

APPENDIX A: SPECIFICATIONS

The following lists the performance specifications for the American Reliance Inc., Linear Programmable DC Power Supply Series. All specifications are at rear terminals with a resistive load, and local sensing unless otherwise stated. All specifications apply over the full operating temperature range of 0 to 50°C, unless otherwise specified.

MODEL	PPS-1001	PPS-1002	PPS-1003	PPS-1004	PPS-1005	PPS-1006	PPS-1007
AC INPUT	One rear panel mounted switch permits operation of 115 or 230(240) Vac line voltage.						
Input Current							
115 VAC	2.24A	1.5A	1.5A	1.5A	1.32A	1.3A	1.2A
230 VAC	1.12A	0.75A	0.75A	0.75A	0.66A	0.6A	0.6A
Fuse Rating	AC input is protected by a rear panel mounted fuse.						
115 VAC	4A	2A	2A	2A	2A	2A	2A
230 VAC	2A	1A	1A	1A	1A	1A	1A
Amplitude	115/230 Vac \pm 10% or 240 Vac \pm 10%						
Frequency	50 to 60 Hz						
Maximum VA	258VA	173VA	173VA	173VA	152VA	152VA	152VA
Maximum Power	208W	141W	141W	141W	120W	120W	120W
Peak Inrush Current	60A	20A	20A	20A	18A	18A	18A
DC OUTPUT MAXIMUM RATINGS							
Voltage	8V	18V	30V	35V	60V	128V	250V
Current	10A	4A	2.5A	2A	1A	0.5A	0.2A
DC OUTPUT PROGRAMMING RANGE							
Voltage	0-8V	0-18V	0-30V	0-35V	0-60V	0-128V	0-250V
Current	0-10A	0-4A	0-2.5A	0-2A	0-1A	0-0.5A	0-0.2A
PROGRAMMING RESOLUTION (LSB)	Voltage and current programming are monotonic over full temperature range.						
Voltage	2mV	5mV	10mV	10mV	20mV	40mV	80mV
Current	4mA	2mA	1mA	0.6mA	0.4mA	0.25mA	0.1mA
OVP	50mV	100mV	200mV	200mV	400mV	800mV	1.6V
PROGRAMMING ACCURACY	If the unit is recalibrated at a temperature other than 25°C, these specifications apply over a temperature band of \pm 5°C around calibration temperature.						
Voltage	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB
Current	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB
OVP	2.4% + 0.3V	2.4% + 0.6V	2.4% + 1.3V	2.4% + 1.3V	2.4% + 2.5V	2.4% + 5V	2.4% + 10V
EXTERNAL ANALOG PROGRAMMING GAIN							
Voltage	0.8V/V	1.8V/V	3V/V	3.5V/V	6V/V	12.8V/V	25V/V
Current	1A/V	0.4A/V	0.25A/V	0.2A/V	0.1A/V	0.05A/V	0.02A/V
EXTERNAL ANALOG PROGRAMMING ACCURACY							
Voltage	0.1% + 4mV	0.1% + 10mV	0.1% + 20mV	0.1% + 20mV	0.1% + 40mV	0.1% + 80mV	0.1% + 160mV
Current	0.1% + 12mA	0.1% + 6mA	0.1% + 3mA	0.1% + 3mA	0.1% + 1mA	0.1% + 0.5mA	0.1% + 0.3mA
LOAD EFFECT	Load effect is defined as the maximum change in output due to a load change up to the maximum voltage or current rating.						
Voltage	0.001% + 1mV	0.001% + 1mV	0.001% + 1mV	0.001% + 1mV	0.001% + 1mV	0.001% + 1mV	0.001% + 1mV
Current	1mA	1mA	1mA	1mA	1mA	0.1mA	0.1mA
Remote sense operation is possible with up to 0.5V drop for positive and negative output load leads.							

