Datasheet Series SCL



Model	SCL1804		H&H States
Order no.	28-003-000-0°	1	Scring 1
Basic operating modes		•	CC, CV, CR, CP
Standard interfaces			RS-232, USB, LAN, CAN
Max. input voltage Vmax			40 V
Min. input voltage Vmin 1)			0.6 V
Max. load current Imax			1200 A
Continuous power 2)		1800 W	
Current-dependent power reduction		0 V	
Voltage setting		0 40 V	
Current setting		0 1200 A	
Resistance setting		0.0005 0.336 Ohm	
Power setting ³⁾		0 1800 W	
Rise and fall time fast / medium / slow ⁴⁾			2000 µs
Load terminals (rear) ⁵⁾		FKS30/10-SM12	
Power consumption		100 VA	
Noise max. ca. 6)		69 dB(A)	
Weight ca.			21.5 kg
Housing / 3D model ⁷⁾		19" - 2 U / SCL_M1	
Width x Height x Depth			482 x 111 x 554 mm

- 1. Minimum input voltage for maximum static load current.
- 2. For ZV variants, a current-dependent power reduction of (1.2 $V \times set$ current) must be calculated.
- $\ \, 3.\ \,$ 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 "medium": ca. 150 µs, "slow": ca. 2 ms.
- 5. FKS30/10-SM12: Flat copper bars 30 x 10 mm vertical with hole for screw M12 Models with copper bars (FKS) are delivered with safety covers.
- 6. Measured on the front from distance of 1 m.
- 7. Device height incl. equipment feet. Maximum width and depth incl. handle. Installation depth without connection cable. $1\ U = 44.45\ mm$.

SCL Series Technical Data

Operating modes, functions			
Basic operating	CC, CP, CR, CV		
modes Combined opera-			
ting modes	CC+CV, CR+CC+CV, CP+CC+CV, CV+CC		
Functions	DC load MPP Tracking energy storage device test internal resistance measurement list function rectangular function PWM function modulation (sine, triangle, square) data acquisition (internally or to USB flash drive) sweep function save and recall of device settings watchdog in remote operation		
User interface	4.3" TFT touch display		
Accuracy of setting			
	of setting	of corresponding range	
Voltage	±0.1 %	±0.05 %	
Current	±0.2 %	±0.05 %	
Resistance (at 5 % to 100 % of voltage range)	±1.4 %	±0.5 % of resistance range ±0.3 % of current range	
Power (at V and I > 30 % of range)	±0.35 %	±0.1 %	
(at V and I > 5 % and < 30 % of range)	±0.7 %	±0.25 %	
Resolution	14 bits		
Accuracy of adjustable	ccuracy of adjustable protections		
	of setting	of corresponding range	
Overcurrent protection	±1 %	±0.2 %	
Undervoltage protection	±0.5 %	±0.2 %	
Resolution	12 bits		
Accuracy of measuren	nent slow		
	of measured value (real value)	of corresponding range	
Voltage	±0.025 %	±0.01 %	
Current	±0.2 %	±0.05 %	
Resistance	is calculated from current and voltage		
Power	is calculated from current ar	nd voltage	
Resolution	23 bits	•	
Sampling time	250 ms, not triggerable		
Accuracy of display			
Number of decimal places	4		
Accuracy	accuracy of measurement s	low ±1 digit of the display value	
Accuracy of measurement fast			
Table 19 of Moderation	of measured value (real value)	of corresponding range	
Voltage	±0.2 %	±0.05 %	
Current	±0.2 %	±0.1 %	
Resistance			
Power	is calculated from current and voltage is calculated from current and voltage		
Resolution	16 bits		
	200 μs 1,000 s, resolution 200 μs		
Sampling time 200 µs 1,000 s, resolution 200 µs Accuracy of trigger voltage and current			
, ,,			
Trigger voltage	±1 % of voltage range		
Trigger current Sampling time	±1 % of current range		
Parmining nine	200 μs		

