

6ADF SERIES 6-AXIS DIN FLANGE-TYPE LOAD CELLS - Fx Fy Fz Mx My Mz (U.S. & METRIC)

STANDARD CONFIGURATION



Model 6ADF45 (Shown)



Model 6ADF80 (Shown)



Model 6ADF100 (Shown)

FEATURES & BENEFITS

- 6-Axis – force and torque in all six axes
- Capacities - Force 20N to 1.2kN, Torque 1Nm to 60Nm
- Compact size
- Force and moment values MUST be calculated using supplied 36-term coefficient matrix
- Low crosstalk
- Temperature compensated
- Mounting per DIN EN ISO 9409-1
- 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
TEMPERATURE		
Effect on Zero – %RO / deg	°C	± 0.01
Effect on Output – % / deg	°C	± 0.05
Operating Range	°C	-10 to +85
	°F	+14 to +185
ELECTRICAL		
Rated Output – mV/V (Nominal)		<2
Excitation Voltage – V MAX		5
Crosstalk – %		3
Zero Balance – mV/V		< 1
Input Resistance – Ω		1K ±10
Output Resistance – Ω		1K ±10
MECHANICAL		
Safe Overload – %CAP		150
Ultimate Overload – %RO		600
Cable Length	m	5
	ft	16.4

Temperature compensation is not available on this product.

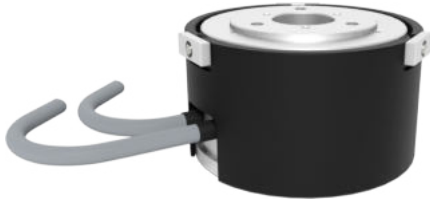
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CHARACTERISTICS

See Drawing	MODEL				
	6ADF45	6ADF80		6ADF100	
	A	A	B	A	B
Fx (N)	20	100	300	200	600
Fy (N)	20	100	300	200	600
Fz (N)	50	200	600	400	1200
Mx (Nm)	1	10	30	20	60
My (Nm)	1	10	30	20	60
Mz (Nm)	1	10	30	20	60
Diameter (mm)	45	80	80	100	100
Height (mm)	27	40	40	40	40
Thru-hole (mm)	12	20	20	25	25
Weight (g)	180	320	320	470	470
Material	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy
Protection (IP)	64	64	64	64	64
DIN Type	DIN EN ISO 9409-1	DIN EN ISO 9409-1	DIN EN ISO 9409-1	DIN EN ISO 9409-1	DIN EN ISO 9409-1
Nominal mV/V	< 2	< 1	< 1	< 1	< 1

6ADF45 6-AXIS DIN FLANGE-TYPE LOAD CELLS (U.S. & METRIC)

STANDARD CONFIGURATION



Model 6ADF45 (Shown)

FEATURES & BENEFITS

- Low forces F_x , F_y 20N, F_z : 50 N
- Low torque M_x , M_y , M_z : 1 Nm
- Light weight aluminum construction
- Center through-hole
- Integrated overload protection
- Robust connection cable
- DIN EN ISO-9409-1 mounting

