High Power Electronic Loads ZS vs. PLI (A), (B), MR

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Höcherl & Hackl
The electronic load

This document shows functional and SCPI command differences between ZS and PLI production series A and B and MR variant electronic loads. Refer to user manuals and technical datasheets for detailed analysis.

Rev. 6

	ZS	PLI Production Series A	PLI Production Series B	PLIxxxxMR Multirange Variant Production Series B
Manufacturer	H&H	H&H	H&H	H&H
Series	ZS	PLI	PLI	PLIxxxxMR Multirange Variant
		Production Series A	Production Series B	Production Series B
Continuous power max.	28,800 W single range / 500 W multi-range	28,800 W	28,800 W	1,500 W
Voltage classes	60 V, 120 V, 300 V, 600 V, 800 V, 1200 V	60 V, 120 V, 300 V, 600 V, 800 V, 1200 V	60 V, 120 V, 300 V, 600 V, 800 V, 1200 V	80 V, 120 V, 300 V, 800 V
Current ranges	2/3/4	1	1	3/4
Autoranging	yes	--	--	no
Basic operating modes	CC, CV, CR, CP	CC, CV, CR, CP	CC, CV, CR, CP	CC, CV, CR, CP
Combined operating modes	CC+CV, CR+CC+CV, CP+CC+CV, CV+CC by overcurrent and undervoltage protection	CC+CV, CR+CC+CV, CP+CC+CV, CV+CC by overcurrent and undervoltage protection, IUa mode at discharge function	CC+CV, CR+CC+CV, CP+CC+CV, CV+CC by overcurrent and undervoltage protection, IUa mode at discharge function	CC+CV, CR+CC+CV, CP+CC+CV, CV+CC by overcurrent and undervoltage protection, IUa mode at discharge function
Min. input voltage Vmin for Imax	1 V (60 V and 120 V devices) 2 V (>=300 V devices)	1.2 V (60 V and 120 V models) 2 V (>=300 V models) 5 V (PLIxxxxEC models)	1.2 V (60 V and 120 V models) 2 V (>=300 V models) 5 V (PLIxxxxEC models)	1.2 V (80 V and 120 V models) 2 V (>=300 V models)
Input capacity	ca. 2 µF/1,000 W	ca. 2 µF/600 W	ca. 2 µF/600 W	ca. 2 µF/600 W
Operating temperature	5 … 40 °C	5 … 40 °C	5 … 40 °C	5 … 40 °C
Power derating	-1.2 %/°C for Ta > 21 °C	-1.2 %/°C for Ta > 21 °C	-1.2 %/°C for Ta > 21 °C	-1.6 %/°C for Ta > 21 °C
Voltage setting				
Accuracy	0.2 % of setting 0.05 % of range	0.2 % of setting 0.05 % of range	0.2 % of setting 0.05 % of range	0.2 % of setting 0.05 % of range
Resolution	16 bits	14 bits	14 bits	14 bits
Current setting				
Accuracy	0.2 % of setting 0.05 % of range	0.2 % of setting 0.05 % of range	0.2 % of setting 0.05 % of range	0.2 % of setting 0.05 % of range
Resolution	16 bits	14 bits	14 bits	14 bits
Resistance setting (local)				
Accuracy	1.4 % of setting 0.3 % of current range	1.4 % of setting 0.3 % of current range at V > 5 % of voltage range	1.4 % of setting 0.3 % of current range at V > 5 % of voltage range	1.4 % of setting 0.3 % of current range at V > 5 % of voltage range
Resistance setting (remote)				
Accuracy	1 % of setting 0.3 % of current range	1.4 % of setting 0.3 % of current range at V > 5 % of voltage range	1.4 % of setting 0.3 % of current range at V > 5 % of voltage range	1.4 % of setting 0.3 % of current range at V > 5 % of voltage range
Resolution	16 bits	14 bits	14 bits	14 bits
Power setting (local)				
Accuracy	1.4 % of setting 0.5 % of range	0.35 % of setting, 0.1 % of range (V and I > 30 % of range) 0.7 % of setting, 0.25 % of range (V or I < 30 % of range)	0.35 % of setting, 0.1 % of range (V and I > 30 % of range) 0.7 % of setting, 0.25 % of range (V or I < 30 % of range)	0.35 % of setting, 0.1 % of range (V and I > 30 % of range) 0.7 % of setting, 0.25 % of range (V or I < 30 % of range)
Power setting (remote)				
Accuracy	1 % of setting 0.5 % of range	0.35 % of setting, 0.1 % of range (V and I > 30 % of range) 0.7 % of setting, 0.25 % of range (V or I < 30 % of range)	0.35 % of setting, 0.1 % of range (V and I > 30 % of range) 0.7 % of setting, 0.25 % of range (V or I < 30 % of range)	0.35 % of setting, 0.1 % of range (V and I > 30 % of range) 0.7 % of setting, 0.25 % of range (V or I < 30 % of range)
Resolution	16 bits	14 bits	14 bits	14 bits
Protections				
Hardware protections and warnings	OCP, OPP, OTP protection OV, UV warning	OCP, OPP, OTP protection UV, RV, OV warning	OCP, OPP, OTP protection UV, RV, OV warning	OCP, OPP, OTP protection UV, RV, OV warning
Accuracy variable undervoltage protection	1.4 % of setting (local) 1 % of setting (remote, 16 bits resolution) 0.3 % of range	1.4 % of setting 0.3 % of range 12 bits resolution	1.4 % of setting 0.3 % of range 12 bits resolution	1.4 % of setting 0.3 % of range 12 bits resolution
Accuracy variable overcurrent protection	1.4 % of setting (local) 1 % of setting (remote, 16 bits resolution) 0.3 % of range	1.4 % of setting 0.3 % of range 12 bits resolution	1.4 % of setting 0.3 % of range 12 bits resolution	1.4 % of setting 0.3 % of range 12 bits resolution
Rise/fall time	model-specific	model-specific	model-specific, factor 3 faster than production series A (except PLI6xx, PLI12xx, PLI21xx)	model-specific
Measurement/display				
Display	4 digits LED voltage 4 digits LED current	Graphical User Interface	Graphical User Interface, enhanced menu navigation	Graphical User Interface, enhanced menu navigation
Voltage measurement accuracy	0.2 % of meas. value 0.05 % of range ±1 digit	0.03% of meas. value 0.02 % of range 18 bits	0.01% of meas. value 0.005 % of range 23 bits	0.01% of meas. value 0.005 % of range 23 bits
Current measurement accuracy	0.2 % of meas. value 0.05 % of active range	0.2 % of meas. value 0.05 % of range 18 bits	0.2 % of meas. value 0.05 % of range 23 bits	0.2 % of meas. value 0.05 % of active range 23 bits
Resistance measurement accuracy	--	calculated of voltage and current measurement	calculated of voltage and current measurement	calculated of voltage and current measurement
Power measurement accuracy	--	calculated of voltage and current measurement	calculated of voltage and current measurement	calculated of voltage and current measurement
Remote measurement in static modes				
Voltage measurement accuracy	0.1 % of meas. value 0.05 % of range	0.03% of meas. value 0.02 % of range	0.01% of meas. value 0.005 % of range	0.01% of meas. value 0.005 % of range
Current measurement accuracy	0.2 % of meas. value 0.05 % of active range	0.2 % of meas. value 0.05 % of range	0.2 % of meas. value 0.05 % of range	0.2 % of meas. value 0.05 % of active range
Resistance measurement accuracy	--	calculated of voltage and current measurement	calculated of voltage and current measurement	calculated of voltage and current measurement
Power measurement accuracy	--	calculated of voltage and current measurement	calculated of voltage and current measurement	calculated of voltage and current measurement
ADC resolution	18 bits	18 bits	23 bits	23 bits
Reset state of voltage protection	--	regulating	switching	switching
Dynamic function (LIST)	with Option ZS13	standard	standard	standard
Number of dynamic settings	50 list points with ramp and dwell times (LIST)	300 list points with ramp and dwell times (LIST)	300 list points with ramp and dwell times (LIST)	300 list points with ramp and dwell times (LIST)
Time resolution	200 µs	200 µs	200 µs	200 µs
Number of measurement points	2,000	8,000	40,000	40,000
Number of iterations	infinite	4,000,000,000	999,999	999,999
Maximum dwell, ramp and sample time	2,000 s	800,000 s	1,000 s	1,000 s
Voltage measurement accuracy	0.15 % of meas. value 0.07 % of range	0.2 % of meas. value 0.1 % of range	0.1 % of meas. value 0.05 % of range	0.1 % of meas. value 0.05 % of range
Current measurement accuracy	0.3 % of meas. value 0.07 % of active range	0.2 % of meas. value 0.1 % of range	0.2 % of meas. value 0.1 % of range	0.2 % of meas. value 0.1 % of active range
Resolution	15 bits	12 bits	16 bits	16 bits

