



## Model 6A Series 6-Axis Load Cells (Fx Fy Fz Mx My Mz)

- 6-Axis – Force and Torque in All Six Axes
- 50N / 1Nm to 100KN/10KNm
- Compact Size
- Force and Moment Values MUST be Calculated Using Supplied 36-Term Coefficient Matrix
- Low Crosstalk
- Temperature Compensated
- Optional BX8 Amplifier and Software can be Used for Force and Moment Value Calculation

Interface's 6-axis load cell measures forces simultaneously in three mutually perpendicular axes and three simultaneous torques about those same axes. Six full bridges provide mV/V output on six independent channels.

Interface's 6-axis load cell is ideally suited to many industrial and scientific applications, such as aerospace, robotics, automotive and medical research (orthopedics and biomechanical)

A 36-term coefficient matrix is included for calculating the load and torque values in each axis.

An 8-channel amplifier with USB PC interface is also available which simplifies data analysis.

### Specifications

#### Accuracy - (Max Error)

Nonlinearity-% FS	±0.1
Hysteresis-% FS	±0.1
Nonrepeatability-% RO	±0.5
Creep, in 20 min-%	±0.1

#### Mechanical

Safe Overload-% of CAP	150
Ultimate Overload - % RO	300

#### Temperature

Compensated Range-°F	14 to 158
Compensated Range-°C	-10 to 70
Operating Range-°F	14 to 185
Operating Range-°C	-10 to 85
Effect On Zero- % RO/°C -Max	±0.1
Effect on Output- %/°C -Max	±0.05

#### Electrical

Rated Output-mV/V (Nominal)	±0.4
Max. Excitation Voltage	5V
Crosstalk	±1%
Zero Balance - mV/V	<2
Input Resistance (6A27)	1KΩ ±10
Output Resistance (6A27)	1KΩ ±10
Input Resistance	350Ω ±10
Output Resistance	350Ω ±10

Model	6A27			6A40			6A68					6A154				6A175		
	A	A	B	A	B	C	D	E	A	B	C	D	A	B	C			
<b>Fx (N)</b>	50	200	500	1K	2K	5K	10K	10K	50	100	200	500	10K	20K	50K			
<b>Fy (N)</b>	50	200	500	1K	2K	5K	10K	10K	50	100	200	500	10K	20K	50K			
<b>Fz (N)</b>	200	500	2K	2K	4K	10K	20K	20K	100	200	500	1K	20K	50K	100K			
<b>Mx (Nm)</b>	1	5	20	20	50	50	100	500	5	10	20	50	1K	2K	5K			
<b>My (Nm)</b>	1	5	20	20	50	50	100	500	5	10	20	50	1K	2K	5K			
<b>Mz (Nm)</b>	1	10	40	20	50	50	100	500	5	10	20	50	2K	5K	10K			
<b>Diameter (mm)</b>	27	60	60	83	83	83	83	83	154	154	154	154	175	175	175			
<b>Height (mm)</b>	25	40	40	64	64	64	64	64	100	100	100	100	116	116	116			
<b>Weight (g)</b>	25	250	400	830	830	1050	1050	1050	800	800	800	800	11,000	11,000	11,000			
<b>Material</b>	SS	AL	SS	AL	AL	SS	SS	SS	AL	AL	AL	AL	SS	SS	SS			
<b>Deflection (mm)</b>	0.01	0.1	0.03	0.04	0.04	0.04	0.04	0.04	0.08	0.08	0.08	0.1	0.1	0.1	0.1			
<b>Deflection (rad)</b>	0.001	0.01	0.003	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.01	0.01	0.01			
<b>Protection (IP)</b>	54	67	67	67	67	67	67	67	67	67	67	67	67	67	67			