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APPENDIX A: SPECIFICATIONS (continued)

MODEL	PPS-1001	PPS-1002	PPS-1003	PPS-1004	PPS-1005	PPS-1006	PPS-1007
SOURCE EFFECT	Maximum output change for a line voltage change within rating.						
Voltage	1mV	1mV	1mV	1mV	1mV	1mV	1mV
Current	1mA	1mA	1mA	1mA	1mA	0.1mA	0.1mA
PARD (PERIODIC AND RANDOM DEVIATION AND NOISE) RMS/PK-PK (20Hz - 20MHz) with output ungrounded.							
Voltage	1mVrms/10mVp-p	1mVrms/10mVp-p	1mVrms/10mVp-p	1mVrms/10mVp-p	1mVrms/10mVp-p	1mVrms/10mVp-p	2mVrms/10mVp-p
Current	1mArms	1mArms	1mArms	1mArms	1mArms	0.5mArms	0.2mArms
TEMPERATURE COEFFICIENT	The temperature coefficient is defined as the change in output per degree Celsius; after a 30 minute warm-up period.						
Voltage	100ppm/°C	100ppm/°C	100ppm/°C	100ppm/°C	100ppm/°C	100ppm/°C	100ppm/°C
Current	200ppm/°C	200ppm/°C	200ppm/°C	200ppm/°C	200ppm/°C	200ppm/°C	200ppm/°C
DRIFT (STABILITY)	The drift is defined as the change in output over an eight hour interval under constant line, load, and ambient temperature after a 30 minute warm-up period.						
Voltage	0.01% + 1mV	0.01% + 1mV	0.01% + 3mV	0.01% + 3mV	0.01% + 6mV	0.01% + 10mV	0.1% + 20mV
Current	0.1% + 10mA	0.1% + 5mA	0.1% + 2mA	0.1% + 2mA	0.1% + 1mA	0.1% + 0.5mA	0.1% + 0.2mA
LOAD TRANSIENT RESPONSE	The time required for the output voltage to recover within a band of 0.1% of rated voltage around the nominal voltage, within a 50% variation in load current.						
Recovery Time	50us	50us	50us	50us	50us	50us	50us
PROGRAMMING UP/DOWN SPEED	The total programming UP/DOWN time is the sum of output voltage response time and the programming com processing time. LSB is the maximum time for the output voltage to vary within ±0.025% of a final value. UP and DOWN times are the maximum times for the output from 10% to 90% or to 10% of its total excursion value.						
Tup/Tdn	10ms/15ms	10ms/15ms	10ms/15ms	10ms/15ms	15ms/20ms	50ms/70ms	200ms/300ms
LSB	20ms/30ms	20ms/30ms	20ms/30ms	20ms/30ms	30ms/40ms	80ms/100ms	250ms/400ms
READBACK RESOLUTION							
Voltage	2mV	5mV	10mV	10mV	20mV	40mV	80mV
Current	4mA	2mA	1mA	0.8mA	0.4mA	0.2mA	0.1mA
READBACK ACCURACY	If the unit is recalibrated at a temperature other than 25°C, these specifications apply over a temperature band of ±5°C around calibration temperature.						
Voltage	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB
Current	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB
READBACK TEMPERATURE COEFFICIENT	The readback temperature coefficient is defined as the variation in reading per degree Celsius after a 30 minute warm-up.						
Voltage	100ppm+2mV	100ppm+4mV	100ppm+8mV	100ppm+10mV	100ppm+20mV	100ppm+40mV	100ppm+80mV
Current	200ppm+12mA	200ppm+4mA	200ppm+3mA	200ppm+3mA	200ppm+1mA	200ppm+0.5mA	200ppm+0.2mA
OUTPUT ISOLATION	Neither output terminal may be more than ±240Vdc from chassis ground.						
	± 240Vdc	± 240Vdc	± 240Vdc	± 240Vdc	± 240Vdc	± 500Vdc	± 500Vdc
TEMPERATURE RATINGS							
		Operating	0°C to 50°C				
		Storage	-40°C to 70°C				
 GPIB INTERFACE CAPABILITY	SH1, AH1, T6, TE0, L4, LE0, RL1, SR0, PP0, DC1, DT0, C0, E1						
WEIGHT	18 lbs	16 lbs	16 lbs	16 lbs	16 lbs	16 lbs	16 lbs
DIMENSIONS	8.4"x5.2"x15.7" for all models						

