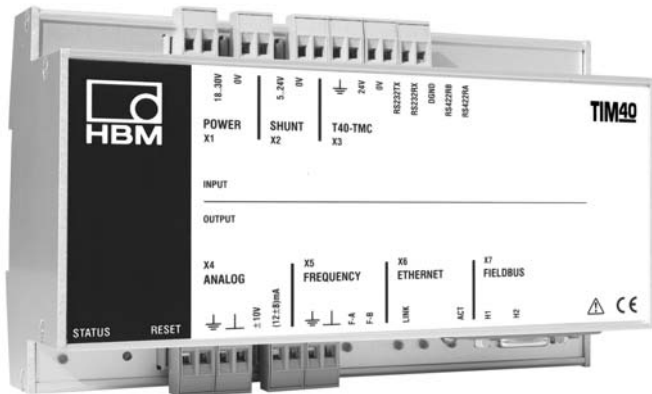


TIM 40

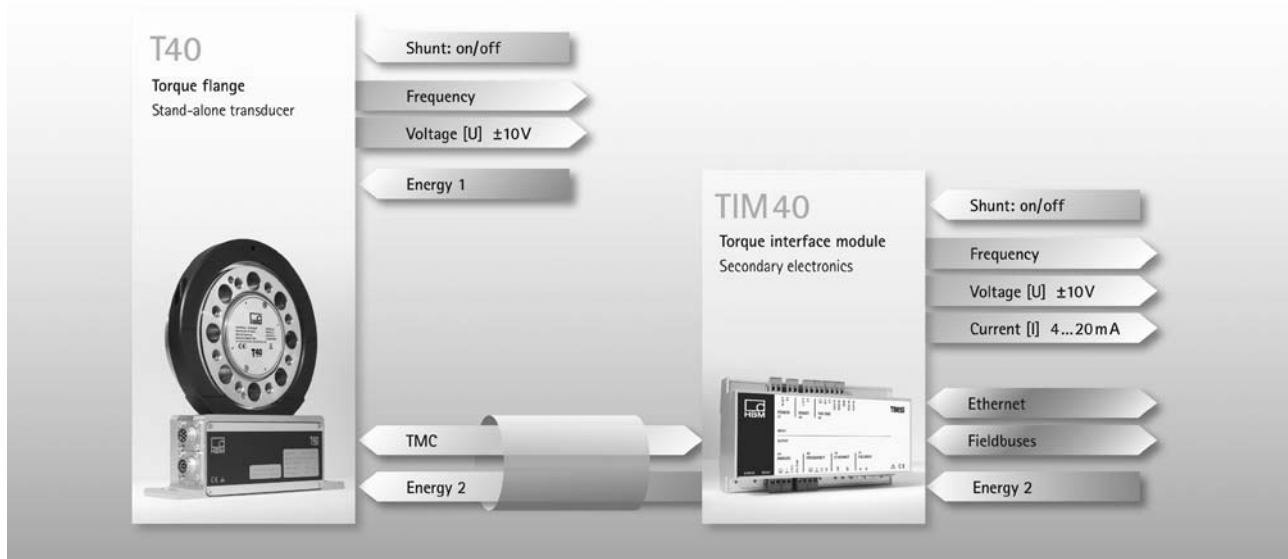
Torque interface module



Special features

- Connection of T40 torque flange
- Mounting on support rail per DIN EN 60715
- Scaling, filtering and zeroing of the torque signal
- Wide measurement frequency range up to 10 kHz (-3 dB)
- ± 10 V and (12 ± 8) mA output signals
- Ethernet interface with 38125 measured values per second
- Various Anybus[®] modules available as accessories

