Datasheet Series PLA



Model	PLA43	30	2.57 2.57 ±
Order no.	22-007-00	0-01	H&H
Basic operating modes			CC, CV, CR, CP
Standard interfaces		-	
Max. input voltage Vmax		300 V	
Min. input voltage Vmin ¹⁾		1.2 V	
Max. load current Imax			6 A
Continuous power			400 W
Short-time power 2)			400 W
Voltage setting			0 300 V
Current setting			0 6 A
Resistance setting			0.333 0hm 666.7 0hm
Power setting 3)			0 400 W
Rise and fall time fast ⁴⁾			40 µs
Load terminals (front) 5)			SBU4-32
Load terminals (rear) 6)		SBU4-32	
Power consumption		37 VA	
Noise max. ca. ⁷⁾			61 dB(A)
Weight ca.			3.85 kg
Housing / 3D model ⁸⁾			½ 19" - 2 U / PLA_M7
Width x Height x Depth			222 x 92 x 312 mm

- 1. Minimum input voltage for maximum static load current.
- 2. Level and duration of the peak power depend on the previous power.
- 3. The setting range extends max. to the possible shorttime power.
- 4. Rise and fall times are defined of 10 ... 90 % and 90 ... 10 % of the maximum current (CC mode, fast regulation speed, tolerance ±20 %). Rise and fall time at setting "slow": approx. 500 µs.
- 5. PK4-30L: Binding posts for 4 mm laboratory jack and stripped wires with diameter up to 4 mm, max. 30 A BPK4-30L: Touch-protected binding posts for 4 mm laboratory jacks and stripped wires with diameter up to 4 mm, max. 30 A BPK4-60L: Touch-protected binding posts for 4 mm laboratory jacks and stripped wires with diameter up to 6 mm, max. 60 A SBU4-32: Safety sockets touch-protected for 4 mm laboratory jacks, max. 32 A FKS20/4-SM8: Flat copper bars 20 x 4 mm vertical with hole for screw M8 Models with copper bars (FKS) are delivered with safety covers.
- 6. PK4-30L: Binding posts for 4 mm laboratory jack and stripped wires with diameter up to 4 mm, max. 30 A BPK4-30L: Touch-protected binding posts for 4 mm laboratory jacks and stripped wires with diameter up to 4 mm, max. 30 A BPK4-60L: Touch-protected binding posts for 4 mm laboratory jacks and stripped wires with diameter up to 6 mm, max. 60 A SBU4-32: Safety sockets touch-protected for 4 mm laboratory jacks, max. 32 A FKS20/4-SM8: Flat copper bars 20 x 4 mm vertical with hole for screw M8

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Models with copper bars (FKS) are delivered with safety covers.

- 7. Measured on the front from distance of 1 m.
- 8. Device height incl. equipment feet. Maximum width and depth incl. handle. Installation depth without connection cable. 1 U = 44.45 mm.

PLA Series Technical Data

Operating modes			
Basic operating	CC CV CB CB		
modes Combined operating	CC, CV, CR, CP		
modes	CC+CV, CP+CV, CR+CV, CP+CC, CR+CC, CV+CC		
Accuracy of setting			
	of setting value	of corresponding range	
Voltage	±0.1 %	±0.05 %	
Current	±0.2 %	±0.05 %	
Resistance (at V > 5 % of voltage range)	±1.4 %	±0.3 % of current range	
Power (at V and I > 10 % of range)	±0.7 %		
(at V or I 5 10 % of range)	±2 %		
Resolution	12 bits		
Accuracy of adjustable p	rotections		
	of setting value	of corresponding range	
Overcurrent protection	±0.5 %	±0.05 %	
Undervoltage protection	±0.3 %	±0.02 %	
Resolution	12 bits		
Accuracy of measurement	nt		
	of measured (actual) value	of corresponding range	
Voltage	±0.1 %	±0.05 %	
Current	±0.2 %	±0.05 %	
External control voltage 0 10 V	±0.2 %	±0.1 %	
Resistance	is calculated from voltage and current		
Power	is calculated from voltage and current		
Resolution	16 bits		
Sampling rate	100 μs, not triggerable		
Accuracy of displays (us	er interface)		
Display user interface	accuracy of each measurement, ±1 digit of the display value		
Resolution	see display resolution page 22		
Dynamic function (LIST)			
Number of load levels	max. 100, with correspondin times	max. 100, with corresponding ramp, dwell and sampling times	
	min.	max.	
Dwell time	1 ms	100 s	
Ramp time	0 s	100 s	
Resolution	1 ms		
Accuracy of setting times	±0.02 %		
Sampling times	1 ms 100 s, resolution 1 m	ns	
Data acquisition			
	of measured (actual) value	of corresponding range	
Accuracy voltage	±0.1 %	±0.05 % ±1 LSB	
Accuracy curent	±0.2 %	±0.05 % ±1 LSB	
Resolution	16 bits		
to external memory	01 20 - 01		
Sampling rate	0.1 30 s, 0.1 s resolution		
Measurement data	time stamp, voltage, current		
Number of measure- ment points File format	limited by flash drive memory size		
i ite iviillat	.034		

