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Find the *Heidenhain EXE 602 E* at our website: ***Click HERE***

HEIDENHAIN



Product Information

EXE 600 Series

Interpolation and
Digitizing Electronics

October 2006

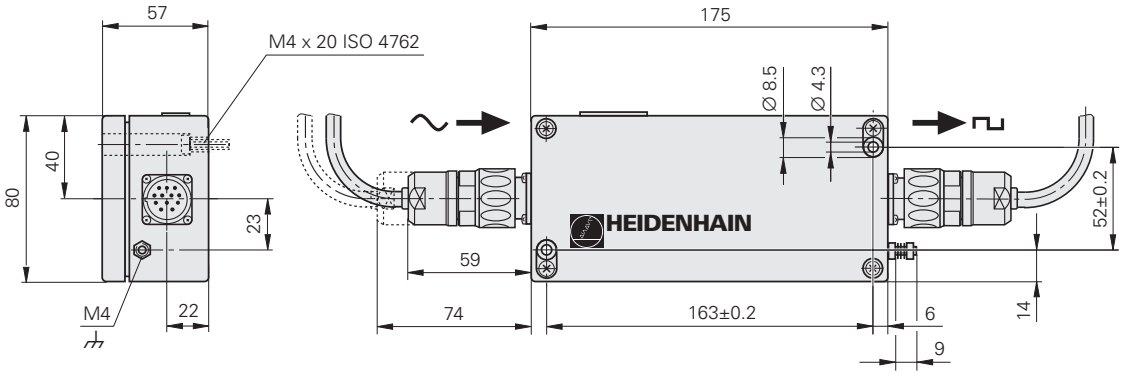
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EXE 600 Series

Interpolation and Digitizing Electronics
- **Input signals ∿ 11 µA$_{PP}$**
- **Output signals ⊓⊔ TTL**



Tolerancing ISO 8015
ISO 2768 - m H
< 6 mm: ±0.2 mm



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Specifications		EXE 602 E		EXE 660 B			
Input		∿ 11 μA_{PP}					
Electrical Connection		M23 flange socket (female) 9-pin					
Cable length		≤ 30 m for $I_{Encoder}$ ≤ 120 mA					
Interpolation[1]		**Without, 5-fold**		25-fold, 50-fold, 100-fold, 200-fold, **400-fold**			
Input frequency[1] for interpolation		Nominal values[2]					
	Without	50 kHz		–			
	5-fold	25 kHz		–			
	25-fold	–		50 kHz	50 kHz	25 kHz	12.5 kHz
	50-fold	–		50 kHz	25 kHz	12.5 kHz	6.25 kHz
	100-fold	–		25 kHz	12.5 kHz	6.25 kHz	3.12 kHz
	200-fold	–		12.5 kHz	6.25 kHz	3.12 kHz	1.56 kHz
	400-fold	–		**6.25 kHz**	3.12 kHz	1.56 kHz	0.78 kHz
Output		⊓⊔ TTL (unclocked)		⊓⊔ TTL (clocked)			
Electrical connection		M23 flange socket (male) 12-pin					
Cable length		≤ 100 m ($\overline{U_{aS}}$ ≤ 50 m)					
Edge separation a		≥ 2.500 µs	≥ 0.500 µs	≥ 0.075 µs	≥ 0.175 µs	≥ 0.370 µs	≥ 0.760 µs
Reference mark signal[1]		Pulse width **90° elec.** or ungated (only when *without interpolation*) or 270° elec.					
Fault indication[1]		through **fault detection signal $\overline{U_{aS}}$** or, in addition, U_{a1}/U_{a2} high impedance					
Power supply		5 V ± 5%					
Current consumption[3]		≤ 90 mA		≤ 120 mA			
Operating temperature **Storage temperature**		0 °C to 70 °C –30 °C to 80 °C					
Vibration 50 to 2000 Hz **Shock** 11 ms		≤ 10 m/s^2 ≤ 300 m/s^2					
Protection		IP 65					
Weight		0.7 kg					

Bold: These preferred versions are available on short notice
[1] Adjustable
[2] The actual input frequency can be up to 5 % lower. Exceeding this limit results in failure
[3] Not including the current consumption of the encoder (see the corresponding brochure) and without output load (80 mA with recommended input circuitry)

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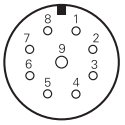
Electrical Connection

Connecting cable or adapter cable with M23 connector (male) 9-pin  **Cable** and **connector** 9-pin See HEIDENHAIN catalogs for digital readout and length gauges as well as product Information sheets for the respective encoders			**M23 connecting cable** 12-pin, Ø 8 mm
			**Complete** Id. Nr. 298399-xx
			**With one connector** Id. Nr. 309777-xx
			**Cable only** [4(2x0.14mm²) + (4x0.5 mm²)] Id. Nr 244957-01
			**Connector (female)** 12-pin Id. Nr. 291697-05

EXE input – ∿ 11 µA$_{PP}$

9-pin
Flange socket
M23





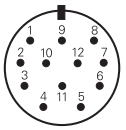
	Power supply				Incremental signals					
	3	**4**	**Housing**	**9**	**1**	**2**	**5**	**6**	**7**	**8**
	U_P	**0 V**	**External shield**	**Inside shield**	**I_1+**	**I_1–**	**I_2+**	**I_2–**	**I_0+**	**I_0–**
	Brown	White	–	White/ Brown	Green	Yellow	Blue	Red	Gray	Pink

U_P = power supply voltage
Vacant pins or wires must not be used!

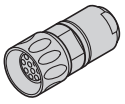
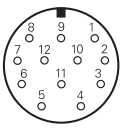
Shield on housing
Color assignment applies only to extension cable.

Output of EXE – ⊓⊔ TTL

12-pin
M23 flange socket

12-pin
M23 connector

	Power supply				Incremental signals						Other signals		
	12	**2**	**10**	**11**	**5**	**6**	**8**	**1**	**3**	**4**	**7**	**/**	**9**
	U_P	**Sensor** 5 V	**0 V**	**Sensor** 0 V	**U_{a1}**	**$\overline{U_{a1}}$**	**U_{a2}**	**$\overline{U_{a2}}$**	**U_{a0}**	**$\overline{U_{a0}}$**	**$\overline{U_{aS}}$**	**U_{aS}**	**Vacant**
	Brown/ Green	Blue	White/ Green	White	Brown	Green	Gray	Pink	Red	Black	Violet	/	Yellow

Shield on housing; **U_P** = power supply voltage
Sensor: The sensor line is connected internally with the corresponding power line

HEIDENHAIN

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For more information
- Product overview: *Interface Electronics*

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