

Encoders

Capacitive Encoders

Features:
48 to 2048 Lines per revolution
3 Channels
Digital output

AMT 102 / AMT 103

		AMT 102 / 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} = 1000 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	lines per revolution	in combination with DC-Micromotors
AMT 102 or 103	3	48, 96, 100, 125, 192	} series 2224 ... SR, series 2232 ... SR series 2342 ... CR
	3	200, 250, 256	
Encoders are programmable for resolutions from 48 to 2048 lines	3	384, 400, 500, 512, 800	} series 2642 ... CR, series 2657 ... CR series 3242 ... CR, series 3257 ... CR
	3	1 000, 1024, 2048	

Features

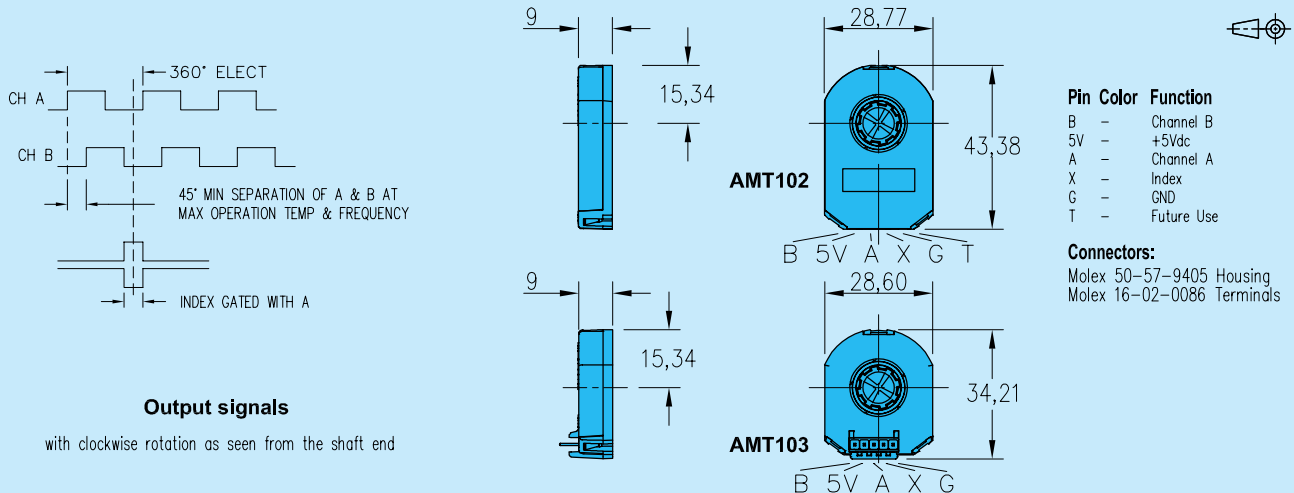
These incremental shaft encoders in combination with the FAULHABER® DC-Micromotors are designed for indication and control of both shaft velocity and direction of rotation as well as for positioning.

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 back 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 with a 0,00393 mm (0,100 in) pitch connector. The AMT 103 encoder uses AMP 3-640440-5 with a 0.00393 mm (0,100 in) pitch connector.

