

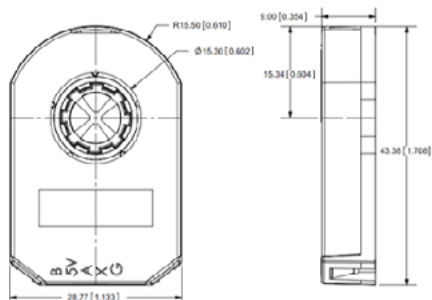
# Incremental encoder

735912

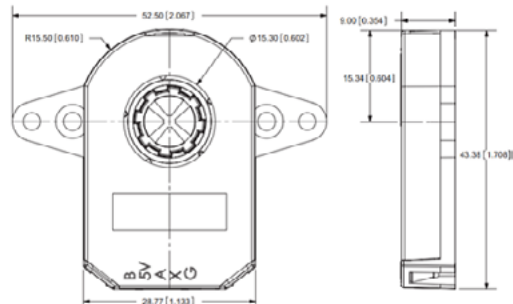
all dimensions in mm [in.]

wiring details available on request

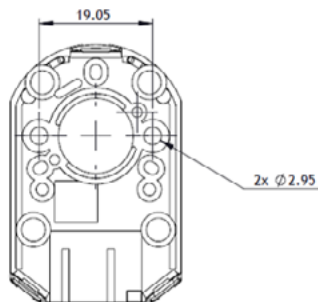
## Standard base



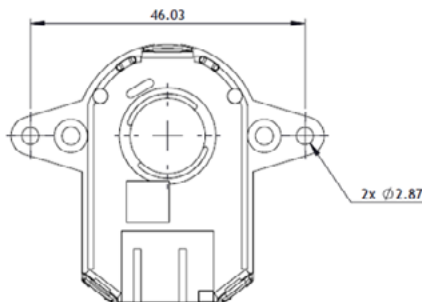
## Wide base



## Standard base mounting



## Wide base mounting



Electrical data	Conditions / description		min	typ	max
1 Power supply (VDD)	VDD	V	3.6	5.0	5.5
2 Current consumption <sup>1</sup>	with unloaded output	mA		6.0	
3 Output high level		V	0.8		
4 Output low level		V			0.4
5 Output current <sup>2</sup>	CMOS sink / source per channel	mA			2.0
6 Rise / fall time		ns		30	

Incremental characteristics	Conditions / description		min	typ	max
1 Channels	quadrature A, B, and X index				
2 Waveform	CMOS voltage square wave				
3 Phase difference	A leads B for CCW rotation (viewed from the front)	°		90	
4 Quadrature resolutions <sup>1</sup>	48, 96, 100, 125, 192, 200, 250, 256, 384, 400, 500, 512, 800, 1000, 1024, 2048	PPR			
5 Index <sup>2</sup>	one pulse per 360° rotation				
6 Accuracy		°		0.25	
7 Quadrature duty cycle (at each resolution)	256, 512, 1024, 2048	%	49	50	51
	48, 96, 100, 125, 192, 200, 250, 384, 400, 500	%	47	50	53
	800, 1000	%	43	50	56

<sup>1</sup> 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

<sup>2</sup> 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		g		20.5	
3 Axial play		mm			±0.3
4 Rotational speed (at each resolution)	192, 284, 400, 500, 800, 1000, 1024, 2048	rpm			7500
	48, 96, 100, 125, 200, 250, 256, 512	rpm			15000

Environmental	Conditions / description		min	typ	max
1 Operating temperature <sup>1</sup>		°C	-40		100
2 Humidity	non-condensing	%			95
3 Vibration	20~500 Hz, 1 hour each XYZ	G			10
4 Shock	11 ms, ±XYZ direction	G			50
5 RoHS	2011 / 65 / EU				

<sup>1</sup> Encoders with operating temperature of -40 - 125°C are available as a custom order