

We used five separate sensor-amplifier pairs to measure the force data of the five fingers.

Force sensor: SAS, Huatran, Shenzhen, China;

Amplifier: HSGA, Huatran, Shenzhen, China.

Important parameters of force sensors:

Output Sensitivity	1.0±10%	mV/V
Range	±200	N
Precision	0.03	%F.S.
Zero-Point Output	±2	%F.S.
Non-Linearity	0.03	%F.S.
Hysteresis	0.03	%F.S.
Repeatability	0.03	%F.S.
Creep (30 min)	0.01	%F.S.
Sensitivity Temperature Drift	0.05	%F.S./10°C
Zero-Point Temperature Drift	0.05	%F.S./10°C
Input Resistance	385±3	Ω
Output Resistance	350±3	Ω
Insulation Resistance	≥5000	MΩ/100VDC

Important parameters of amplifiers:

Range of Input Signals	±0.06 to ±30	mV/V
Output Signals	±10V, ±5V Bipolar 0—5V, 0—10V Monopolar 0—20mA, 4—20mA Monopolar	
Maximum Bandwidth	6	kHz
Filter Range (Optional)	1 to 5000	Hz
Non-Linearity	0.03	%F.S.
Full Temperature Drift	0.004%/°F MAX	
Zero-Point Temperature Drift	0.5μV/°F MAX	

We used the Quattrocento system (OT Bioelettronica, Torino, Italy) to acquire 256-channel HD-sEMG signals. The user manual is available on the website of OT Bioelettronica:

<https://www.otbioelettronica.it/en/products/hardware>