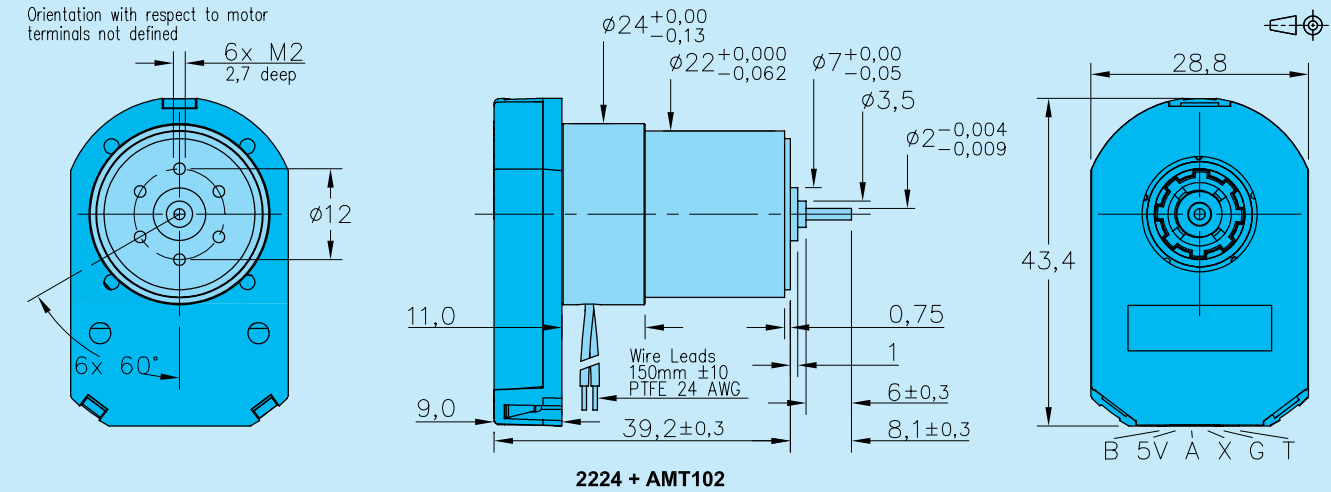
Details for the DC-Micromotors and suitable reduction gearheads are on separate catalog pages.

