

PRODUCTION APPROVAL **M. ROBINSON** DATE **29.04.2019** ENGINEERING APPROVAL **D. EKERS** DATE **12.04.2019**

ETP ion detect 8 MARTHA ST CLYDE NSW 2142, AUSTRALIA
 PH: +61(0)2 8876 0100 ACN NO. 078 955 521
 FAX: +61(0)28876 0199 ABN: 35 078 955 521

REV	DESCRIPTION	ECR #	BY	DATE	TOLERANCE (UNLESS SPECIFIED)	LINEAR	MATERIAL DESCRIPTION
B	DATA SHT, GAIN CURVE AND PULSE GAIN CURVE ADDED	1417	RZ	10.04.19	WHOLE MILLIMETERS	+0.5	MATERIAL TOLERANCE
A	ORIGINAL ISSUE		RZ	25/03/19	ONE DECIMAL PLACE	+0.2	GENERAL FINISH
					TWO DECIMAL PLACES	+0.1	FREE FROM TOOLING MARKS, BURRS AND SCRATCHES
					DIAMETER		SOLID MODEL
					WHOLE MILLIMETRES	+0.5	MACHINED FINISH 1.6/ UNLESS OTHERWISE MENTIONED
					ONE DECIMAL PLACE	+0.2	
					TWO DECIMAL PLACES	+0.1	
					ANGULAR		
					WHOLE DEGREES	+1°	
					ONE DECIMAL PLACE	+0.5°	

TITLE **MECHANICAL SPECIFICATION ICP-MS DETECTOR**

DRAWN **RZ** DATE **25/03/2019** SHEET **1 OF 3** PRIOR DRAWING REF. **MS142003 1_0** SCALE: **1:10** DO NOT SCALE

DRAWING No. **MS142003** REVISION **B**


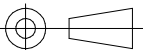
ALL DIMENSIONS ARE IN MILLIMETERS

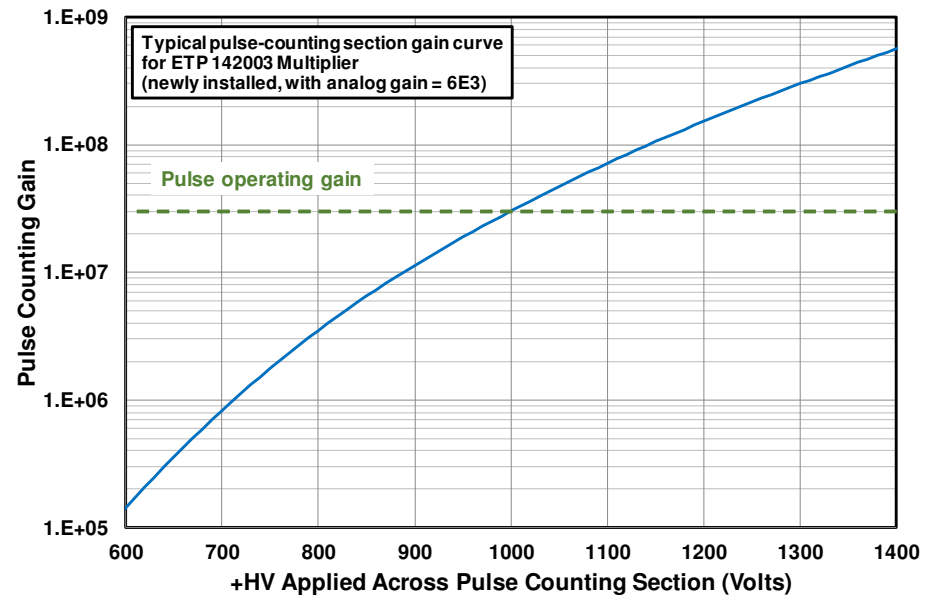
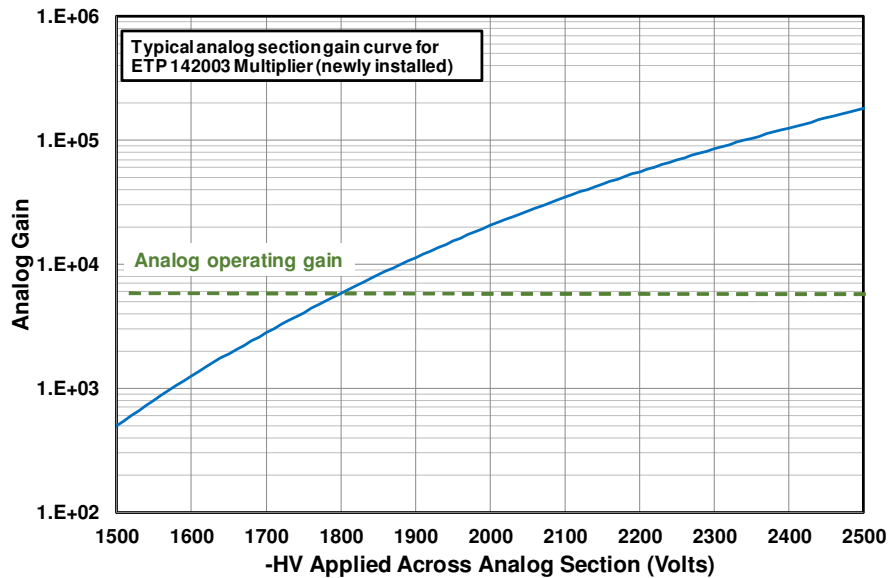
Specifications (New Multiplier)

