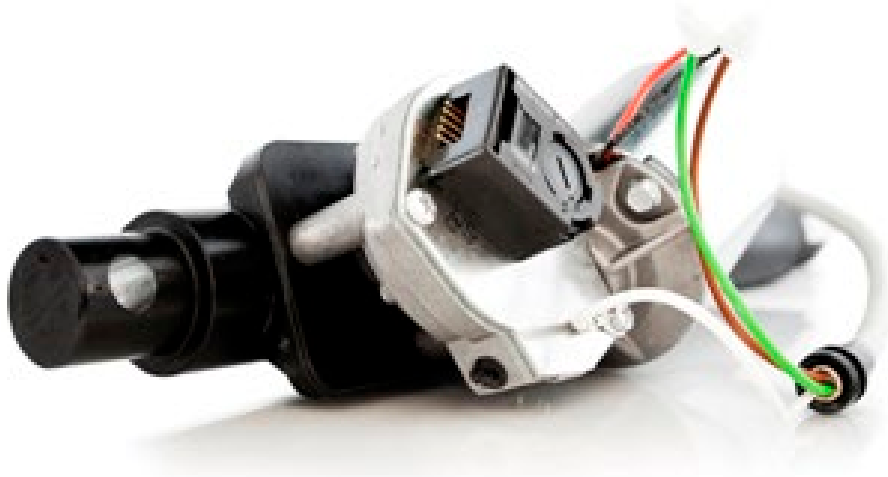


Optical Sensor Encoder



External encoder which is mounted on the motor gear house and connected to the output shaft. Two channel quadrature with optional index pulse. Resolutions up to 1024 counts per revolution. TTL compatible. Single 5 V supply. 7.

Technical specification

Configurations

Available for RE25, RE35

Electrical characteristics type HEDS-5XXX

Absolute max ratings:

Operating temperature	-40°C to +100°C	
Supply voltage Vcc	-0,5 to 7,0VDC	
Output voltage Vo	-0,5 to Vcc	
Output current/channel, Iout	-1,0mA to 5mA	
Load capacitance	Max 100pF	2,7 Kohms pull-up

Recommended operating conditions:

Operating temperature	-40°C to +100°C	
Supply voltage	5,0 VDC	(min 4,5VDC, max 5,5VDC) ripple <100mVp-p
Supply current*	17mA	(max 40mA)
High level output*	min 2,4VDC	I oh = -40uA
Low level output*	max 0,4VDC	I ol = 3,2mA
Rise time*	200nS	@ 25pF, 11kohms pull-up
Fall time*	50nS	@ 25pF, 11kohms pull-up
Resolution	50, 96, 100, 192, 200, 256, 360, 400, 500, 512 ppr	

Electrical characteristics type HEDS-5XXX

Absolute max ratings:

Operating temperature	-40°C to +70°C	
Supply voltage Vcc	-0,5 to 7,0VDC	
Output voltage Vo	-0,5 to Vcc	
Output current/channel, Iout	-1,0mA to 5mA	
Load capacitance	Max 100pF	2,7 Kohms pull-up

Recommended operating conditions:

Operating temperature	-40°C to +70°C	
Supply voltage	5,0 VDC	(min 4,5VDC, max 5,5VDC) ripple <100mVp-p
Supply current*	57mA	(max 85mA)
High level output*	min 2,4VDC	I oh = -40uA
Low level output*	max 0,4VDC	I ol = 3,86mA
Rise time*	180nS	@ 25pF, 3,2kohms pull-up
Fall time*	40nS	@ 25pF, 3,2kohms pull-up
Resolution	1000 and 1024 ppr	

*Typical values specified at Vcc = 5,0VDC and 25°C

Optical Sensor Encoder

Resolution

Encoder ppr	Actuator pitch 3mm	Actuator pitch 4mm	Actuator pitch 6mm	Actuator pitch 9mm
50	16,667	12,500	8,333	5,556
96	32,000	24,000	16,000	10,667
100	33,333	25,000	16,667	11,111
192	64,000	48,000	32,000	21,333
200	66,667	50,000	33,333	22,222
256	85,333	64,000	42,667	28,444
360	120,000	90,000	60,000	40,000
400	133,333	100,000	66,667	44,444
500	166,667	125,000	83,333	55,556
512	170,667	128,000	85,333	56,889
1000	333,333	250,000	166,667	111,111
1024	341,333	256,000	170,667	113,778

Connection

AMP	103686-4, 640442-5
Molex	2695 series with 2759 series term
Avago	Designed connector, HEDS-8902 (2 ch), HEDS-8903 (3 ch).
Cable length	152 mm

Pin Configuration

Pin No	Parameter	HEDS-8902	HEDS-8903
1	Ground	Black	Black
2	CH 1	N/A	Blue
3	CH A	White	White
4	Vcc	Red	Red
5	CH B	Brown	Brown

Overall dimensions

Height over motor gear house will increase 18mm, length and width fits within gear house dimensions.

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