


**Motor-Feedback System**

VFS60A-  
THPZ0-S01

 Number of lines programmable  
**Incremental Encoder**

**Deviation to Standard Motor-Feedback-System VFS60A-THPK01024**

- Customized flange
- Cable with connector
- Mating connector in box

**Features**

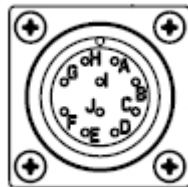
- **Electrical Interface**  
5... 32 V, TTL/HTL
- **Through hollow shaft**  
15 mm
- **Connection type, cable**  
8-core, universal, 0.5 m



**M23 connector**

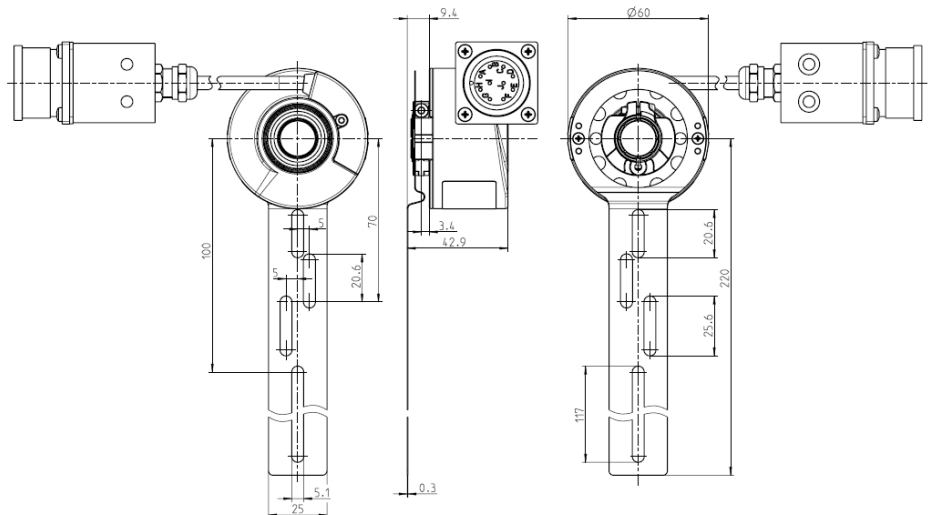
PIN	Signal TTL/HTL	Explanation
H	B_	Signal line
	N.C.	Not connected
C	Z	Signal line
I	Z_	Signal line
A	A	Signal line
G	A_	Signal line
	N.C.	Not connected
B	B	Signal line
J	Shield	Housing potential
F	GND	Supply voltage of the encoder
	N.C.	Not connected
D	U <sub>s</sub>	Power supply <sup>1)</sup>

<sup>1)</sup> Potential free to housing



View of the plug in face.

**Dimensional drawing**



**Order information**

<b>Type</b>	<b>Part no.</b>
VFS60A-THPZ0-S01	1036992

Technical Data acc. to DIN 32878		VFS60A-THPZ0- S01
<b>Hollow shaft diameter</b>		15 mm
<b>Electrical Interface</b>		TTL/ HTL
<b>Number of lines per revolution</b>		programmable
<b>Mass</b>		0.2 kg
<b>Moment of inertia of the rotor</b>		40 gcm <sup>2</sup>
<b>Measuring step</b>		90°/number of lines electr.
<b>Reference signal</b>		
Number		1
Position		90° electrical and logical interlocked with A + B
<b>Error limits</b>		± 0.03°
<b>Measuring step deviation</b>		± 0.01°
<b>Max. output frequency</b> TTL/RS 422		820 kHz
<b>Operating speed</b> <sup>1)</sup>		9,000 rpm
<b>Angular acceleration</b>		5 x 10 <sup>5</sup> rad/s <sup>2</sup>
<b>Operating torque</b> at 20 °C		0.6 Ncm
<b>Starting torque</b> at 20 °C		0.8 Ncm
<b>Permissible movement of the drive element</b>		
Radial static/ dynamic		± 0.3/ ± 0.05 mm
Axial static/ dynamic		± 0.5/ ± 0.01 mm
<b>Bearing lifetime</b>		3 x 10 <sup>9</sup> revolutions
<b>Working temperature range</b>		± 0 ... + 100 °C
<b>Storage temperature range (without package)</b>		- 40 ... + 100 °C
<b>Permissible relative humidity</b> <sup>2)</sup>		90 %
<b>EMC</b> <sup>3)</sup>		
<b>Resistance to shocks</b> <sup>4)</sup>		50g/6 ms
<b>Resistance to vibration</b> <sup>5)</sup>		20 g/10 ... 2,000 Hz
<b>Protection class acc. IEC 60529</b>		IP 65
<b>Load current</b> 5...32V, TTL/HTL programmable		Max 30 mA
<b>No-load operating current</b> 5...32V, TTL/HTL programmable		60 mA
<b>Initialisation time after power on</b> 5...32V, TTL/HTL programmable		1,000 ms

<sup>1)</sup> Self warming 3.3 k/1,000 rpm when applying,  
note working temperature range

<sup>2)</sup> Condensation of the optical scanning not permitted  
<sup>3)</sup> Acc. EN 61000-6-2 and EN 61000-6-4

<sup>4)</sup> Acc. EN 60068-2-27

<sup>5)</sup> Acc. EN 60068-2-6

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