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APPENDIX A: SPECIFICATIONS (continued)

MODEL	PPS-1021	PPS-1022
AC INPUT	One rear panel mounted switch permits operation of 115 or 230(240) Vac line voltage.	
Input Current		
115 VAC	1.92A	1.92A
230 VAC	0.96A	0.96A
Fuse Rating		
115 VAC	4A	4A
230 VAC	2A	2A
Amplitude	115/230 Vac \pm 10% or 240 Vac \pm 10%	115/230 Vac \pm 10% or 240 Vac \pm 10%
Frequency	50 to 60 Hz	50 to 60 Hz
Maximum VA	221VA	221VA
Maximum Power	192W	192W
Peak Inrush Current	30A	30A
DC OUTPUT MAXIMUM RATINGS		
Voltage	0 ~ 16V; 0 ~ 35V	0 ~ 35V; 0 ~ 60V
Current	0 ~ 6A; 0 ~ 3A	0 ~ 3A; 0 ~ 1.5A
DC OUTPUT PROGRAMMING RANGE		
Voltage	0 ~ 16V; 0 ~ 35V	0 ~ 35V; 0 ~ 60V
Current	0 ~ 6A; 0 ~ 3A	0 ~ 3A; 0 ~ 1.5A
PROGRAMMING RESOLUTION (LSB)	Voltage and current programming are monotonic over full temperature range.	
Voltage	10mV	20mV
Current	1mA(Low); 2mA(High)	0.5mA(Low); 1mA(High)
OVP	200mV	400mV
PROGRAMMING ACCURACY	If the unit is recalibrated at a temperature other than 25°C, these specifications apply over a temperature band of \pm 5°C around calibration temperature.	
Voltage	0.05% +2LSB	0.05% +2LSB
Current	0.15% +5LSB	0.15% +5LSB
OVP	2.4% + 0.3V	2.4% + 1.3V
LOAD EFFECT	Load effect is defined as the maximum change in output due to a load change up to the maximum voltage or current rating.	
Voltage	0.001% +1mV	0.001% +1mV
Current	1mA	1mA
Remote sense operation is possible with up to 0.5V drop for positive and negative output load leads.		

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APPENDIX A: SPECIFICATIONS (continued)

MODEL	PPS-1021	PPS-1022
SOURCE EFFECT	Maximum output change for a line voltage change within rating.	
Voltage	1mV	1mV
Current	1mA	1mA
PARD (PERIODIC AND RANDOM DEVIATION AND NOISE) RMS/PK-PK (20Hz - 20MHz) with output ungrounded.		
Voltage	1mVrms/10mVp-p	1mVrms/10mVp-p
Current	1mA _{rms}	1mA _{rms}
TEMPERATURE COEFFICIENT	The temperature coefficient is defined as the change in output per degree Celsius; after a 30 minute warm-up period.	
Voltage	100ppm/°C	100ppm/°C
Current	200ppm/°C	200ppm/°C
DRIFT (STABILITY)	The drift is defined as the change in output over an eight hour interval under constant line, load, and ambient temperature after a 30 minute warm-up period.	
Voltage	0.01% + 1mV	0.01% + 3mV
Current	0.1% + 3mA(Low); 0.1% + 6mA(High)	0.1% + 2mA(Low); 0.1% + 3mA(High)
LOAD TRANSIENT RESPONSE	The time required for the output voltage to recover within a band of 0.1% of rated voltage around the nominal voltage, within a 50% variation in load current.	
Recovery Time	50us	50us
PROGRAMMING UP/DOWN SPEED	The total programming UP/DOWN time is the sum of output voltage response time and the programming command processing time. LSB is the maximum time for the output voltage to vary within ±0.025% of a final value. UP and DOWN times are the maximum times for the output from 10% to 90 % or to 10% of its total excursion value.	
Tup/Tdn	10ms/15ms	10ms/15ms
LSB	20ms/30ms	20ms/30ms
READBACK RESOLUTION(LSB)		
Voltage	10mV	20mV
Current	1mA(Low); 2mV(High)	0.5mA(Low); 1mV(High)
READBACK ACCURACY	If the unit is recalibrated at a temperature other than 25°C, these specifications apply over a temperature band of ±5°C around calibration temperature.	
Voltage	0.1% + 2LSB	0.1% + 2LSB
Current	0.2% + 5LSB	0.2% + 5LSB
READBACK TEMPERATURE COEFFICIENT	The readback temperature coefficient is defined as the variation in reading per degree Celsius after a 30 minute warm-up.	
Voltage	100ppm+10mV	100ppm+20mV
Current	200ppm+2mA(Low); 200ppm+4mA(High)	200ppm+1mA(Low); 200ppm+2mA(High)
OUTPUT ISOLATION	Neither output terminal may be more than ±240Vdc from chassis ground.	
	± 240Vdc	± 240Vdc
TEMPERATURE RATINGS		
Operating	0°C to 50°C	0°C to 50°C
Storage	-40°C to 70°C	-40°C to 70°C
GPIB INTERFACE CAPABILITY	SH1, AH1, T6, TE0, L4, LE0, RL1, SR0, PP0. DC1, DT0, C0, E1	
WEIGHT	18 lbs	18 lbs
DIMENSIONS	8.4"x5.2"x15.7" for all models	

