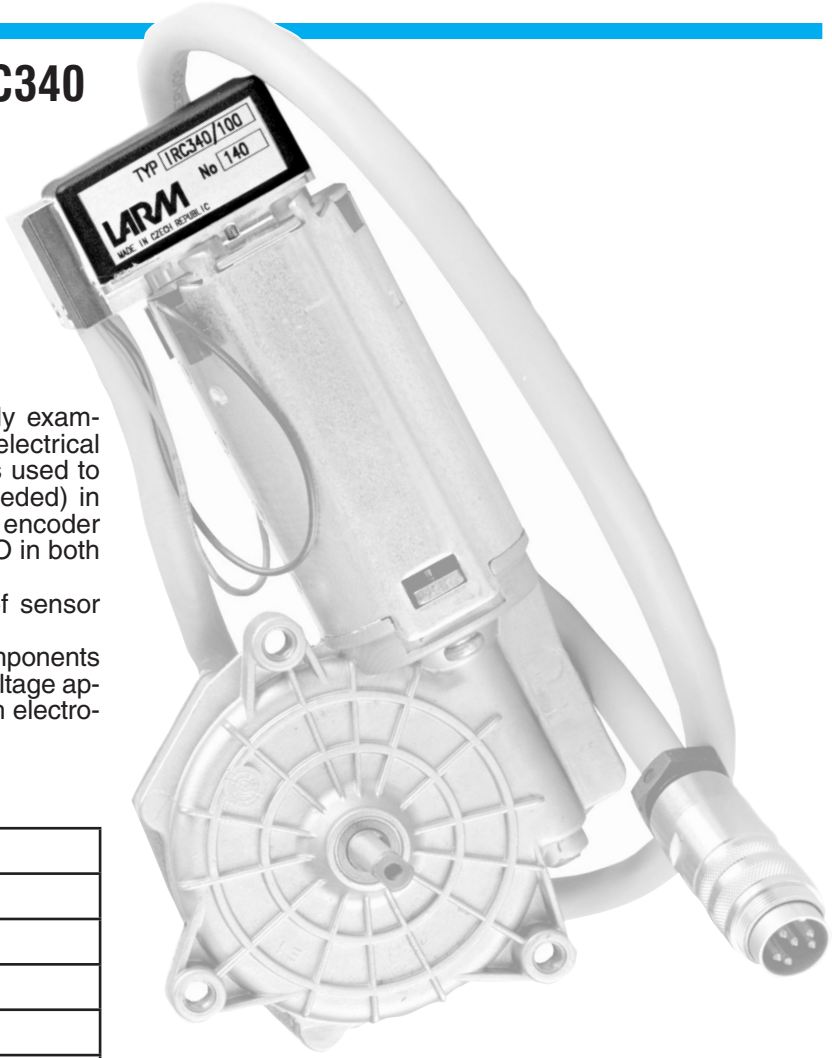
Incremental rotary encoder IRC340



This encoder is a part of the VALEO motor (only example) and they convert rotary movement onto two electrical signals, each other shifted 90° el. The encoder is used to accurate control of motor speed (or torque if needed) in combination with an electronic control unit. The encoder is adjusted in whole speed range for motor VALEO in both directions.
In the development department a similar type of sensor with two or four impulses per rotation is available.
With respect to use of electrostatic sensitive components we recommend to connect the encoders without voltage applied and at compliance with rules for handling with electrostatic sensitive devices.

Encoder IRC 340 technical specification

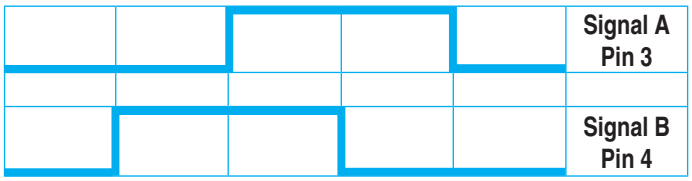
Supply voltage U_N [V]	+18 to +30 V
Encoder Consumption I_N [mA]	50 mA
Max. load of outputs I_0 [mA]	± 25 mA
U_{OH} [V] při I = 10mA	U_{N-3}
U_{OL} [V] při I = 10mA	< 1,2
Output design	push/pull *(output voltage according to power supply)*
Number of pulses / revolution	100
Speed	per motor *(up to 5000 ot.min^{-1})*
Cable length [mm]	600 mm
Working temperature	–20° to +60°C

Description of conection IRC 340

Connector pin	Color of outled cable	Cross-section [mm^2]	Significance
1	–	–	NC
2	Black	0,25	GND
3	Grey	0,25	signal A
4	Pink	0,25	signal B
5	–	–	NC
6	White	1	M–
7	Brown	1	M+
8	Red	0,25	$+U_N$
packing	Shielding	–	Chassis

OUTPUT SIGNALS

2 basic signals (1 and 2) shifted 90° electrical. Sequence of traces at output shaft turning to the right.
(Clockwise facing shaft)



Technical Specification of motor VALEO (only example)

Supply Voltage U_N [V]	24 V
Speed without load n_0 [min^{-1}]	52 min^{-1}
Torque M_N [Nm]	2,00 Nm
Starting moment M_A [Nm]	16,5 Nm
Ratio i	85/1
Material of gear	Plastic
Bearing	Ball Bearing, d=M6
Cable length [mm]	600 mm
Cable length protection	IP30
Weight [kg]	0,71 kg

Changes in technical parameters reserved

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