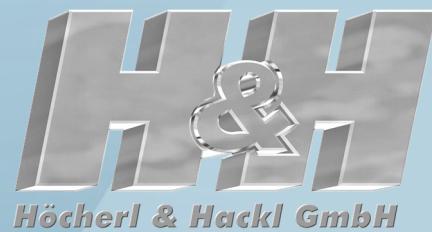




METAF

Electronic Solutions – since 1993



**600 W up to 28,800 W
60 V up to 1,200 V
6 A up to 2,700 A**



Electronic Loads, PLI Series

SCPI

Interface overview	
RS-232	X
USB	X
LAN	X
GPIB	O
CAN	X
Analog	X
Analog isolated	O
<small>X Standard O Option /not available</small>	



- Ethernet + USB + RS-232 + CAN + I/O Port as standard
- CC - CV - CR - CP - CCV - CVC Mode + optional Maximum Power Point Tracking
- Dynamic loads with synchronized DAQ function
- SCPI programming with measurement function
- USB flash drive as measurement data memory
- Adjustable protections for current and voltage

- Functions for testing energy storage devices
- Watchdog function
- Temporary overload capacity depending on model
- High power density up to 28,800 W
- Electronic protection
- Silent fan cooling
- Digital input and programmable control output

Description

The Electronic Loads of PLI series provide a comfortable operation by a graphical user interface.

The highlight of the PLI series is the extensive variety of standard interfaces. Apart from Ethernet, USB, RS-232 and an Analog I/O Port there is a standard CAN interface.

GPIB can be installed as an option (PLI02).

Programming is done in SCPI syntax.

Functions

Operating modes Constant Current, Voltage, Resistance, Power

Protections for undervoltage and overcurrent

Regulation speed selectable

Load profiles with up to 300 settings and synchronous data acquisition

DAQ function saves 8000 data points consisting of timestamp, voltage and current internally or to a USB flash drive

Trigger model with several trigger sources

I/O Port

The standard I/O Port provides the following functions:

- Analog load setting C and V
- Analog setting of C and V protections
- Load on-off
- Analog voltage monitor output
- Analog current monitor output
- Trigger input
- Trigger output
- Digital input and programmable control output

Analog setting in real time!

Loading Capacity

The type spectrum contains models from 600 W up to 28,800 W continuous power rating.

In addition, the models up to 300 V have a short-time power overload capability. The level and duration of the possible power overload depends on the temperature of the power stage. The unit indicates the currently possible overload. Thus, the units can be used even for considerably more powerful applications for short time.

Calibration (FCC-PLIx)



We supply a free Factory Calibration Certificate (FCC) with the devices. The FCC meets the requirements according to DIN EN ISO 9000ff. This calibration certificate documents the traceability to national standards to illustrate the physical device in accordance with the International System of Units (SI).

Calibration Service	Höcherl & Hackl GmbH
	ISO 9000
CAL DATE:	09/2017

Within 2 years after delivery, we calibrate your device another time free of charge!

This is H&H

PLA
Low Power

PLI
High Power

ZS
Multi-Range

ERI
Energy Recycling

PMLA
Multi-Channel, GUI

ZSAC
AC & DC

NL
Source-Sink

Accessories

SE
Power Distribution

GTC



PLI Series

**Mechanics**

The PLI is a sturdy 19" rack design and can also be used as a table-top device. From 5 height units there are retractable handles on the top of the device. Optional castors can be mounted on heavy devices. Devices up to 3,200 W need optional installation kits for 19" rack installation. Higher-powered devices are already fit for 19" installation.

**Castors
(Option PLI14)**

Steerable castors can be screwed onto large devices for easier transport. A 19" rack can then often be economized.

This option is available for devices from 5 HU and is suitable only for hard floors.

**Terminals**

All connections are at the rear side. At small devices, the current terminals are designed as touch-protected binding posts.



Bigger devices have got solid copper bars with screw terminals. 600 W devices also have terminals at the front.



3 HU devices



5 HU devices

Safety Covers

Covers are available as touch protection for units operating with dangerous contact voltages.



3 HU devices



5 HU devices

Cooling

The units are air-cooled. To keep the operating noise low, the fans are controlled depending on temperature and current. For better utilization of the maximum possible overload capacity the fans may be set to full power.

Protection and Monitoring

- Current protection
- Power protection
- Overtemperature protection
- Overvoltage indication
- Reverse voltage indication
- undervoltage indication
- Protection of the GND lines at the I/O Port

**19" Rack Mounting Kits
(Option PLI10, PLI11, PLI12, PLI13)**

Devices up to 3,200 W can be integrated into 19" racks by optional installation kits.

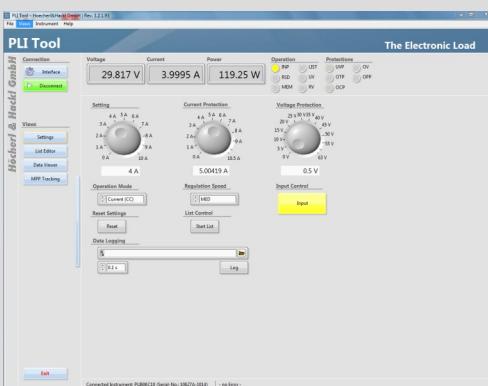


GTC	SE	Accessories	PMLI Multi-Channel	PMLA Multi-Channel, GUI	ZSAC AC & DC	NL Source-Sink	ERI Energy Recycling	PLA Low Power	PLI High Power	ZS Multi-Range	This is H+H
------------	-----------	--------------------	------------------------------	-----------------------------------	------------------------	--------------------------	--------------------------------	-------------------------	--------------------------	--------------------------	------------------------

Functions PLI Series		This is H&H	
GTC	SE Power Distribution	Accessories	NL Source-Sink
ZSAC AC & DC	PMLI Multi-Channel	PMLA Multi-Channel, GUI	ERI Energy Recycling
Overcurrent and Undervoltage Protection	Load profiles (LIST Function)	PLA Low Power	This is H&H
Adjustable overcurrent and undervoltage protection are permanently active. Both protections work in all operating modes.	In all operating modes the PLI series loads can produce load profiles by LIST function. Up to 300 settings with variable dwell and ramp times are possible. Sample times can be defined for each section separately. The Electronic Load synchronously measures voltage and current and saves the data with timestamp.		
Undervoltage protection operates in two different modes:			
<ul style="list-style-type: none"> regulating transition (e.g. CC-CV operation at battery discharge) switching transition (short dead time, e.g. when switching the input voltage) 			
Static Data Logging	Data Acquisition		
At slow processes the Electronic Load can directly save voltage and current to a USB flash drive. Logging intervals are in the seconds range.	The Electronic Load can synchronously save data sets of voltage and current with timestamp in a defined interval. Up to 8000 data sets are stored in a ring buffer. After data acquisition, the data can be transferred to a USB flash drive.		
Watchdog Function	Discharge Function	PLI	PLI
In digital remote operation, the Electronic Load has got a watchdog function switching the load input off if the previously programmed watchdog delay expires without resetting the watchdog.	The discharge function tests energy storage devices like batteries, ultracaps, elcos and solar panels by discharging them in CC, CP or CR mode. CCCV discharge is also possible: the DUT is discharged until a predefined discharge voltage is reached. This voltage is kept constant until the current falls below the predefined minimum current.	Multi-Channel	High Power
The watchdog delay is set by SCPI command. Another command activates the watchdog. Now the control program must ensure that the command to reset the watchdog is sent periodically to the Electronic Load before the delay time expires.			
Trigger Model	MPP Tracking ¹⁾	PLI	PLI
Several functions or settings can be triggered by a configurable trigger model:	The Electronic Load automatically searches the maximum power point (MPP) at solar or PV panels and tracks the MPP even when solar radiation varies. The consumed energy is calculated. Simultaneously, data acquisition can save the voltage and current characteristic.	Low Power	High Power
<ul style="list-style-type: none"> Start/stop LIST function Start/stop data acquisition Set triggered settings of all operating modes 			
Trigger sources are Bus, External, Manual und Voltage.			

1) only with Option PLI20

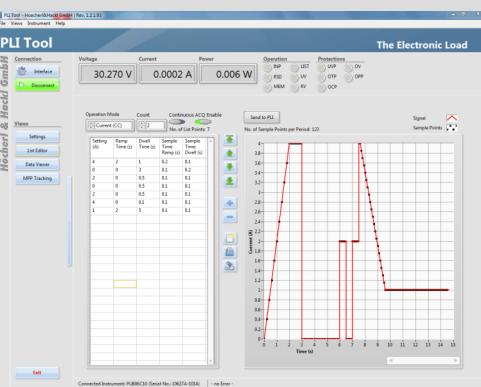
Software Tools PLI Series



Setting Menu

The PLI Tool is a graphical software tool to control the PLI series Electronic Loads. The user can choose different functions with the aid of the navigation bar.

The most important load settings are done in the Main Menu ("Settings"). Several graphical widgets inform the user about the measurements and the current device status. Further on, a data logging function can be activated in the Main Menu.



List Editor

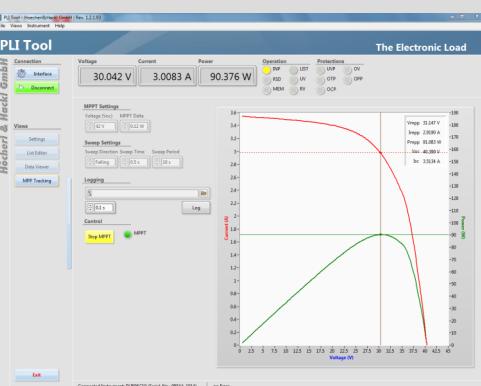
The list editor can be used to easily create dynamic load profiles for the Electronic Load. The user can enter the nominal setting values for current, voltage, power and resistance, the corresponding rise and fall times and the corresponding dwell times for each setting point of the list. Additionally, the List function allows the user to enable a synchronous data logging function for current and voltage measurements where the sampling times can be individually adjusted for each part of the load profile.

The generated list profile can be sent directly to the load via one of the digital communication interfaces or saved on a USB flash drive and imported by the load.



Data Viewer

Measurement values of the internal DAQ memory can be exported from the Electronic Load and displayed as a diagram with the aid of the "Data Viewer". The measurement data can also be saved on a data storage as a *.CSV file for further processing.



MPP Tracking ¹⁾

The MPPT function acquires the measurement data of a connected solar panel. Thereby the load switches continuously between the MPPT regulation and a sweep process. During the MPPT regulation the load is adjusted to seek and set the ideal MPP (maximum power point). During the sweep process the Electronic Load executes a list function in voltage mode and thereby determines the I-V characteristic of the connected solar panel. The measurements are evaluated and displayed in a diagram.

