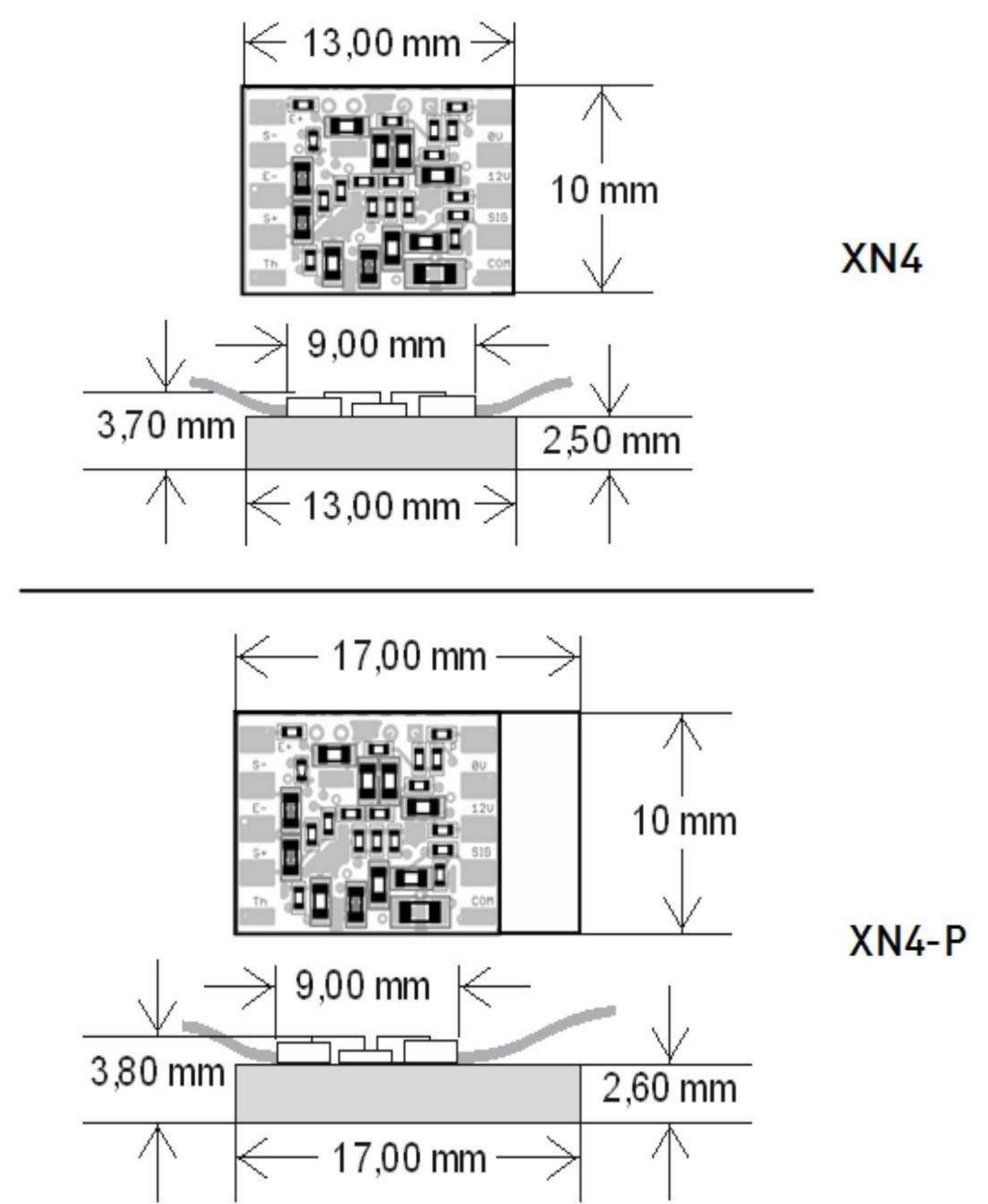


XN4

Digital controlled strain gauge amplifier

Supply voltage	6 to 16 V
Supply current (amplifier only)	< 5 mA
Bridge supply voltage (internal)	5 V
Bridge gauge impedance	120 to 1000 Ω
Output signal	0 – 5 V
Output impedance	100 Ω
Offset by VPROG by Tx/Rx *	0.5 to 2.5 V 0 to 5 V
Gain by VPROG by Tx/Rx *	2.6 to 4.5 V (under force) 70 to 1250 V/V
Cut off frequency (1 pole filter)	90 (default) up to 8 KHz
Offset drift with temperature	< 10 mV
Gain drift with temperature	0.2 %
Temperature compensation:	
- Offset	By self-training in oven
- Gain	By resistor R metal depending on part & gauge material or by Tx/Rx wire digital PPM
Max initial recommended bridge unbalance	
..... 120 Ω	1.5 mV
..... 350 Ω	2 mV
..... 1000 Ω	3.5 mV
Dimensions XN4	13x10x4 mm
XN3 -P (120 Ω groups)	17x10x4 mm
Material	PCB + Epoxy encapsulation
Weight	1g
Shock	500 G
Operating temp	-20 to +125 °C
Storage temp	-40 to +125 °C



Digital communication commands

command	value	min	max	
offset	'o'	2500	0	5000 offset in mV
gain	'g'	4995	700	12500 gain in tenth
ppm	'p'	-335	-1000	1000 ppm/°C (DIG)
ppm_dig	'u'	0	0	1
out_dig	'd'	0	0	1
timeout	't'	5	2	12
compens	'c'	(5hours max)		
table	'x'			
check	'v'			
header	'h'			
reset	'!'			

R Metal value for gain temperature compensation (Constantan gauges)

Material of strain gauged part	Usual coeff %/°C	PPM/°C	R Metal
Steel (default)	-0.033	-330	20KΩ
Titanium	-0.050	-500	27KΩ
Aluminium	-0.059	-590	33KΩ
No compensation (if XN4 is used with a compensated gauge bridge)	0	0	11.5KΩ

Bandwidth capacitor values

Capacitor	Fc	Capacitor value = 1/(2π Fc x 18000)
220nF	40Hz	
100nF	90Hz (Default)	
47nF	190Hz	
1nF	9kHz	

*Tx/Rx Only with Texense USB-Connect

In the interest of continuous product improvement, we reserve the right to alter without prior notice the specifications and features described in this document