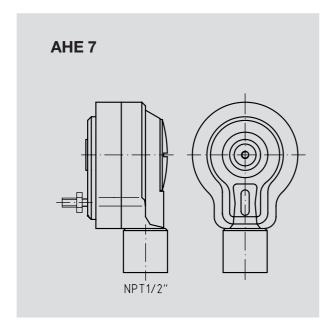
## **HÜBNER Digital-Tachos**

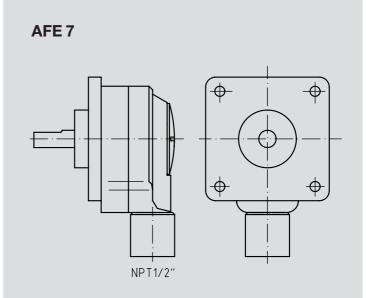
Incremental Encoders

## Installation and operating instructions









## **Important Notice**

- Digital-Tachos (incremental encoders) are opto-electronic **precision speed measurement devices** which must be handled by skilled personnel and with care during transportation, mounting and operation.
- The Digital-Tacho AFE 7 with solid shaft is driven via a torsionally stiff, flexible coupling (e.g. Hübner spring disk coupling K35) which should be slid onto the shaft with minimum axial pressure. If shaft eddy currents occur in the motor shaft, it is recommended to use an insulated coupling like the Hübner spring disk coupling K 35 with insulated hub.

**Hammering** the coupling on the shaft is not permitted because the ball bearings may be damaged.

- The Digital-Tacho AHE 7 with hollow shaft must be installed to the motor shaft **without** pressure to avoid a damage of the ball bearings.
- The devices are manufactured according to **quality standard** DIN ISO 9001, **EU Declaration of Conformity** meeting Council Directive 89/336/EEC art. 10 and annex 1 (EMC Directive).

■ Do not connect outputs to supply voltage:

## !!! Danger of Damage !!!

Please, pay attention to possible voltage drop in long cable leads (input and output).

■ Shielded cables should be used with twisted lead pairs. If possible, they should be placed uninterrupted and seperately, but at a clear distance from the motor cables. Normally the cable shield is connected to a large surface on the housing via a cable screw or an earth clamp.

Cable terminating resistance 120  $\Omega$  for TTL and sinewave.

■ The expected **operating life** of the devices is governed by the **ball bearings**, which are manufactured with a permanent lubrication to give approx. 20,000 operating hours (≥ 10<sup>9</sup> revolutions).