1) only with Option PLI20

600 W ... 1,400 W DC PLI Series

This is H&H	PLA Low Power	PLI High Power	ZS Multi-Range
Model (order number)	PLI606C10	PLI1406C20	PLI2106C30
Maximum input voltage	60 V	60 V	60 V
Current¹⁾	10 A	20 A	30 A
Continuous power	600 W	1,200 W	1,800 W
Short-time power²⁾	600 W	1,200 W	1,800 W
Voltage setting	0 ... 60 V	0 ... 60 V	0 ... 60 V
Current setting	0 ... 10 A	0 ... 20 A	0 ... 30 A
Resistance setting	200 mΩ ... 64.5 Ω	100 mΩ ... 32.2 Ω	67 mΩ ... 21.5 Ω
Power setting³⁾	0 ... 600 W	0 ... 1,200 W	0 ... 1,800 W
Rise/fall time⁴⁾	30 µs	30 µs	30 µs
Load terminals⁵⁾ rear / front	BPK4-30L / BPK4-30L	BPK4-30L / -	BPK4-30 L / -
Power consumption	35 VA	55 VA	75 VA
Noise max.⁶⁾	55 dB(A)	57 dB(A)	60 dB(A)
Weight ca.	9 kg	15 kg	17.5 kg
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	222 x 96 x 495 1/219", 2 HU / 475	444 x 96 x 490 19", 2HU / 470	444 x 96 x 490 19", 2HU / 470

ERI Energy Recycling	PLI Multi-Channel, GUI	PMLI Multi-Channel	PLI606	PLI612	PLI630	PLI660	PLI680
Maximum input voltage	60 V	120 V	300 V	600 V	800 V	800 V	800 V
Current¹⁾	60 A	20 A	16 A	8 A	6 A	6 A	6 A
Continuous power	600 W	600 W	600 W	600 W	600 W	600 W	600 W
Short-time power²⁾	1,200 W	1,200 W	900 W	600 W	600 W	600 W	600 W
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V	0 ... 800 V	0 ... 800 V
Current setting	0 ... 60 A	0 ... 20 A	0 ... 16 A	0 ... 8 A	0 ... 6 A	0 ... 6 A	0 ... 6 A
Resistance setting	33 mΩ ... 10.8 Ω	100 mΩ ... 64.5 Ω	125 mΩ ... 201 Ω	250 mΩ ... 806 Ω	334 mΩ ... 1433 Ω	334 mΩ ... 1433 Ω	334 mΩ ... 1433 Ω
Power setting³⁾	0 ... 1,200 W	0 ... 1,200 W	0 ... 900 W	0 ... 600 W	0 ... 600 W	0 ... 600 W	0 ... 600 W
Rise/fall time⁴⁾	50 µs	50 µs	30 µs	30 µs	30 µs	20 µs	20 µs
Load terminals⁵⁾ rear / front	FKS20/5-SM8 / BPK4-60L	BPK4-30L / BPK4-30L	BPK4-30L / BPK4-30L	BPK4-30L / BPK4-30L	BPK4-30L / BPK4-30L	BPK4-30L / BPK4-30L	BPK4-30L / BPK4-30L
Power consumption	35 VA	35 VA	35 VA	35 VA	35 VA	35 VA	35 VA
Noise max.⁶⁾	55 dB(A)	55 dB(A)	55 dB(A)	55 dB(A)	55 dB(A)	55 dB(A)	55 dB(A)
Weight ca.	9 kg	9 kg	9 kg	9 kg	9 kg	9 kg	9 kg
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	222 x 96 x 555 1/219", 2 HU / 530	222 x 96 x 490 1/219", 2 HU / 475	222 x 96 x 490 1/219", 2 HU / 475	222 x 96 x 490 1/219", 2 HU / X475	222 x 96 x 490 1/219", 2 HU / X475	222 x 96 x 490 1/219", 2 HU / 475	222 x 96 x 490 1/219", 2 HU / 475

ZSAC AC & DC	NL Source-Sink	Accessories	PLI1406	PLI1412	PLI1430	PLI1460	PLI1480
Maximum input voltage	60 V	120 V	300 V	600 V	800 V	800 V	800 V
Current¹⁾	120 A	40 A	32 A	16 A	12 A	12 A	12 A
Continuous power	1,400 W						
Short-time power²⁾	2,800 W	2,800 W	2,100 W	1,400 W	1,400 W	1,400 W	1,400 W
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V	0 ... 800 V	0 ... 800 V
Current setting	0 ... 120 A	0 ... 40 A	0 ... 32 A	0 ... 16 A	0 ... 12 A	0 ... 12 A	0 ... 12 A
Resistance setting	16.7 mΩ ... 5.37 Ω	50 mΩ ... 32.3 Ω	63 mΩ ... 101 Ω	125 mΩ ... 403 Ω	167 mΩ ... 716 Ω	167 mΩ ... 716 Ω	167 mΩ ... 716 Ω
Power setting³⁾	0 ... 2,800 W	0 ... 2,800 W	0 ... 2,100 W	0 ... 1,400 W			
Rise/fall time⁴⁾	50 µs	50 µs	30 µs	30 µs	30 µs	25 µs	25 µs
Load terminals⁵⁾ rear / front	FKS20/5-SM8 / -	BPK4-60L / -	BPK4-60L / -	BPK4-30L / -	BPK4-30L / -	BPK4-30L / -	BPK4-30L / -
Power consumption	55 VA						
Noise max.⁶⁾	57 dB(A)						
Weight ca.	15 kg						
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	444 x 96 x 545 19", 2 HU / 530	444 x 96 x 485 19", 2 HU / 475	444 x 96 x 485 19", 2 HU / 475	444 x 96 x 485 19", 2 HU / 475	444 x 96 x 485 19", 2 HU / 475	444 x 96 x 485 19", 2 HU / 475	444 x 96 x 485 19", 2 HU / 475

- 1) Each current range of the higher voltage classes of the same device power can also be produced as special current range.
- 2) Level and duration of the peak power see diagram in Technical Data.
- 3) The setting range extends max. to the possible peak power.
- 4) Rise and fall times are defined as 10 ... 90 % and 90 ... 10 % of the maximum current (current mode FAST, tolerance ±20 %). Rise and fall time at setting „medium“: ca. 150 µs, „slow“: ca. 2 ms

5) Load terminals	Type of terminals
BPK4-30L	Binding post for 4 mm pin connector with connection possibility for stripped wire, max. 30 A
BPK4-60L	Touch-protected binding post for 4 mm pin connector with connection possibility for stripped wire, max. 60 A
FKS20/5-SM8	Flat copper bar 20 x 4 mm, vertically installed with screw M8
FKS25/8-SM10	Flat copper bar 25 x 8 mm, vertically installed with screw M10
FKS25/10-SM10	Flat copper bar 25 x 10 mm, vertically installed with screw M10
FKS40/12-SM12	Flat copper bar 40 x 12 mm, vertically installed with screw M12

- 6) Measured at the front in distance of 1 m.
- 7) Device height incl. feet, largest width and depth without wiring.
1 HU = 44.45 mm

2,100 W ... 4,800 W DC PLI Series

Model (order number)	PLI2106	PLI2112	PLI2130	PLI2160	PLI2180	This is H&H
Maximum input voltage	60 V	120 V	300 V	600 V	800 V	PLA Low Power
Current¹⁾	180 A	60 A	48 A	24 A	18 A	
Continuous power	2,100 W					
Short-time power²⁾	4,200 W	4,200 W	3,150 W	2,100 W	2,100 W	
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V	
Current setting	0 ... 180 A	0 ... 60 A	0 ... 48 A	0 ... 24 A	0 ... 18 A	
Resistance setting	11.1 Ω ... 3.58 Ω	33 mΩ ... 21.5 Ω	41.7 mΩ ... 67.2 Ω	83.3 mΩ ... 268 Ω	111 mΩ ... 477 Ω	
Power setting³⁾	0 ... 4,200 W	0 ... 4,200 W	0 ... 3,150 W	0 ... 2,100 W	0 ... 2,100 W	
Rise/fall time⁴⁾	50 µs	50 µs	30 µs	40 µs	40 µs	
Load terminals⁵⁾ rear	FKS20/5-SM8	BPK4-60L	BPK4-60L	BPK4-30L	BPK4-30L	
Power consumption	75 VA					
Noise max.⁶⁾	60 dB(A)					
Weight ca.	17.5 kg					
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	444 x 96 x 545 19", 2 HU / 530	444 x 96 x 485 19", 2 HU / 475	444 x 96 x 485 19", 2 HU / 475	444 x 96 x 485 19", 2 HU / 475	444 x 96 x 485 19", 2 HU / 475	

Model (order number)	PLI3206	PLI3212	PLI3230	PLI3260	PLI3280	ZS Multi-Range
Maximum input voltage	60 V	120 V	300 V	600 V	800 V	
Current¹⁾	300 A	150 A	60 A	40 A	30 A	
Continuous power	3,200 W					
Short-time power²⁾	6,400 W	6,400 W	4,800 W	3,200 W	3,200 W	
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V	
Current setting	0 ... 300 A	0 ... 150 A	0 ... 60 A	0 ... 40 A	0 ... 30 A	
Resistance setting	6.7 mΩ ... 2.15 Ω	13.3 mΩ ... 8.6 Ω	33 mΩ ... 53.7 Ω	50 mΩ ... 161 Ω	66.7 mΩ ... 286 Ω	
Power setting³⁾	0 ... 6,400 W	0 ... 6,400 W	0 ... 4,800 W	0 ... 3,200 W	0 ... 3,200 W	
Rise/fall time⁴⁾	60 µs					
Load terminals⁵⁾ rear	FKS25/8-SM10	FKS25/8-SM10 with safety cover	BPK4-60L	BPK4-60L	BPK4-30L	
Power consumption	140 VA					
Noise max.⁶⁾	70 dB(A)					
Weight ca.	22.5 kg					
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	444 x 141 x 535 19", 3 HU / 520	444 x 141 x 545 19", 3 HU / 530	444 x 141 x 490 19", 3 HU / 475	444 x 141 x 490 19", 3 HU / 475	444 x 141 x 490 19", 3 HU / 475	

Model (order number)	PLI4806	PLI4812	PLI4230	PLI4260	PLI4280	PMLI Multi-Channel
Maximum input voltage	60 V	120 V	300 V	600 V	800 V	
Current¹⁾	450 A	225 A	90 A	60 A	45 A	
Continuous power	4,800 W	4,800 W	4,200 W	4,200 W	4,200 W	
Short-time power²⁾	9,600 W	9,600 W	6,300 W	4,200 W	4,200 W	
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V	
Current setting	0 ... 450 A	0 ... 225 A	0 ... 90 A	0 ... 60 A	0 ... 45 A	
Resistance setting	4.4 mΩ ... 1.43 Ω	8.89 mΩ ... 5.73 Ω	22.2 mΩ ... 35.8 Ω	33.3 mΩ ... 107 Ω	44.4 mΩ ... 191 Ω	
Power setting³⁾	0 ... 9,600 W	0 ... 9,600 W	0 ... 6,300 W	0 ... 4,200 W	0 ... 4,200 W	
Rise/fall time⁴⁾	75 µs	60 µs	75 µs	60 µs	60 µs	
Load terminals⁵⁾ rear	FKS25/10-SM10	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	
Power consumption	190 VA					
Noise max.⁶⁾	71 dB(A)					
Weight ca.	39 kg	39 kg	39 kg	38 kg	39 kg	
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 237 x 550 19", 5 HU / 510	482 x 237 x 635 19", 5 HU / 595	482 x 237 x 635 19", 5 HU / 595	482 x 237 x 635 19", 5 HU / 595	482 x 237 x 635 19", 5 HU / 595	