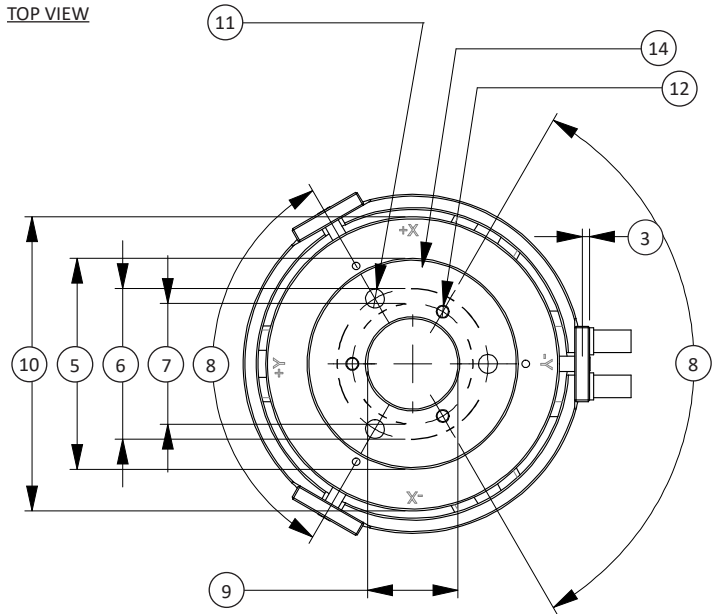
CONNECTOR OPTIONS

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

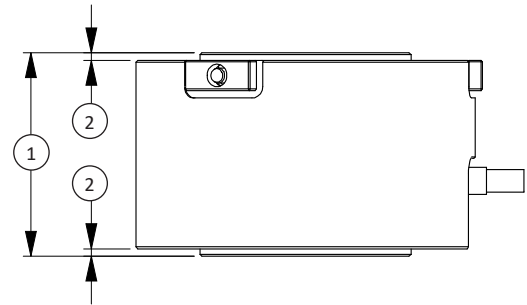
DIMENSIONS

See Drawing	Metric	U.S.
	mm	in
(1)	27	1.06
(2)	1	0.04
(3)	1	0.04
(4)	Ø45	Ø1.77
(5)	Ø28	Ø1.10
(6)	Ø20	Ø0.79
(7)	Ø16	Ø0.63
(8)	120°	
(9)	Ø12 H10	Ø0.47 H10
(10)	Ø39	Ø1.54
(11)	3 x Ø2.5 E7 ↓ 8 M3 - 6H ↓ 6	3 x Ø0.1 E7 ↓ 0.31 M3 - 6H ↓ 0.24
(12)	3 x Ø1.5 E7/m6 - ↓ 5	3 x Ø0.06 E7/m6 - ↓ 0.2
(13)	Dead End	
(14)	Live End / Measuring Surface	

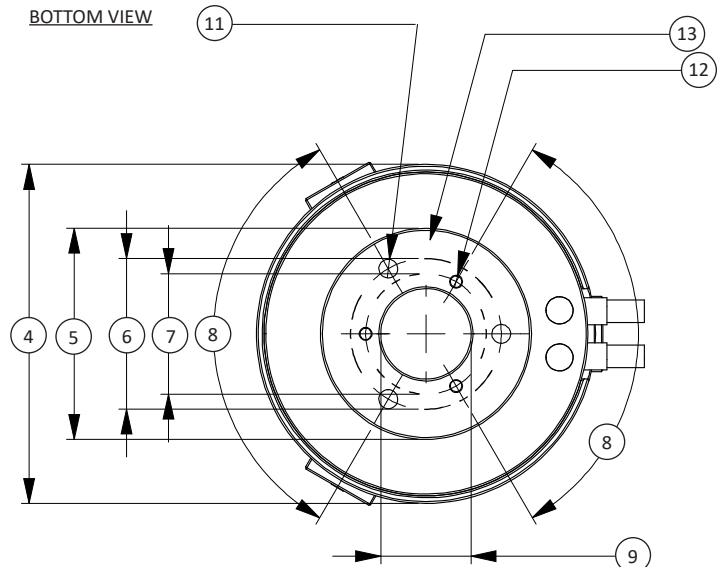
TOP VIEW



SIDE VIEW



BOTTOM VIEW



6ADF80 6-AXIS DIN FLANGE-TYPE LOAD CELLS (U.S. & METRIC)

STANDARD CONFIGURATION



Model 6ADF80 (Shown)

CABLE CONNECTION OPTIONS (Included with purchase)

