

- Over 30 YEARS Supplying Africa -



BirCraft

GEARED MOTORS - LINEAR ACTUATORS - CONTROLS



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BEE Certified

SHORT FORM SELECTION

Incremental Optical Encoders, RCI range

PRECILEC optical Incremental Encoders are employed to convert the rotary movement into electrical signals and to obtain accurate - Position, Speed & Direction measurements of rotating shafts in industrial environments and applications - on Robotics, machine tools, packing machines, motor drives...etc.

Incremental encoders can also be used to measure linear movement. Their universal push-pull output interface and their wide supply voltage range make them very easy to connect to most electronic control systems.

Type	Size mm	Shaft	Shaft size mm/inch	Max Speed RPM	Max Resolution	Protection Shaft/housing	Termination
RCI 40A - HS	40	Hollow Through	4, 6, 1/4"	6000	2500	IP 64/65	Cable
RCI 40A - BS	40	Blind Hollow	4, 6, 1/4"	10000	2500	IP 64/65	Cable
RCI 40A - FS	40	Full	4, 6, 1/4"	10000	2500	IP 64/65	Cable
RCI 58A - HS	58	Hollow Through	12, 1/2", 14, 15	6000	400	IP 64/65	Cable/connector
RCI 58A - BS	58	Blind Hollow	12, 1/2", 14, 15	10000	5400	IP 64/65	Cable/connector
RCI 58A - FS	58	Full	6, 1/4", 3/8", 10	10000	5400	IP 64/65	Cable/connector
RCI 90A - HS	90	Hollow Through	20, 25, 1", 30, 42	3000	1024	IP 64/65	Cable/connector
RCI 444R - FS	115	Full	7, 11	10000	5400	IP 64/65	Cable/connector/ junction box
RCI 444ADF - FS	115	Full	7, 11	10000	5400	IP 66	Junction box

General information about Encoders:

Encoders are employed to **convert the rotary movement into electrical signals** and to obtain position, speed & direction measurements.

Our incremental encoders are designed with an optical electronic circuit.

With **optical encoders**, an engraved disc made of metal or glass associated with a mask interrupts an infrared beam emitted by a transmitting gallium arsenide diode.

The number of pulses produced determines the system's resolution, i.e. the number of increments per rotation.

Every time the infrared beam is interrupted, this is registered by a receiver and then processed electronically.

The result is a **square wave output signal**.

Two shifted photosensitive diode arrays deliver **squared signals (A and B) in quadrature**.

The phase shift (90° electric) of signals A and B makes possible to determine the direction of rotation.

In one direction, during the going up (mounting front) of the signal A, the signal B is equal to 1.

In the other direction, during the going up (mounting front) of the signal A, the signal B is equal to 0.

The **Z or ZERO signal** comprises only one transparent window delivering one signal (per) turn.

This signal is synchronized with **signals A and B**.

This zero signal **determines a position of reference** and allows reinitializing the system at each turn.

The electronic treatment delivers signals complementary to **A, B and Z** and makes it possible to remove electric noises by using a differential transmission of the signals.

(SPECS FOR GUIDELINES ONLY)

INDUSTRIAL SENSORS

RCI 40A-BS
RCI 40A-HS



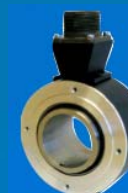
RCI 58A-BS
RCI 58A-HS



RCI 58A-FS



RCI 90A-HS



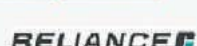
RCI 444R-HS



RCI 444ADF-FS



PRECILEC



Member Mr. P Birkett

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