Rectangle function	by TRANsient function	by LIST function	by LIST or RECTangle function with amplitude and offset	by LIST or RECTangle function with amplitude and offset
Watchdog function	yes	yes	yes	yes
Save/recall settings	no	2 memories + 1 for power off settings	9 memories + 1 for power off settings	9 memories + 1 for power off settings
MPP tracking	yes, hill climbing method	yes, optional, hill climbing method	yes, optional, configurable sweep functionality to find global MPP, readable and displayable V/I characteristic	yes, optional, configurable sweep functionality to find global MPP, readable and displayable V/I characteristic
Battery test function	yes, stop criterion test-end voltage, data logging by trigger system	yes, several stop criteria, IUa mode, data logging with follow-up time	yes, several stop criteria, IUa mode, data logging with follow-up time, combineable with LIST function	yes, several stop criteria, IUa mode, data logging with follow-up time, combineable with LIST function
Internal resistance measurement	no	yes, like specified e.g. in DIN EN 61951, DIN EN 61960	yes, like specified e.g. in DIN EN 61951, DIN EN 61960	yes, like specified e.g. in DIN EN 61951, DIN EN 61960
Charger starter interface	no	no	yes, optional	yes, optional
Data logging to USB MSD	no	yes, sample rate 0.5 s, 1 s, 5 s, 10 s	yes, sample rate 0.5 … 30 s with 0.1 s resolution	yes, sample rate 0.5 … 30 s with 0.1 s resolution
Trigger system	yes (extern, bus)	yes (extern, bus, manual, voltage)	yes (extern, bus, manual, voltage, current)	yes (extern, bus, manual, voltage, current)
Keylock function	no	yes	yes	yes
Preset function	no	yes	yes	yes
t/V graph, t/I graph	no	no	yes	yes
V/I characteristic graph	no	no	yes	yes
Screenshot function	no	no	yes	yes
Setting toggling	yes	no	no	yes
Permissible potentials of neg. load input	±125 V (DC or AC) to PE ±500 V (DC or AC) to PE with ZS06 option	±125 V (DC or AC) to PE	±125 V (DC or AC) to PE ±800 V (DC or AC) to PE with PLI06 option	±125 V (DC or AC) to PE ±800 V (DC or AC) to PE with PLI06 option
I/O port	standard, not isolated isolated version ZS06 optional	standard, not isolated isolated version PLI06 optional	standard, not isolated isolated version PLI06 optional	standard, not isolated isolated version PLI06 optional
Analog control	0 … 5 V or 0 … 10 V	0 … 10 V	0 … 10 V	0 … 10 V
Analog control sampling rate	analog/real time	analog/real time	analog/real time	analog/real time
Ext. setting control	0 … Imax 0 … Vmax 0 … Pmax	0 … Imax 0 … Vmax 0 … Iprotmax 0 … Vprotmax	0 … Imax 0 … Vmax 0 … Iprotmax 0 … Vprotmax	0 … Imax 0 … Vmax 0 … Iprotmax 0 … Vprotmax
Monitor signals	I, V, P	I, V	I, V	I, V
Monitor sampling rate	analog/real time	analog/real time	analog/real time	analog/real time
Digital control signals (inputs)	load on-off emergency off (remote shut-down) control input for ext. control activation operating mode control trigger input setting A-B setting range control	load on-off remote shut-down control input for ext. control activation operating mode control trigger input readable logic input	load on-off remote shut-down control input for ext. control activation operating mode control trigger input readable logic input	load on-off remote shut-down control input for ext. control activation operating mode control trigger input readable logic input
Digital outputs	overload trigger output during dynamic operation (setting A-B) UVP status	overload load on-off trigger output programmable logic output	overload load on-off trigger output programmable logic output	overload load on-off trigger output programmable logic output
Digital outputs' voltage levels	5 V / 24 V (switchable)	3.3 V, 5 V, 12 V, externally programmable up to 24 V	3.3 V, 5 V, 12 V, externally programmable up to 24 V	3.3 V, 5 V, 12 V, externally programmable up to 24 V
Permissible potential of GNDs at standard I/O port	max. ±2 V (DC or AC) to Input- max. ±125 V (DC or AC) to PE	max. ±2 V (DC or AC) to Input- max. ±125 V (DC or AC) to PE	max. ±2 V (DC or AC) to Input- max. ±125 V (DC or AC) to PE	max. ±2 V (DC or AC) to Input- max. ±125 V (DC or AC) to PE
Permissible potential of GNDs at isolated I/O port	max. ±500 V (DC or AC) to Input- max. ±125 V (DC or AC) to PE	max. ±125 V (DC or AC) to Input- max. ±125 V (DC or AC) to PE	max. ±800 V (DC or AC) to Input- max. ±125 V (DC or AC) to PE	max. ±800 V (DC or AC) to Input- max. ±125 V (DC or AC) to PE
Sense terminals	binding post or safety laboratory socket	binding post or safety laboratory socket	Phoenix PH2/7.62-ST16	Phoenix PH2/7.62-ST16
Data interfaces				
	USB optional	USB standard	USB standard	USB standard
	RS-232 optional	RS-232 standard	RS-232 standard	RS-232 standard
		CAN standard	CAN standard, can be internally terminated	CAN standard, can be internally terminated
	external Ethernet optional	Ethernet standard	Ethernet standard	Ethernet standard
	GPIB optional	GPIB optional	GPIB optional	GPIB optional
SCPI syntax	yes	yes	yes	yes
LabVIEW drivers	yes, NI certified	yes, NI certified	yes, NI certified	yes, NI certified
Software tools	yes	yes	yes	yes
Firmware update	by flashing tool via RS-232	via USB MSD (front)	via USB MSD (front)	via USB MSD (front)
Master-Slave operation in system connection	no	no	yes	yes
Safety compliance	DIN EN 61010-1 DIN EN 61010-2-030	DIN EN 61010-1 DIN EN 61010-2-030	DIN EN 61010-1 DIN EN 61010-2-030	DIN EN 61010-1 DIN EN 61010-2-030
EMC compliance	DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3	DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3	DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3	DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3
Front panel color	RAL 7032	RAL 7032	RAL 7035	RAL 7035
Calibration	Free H&H calibration service for new device, another free calibration within warranty period	Free H&H calibration service for new device, another free calibration within warranty period	Free H&H calibration service for new device, another free calibration within warranty period	Free H&H calibration service for new device, another free calibration within warranty period