B 1 6 11 110T	
Dynamic function LIST	
Operating modes	CC, CV, CR, CP
No. of load levels	max. 300, with corresponding ramp and dwell times
Accuracy of load levels	see accuracy of setting
Dwell time 1)	200 μs 1,000 s
Ramp time 1)	0 1,000 s
Resolution	200 μs
Accuracy of setting times	±0.02 %
Sampling time	see accuracy of measurement fast
Delay at triggered start	max. 300 μs
Dynamic function rectangular	
Operating modes	CC, CV, CR
No. of load levels	2
Accuracy of load levels	see accuracy of setting
Pulse times ¹⁾ , resolution	1 μs 9999.999 ms, resolution 1 μs
Accuracy of setting times	0.02 %
Dynamic function PWM	
Operating modes	CC, CV, CR
No. of load levels	2
Accuracy of load levels	see accuracy of setting
Frequency 1), resol.	0.1 Hz 10 kHz, resolution 0.1 Hz
Duty cycle, resol.	1 99 %, resolution 1 %
Dynamic function modulation	
Operating modes	CC, CV
Waveforms	sine, square, triangle
Frequency 1), resol.	0.1 Hz 10 kHz, resolution 0.1 Hz
Modulation depth	0 100 %

Data acquisition		
to external USB flash drive		
Sampling time	0.1 30.0 s, resolution 0.1 s	
Measurement data	timestamp, voltage, current	
No. of measurement points	limited by flash drive memory capacity	
File format	.csv	
Accuracy	see accuracy of measurement slow	
to internal memory		
Sampling time	200 μs 1,000 s, resolution 200 μs, synchronized with dynamic function	
Measurement data	timestamp, voltage, current	
No. of measurement points	max. 40,000	
Accuracy	see accuracy of measurement fast	
Settings memory		
No. of memory positions	9, selectable (incl. programmed list)	
I/O port: inputs and outputs		
Inputs	analog load setting I and V with 0 5 V and 0 10 V analog protection setting I and V with 0 10 V load input activation (low active) operating mode selection CC/CV control speed selection remote shut-down (high active) readable digital input (by SCPI command) trigger input (high active) control input (activates analog signals, low active)	
Digital input level	logical low: 0 0.8 V, logical high: 3 30 V	

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

- The applicable time or frequency range is limited by the rise/fall time of the respective model. positive/negative DC voltage or RMS value of a sinusoidal AC voltage only 0 \dots 10 V

Technical Data

Outputs Digital output level	analog voltage monitor output 0 10 V analog current monitor output 0 10 V load input activation state (low active) overload status (0V, OCP, OPP, OTP, low active) programmable logic output (by SCPI command) trigger output (low active) Standard: logical low: 0 0.8 V, logical high: 5 V, max. 10 mA (push-pull) Isolated: logical low: 0 0.8 V, logical high: 5 V/24 V selectable, max. 10 mA (push-pull)	
I/O port: accuracy of ana	alog control 0 5 V or 0 10	V
	of setting	of corresponding range
Voltage	±0.1 %	±0.05 %
Current	±0.2 %	±0.1 %
Overcurrent protection 3)	±1 %	±0.2 %
Undervoltage protection 3)	±0.5 %	±0.2 %
	input resistance of analog	inputs >10 kΩ
I/O port: accuracy of ana	alog monitor outputs 0 10 V	
	of analog signal of actual value	offset voltage
Voltage	±0.2 %	±15 mV
Current	±0.2 %	±15 mV
	minimum load > 2 kΩ	
I/O port: permissible vo	tages	
	standard I/O port	isolated I/O port (option SCLO6)
Vin-io (GND - neg. load input)	max. 2 V	max. 185 V ²⁾
VioPE (GND - PE)	max. 60 V ²⁾	max. 125 V ²⁾
Vmax Sense + Electronic Sense - load I/O port GND/GNDA Vin+PE Vmax Vin+PE Vin+PE Vin+PE Vin+PE Vin-PE Vin-PE Vin-PE Vin-io Vio-PE Vin-io Vin-i		

