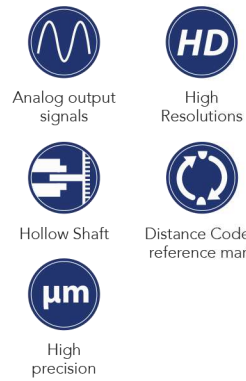


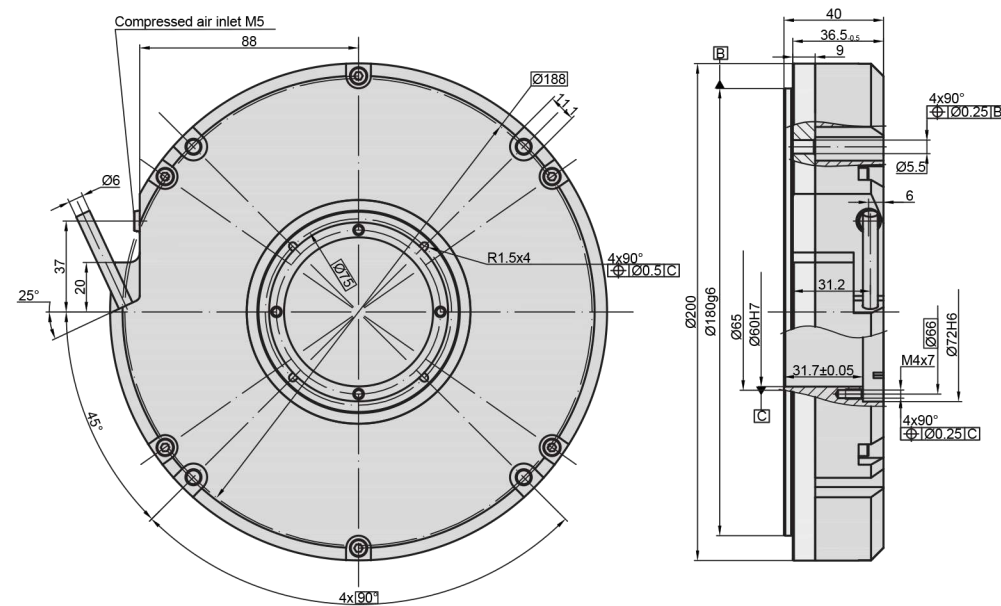
PHOTOELECTRIC ANGLE ENCODER

A200H



Photoelectric angle encoder A200H is the most sophisticated encoder in our product range. It is capable of producing up to 3.600.000 output pulses per revolution and has accuracy of up to

±2.0 arc. sec. Also, it has a 60 mm shaft hole diameter, which sets it apart from other encoders.



MECHANICAL DATA

Line number on disc (Z)	36000	Starting torque at 20°C	≤ 0.5Nm
Number of output pulses per revolution for A200-F	Z x k, where k = 1, 2, 3, 4, 5, 8, 10, 20, 25, 50, 100	Rotor moment of inertia	< 0.9×10 ⁻³ kgm
Reference signal:		Protection (IEC 529)	IP64
- standard (s)	one per shaft revolution	Maximum weight without cable	4.5 kg
- distance coded (K)	72 per shaft revolution	Operating temperature	0...+70 °C
Permissible mech. speed	≤ 1000 rpm	Storage temperature	-30...+85°C
Max. operating speed (depends on number of output pulses)	300 to 500 rpm	Maximum humidity (non condensing)	98 %
Permissible shaft load:		Permissible vibration	≤ 100 m/s ²
- axial	0,02 mm	Permissible shock (6 ms)	≤ 300 m/s ²
- radial	0,02 mm		
Accuracy	±2.0 arc. sec		

ACCESSORIES

CONNECTORS FOR CABLE	B12 12-pin round connector	C9 9-pin round connector	C12 12-pin round connector	D9 9-pin flat connector	D15 15-pin flat connector	RS10 10-pin round connector	ONC 10-pin round connector
DIGITAL READOUT DEVICES	CS3000			CS5500			
EXTERNAL INTERPOLATOR	NK						

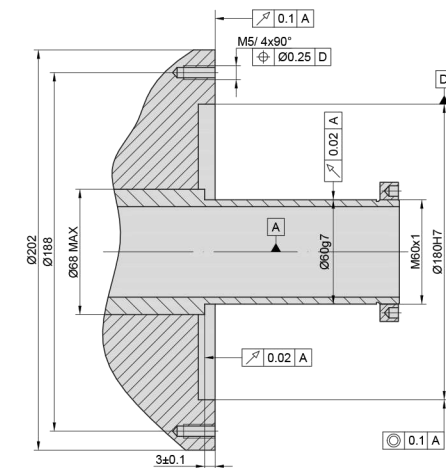
ELECTRICAL DATA

Version	A200H-A ~ 11 μApp	A200H-AV ~ 1 Vpp	A200H-F □ TTL
Supply voltage (U _p)	+5 V ± 5%	+5 V ± 5%	+5 V ± 5%;
Max. supply current (without load)	100 mA	120 mA	150 mA
Light source	LED	LED	LED
Incremental signals	Two sinusoidal I ₁ and I ₂ Amplitude at 1 kΩ load: - I ₁ = 7...16 μA - I ₂ = 7...16 μA	Differential sine +A/-A and +B/-B Amplitude at 120 Ω load: - A = 0.6...1.2 V - B = 0.6...1.2 V	Differential square-wave U1/U1 and U2/U2. Signal levels at 20 mA load current: - low (logic "0") ≤ 0.5 V - high (logic "1") ≥ 2.4 V
Reference signal	One quasi-triangular I ₀ peak per revolution. Signal magnitude at 1 kΩ load: - I ₀ = 2...8 μA (usable component)	One quasi-triangular +R and its complementary -R per revolution. Signals magnitude at 120Ω load - R = 0.2...0.8 V (usable component)	One differential square-wave U0/U0 per revolution. Signal levels at 20 mA load current: - low (logic "0") < 0.5 V - high (logic "1") > 2.4 V
Maximum operating frequency	(-3 dB cutoff) ≥ 160 kHz	(-3 dB cutoff) ≥ 180 kHz	160-2000 kHz (depends on interpolation factor)
Direction of signals	I ₂ lags I ₁ for clockwise rotation (viewed from encoder mounting side)	+B lags +A for clockwise rotation (viewed from encoder mounting side)	U2 lags U1 with clockwise rotation (viewed from encoder mounting side)
Maximum rise and fall time	-	-	< 0.5 μs
Standard cable length	1 m, without connector	1 m, without connector	1 m, without connector
Maximum cable length	5 m	25 m	25 m
Output signals			

Note:

- Maximum working rotation speed (with proper encoder counting) is limited by maximum operating frequency and maximum mechanical rotation speed.
- If cable extension is used, power supply conductor cross-section should not be smaller than 0.5 mm².

MOUNTING REQUIREMENTS



ORDER FORM

A200H	- X1 - X2 - X3 - X4/X5			
Output signal version (X1):	Pulse number per revolution (X2):	Reference signal (X3):	Cable Length (X4):	Connector type (X5):
A AV F	36000 ... 3600000* <small>*only F signal version for >36000 pulses</small>	S - one per revolution, K - distance-coded	AR01 - 1m AR02 - 2m AR03 - 3m ...	W - without connector B12 - round, 12 pins C9 - round, 9 pins C12 - round, 12 pins D9 - flat, 9 pins D15 - flat, 15 pins RS10 - round, 10 pins ONC - round, 10 pins
ORDER EXAMPLES: 1) A200H-AV-36000-S-AR01/C12 2) A200H-F-360000-K-AR01/C12				