- 1) Each current range of the higher voltage classes of the same device power can also be produced as special current range.
 2) Level and duration of the peak power see diagram in Technical Data.
 3) The setting range extends max. to the possible peak power.
 4) Rise and fall times are defined as 10 ... 90 % and 90 ... 10 % of the maximum current (current mode FAST, tolerance ±20 %). Rise and fall time at setting „medium“: ca. 150 µs, „slow“: ca. 2 ms

5) Load terminals	Type of terminals
BPK4-30L	Binding post for 4 mm pin connector with connection possibility for stripped wire, max. 30 A
BPK4-60L	Touch-protected binding post for 4 mm pin connector with connection possibility for stripped wire, max. 60 A
FKS20/5-SM8	Flat copper bar 20 x 4 mm, vertically installed with screw M8
FKS25/8-SM10	Flat copper bar 25 x 8 mm, vertically installed with screw M10
FKS25/10-SM10	Flat copper bar 25 x 10 mm, vertically installed with screw M10
FKS40/12-SM12	Flat copper bar 40 x 12 mm, vertically installed with screw M12

- 6) Measured at the front in distance of 1 m.
 7) Device height incl. feet, largest width and depth without wiring.
 1 HU = 44.45 mm

GTC	SE	Accessories	NL Source-Sink	ZSAC AC & DC	PMLI Multi-Channel	PMLA Multi-Channel, GUI	ERI Energy Recycling	ZS Multi-Range

5,600 W ... 9,600 W DC PLI Series

This is H&H	PLA Low Power	PLI High Power	ZS Multi-Range	ERI Energy Recycling	PMLA Multi-Channel, GUI	PMLI Multi-Channel	ZSAC AC & DC	NL Source-Sink	Accessories	SE Power Distribution	GTC
Model (order number)	PLI6406	PLI6412	PLI5630	PLI5660	PLI5680						
Maximum input voltage	60 V	120 V	300 V	600 V	800 V						
Current¹⁾	600 A	300 A	120 A	80 A	60 A						
Continuous power	6,400 W	6,400 W	5,600 W	5,600 W	5,600 W						
Short-time power²⁾	12,800 W	12,800 W	8,400 W	5,600 W	5,600 W						
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V						
Current setting	0 ... 600 A	0 ... 300 A	0 ... 120 A	0 ... 80 A	0 ... 60 A						
Resistance setting	3.33 mΩ ... 1.07 Ω	6.67 mΩ ... 4.3 Ω	16.7 mΩ ... 26.8 Ω	25.0 mΩ ... 80.6 Ω	33.3 mΩ ... 143.3 Ω						
Power setting³⁾	0 ... 12,800 W	0 ... 12,800 W	0 ... 8,400 W	0 ... 5,600 W	0 ... 5,600 W						
Rise/fall time⁴⁾	75 µs	75 µs	80 µs	60 µs	60 µs						
Load terminals⁵⁾ rear	FKS40/12-SM12	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover						
Power consumption	275 VA										
Noise max.⁶⁾	73 dB(A)										
Weight ca.	56 kg										
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 370 x 550 19", 8 HU / 510	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595						
Model (order number)	PLI8006	PLI8012	PLI7030	PLI7060	PLI7080						
Maximum input voltage	60 V	120 V	300 V	600 V	800 V						
Current¹⁾	750 A	375 A	150 A	100 A	75 A						
Continuous power	8,000 W	8,000 W	7,000 W	7,000 W	7,000 W						
Short-time power²⁾	16,000 W	16,000 W	10,500 W	7,000 W	7,000 W						
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V						
Current setting	0 ... 750 A	0 ... 375 A	0 ... 150 A	0 ... 100 A	0 ... 27 A						
Resistance setting	2.67 mΩ ... 0.86 Ω	5.33 mΩ ... 3.44 Ω	13.3 mΩ ... 21.5 Ω	20 mΩ ... 64.5 Ω	26.7 mΩ ... 114.7 Ω						
Power setting³⁾	0 ... 16,000 W	0 ... 16,000 W	0 ... 10,500 W	0 ... 7,000 W	0 ... 7,000 W						
Rise/fall time⁴⁾	75 µs	60 µs	80 µs	60 µs	60 µs						
Load terminals⁵⁾ rear	FKS40/12-M12	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover						
Power consumption	320 VA										
Noise max.⁶⁾	74 dB(A)										
Weight ca.	57 kg										
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 370 x 550 19", 8 HU / 510	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595						
Model (order number)	PLI9606	PLI9612	PLI8430	PLI8460	PLI8480						
Maximum input voltage	60 V	120 V	300 V	600 V	800 V						
Current¹⁾	900 A	450 A	180 A	120 A	90 A						
Continuous power	9,600 W	9,600 W	8,400 W	8,400 W	8,400 W						
Short-time power²⁾	19,200 W	19,200 W	12,600 W	8,400 W	8,400 W						
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V						
Current setting	0 ... 900 A	0 ... 450 A	0 ... 180 A	0 ... 120 A	0 ... 90 A						
Resistance setting	2.22 mΩ ... 0.71 Ω	4.44 mΩ ... 2.86 Ω	11.1 mΩ ... 17.9 Ω	16.6 mΩ ... 53.7 Ω	22.2 mΩ ... 95.5 Ω						
Power setting³⁾	0 ... 19,200 W	0 ... 19,200 W	0 ... 12,600 W	0 ... 8,400 W	0 ... 8,400 W						
Rise/fall time⁴⁾	75 µs	80 µs	80 µs	60 µs	60 µs						
Load terminals⁵⁾ rear	FKS40/12-SM12	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover						
Power consumption	380 VA										
Noise max.⁶⁾	74 dB(A)										
Weight ca.	63 kg										
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 370 x 550 19", 8 HU / 510	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595						

- 1) Each current range of the higher voltage classes of the same device power can also be produced as special current range.
- 2) Level and duration of the peak power see diagram in Technical Data.
- 3) The setting range extends max. to the possible peak power.
- 4) Rise and fall times are defined as 10 ... 90 % and 90 ... 10 % of the maximum current (current mode FAST, tolerance ±20 %). Rise and fall time at setting „medium“: ca. 150 µs, „slow“: ca. 2 ms

5) Load terminals	Type of terminals
BPK4-30L	Binding post for 4 mm pin connector with connection possibility for stripped wire, max. 30 A
BPK4-60L	Touch-protected binding post for 4 mm pin connector with connection possibility for stripped wire, max. 60 A
FKS20/5-SM8	Flat copper bar 20 x 4 mm, vertically installed with screw M8
FKS25/8-SM10	Flat copper bar 25 x 8 mm, vertically installed with screw M10
FKS25/10-SM10	Flat copper bar 25 x 10 mm, vertically installed with screw M10
FKS40/12-SM12	Flat copper bar 40 x 12 mm, vertically installed with screw M12

- 6) Measured at the front in distance of 1 m.
- 7) Device height incl. feet, largest width and depth without wiring.
1 HU = 44.45 mm

9,800 W ... 14,400 W DC PLI Series

Model (order number)	PLI11206	PLI11212	PLI9830	PLI9860	PLI9880	This is H&H
Maximum input voltage	60 V	120 V	300 V	600 V	800 V	
Current¹⁾	1,050 A	525 A	210 A	140 A	105 A	
Continuous power	11,200 W	11,200 W	9,800 W	9,800 W	9,800 W	
Short-time power²⁾	22,400 W	22,400 W	14,700 W	9,800 W	9,800 W	
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V	
Current setting	0 ... 1,050 A	0 ... 525 A	0 ... 210 A	0 ... 140 A	0 ... 105 A	
Resistance setting	1.9 mΩ ... 0.61 Ω	3.81 mΩ ... 2.45 Ω	9.52 mΩ ... 15.36 Ω	14.29 mΩ ... 46.08 Ω	19.1 mΩ ... 81.93Ω	
Power setting³⁾	0 ... 22,400 W	0 ... 22,400 W	0 ... 14,700 W	0 ... 9,800 W	0 ... 9,800 W	
Rise/fall time⁴⁾	80 µs	70 µs	80 µs	60 µs	60 µs	
Load terminals⁵⁾ rear	FKS40/12-SM12	FKS40/12-SM12 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/8-SM10 with safety cover	
Power consumption	450 VA	450 VA	450 VA	450 VA	450 VA	
Noise max.⁶⁾	75 dB(A)	75 dB(A)	75 dB(A)	75 dB(A)	75 dB(A)	
Weight ca.	80 kg	80 kg	74 kg	74 kg	74 kg	
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 503 x 550 19", 11 HU / 510	482 x 503 x 635 19", 11 HU / 595	482 x 503 x 635 19", 11 HU / 595	482 x 503x 635 19", 11 HU / 595	482 x 503 x 635 19", 11 HU / 595	

Model (order number)	PLI12806	PLI12812	PLI11230	PLI11260	PLI11280	ZS
	ERI	Energy Recycling				Multi-Range
Maximum input voltage	60 V	120 V	300 V	600 V	800 V	
Current¹⁾	1,200 A	600 A	240 A	160 A	120 A	
Continuous power	12,800 W	12,800 W	11,200 W	11,200 W	11,200 W	
Short-time power²⁾	25,600 W	25,600 W	16,800 W	11,200 W	11,200 W	
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V	
Current setting	0 ... 1,200 A	0 ... 600 A	0 ... 240 A	0 ... 160 A	0 ... 120 A	
Resistance setting	1.67 mΩ ... 0.53 Ω	3.33 mΩ ... 2.15 Ω	8.33 mΩ ... 13.44 Ω	12.5 mΩ ... 40.32Ω	16.7 mΩ ... 71.68 Ω	
Power setting³⁾	0 ... 25,600 W	0 ... 25,600 W	0 ... 16,800 W	0 ... 11,200 W	0 ... 11,200 W	
Rise/fall time⁴⁾	80 µs	70 µs	80 µs	60 µs	60 µs	
Load terminals⁵⁾ rear	FKS40/12-SM12	FKS40/12-SM12 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	
Power consumption	500 VA	500 VA	500 VA	500 VA	500 VA	
Noise max.⁶⁾	76 dB(A)	76 dB(A)	76 dB(A)	76 dB(A)	76 dB(A)	
Weight ca.	82 kg	82 kg	82 kg	82 kg	82 kg	
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 503 x 550 19", 11 HU / 510	482 x 503 x 635 19", 11 HU / 595	482 x 503 x 635 19", 11 HU / 595	482 x 503x 635 19", 11 HU / 595	482 x 503 x 635 19", 11 HU / 595	

Model (order number)	PLI14406	PLI14412	PLI12630	PLI12660	PLI12680	PMLA
	ZSAC	AC & DC				Multichannel, GUI
Maximum input voltage	60 V	120 V	300 V	600 V	800 V	
Current¹⁾	1,350 A	675 A	270 A	180 A	135 A	
Continuous power	14,400 W	14,400 W	12,600 W	12,600 W	12,600 W	
Short-time power²⁾	28,800 W	28,800 W	18,900 W	12,600 W	12,600 W	
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V	
Current setting	0 ... 1,350 A	0 ... 675 A	0 ... 270 A	0 ... 180 A	0 ... 135 A	
Resistance setting	1.48 mΩ ... 47.7 mΩ	2.96 mΩ ... 1.91 Ω	7.41 mΩ ... 11.94 Ω	11.1 mΩ ... 35.84 Ω	14.8 mΩ ... 63.72 Ω	
Power setting³⁾	0 ... 28,800 W	0 ... 28,800 W	0 ... 18,900 W	0 ... 12,600 W	0 ... 12,600 W	
Rise/fall time⁴⁾	100 µs	60 µs	70 µs	60 µs	60 µs	
Load terminals⁵⁾ rear	FKS40/12-SM12	FKS40/12-SM12 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	
Power consumption	540 VA	540 VA	540 VA	540 VA	540 VA	
Noise max.⁶⁾	76 dB(A)	76 dB(A)	76 dB(A)	76 dB(A)	76 dB(A)	
Weight ca.	89 kg	87 kg	89 kg	89 kg	89 kg	
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 503 x 550 19", 11 HU / 510	482 x 503 x 635 19", 11 HU / 595	482 x 503 x 635 19", 11 HU / 595	482 x 503x 635 19", 11 HU / 595	482 x 503 x 635 19", 11 HU / 595	