- MP11 to M16 24-pin
- MP11 to 44-pin High Density D-Sub

OPTIONS

- CANbus

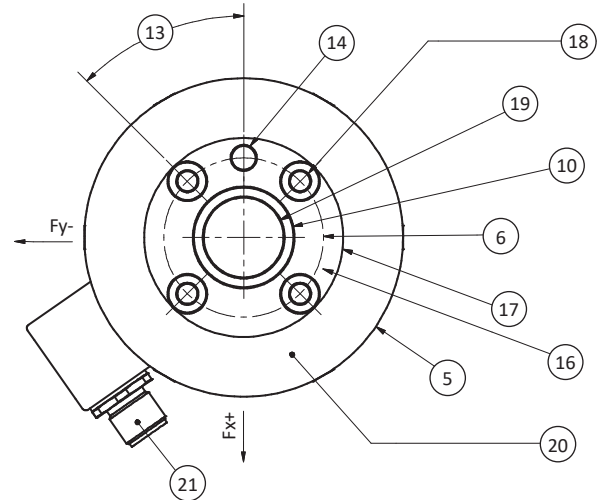
DIMENSIONS

See Drawing	Metric	U.S.
	mm	in
(1)	40.0	1.57
(2)	26.0	1.02
(3)	3.0	0.12
(4)	27.0	1.06
(5)	Ø80.0	Ø3.15
(6)	Ø40.0	Ø1.57
(7)	Ø60.0	Ø2.36
(8)	Ø25.0 h6	Ø h6
(9)	4x M6x1.0 Socket Head Cap Screws, accessible with 4 mm socket wrench through opposite side mounting holes	
(10)	Ø25.0 H7 ↓ 6.0	Ø H7 ↓ 0.24
(11)	4x 5.9	4x 0.23
(12)	57.8	2.28
(13)	45°	
(14)	Ø6.0 H7 ↓ 6.0	Ø0.24 H7 ↓ 0.24
(15)	Dead End	
(16)	Live End / Measuring Surface	
(17)	Ø50.0	Ø1.97
(18)	4x ENSAT M6x1.0	
(19)	Ø20.0 THRU	Ø0.79 THRU
(20)	This Surface ↓ 3.0	This Surface ↓ 0.12
(21)	MP11 Connector for mV/V Output or M12 Connector for CANbus Output	

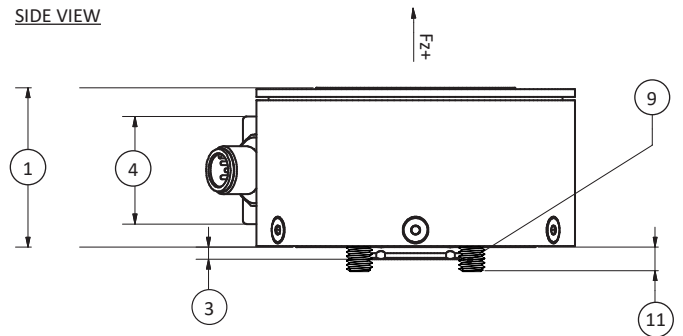
FEATURES & BENEFITS

- Light weight aluminum construction
- Compact design
- Center through hole
- DIN EN ISO-9409-1 mounting

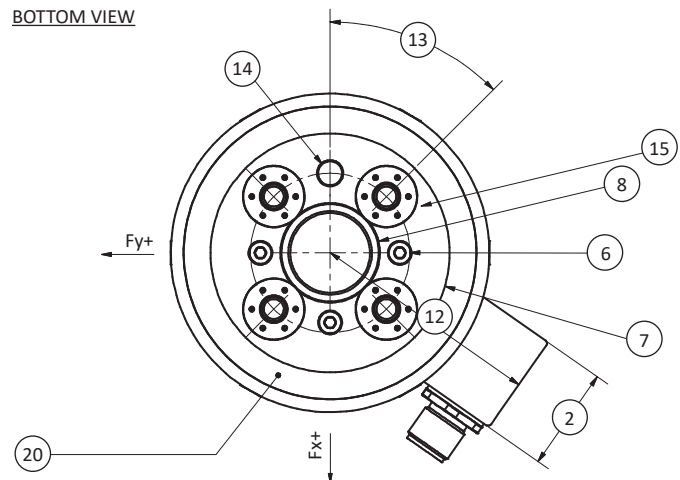
TOP VIEW



SIDE VIEW



BOTTOM VIEW



6ADF100 6-AXIS DIN FLANGE-TYPE LOAD CELLS (U.S. & METRIC)