Output signals / Circuit diagram / Connector information

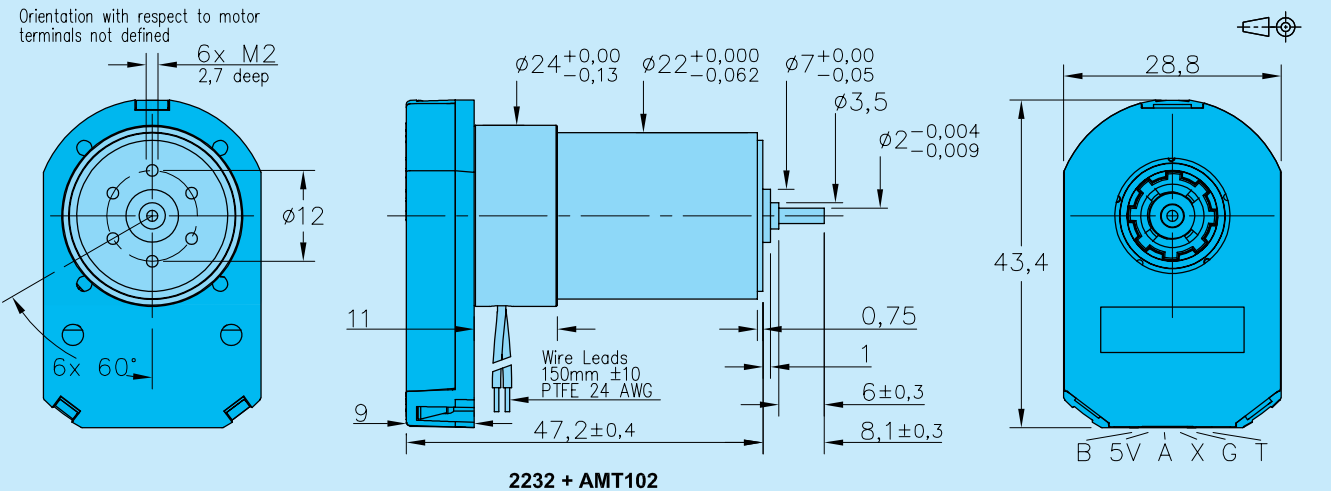


AMT 102 / AMT 103

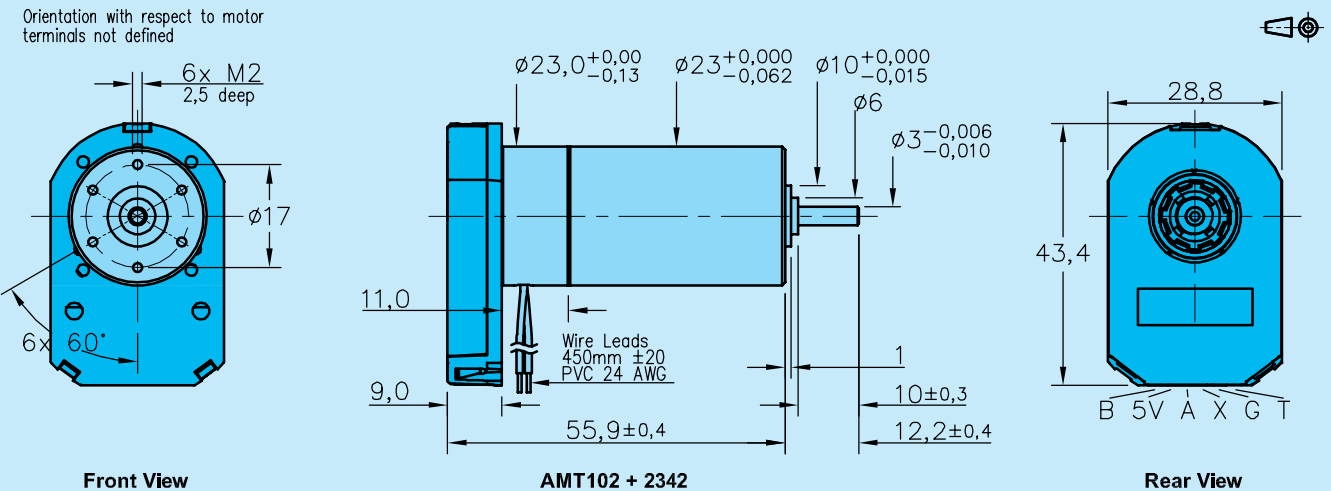
DC-Micromotor 2224...SR with Encoder AMT 102



DC-Micromotor 2232 U ... SR with Encoder AMT 102



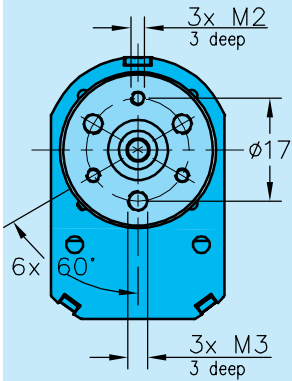
DC-Micromotor 2342 S ... CR with Encoder AMT 102



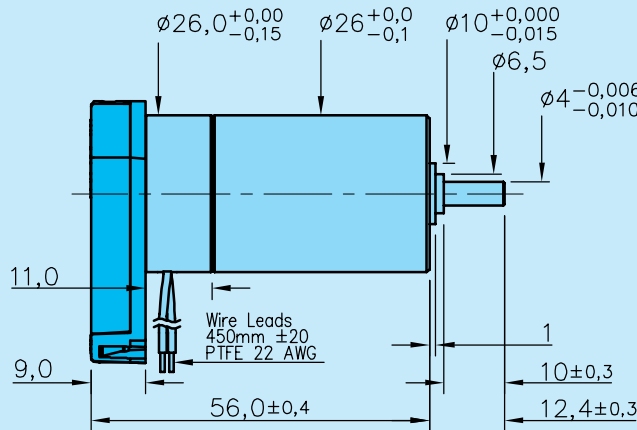
AMT 102 / AMT 103

DC-Micromotor 2642 W ... CR with Encoder AMT 102

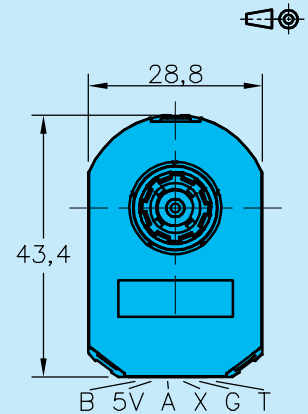
Orientation with respect to motor terminals not defined



