

Encoders

Capacitive Encoders

Features:
 48 to 2,048 Cycles per revolution
 3 Channels
 Digital output

Series AMT 102 / AMT 103

Supply output	square wave		3	channels
Supply voltage		V _{CC}	3.6 to 5.5	V DC
Current consumption, typical (V _{DD} = 5 V DC)		I _{DD}	6	mA
Output current		I _{OUT}	2	mA
Pulse width		P	180 ± 45	°e
Phase shift, channel A to B		Φ	90 ± 45	°e
Logic state width		S	90 ± 45	°e
Cycle		C	360 ± 30	°e
Signal rise/fall time, typical (C _{LOAD} = 1,000 pF)		tr/tf	0.4	µs
Frequency range ⁽¹⁾		f	up to 250	KHz
Inertia of code disc		J	4.2	gcm ²
Operating temperature range			- 40 to + 100	°C

Ordering information			
Encoder type	number of channels	cycles per revolution	in combination with DC-Micromotors units
AMT 102 or AMT 103	3	48, 96, 100, 125, 192,	{ M2232U...CS, M2232U...GS M3138U
	3	200, 250, 256, 384, 400, 500	
See cable configuration	3	512, 800, 1000, 1024, 2048	{ M4870U MD2230
Encoder are programmable for any number of cycles per revolution 48 to 2048			

Features

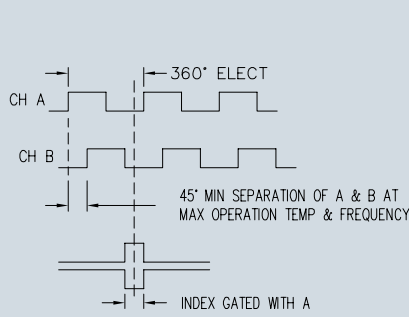
These incremental shaft encoders in combination with the Micro-Drives DC-Micromotors are designed for indication and control of both shaft velocity and direction of rotation as well as for positioning.

The AMT 102 encoder is configured with a side or radial exit connector. The AMT 103 is configured with a top or axial connector. See the second page for connector ordering information.

The supply voltage for the encoder and the DC-Micromotor as well as the output signals are interfaced with separate cables for connection. The AMT 102 encoder connection uses a Molex 50-57-9405 (0.100" pitch) connector. The AMT 103 encoder uses AMP 3-640440-5 (0.100" pitch).

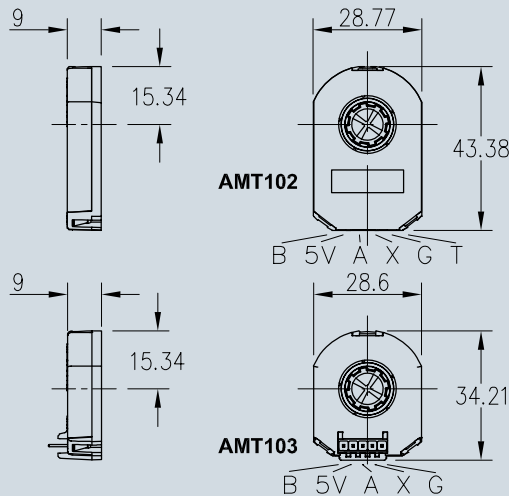
Details for the DC-Micromotors and suitable reduction gearheads are on separate catalog pages.

