

A19



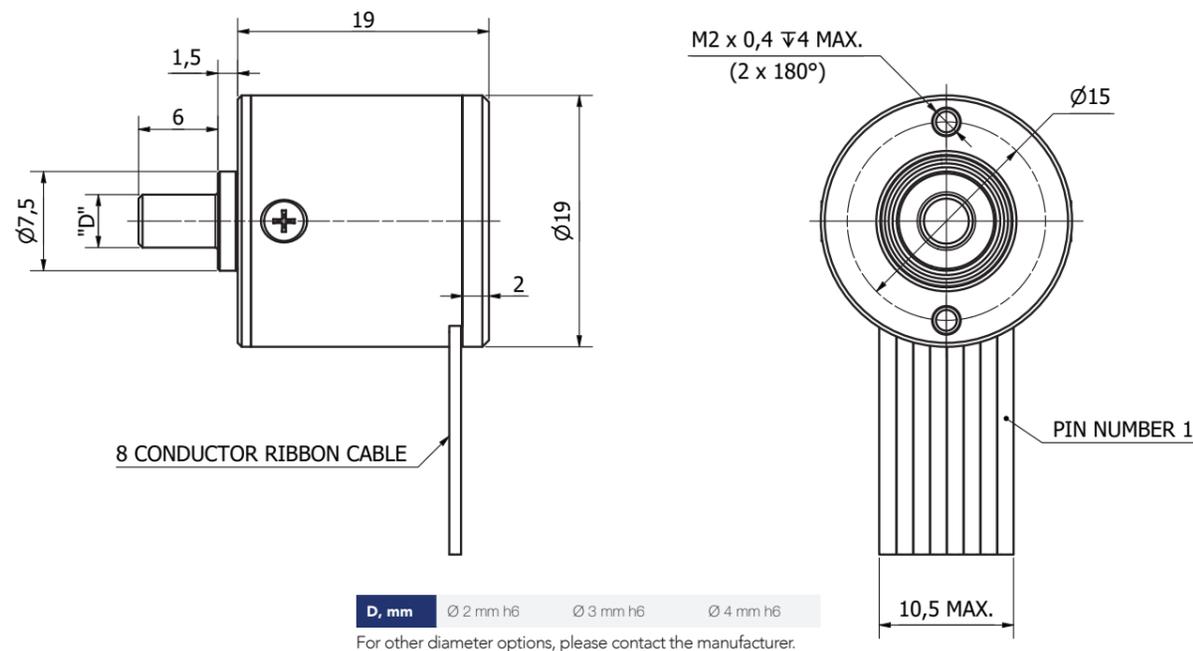
A19 is a compact, incremental encoder designed for high-precision motion detection in applications with limited space. With a small diameter of only 19mm, it is ideal for installations where size constraints are critical. The encoder outputs TTL differential signals, ensuring reliable data transmission even in electrically noisy environments. It offers a wide range of resolution options, adjustable from 1 to 262,144 pulses per revolution, providing flexibility to match specific performance requirements in diverse applications. The encoder is available in various configurations, including both solid and blind hollow shaft versions. The blind hollow shaft version features two optional flexible couplings, which can be mounted at different angles. This design allows for versatile and adaptable installation to accommodate various mounting requirements, enhancing ease of integration into different mechanical systems. Additionally, the encoder includes an 8-conductor ribbon cable output, which helps minimize the overall height of the device. This feature makes the encoder well-suited for compact and space-constrained applications, where maintaining a low profile is essential.

- Miniature size (Ø 19 mm)
- Various diameter options for solid and blind hollow shafts
- Several flexible couplings with different mounting options
- Special encoder design for extended temperature ranges (-40°C + 100°C)
- Ribbon cable output

SYSTEM SPECIFICATIONS

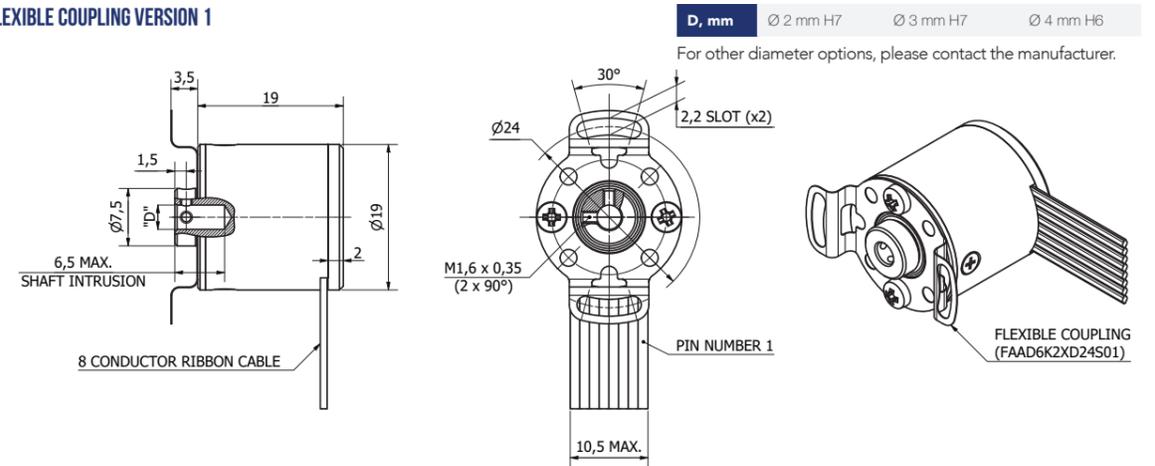
Measuring type	Incremental
Measuring technology	Optical reflective
Measuring standard	Glass disc with incremental track and a reference mark
System accuracy	± 100 arc.sec
Resolution (positions per turn)	up to 1 048 576 counts per revolution