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APPENDIX A: SPECIFICATIONS (continued)

MODEL	PPS-1201	PPS-1202	PPS-1203	PPS-1204	PPS-1205	PPS-1206
AC INPUT	One rear panel mounted switch permits operation of 115 or 230(240) Vac line voltage.					
Input Current						
115 VAC	2.7A	2.7A	2.6A	3A	2.6A	2.6A
230 VAC	1.4A	1.35A	1.3A	1.5A	1.3A	1.3A
Fuse Rating	AC input is protected by a rear panel mounted fuse.					
115 VAC	4A	4A	4A	5A	4A	4A
230 VAC	2A	2A	2A	2.5A	2A	2A
Amplitude	115/230 Vac \pm 10% or 240 Vac \pm 10%					
Frequency	50 to 60 Hz					
Maximum VA	315VA	315VA	299VA	343VA	299VA	299VA
Maximum Power	240W	240W	232W	268W	232W	232W
Peak Inrush Current	30A	30A	30A	60A	30A	30A
DC OUTPUT MAXIMUM RATINGS						
Voltage	8V	18V	35V	30V	60V	128V
Current	6A	4A	2A	3A	1A	0.5A
DC OUTPUT PROGRAMMING RANGE						
Voltage	0-8V	0-18V	0-35V	0-30V	0-60V	0-128V
Current	0-6A	0-4A	0-2A	0-3A	0-1A	0-0.5A
PROGRAMMING RESOLUTION (LSB)	Voltage and current programming are monotonic over full temperature range.					
Voltage	2mV	5mV	10mV	10mV	20mV	40mV
Current	2mA	1.5mA	0.6mA	1mA	0.4mA	0.25mA
OVP	50mV	100mV	200mV	200mV	400mV	800mV
PROGRAMMING ACCURACY	If the unit is recalibrated at a temperature other than 25°C, these specifications apply over a temperature band of \pm 5°C around calibration temperature.					
Voltage	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB	0.05% -2LSB
Current	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB	0.15% -5LSB
OVP	2.4% + 0.3V	2.4% + 0.6V	2.4% + 1.3V	2.4% + 1.3V	2.4% + 2.5V	2.4% + 5V
LOAD EFFECT	Load effect is defined as the maximum change in output due to a load change up to the maximum voltage or current rating.					
Voltage	0.001% +1mV	0.001% +1mV	0.001% +1mV	0.001% + 1mV	0.001% + 1mV	0.001% + 1mV
Current	1mA	1mA	1mA	1mA	1mA	0.1mA
Remote sense operation is possible with up to 0.5V drop for positive and negative output load leads.						

Specifications are subject to change without notice.