- 1) Each current range of the higher voltage classes of the same device power can also be produced as special current range.
 2) Level and duration of the peak power see diagram in Technical Data.
 3) The setting range extends max. to the possible peak power.
 4) Rise and fall times are defined as 10 ... 90 % and 90 ... 10 % of the maximum current (current mode FAST, tolerance ±20 %). Rise and fall time at setting „medium“: ca. 150 µs, „slow“: ca. 2 ms

5) Load terminals	Type of terminals
BPK4-30L	Binding post for 4 mm pin connector with connection possibility for stripped wire, max. 30 A
BPK4-60L	Touch-protected binding post for 4 mm pin connector with connection possibility for stripped wire, max. 60 A
FKS20/5-SM8	Flat copper bar 20 x 4 mm, vertically installed with screw M8
FKS25/8-SM10	Flat copper bar 25 x 8 mm, vertically installed with screw M10
FKS25/10-SM10	Flat copper bar 25 x 10 mm, vertically installed with screw M10
FKS40/12-SM12	Flat copper bar 40 x 12 mm, vertically installed with screw M12

- 6) Measured at the front in distance of 1 m.
 7) Device height incl. feet, largest width and depth without wiring.
 1 HU = 44.45 mm

14,000 W ... 19,200 W DC PLI Series

This is H&H	PLA Low Power	PLI High Power	ZS Multi-Range		
Model (order number)	PLI16006	PLI16012	PLI14030	PLI14060	PLI14080
Maximum input voltage	60 V	120 V	300 V	600 V	800 V
Current¹⁾	1,500 A	750 A	300 A	200 A	150 A
Continuous power	16,000 W	16,000 W	14,000 W	14,000 W	14,000 W
Short-time power²⁾	32,000 W	32,000 W	21,000 W	14,000 W	14,000 W
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V
Current setting	0 ... 1,500 A	0 ... 750 A	0 ... 300 A	0 ... 200 A	0 ... 150 A
Resistance setting	1.33 mΩ ... 0.430 Ω	2.67 mΩ ... 1.72 Ω	6.67 mΩ ... 10.75 Ω	10.0 mΩ ... 32.26 Ω	13.3 mΩ ... 57.35 Ω
Power setting³⁾	0 ... 32,000 W	0 ... 32,000 W	0 ... 21,000 W	0 ... 14,000 W	0 ... 14,000 W
Rise/fall time⁴⁾	100 µs	80 µs	90 µs	60 µs	60 µs
Load terminals⁵⁾	FKS40/12-SM12 rear	FKS40/12-SM12 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover
Power consumption	600 VA	600 VA	600 VA	600 VA	600 VA
Noise max.⁶⁾	77 dB(A)	77 dB(A)	77 dB(A)	77 dB(A)	77 dB(A)
Weight ca.	104 kg	104 kg	104 kg	104 kg	104 kg
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 637 x 55 19", 14 HU / 510	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595

ERI Energy Recycling	PMLA Multi-Channel, GUI	PMLI Multi-Channel	ZSAC AC & DC	NL Source-Sink	Accessories
Model (order number)	PLI17606	PLI17612	PLI15430	PLI15460	PLI15480
Maximum input voltage	60 V	120 V	300 V	600 V	800 V
Current¹⁾	1,650 A	825 A	330 A	220 A	165 A
Continuous power	17,600 W	17,600 W	15,400 W	15,400 W	15,400 W
Short-time power²⁾	35,200 W	35,200 W	23,100 W	15,400 W	15,400 W
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V
Current setting	0 ... 1,650 A	0 ... 825 A	0 ... 330 A	0 ... 220 A	0 ... 165 A
Resistance setting	1.21 mΩ ... 0.391 Ω	2.42 mΩ ... 1.56 Ω	6.06 mΩ ... 9.77 Ω	9.1 mΩ ... 29.32 Ω	12.2 mΩ ... 52.13 Ω
Power setting³⁾	0 ... 35,200 W	0 ... 35,200 W	0 ... 23,100 W	0 ... 15,400 W	0 ... 15,400 W
Rise/fall time⁴⁾	100 µs	80 µs	90 µs	60 µs	60 µs
Load terminals⁵⁾	FKS40/12-SM12 rear	FKS40/12-SM12 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover
Power consumption	675 VA	675 VA	675 VA	675 VA	675 VA
Noise max.⁶⁾	77 dB(A)	77 dB(A)	77 dB(A)	77 dB(A)	77 dB(A)
Weight ca.	105 kg	105 kg	105 kg	98 kg	105 kg
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 637 x 55 19", 14 HU / 510	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595

SE Power Distribution	GTC				
Model (order number)	PLI19206	PLI19212	PLI16830	PLI16860	PLI16880
Maximum input voltage	60 V	120 V	300 V	600 V	800 V
Current¹⁾	1,800 A	900 A	360 A	240 A	180 A
Continuous power	19,200 W	19,200 W	16,800 W	16,800 W	16,800 W
Short-time power²⁾	38,400 W	38,400 W	25,200 W	16,800 W	16,800 W
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V
Current setting	0 ... 1,800 A	0 ... 900 A	0 ... 360 A	0 ... 240 A	0 ... 180 A
Resistance setting	1.11 mΩ ... 0.358 Ω	2.22 mΩ ... 1.43 Ω	5.56 mΩ ... 8.96 Ω	8.30 mΩ ... 26.88 Ω	11.1 mΩ ... 47.79 Ω
Power setting³⁾	0 ... 38,400 W	0 ... 38,400 W	0 ... 25,200 W	0 ... 16,800 W	0 ... 16,800 W
Rise/fall time⁴⁾	100 µs	100 µs	90 µs	60 µs	60 µs
Load terminals⁵⁾	FKS40/12-SM12 rear	FKS40/12-SM12 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-M10 with safety cover
Power consumption	700 VA	700 VA	700 VA	700 VA	700 VA
Noise max.⁶⁾	77 dB(A)	77 dB(A)	77 dB(A)	77 dB(A)	77 dB(A)
Weight ca.	112 kg	112 kg	112 kg	112 kg	112 kg
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 637 x 55 19", 14 HU / 510	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595

- Each current range of the higher voltage classes of the same device power can also be produced as special current range.
- Level and duration of the peak power see diagram in Technical Data.
- The setting range extends max. to the possible peak power.
- Rise and fall times are defined as 10 ... 90 % and 90 ... 10 % of the maximum current (current mode FAST, tolerance ±20 %). Rise and fall time at setting „medium“: ca. 150 µs, „slow“: ca. 2 ms

5) Load terminals Type of terminals

BPK4-30L	Binding post for 4 mm pin connector with connection possibility for stripped wire, max. 30 A
BPK4-60L	Touch-protected binding post for 4 mm pin connector with connection possibility for stripped wire, max. 60 A
FKS20/5-SM8	Flat copper bar 20 x 4 mm, vertically installed with screw M8
FKS25/8-SM10	Flat copper bar 25 x 8 mm, vertically installed with screw M10
FKS25/10-SM10	Flat copper bar 25 x 10 mm, vertically installed with screw M10
FKS40/12-SM12	Flat copper bar 40 x 12 mm, vertically installed with screw M12

6) Measured at the front in distance of 1 m.

7) Device height incl. feet, largest width and depth without wiring.
1 HU = 44.45 mm

18,200 W ... 24,000 W DC PLI Series

Model (order number)	PLI20806	PLI20812	PLI18230	PLI18260	PLI18280
Maximum input voltage	60 V	120 V	300 V	600 V	800 V
Current¹⁾	1,950 A	975 A	390 A	260 A	195 A
Continuous power	20,800 W	20,800 W	18,200 W	18,200 W	18,200 W
Short-time power²⁾	41,600 W	41,600 W	27,300 W	18,200 W	18,200 W
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V
Current setting	0 ... 1,950 A	0 ... 975 A	0 ... 390 A	0 ... 260 A	0 ... 195 A
Resistance setting	1.03 mΩ ... 0.33 Ω	2.05 mΩ ... 1.32 Ω	5.13 mΩ ... 8.27 Ω	7.70 Ω ... 24.81 Ω	10.26 mΩ ... 44.11 Ω
Power setting³⁾	0 ... 41,600 W	0 ... 41,600 W	0 ... 27,300 W	0 ... 18,200 W	0 ... 18,200 W
Rise/fall time⁴⁾	100 µs	100 µs	90 µs	80 µs	80 µs
Load terminals⁵⁾ rear	FKS40/12-SM12	FKS40/12-SM12 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover
Power consumption	770 VA	770 VA	770 VA	770 VA	770 VA
Noise max.⁶⁾	77 dB(A)	77 dB(A)	77 dB(A)	77 dB(A)	77 dB(A)
Weight ca.	126 kg	126 kg	126 kg	126 kg	126 kg
Housing⁷⁾ W x H x D (mm)	482 x 770 x 55	482 x 770 x 635			
Height / inst. depth (mm)	19", 17 HU / 510	19", 17 HU / 595			

Model (order number)	PLI22406	PLI22412	PLI19630	PLI19660	PLI19680
Maximum input voltage	60 V	120 V	300 V	600 V	800 V
Current ¹⁾	2,100 A	1,050 A	420 A	280 A	210 A
Continuous power	22,400 W	22,400 W	19,600 W	19,600 W	19,600 W
Short-time power ²⁾	44,800 W	44,800 W	29,400 W	19,600 W	19,600 W
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V
Current setting	0 ... 2,100 A	0 ... 1,050 A	0 ... 420 A	0 ... 280 A	0 ... 210 A
Resistance setting	0.95 mΩ ... 0.30 Ω	1.90 mΩ ... 1.22 Ω	4.76 mΩ ... 7.68 Ω	7.10 mΩ ... 23.04 Ω	9.52 mΩ ... 40.96 Ω
Power setting ³⁾	0 ... 44,800 W	0 ... 44,800 W	0 ... 29,400 W	0 ... 19,600 W	0 ... 19,600 W
Rise/fall time ⁴⁾	80 µs	100 µs	90 µs	80 µs	80 µs
Load terminals ⁵⁾ rear	FKS40/12-SM12	FKS40/12-SM12 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover
Power consumption	810 VA	870 VA	870 VA	870 VA	870 VA
Noise max. ⁶⁾	78 dB(A)	78 dB(A)	78 dB(A)	78 dB(A)	78 dB(A)
Weight ca.	131 kg	131 kg	131 kg	131 kg	131 kg
Housing ⁷⁾ W x H x D (mm)	482 x 770 x 55	482 x 770 x 635			
Height / inst. depth (mm)	19", 17 HU / 510	19", 17 HU / 595			

