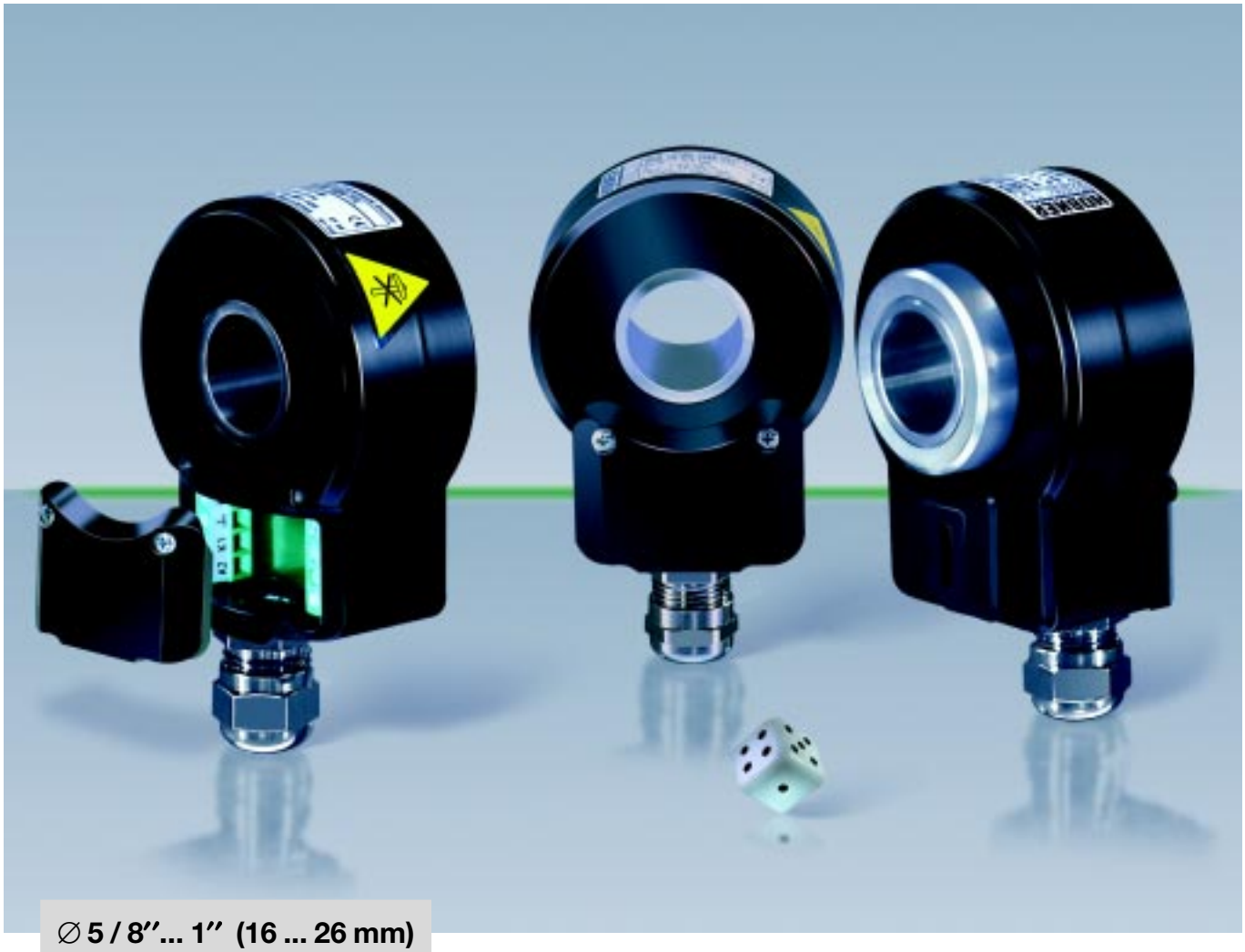
HÜBNER
ELEKTROMASCHINEN AG
BERLIN

SIEI America



∅ 5 / 8″... 1″ (16 ... 26 mm)

