

Digital Amplifier EtherCAT DA-EC

Scope of Supply

Amplifier in DIN Rail Mount enclosure
Standard: 1 channel EtherCAT

Device description file on disk

Variant

2EC: 2 channel EtherCAT
in DIN Rail Mount enclosure

Additional Options

GK: Enclosure (IP67) with terminals

M: Potted version only with option GK

F: (Potentially explosive atmospheres):
Use with safety barriers



Pic. similar

EtherCAT Strain Gauge Amplifier



Other interfaces on request,
e.g. ProfiNet, ProfiBus, EtherNet/IP



Special Features

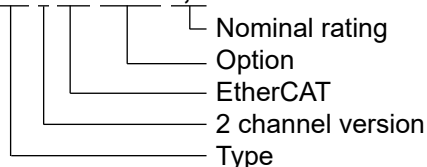
- 24 bit Σ - Δ -AD converter for highest precision
- Very fast cycle time for time-critical applications
- Galvanic separation of bus and application up to 1.5 kV
- ETC certified

The amplifier DA-EC is used whenever full bridge strain gauge sensors (e.g. force sensors) are to be connected with EtherCAT networks. The primary field of application is web tension and force measurement.

The sensor signals are converted into digital signals with a cycle time of 0.5 ms. They are averaged and provided to the interface circuit at a distance of approx. 6 ms. From there, they are then switched in the corresponding data format.

Ordering Example

DA-2EC-GKM-1,5



Please consider with the order:

The amplification of the DA-EC is preset and in particular correlation with the nominal rating of the HAEHNE sensor.

Version DA-EC	Nominal rating of the sensor
-1,5	1.5 mV/V
-1,0	1.0 mV/V
-0,75	0.75 mV/V
-0,5	0.5 mV/V

Ordering example for option F:

Indicate the total resistance from measuring chain for option F (e. g. 1000 Ohm):

DA-EC-F1000-1,5

Technical Data

Power supply Attention: The auxiliary power must be grounded!	Power supply	24 V DC (9 ... 36 V)
	Typical current requirements with standard wiring	approx. 150 mA
Strain gauge excitation supply	Voltage (V_4)	10 V DC
	Option J	5 V DC
	Current max.	160 mA
Signal	-160 % ... 0 ... +160 % $\hat{=}$ 8000...0000...7FFF	
Data width	1 word	
Resolution	16 bit	
Enclosure protection	Standard: P20	Variant GK: IP67
Nominal temperature range	0...+60° C	
Terminal cross-section	AWG 24-12	

Terminal Assignment

Terminal	Assignment		Terminal	Assignment	
1	+24 V	Power supply	7	V_{4+}	Sensor A
2	+24 V*		8	V_{4-}	
3	0 V		9	V_{1+}	
4	0 V*		10	V_{1-}	
5	PE		11	V_{4+}	Sensor B
6	GND	12	V_{4-}		
	Reference potential for Ex protection	13	V_{1+}		
			14	V_{1-}	

* Power supply for other devices
The maximum current of 1 Ampere must not be exceeded.

V_1 : Signal voltage V_4 : Supply voltage

Upper side

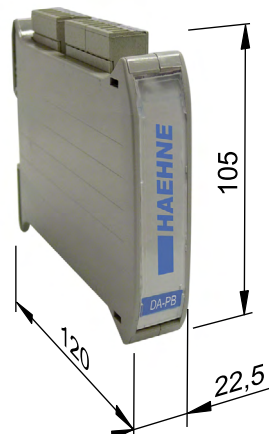


Underneath



Port 1	Port 2
RJ45	RJ45

Dimensions



Option GK
Width x depth x height
170 x 123 x 67 mm