Front View



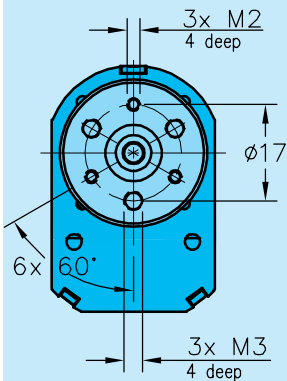
AMT102 + 2642



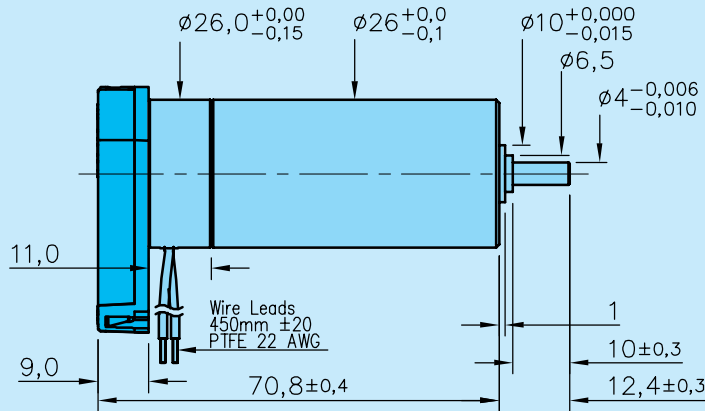
Rear View

DC-Micromotor 2657 W ... CR with Encoder AMT 102

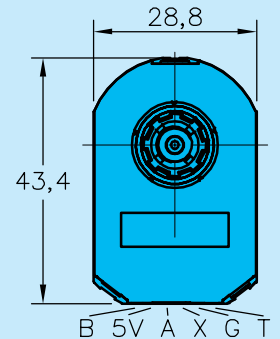
Orientation with respect to motor terminals not defined



Front View



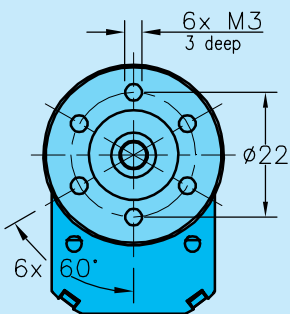
AMT102 + 2657



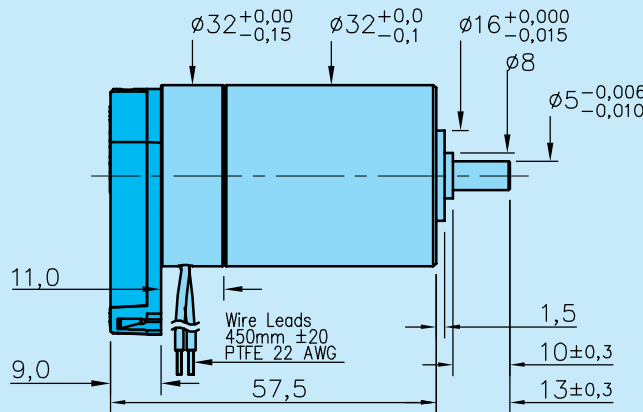
Rear View

DC-Micromotor 3242 G ... CR with Encoder AMT 102

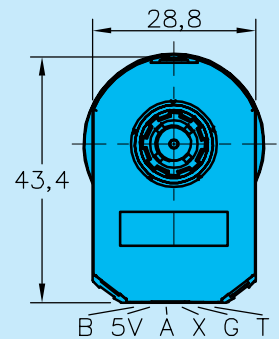
Orientation with respect to motor terminals not defined