AHE 7.5 Hollow-Shaft

Incremental Encoder

HEAVY DUTY®

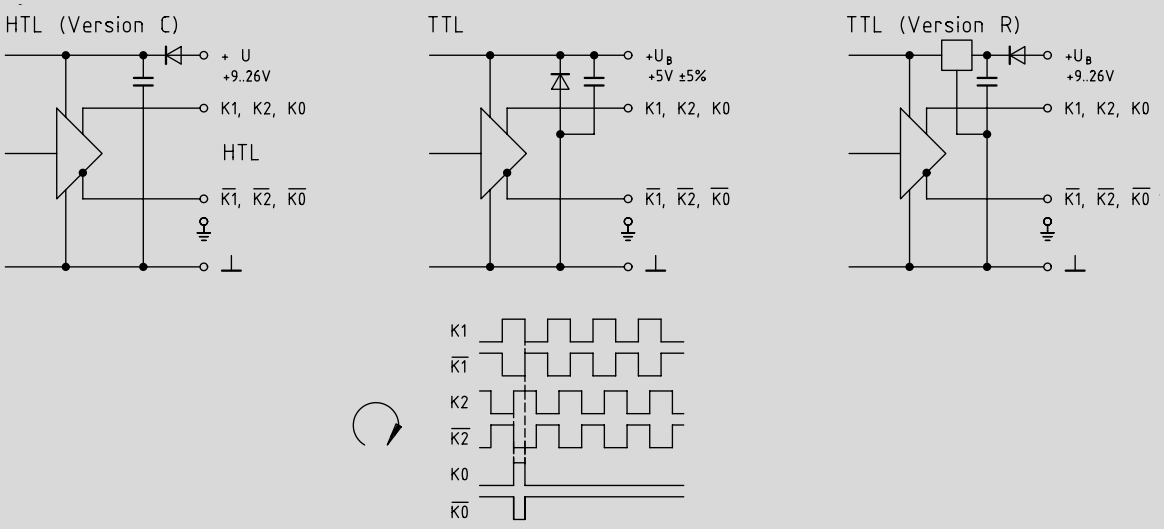
AHE 7.5

Compact hollow-shaft incremental encoder in rugged all-metal die-cast housing with hollow-shaft for monitoring speed or position in drive systems, especially for AC motors.

- **HÜBNER / SIEI America Incremental Encoders** (Digital-Tachos) have over the years become standard in many areas of industry due to their rugged construction adapted to the application **(Heavy Duty® Technology)**:
- Sensing by **opto-ASIC,** compensated for **temperature** and **aging**
- **Electromagnetic Compatibility (EMC)** according to IEC 801-4
- High **vibration** and **shock resistance** meeting IEC 68-2-6 and IEC 68-2-27
- **Warranty 2 years** within the conditions of the German Electrical Manufacturer's Association (ZVEI), **ISO 9001** certified

Special features:

- Compact **aluminium housing**
- Bore **hollow-shaft** ∅ 5 / 8" ... 1" (∅ 16 ... 26 mm), ∅ 5 / 8" and 1" in stock
- Clamping ring left side (right side option)
- Internal **terminal strip**
- **Logic level HTL** with line driver IC (version C) or +9 ... +26 V (version R with internal regulator) or **logic level TTL** with supply voltage +5 V
- Protection **IP 56**
- **Patent** pending

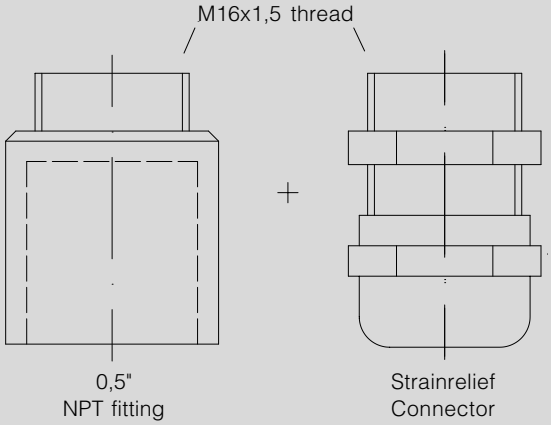


AHE 7.5 DN ... CI	two HTL signals displaced by 90° plus marker pulse and inverted signals
AHE 7.5 DN ... TTL	as DN ... CI, but TTL signals
AHE 7.5 DN ... R	as DN ... TTL, but supply voltage U_b = +9 ... +26 V

Pulses per revolution

Pulses per revolution	Z	**1 024 stock** 1 200, 1 250, 2 048 and 2 500 please consult agent		
Switching frequency	$f_{max.}$	120 kHz		
Speed max.	rpm	$\frac{7{,}2 \cdot 10^6}{Z} \leq 10\,000$		
Logic level		**HTL** (Version C)		**TTL** (RS-422)
Supply voltage	U_b	+9 ... +26 V	+5 V ± 5 %	+9 ... +26 V (Version R)
Current consumption at no-load		approx. 100 mA		approx. 100 mA
Load current per channel max.	$I_{source} = I_{sink}$	60 mA average 150 mA peak		25 mA average 75 mA peak
Output amplitude		$U_{Low} \leq 3$ V; $U_{High} \geq U_B - 3{,}5$ V		$U_{Low} \leq 0{,}5$ V; $U_{High} \geq 2{,}5$ V
Mark space ratio		1:1 ± 20 %		
Square wave displacement		90° ± 20°		
Rise time		≥ 10 V/µs		
Moment of inertia		approx. 180 gcm²		
Driving torque at operating temperature		approx. 4 Ncm		
Load on shaft	max.	axial 40 N radial 30 N		
Vibration proof		≤ 10 g ≈ 100 m/s²	(10 Hz ... 2 kHz)	DIN IEC 68-2-6
Shock proof		≤ 100 g ≈ 1 000 m/s²	(6 ms)	DIN IEC 68-2-27
Temperature range (housing surface)	T	–20 °C ... +70 °C		
Protection		IP 56		IEC 34-5
Weight		approx. 320 g		