Overall concept



Specifications

Type		TIM40	
Accuracy class		0.05	
Energy supply			
Nominal (rated) supply voltage	V	18 ... 30	
Nominal (rated) power consumption	W	< 20 W	
Transducers that can be connected		HBM's T40 Torque Flange	
Inputs			
Max. cable length	m	50	
Control signal input shunt			
Input level "On"	V	> 2.5	
Input level "Off"	V	< 1.5	
Max. input voltage	V	36	
Max. input current at 24 V	mA	24	
Outputs			
Frequency output			
Nominal (rated) output signal at	10 kHz	kHz	10 ± 5
	60 kHz	kHz	60 ± 30 ¹⁾
	240 kHz	kHz	240 ± 120
Max. modulation range at	10 kHz	kHz	4 ... 16
	60 kHz	kHz	24 ... 96
	240 kHz	kHz	96 ... 384
Output signal in case of error	kHz	0	
Level	V	5 symmetrical ²⁾	
Max. group delay (scaled, without filter)	µs	200	
Voltage output			
Nominal (rated) output signal	V	-10.0 ... +10.0	
Max. modulation range	V	-12.0 ... +12.0	
Output signal in case of error	V	12.5 ... 15	
Resolution	mV	0.5	
Measurement frequency range (-3 dB)	Hz	0 ... 10000	
Load resistance	kΩ	≥ 5	
Long-term drift over 48 h	mV	± 5	
Current output			
Nominal (rated) output signal	mA	12 ± 8	
Max. modulation range	mA	3.4 ... 21.6	
Output signal in case of error	mA	23 up to 25	
Measurement frequency range (-3 dB)	Hz	0 ... 8000	
Burden	Ω	≤ 500	
Digital low-pass filter (Bessel; can be switched off)			
Low-pass filter TP 1 (-1 dB)	Hz	1; 10; 100; 1000; 3000	
Low-pass filter TP 2 (-1 dB)	Hz	1; 10; 100; 1000; 3000	
Effect of temperature per 10 K in the nominal (rated) temperature range on the zero signal, related to the nominal (rated) sensitivity			
Voltage output	%	0.05	
Current output	%	0.05	
Fieldbuses			
Ethernet interface			
Baud rate	MBit/s	10 and 100	
Connection		RJ45	
Protocol		TCP/IP, UDP, DHCP	
Slots for fieldbus modules			
Format	Number	1	
Protocol		Anybus [®] -CC Profibus-DP, CANopen	

