



EL/EF49C-P

INCREMENTAL ENCODER/
INCREMENTAL ENCODER+
COMMUTATION PHASES



Motor's line Incremental encoder

Ø49 encoder series used in feedback systems on AC servomotor. They integrate a traditional incremental encoder with the optic generation of "Hall effect phases".
Main characteristics are:

- Interchangeability with size 19 resolver representing a cost-effective solution because it is sufficient to have only one predisposition on the motor.
- Wiring simplification using the connector kit
- Contained dimensions
- Wide resolution range available
- High temperature resistance

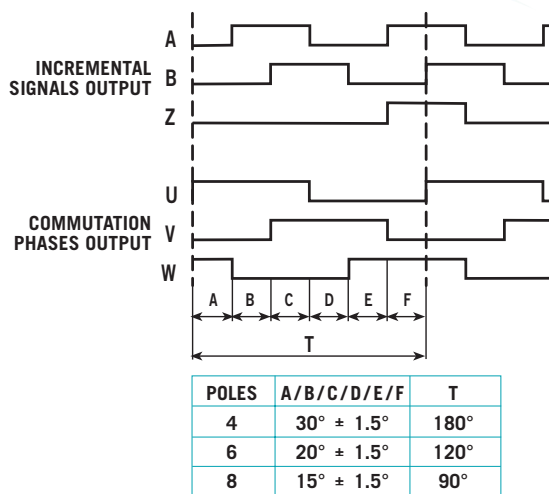
EL series

Basic version with incremental outputs
Several output types available

EF series

Optic engendering of the "commutation phases" integrated to the basic version
Signals transmission by parallel connection

Signal configuration



Wire colours

COLOUR	SIGNAL	EL	EF
Red	+ Vdc	•	•
Black	0 Volt	•	•
Green	A	•	•
Yellow	B	•	•
Blue	Z	•	•
Brown	Ā	•	•
Orange	B̄	•	•
White	Z̄	•	•
Gray	U	•	•
Violet	V	•	•
Gray/Pink	W	•	•
Red / Blue	Ū	•	•
White/Green	V̄	•	•
Brown / Green	W̄	•	•

Electrical specifications

Resolution from 1 to 2048

Source and sink current 15 mA for channel with LINE DRIVER
30 mA for channel with other electronics

Frequency response 150 KHz Max
 $F = \frac{RPM \times Resolution}{60}$

EL series electrical specifications

Input voltage 5Vdc / 8÷24 Vdc

Output type NPN / NPN OPEN COLLECTOR /
PUSH PULL / LINE DRIVER

Input current with no output load 100 mA Max

EF series electrical specifications

Input voltage 5Vdc ± 5%

Output types for incremental phases LINE DRIVER

Output types for Hall phases LINE DRIVER/
NPN OPEN COLLECTOR

Input current with no output load 150 mA Max

Mechanical specifications

Bore diameter Ø6 / Ø8 / Ø10 / Ø12 / Ø12.7 (1/2") mm H7

Shaft speed 6000 RPM

Shock 50 G for 11 msec

Vibrations 5G 10 ÷ 500 Hz

Bearings n° 2 ball bearings

Shaft material Stainless steel
Body material Aluminium
Housing material Fe

Weight 100 g

Enclosure rating IP40

Operating temperature -10° + 85°C

Storage temperature -25° + 85°C

Accessories 1) Set n° 3 fasteners
Ordering code: 94080001
2) Flanges for fixing on motors with "Resolver" size 19
versions 01 and 14