A19S

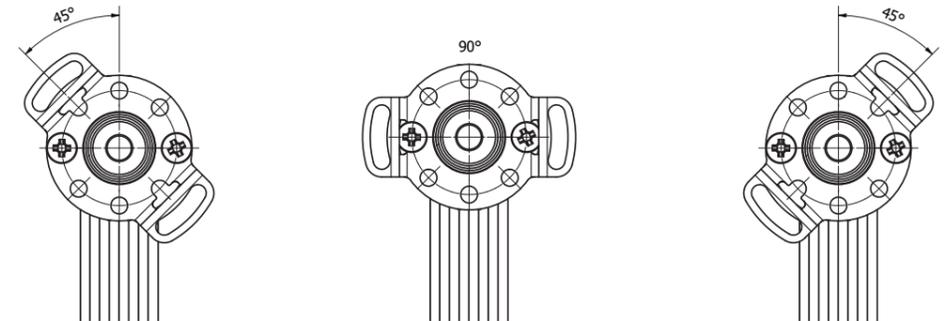


A19H

FLEXIBLE COUPLING VERSION 1

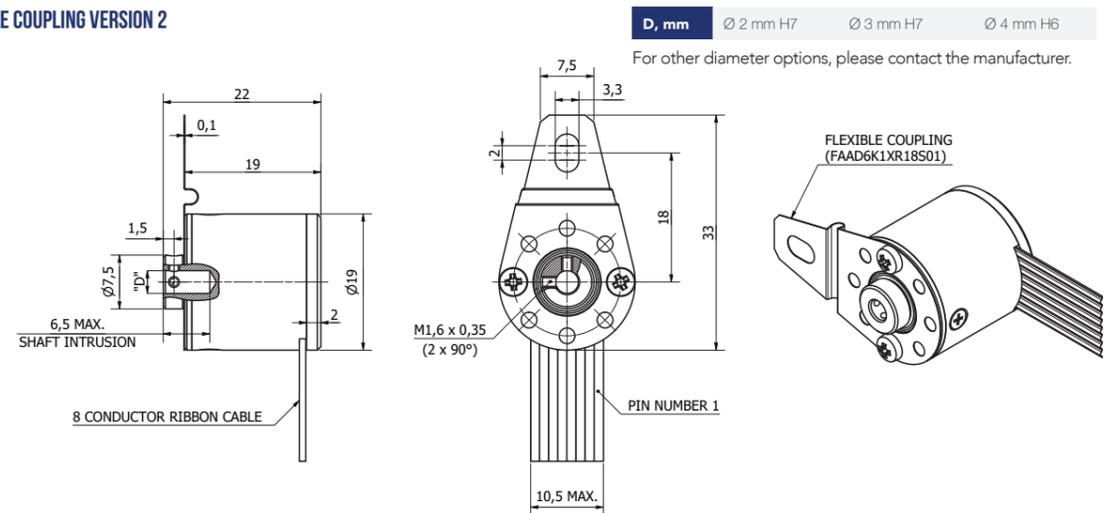


FLEXIBLE COUPLING MOUNTING OPTIONS

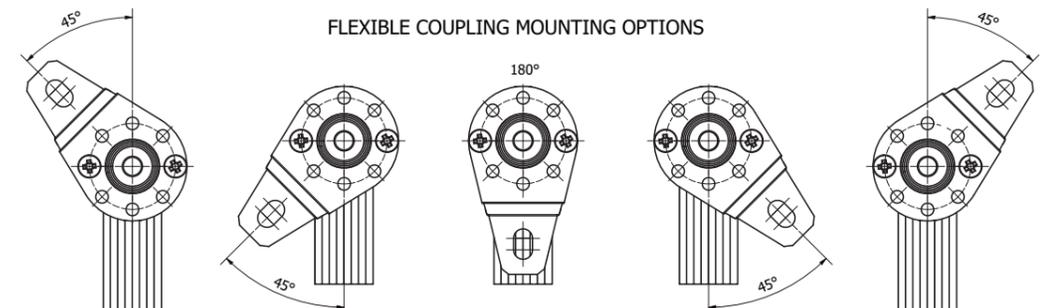


A19H

FLEXIBLE COUPLING VERSION 2



FLEXIBLE COUPLING MOUNTING OPTIONS



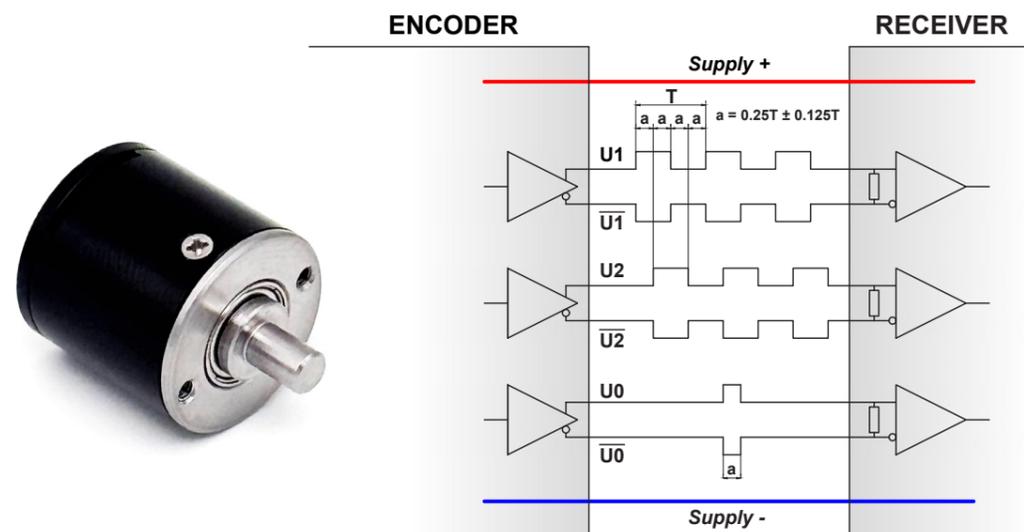
MECHANICAL DATA

Maximum shaft speed	10 000 RPM
Moment of inertia	< 0.4 gcm ²
Starting torque	5 × 10 ⁻⁴ Nm
Shaft load:	
- axial	3 N
- radial	3 N
Vibrations (55 Hz to 2000 Hz)	≤ 100 m/s ²
Shock (6 ms)	≤ 300 m/s ²
Operating temperature:	
- standard	0°C - 70°C
- extended	-40°C - 100°C
Storage temperature	-40°C - 105°C
Ingress Protection (EN 60529)	IP50
Mass (without cable):	
- standard	< 15 g
- for extended temperature option with stainless steel	< 25 g

ELECTRICAL DATA

Interface	TTL
Incremental signals	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 mark	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
Supply voltage	+5 V ±5%
Current consumption (without load)	100 mA
Maximum operating frequency	12.5 MHz

ENCODER ELECTRICAL CONNECTION



U2 lags U1 with clockwise rotation (viewed from shaft side).
Other reference signal widths (90°C, 180°C, 360°C) available on request.

ACCESSORIES

FLEXIBLE COUPLINGS

FAAD6K2XD24S01
flexible coupling version 1

FAAD6K1XR18S01
flexible coupling version 2

FAAD6K2XD24S01 FLEXIBLE COUPLING VERSION 1



FAAD6K1XR18S01 FLEXIBLE COUPLING VERSION 2



CONNECTORS FOR CABLE

71600-108LF
8-pins connector

71600-108LF 8-PINS CONNECTOR



DIGITAL READOUT DEVICES

CS3000