Model (order number)	PLI24006	PLI24012	PLI21030	PLI21060	PLI21080
Maximum input voltage	60 V	120 V	300 V	600 V	800 V
Current¹⁾	2,250 A	1,125 A	450 A	300 A	225 A
Continuous power	24,000 W	24,000 W	21,000 W	21,000 W	21,000 W
Short-time power²⁾	48,000 W	48,000 W	31,500 W	21,000 W	21,000 W
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V
Current setting	0 ... 2,250 A	0 ... 1,125 A	0 ... 450 A	0 ... 300 A	0 ... 225 A
Resistance setting	0.89 mΩ ... 0.28 Ω	1.78 mΩ ... 1.14 Ω	4.44 mΩ ... 7.16 Ω	6.70 mΩ ... 21.50 Ω	8.89 mΩ ... 38.23 Ω
Power setting³⁾	0 ... 48,000 W	0 ... 48,000 W	0 ... 31,500 W	0 ... 21,000 W	0 ... 21,000 W
Rise/fall time⁴⁾	100 µs	100 µs	90 µs	80 µs	80 µs
Load terminals⁵⁾ rear	FKS40/12-SM12	FKS40/12-SM12 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover
Power consumption	875 VA	875 VA	875 VA	875 VA	875 VA
Noise max.⁶⁾	78 dB(A)	78 dB(A)	78 dB(A)	78 dB(A)	78 dB(A)
Weight ca.	136 kg	136 kg	136 kg	136 kg	136 kg
Housing⁷⁾ W x H x D (mm)	482 x 770 x 55	482 x 770 x 635			
Height / inst. depth (mm)	19", 17 HU / 510	19", 17 HU / 595			

- 1) Each current range of the higher voltage classes of the same device power can also be produced as special current range.
- 2) Level and duration of the peak power see diagram in Technical Data.
- 3) The setting range extends max. to the possible peak power.
- 4) Rise and fall times are defined as
10 ... 90 % and 90 ... 10 % of the maximum current (current mode FAST, tolerance $\pm 20\%$). Rise and fall time at setting „medium“: ca. 150 μ s, „slow“: ca. 2 ms

5) Load terminals	Type of terminals
BPK4-30L	Binding post for 4 mm pin connector with connection possibility for stripped wire, max. 30 A
BPK4-60L	Touch-protected binding post for 4 mm pin connector with connection possibility for stripped wire, max. 60 A
FKS20/5-SM8	Flat copper bar 20 x 4 mm, vertically installed with screw M8
FKS25/8-SM10	Flat copper bar 25 x 8 mm, vertically installed with screw M10
FKS25/10-SM10	Flat copper bar 25 x 10 mm, vertically installed with screw M10
FKS40/12-SM12	Flat copper bar 40 x 12 mm, vertically installed with screw M12

- 6) Measured at the front in distance of 1 m.
- 7) Device height incl. feet,
largest width and depth without wiring.
 $1 \text{ HU} = 44.45 \text{ mm}$

22,400W ... 28,800W DC PLI Series

This is H&H	PLA Low Power	PLI High Power	ZS Multi-Range	ERI Energy Recycling	PMLA Multi-Channel, GUI
Model (order number)	PLI25606	PLI25612	PLI22430	PLI22460	PLI22480
Maximum input voltage	60 V	120 V	300 V	600 V	800 V
Current¹⁾	2,400 A	1,200 A	480 A	320 A	240 A
Continuous power	25,600 W	25,600 W	22,400 W	22,400 W	22,400 W
Short-time power²⁾	51,200 W	51,200 W	33,600 W	22,400 W	22,400 W
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V
Current setting	0 ... 2,400 A	0 ... 1,200 A	0 ... 480 A	0 ... 320 A	0 ... 240 A
Resistance setting	0.83 mΩ ... 0.26 Ω	1.67 mΩ ... 1.07 Ω	4.17 mΩ ... 6.72 Ω	6.30 mΩ ... 20.16 Ω	8.33 mΩ ... 35.84 Ω
Power setting³⁾	0 ... 51,200 W	0 ... 51,200 W	0 ... 33,600 W	0 ... 22,400 W	0 ... 22,400 W
Rise/fall time⁴⁾	100 µs	100 µs	100 µs	70 µs	100 µs
Load terminals⁵⁾ rear	FKS40/12-SM12	FKS40/12-SM12 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover
Power consumption	950 VA	950 VA	950 VA	810 VA	950 VA
Noise max.⁶⁾	79 dB(A)	79 dB(A)	79 dB(A)	78 dB(A)	79 dB(A)
Weight ca.	144 kg				
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 904 x 550 19", 20 HU / 510	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595

This is H&H	PLA Low Power	PLI High Power	ZS Multi-Range	ERI Energy Recycling	PMLA Multi-Channel, GUI
Model (order number)	PLI27206	PLI27212	PLI23830	PLI23860	PLI23880
Maximum input voltage	60 V	120 V	300 V	600 V	800 V
Current¹⁾	2,550 A	1,275 A	510 A	340 A	255 A
Continuous power	27,200 W	27,200 W	23,800 W	23,800 W	23,800 W
Short-time power²⁾	54,400 W	54,400 W	35,700 W	23,800 W	23,800 W
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V
Current setting	0 ... 2,550 A	0 ... 1,275 A	0 ... 510 A	0 ... 340 A	0 ... 255 A
Resistance setting	0.78 mΩ ... 0.25 Ω	1.57 mΩ ... 1.01 Ω	3.92 mΩ ... 6.32 Ω	5.9 mΩ ... 18.97 Ω	7.84 mΩ ... 33.73 Ω
Power setting³⁾	0 ... 54,400 W	0 ... 54,400 W	0 ... 35,700 W	0 ... 23,800 W	0 ... 23,800 W
Rise/fall time⁴⁾	100 µs				
Load terminals⁵⁾ rear	FKS40/12-SM12	FKS40/12-SM12 with safety cover	FKS40/12-SM12 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover
Power consumption	1,000 VA				
Noise max.⁶⁾	80 dB(A)				
Weight ca.	152 kg				
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 904 x 550 19", 20 HU / 510	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595

This is H&H	PLA Low Power	PLI High Power	ZS Multi-Range	ERI Energy Recycling	PMLA Multi-Channel, GUI
Model (order number)	PLI28806	PLI28812	PLI25230	PLI25260	PLI25280
Maximum input voltage	60 V	120 V	300 V	600 V	800 V
Current¹⁾	2,700 A	1,350 A	540 A	360 A	270 A
Continuous power	28,800 W	28,800 W	25,200 W	25,200 W	25,200 W
Short-time power²⁾	57,600 W	57,600 W	37,800 W	25,200 W	25,200 W
Voltage setting	0 ... 60 V	0 ... 120 V	0 ... 300 V	0 ... 600 V	0 ... 800 V
Current setting	0 ... 2,700 A	0 ... 1,350 A	0 ... 540 A	0 ... 360 A	0 ... 270 A
Resistance setting	0.74 mΩ ... 0.23 Ω	1.48 mΩ ... 0.95 Ω	3.70 mΩ ... 5.97 Ω	5.60 mΩ ... 17.92 Ω	7.41 mΩ ... 31.86 Ω
Power setting³⁾	0 ... 57,600 W	0 ... 57,600 W	0 ... 37,800 W	0 ... 25,200 W	0 ... 25,200 W
Rise/fall time⁴⁾	100 µs	100 µs	100 µs	70 µs	100 µs
Load terminals⁵⁾ rear	FKS40/12-SM12	FKS40/12-SM12 with safety cover	FKS40/12-SM12 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover
Power consumption	1,050 VA				
Noise max.⁶⁾	80 dB(A)				
Weight ca.	160 kg	160 kg	160 kg	155 kg	160 kg
Housing⁷⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 904 x 550 19", 20 HU / 510	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595

1) Each current range of the higher voltage classes of the same device power can also be produced as special current range.	5) Load terminals	Type of terminals
2) Level and duration of the peak power see diagram in Technical Data.	BPK4-30L	Binding post for 4 mm pin connector with connection possibility for stripped wire, max. 30 A
3) The setting range extends max. to the possible peak power.	BPK4-60L	Touch-protected binding post for 4 mm pin connector with connection possibility for stripped wire, max. 60 A
4) Rise and fall times are defined as 10 ... 90 % and 90 ... 10 % of the maximum current (current mode FAST, tolerance ±20 %). Rise and fall time at setting „medium“: ca. 150 µs, „slow“: ca. 2 ms	FKS20/5-SM8	Flat copper bar 20 x 4 mm, vertically installed with screw M8
	FKS25/8-SM10	Flat copper bar 25 x 8 mm, vertically installed with screw M10
	FKS25/10-SM10	Flat copper bar 25 x 10 mm, vertically installed with screw M10
	FKS40/12-SM12	Flat copper bar 40 x 12 mm, vertically installed with screw M12

6) Measured at the front in distance of 1 m.

7) Device height incl. feet, largest width and depth without wiring.
1 HU = 44.45 mm

Models up to 1.200 V PLI Series

Model (order number)	PLI24K12HV	PLI36K12HV	PLI48K12HV	PLI60K12HV	PLI72K12HV	This is H&H
Maximum input voltage	1,200 V					
Current	12 A	18 A	24 A	30 A	36 A	
Continuous power	2,400 W	3,600 W	4,800 W	6,000 W	7,200 W	
Short-time power¹⁾	2,400 W	3,600 W	4,800 W	6,000 W	7,200 W	
Voltage setting	0 ... 1,200 V					
Current setting	0 ... 12 A	0 ... 18 A	0 ... 24 A	0 ... 30 A	0 ... 36 A	
Resistance setting	166.7 mΩ ... 1075 Ω	111.2 mΩ ... 716 Ω	83.4 mΩ ... 537 Ω	66.7 mΩ ... 430 Ω	55.6 mΩ ... 358 Ω	PLA Low Power
Power setting²⁾	0 ... 2,400 W	0 ... 3,600 W	0 ... 4,800 W	0 ... 6,000 W	0 ... 7,200 W	PLI High Power
Rise/fall time³⁾	30 µs					
Load terminals⁴⁾ rear	FKS25/8-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	
Power consumption	140 VA	190 VA	275 VA	320 VA	380 VA	
Noise max.⁵⁾	70 dB(A)	71 dB(A)	73 dB(A)	74 dB(A)	74 dB(A)	
Weight ca.	22.5 kg	39 kg	56 kg	57 kg	63 kg	
Housing⁶⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 141 x 635 19", 3 HU / 595	482 x 237 x 635 19", 5 HU / 595	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595	