Input aperture diameter: (nominal)		Ø11mm
Internal resistance: (nominal)	-HV to Gnd +HV to Gnd Gate to Gnd	22.3 MΩ 18.6 MΩ O/C
Number of dynodes		26
Maximum applied bias Voltage	-HV* +HV*	- 3000 Volts +2500 Volts
Typical analog gain (new multiplier) (-HV @ -1800 Volts and +HV @ +1000 Volts)		>2.5x10 ³
Typical pulse-counting gain (new multiplier) (-HV @ -1800 Volts and +HV @ +1000 Volts)		>1x10 ⁷
Gain Attenuation of pulse-counting section (with gate set to 0V)		> 4000
Maximum analog dark current (-HV @ -2500Volts and +HV @ +1000 Volts)		<1 pA
Maximum pulse-counting dark counts (-HV @ -1800Volts and +HV @ +1400 Volts)		≤ 3 counts per minute
Maximum operating pressure		10 ⁻⁴ Torr
Electrical connections		- HV +HV Gate Analog output Pulse output
Mechanical dimensions		Refer figure 1

* Maximum multiplier voltage must not be applied to a new multiplier, or damage to the multiplier may result.

Maximum multiplier voltage should only be applied to the multiplier when it is near end of life.

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						LINEAR WHOLE MILLIMETERS ±0.5 ONE DECIMAL PLACE +0.2 TWO DECIMAL PLACES +0.1 DIAMETER WHOLE MILLIMETRES ±0.5 ONE DECIMAL PLACE +0.2 TWO DECIMAL PLACES +0.1		MATERIAL DESCRIPTION MATERIAL TOLERANCE GENERAL FINISH FREE FROM TOOLING MARKS, BURRS AND SCRATCHES SOLID MODEL A MACHINED FINISH 1.6/ UNLESS OTHERWISE MENTIONED		TITLE MECHANICAL SPECIFICATION ICP-MS DETECTOR					
B	DATA SHT, GAIN CURVE AND PULSE GAIN CURVE ADDED	1417	RZ	10.04.19	ANGLULAR WHOLE DEGREES ± 1° ONE DECIMAL PLACE ±0.5°				DRAWN	DATE	SHEET	PRIOR DRAWING REF.	SCALE:	DRAWING No.	REVISION
A	ORIGINAL ISSUE		RZ	25/03/19					RZ	25/03/2019	2 OF 3	MS142003 1_0	1:1	MS142003	B
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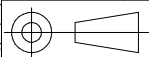
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A	ORIGINAL ISSUE		RZ	25/03/19	DIAMETER WHOLE MILLIMETRES ±0.5 ONE DECIMAL PLACE ±0.2 TWO DECIMAL PLACES ±0.1		MACHINED FINISH 1.6/ UNLESS OTHERWISE MENTIONED		25/03/2019	3 OF 3	MS142003 1_0	DO NOT SCALE	MS142003	B
					ANGULAR WHOLE DEGREES ±1° ONE DECIMAL PLACE ±0.5°									



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