Output signals / Circuit diagram / Connector information



Output signals

with clockwise rotation as seen from the shaft end

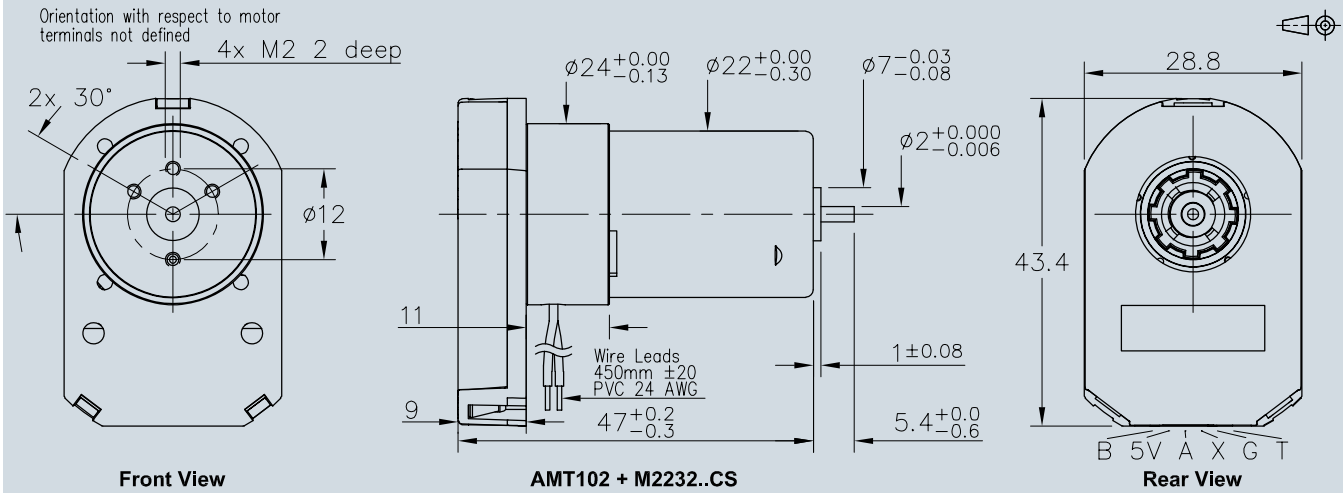


Pin	Color	Function
B	-	Channel B
5V	-	+5Vdc
A	-	Channel A
X	-	Index
G	-	GND
T	-	Future Use

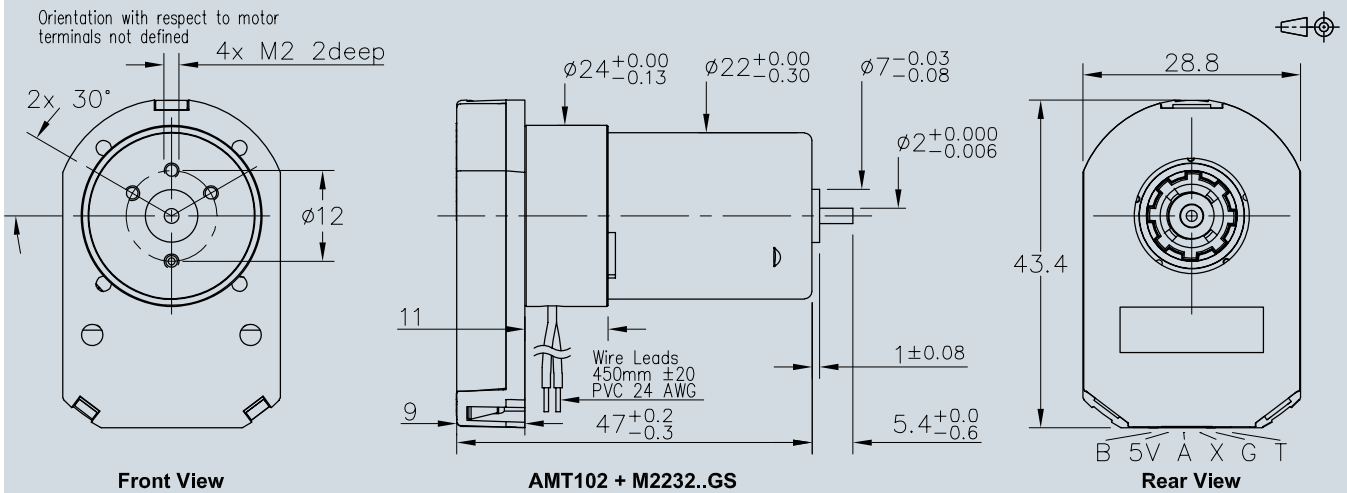
Connectors:
 Molex 50-57-9405 Housing
 Molex 16-02-0086 Terminals

