution</b> - <b>2-T-5, 24</b> N V <b>3-T-5, 24</b> N V <b>4-L-5</b> <b>6</b>	*Cable CR: Axial connector integrated type CS: Radial connector integrated type	*The number of ( ) is former name.	(Note) The output of Line driver is only for 5VDC.	<b>F-25 to 27</b>
φ 60mm Hollow shaft type <b>CE</b> Line-up 	<b>E60H20</b> - <b>Resolution</b> - <b>3-T-5, 24</b> N V <b>6-L-5</b>	100P/R 1024P/R 5000P/R 8192P/R			

- (A) Photo electric sensor
- (B) Fiber optic sensor
- (C) Door/Area sensor
- (D) Proximity sensor
- (E) Pressure sensor
- (F) Rotary encoder
- (G) Connector/Socket
- (H) Temp. controller
- (I) SSR/Power controller
- (J) Counter
- (K) Timer
- (L) Panel meter
- (M) Tacho/Speed/Pulse meter
- (N) Display unit
- (O) Sensor controller
- (P) Switching power supply
- (Q) Stepping motor & Driver & Controller
- (R) Graphic/Logic panel
- (S) Field network device
- (T) Production stoppage models & replacement

※The '\*' marked pulse is only for A, B phase in resolution. (Line Driver output is for A,  $\bar{A}$ , B,  $\bar{B}$  phase.)  
 ※Not indicated pulse in this chart is customizable.

# Product Overview(Incremental Type)






Appearances	Model	Resolution	Control output	Power supply	Page
<b>φ 68mm Shaft type</b> 	<b>E68S15-1024-6-L-5</b>	1024P/R *Not indicated pulse in this chart is customizable.	<b>T (1) : Totem pole output</b>  <b>N (2): NPN open collector output</b>  <b>V (3): Voltage output</b>  <b>L : Line driver output</b> (Not included in CE certification)	<b>5 :</b> 5VDC ±5%  <b>24 :</b> 12-24VDC ±5% (Ripple P-P : Max. 5%)	<b>F-28 to 29</b>
<b>φ 80mm Hollow shaft type</b> 	<b>E80H30-Resolution-3-T-5, 24</b> (Standard item) <b>N</b> <b>E80H32</b> <b>V</b> (Customizable) <b>6-L-5</b>	60P/R 100P/R 360P/R 500P/R 512P/R 1024P/R 3200P/R			<b>F-30 to 32</b>
<b>φ 100mm Hollow shaft type</b> 	<b>E100H35-Resolution-3-T-5, 24</b> <b>N</b> <b>V</b> <b>6-L-5</b>	512P/R 1024P/R 10000P/R			<b>F-33 to 35</b>
<b>Side-mounting type</b> 	<b>ENA -Resolution- 2-T-5, 24</b> <b>N</b> <b>V</b> <b>3-T-5, 24</b> <b>N</b> <b>V</b> *Standard : Output the <b>A, B phase</b> *Customizable : Output the <b>A, B, Z phase</b>	*1P/R    60P/R    500P/R *2P/R    75P/R    512P/R *5P/R    100P/R    600P/R 10P/R    120P/R    800P/R *12P/R    125P/R    1000P/R 15P/R    150P/R    1024P/R 20P/R    192P/R    1200P/R 23P/R    200P/R    1500P/R 25P/R    240P/R    1800P/R 30P/R    250P/R    2000P/R 35P/R    256P/R    2048P/R 40P/R    300P/R    2500P/R 45P/R    360P/R    3000P/R 50P/R    400P/R    3600P/R 5000P/R			<b>F-36 to 38</b>
<b>Measuring wheel type</b> 	<b>ENC-1-Measurement unit-T-5, 24</b> <b>N</b> <b>V</b>	<b>1</b> : 1mm/1Pulse <b>2</b> : 1cm/1Pulse <b>3</b> : 1m/1Pulse <b>4</b> : 0.01yd/1Pulse <b>5</b> : 0.1yd/1Pulse <b>6</b> : 1yd/1Pulse			<b>F-39 to 40</b>
<b>Manual handle type</b> 	<b>ENH-Resolution-1-T-5, 24</b> <b>2</b> <b>1-V-5, 24</b> <b>2</b> <b>1-L-5</b> <b>2</b>	25P/R 100P/R			<b>F-41 to 42</b>
<b>Portable encoder with handle</b> 	<b>ENHP-Resolution-1-L-5</b> <b>2</b>	100P/R			<b>F-43 to 44</b>  *The number of ( ) is former name.