Front View



AMT102 + 3242

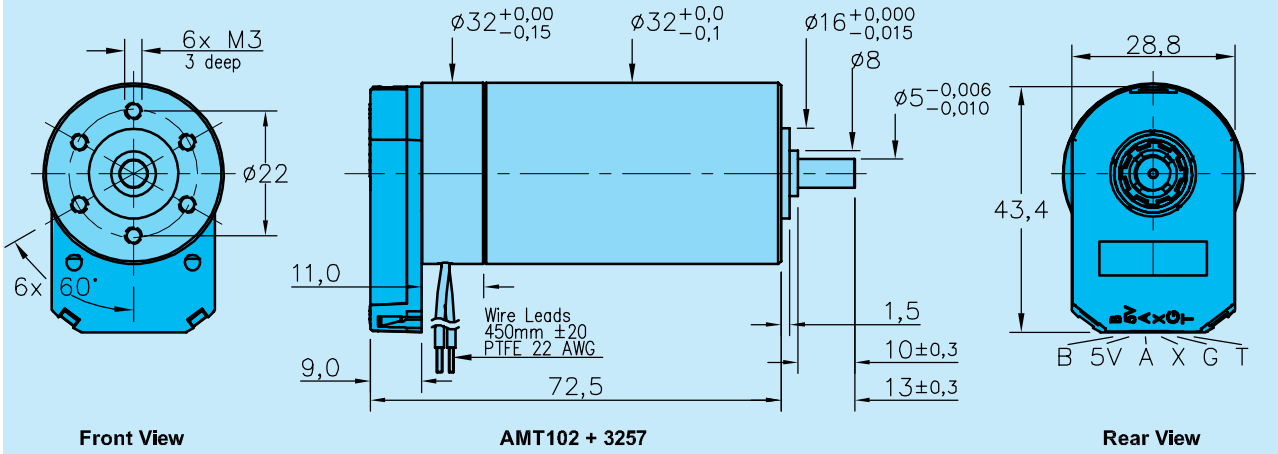


Rear View

AMT 102 / AMT 103

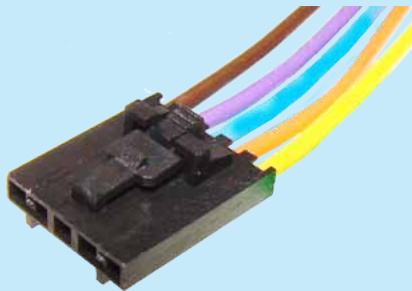
DC-Micromotor 3257 G ... CR with Encoder AMT102

Orientation with respect to motor terminals not defined



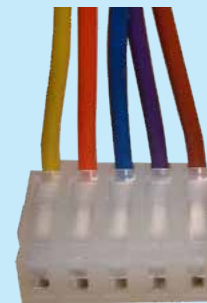
How to Order a AMT-102 & AMT-103

Part number	Description	Stocked items
AMT102-V-48	Encoder with 48 lines per revolution	yes
AMT102-V-96	Encoder with 96 lines per revolution	yes
AMT102-V-100	Encoder with 100 lines per revolution	yes
AMT102-V-125	Encoder with 125 lines per revolution	yes
AMT102-V-192	Encoder with 192 lines per revolution	yes
AMT102-V-200	Encoder with 200 lines per revolution	yes
AMT102-V-250	Encoder with 250 lines per revolution	yes
AMT102-V-256	Encoder with 256 lines per revolution	yes
AMT102-V-384	Encoder with 384 lines per revolution	yes
AMT102-V-400	Encoder with 400 lines per revolution	yes
AMT102-V-500	Encoder with 500 lines per revolution	yes
AMT102-V-512	Encoder with 512 lines per revolution	yes
AMT102-V-800	Encoder with 800 lines per revolution	yes
AMT102-V-1000	Encoder with 1000 lines per revolution	yes
AMT102-V-1024	Encoder with 1024 lines per revolution	yes
AMT102-V-2048	Encoder with 2048 lines per revolution	yes
AMT103-V-48	Encoder with 48 lines per revolution	yes
AMT103-V-96	Encoder with 96 lines per revolution	yes
AMT103-V-100	Encoder with 100 lines per revolution	yes
AMT103-V-125	Encoder with 125 lines per revolution	yes
AMT103-V-192	Encoder with 192 lines per revolution	yes
AMT103-V-200	Encoder with 200 lines per revolution	yes
AMT103-V-250	Encoder with 250 lines per revolution	yes
AMT103-V-256	Encoder with 256 lines per revolution	yes
AMT103-V-384	Encoder with 384 lines per revolution	yes
AMT103-V-400	Encoder with 400 lines per revolution	yes
AMT103-V-500	Encoder with 500 lines per revolution	yes
AMT103-V-512	Encoder with 512 lines per revolution	yes
AMT103-V-800	Encoder with 800 lines per revolution	yes
AMT103-V-1000	Encoder with 1000 lines per revolution	yes
AMT103-V-1024	Encoder with 1024 lines per revolution	yes
AMT103-V-2048	Encoder with 2048 lines per revolution	yes
CUI-3132-1FT	Cable for AMT 102 only	yes
CUI-435-1FT	Cable for AMT 103 only	yes



CUI-3132-1FT Cable for AMT 102 only

Molex 50-57-9405 with a 2,55 mm (0,100 in) pitch crimp (16-02-0086 pins) connector, 5-pin finger latching with 5 discrete 22 AWG flying leads 305 mm (12 in) in length, each fits with AMT102-V. Additional cable lengths available.



CUI-435-1FT Cable for AMT 103 only

AMP (Tyco) 3-640440-5 with a 2,55 mm (0,100 in) pitch IDC connector, 5-pin right angle with 5 discrete 22 AWG flying leads 305 mm (12 in) in length, each fits with ATM103-V. Additional cable lengths available.