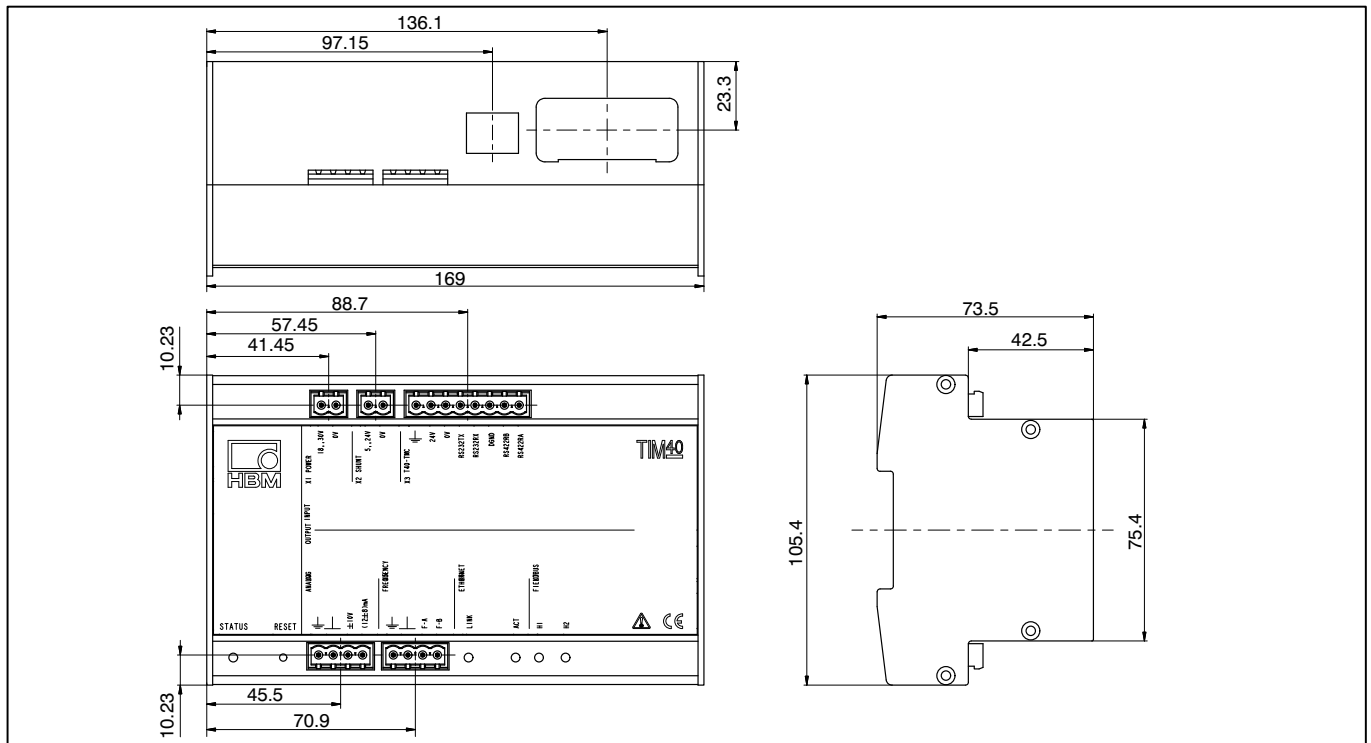
¹⁾ Factory settings

²⁾ Complementary signals per RS-422, observe terminating resistors

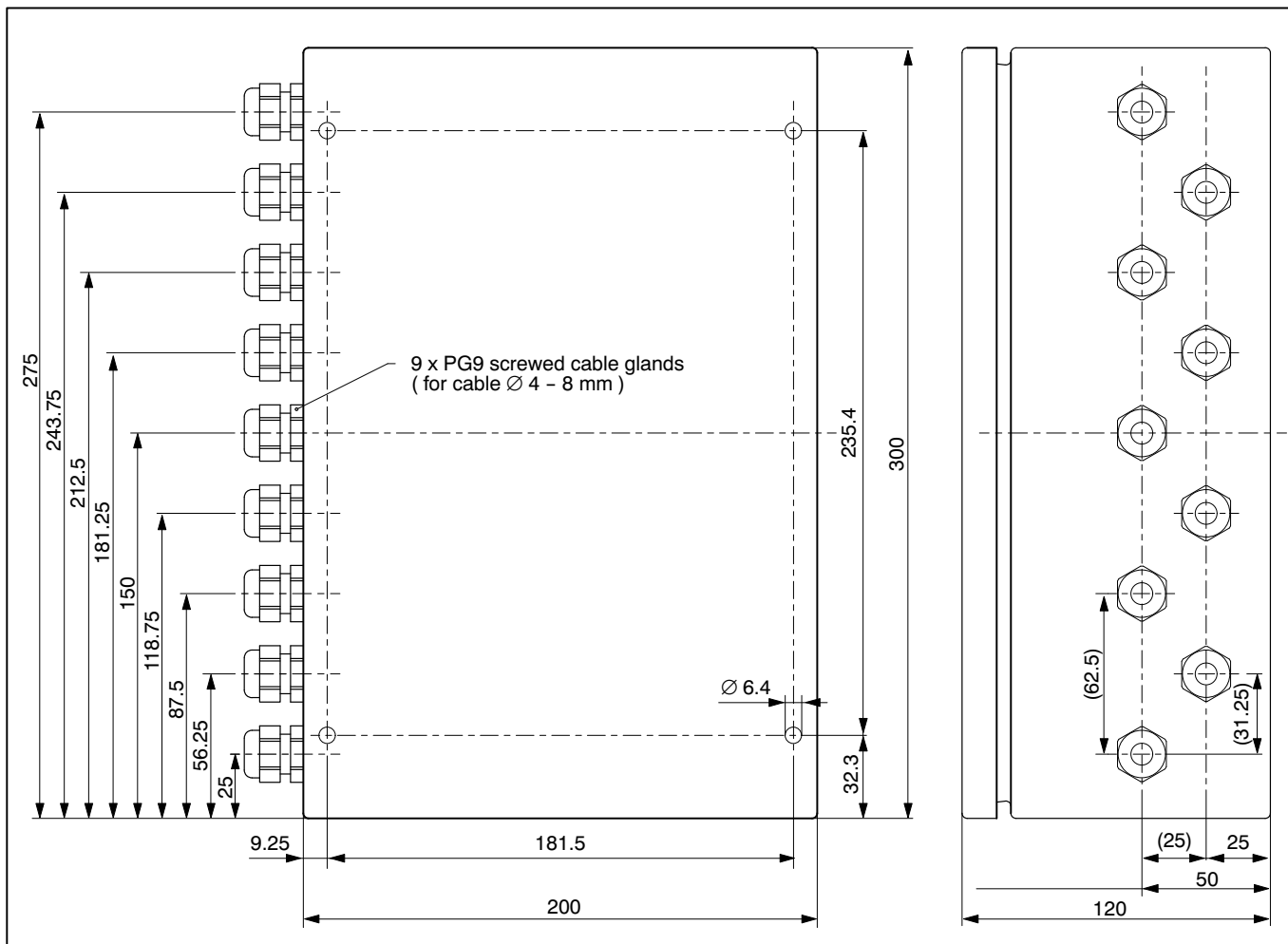
Specifications (Continued)