Input		
Input resistance	>50 kΩ when load input is off standard models with diode function at reverse polarity up to nominal current ZV models have no reverse polarity protection!	
Input capacity	see model overview	
Max. input voltage Vmax	see model overview	
Min. input voltage Vmin	see model overview	
Input: permissible voltages		
	standard I/O port	isolated I/O port (option SCLO6)
Vin-PE (neg. load input - PE)	max. 60 V ²⁾	max. 60 V ²⁾
Vin+PE (pos. load input - PE)	max. 60 V ²⁾	max. 60 V ²⁾
Power		
Continuous power	see model overview (at Ta = 21 °C)	
Derating	-1.2 %/°C for Ta > 21 °C	

Protective devices overcurrent overpower overtemperature Monitoring overvoltage indication undervoltage indication (if the input voltage is too low for the set current) Terminals Load input see model overview Sense PH2/7.62-BU16, see starting at page 123 Operating conditions Operating temperature 5 40 °C Max. operating height 2,000 m above sea level Pollution degree 2 Overvoltage category of mains Max. humidity 80 % at 31 °C, linear decreasing to 50 % at 40 °C Min. distance rear panel to walt or other objects Cooling 2-stage air cooling Cabinet installation with minimum 1 U vented front panel each above and below the device Noise, weight see model overview Mains voltage see model overview Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption see model overview Housing Dimensions see model overview Color front RAL7035 (light grey) stainless steel top RAL7037 (dusty grey) 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 EMC Din EN 63128-1 Din EN 61000-3-2 Din EN 61000-3-3 Standard interfaces Data interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface Calibration, warranty FCC-SCLXX Factory Calibration Certificate, twice for free ⁶⁰	Protection and monitoring		
reverse polarity indication undervoltage is too low for the set current) Terminals Load input See model overview Sense PH2/7.62-BU16, see starting at page 123 Operating conditions Operating temperature -25 40 °C Max. operating height 2.000 m above sea level Pollution degree 2 Overvoltage category of mains Max. hurnidity 80 % at 31 °C, tinear decreasing to 50 % at 40 °C Min. distance rear panel to wall or other objects Cooling 2-stage air cooling Cabinet installation with minimum 1 U vented front panel each above and below the device Noise, weight See model overview Mains voltage see model overview Mains voltage see model overview Housing Dimensions see model overview Housing Dimensions see model overview RAL7035 (light grey) stainless steel roop RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010-2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 6100-3-2 DIN EN 61000-3-2 CALIBRATION SEED CALIB	Protective devices	overpower	
Seense	Monitoring	reverse polarity indication undervoltage indication (if the input voltage is too low for	
Sense PH2/7.62-BU16, see starting at page 123 Operating conditions Operating temperature 5 40 °C Stock temperature -25 65 °C Max. operating height 2,000 m above sea level Pollution degree 2 Overvoltage category of mains II Max. humidity 80 % at 31 °C, linear decreasing to 50 % at 40 °C Min. distance rear panel to wall or other objects 70 cm Cooling 2-stage air cooling Cabinet installation with minimum 1 U vented front panel each above and below the device Noise, weight see model overview Mains voltage see model overview Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption see model overview Housing Dimensions see model overview Color front rear stainless steel RAL7035 (light grey) stainless steel RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-2-030	Terminals		
Operating conditions Operating temperature Stock temperature -25 40 °C Max. operating height Pollution degree 2 Overvoltage category of mains Max. humidity 80 % at 31 °C, linear decreasing to 50 % at 40 °C Min. distance rear panel to wall or other objects Cooling Cabinet installation With minimum 1 U vented front panel each above and below the device Noise, weight see model overview Mains voltage Mains voltage Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption See model overview Housing Dimensions See model overview Color front rear top RAL7035 (light grey) stainless steel top RAL7037 (dusty grey) 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 EMC DIN EN 61010-3-2 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN // O port standard (not isolated) Available options Calibration, warranty	Load input	see model overview	
Stock temperature Stock temperature Stock temperature -25 65 °C Max. operating height 2,000 m above sea level Pollution degree 2 Overvoltage category of mains Max. humidity Max. humidity Max. humidity 80 % at 31 °C, linear decreasing to 50 % at 40 °C Min. distance rear panel to wall or other objects Cooling Cabinet installation with minimum 1 U vented front panel each above and below the device Noise, weight see model overview Mains voltage see model overview Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption see model overview Housing Dimensions See model overview Safety and EMC Protection class 1 Measuring category O (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-2-030 EMC DIN EN 61010-2-030 EMC DIN EN 6100-3-2 DIN EN 61000-3-2 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces RS-232, USB, LAN, CAN J/O port standard (not isolated) Available options Data interface GPIB Hardware extensions SCL06 Galibration, warranty	Sense	PH2/7.62-BU16, see starting at page 123	
