

UDW3-100 SPECIFICATIONS

The UDW3 is designed for accurate underwater force measurement. The body of the load cell is manufactured from heat treated 17-4 PH stainless steel. The mounting surfaces are equipped with threaded holes, and the unit is sealed and filled with mineral oil. A pressure compensation bladder is used to equalize the internal and external pressures. This allows operation underwater with little effect on the force and moment outputs due to water pressure.



Units: Capacity:

Dimensions(LxDia)	88.9 x 75.44 mm	IP Rating	IP68 *
Weight	2.05 Kg.	Sensing elements	Strain gage bridge
Channels	Fx, Fy, Fz, Mx, My, Mz	Amplifier	Required
Body Material	Stainless Steel	Analog outputs	6 Channels
Temperature range	-17.78 to 51.67°C	Digital outputs	None
Excitation	10V maximum	Crosstalk	< 2% on all channels
Fx, Fy, Fz hysteresis	± 0.2% full scale output	Fx, Fy, Fz non-linearity	± 0.2% full scale output

Channel	Fx	Fy	Fz	Units	Mx	My	Mz	Units
Capacity	222	222	445	N	11	11	5.6	N-m
Sensitivity	5.4	5.4	1.35	µv/v-N	266	266	213	µv/v-N-m
Natural frequency	-	-	-	Hz	-	-	-	Hz
Stiffness (X 105)	21.04	21.04	298	N/m	-	-	0.0226	N-m/rad

Resolution *To determine the resolution of your system, please use our [Output Calculator](#).*

Notes: * The transducer is tested in potable tap water at a pressure of 100 psi (690 kPa) and a temperature of 70°F (21°C) for 8 hours. Any use exceeding these conditions will void the warranty.

Published specifications subject to change without notice.

Last modified:2018-03-22

TECHNICAL DRAWINGS

Footprint Drawing (click on image to enlarge)

Electrical Drawing (click on image to enlarge)

TECHNICAL DRAWING

UDW3-250 SPECIFICATIONS

The UDW3 is designed for accurate underwater force measurement. The body of the load cell is manufactured from heat treated 17-4 PH stainless steel. The mounting surfaces are equipped with threaded holes, and the unit is sealed and filled with mineral oil. A pressure compensation bladder is used to equalize the internal and external pressures. This allows operation underwater with little effect on the force and moment outputs due to water pressure.



Units: Capacity:

Dimensions(LxDia)	88.9 x 75.44 mm	IP Rating	IP68 *
Weight	2.05 Kg.	Sensing elements	Strain gage bridge
Channels	Fx, Fy, Fz, Mx, My, Mz	Amplifier	Required
Body Material	Stainless Steel	Analog outputs	6 Channels
Temperature range	-17.78 to 51.67°C	Digital outputs	None
Excitation	10V maximum	Crosstalk	< 2% on all channels
Fx, Fy, Fz hysteresis	± 0.2% full scale output	Fx, Fy, Fz non-linearity	± 0.2% full scale output

Channel	Fx	Fy	Fz	Units	Mx	My	Mz	Units
Capacity	556	556	1112	N	28	28	14	N-m
Sensitivity	2.16	2.16	0.54	µv/v-N	106.3	106.3	85.06	µv/v-N-m
Natural frequency	-	-	-	Hz	-	-	-	Hz
Stiffness (X 105)	52.58	52.58	745	N/m	-	-	0.0564	N-m/rad

Resolution *To determine the resolution of your system, please use our [Output Calculator](#).*

Notes: * The transducer is tested in potable tap water at a pressure of 100 psi (690 kPa) and a temperature of 70°F (21°C) for 8 hours. Any use exceeding these conditions will void the warranty.

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Last modified:2018-03-22

TECHNICAL DRAWINGS

Footprint Drawing (click on image to enlarge)

Electrical Drawing (click on image to enlarge)

TECHNICAL DRAWING

UDW3-500 SPECIFICATIONS

The UDW3 is designed for accurate underwater force measurement. The body of the load cell is manufactured from heat treated 17-4 PH stainless steel. The mounting surfaces are equipped with threaded holes, and the unit is sealed and filled with mineral oil. A pressure compensation bladder is used to equalize the internal and external pressures. This allows operation underwater with little effect on the force and moment outputs due to water pressure.



