

Digital Amplifier ProfiNet DA-PN

Scope of Supply

Amplifier in DIN Rail Mount enclosure
Standard: 1 channel PROFINET

Device description file on disk

Variant

2PN: 2 channel PROFINET
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



Other interfaces also possible,
e.g.: Ethernet (DA-EN)
EtherCAT (DA-EC)
Profibus (DA-PB)



ProfiNet Strain Gauge Amplifier

Special Features

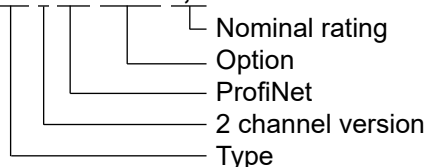
- 24 bit Σ - Δ -AD converter for highest precision
- Very fast cycle time for time-critical applications
- Simple integration of the interface in PROFINET networks
- ProfiNet IRT with 2 Port Switch (2 x RJ-45), Conformance Class C
- Neighborhood detection within the network (LLDP)

The amplifier DA-PN is used whenever full bridge strain gauge sensors (e.g. force sensors) are to be connected with ProfiNet 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-2PN-GKM-1,5



Please consider with the order:

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

Version DA-PN	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-PN-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	



Upper side

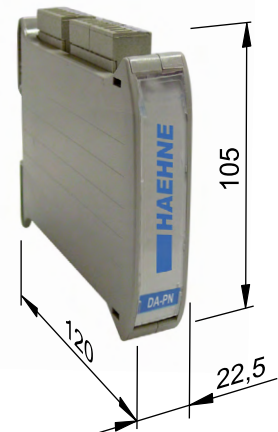


Port 1	Port 2	Underneath
RJ45	RJ45	

Terminal Assignment DIN Rail enclosure

Power Supply					Reference potential for Ex protection	Sensor A				Sensor B			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
+24 V	+24 V*	0 V	0 V*	PE	GND	V_4^+	V_4^-	V_1^+	V_1^-	V_4^+	V_4^-	V_1^+	V_1^-

V_1 : Signal voltage V_4 : Supply voltage



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

Terminal Assignment option GK

Power Supply					Reference potential for Ex protection	Port 1					Port 2					Sensor A				Sensor B				
1	2	3	4	5	6	1	2	3	6	S	1	2	3	6	S	V_4^+ / U_{Br}^+	V_4^- / U_{Br}^-	V_1^+ / U_{Sig}^+	V_1^- / U_{Sig}^-	V_4^+ / U_{Br}^+	V_4^- / U_{Br}^-	V_1^+ / U_{Sig}^+	V_1^- / U_{Sig}^-	
+24 V	+24 V*	0 V	0 V*	PE	GND	TD+	TD-	RD+	RD-	Shield	TD+	TD-	RD+	RD-	Shield									



Option GK

Width x depth x height
170 x 123 x 67 mm