rature Stock temperature Asx. operating height Pollution degree 2 Overvoltage category of mains Max. humidity 80 % at 31 °C, linear decreasing to 50 % at 40 °C Min. distance rear panel to wall or other objects Cooling Cabinet installation With minimum 1 U vented front panel each above and below the device Noise, weight Mains voltage See model overview Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption See model overview Housing Dimensions See model overview RAL7035 (light grey) stainless steel top RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61010-2-030 EMC DIN EN 6100-3-2 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces Data interface RS-232, USB, LAN, CAN Vo port Sclude GPIB Hardware extensions SCL06 GPIB Hardware extensions SCL06 Calibration, warranty	Operating conditions		
Max. operating height Pollution degree 2 Overvoltage category of mains Max. humidity 80 % at 31 °C, tinear decreasing to 50 % at 40 °C Min. distance rear panel to wall or other objects Cooling Cabinet installation below the device Noise, weight see model overview Mains voltage see model overview Mains voltage see model overview Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption See model overview Housing Dimensions See model overview Kary of the device See model overview Housing Dimensions See model overview Color front rear stainless steel RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category O (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-2-030 EMC DIN EN 61010-2-030 EMC DIN EN 61000-3-2 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options ScL06 GPIB Hardware extensions SCL06 Calibration, warranty		5 40 °C	
Pollution degree 2 Overvoltage category of mains Max. humidity 80 % at 31 °C, linear decreasing to 50 % at 40 °C Min. distance rear panel to wall or other objects Cooling 2-stage air cooling Cabinet installation with minimum 1 U vented front panel each above and below the device Noise, weight see model overview Mains voltage see model overview Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption see model overview Housing Dimensions see model overview Color front RAL7035 (light grey) stainless steel top RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61000-3-2 DIN EN 61000-3-2 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface GPIB Hardware extensions SCL06 Calibration, warranty	Stock temperature	-25 65 °C	
Overvoltage category of mains Max. humidity 80 % at 31 °C, linear decreasing to 50 % at 40 °C Min. distance rear panel to wall or other objects Cooling 2-stage air cooling Cabinet installation with minimum 1 U vented front panel each above and below the device Noise, weight See model overview Mains voltage Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption See model overview Housing Dimensions See model overview Color front RAL7035 (light grey) stainless steel RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61010-2-030 EMC DIN EN 61000-3-2 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port Standard (not isolated) Available options Data interface GPIB Hardware extensions SCL06 Calibration, warranty	Max. operating height	2,000 m above sea level	
category of mains Max. humidity 80 % at 31 °C, linear decreasing to 50 % at 40 °C Min. distance rear panel to wall or other objects Cooling 2-stage air cooling Cabinet installation with minimum 1 U vented front panel each above and below the device Noise, weight See model overview Mains voltage Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption See model overview Housing Dimensions See model overview Color front RAL7035 (light grey) stainless steel top RAL7037 (dusty grey) 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 EMC DIN EN 61326-1 DIN EN 61326-1 DIN EN 61300-3-2 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN Available options Data interface GPIB Hardware extensions SCL06 Calibration, warranty	Pollution degree	2	
Min. distance rear panel to wall or other objects Cooling 2-stage air cooling Cabinet installation with minimum 1 U vented front panel each above and below the device Noise, weight see model overview Mains voltage see model overview Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption see model overview Housing Dimensions see model overview Color front RAL7035 (light grey) stainless steel RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces Data interface RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL06 GPIB Hardware extensions SCL06 Calibration, warranty		Ш	
panel to wall or other objects Cooling 2-stage air cooling Cabinet installation with minimum 1 U vented front panel each above and below the device Noise, weight see model overview Mains voltage see model overview Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption see model overview Housing Dimensions see model overview Color RAL7035 (light grey) stainless steel RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty	Max. humidity	80 % at 31 °C, linear decreasing to 50 % at 40 °C	