digital readout device

CS5500
digital readout device

CS3000 DIGITAL READOUT DEVICE



CS5500 DIGITAL READOUT DEVICE



SPECIAL CAPABILITIES

We offer exceptional flexibility in our design and manufacturing processes, allowing us to create tailor-made encoders to meet specific customer needs. We can also modify our standard encoders to accommodate different shaft diameters or designs, special wiring configurations, different mechanical interfaces, etc. Additionally, we can incorporate other custom features, such as specialized connectors, couplings, and various accessories, to ensure seamless integration into your application. Furthermore, we can adapt the design and conduct testing for various environmental conditions, including higher ingress protection levels, extended temperature ranges, and resistance to intensive mechanical vibrations or shock.

ORDER FORM

A19X1 - X2 - X3 - X4 - X5 - X6/X7

Type (X1):	Pulse number per revolution (X2):	Operating temperature (X3):	Shaft diameter (X4):	Cable length (X5):	Connector type (X6):	Flexible coupling (X7):
S - solid shaft H - blind hollow shaft	000001 - 1 pulse/rev 262144 - 262 144 pulses/rev	N - 0°C - 70°C (standard) T - -40°C - 100°C (extended)	02M - Ø 2 mm 03M - Ø 3 mm 04M - Ø 4 mm	RC005 - 500 mm RC01 - 1 000 mm RC02 - 2 000 mm	W - without connector B71 - 8-pins connector 71600-108LF	W - without coupling 1 - flexible coupling version 1* 2 - flexible coupling version 2*

*only for blind hollow shaft encoder type.

ORDER EXAMPLES: 1) A19S-S-262144-N-RC005-W/W
2) A19H-000001-T-03M-RC01-W-2