

Sunrise Instruments Calibration Report

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

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Email: sri@srisensor.com



Calibration Report

Calibration No.	SRI-V-251127-ZI	Cal Date	2025/11/27
Model No.	M3552C	Serial No.	25679
Technician	Wei Jing Xian	Temp(C)/Hum.(%).	25/70
Customer	深圳康诺思腾科技有限公司	Excitation(V)	5.0000
Description	6 AXIS FORCE SENSOR	Cable Length	80mm
Comments	搭配M8134B SN0013		

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>	<u>Change</u>
	N/Nm	V	%FS	%FS	V	V/EU	%
FX	-300	0.0000	0.19	0.53			
FY	300	0.0000	0.26	0.60			
FZ	-500	0.0000	0.15	0.37			
MX	-4.5	0.0000	0.20	0.87		DECOUPLE	
MY	-4.5	0.0000	0.12	0.42			
MZ	4.5	0.0000	0.22	0.51			

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	2026/7/20

Calibrated by

Approved by

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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	-300	0.00	0.12	0.03	0.02	0.36	0.43
FY	300	0.05	0.00	0.04	0.27	0.03	0.27
FZ	-500	0.03	0.05	0.00	0.10	0.09	0.01
MX	-4.5	0.05	0.07	0.09	0.00	0.24	0.02
MY	-4.5	0.17	0.13	0.12	0.13	0.00	0.07
MZ	4.5	0.16	0.06	0.04	0.08	0.29	0.00

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

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SENSOR TYPE A ----- OUTPUT RELATED TO EXCITATION VOLTAGE.

Decoupled Matrix

[DECOUPLED] =

-191.10226	-1.81347	4.28000	-1.29503	191.63977	-0.69331
106.37598	1.19400	-233.00000	-1.90025	114.99818	-1.81781
-0.85104	123.29317	-3.03644	129.43284	-2.80535	125.78457
0.01929	-1.14000	-0.03789	0.10400	-0.01090	1.20000
0.01163	0.72200	0.00620	-1.37000	-0.04633	0.71900
-2.20000	-0.03131	-2.11000	-0.03975	-1.90000	0.03751

The six axis loads can be decoupled as follows:

Step 1: Obtain the raw data of Channels 1 through 6 into Volt

[RAW] = {rawchn1, rawchn2, rawchn3, rawchn4, rawchn5, rawchn6}

where rawchn1, rawchn2, rawchn3, rawchn4, rawchn5 and rawchn6 are in V

Step 2: Convert the raw data into mV/V

Assume the raw data output in Volt, Excitation voltage = EXC, Amplifier gain = GAIN

[DAT] = {chn1, chn2, chn3, chn4, chn5, chn6} * 1000 / (EXC * GAIN)

where chn1, chn2, chn3, chn4, chn5 and chn6 are in mV/V

Step 3: 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