

## Specification Comparison for Digitimer High Voltage Isolated Constant Current Stimulators

Digitimer Stimulator Model	DS5	DS7A	DS7AH	DS7R	DS8R
	Bipolar Constant Current Stimulator	HV Constant Current Stimulator (100mA)	HV Constant Current Stimulator (1A)	HV Constant Current Research Stimulator	Bipolar Constant Current Research Stimulator
Output Shape	Arbitrary Waveform	Rectangular	Rectangular	Rectangular	Rectangular
Current Ranges	0-10mA, 0-25mA 0-50mA	0-9.99mA, 0-99.9mA	0-99.9mA, 0-999mA	0-99.9mA, 0-999mA	0-1000mA
Maximum Compliance Voltage	160V	400V	400V	400V	400V
Bipolar/Biphasic Output	Yes	No	No	No	Yes
Alternating Polarity Mode	No	Yes	Yes	Yes	Yes
Charge Balanced Output	Yes	No	No	No	Yes
Pulse Duration	0-1s or 0-5s	50, 100, 200, 500, 1000, 2000µs	50, 100, 200µs	50, 100, 200, 500, 1000, 2000µs	50 to 2000µs (10µs steps)
Pulse Energy	<50mJ or <300mJ	<50mJ	<50mJ	<300mJ	<300mJ
Current Monitor Output	Yes	No	No	No	No
Voltage Monitor Output	Yes	No	No	No	No
Display of Measured Parameters	Yes	No	No	No	Yes
Sync/Event Marker Output (TTL)	No	Yes	Yes	Yes	Yes
Front Panel Amplitude/Duration Controls	No	Yes	Yes	Yes	Yes
External Trigger In (TTL)	No	Yes	Yes	Yes	Yes
Foot/Hand Switch Trigger Input	No	Yes	Yes	Yes	Yes
Front Panel Trigger Button	No	Yes	Yes	Yes	Yes
Virtual Front Panel Software (Windows)	Yes (Stimulator settings)	No	No	No	Yes (Full control)
Third Party Software Control	Yes (Stimulator settings)	No	No	No	Yes (Full control)
Analogue Voltage Input	Yes (defines shape)	No	No	No	Yes (defines amplitude)
Max. TTL Trigger Freq. in "normal" polarity mode	Not Applicable	1kHz	1kHz	1kHz	1kHz (default) or 10kHz with modified firmware
Medical Device Certification	<b>Yes</b> European MDD CE	<b>Yes</b> European MDD CE FDA 510k	<b>Yes</b> European MDD CE FDA 510k	<b>No</b> Research Use Only	<b>No</b> Research Use Only