STANDARD CONFIGURATION



Model 6ADF100 (Shown)

CABLE CONNECTION OPTIONS (Included with purchase)

- MP11 to M16 24-pin
- MP11 to 44-pin High Density D-Sub

OPTIONS

- CANbus

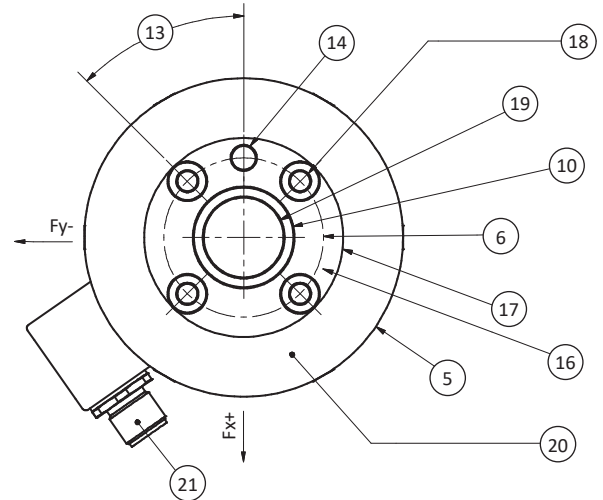
DIMENSIONS

See Drawing	Metric	U.S.
	mm	in
(1)	40.0	1.57
(2)	26.0	1.02
(3)	3.0	0.12
(4)	27.0	1.06
(5)	∅100.0	∅3.94
(6)	∅50.0	∅1.97
(7)	∅70.0	∅2.75
(8)	∅31.5 h6	∅1.24 h6
(9)	4x M6x1.0 Socket Head Cap Screws, accessible with 4 mm socket wrench through opposite side mounting holes	
(10)	∅31.5 H7 ↓ 6.0	∅1.24 H7 ↓ 0.24
(11)	4x 5.9	4x 0.23
(12)	68.3	2.69
(13)	45°	
(14)	∅6 H7 ↓ 6.0	∅0.24 H7 ↓ 0.24
(15)	Dead End	
(16)	Live End / Measuring Surface	
(17)	∅63.0	∅2.48
(18)	4x ENSAT M6x1.0	
(19)	∅25.0 THRU	∅0.98 THRU
(20)	This Surface ↓ 3.0	This Surface ↓ 0.12
(21)	MP11 Connector for mV/V Output or M12 Connector for CANbus Output	

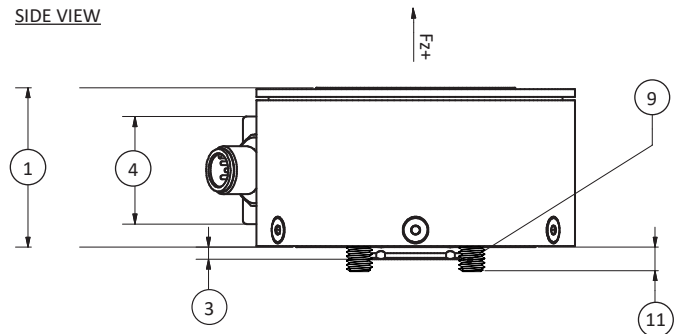
FEATURES & BENEFITS

- Light weight aluminum construction
- Compact design
- Center through hole
- DIN EN ISO-9409-1 mounting

TOP VIEW



SIDE VIEW



BOTTOM VIEW