Model (order number)	PLI84K12HV	PLI96K12HV	PLI108K12HV	PLI120K12HV	PLI132K12HV	ZS Multi-Range
Maximum input voltage	1,200 V					
Current	42 A	48 A	54 A	60 A	66 A	
Continuous power	8,400 W	9,600 W	10,800 W	12,000 W	13,200 W	
Short-time power¹⁾	8,400 W	9,600 W	10,800 W	12,000 W	13,200 W	
Voltage setting	0 ... 1,200 V					
Current setting	0 ... 42 A	0 ... 48 A	0 ... 54 A	0 ... 60 A	0 ... 66 A	
Resistance setting	47.7 mΩ ... 307 Ω	41.7 mΩ ... 268 Ω	37.1 mΩ ... 238 Ω	333.4 mΩ ... 215 Ω	30.4 mΩ ... 195 Ω	
Power setting²⁾	0 ... 8,400 W	0 ... 9,600 W	0 ... 10,800 W	0 ... 12,000 W	0 ... 13,200 W	
Rise/fall time³⁾	30 µs	40 µs	40 µs	40 µs	40 µs	
Load terminals⁴⁾ rear	FKS25/10-SM10 with safety cover					
Power consumption	450 VA	500 VA	540 VA	600 VA	675 VA	
Noise max.⁵⁾	75 dB(A)	76 dB(A)	76 dB(A)	77 dB(A)	77 dB(A)	
Weight ca.	74 kg	82 kg	85 kg	104 kg	98 kg	
Housing⁶⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 503 x 635 19", 11 HU / 595	482 x 503 x 635 19", 11 HU / 595	482 x 503 x 635 19", 11 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595	

Model (order number)	PLI144K12HV
Maximum input voltage	1,200 V
Current	72 A
Continuous power	14,400 W
Short-time power¹⁾	14,400 W
Voltage setting	0 ... 1,200 V
Current setting	0 ... 72 A
Resistance setting	27.8 mΩ ... 179 Ω
Power setting²⁾	0 ... 57,600 W
Rise/fall time³⁾	40 µs
Load terminals⁴⁾ rear	FKS25/10-SM10 with safety cover
Power consumption	700 VA
Noise max.⁵⁾	77 dB(A)
Weight ca.	112 kg
Housing⁶⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 637 x 635 19", 14 HU / 595

Models with higher power on request

- 1) HV models have no short-time overload capability.
- 2) The setting range extends max. to the possible peak power.
- 3) Rise and fall times are defined as 10 ... 90 % and 90 ... 10 % of the maximum current (current mode FAST, tolerance ±20 %). Rise and fall time at setting „medium”: ca. 150 µs, „slow”: ca. 2 ms

4) Load terminals	Type of terminals
BPK4-30L	Binding post for 4 mm pin connector with connection possibility for stripped wire, max. 30 A
BPK4-60L	Touch-protected binding post for 4 mm pin connector with connection possibility for stripped wire, max. 60 A
FKS20/5-SM8	Flat copper bar 20 x 4 mm, vertically installed with screw M8
FKS25/10-SM8	Flat copper bar 25 x 10 mm, vertically installed with screw M8
FKS25/10-SM10	Flat copper bar 25 x 10 mm, vertically installed with screw M10
FKS40/12-SM12	Flat copper bar 40 x 12 mm, vertically installed with screw M12

- 5) Measured at the front in distance of 1 m.
- 6) Device height incl. feet, largest width and depth without wiring.
1 HU = 44.45 mm

GTC	SE Power Distribution	Accessories	NL Source-Sink	ZSAC AC & DC	PMLI Multi-Channel	PMLA Multi-Channel, GUI	ERI Energy Recycling
-----	--------------------------	-------------	-------------------	-----------------	-----------------------	----------------------------	-------------------------

300 V Models with Extended Current PLI Series

This is H&H	PLA Low Power	PLI High Power	ZS Multi-Range	PMLI Multi-Channel	PMLA Multi-Channel, GUI	ERI Energy Recycling	PLI High Power	PLI Low Power
Model (Order No.)	PLI3230EC	PLI4230EC	PLI5630EC	PLI7030EC	PLI8430EC	PLI9830EC		
Maximum input voltage	300 V							
Current	208 A	312 A	416 A	520 A	624 A	728 A		
Continuous power	3,200 W	4,200 W	5,600 W	7,000 W	8,400 W	9,800 W		
Short-time power¹⁾	3,200 W	4,200 W	5,600 W	7,000 W	8,400 W	9,800 W		
Voltage setting	0 ... 300 V							
Current setting	0 ... 208 A	0 ... 312 A	0 ... 416 A	0 ... 520 A	0 ... 624 A	0 ... 728 A		
Resistance setting	25 mΩ ... 15.5 Ω	16 mΩ ... 10.33 Ω	12 mΩ ... 7.75 Ω	9.7 mΩ ... 6.2 Ω	8.1 mΩ ... 5.16 Ω	6.9 mΩ ... 4.4 Ω		
Power setting²⁾	0 ... 3,200 W	0 ... 4,200 W	0 ... 5,600 W	0 ... 7,000 W	0 ... 8,400 W	0 ... 9,800 W		
Rise/fall time³⁾	100 µs	120 µs						
Load terminals⁴⁾ rear	FKS25/8-SM8 with safety cover	FKS25/10-SM10 with safety cover	FKS25/10-SM10 with safety cover	FKS40/12-SM12 with safety cover	FKS40/12-SM12 with safety cover	FKS40/12-SM12 with safety cover		
Power consumption	140 VA	190 VA	260 VA	300 VA	340 VA	390 VA		
Noise max.⁵⁾	70 dB(A)	71 dB(A)	72 dB(A)	74 dB(A)	74 dB(A)	74 dB(A)		
Weight ca.	22.5 kg	39 kg	56 kg	57 kg	63 kg	80 kg		
Housing⁶⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 141 x 535 19", 3 HU / 520	482 x 237 x 550 19", 5 HU / 510	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595	482 x 503 x 635 19", 11 HU / 595		

This is H&H	PLA Low Power	PLI High Power	ZS Multi-Range	PMLI Multi-Channel	PMLA Multi-Channel, GUI	ERI Energy Recycling	PLI High Power	PLI Low Power
Model (Order No.)	PLI11230EC	PLI12630EC	PLI14030EC	PLI15430EC	PLI16830EC	PLI18230EC		
Maximum input voltage	300 V							
Current	832 A	936 A	1,040 A	1,144 A	1,248 A	1,352 A		
Continuous power	11,200 W	12,600 W	14,000 W	15,400 W	16,800 W	18,200 W		
Short-time power¹⁾	11,200 W	12,600 W	14,000 W	15,400 W	16,800 W	18,200 W		
Voltage setting	0 ... 300 V							
Current setting	0 ... 832 A	0 ... 936 A	0 ... 1,040 A	0 ... 1,144 A	0 ... 1,248 A	0 ... 1,352 A		
Resistance setting	6.1 mΩ ... 3.8 Ω	5.4 mΩ ... 3.44 Ω	4.9 mΩ ... 3.10 Ω	4.4 mΩ ... 2.81 Ω	4.1 mΩ ... 2.58 Ω	3.7 mΩ ... 2.38 Ω		
Power setting²⁾	0 ... 11,200 W	0 ... 12,600 W	0 ... 14,000 W	0 ... 15,400 W	0 ... 16,800 W	0 ... 18,200 W		
Rise/fall time³⁾	120 µs	140 µs						
Load terminals⁴⁾ rear	FKS40/12-SM12 with safety cover							
Power consumption	450 VA	500 VA	540 VA	580 VA	650 VA	680 VA		
Noise max.⁵⁾	75 dB(A)	76 dB(A)	76 dB(A)	77 dB(A)	77 dB(A)	77 dB(A)		
Weight ca.	80 kg	82 kg	89 kg	104 kg	105 kg	112 kg		
Housing⁶⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 503 x 635 19", 11 HU / 595	482 x 503 x 635 19", 11 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 770 x 635 19", 17 HU / 595		

This is H&H	PLA Low Power	PLI High Power	ZSAC AC & DC	NL Source-Sink	Accessories	SE Power Distribution	GTC
Model (Order No.)	PLI19630EC	PLI21030EC	PLI22430EC	PLI23830EC	PLI25230EC		
Maximum input voltage	300 V						
Current	1,456 A	1,560 A	1,664 A	1,768 A	1,872 A		
Continuous power	19,600 W	21,000 W	22,400 W	23,800 W	25,200 W		
Short-time power¹⁾	19,600 W	21,000 W	22,400 W	23,800 W	25,200 W		
Voltage setting	0 ... 300 V						
Current setting	0 ... 1,456 A	0 ... 1,560 A	0 ... 1,664 A	0 ... 1,768 A	0 ... 1,872 A		
Resistance setting	3.5 mΩ ... 2.2 Ω	3.3 mΩ ... 2.0 Ω	3.0 mΩ ... 1.9 Ω	2.9 mΩ ... 1.8 Ω	2.7 mΩ ... 1.7 Ω		
Power setting²⁾	0 ... 19,600 W	0 ... 21,000 W	0 ... 22,400 W	0 ... 23,800 W	0 ... 25,200 W		
Rise/fall time³⁾	140 µs						
Load terminals⁴⁾ rear	FKS40/12-SM12 with safety cover						
Power consumption	720 VA	780 VA	870 VA	870 VA	960 VA		
Noise max.⁵⁾	77 dB(A)	78 dB(A)	78 dB(A)	78 dB(A)	79 dB(A)		
Weight ca.	131 kg	136 kg	144 kg	152 kg	160 kg		
Housing⁶⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 770 x 635 19", 17 HU / 595	482 x 770 x 635 19", 17 HU / 595	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595		

- 1) EC models have no power overload capability.
- 2) The setting range extends max. to the possible peak power.
- 3) Rise and fall times are defined as 10 ... 90 % and 90 ... 10 % of the maximum current (current mode FAST, tolerance ±20 %). Rise and fall time at setting „medium“: ca. 150 µs, „slow“: ca. 2 ms

4) Load terminals	Type of terminals
BPK4-30L	Binding post for 4 mm pin connector with connection possibility for stripped wire, max. 30 A
BPK4-60L	Touch-protected binding post for 4 mm pin connector with connection possibility for stripped wire, max. 60 A
FKS20/5-SM8	Flat copper bar 20 x 4 mm, vertically installed with screw M8
FKS25/8-SM10	Flat copper bar 25 x 8 mm, vertically installed with screw M10
FKS25/10-SM10	Flat copper bar 25 x 10 mm, vertically installed with screw M10
FKS40/12-SM12	Flat copper bar 40 x 12 mm, vertically installed with screw M12

- 5) Measured at the front in distance of 1 m.
- 6) Device height incl. feet, largest width and depth without wiring. 1 HU = 44.45 mm

600 V Models with Extended Current PLI Series

Model (Order No.)	PLI3260EC	PLI4260EC	PLI5660EC	PLI7060EC	PLI8460EC	PLI9860EC	This is H&H
Maximum input voltage	600 V	PLA Low Power					
Current	104 A	156 A	208 A	260 A	312 A	364 A	
Continuous power	3,200 W	4,200 W	5,600 W	7,000 W	8,400 W	9,800 W	
Short-time power¹⁾	3,200 W	4,200 W	5,600 W	7,000 W	8,400 W	9,800 W	
Voltage setting	0 ... 600 V						
Current setting	0 ... 104 A	0 ... 156 A	0 ... 208 A	0 ... 260 A	0 ... 312 A	0 ... 728 A	
Resistance setting	48.1 mΩ ... 62.0 Ω	32.1 mΩ ... 41.3 Ω	24.1 mΩ ... 31 Ω	19.3 mΩ ... 24.8 Ω	16.1 mΩ ... 20.6 Ω	13.8 mΩ ... 17.7 Ω	
Power setting²⁾	0 ... 3,200 W	0 ... 4,200 W	0 ... 5,600 W	0 ... 7,000 W	0 ... 8,400 W	0 ... 9,800 W	
Rise/fall time³⁾	100 µs						
Load terminals⁴⁾ rear	FKS25/8-SM10 with safety cover	PLI High Power					
Power consumption	140 VA	190 VA	260 VA	300 VA	340 VA	390 VA	
Noise max.⁵⁾	70 dB(A)	71 dB(A)	72 dB(A)	74 dB(A)	74 dB(A)	74 dB(A)	
Weight ca.	20.5 kg	38 kg	56 kg	57 kg	63 kg	74 kg	
Housing⁶⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 141 x 535 19", 3 HU / 520	482 x 237 x 550 19", 5 HU / 510	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595	482 x 370 x 635 19", 8 HU / 595	482 x 503 x 635 19", 11 HU / 595	