**Model 6A27 6-Axis Load Cell**

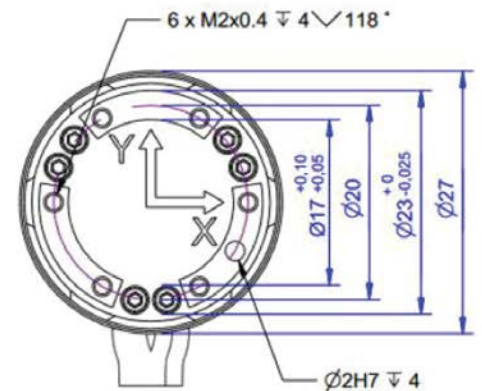
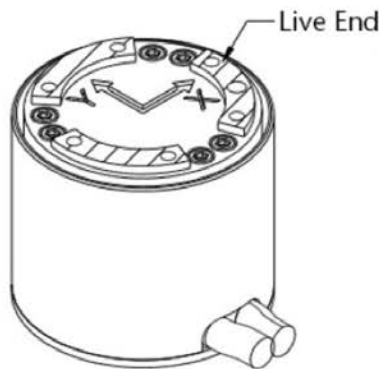
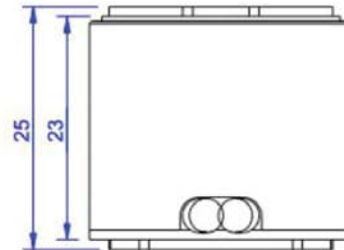
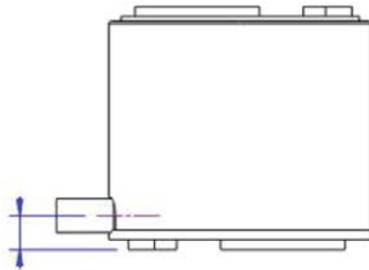
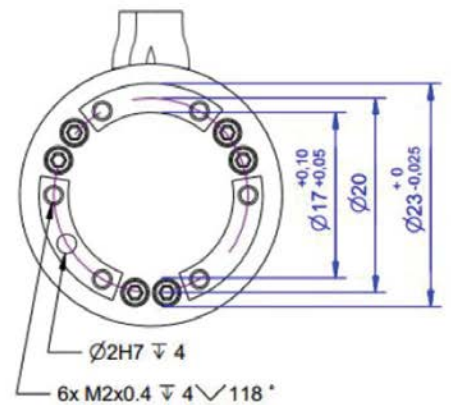
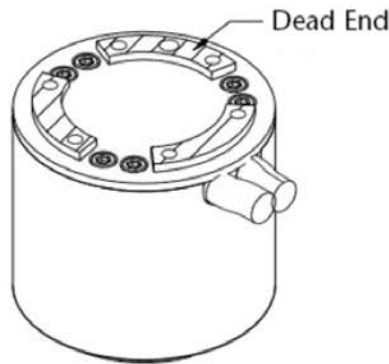
- Integration into Wind Tunnel Models
- Integration into Handles of Medical Tools
- Sports Medicine
- Biomechanics
- Control o Assembly & Handling Processes in Micromechanics