\*The '\*' marked pulse is only for A, B phase in resolution. (Line Driver output is for A,  $\bar{A}$ , B,  $\bar{B}$  phase.)  
 \*Not indicated pulse in this chart is customizable.

# Product Overview(Absolute Type)

**EP50S** **8** — **Resolution** — **1** **R** — **P** — **5**


External or inner diameter of shaft → **8**      Revolution direction(\*) → **R**

Appearances	Model	Resolution	Output code	Control output	Power supply	Page
φ 50mm Shaft type 	<b>EP50S8-Resolution-1R-N(P)-5, 24</b> 2R 3R 1F 2F 3F	45P/R 360P/R 64P/R 512P/R 90P/R 720P/R 128P/R 1024P/R 180P/R 256P/R				<b>F-45 to 48</b>
φ 58mm Shaft type 	<b>EP58SC10-Resolution-1R-N(P)-5,24</b> (Shaft Clamping) 2R <b>EP58SC6</b> (Shaft Synchro) 3R 1F 2F 3F	45P/R 64P/R 90P/R 128P/R 180P/R 256P/R 360P/R 512P/R 720P/R 1024P/R	<b>1 : BCD</b>  <b>2 : BINARY</b>  <b>3 : GRAY (customizable)</b>	<b>P (1) : PNP open collector output</b>  <b>N (2) : NPN open collector output</b>	<b>5 :</b> 5VDC ±5%  <b>24 :</b> 12-24VDC ±5% (Ripple P-P : Max. 5%)	<b>F-49 to 52</b>
φ 58mm Hollow shaft built-in type 	<b>EP58HB8-Resolution-1R-N(P)-5,24</b> 2R 3R 1F 2F 3F	45P/R 64P/R 90P/R 128P/R 180P/R 256P/R 360P/R 512P/R 720P/R 1024P/R				

※Not indicated number of division in this chart is customizable.  
 ※Revolution direction ☞ **R** : CCW as from the shaft, **F** : CW as from the shaft  
 ※The number of ( ) is former name in control output.

**ENP** — **1** **1** **1** **R** — **P**

Output(\*) → **1** **1** **1**      Revolution direction(\*) → **R**


Appearances	Model	Output code	Power supply	Resolution	Control output	Page
φ 60mm Shaft type 	<b>ENP-111R-Resolution-P</b> <b>111F</b> <b>ENP-101R-Resolution-N</b> <b>101F</b> <b>ENP-110R-360-P</b> <b>110F</b> <b>ENP-100R-360-N</b> <b>100F</b>	<b>1 : BCD Code</b>  <b>0 :</b>	<b>1 :</b> 12-24VDC ±5% (Ripple P-P : Max. 5%)  <b>0 :</b> 5-12VDC ±5% (Ripple P-P : Max. 5%)	6P/R 8P/R 12P/R 16P/R 24P/R  360P/R	<b>P (1) : PNP open collector output</b>  <b>N (2) : NPN open collector output</b>  <b>P (1) : PNP open collector output</b>  <b>N (2) : NPN open collector output</b>	<b>F-53 to 56</b>

※Output ☞ **0** : Negative logic, **1** : Positive logic  
 ※Revolution direction ☞ **R** : CCW as from the shaft, **F** : CW as from the shaft  
 ※The number of ( ) is former name in control output.

## Multi-turn

**EPM50S** **8** — **10** **13** — **B** — **PN** — **24**

Shaft diameter → **8**

Appearances	Single-turn	Multi-turn	Output code	Control output	Power supply	Page
φ 50mm Shaft type 	10bit (1024 division)	13bit (8192 division)	<b>Binary code</b>	<b>PN : Parallel NPN open collector output</b>  <b>S : SSI</b>	12-24VDC ±5% (Ripple P-P : Max. 5%)	<b>F-57 to 61</b>

- (A) Photo electric sensor
- (B) Fiber optic sensor
- (C) Door/Area sensor
- (D) Proximity sensor
- (E) Pressure sensor
- (F) Rotary encoder
- (G) Connector/Socket
- (H) Temp. controller
- (I) SSR/Power controller
- (J) Counter
- (K) Timer
- (L) Panel meter
- (M) Tacho/Speed/Pulse meter
- (N) Display unit
- (O) Sensor controller
- (P) Switching power supply
- (Q) Stepping motor & Driver & Controller
- (R) Graphic/Logic panel
- (S) Field network device
- (T) Production stoppage models & replacement