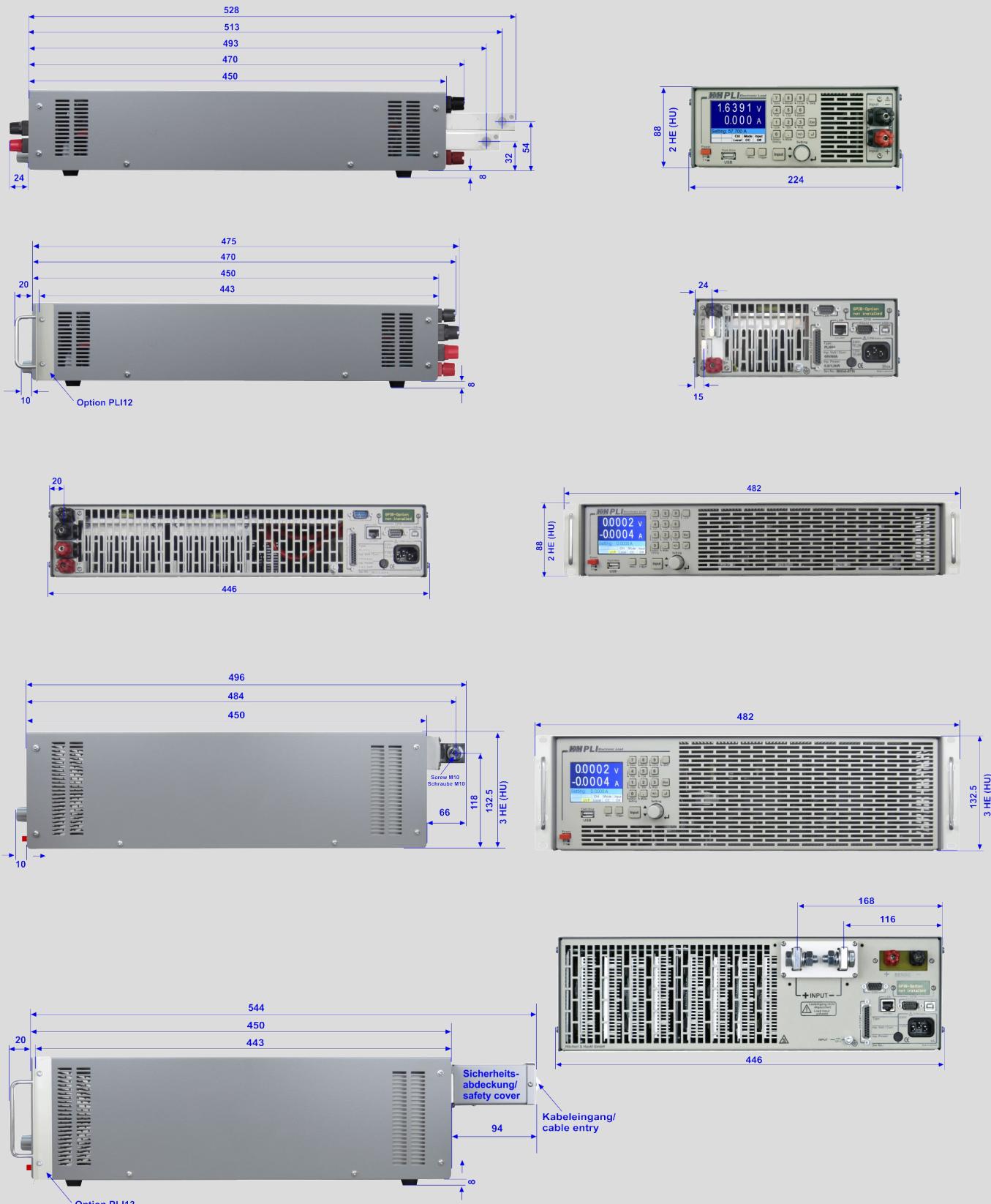
Model (Order No.)	PLI11260EC	PLI12660EC	PLI14060EC	PLI15460EC	PLI16860EC	PLI18260EC	ZS Multi-Range
Maximum input voltage	600 V	ERI Energy Recycling					
Current	416 A	468 A	520 A	572 A	624 A	676 A	
Continuous power	11,200 W	12,600 W	14,000 W	15,400 W	16,800 W	18,200 W	
Short-time power¹⁾	11,200 W	12,600 W	14,000 W	15,400 W	16,800 W	18,200 W	
Voltage setting	0 ... 600 V						
Current setting	0 ... 416 A	0 ... 468 A	0 ... 520 A	0 ... 572 A	0 ... 624 A	0 ... 676 A	
Resistance setting	12.1 mΩ ... 15.5 Ω	10.7 mΩ ... 13.7 Ω	9.6 mΩ ... 12.4 Ω	8.7 mΩ ... 11.2 Ω	8 mΩ ... 10.3 Ω	7.4 mΩ ... 9.5 Ω	
Power setting²⁾	0 ... 11,200 W	0 ... 12,600 W	0 ... 14,000 W	0 ... 15,400 W	0 ... 16,800 W	0 ... 18,200 W	
Rise/fall time³⁾	120 µs	130 µs					
Load terminals⁴⁾ rear	FKS25/8-SM10 with safety cover	FKS25/8-SM10 with safety cover	FKS40/12-SM12 with safety cover	FKS40/12-SM12 with safety cover	FKS40/12-SM12 with safety cover	FKS40/12-SM12 with safety cover	PMLA Multi-Channel, GUI
Power consumption	450 VA	500 VA	540 VA	580 VA	650 VA	680 VA	
Noise max.⁵⁾	75 dB(A)	76 dB(A)	76 dB(A)	77 dB(A)	77 dB(A)	77 dB(A)	
Weight ca.	80 kg	82 kg	89 kg	98 kg	105 kg	112 kg	
Housing⁶⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 503 x 635 19", 11 HU / 595	482 x 503 x 635 19", 11 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 637 x 635 19", 14 HU / 595	482 x 770 x 635 19", 17 HU / 595	

Model (Order No.)	PLI19660EC	PLI21060EC	PLI22460EC	PLI23860EC	PLI25260EC	ZSAC AC & DC	PMLI Multi-Channel	Accessories	GTC
Maximum input voltage	600 V								
Current	728 A	780 A	832 A	884 A	936 A				
Continuous power	19,600 W	21,000 W	22,400 W	23,800 W	25,200 W				
Short-time power¹⁾	19,600 W	21,000 W	22,400 W	23,800 W	25,200 W				
Voltage setting	0 ... 600 V								
Current setting	0 ... 728 A	0 ... 780 A	0 ... 832 A	0 ... 884 A	0 ... 936 A				
Resistance setting	6.9 mΩ ... 8.8 Ω	6.4 mΩ ... 8.2 Ω	6 mΩ ... 7.7 Ω	5.7 mΩ ... 7.2 Ω	5.3 mΩ ... 6.8 Ω				
Power setting²⁾	0 ... 19,600 W	0 ... 21,000 W	0 ... 22,400 W	0 ... 23,800 W	0 ... 25,200 W				
Rise/fall time³⁾	130 µs	140 µs	140 µs	150 µs	150 µs				
Load terminals⁴⁾ rear	FKS40/12-SM12 with safety cover								
Power consumption	720 VA	780 VA	870 VA	870 VA	960 VA				
Noise max.⁵⁾	77 dB(A)	78 dB(A)	78 dB(A)	78 dB(A)	79 dB(A)				
Weight ca.	131 kg	136 kg	144 kg	152 kg	155 kg				
Housing⁶⁾ W x H x D (mm) Height / inst. depth (mm)	482 x 770 x 635 19", 17 HU / 595	482 x 770 x 635 19", 17 HU / 595	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595	482 x 904 x 635 19", 20 HU / 595				

1) EC models have no power overload capability.	4) Load terminals	Type of terminals	5) Measured at the front in distance of 1 m.
2) The setting range extends max. to the possible peak power.	BPK4-30L	Binding post for 4 mm pin connector with connection possibility for stripped wire, max. 30 A	6) Device height incl. feet, largest width and depth without wiring, 1 HU = 44.45 mm
3) Rise and fall times are defined as 10 ... 90 % and 90 ... 10 % of the maximum current (current mode FAST, tolerance ±20 %). Rise and fall time at setting „medium“: ca. 150 µs, „slow“: ca. 2 ms	BPK4-60L	Touch-protected binding post for 4 mm pin connector with connection possibility for stripped wire, max. 60 A	
	FKS20/5-SM8	Flat copper bar 20 x 4 mm, vertically installed with screw M8	
	FKS25/8-SM10	Flat copper bar 25 x 8 mm, vertically installed with screw M10	
	FKS25/10-SM10	Flat copper bar 25 x 10 mm, vertically installed with screw M10	
	FKS40/12-SM12	Flat copper bar 40 x 12 mm, vertically installed with screw M12	