Units: Capacity:

Dimensions(LxDia)	88.9 x 75.44 mm	IP Rating	IP68 *
Weight	2.05 Kg.	Sensing elements	Strain gage bridge
Channels	Fx, Fy, Fz, Mx, My, Mz	Amplifier	Required
Body Material	Stainless Steel	Analog outputs	6 Channels
Temperature range	-17.78 to 51.67°C	Digital outputs	None
Excitation	10V maximum	Crosstalk	< 2% on all channels
Fx, Fy, Fz hysteresis	± 0.2% full scale output	Fx, Fy, Fz non-linearity	± 0.2% full scale output

Channel	Fx	Fy	Fz	Units	Mx	My	Mz	Units
Capacity	1112	1112	2223	N	56	56	28	N-m
Sensitivity	1.08	1.08	0.27	µv/v-N	53.16	53.16	42.53	µv/v-N-m
Natural frequency	-	-	-	Hz	-	-	-	Hz
Stiffness (X 105)	105.2	105.2	1490	N/m	-	-	0.113	N-m/rad

Resolution *To determine the resolution of your system, please use our [Output Calculator](#).*

Notes: * The transducer is tested in potable tap water at a pressure of 100 psi (690 kPa) and a temperature of 70°F (21°C) for 8 hours. Any use exceeding these conditions will void the warranty.

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TECHNICAL DRAWINGS

Footprint Drawing (click on image to enlarge)

Electrical Drawing (click on image to enlarge)

TECHNICAL DRAWING

UDW3-1000 SPECIFICATIONS

The UDW3 is designed for accurate underwater force measurement. The body of the load cell is manufactured from heat treated 17-4 PH stainless steel. The mounting surfaces are equipped with threaded holes, and the unit is sealed and filled with mineral oil. A pressure compensation bladder is used to equalize the internal and external pressures. This allows operation underwater with little effect on the force and moment outputs due to water pressure.



Units: Capacity:

Dimensions(LxDia)	88.9 x 75.44 mm	IP Rating	IP68 *
Weight	2.05 Kg.	Sensing elements	Strain gage bridge
Channels	Fx, Fy, Fz, Mx, My, Mz	Amplifier	Required
Body Material	Stainless Steel	Analog outputs	6 Channels
Temperature range	-17.78 to 51.67°C	Digital outputs	None
Excitation	10V maximum	Crosstalk	< 2% on all channels
Fx, Fy, Fz hysteresis	± 0.2% full scale output	Fx, Fy, Fz non-linearity	± 0.2% full scale output

Channel	Fx	Fy	Fz	Units	Mx	My	Mz	Units
Capacity	2223	2223	4446	N	113	113	56	N-m
Sensitivity	0.54	0.54	0.135	µv/v-N	26.58	26.58	21.26	µv/v-N-m
Natural frequency	-	-	-	Hz	-	-	-	Hz
Stiffness (X 105)	210	210	2979	N/m	-	-	0.226	N-m/rad

Resolution *To determine the resolution of your system, please use our [Output Calculator](#).*

Notes: * The transducer is tested in potable tap water at a pressure of 100 psi (690 kPa) and a temperature of 70°F (21°C) for 8 hours. Any use exceeding these conditions will void the warranty.

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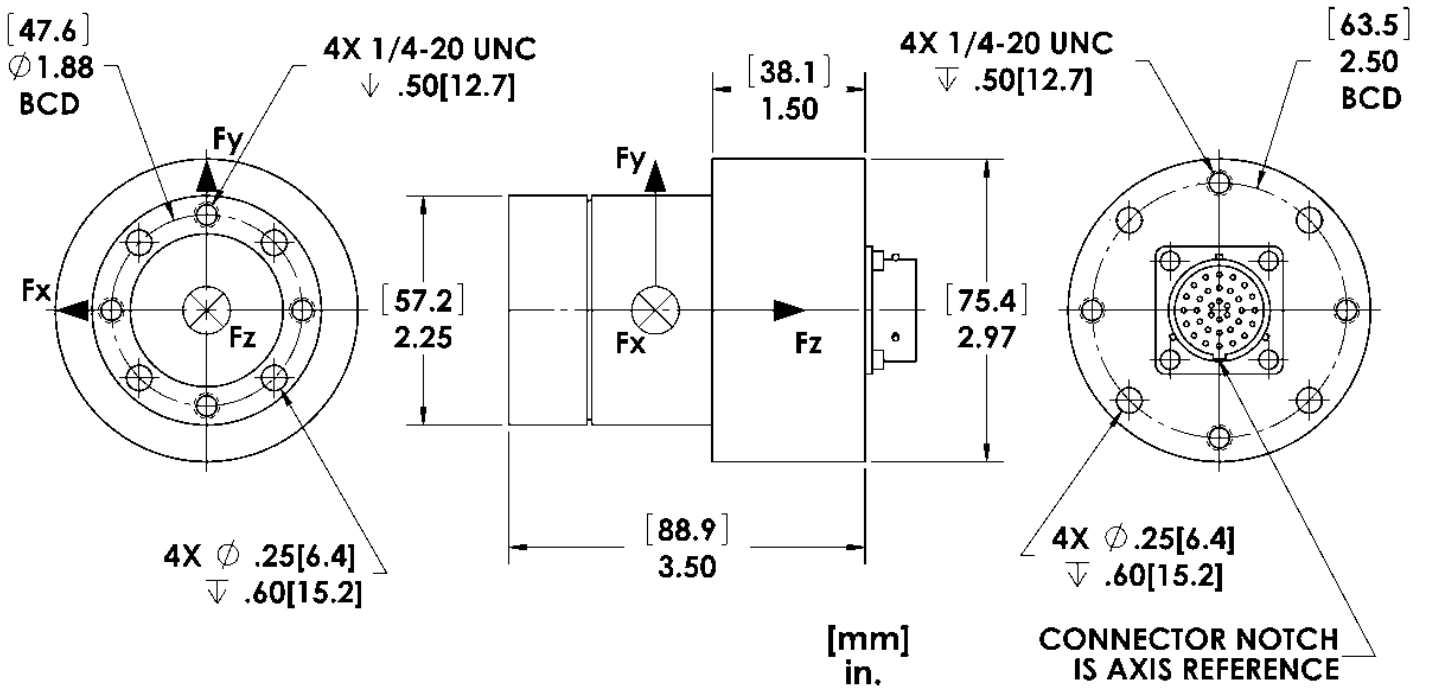
TECHNICAL DRAWINGS