APPENDIX A: SPECIFICATIONS (continued)

MODEL	PPS-1201	PPS-1202	PPS-1203	PPS-1204	PPS-1205	PPS-1206
SOURCE EFFECT	Maximum output change for a line voltage change within rating.					
Voltage	1mV	1mV	1mV	1mV	1mV	1mV
Current	1mA	1mA	1mA	1mA	1mA	0.1mA
PARD (PERIODIC AND RANDOM DEVIATION AND NOISE) RMS/PK-PK (20Hz - 20MHz) with output ungrounded.						
Voltage	1mVrms/10mVp-p	1mVrms/10mVp-p	1mVrms/10mVp-p	1mVrms/10mVp-p	1mVrms/10mVp-p	1mVrms/10mVp-p
Current	1mA _{rms}	1mA _{rms}	1mA _{rms}	1mA _{rms}	1mA _{rms}	0.5mA _{rms}
TEMPERATURE COEFFICIENT	The temperature coefficient is defined as the change in output per degree Celsius; after a 30 minute warm-up period.					
Voltage	100ppm/°C	100ppm/°C	100ppm/°C	100ppm/°C	100ppm/°C	100ppm/°C
Current	200ppm/°C	200ppm/°C	200ppm/°C	200ppm/°C	200ppm/°C	200ppm/°C
DRIFT (STABILITY)	The drift is defined as the change in output over an eight hour interval under constant line, load, and ambient temperature after a 30 minute warm-up period.					
Voltage	0.01% + 1mV	0.01% + 1mV	0.01% + 3mV	0.01% + 3mV	0.01% + 6mV	0.01% + 10mV
Current	0.1% + 6mA	0.1% + 5mA	0.1% + 2mA	0.1% + 3mA	0.1% + 1mA	0.1% + 0.5mA
LOAD TRANSIENT RESPONSE	The time required for the output voltage to recover within a band of 0.1% of rated voltage around the nominal voltage, within a 50% variation in load current.					
Recovery Time	50us	50us	50us	50us	50us	50us
PROGRAMMING UP/DOWN SPEED	The total programming UP/DOWN time is the sum of output voltage response time and the programming command processing time. LSB is the maximum time for the output voltage to vary within ±0.025% of a final value. UP and DOWN times are the maximum times for the output from 10% to 90% or to 10% of its total excursion value.					
Tup/Tdn	10ms/15ms	10ms/15ms	10ms/15ms	10ms/15ms	15ms/20ms	50ms/70ms
LSB	20ms/30ms	20ms/30ms	20ms/30ms	20ms/30ms	30ms/40ms	80ms/100ms
READBCK RESOLUTION						
Voltage	2mV	5mV	10mV	10mV	20mV	40mV
Current	4mA	2mA	1mA	0.8mA	0.4mA	0.2mA
READBCK ACCURACY	If the unit is recalibrated at a temperature other than 25°C, these specifications apply over a temperature band of ±5°C around calibration temperature.					
Voltage	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB
Current	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB
READBCK TEMPERATURE COEFFICIENT	The readback temperature coefficient is defined as the variation in reading per degree Celsius after a 30 minute warm-up.					
Voltage	100ppm + 2mV	100ppm + 4mV	100ppm + 8mV	100ppm + 10mV	100ppm + 20mV	100ppm + 40mV
Current	200ppm + 6mA	200ppm + 4mA	200ppm + 2mA	200ppm + 3mA	200ppm + 1mA	200ppm + 0.5mA
OUTPUT ISOLATION	Neither output terminal may be more than ±240Vdc from chassis ground.					
	± 240Vdc	± 240Vdc	± 240Vdc	± 240Vdc	± 240Vdc	± 500Vdc
TEMPERATURE RATINGS						
		Operating	0°C to 50°C			
		Storage	-40°C to 70°C			
GPB INTERFACE CAPABILITY	SH1, AH1, T6, TE0, L4, LE0, RL1, SR0, PP0, DC1, DT0, C0, E1					
WEIGHT	18 lbs	18 lbs	20 lbs	18 lbs	18 lbs	18 lbs
DIMENSIONS	8.4"x5.2"x15.7" for all models					

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APPENDIX A: SPECIFICATIONS (continued)