SCPI Commands ZS vs. PLI (A), (B), –MR

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For identical commands/queries, the following notes must be considered:
- The setting values after resetting the system may differ.
- The actual, numeric settings when passing parameters MIN or MAX may differ.
- The format of transferred parameters can differ.
- The format of returned values and strings may differ.
- The assignment of status registers can differ.
- The control behavior with regard to speed and accuracy may differ.
- The scope of commands can differ.

Use the user manuals to analyze the detailed differences between the ZS and PLI series commands/queries.
n. a. = not available

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ZS	PLI Production Series A	PLI Production Series B	PLIxxxxMR Multirange Variant Production Series B	Remark
Common Commands				
*CLS	*CLS	*CLS	*CLS	
*ESE	*ESE	*ESE	*ESE	
*ESE?	*ESE?	*ESE?	*ESE?	
*ESR?	*ESR?	*ESR?	*ESR?	
*IDN?	*IDN?	*IDN?	*IDN?	
*OPC	*OPC	*OPC	*OPC	
*OPC?	*OPC?	*OPC?	*OPC?	
n. a.	*OPT?	*OPT?	*OPT?	
n. a.	*RCL	*RCL	*RCL	
*RST	*RST	*RST	*RST	
n. a.	*SAV	*SAV	*SAV	
*SRE	*SRE	*SRE	*SRE	ZS loads do not produce an SRQ, independent from the set register value.
*SRE?	*SRE?	*SRE?	*SRE?	
*STB?	*STB?	*STB?	*STB?	
*TRG	*TRG	*TRG	*TRG	
*TST?	*TST?	*TST?	*TST?	
*WAI	*WAI	*WAI	*WAI	
Device-dependent Commands				
Subsystem ACQuisition				
n. a.	ACQuisition[:STATe]	ACQuisition[:STATe]	ACQuisition[:STATe]	
n. a.	ACQuisition[:STATe]?	ACQuisition[:STATe]?	ACQuisition[:STATe]?	
n. a.	ACQuisition:STIMe	ACQuisition:STIMe	ACQuisition:STIMe	
n. a.	ACQuisition:STIMe?	ACQuisition:STIMe?	ACQuisition:STIMe?	
n. a.	ACQuisition:TRIGger	ACQuisition:TRIGger	ACQuisition:TRIGger	
n. a.	ACQuisition:TRIGger?	ACQuisition:TRIGger?	ACQuisition:TRIGger?	
Subsystem CHANnel				
CHANnel INSTrument	n. a.	n. a.	n. a.	
Subsystem CURRent				
CURRent[:LEVel][:IMMediate]	CURRent[:LEVel][:IMMediate]	CURRent[:LEVel][:IMMediate]	CURRent[:LEVel][:IMMediate]	
CURRent[:LEVel][:IMMediate]?	CURRent[:LEVel][:IMMediate]?	CURRent[:LEVel][:IMMediate]?	CURRent[:LEVel][:IMMediate]?	
CURRent[:LEVel]:TRIGgered	CURRent[:LEVel]:TRIGgered	CURRent[:LEVel]:TRIGgered	CURRent[:LEVel]:TRIGgered	
CURRent[:LEVel]:TRIGgered?	CURRent[:LEVel]:TRIGgered?	CURRent[:LEVel]:TRIGgered?	CURRent[:LEVel]:TRIGgered?	
CURRent:MODE	n. a.	n. a.	n. a.	
CURRent:MODE?	n. a.	n. a.	n. a.	
CURRent:PROTection[:LEVel][:HIGH]	CURRent:PROTection[:LEVel]	CURRent:PROTection[:LEVel]	CURRent:PROTection[:LEVel]	
CURRent:PROTection[:LEVel][:HIGH]?	CURRent:PROTection[:LEVel]?	CURRent:PROTection[:LEVel]?	CURRent:PROTection[:LEVel]?	
CURRent:PROTection:TRIPped?	n. a.	n. a.	n. a.	
CURRent:RANGe	n. a.	n. a.	n. a.	
CURRent:RANGe?	n. a.	n. a.	CURRent:RANGe?	
CURRent:RANGe:AUTO	n. a.	n. a.	n. a.	
Subsystem DATA				
n. a.	DATA:DELete	DATA:DELete	DATA:DELete	
DATA:POINts? TRACe:POINts?	DATA:POINts?	DATA:POINts?	DATA:POINts?	
DATA:REMove? TRACe:REMove?	DATA:REMove?	DATA:REMove?	DATA:REMove?	
Subsystem DELay				
DELay	n. a.	n. a.	n. a.	
Subsystem FORMat				
n. a.	FORMat[:DATA]	FORMat[:DATA]	FORMat[:DATA]	
n. a.	FORMat[:DATA]?	FORMat[:DATA]?	FORMat[:DATA]?	
n. a.	FORMat:SREGister	FORMat:SREGister	FORMat:SREGister	
n. a.	FORMat:SREGister?	FORMat:SREGister?	FORMat:SREGister?	
Subsystem FUNCtion				
n. a.	FUNCtion:MEASure:IRESistance[:STATe]	FUNCtion:MEASure:IRESistance[:STATe]	FUNCtion:MEASure:IRESistance[:STATe]	
n. a.	FUNCtion:MEASure:IRESistance[:STATe]?	FUNCtion:MEASure:IRESistance[:STATe]?	FUNCtion:MEASure:IRESistance[:STATe]?	
n. a.	FUNCtion:MEASure:IRESistance:CURRent	FUNCtion:MEASure:IRESistance:CURRent	FUNCtion:MEASure:IRESistance:CURRent	
n. a.	FUNCtion:MEASure:IRESistance:CURRent?	FUNCtion:MEASure:IRESistance:CURRent?	FUNCtion:MEASure:IRESistance:CURRent?	
n. a.	FUNCtion:MEASure:IRESistance:DWELl	FUNCtion:MEASure:IRESistance:DWELl	FUNCtion:MEASure:IRESistance:DWELl	
n. a.	FUNCtion:MEASure:IRESistance:DWELl?	FUNCtion:MEASure:IRESistance:DWELl?	FUNCtion:MEASure:IRESistance:DWELl?	
n. a.	FUNCtion:MEASure:IRESistance:RESistance?	FUNCtion:MEASure:IRESistance:RESistance?	FUNCtion:MEASure:IRESistance:RESistance?	
n. a.	FUNCtion:MEASure:IRESistance:TIME?	FUNCtion:MEASure:IRESistance:TIME?	FUNCtion:MEASure:IRESistance:TIME?	
n. a.	FUNCtion:ZVOLtage	FUNCtion:ZVOLtage	FUNCtion:ZVOLtage	
n. a.	FUNCtion:ZVOLtage?	FUNCtion:ZVOLtage?	FUNCtion:ZVOLtage?	
n. a.	FUNCtion:MPPT[:STATe]	FUNCtion:MPPT[:STATe]	FUNCtion:MPPT[:STATe]	
n. a.	FUNCtion:MPPT[:STATe]?	FUNCtion:MPPT[:STATe]?	FUNCtion:MPPT[:STATe]?	
n. a.	FUNCtion:MPPT:ENERgy?	FUNCtion:MPPT:ENERgy?	FUNCtion:MPPT:ENERgy?	
n. a.	n. a.	FUNCtion:MPPT:MPP?	FUNCtion:MPPT:MPP?	
n. a.	n. a.	FUNCtion:MPPT:SWEep[:IMMediate]	FUNCtion:MPPT:SWEep[:IMMediate]	
n. a.	n. a.	FUNCtion:MPPT:SWEep:DATA?	FUNCtion:MPPT:SWEep:DATA?	
n. a.	n. a.	FUNCtion:MPPT:SWEep:DATA:POINts?	FUNCtion:MPPT:SWEep:DATA:POINts?	
n. a.	n. a.	FUNCtion:MPPT:SWEep:DIRection	FUNCtion:MPPT:SWEep:DIRection	
n. a.	n. a.	FUNCtion:MPPT:SWEep:DIRection?	FUNCtion:MPPT:SWEep:DIRection?	
n. a.	n. a.	FUNCtion:MPPT:SWEep:PERiod	FUNCtion:MPPT:SWEep:PERiod	
n. a.	n. a.	FUNCtion:MPPT:SWEep:PERiod?	FUNCtion:MPPT:SWEep:PERiod?	
n. a.	n. a.	FUNCtion:MPPT:SWEep:TIME	FUNCtion:MPPT:SWEep:TIME	
n. a.	n. a.	FUNCtion:MPPT:SWEep:TIME?	FUNCtion:MPPT:SWEep:TIME?	
Subsystem GTL				
GTL	SYSTem:LOCal	SYSTem:LOCal	SYSTem:LOCal	
Subsystem INPut				
INPut[:STATe] OUTPut[:STATe]	INPut[:STATe]	INPut[:STATe]	INPut[:STATe]	
INPut[:STATe]? OUTPut[:STATe]?	INPut[:STATe]?	INPut[:STATe]?	INPut[:STATe]?	
Subsystem LIST				
n. a.	LIST:ACQuisition[:STATe]	LIST:ACQuisition[:STATe]	LIST:ACQuisition[:STATe]	
LIST:COUNt	LIST:COUNt	LIST:COUNt	LIST:COUNt	
n. a.	LIST:COUNt?	LIST:COUNt?	LIST:COUNt?	
LIST:CURRent[:LEVel]	LIST:CURRent[:LEVel]	LIST:CURRent[:LEVel]	LIST:CURRent[:LEVel]	
n. a.	LIST:CURRent[:LEVel]?	LIST:CURRent[:LEVel]?	LIST:CURRent[:LEVel]?	
n. a.	LIST:CURRent[:LEVel]:POINts?	LIST:CURRent[:LEVel]:POINts?	LIST:CURRent[:LEVel]:POINts?	
LIST:CURRent:RTIMe	LIST:RTIMe	LIST:RTIMe	LIST:RTIMe	
LIST:CURRent:DWELl	LIST:DWELl	LIST:DWELl	LIST:DWELl	
LIST:CURRent:STRamp	LIST:STIMe:RTIMe	LIST:STIMe:RTIMe	LIST:STIMe:RTIMe	
LIST:CURRent:STDWell	LIST:STIMe:DWELl	LIST:STIMe:DWELl	LIST:STIMe:DWELl	