Cabinet installation with minimum 1 U vented front panel each above and below the device Noise, weight see model overview Mains voltage see model overview Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption see model overview Housing Dimensions see model overview Color front RAL7035 (light grey) stainless steel RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-2-030 EMC DIN EN 61010-2-030 EMC DIN EN 55011 DIN EN 5000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty	panel to wall or other	70 cm	
below the device Noise, weight see model overview Mains voltage see model overview Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption see model overview Housing Dimensions see model overview Color front RAL7035 (light grey) stainless steel rop stainless steel RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 61000-3-2 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 Galibration, warranty	Cooling	2-stage air cooling	
Mains voltage see model overview Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption see model overview Housing Dimensions see model overview Color front RAL7035 (light grey) stainless steel rop RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61010-2-030 EMC DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 Galvanically isolated I/O port Calibration, warranty	Cabinet installation	· ·	
Mains cable length max. 3 m cross-section of mains leads min. 1 mm² Power consumption see model overview Housing Dimensions see model overview Color front RAL7035 (light grey) stainless steel rop RAL7037 (dusty grey) 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 EMC DIN EN 61326-1 DIN EN 61000-3-2 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 Galvanically isolated I/O port Calibration, warranty	Noise, weight	see model overview	
Cross-section of mains leads min. 1 mm² Power consumption see model overview Housing Dimensions see model overview Color front RAL7035 (light grey) stainless steel top RAL7037 (dusty grey) 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 EMC DIN EN 61326-1 DIN EN 61326-1 DIN EN 61000-3-2 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 Galvanically isolated I/O port Calibration, warranty	Mains voltage	see model overview	
Housing Dimensions See model overview Color front RAL7035 (light grey) stainless steel top RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category Color (RAL7037 (dusty grey)) Safety and EMC Protection class 1 Measuring category DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 61000-3-2 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty	Mains cable		
Dimensions see model overview Color front rear stainless steel RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 Galvanically isolated I/O port Calibration, warranty	Power consumption	see model overview	
Dimensions see model overview Color front rear stainless steel RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 Galvanically isolated I/O port Calibration, warranty	Housing		
front rear top RAL7035 (light grey) stainless steel RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 55011 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/0 port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 Galvanically isolated I/0 port Calibration, warranty		see model overview	
rear top Stainless steel RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN 1/0 port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/0 port Calibration, warranty	Color		
top RAL7037 (dusty grey) Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 Galibration, warranty			
Safety and EMC Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty			
Protection class 1 Measuring category 0 (CAT I according to EN 61010:2004) Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty	Safety and EMC		
Electrical safety DIN EN 61010-1 DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty		1	
DIN EN 61010-2-030 EMC DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty	Measuring category	O (CAT I according to EN 61010:2004)	
DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3 Standard interfaces Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty	Electrical safety		
Data interfaces RS-232, USB, LAN, CAN I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty	EMC	DIN EN 55011 DIN EN 61000-3-2	
I/O port standard (not isolated) Available options Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty	Standard interfaces		
Available options Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty	Data interfaces	RS-232, USB, LAN, CAN	
Data interface SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty	I/O port	standard (not isolated)	
SCL02 GPIB Hardware extensions SCL06 galvanically isolated I/O port Calibration, warranty	Available options		
SCL06 galvanically isolated I/O port Calibration, warranty		GPIB	
		galvanically isolated I/O port	
FCC-SCLxx Factory Calibration Certificate, twice for free 4)	Calibration, warranty		
	FCC-SCLxx	Factory Calibration Certificate, twice for free 4)	
Recommended calibration interval 2 years		2 years	
Warranty 2 years	Warranty	2 years	

Technical data of production series A, rev. 2. Subject to technical changes without notice.

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

- The applicable time or frequency range is limited by the rise/fall time of the respective model. positive/negative DC voltage or RMS value of a sinusoidal AC voltage only 0 ... 10 V

 The second calibration is free of charge if the particular device has been registered with H&H: www.hoecherl-hackl.com/service/device-registration