


**Features**

- Extremely wide measuring range
- Excellent measuring accuracy
- Built-in amplifier with acquisition system
- Start and stop triggers
- LAN connection
- Control & acquisition software included
- Cost-effective

**Applications**

- Biomechanics
- Basic research
- Posture and movement analysis

Overview		
Model	3D-8050	
Dimensions	800 x 500 x 95 mm	
Load range	Fx, Fy, Fz	10 kN
Overload	Fx, Fy, Fz	15 kN
Interfaces	Built-in amplifier Ethernet interface Analog / Digital interface One start and one stop buffered trigger	

Construction	
Sensors	Strain gauge / Aluminum
Top plate	Anodized aluminum casting
Bottom plate	Aluminum casting

Performance		
Bandwidth	Fx, Fy, Fz	0 to 125 Hz
Linearity	Fx, Fy	<0.7 %
	Fz	<0.1 %
Hysteresis	Fx, Fy	<0.6 %
	Fz	<0.1 %
Cross-talk	Fz → Fx, Fy	<0.3 %
Drift	Fx, Fy, Fz	<1.5 mN/s
Natural frequency	x-axis	≈220 Hz
	y-axis	≈200 Hz
	z-axis	≈270 Hz

Physical	
Mass	35 kg
Operating temperature range	0 to 60 °C

Electrical	
Supply voltage	12 to 17 VDC
Current consumption	500 mA

Amplification			
Amplifier		8 channels: 4 x Fz, 2 x Fy, 2 x Fx	
Analog filter		Bessel 8-pole low pass filter	
Range	1 to 7	x1 / x2 / x4 / x8 / x16 / x32 / x64	
		Range 1	Range 7
Measuring range	Fx, Fy	-9 to 9 kN	-0.14 to 0.14 kN
	Fz	-1 to 8 kN	-0.02 to 0.13 kN
Resolution	Fx, Fy	600 mN	9 mN
	Fz	280 mN	4 mN
Noise (peak-to-peak)	Fx, Fy	±0.3 N	±0.3 N
	Fz	±1.5 N	±0.3 N
Sensitivity at analog interface	Fx, Fy	2000 N/V	30 N/V
	Fz	1000 N/V	15 N/V

Ethernet interface	
Connector	RJ-45
Speed	10 / 100 Mbit/s
Analog-to-digital converter	Built-in, 8 channels, 16-bit resolution, simultaneous sampling
Sampling rate	Up to 3 kHz

Analog interface		
Connector		9-pin Sub-D
Output channels		8
Output range	Fx, Fy, Fz	0 to 10 V
Output type	Fx, Fy, Fz	Single-ended ground referenced

Digital interface		
Connector		15-pin Sub-D
Input command	Auto-zero	Opto-isolated, 5 to 12 V digital, min.1 mA
Output trigger	T1, T2	5V digital TTL/CMOS

Triggers	
Connector	RJ-22
Number of channels	2 (1 start and 1 stop trigger)
Supply to ext. trigger	5V or 11V (factory configured)
Input type	Differential, referenced to mid-supply voltage
Output type	Buffered differential

Software	
Data acquisition	3D-Force Plate ©
Functions	Configuration, data monitoring (oscilloscope mode), data acquisition, data storage, visualization of acquired data, recalibration
Compatibility	Windows XP / Vista / Seven
File format	ASCII tab separated fields

Mounting	
Anchorage	Up to 16 x HILTI HKDM10x40
Tightening torque	15 Nm