	n. a.	LIST:DWELl?	LIST:DWELl?	LIST:DWELl?	
	n. a.	LIST:DWELl:POINts?	LIST:DWELl:POINts?	LIST:DWELl:POINts?	
	n. a.	LIST:MODE	LIST:MODE	LIST:MODE	
	n. a.	LIST:MODE?	LIST:MODE?	LIST:MODE?	
	LIST:POWer[:LEVel]	LIST:POWer[:LEVel]	LIST:POWer[:LEVel]	LIST:POWer[:LEVel]	
	n. a.	LIST:POWer[:LEVel]?	LIST:POWer[:LEVel]?	LIST:POWer[:LEVel]?	
	n. a.	LIST:POWer[:LEVel]:POINts?	LIST:POWer[:LEVel]:POINts?	LIST:POWer[:LEVel]:POINts?	
	LIST:POWer:RTIMe	LIST:RTIMe	LIST:RTIMe	LIST:RTIMe	
	LIST:POWer:DWELl	LIST:DWELl	LIST:DWELl	LIST:DWELl	
	LIST:POWer:STRamp	LIST:STIMe:RTIMe	LIST:STIMe:RTIMe	LIST:STIMe:RTIMe	
	LIST:POWer:STDwell	LIST:STIMe:DWELl	LIST:STIMe:DWELl	LIST:STIMe:DWELl	
	LIST:RESistance[:LEVel]	LIST:RESistance[:LEVel]	LIST:RESistance[:LEVel]	LIST:RESistance[:LEVel]	
	n. a.	LIST:RESistance[:LEVel]?	LIST:RESistance[:LEVel]?	LIST:RESistance[:LEVel]?	
	n. a.	LIST:RESistance[:LEVel]:POINts?	LIST:RESistance[:LEVel]:POINts?	LIST:RESistance[:LEVel]:POINts?	
	LIST:RESistance:RTIMe	LIST:RTIMe	LIST:RTIMe	LIST:RTIMe	
	LIST:RESistance:DWELl	LIST:DWELl	LIST:DWELl	LIST:DWELl	
	LIST:RESistance:STRamp	LIST:STIMe:RTIMe	LIST:STIMe:RTIMe	LIST:STIMe:RTIMe	
	LIST:RESistance:STDWell	LIST:STIMe:DWELl	LIST:STIMe:DWELl	LIST:STIMe:DWELl	
	n. a.	LIST:RTIMe?	LIST:RTIMe?	LIST:RTIMe?	
	n. a.	LIST:RTIMe:POINts?	LIST:RTIMe:POINts?	LIST:RTIMe:POINts?	
	LIST:STATe	LIST[:STATe]	LIST[:STATe]	LIST[:STATe]	
	LIST:STATe?	LIST[:STATe]?	LIST[:STATe]?	LIST[:STATe]?	
	n. a.	LIST:STIMe:DWELl?	LIST:STIMe:DWELl?	LIST:STIMe:DWELl?	
	n. a.	LIST:STIMe:DWELl:POINts?	LIST:STIMe:DWELl:POINts?	LIST:STIMe:DWELl:POINts?	
	n. a.	LIST:STIMe:RTIMe?	LIST:STIMe:RTIMe?	LIST:STIMe:RTIMe?	
	n. a.	LIST:STIMe:RTIMe:POINts?	LIST:STIMe:RTIMe:POINts?	LIST:STIMe:RTIMe:POINts?	
	LIST:VOLTage[:LEVel]	LIST:VOLTage[:LEVel]	LIST:VOLTage[:LEVel]	LIST:VOLTage[:LEVel]	
	n. a.	LIST:VOLTage[:LEVel]?	LIST:VOLTage[:LEVel]?	LIST:VOLTage[:LEVel]?	
	n. a.	LIST:VOLTage[:LEVel]:POINts?	LIST:VOLTage[:LEVel]:POINts?	LIST:VOLTage[:LEVel]:POINts?	
	LIST:VOLTage:RTIMe	LIST:RTIMe	LIST:RTIMe	LIST:RTIMe	
	LIST:VOLTage:DWELl	LIST:DWELl	LIST:DWELl	LIST:DWELl	
	LIST:VOLTage:STRamp	LIST:STIMe:RTIMe	LIST:STIMe:RTIMe	LIST:STIMe:RTIMe	
	LIST:VOLTage:STDWell	LIST:STIMe:DWELl	LIST:STIMe:DWELl	LIST:STIMe:DWELl	
	n. a.	LIST:TRIGger[:ENABle]	LIST:TRIGger[:ENABle]	LIST:TRIGger[:ENABle]	

