

Sunrise Instruments Calibration Report

Address: 2nd Floor Building B2 19#Keyuan Xishi Road Nanning Guangxi Province China 530007

Phone: +86 771-389-9499 Fax: +86 771-389-9497

Email: sri@srisensor.com



Calibration Report

Calibration No.	SRI-V-260124-I	Cal Date	2026/1/24
Model No.	M4313M2B	Serial No.	32655
Technician	Wei jing xian	Temp(C)/Hum.(%).	22.0 / 65.0
Customer	北京易如精智医学技术有限公司	Excitation(V)	5.0000
Description	6 AXIS FORCE SENSOR	Cable Length	
Comments			

Voltage Calibration

<u>Bridge</u>	<u>Capacity</u>	<u>Zero Offset</u>	<u>Nonlinearity</u>	<u>Hysteresis</u>	<u>Output @ Capacity</u>	<u>Sensitivity</u>
	N/Nm	N	%FS	%FS	V	V/EU
FX	100	-0.3301	0.13	0.15	DECOUPLE	
FY	100	0.6446	0.21	0.35		
FZ	-100	0.2716	0.10	0.20		
MX	-8	0.2789	0.41	0.27		
MY	8	0.4509	0.25	0.36		
MZ	8	-0.5530	0.30	0.33		

Wire Color Codes

FUNCTION

+EXC

+SIG

-EXC

-SIG

Sensor ID

ID Return

CONNECTOR

Reference Load Cell

<u>Manufacturer</u>	<u>Model Type</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Cal Due Date</u>
SUNRISE	GOLDEN TYPE	M3001	121	2026/8/6

Calibrated by

Approved by

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Technician	Chen Feng Sheng	Temp(C)/Hum.(%).	22.0 / 65.0
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CROSSTALK

<u>Bridge</u>	<u>Load</u>	<u>FX</u>	<u>FY</u>	<u>FZ</u>	<u>MX</u>	<u>MY</u>	<u>MZ</u>
	N/Nm	% FS	% FS	% FS	% FS	% FS	% FS
FX	100	0.00	0.27	0.40	0.12	1.25	0.92
FY	100	0.43	0.00	0.21	0.79	0.87	0.43
FZ	-100	0.16	0.25	0.00	0.14	0.18	0.18
MX	-8	0.07	0.77	0.40	0.00	0.46	0.20
MY	8	0.30	0.32	0.14	0.33	0.00	0.72
MZ	8	0.44	0.34	0.66	1.12	0.80	0.00

Bridge to Transducer body resistance greater than 5G Ohm when measured with 50V excitation

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SENSOR TYPE B ----- OUTPUT UNRELATED TO EXCITATION VOLTAGE.

Decoupled Matrix

[DECOUPLED] =

-0.05583	0.22778	0.04360	0.15579	-0.05708	-0.16209	0.04882	-0.22514
0.03597	-0.23090	-0.04515	0.22855	0.03505	0.15532	-0.03721	-0.14473
0.20612	-0.08762	0.17417	0.08450	0.20167	-0.08305	0.17872	0.08577
0.00501	-0.00580	-0.01405	0.00592	0.01321	-0.00546	-0.00501	0.00563
0.02516	-0.00480	-0.02526	0.00422	0.01608	-0.00357	-0.01653	0.00443
-0.00886	0.02792	0.00955	-0.02128	-0.00751	0.02775	0.00802	-0.02114

The six axis loads can be decoupled as follows:

Step 1: Obtain the raw data of Channels 1 through 8 into mV
[DAT] = {rawchn1, rawchn2, rawchn3, rawchn4, rawchn5, rawchn6, rawchn7, rawchn8}
where rawchn1, rawchn2, rawchn3, rawchn4, rawchn5, rawchn6 , rawchn7 and rawchn8
are in mV

Step 2: To calculate decoupled loads
[RESULT]T = [DECOUPLED]*[DAT]T
where [RESULT] = {FX,FY,FZ,MX,MY,MZ}. Force Unit: N. Moment Unit: Nm
[DECOUPLED] is the above decoupled matrix