**Standard Configuration**

**3 Meter Dual Cable**

**Connector Options**

- 24-Pin M16
- 44-Pin High Density D-Sub



Dimensions in mm

Mechanical views are 1<sup>st</sup>-angle projection



## Model 6A40 6-Axis Load Cell

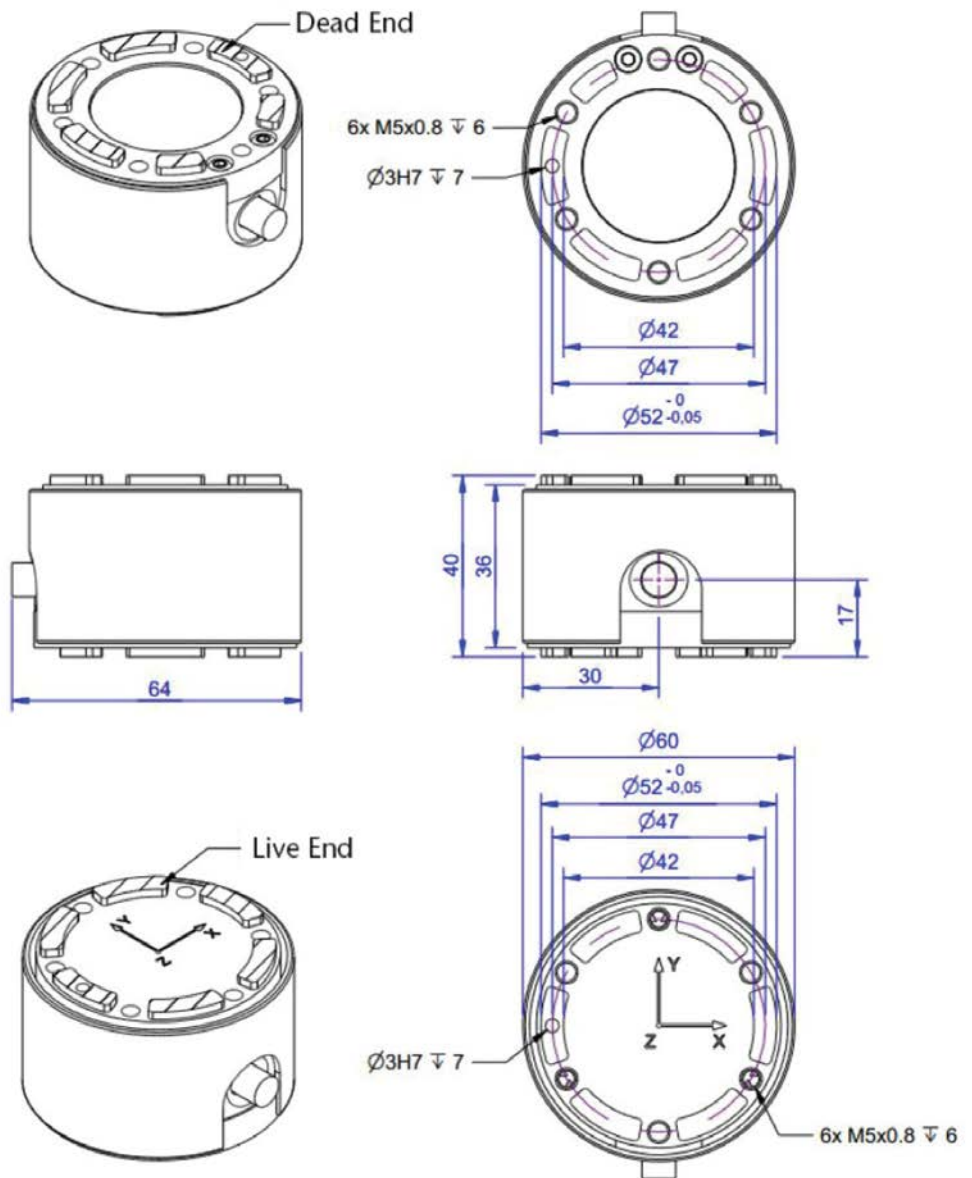
- Collision Detection
- "Teach-In"
- Presence or Error Detection
- Medical / Prosthetics / Orthopedics
- Gait Analysis
- Sports Medicine
- Comfort / Ergonomics

### Standard Configuration

## 5 Meter Dual Cable

### Connector Options

- 24-Pin M16
- 44-Pin High Density D-Sub



Dimensions in mm

Mechanical views are 1<sup>st</sup>-angle projection





## Model 6A68 6-Axis Load Cell

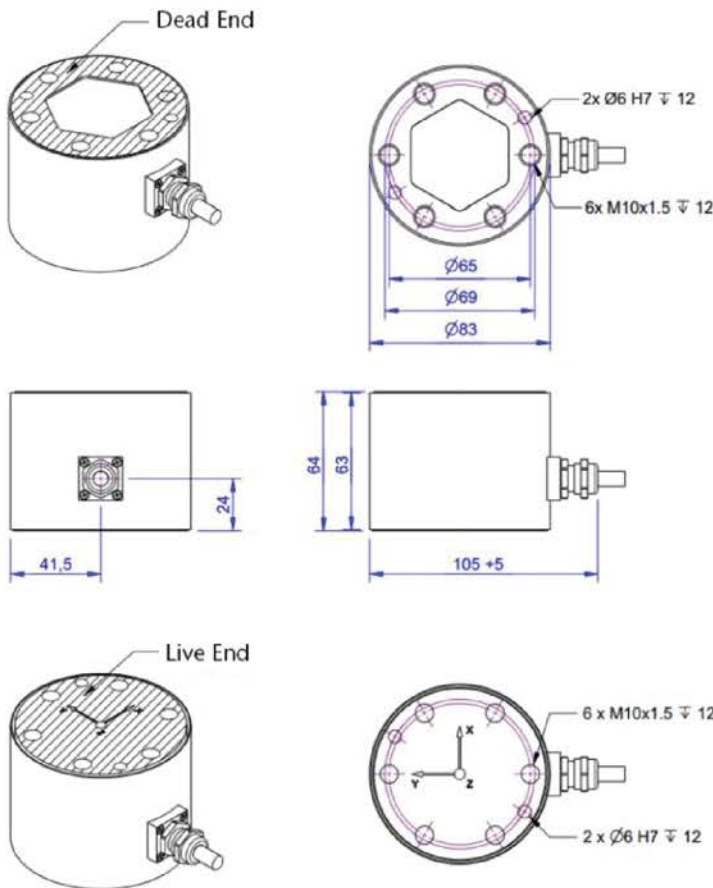
- Collision Detection
- "Teach-In"
- Presence or Error Detection
- Medical / Prosthetics / Orthopedics
- Gait Analysis
- Sports Medicine
- Comfort / Ergonomics

