



Admotec’s Flat Magnetic Encoder has the narrowest profile and the most economical performance in harsh environments.

The new Admotec Series FM500 flat magnetic encoder permits OEMs to achieve high performance from an economical, narrow profile, fully enclosed magnetic encoder. Only 22mm long, the Series FM500 is shorter than Series FM700 and FM750 encoders and requires less space than traditional optical encoders. This flat magnetic encoder provides up to 600 pulses per revolution on each of two quadrature channels and operates in harsh environments including high shock, vibration, and contaminants.

In addition, the self-contained, hollow-shaft FM500 is easily installed and automatically aligned—no additional shaft coupling is required. Two set screws secure the FM500 on the rotating shaft, and three screws attach the flexible spring assembly of the encoder body to the stationary flange. This low profile design virtually eliminates shaft loading, and accommodates up to 1 mm (0.039") of shaft end play.

Conforming to the rigorous European EMC directive, the Series FM500 flat magnetic encoder carries the prestigious CE mark and is qualified for demanding international and domestic applications.

The combination of narrow profile, high performance in tough environments, and simple installation make the new series FM500 the perfect choice for economical general industrial automation including motor feedback, textile, packaging, test equipment, and aerospace applications.

Admotec—motion and position sensing for original equipment manufacturers.

FM

FLAT MAGNETIC ENCODER

SERIES FM500

FEATURES & BENEFITS

Magnetic, not optical	Reliable operation in harsh environments: high shock and vibration, dust, oil, moisture, etc.
Flat design	Shorter axial length saves space.
Hollow shaft for direct coupling	Installs easily without precise adjustment.
Line driver outputs	Immunity to electrical noise and interference (EMI/RFI).
CE mark	Conforms to European EMC directive.
IP54 rating	Protected against dust and water sprays.

GENERAL SPECIFICATIONS

Operating Temperature	-10 to +80	°C
Maximum Speed	6,000	RPM
Weight	120	grams nom.
Moment of Inertia	40	gram cm ²
Starting Torque	30	gram cm
Cable Length	500	mm
Supply Voltage	5.0 ±5%	V dc
Supply Current	90	mA max.
Output Load Resistance	100	Ω min.
Channel Frequency	40	kHz max.
Quadrature	90 ±45	° electrical
Cycle Error (max.)	±18	° electrical

ORDERING INFORMATION

FM500 - 2 - □ □ - □ □ □

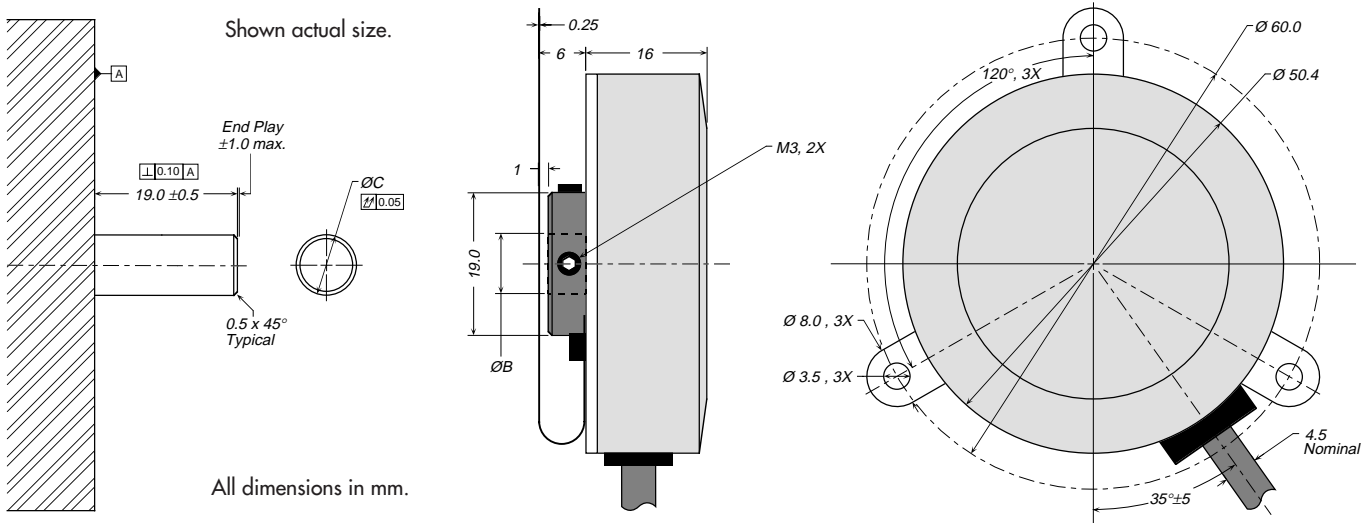
Hollow-Shaft Bore

08 = 8mm
25 = 1/4"

Resolution (PPR)

300, 360, 500,
512, 600

OUTLINE & MOUNTING DIMENSIONS AND SHAFT SPECIFICATIONS



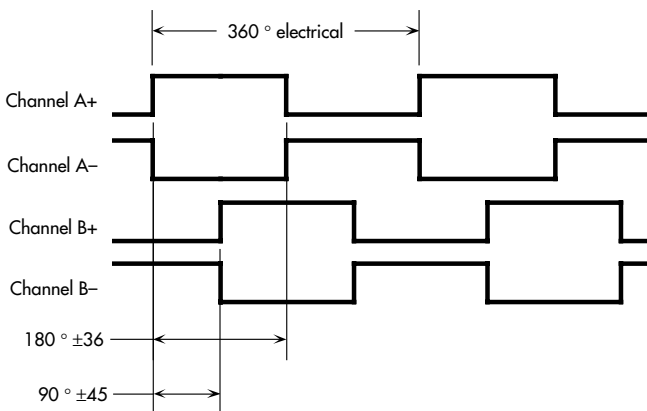
HOLLOW-SHAFT BORE (ØB)

Model Number	ØB	ØB Tolerance
FM500-2-08-□□□	8.00mm	+0.015/-0 (ISO H7)
FM500-2-25-□□□	6.35mm (1/4")	+0.015/-0 (ISO H7)

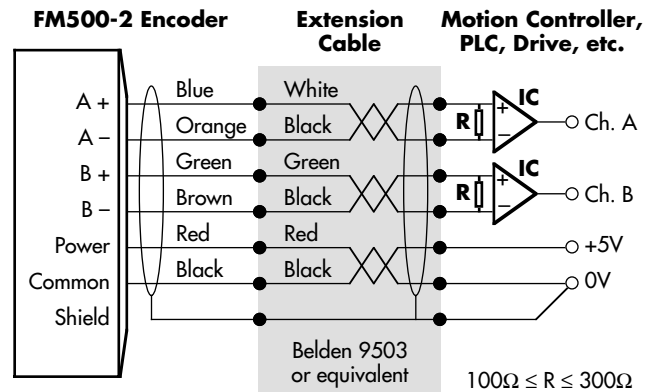
RECOMMENDED SHAFT DIMENSIONS (ØC)

Model Number	ØC	ØC Tolerance
FM500-2-08-□□□	8.00mm	+0/-0.009 (ISO h6)
FM500-2-25-□□□	6.35mm (1/4")	+0/-0.009 (ISO h6)

OUTPUT SIGNAL FORMAT



TYPICAL CONNECTION



IC = 88C20, 26C32, 26LS32, 75ALS193, etc.