AMT 102 / AMT 103

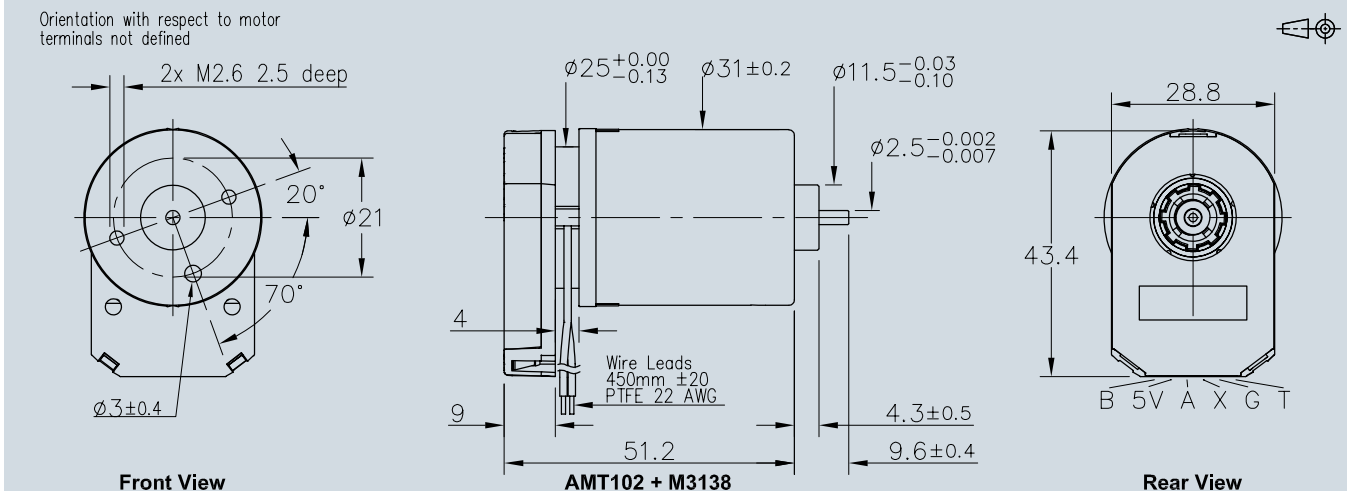
AMT 102 with M2232...CS



AMT 102 with M2232...GS



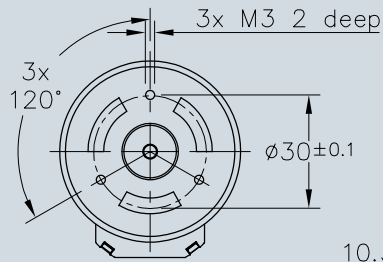
AMT 102 with M3138



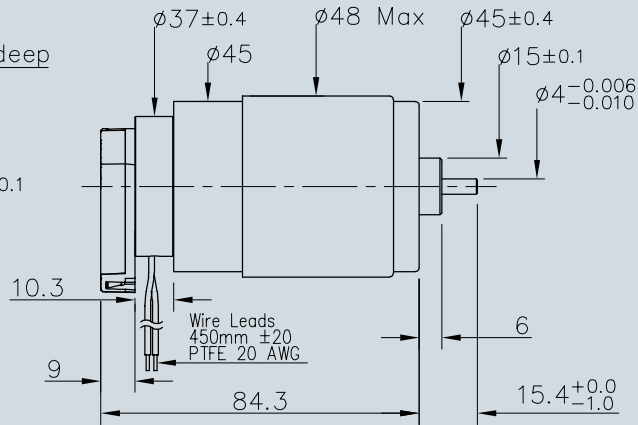
AMT 102 / AMT 103

AMT 102 with M4870

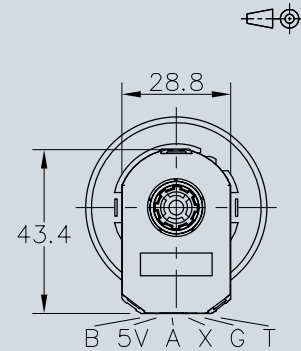
Orientation with respect to motor terminals not defined



Front View



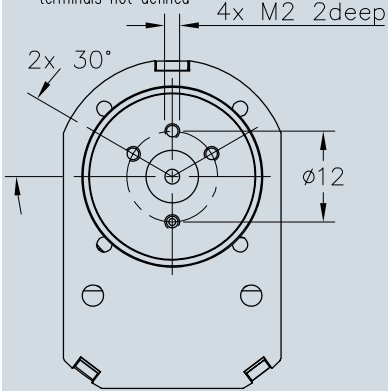
AMT102 + M4870



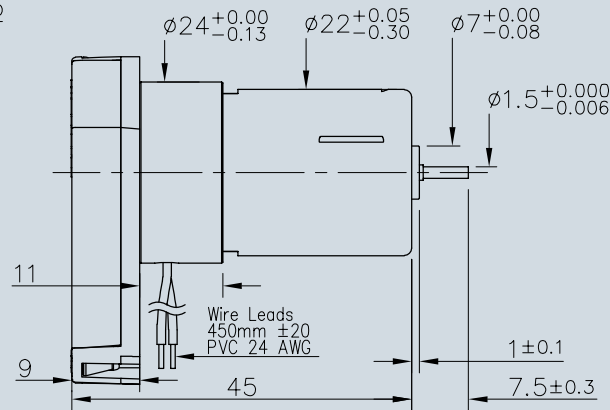
Rear View

AMT 102 with MD2230

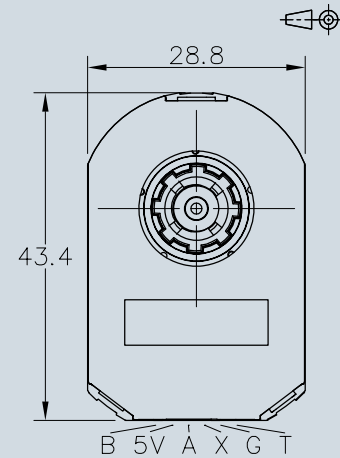
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Front View



AMT102 + MD2230



Rear View