### Standard Configuration

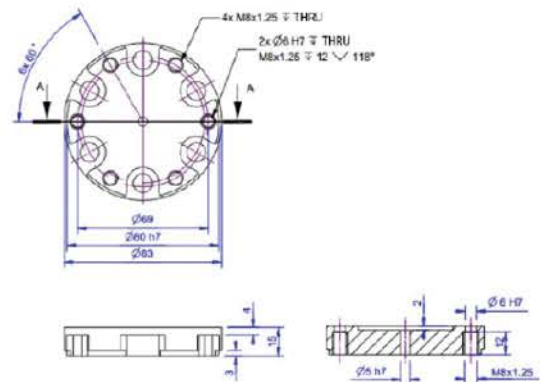
## 5 Meter Dual Cable

### Connector Options

- 24-Pin M16
- 44-Pin High Density D-Sub



### Adapter Plates



- Two Required Per Sensor
- Aluminum or Stainless Steel Depending on Capacity
- 6A68 Only

Dimensions in mm

Mechanical views are 1<sup>st</sup>-angle projection



**Model 6A154 6-Axis Load Cell**

Wind Tunnel Balances

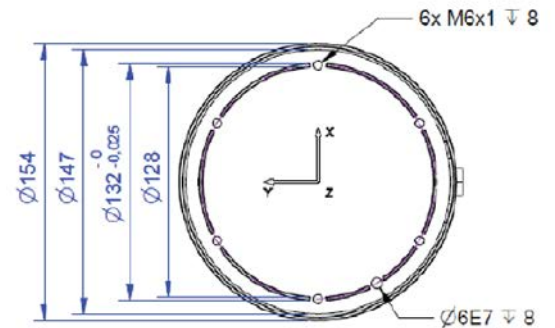
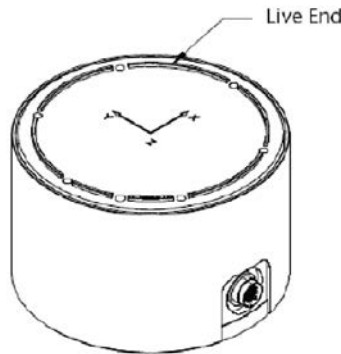
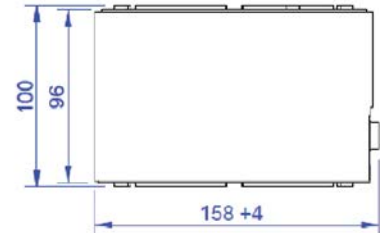
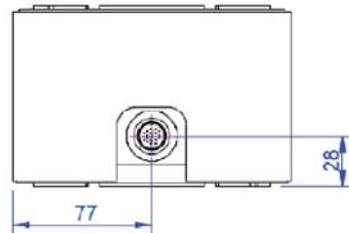
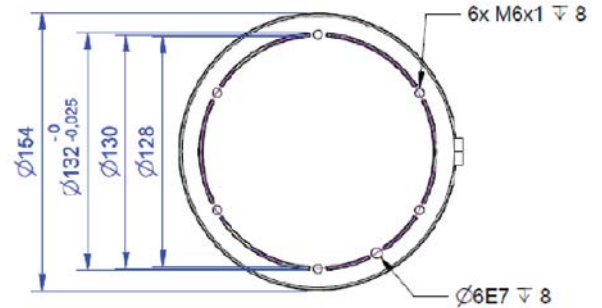
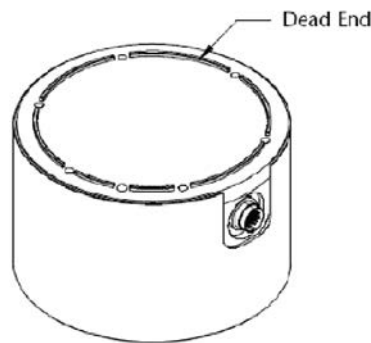
- Combines Low Force with High Moment Capacity