MODEL	PPS-2013	PPS-2014	PPS-2015	PPS-2016	PPS-2017	PPS-2018	PPS-2019
AC INPUT							
One rear panel mounted switch permits operation of 115 or 230(240) Vac line voltage.							
Input Current							
115 VAC	3A	3A	3.2A	3.1A	3A	3A	3A
230 VAC	1.5A	1.5A	1.6A	1.5A	1.5A	1.5A	1.5A
Fuse Rating							
AC input is protected by a rear panel mounted fuse.							
115 VAC	5A	5A	5A	5A	5A	5A	5A
230 VAC	2.5A	2.5A	2.5A	2.5A	2.5A	2.5A	2.5A
Amplitude							
115/230 Vac \pm 10% or 240 Vac \pm 10%							
Frequency							
50 to 60 Hz							
Maximum VA							
343VA 343VA 350VA 350VA 343VA 340VA 340VA							
Maximum Power							
268W 268W 273W 273W 268W 270W 270W							
Peak Inrush Current							
60A 60A 60A 60A 60A 60A 60A							
DC OUTPUT MAXIMUM RATINGS							
Voltage	30V	35V	8V	18V	60V	120V	250V
Current	6A	5A	20A	10A	3A	1.5A	0.8A
DC OUTPUT PROGRAMMING RANGE							
Voltage	0-30V	0-35V	0-8V	0-18V	0-60V	0-120V	0-250V
Current	0-6A	0-5A	0-20A	0-10A	0-3A	0-1.5A	0-0.8A
PROGRAMMING RESOLUTION (LSB)							
Voltage and current programming are monotonic over full temperature range.							
Voltage	10mV	10mV	2mV	5mV	20mV	40mV	80mV
Current	2mA	2mA	7mA	3mA	1mA	0.5mA	0.25mA
OVP	200mV	200mV	50mV	100mV	400mV	800mV	1.6V
PROGRAMMING ACCURACY							
If the unit is recalibrated at a temperature other than 25°C, these specifications apply over a temperature band of \pm 5°C around calibration temperature.							
Voltage	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB	0.05% +2LSB
Current	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB	0.15% +5LSB
OVP	2.4% + 1.3V	2.4% + 1.3V	2.4% + 0.3V	2.4% + 0.6V	2.4% + 2.5V	2.4% + 5V	2.4% + 10V
EXTERNAL ANALOG PROGRAMMING GAIN							
Voltage	3V/V	3.5V/V	0.8V/V	1.8V/V	6V/V	12V/V	25V/V
Current	0.6A/V	0.5A/V	2A/V	1A/V	0.3A/V	0.15A/V	0.08A/V
EXTERNAL ANALOG PROGRAMMING ACCURACY							
Voltage	0.1% + 20mV	0.1% + 20mV	0.1% + 4mV	0.1% + 10mV	0.1% + 40mV	0.1% + 80mV	0.1% + 160mV
Current	0.1% + 12mA	0.1% + 12mA	0.1% + 40mA	0.1% + 20mA	0.1% + 6mA	0.1% + 3mA	0.1% + 1.5mA
LOAD EFFECT							
Load effect is defined as the maximum change in output due to a load change up to the maximum voltage or current rating.							
Voltage	0.001% + 1mV	0.001% + 1mV	0.001% + 1mV	0.001% + 1mV	0.001% + 1mV	0.001% + 1mV	0.001% + 1mV
Current	1mA	1mA	1mA	1mA	1mA	0.5mA	0.1mA
Remote sense operation is possible with up to 0.5V drop for positive and negative output load leads.							

Specifications are subject to change without notice.

