

**TA Technology (Shanghai) Co., Ltd.**  
**Test Report**

**DC Voltage Measurement**

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1 $\mu$ V, full range = -100...+300 mV

Low Range: 1LSB = 61nV, full range = -1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	404.585 $\pm$ 0.1% (k=2)	404.416 $\pm$ 0.1% (k=2)	404.565 $\pm$ 0.1% (k=2)
Low Range	3.97854 $\pm$ 0.7% (k=2)	3.95135 $\pm$ 0.7% (k=2)	3.98063 $\pm$ 0.7% (k=2)

**Connector Angle**

Connector Angle to be used in DASY system	148 $^{\circ}$ $\pm$ 1 $^{\circ}$
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### Appendix

#### 1. DC Voltage Linearity

High Range	Input ( $\mu\text{V}$ )	Reading ( $\mu\text{V}$ )	Error (%)
Channel X + Input	200000	200000	0.00
Channel X + Input	20000	20006.89	0.03
Channel X - Input	20000	-20003.71	0.02
Channel Y + Input	200000	200000.5	0.00
Channel Y + Input	20000	20008.05	0.04
Channel Y - Input	20000	-20006.61	0.03
Channel Z + Input	200000	199999.6	0.00
Channel Z + Input	20000	20006.84	0.03
Channel Z - Input	20000	-20004.66	0.02

Low Range	Input ( $\mu\text{V}$ )	Reading ( $\mu\text{V}$ )	Error (%)
Channel X + Input	2000	2000	0.00
Channel X + Input	200	200.19	0.09
Channel X - Input	200	-199.99	0.00
Channel Y + Input	2000	2000	0.00
Channel Y + Input	200	199.38	-0.31
Channel Y - Input	200	-200.73	0.36
Channel Z + Input	2000	2000.1	0.00
Channel Z + Input	200	199.25	-0.38
Channel Z - Input	200	-201.52	0.76

#### 2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading ( $\mu\text{V}$ )	Low Range Average Reading ( $\mu\text{V}$ )
Channel X	200	2.99	1.90
	- 200	-1.54	-1.85
Channel Y	200	-8.82	-8.73
	- 200	6.90	6.96
Channel Z	200	9.94	10.21
	- 200	-13.53	-13.21

#### 3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X ( $\mu\text{V}$ )	Channel Y ( $\mu\text{V}$ )	Channel Z ( $\mu\text{V}$ )
Channel X	200	-	1.31	-0.98
Channel Y	200	1.52	-	2.97
Channel Z	200	-1.16	0.18	-

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#### 4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16123	16646
Channel Y	15886	16452
Channel Z	16175	16346

#### 5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Input 10M $\Omega$

	Average ( $\mu$ V)	min. Offset ( $\mu$ V)	max. Offset ( $\mu$ V)	Std. Deviation ( $\mu$ V)
Channel X	0.53	-0.80	1.64	0.33
Channel Y	-1.51	-2.67	-0.89	0.35
Channel Z	-1.99	-3.07	-1.43	0.29

#### 6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

#### 7. Input Resistance

	Zeroing (MOhm)	Measuring (MOhm)
Channel X	0.1999	198.3
Channel Y	0.1999	200.1
Channel Z	0.1999	199.3

#### 8. Low Battery Alarm Voltage (verified during pre test)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

#### 9. Power Consumption (verified during pre test)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.0	+6	+14
Supply (- Vcc)	-0.01	-8	-9