Fieldbuses										
CAN Bus										
Protocol	-	CAN 2.0B, CAL/CANopen compatible according to ISO 11898								
Hardware bus link		max. 1000 (PDO)								
Sampling rate	Mv/s									
Baud rate	kBaud	10	20	50	100	125	250	500	800	1000
Maximum line length	m	5000	2500	1000	500	500	250	100	50	25
Profibus DP										
Protocol		Profibus DP Slave, according to DIN 19245-3								
Max. update rate	Mv/s	1000								
Baud rate	MBaud	max. 12								
Environmental requirements										
Degree of protection per EN 60 529		IP20								
Weight, approx.	kg	0.65								
Nominal (rated) temperature range	°C [°F]	0 ... +60 [+32 ... +140]								
Operating temperature range	°C [°F]	-10 ... +60 [+14 ... +140]								
Permissible relative humidity, non-condensing	%	10 ... 90								
Mechanical stress										
Vibration resistance (test per EN60068-2-6)										
Frequency range	Hz	5 ... 65								
Duration	h	0.5								
Acceleration (amplitude)	m/s ²	25								
Impact resistance (test per EN60068-2-27)										
Number of impacts	n	3 in each direction								
Duration	ms	11								
Acceleration (half cosine)	m/s ²	200								
EMC requirements										
EMC		According to EN 61326:2006, industrial environment								
Emission (EME)		DIN EN 61326:2006, Class A								
Immunity from interference		DIN EN 61326:2006, industrial environment								
Conducted HF		EN61000-4-6, 10V								

TIM40 dimensions



Dimensions of the protective housing



Accessories, to be ordered separately

Article	Order No.
Connection cable, ready-made	
Connection cable TIM40, Binder 423 8-pole - free ends, 6 m	1-KAB169-6
Protective housing for TIM40; protection class IP67; 9 screwed cable glands (clamping range 4.5 mm-10 mm)	3-6440.0148
Anybus® modules	
Anybus®-CompactCom-CANopen	1-ANYBUS-CAN
Anybus®-CompactCom-PROFIBUS DP	1-ANYBUS-PROFI

Modifications reserved.

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