**Standard Configuration**

**5 Meter Dual Cable**

**Connector Options**

- 24-Pin M16
- 44-Pin High Density D-Sub



*Dimensions in mm*

*Mechanical views are 1<sup>st</sup>-angle projection*



### Model 6A175 6-Axis Load Cell

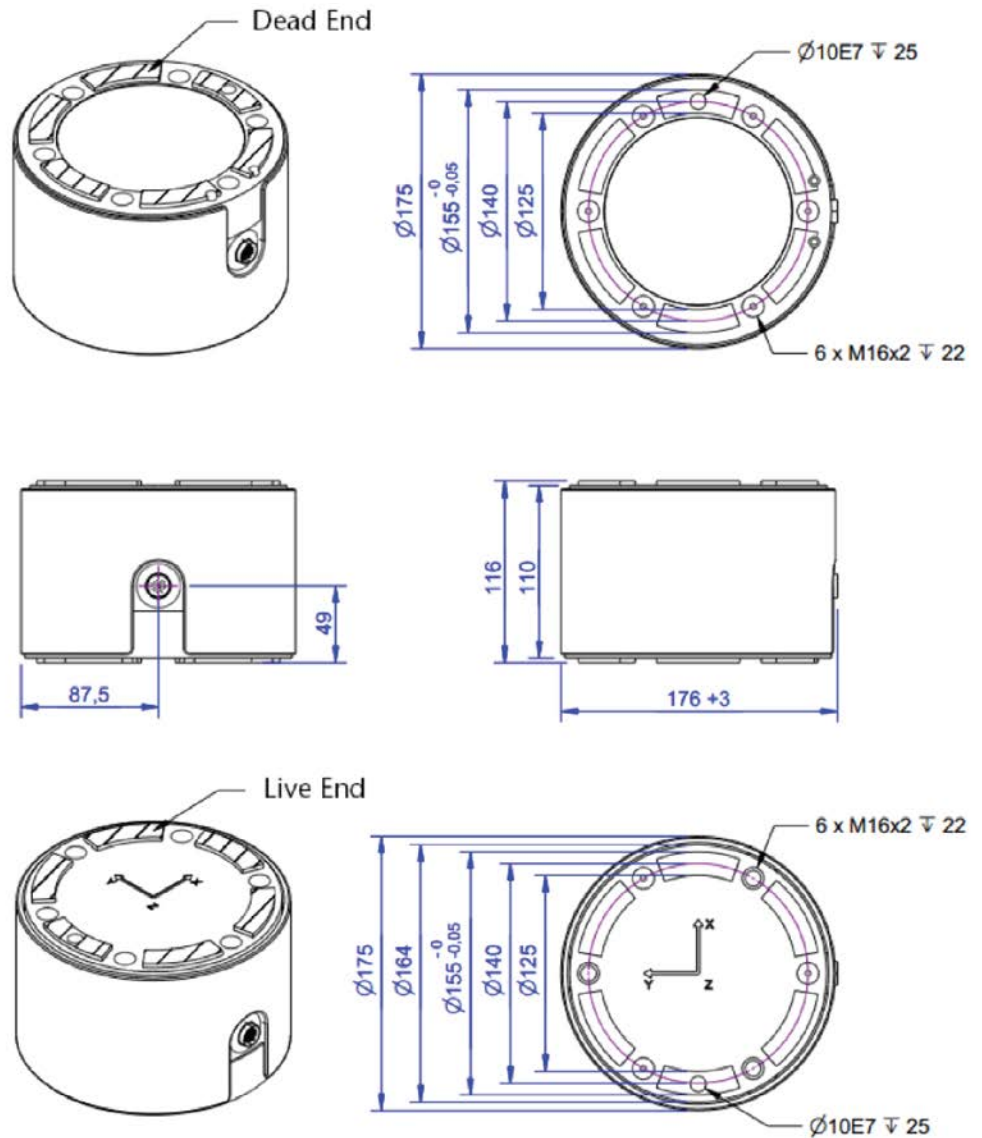
- Automation & Robotics
- Seismic Studies
- Press Force

#### Standard Configuration

### 3 Meter Dual Cable

#### Connector Options

- 24-Pin M16
- 44-Pin High Density D-Sub



Dimensions in mm

Mechanical views are 1<sup>st</sup>-angle projection