Subsystem MEASure

	MEASure:CHARge[:DC]?	FUNCtion:DISCharge:CHARge?	FUNCtion:DISCharge:CHARge?	FUNCtion:DISCharge:CHARge?	
	MEASure:CURRent[:DC]?	MEASure:CURRent?	MEASure:CURRent?	MEASure:CURRent?	
	MEASure:ENERgy[:DC]?	FUNCtion:MPPT:ENERgy? FUNCtion:DISCharge:ENERgy?	FUNCtion:MPPT:ENERgy? FUNCtion:DISCharge:ENERgy?	FUNCtion:MPPT:ENERgy? FUNCtion:DISCharge:ENERgy?	
	MEASure:EXTernal[:DC]?	n. a.	n. a.	n. a.	
	MEASure:MPP[:DC]?	n. a.	n. a.	n. a.	
	MEASure:POWer[:DC]?	MEASure:POWer?	MEASure:POWer?	MEASure:POWer?	
	MEASure:RESistance[:DC]?	MEASure:RESistance?	MEASure:RESistance?	MEASure:RESistance?	
	n. a.	MEASure:TEMPerature?	MEASure:TEMPerature?	MEASure:TEMPerature?	
	MEASure:VOLTage[:DC]?	MEASure:VOLTage?	MEASure:VOLTage?	MEASure:VOLTage?	

Subsystem MODE

	MODE:CURRent[:DC] FUNCtion:CURRent[:DC]	FUNCtion:MODE	FUNCtion:MODE	FUNCtion:MODE	
	MODE:POWer[:DC] FUNCtion:POWer[:DC]	FUNCtion:MODE	FUNCtion:MODE	FUNCtion:MODE	
	MODE:RESistance[:DC] FUNCtion:RESistance[:DC]	FUNCtion:MODE	FUNCtion:MODE	FUNCtion:MODE	
	MODE:VOLTage[:DC] FUNCtion:VOLTage[:DC]	FUNCtion:MODE	FUNCtion:MODE	FUNCtion:MODE	
	MODE:MPP FUNCtion:MPP	FUNCtion:MPPT[:STATe]	FUNCtion:MPPT[:STATe]	FUNCtion:MPPT[:STATe]	
	MODE? FUNCtion?	FUNCtion:MODE?	FUNCtion:MODE?	FUNCtion:MODE?	

Subsystem PCYCle

	PCYCle:CURRent	n. a.	n. a.	n. a.	
	PCYCle:POWer	n. a.	n. a.	n. a.	
	PCYCle:RESistance	n. a.	n. a.	n. a.	
	PCYCle:VOLTage	n. a.	n. a.	n. a.	
	PCYCle:TIME	n. a.	n. a.	n. a.	
	PCYCle:TRIGgered	n. a.	n. a.	n. a.	
	PCYCle:MODE	n. a.	n. a.	n. a.	
	PCYCle:MODE?	n. a.	n. a.	n. a.	
	PCYCle:STATe	n. a.	n. a.	n. a.	
	PCYCle:STATe?	n. a.	n. a.	n. a.	

Subsystem PORT

	n. a.	PORT:IO:IPIN?	PORT:IO:IPIN?	PORT:IO:IPIN?	
	n. a.	PORT:IO:OPIN	PORT:IO:OPIN	PORT:IO:OPIN	
	n. a.	PORT:IO:OPIN?	PORT:IO:OPIN?	PORT:IO:OPIN?	

Subsystem POWer

	POWer[:LEVel][:IMMediate]	POWer[:LEVel][:IMMediate]	POWer[:LEVel][:IMMediate]	POWer[:LEVel][:IMMediate]	
	POWer[:LEVel][:IMMediate]?	POWer[:LEVel][:IMMediate]?	POWer[:LEVel][:IMMediate]?	POWer[:LEVel][:IMMediate]?	
	POWer:MODE	n. a.	n. a.	n. a.	
	POWer:MODE?	n. a.	n. a.	n. a.	
	POWer:RANGe	n. a.	n. a.	POWer:RANGe?	
	POWer:RANGe?	n. a.	n. a.	n. a.	
	n. a.	POWer[:LEVel][:TRIGgered]	POWer[:LEVel][:TRIGgered]	POWer[:LEVel][:TRIGgered]	
	n. a.	POWer[:LEVel][:TRIGgered]?	POWer[:LEVel][:TRIGgered]?	POWer[:LEVel][:TRIGgered]?	
	n. a.	POWer:PEAK?	POWer:PEAK?	POWer:PEAK?	

Subsystem PROGram

	PROGram[:SELected]:BEGin	n. a.	n. a.	n. a.	
	PROGram[:SELected]:DELete[:SELected]	n. a.	n. a.	n. a.	
	PROGram[:SELected]:DELete:ALL	n. a.	n. a.	n. a.	
	PROGram[:SELected]:END	n. a.	n. a.	n. a.	
	PROGram[:SELected]:NAME	n. a.	n. a.	n. a.	
	PROGram[:SELected]:STATe	n. a.	n. a.	n. a.	