Footprint Drawing (click on image to enlarge)

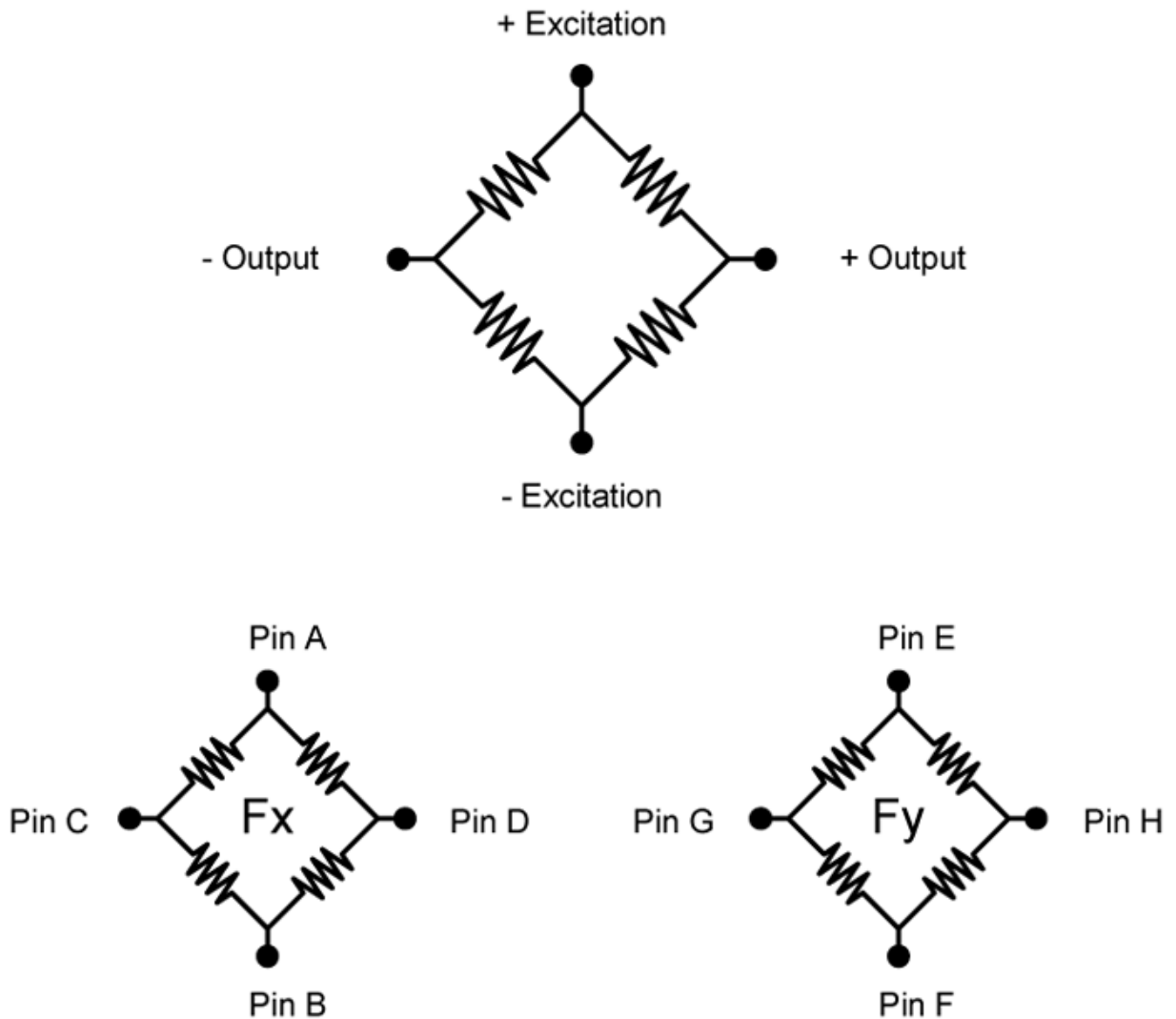
Electrical Drawing (click on image to enlarge)

