

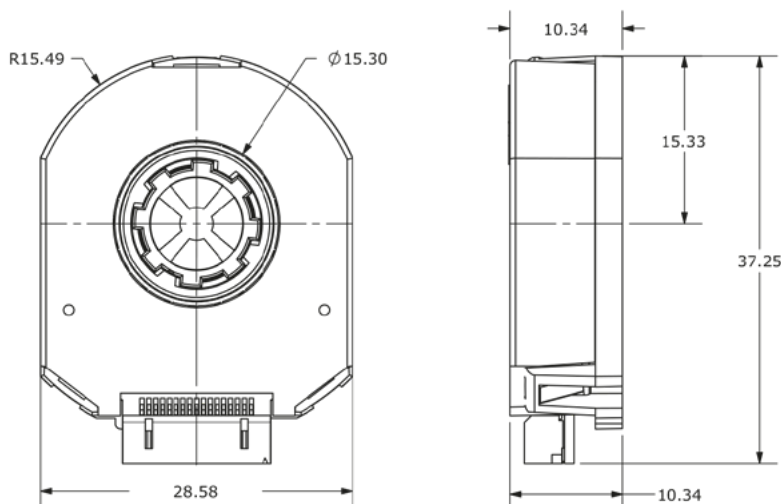
Differential encoder

919388

parvalux
by **maxon**

all dimensions in mm [in.]

wiring details available on request



Electrical data	Conditions / description		min	typ	max
1 Power supply (VDD)	VDD	V	4.5	5.0	5.5
2 Start-up time ¹		ms		200	
3 Current consumption	with unloaded output	mA		16	
4 Single ended channels	output high level	V	VDD 0.1		
	output low level	V			0.1
	output current (per channel)	mA			15
	rise/fall time	ns		8	
5 Differential RS-422 channels	output high level	V	3		
	output low level	V			0.1
	output current (per channel)	mA			25
	rise/fall time	ns	7	11	20

¹ Encoder must be stationary during start-up

Incremental characteristics	Conditions / description		min	typ	max
1 Channels	CMOS voltage (S) - A, B, Z Quadrature line driver (Q) - A, A, B, B, Z, Z				
2 Waveform	CMOS voltage square wave				
3 Phase difference	A leads B for CCW rotation (viewed from the front)				
4 Quadrature resolutions ¹	48, 96, 100, 125, 192, 200, 250, 256, 384, 400, 500, 512, 800, 1000, 1024, 2048	PPR			
5 Index ²	one pulse per 360° rotation				
6 Accuracy		°		0.2	
	256, 512, 1024, 2048	%	49	50	51
7 Quadrature duty cycle (at each resolution)	48, 96, 100, 125, 192, 200, 250, 384, 400, 500	%	47	50	53
	800, 1000	%	43	50	56

¹ Resolution selected via adjustable DIP switch, pre-set to 2048 PPR. All resolutions are listed as pre-quadrature, meaning the final number of counts is PPR x 4

² Some stepper motors may leak a magnetic field causing the index pulse to not function properly (non-magnetic version available with 8 pulses per revolution)

Mechanical data	Conditions / description		min	typ	max
1 Motor shaft length		mm	9		
2 Weight	Weight varies by configuration	g		15.7	
3 Axial play		mm			±0.3
	48, 96, 100, 125, 182, 200, 250, 256, 384, 400, 500, 512, 800, 1000, 1024, 2048	rpm			8000
4 Rotational speed (at each resolution)	360, 768, 1600, 2000, 4096	rpm			4000
	2500	rpm			2500

Environmental	Conditions / description		min	typ	max
1 Operating temperature		°C	-40		100
2 Humidity	non-condensing	%			85
3 Vibration	20~500 Hz, 1 hour each XYZ	G			5
4 Shock	11 ms, ±XYZ direction	G			200
5 RoHS	2011 / 65 / EU				