Subsystem RANGe

	n. a.	n. a.	n. a.	RANGe	
	n. a.	n. a.	n. a.	RANGe?	

Subsystem RESistance

	RESistance[:LEVel][:IMMediate]	RESistance[:LEVel][:IMMediate]	RESistance[:LEVel][:IMMediate]	RESistance[:LEVel][:IMMediate]	
	RESistance[:LEVel][:IMMediate]?	RESistance[:LEVel][:IMMediate]?	RESistance[:LEVel][:IMMediate]?	RESistance[:LEVel][:IMMediate]?	
	RESistance[:LEVel]:TRIGgered	RESistance[:LEVel]:TRIGgered	RESistance[:LEVel]:TRIGgered	RESistance[:LEVel]:TRIGgered	
	RESistance[:LEVel]:TRIGgered?	RESistance[:LEVel]:TRIGgered?	RESistance[:LEVel]:TRIGgered?	RESistance[:LEVel]:TRIGgered?	
	RESistance:MODE	n. a.	n. a.	n. a.	
	RESistance:MODE?	n. a.	n. a.	n. a.	
	RESistance:RANGe	n. a.	n. a.	n. a.	
	RESistance:RANGe?	n. a.	n. a.	RESistance:RANGe?	
	RESistance:RANGe:AUTO	n. a.	n. a.	n. a.	

Subsystem SERVice

	n. a.	SERVice:CALibration[:STATe]	SERVice:CALibration[:STATe]	SERVice:CALibration[:STATe]	
	n. a.	SERVice:CALibration[:STATe]?	SERVice:CALibration[:STATe]?	SERVice:CALibration[:STATe]?	
	n. a.	SERVice:PRODuction[:STATe]	SERVice:PRODuction[:STATe]	SERVice:PRODuction[:STATe]	
	n. a.	SERVice:PRODuction[:STATe]?	SERVice:PRODuction[:STATe]?	SERVice:PRODuction[:STATe]?	

Subsystem SETup

	SETup:ADC	n. a.	n. a.	n. a.	
	SETup:ADC?	n. a.	n. a.	n. a.	
	SETup?	n. a.	n. a.	n. a.	

Subsystem SFUNCtion

	SFUNction:BATTery:ENABle	FUNCtion:DISCharge[:STATe]	FUNCtion:DISCharge[:STATe]	FUNCtion:DISCharge[:STATe]	
	SFUNction:BATTery:ENABle?	FUNCtion:DISCharge[:STATe]?	FUNCtion:DISCharge[:STATe]?	FUNCtion:DISCharge[:STATe]?	
	SFUNction:BATTery:STATe?	FUNCtion:DISCharge[:STATe]?	FUNCtion:DISCharge[:STATe]?	FUNCtion:DISCharge[:STATe]?	
	SFUNction:BATTery:TEVoltage	FUNCtion:DISCharge:STOP:VOLTage	FUNCtion:DISCharge:STOP:VOLTage	FUNCtion:DISCharge:STOP:VOLTage	
	SFUNction:BATTery:TEVoltage?	FUNCtion:DISCharge:STOP:VOLTage?	FUNCtion:DISCharge:STOP:VOLTage?	FUNCtion:DISCharge:STOP:VOLTage?	
	n. a.	FUNCtion:DISCharge:CHARge?	FUNCtion:DISCharge:CHARge?	FUNCtion:DISCharge:CHARge?	
	n. a.	FUNCtion:DISCharge:ENERgy?	FUNCtion:DISCharge:ENERgy?	FUNCtion:DISCharge:ENERgy?	

Subsystem STATus

	n. a.	FUNCtion:DISCharge:STOP:CHARge	FUNCtion:DISCharge:STOP:CHARge	FUNCtion:DISCharge:STOP:CHARge
	n. a.	FUNCtion:DISCharge:STOP:CHARge?	FUNCtion:DISCharge:STOP:CHARge?	FUNCtion:DISCharge:STOP:CHARge?
	n. a.	FUNCtion:DISCharge:STOP:CURRent	FUNCtion:DISCharge:STOP:CURRent	FUNCtion:DISCharge:STOP:CURRent
	n. a.	FUNCtion:DISCharge:STOP:CURRent?	FUNCtion:DISCharge:STOP:CURRent?	FUNCtion:DISCharge:STOP:CURRent?
	n. a.	FUNCtion:DISCharge:STOP:ENABle	FUNCtion:DISCharge:STOP:ENABle	FUNCtion:DISCharge:STOP:ENABle
	n. a.	FUNCtion:DISCharge:STOP:ENABle?	FUNCtion:DISCharge:STOP:ENABle?	FUNCtion:DISCharge:STOP:ENABle?
	n. a.	FUNCtion:DISCharge:STOP:ENERgy	FUNCtion:DISCharge:STOP:ENERgy	FUNCtion:DISCharge:STOP:ENERgy
	n. a.	FUNCtion:DISCharge:STOP:ENERgy?	FUNCtion:DISCharge:STOP:ENERgy?	FUNCtion:DISCharge:STOP:ENERgy?
	n. a.	FUNCtion:DISCharge:STOP:EVENt?	FUNCtion:DISCharge:STOP:EVENt?	FUNCtion:DISCharge:STOP:EVENt?
	n. a.	FUNCtion:DISCharge:STOP:TIME	FUNCtion:DISCharge:STOP:TIME	FUNCtion:DISCharge:STOP:TIME
	n. a.	FUNCtion:DISCharge:STOP:TIME?	FUNCtion:DISCharge:STOP:TIME?	FUNCtion:DISCharge:STOP:TIME?
	n. a.	FUNCtion:DISCharge:STOP:VOLTage	FUNCtion:DISCharge:STOP:VOLTage	FUNCtion:DISCharge:STOP:VOLTage
	n. a.	FUNCtion:DISCharge:STOP:VOLTage?	FUNCtion:DISCharge:STOP:VOLTage?	FUNCtion:DISCharge:STOP:VOLTage?
		FUNCtion:DISCharge:TIME?	FUNCtion:DISCharge:TIME?	FUNCtion:DISCharge:TIME?
	SFUNction:EXPonential:ENABle	n. a.	n. a.	n. a.
	SFUNction:EXPonential:ENABle?	n. a.	n. a.	n. a.
	SFUNction:EXPonential:STATe?	n. a.	n. a.	n. a.

Subsystem STATus

	STATus:OPERation:CONDition?	STATus:OPERation:CONDition?	STATus:OPERation:CONDition?	STATus:OPERation:CONDition?
	STATus:OPERation:ENABle	STATus:OPERation:ENABle	STATus:OPERation:ENABle	STATus:OPERation:ENABle
	STATus:OPERation:ENABle?	STATus:OPERation:ENABle?	STATus:OPERation:ENABle?	STATus:OPERation:ENABle?
	STATus:OPERation[:EVENt]?	STATus:OPERation[:EVENt]?	STATus:OPERation[:EVENt]?	STATus:OPERation[:EVENt]?
	STATus:PRESet	STATus:PRESet	STATus:PRESet	STATus:PRESet
	STATus:QUEStionable:CONDition?	STATus:QUEStionable:CONDition?	STATus:QUEStionable:CONDition?	STATus:QUEStionable:CONDition?
	STATus:QUEStionable:ENABle	STATus:QUEStionable:ENABle	STATus:QUEStionable:ENABle	STATus:QUEStionable:ENABle
	STATus:QUEStionable:ENABle?	STATus:QUEStionable:ENABle?	STATus:QUEStionable:ENABle?	STATus:QUEStionable:ENABle?
	STATus:QUEStionable[:EVENt]?	STATus:QUEStionable[:EVENt]?	STATus:QUEStionable[:EVENt]?	STATus:QUEStionable[:EVENt]?