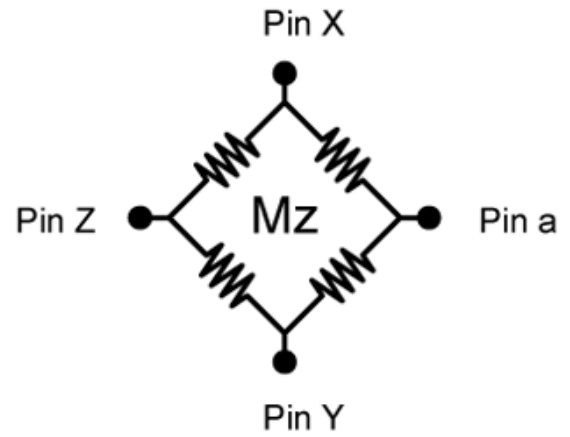
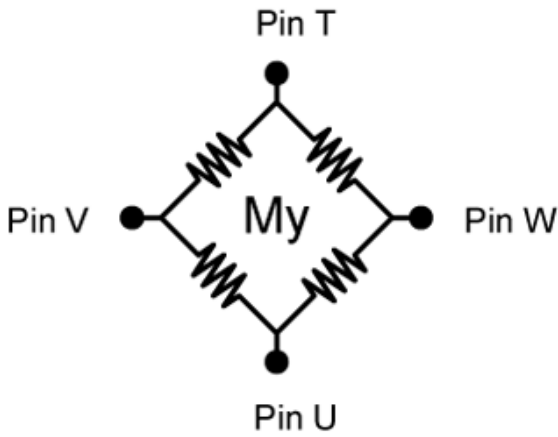
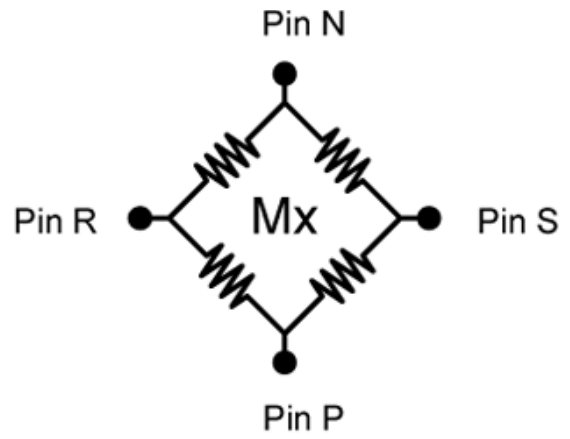
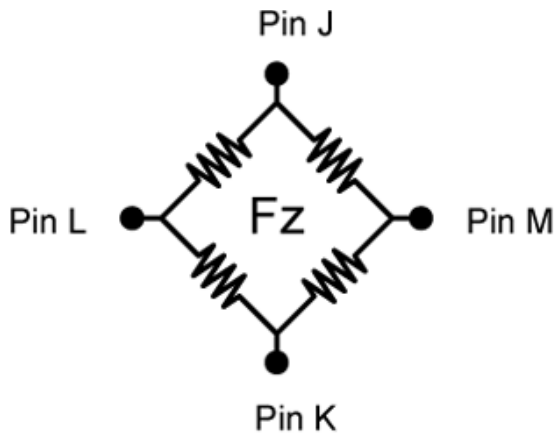
TECHNICAL DRAWING

Footprint Drawing



Electrical Drawing





Bridge Fz = 700 ohms
 Bridges Fx; Fy; Mx; My; Mz = 350 ohms
Connector Type:
 Souriau 851-02E16-26P50-44

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