APPENDIX A: SPECIFICATIONS (continued)

MODEL	PPS-2013	PPS-2014	PPS-2015	PPS-2016	PPS-2017	PPS-2018	PPS-2019
SOURCE EFFECT	Maximum output change for a line voltage change within rating. (PPS-2015 with 90% of Full Load)						
Voltage	1mV	1mV	1mV	1mV	1mV	1mV	1mV
Current	1mA	1mA	1mA	1mA	1mA	0.1mA	0.1mA
PARD (PERIODIC AND RANDOM DEVIATION AND NOISE) RMS/PK-PK (20Hz - 20MHz) with output ungrounded.							
Voltage	1mVrms/10mVp-p	1mVrms/10mVp-p	1mVrms/10mVp-p	1mVrms/10mVp-p	1mVrms/10mVp-p	1mVrms/10mVp-p	2mVrms/10mVp-p
Current	1mA _{rms}	1mA _{rms}	1mA _{rms}	1mA _{rms}	1mA _{rms}	1mA _{rms}	0.2mA _{rms}
TEMPERATURE COEFFICIENT	The temperature coefficient is defined as the change in output per degree Celsius; after a 30 minute warm-up period.						
Voltage	100ppm/°C	100ppm/°C	100ppm/°C	100ppm/°C	100ppm/°C	100ppm/°C	100ppm/°C
Current	200ppm/°C	200ppm/°C	200ppm/°C	200ppm/°C	200ppm/°C	200ppm/°C	200ppm/°C
DRIFT (STABILITY)	The drift is defined as the change in output over an eight hour interval under constant line, load, and ambient temperature after a 30 minute warm-up period.						
Voltage	0.01% + 3mV	0.01% + 3mV	0.01% + 1mV	0.01% + 1mV	0.01% + 6mV	0.01% + 10mV	0.1% + 20mV
Current	0.1% + 6mA	0.1% + 6mA	0.1% + 20mA	0.1% + 10mA	0.1% + 2mA	0.1% + 1mA	0.1% + 0.5mA
LOAD TRANSIENT RESPONSE	The time required for the output voltage to recover within a band of 0.1% of rated voltage around the nominal voltage, within a 50% variation in load current.						
Recovery Time	50us	50us	50us	50us	50us	50us	50us
PROGRAMMING UP/DOWN SPEED	The total programming UP/DOWN time is the sum of output voltage response time and the programming com. processing time. LSB is the maximum time for the output voltage to vary within ±0.025% of a final value. UP and DOWN times are the maximum times for the output from 10% to 90 % or to 10% of its total excursion value.						
Tup/Tdn	10ms/15ms	10ms/15ms	10ms/15ms	10ms/15ms	15ms/20ms	50ms/70ms	200ms/300ms
LSB	20ms/30ms	20ms/30ms	20ms/30ms	20ms/30ms	30ms/40ms	80ms/100ms	250ms/400ms
READBACK RESOLUTION							
Voltage	10mV	10mV	2mV	5mV	20mV	40mV	80mV
Current	2mA	2mA	8mA	4mA	1mA	0.5mA	0.25mA
READBACK ACCURACY	If the unit is recalibrated at a temperature other than 25°C, these specifications apply over a temperature band of ±5°C around calibration temperature.						
Voltage	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB	0.1% + 2LSB
Current	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB	0.2% + 5LSB
READBACK TEMPERATURE COEFFICIENT	The readback temperature coefficient is defined as the variation in reading per degree Celsius after a 30 minute warm-up.						
Voltage	100ppm+8mV	100ppm+10mV	100ppm+2mV	100ppm+4mV	100ppm+20mV	100ppm+40mV	100ppm+80mV
Current	200ppm+6mA	200ppm+6mA	200ppm+20mA	200ppm+12mA	200ppm+3mA	200ppm+1mA	200ppm+0.5mA
OUTPUT ISOLATION	Neither output terminal may be more than ±240Vdc from chassis ground.						
	± 240Vdc	± 240Vdc	± 240Vdc	± 240Vdc	± 240Vdc	± 500Vdc	± 500Vdc
TEMPERATURE RATINGS							
		Operating	0°C to 50°C				
		Storage	-40°C to 70°C				
GPIB INTERFACE CAPABILITY							
	SH1, AH1, T6, TE0, L4, LE0, RL1, SR0, PP0, DC1, DT0, C0, E1						
WEIGHT	19 lbs	19 lbs	19 lbs	19 lbs	19 lbs	19 lbs	19 lbs
DIMENSIONS	8.4"x5.2"x15.7" for all models						

Specifications are subject to change without notice.