Subsystem SYSTem

	n. a.	SYSTem:COMMunicate:CAN:ADDRess	SYSTem:COMMunicate:CAN:ADDRess	SYSTem:COMMunicate:CAN:ADDRess
	n. a.	SYSTem:COMMunicate:CAN:ADDRess?	SYSTem:COMMunicate:CAN:ADDRess?	SYSTem:COMMunicate:CAN:ADDRess?
	n. a.	SYSTem:COMMunicate:CAN:BAUD	SYSTem:COMMunicate:CAN:BAUD	SYSTem:COMMunicate:CAN:BAUD
	n. a.	SYSTem:COMMunicate:CAN:BAUD?	SYSTem:COMMunicate:CAN:BAUD?	SYSTem:COMMunicate:CAN:BAUD?
	n. a.	n. a.	SYSTem:COMMunicate:CAN:TERMination	SYSTem:COMMunicate:CAN:TERMination
	n. a.	n. a.	SYSTem:COMMunicate:CAN:TERMination?	SYSTem:COMMunicate:CAN:TERMination?
	n. a.	SYSTem:COMMunicate:GPIB:ADDRess	SYSTem:COMMunicate:GPIB:ADDRess	SYSTem:COMMunicate:GPIB:ADDRess
	n. a.	SYSTem:COMMunicate:GPIB:ADDRess?	SYSTem:COMMunicate:GPIB:ADDRess?	SYSTem:COMMunicate:GPIB:ADDRess?
	n. a.	SYSTem:COMMunicate:LAN:DHCP[:STATe]	SYSTem:COMMunicate:LAN:DHCP[:STATe]	SYSTem:COMMunicate:LAN:DHCP[:STATe]
	n. a.	SYSTem:COMMunicate:LAN:DHCP[:STATe]?	SYSTem:COMMunicate:LAN:DHCP[:STATe]?	SYSTem:COMMunicate:LAN:DHCP[:STATe]?
	n. a.	SYSTem:COMMunicate:LAN:DNS[:ADDRess]	SYSTem:COMMunicate:LAN:DNS[:ADDRess]	SYSTem:COMMunicate:LAN:DNS[:ADDRess]
	n. a.	SYSTem:COMMunicate:LAN:DNS[:ADDRess]?	SYSTem:COMMunicate:LAN:DNS[:ADDRess]?	SYSTem:COMMunicate:LAN:DNS[:ADDRess]?
	n. a.	SYSTem:COMMunicate:LAN:GATeway[:ADDRess]	SYSTem:COMMunicate:LAN:GATeway[:ADDRess]	SYSTem:COMMunicate:LAN:GATeway[:ADDRess]
	n. a.	SYSTem:COMMunicate:LAN:GATeway[:ADDRess]?	SYSTem:COMMunicate:LAN:GATeway[:ADDRess]?	SYSTem:COMMunicate:LAN:GATeway[:ADDRess]?
	n. a.	SYSTem:COMMunicate:LAN:HOSTname?	SYSTem:COMMunicate:LAN:HOSTname?	SYSTem:COMMunicate:LAN:HOSTname?
	n. a.	SYSTem:COMMunicate:LAN:IP[:ADDRess]	SYSTem:COMMunicate:LAN:IP[:ADDRess]	SYSTem:COMMunicate:LAN:IP[:ADDRess]
	n. a.	SYSTem:COMMunicate:LAN:IP[:ADDRess]?	SYSTem:COMMunicate:LAN:IP[:ADDRess]?	SYSTem:COMMunicate:LAN:IP[:ADDRess]?
	n. a.	SYSTem:COMMunicate:LAN:MAC[:ADDRess]?	SYSTem:COMMunicate:LAN:MAC[:ADDRess]?	SYSTem:COMMunicate:LAN:MAC[:ADDRess]?
	n. a.	SYSTem:COMMunicate:LAN:PORT	SYSTem:COMMunicate:LAN:PORT	SYSTem:COMMunicate:LAN:PORT
	n. a.	SYSTem:COMMunicate:LAN:PORT?	SYSTem:COMMunicate:LAN:PORT?	SYSTem:COMMunicate:LAN:PORT?
	n. a.	SYSTem:COMMunicate:LAN:SUBNet[:MASK]	SYSTem:COMMunicate:LAN:SUBNet[:MASK]	SYSTem:COMMunicate:LAN:SUBNet[:MASK]
	n. a.	SYSTem:COMMunicate:LAN:SUBNet[:MASK]?	SYSTem:COMMunicate:LAN:SUBNet[:MASK]?	SYSTem:COMMunicate:LAN:SUBNet[:MASK]?
	n. a.	SYSTem:COMMunicate:SERial:BAUD	SYSTem:COMMunicate:SERial:BAUD	SYSTem:COMMunicate:SERial:BAUD
	n. a.	SYSTem:COMMunicate:SERial:BAUD?	SYSTem:COMMunicate:SERial:BAUD?	SYSTem:COMMunicate:SERial:BAUD?
	n. a.	SYSTem:COMMunicate:SERial:BITS?	SYSTem:COMMunicate:SERial:BITS?	SYSTem:COMMunicate:SERial:BITS?
	SYSTem:COMMunicate:SERial:CONTrol:RTS	n. a.	n. a.	n. a.
	SYSTem:COMMunicate:SERial[:RECeive]:PACE	n. a.	n. a.	n. a.
	n. a.	SYSTem:COMMunicate:SERial:PARity	SYSTem:COMMunicate:SERial:PARity	SYSTem:COMMunicate:SERial:PARity
	n. a.	SYSTem:COMMunicate:SERial:PARity?	SYSTem:COMMunicate:SERial:PARity?	SYSTem:COMMunicate:SERial:PARity?
	n. a.	SYSTem:COMMunicate:SERial:SBITs	SYSTem:COMMunicate:SERial:SBITs	SYSTem:COMMunicate:SERial:SBITs
	n. a.	SYSTem:COMMunicate:SERial:SBITs?	SYSTem:COMMunicate:SERial:SBITs?	SYSTem:COMMunicate:SERial:SBITs?
	n. a.	SYSTem:COMMunicate:VCP:BAUD	SYSTem:COMMunicate:VCP:BAUD	SYSTem:COMMunicate:VCP:BAUD
	n. a.	SYSTem:COMMunicate:VCP:BAUD?	SYSTem:COMMunicate:VCP:BAUD?	SYSTem:COMMunicate:VCP:BAUD?
	n. a.	SYSTem:COMMunicate:VCP:BITS?	SYSTem:COMMunicate:VCP:BITS?	SYSTem:COMMunicate:VCP:BITS?
	n. a.	SYSTem:COMMunicate:VCP:PARity	SYSTem:COMMunicate:VCP:PARity	SYSTem:COMMunicate:VCP:PARity
	n. a.	SYSTem:COMMunicate:VCP:PARity?	SYSTem:COMMunicate:VCP:PARity?	SYSTem:COMMunicate:VCP:PARity?
	n. a.	SYSTem:COMMunicate:VCP:SBITs	SYSTem:COMMunicate:VCP:SBITs	SYSTem:COMMunicate:VCP:SBITs
	n. a.	SYSTem:COMMunicate:VCP:SBITs?	SYSTem:COMMunicate:VCP:SBITs?	SYSTem:COMMunicate:VCP:SBITs?
	n. a.	SETTing:EXTernal:ENABle	SETTing:EXTernal:ENABle	SETTing:EXTernal:ENABle
	n. a.	SETTing:EXTernal:ENABle?	SETTing:EXTernal:ENABle?	SETTing:EXTernal:ENABle?
	SYSTem:CONTrol	SETTing:EXTernal[:STATe]	SETTing:EXTernal[:STATe]	SETTing:EXTernal[:STATe]
	SYSTem:CONTrol?	SETTing:EXTernal[:STATe]?	SETTing:EXTernal[:STATe]?	SETTing:EXTernal[:STATe]?
	n. a.	SYSTem:DATE	SYSTem:DATE	SYSTem:DATE
	n. a.	SYSTem:DATE?	SYSTem:DATE?	SYSTem:DATE?
	n. a.	SYSTem:ERRor:ALL?	SYSTem:ERRor:ALL?	SYSTem:ERRor:ALL?
	n. a.	SYSTem:ERRor:COUNt?	SYSTem:ERRor:COUNt?	SYSTem:ERRor:COUNt?
	SYSTem:ERRor?	SYSTem:ERRor[:NEXT]?	SYSTem:ERRor[:NEXT]?	SYSTem:ERRor[:NEXT]?
	SYSTem:FAN	SYSTem:COOLing[:MODE]	SYSTem:COOLing[:MODE]	SYSTem:COOLing[:MODE]
	SYSTem:FAN?	SYSTem:COOLing[:MODE]?	SYSTem:COOLing[:MODE]?	SYSTem:COOLing[:MODE]?
	n. a.	SYSTem:HELP:HEADers?	SYSTem:HELP:HEADers?	SYSTem:HELP:HEADers?
	n. a.	SYSTem:KLOCk	SYSTem:KLOCk	SYSTem:KLOCk
	n. a.	SYSTem:KLOCk?	SYSTem:KLOCk?	SYSTem:KLOCk?
	SYSTem:LANGuage	n. a.	n. a.	n. a.
	SYSTem:LANGuage?			
	SYSTem:PARameter	SERVice:VALue	SERVice:VALue	SERVice:VALue
	SYSTem:PARameter?	SERVice:VALue?	SERVice:VALue?	SERVice:VALue?
	n. a.	SYSTem:PRESet	SYSTem:PRESet	SYSTem:PRESet
	SYSTem:PROTection[:LEVel]	INPut:WDOG:DELay	INPut:WDOG:DELay	INPut:WDOG:DELay
	SYSTem:PROTection[:LEVel]?	INPut:WDOG:DELay?	INPut:WDOG:DELay?	INPut:WDOG:DELay?
	n. a.	INPut:WDOG:RESet	INPut:WDOG:RESet	INPut:WDOG:RESet
	SYSTem:PROTection:STATe	INPut:WDOG[:STATe]	INPut:WDOG[:STATe]	INPut:WDOG[:STATe]
	SYSTem:PROTection:STATe?	INPut:WDOG[:STATe]?	INPut:WDOG[:STATe]?	INPut:WDOG[:STATe]?
	SYSTem:PROTection:TRIPped?	n. a.	n. a.	n. a.
	n. a.	SYSTem:REMote	SYSTem:REMote	SYSTem:REMote
	SYSTem:SPEed	FUNCtion:SPEed	FUNCtion:SPEed	FUNCtion:SPEed
	SYSTem:SPEed?	FUNCtion:SPEed?	FUNCtion:SPEed?	FUNCtion:SPEed?
	SYSTem:STRing	SERVice:STRing	SERVice:STRing	SERVice:STRing
		SERVice:STRing?	SERVice:STRing?	SERVice:STRing?
	n. a.	SYSTem:TIME	SYSTem:TIME	SYSTem:TIME
	n. a.	SYSTem:TIME?	SYSTem:TIME?	SYSTem:TIME?
	SYSTem:VERSion?	SYSTem:VERSion?	SYSTem:VERSion?	SYSTem:VERSion?

