

# **Encoders**

**Magnetic Encoders** 

#### For combination with: Stepper Motor: AM1020

## Series AE 30B19

		45 30840	
		AE 30B19	
Lines per revolution	Ν	10	
Signal output, square wave		2 channels	
5 1 7 1			
Supply voltage	V cc	4,5 5,5	V DC
Current consumption, typical (V CC = 5 V DC)	l cc	5	mA
Pulse width	Р	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	tr / tf	5/0,2	μs
5			
Frequency range <sup>1)</sup>	f	up to 7,2	kHz
Inertia of code disc	J	9	·10 <sup>-9</sup> kgm <sup>2</sup>
Operating temperature range		-20 +85	°C

<sup>1)</sup> Velocity (rpm) = f (Hz) x 60/N

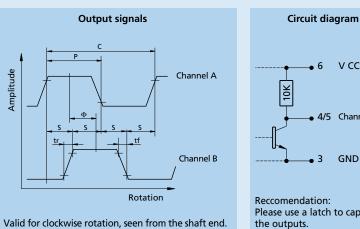
### Features / Output signals / Circuit diagram

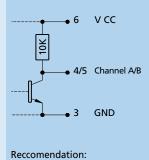
These incremental shaft encoders are designed for indication and control of shaft velocity and direc-tion of rotation as well as for position verification.

Solid state Hall sensors and a low inertia magnetic disc provide two channels with  $90^\circ\, phase$  shift.

The supply voltages for the encoder and the stepper motor as well as the two channel output signals are interfaced through a individual lead wires with 125 mm in length with an 8-pin connector.

Details for the stepper motors and suitable reduction gearheads are on the coresponding data sheets.





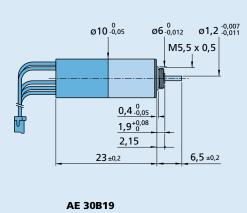
Please use a latch to capture the outputs.

### Cable connection

Function		Colour		
Motor Phase A +		black		
Motor Pha	ase B –	orange		
GND		green		
Channel B		red		
Channel A		violet		
Vcc		yellow		
Motor Pha	Motor Phase A –			
Motor Phase B +		blue		
Connector type: JST#08ZR-3H				
Receptacle type: (not supplied)				
Top entry:				
Side entry:				
	Motor Pha Motor Pha GND Channel B Channel A Vcc Motor Pha Motor Pha Motor Pha ector type: ptacle type: entry:	Motor Phase A + Motor Phase B – GND Channel B Channel A Vcc Motor Phase A – Motor Phase B + ector type: JST#08 ptacle type: (not su entry: B8B-ZR		



Individual lead wires, AWG30, length 125 mm.



For notes on technical data and lifetime performance refer to "Technical Information". Edition 2010 - 2011

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