Dimensions 2 HU and 3 HU devices PLI Series

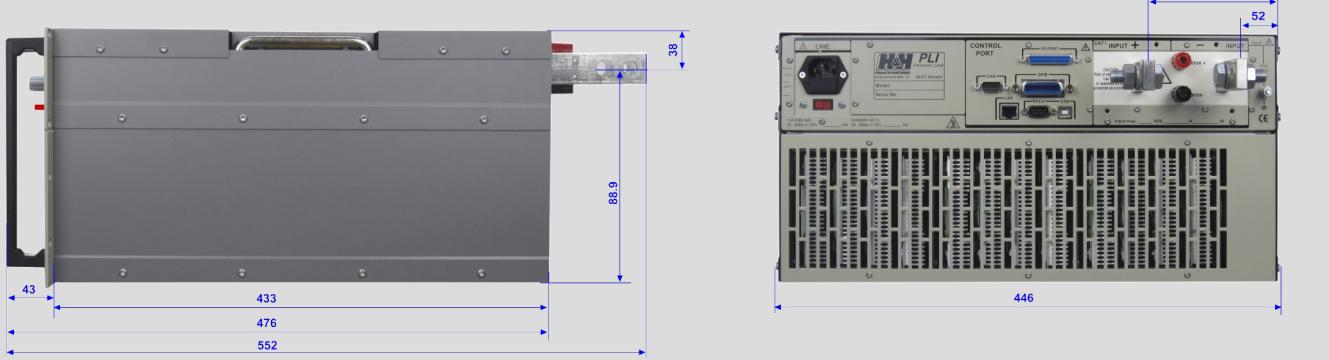
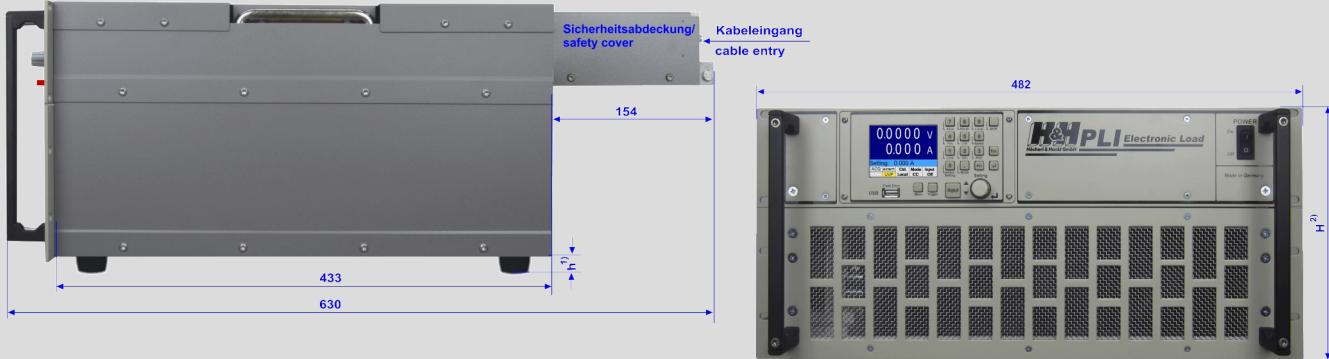
GTC	SE Power Distribution	Accessories	NL Source-Sink	ZSAC AC & DC	PMLI Multi-Channel	PMLA Multi-Channel, GUI	ERI Energy Recycling	PLI High Power	PLA Low Power	This is H&H
-----	--------------------------	-------------	-------------------	-----------------	-----------------------	----------------------------	-------------------------	-------------------	------------------	----------------



3D models in STEP format or as PDF file here:
<http://www.hoecherl-hackl.com/mechanic.html>

All dimensions in mm
Rack mountable with optional accessories

Dimensions 5 HU and higher PLI Series



All dimensions in mm
Rack mountable

¹⁾ h: Standard: 15 mm
With option PLI14 (castors): 45 mm



System with PLI4806 and PLI9860 for testing transformers.
Source: MSPM

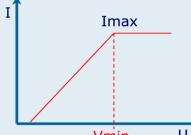
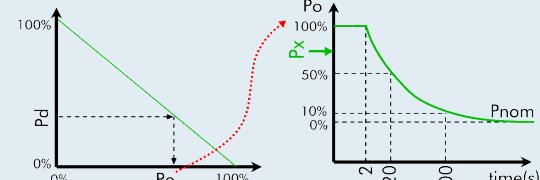
²⁾

Height	2 HU	3 HU	5 HU	8 HU	11 HU	14 HU	17 HU	20 HU	23 HU	26 HU	29 HU	32 HU	35 HU
H (mm)	88	133	222	355	488	622	755	889	1,022	1,155	1,289	1,422	1,556

GTC	SE	Accessories	NL Source-Sink	ZSAC AC & DC	PMLI Multi-Channel	PMLA Multi-Channel, GUI	ERI Energy Recycling	ZS Multi-Range	PLI High Power	PLA Low Power	This is H&H
-----	----	-------------	----------------	--------------	--------------------	-------------------------	----------------------	----------------	----------------	---------------	-------------

Technical Data PLI Series

		This is H&H
PLA Low Power		PLI High Power
ZS Multi-Range		ERI Energy Recycling
PMLA Multi-Channel, GUI		PMLI Multi-Channel
ZSAC AC & DC		NL Source-Sink
Accessories		SE Power Distribution
GTC		
Accuracy of setting		
Voltage	of the setting value	of the corresponding range
Current	$\pm 0.2 \%$	$\pm 0.05 \%$
Resistance (at 5 ... 100 % of the voltage range)	$\pm 1.4 \%$	$\pm 0.3 \%$ of current range
Power (at V and I > 30 % of the corresp. range) (at V or I < 30 % of the corresp. range)	$\pm 0.35 \%$ $\pm 0.7 \%$	$\pm 0.1 \%$ $\pm 0.25 \%$
Resolution	14 bit	
Accuracy of settable protections		
Overcurrent prot.	of the setting value	of the corresponding range
Undervoltage prot.	$\pm 1.4 \%$	$\pm 0.3 \%$
Resolution	12 bit	
Accuracy of measurement/display (in static CC, CV and CR Mode)		
	of the measured value (actual value)	of the corresponding range
Voltage	$\pm 0.03 \%$	$\pm 0.02 \%$
Current	$\pm 0.2 \%$	$\pm 0.05 \%$
Resistance	is calculated from current and voltage	
Power	is calculated from current and voltage	
Resolution	18 bit	
Sampling rate	330 ms, not triggerable	
Accuracy of measurement/display (in static CP and all dynamic modes)		
	of the measured value (actual value)	of the corresponding range
Voltage	$\pm 0.2 \%$	$\pm 0.1 \%$
Current	$\pm 0.2 \%$	$\pm 0.1 \%$
Resistance	is calculated from current and voltage	
Power	is calculated from current and voltage	
Resolution	12 bit	
Sampling rate	200 μ s ... 800,000 s	
Accuracy of trigger voltage measurement		
Trigger voltage	$\pm 1 \%$ of voltage range	
Measurement rate	200 μ s	
Dynamic function (LIST)		
No. of load levels	max. 300, with ramp time and dwell time setting	
	min.	max.
Dwell time	200 μ s	800,000 s
Ramp time	0 s	800,000 s
Resolution	200 μ s	
Precision of the setting times	$\pm 0.02 \%$	
Delay at triggered start	max. 300 μ s	
Data acquisition		
To external USB flash drive		
Measurement rate	0.5 s, 1 s, 5 s, 10 s	
Measurement data	time stamp, voltage, current	
No. of measurement points	Limited by USB memory capacity	
File format	.CSV format	
To internal memory		
Measurement rate	200 μ s ... 800,000 s, resolution 200 μ s, synchronized with dynamic function	
Measurement data	time stamp, voltage, current	
No. of points	max. 8,000	
Settings memories		
No. of User Settings	2, selectable 1 for last device settings at power-off or power fail (incl. programmed list)	

Accuracy of analog control 0 ... 10 V					
	of the setting value	of the corresponding range			
Current	$\pm 0.2 \%$	$\pm 0.1 \%$			
Voltage	$\pm 0.2 \%$	$\pm 0.1 \%$			
Overcurrent prot.	$\pm 1 \%$	$\pm 0.4 \%$			
Undervoltage prot.	$\pm 1 \%$	$\pm 0.4 \%$			
Input resistance of analog inputs > 10 k Ω GND max. 2 V ¹⁾ referred to negative load input (125 V ¹⁾ with option PLI06)					
Accuracy of analog measurement outputs 0 ... 10 V					
	of analog signal of actual value	offset voltage			
Voltage	$\pm 0.2 \%$	$\pm 15 \text{ mV}$			
Current	$\pm 0.2 \%$	$\pm 15 \text{ mV}$			
Load capacity: minimal 2 k Ω GND max. 2 V ¹⁾ with respect to negative load input (125 V ¹⁾ with option PLI06)					
I/O Port outputs and inputs					
Control outputs	Output level	load input on/off overload (OV, OCP, OPP, OTP) trigger output programmable output selectable, 3.3 V, 5 V, 12 V, or externally programmable up to 30 V			
Control inputs		load input on/off mode selection trigger input programmable input control input remote shut-down 3 V to 30 V			
Input					
Input resistance	> 50 k Ω when load input is off Diode function at reverse polarity up to nominal current				
Input capacity	approx. 2 μ F / 600 W				
Parallel operation	up to 5 units in Master-Slave mode (hardware-controlled)				
Maximum input voltage	see model overview				
Minimum input voltage for max. current	Devices up to 120 V Devices from 300 V PLIxxxxEC	1.2 V for maximum current, linear derating to 0 2 V for maximum current, linear derating to 0 5 V for maximum current, linear derating to 0			
					
Permissible potential	negative load input - housing 125 V DC ¹⁾				
Continuous power	see model overview (where T _A = 21 °C)				
Derating	-1.2 %/°C for T _A > 21 °C				
Overload capability	see model overview				
					
The max. possible overload Po depends on the temperature of the device and therefore on the previously consumed continuous power Pd. The possible overload duration depends on the value of the overload Px.					

The specified accuracies refer to an ambient temperature of 23 ± 5 °C. The specified accuracies are valid 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.

1) positive/negative DC voltage or RMS value of a sinusoidal AC voltage

PLI Series

Protection and monitoring	
Protective devices	overcurrent overpower overtemperature
Monitoring	overvoltage indication reverse polarity indication undervoltage indication (if the input voltage is too low for the set current)
Terminals	
Load input: Sense:	see type overview BPK4-30L or SBU4-32 (touch-proof terminal binding post for 4 mm laboratory jack or stripped wires)
Operating conditions	
Operating temperature	5 ... 40 °C
Stock temperature	-25 ... 65 °C
Max. operating height	2,000 m above sea level
Pollution degree	1
Overvoltage category of mains	II
Max. humidity	80 % at 31 °C, linear derating to 50 % at 40 °C
Min. distance rear panel - wall or other objects	70 cm
Cooling	3-stage air-cooling as of 3,200 W variably controlled fans
Noise, weight	see model overview
Supply voltage	115/230 V AC ($\pm 10\%$), switchable, 50 ... 60 Hz (12 V DC with option PLI18)
Power consumption	see model overview

Housing	
Color	Front, rear panel RAL7032 (pebble grey) Side panel, top RAL7037 (dusty grey)
Safety and EMC	
Protection	IP20
Measuring category	O (CAT I according to EN61010 Rev. 2004)
Electrical safety	DIN EN 61010-1, DIN EN 61010-2-030
EMC, CE marking	DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3
Warranty	2 years
Available options	
Data interfaces	PLI02 GPIB Interface
Function expansion	PLI20 MPPT function with activation code
Hardware expansion	PLI06 galvanically isolated Analog I/O Port
19" rack mounting kits	PLI10 for 1 Load PLI6XX PLI11 for 2 Loads PLI6XX PLI12 for 1 Load PLI14XX/21XX PLI13 for 1 Load PLI3206 PLI14 castors (from 5 HU)
DC supply	PLI18 12 V DC supply (only for PLI14XX)
Calibration, warranty	
FCC-PLIxx	Factory Calibration Certificate, twice free of charge
Warranty	2 years



GTC	SE	Accessories	NL Source-Sink	ZSAC AC & DC	PMLI Multi-Channel	PMLA Multichannel, GUI	This is H&H
-----	----	-------------	----------------	--------------	--------------------	------------------------	-------------

PLA Low Power	PLI High Power
---------------	----------------

ERI Energy Recycling	ZS Multi-Range
----------------------	----------------

GTC	SE Power Distribution	Accessories	NL Source-Sink	ZSAC AC & DC	PMLI Multi-Channel	PMLA Multichannel, GUI
-----	-----------------------	-------------	----------------	--------------	--------------------	------------------------



PLI excerpt from Catalog_E_0303

The Electronic Load