All electrical data at $T \leq T_{max.}$



Accessories:

Torque arm

Cable and plug HEK 8

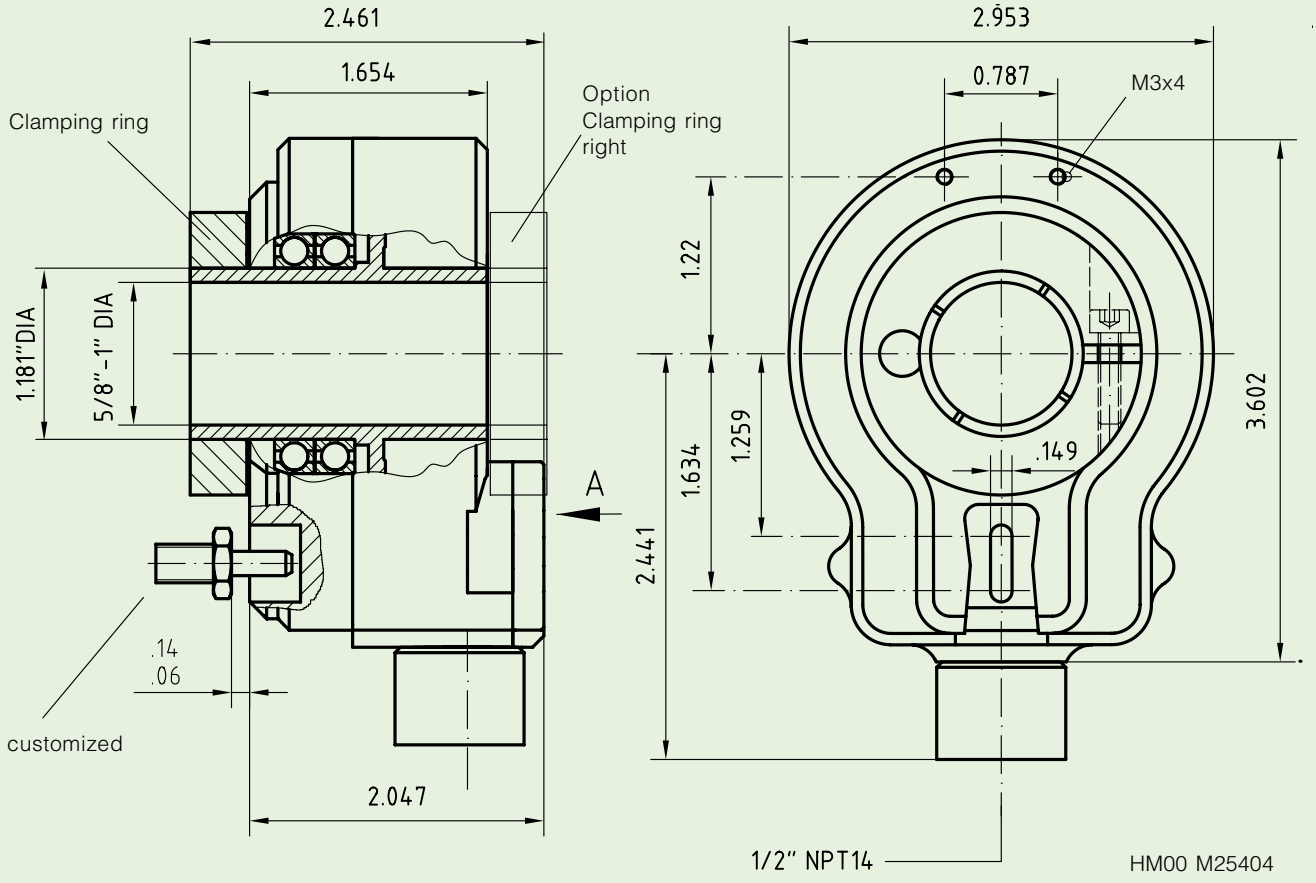
Spring disk coupling

Frequency-analogue converter HEAG 121 P

Opto coupler / logic converters HEAG 151 → HEAG 154

Fiber optic links HEAG 171 → HEAG 174

AHE 7.5



RAL 7021 (anthracite)

Mounting Tethers Kits (Torque arms)

Part #	Description
AHE7.5 - T25	25 mm Wide Tether for 5.875" OD Accessory Bolt Circle
	Marathon Black Max AC Motors, Frames 56 - 284 TENV Only
	Marathon Blue Max AC Motors, Frames 143 - 256 TENV Only
AHE7.5 - T44	44,5 mm Wide Tether for 7.25" OD Accessory Bolt Circle
	GE Type KAF AC Motors, Frames 182 - 365