to internal memory			
Sampling rate	1 ms 100 s, 1 ms resolution		
Measurement data	time stamp, voltage, current		
Number of measure- ment points	max. 100		
Settings memories	I.		
Number of user settings	10, selectable (incl. programmed list)		
I/O port: outputs and inp	uts		
Status and control outputs	status load input (on/off, low active) overload (OV, OCP, OPP, OTP, low active)		
Output level	5 V	5 V	
Control inputs	load input (on/off, low active) control input (activates I/O port, low active)		
Input level	3 30 V		
I/O port: accuracy of ana	log control 0 10 V		
	of the setting value	of the corresponding range	
Voltage	±0.2 %	±0.05 %	
Current	±0.2 %	±0.05 %	
Resistance (at V > 5 % of voltage range)	±1.6 %	±0.4 % of current range	
Power (at V and I > 30 % of the corresponding range)	±0.55 %	±0.2 %	
Power at V and I > 5 % and < 30 % of the correspon- ding range	±0.9 %	±0.35 %	
	input resistance of analog in	puts >10 kΩ	
I/O port: accuracy of ana	log monitor outputs 0 10 V		
	of analog signal of real value	offset voltage	
Voltage	±0.1 %	±15 mV	
Current	±0.2 %	±15 mV	
	minimum load 2 kΩ	I	
I/O port: permissible vol	tages		
Vin-io (GND - neg. load input)	max. 2 V ¹⁾		
VioPE (GND - PE)	max. 125 V ¹⁾		
Vmax Sense + Electronic Sense - load I/O port GND/ GNDA Vin+PE Vmax Vin-PE Vin-PE Vin-io			

The specified accuracies refer to an ambient temperature of 23 ± 5 °C. The specified accuracies are valid when the sense lines (if available) are connected and when the unit is connected to undisturbed voltages (ripple and noise < 0.1 %). At voltages with higher disturbance values the accuracy can change for the worse.

Technical Data

Input		
Input resistance	>50 kΩ when load input is off diode function at reverse polarity up to nominal current	
Input capacity	see model overview	
Parallel operation	up to 5 devices in Master-Slave operation	
Maximum input voltage Vmax	see model overview	
Minimum input volta- ge Vmin	see model overview	
Input: permissible volta	ges	
Vin-PE (neg. load input - PE)	max. 125 V ¹⁾	
Vin+PE (pos. load input - PE)	Vmax + max. 125 V ¹⁾	
Power		
Continuous power	see model overview (at Ta = 21 °C)	
Derating	-1.2 %/°C for Ta > 21 °C	
Overload capacity	see model overview The possible short-time power depends on the temperature of the device and with that on the normal rating taken before.	
Protection and monitoring	ng	
Protective devices	overcurrent overpower overtemperature	
Monitoring	overvoltage indication reverse polarity indication undervoltage display (if the input voltage is too low for the set current)	
Terminals		
Load input	see model overview	
Sense	at I/O port, only at models up to 120 V	
Operating conditions		
Operating temperature	5 40 °C	
Stock temperature	-25 65 °C	
Max. operating height	2000 m above sea level	
Pollution degree	2	
Max. humidity	80 % at 31 °C, linear decreasing to 50 % at 40 °C	
Min. distance rear panel - wall or other objects	70 cm	
Cooling	temperature-controlled air cooling	
Noise	see model overview	
Mains voltage with option PLA18	1/N/PE AC 85 264 V 50 60 Hz DC 10 18 V, max. 4 A, reverse polarity protected	
Mains cable	length max. 3 m cross-section of mains leads min. 1 mm²	
Power consumption	see model overview	

Housing	
Color Front panel Rear panel Side panels, top	RAL7035 (light grey) stainless steel RAL7037 (dusty grey)
Dimensions, weight	see model overview
Safety and EMC	
Protection class	1
Measuring category	O (CAT I according to EN 61010:2004)
Electrical safety	DIN EN 61010-1 DIN EN 61010-2-030
EMV, CE marking	DIN EN 55011 DIN EN 61326-1 DIN EN 61000-3-2 DIN EN 61000-3-3
Standard interfaces	
Data interfaces	-
I/O interface	standard I/O port (not isolated)
Available options	
Data interfaces PLA01 PLA02 PLA03	USB, RS-232, Ethernet GPIB (for models up from 400 W, requires PLA01) CAN (requires PLA01)
Mechanical options PLA08 PLA10 PLA11 PLA12 PLA13 PLA14 PLA15 PLA16 PLA17	safety cover for copper bars 19" installation kit for 1 device with ½ 19", 1 U 19" installation kit for 2 devices with ½ 19", 1 U 19" installation kit for 1 device with ½ 19", 2 U 19" installation kit for 1 device with ½ 19", 2 U 19" installation kit for 1 device with ½ 19", 2 U and 1 device with ½ 19", 1 U 19" installation kit for 1 device with ½ 19", 2 U and 2 devices with ½ 19", 1 U carrying handle for 1 device with ½ 19", 1 or 2 U 19" installation kit for 1 device with 19", 2 U
DC-Versorgung PLA18	12 V DC supply (10 18 V)
Calibration, warranty	
FCC-PLAxx	Factory Calibration Certificate, twice free of charge
Warranty	2 years