

DULCINEA CONTROLLER



Dulcinea® is the foundation of Cervantes'® versatility, consistently providing high quality and precision in all unique modes of operation. This powerful controller is the heart of the Cervantes® SPM system and can also be used to control other manufacturer's hardware. Contact us for information regarding custom interfaces.

QUICK SPECIFICATIONS**	
DUAL ($\pm X$, $\pm Y$, $\pm Z$) HV SUPPLIES FOR PIEZO CONTROL ($\pm 150V$ RANGE [†]):	
PER AXIS OPTIONS:	BIPOLAR ($\pm 150V$) OR MONOPOLAR ($-10V/140V$) PER CLIENT REQUEST
16-BIT OFFSET WITH FIXED GAIN OF 15	16-BIT SCAN RESOLUTION WITH CONTINUOUS GAIN OF 0.06 TO 15 ($\pm 10V$ BASIS)
NOISE LEVEL:	< 2 MV RMS [‡]
Z-OFFSET CONTROL:	MANUAL & SOFTWARE
HV BIAS OUTPUT SIGNAL ($\pm 150V$ RANGE):	
RESOLUTION & NOISE LEVEL:	16-BIT WITH < 2 MV RMS [‡]
GAIN AVAILABILITY:	x1 ($\pm 10V$) OR x15 ($\pm 150V$)
OUTPUT SIGNALS:	8 -- 16-BIT $\pm 10V$ (3 ACCESSIBLE VIA BNC PANEL MOUNTS)
INPUT SIGNALS:	16 -- 16-BIT $\pm 10V$ RANGE (8 WITH VARIABLE GAIN & OFFSET) (4 ACCESSIBLE VIA BNC PANEL MOUNTS) (VAR. GAIN -- CONTINUOUS 0.65 TO 9.8)
DIGITAL SIGNALS:	16 - DEDICATED TO SYSTEM TASKS 8 - SOFTWARE CONFIGURABLE TRIGGER SIGNALS 8 - INPUT COUNTERS
EXTRA BNC PANEL MOUNTS:	INTERNAL SIGNAL MONITORING & EXTERNAL INPUT CONDITIONING
INTERNAL SIGNAL MONITORING:	PHOTODIODE OUTPUT, PLL OUTPUT*, GENERATED AC SIGNAL IN DYNAMIC MODES* & INTERNAL VOLTAGE RAMP IN MODULATION OF AC FREQUENCY MONITORING*
EXTERNAL INPUT CONDITIONING:	MODULATION OF: APPLIED Z-SCANNER VOLTAGE, TIP/SAMPLE BIAS VOLTAGE. ALSO INPUT OF DYNAMIC MODES AC SIGNAL TO SUBSTITUTE FOR NORMAL FORCE*. AC CURRENT SOURCE SOFTWARE CONFIG FREQ FOR EXCITING MAGNETICALLY DRIVEN CANTILEVERS
BNC SIGNAL MONITORING:	15 - SOFTWARE SELECTABLE ANALOG SIGNALS THROUGH 4 FRONT PANEL MOUNT BNC
DISPLAY:	REAL-TIME GRAPHIC DISPLAY ON UNIT

[†] 300V differential -- \neq 100 KHz Bandwidth
*Requires optional Dynamic Force Board

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