Subsystem TRIGger

	n. a.	ABORt	ABORt	ABORt
	n. a.	INITiate[:IMMediate]	INITiate[:IMMediate]	INITiate[:IMMediate]
	n. a.	INITiate:CONTinuous	INITiate:CONTinuous	INITiate:CONTinuous
	n. a.	INITiate:CONTinuous?	INITiate:CONTinuous?	INITiate:CONTinuous?
	n. a.	TRIGger[:SEQuence][:IMMediate]	TRIGger[:SEQuence][:IMMediate]	TRIGger[:SEQuence][:IMMediate]
	n. a.	TRIGger[:SEQuence]:DELay	TRIGger[:SEQuence]:DELay	TRIGger[:SEQuence]:DELay
	n. a.	TRIGger[:SEQuence]:DELay?	TRIGger[:SEQuence]:DELay?	TRIGger[:SEQuence]:DELay?
	n. a.	TRIGger[:SEQuence]:HOLDoff	TRIGger[:SEQuence]:HOLDoff	TRIGger[:SEQuence]:HOLDoff
	n. a.	TRIGger[:SEQuence]:HOLDoff?	TRIGger[:SEQuence]:HOLDoff?	TRIGger[:SEQuence]:HOLDoff?
	n. a.	n. a.	TRIGger[:SEQuence]:LEVel:CURRent	TRIGger[:SEQuence]:LEVel:CURRent
	n. a.	n. a.	TRIGger[:SEQuence]:LEVel:CURRent?	TRIGger[:SEQuence]:LEVel:CURRent?
	n. a.	TRIGger[:SEQuence]:LEVel:VOLTage	TRIGger[:SEQuence]:LEVel:VOLTage	TRIGger[:SEQuence]:LEVel:VOLTage
	n. a.	TRIGger[:SEQuence]:LEVel:VOLTage?	TRIGger[:SEQuence]:LEVel:VOLTage?	TRIGger[:SEQuence]:LEVel:VOLTage?
	n. a.	TRIGger[:SEQuence]:SLOPe	TRIGger[:SEQuence]:SLOPe	TRIGger[:SEQuence]:SLOPe
	n. a.	TRIGger[:SEQuence]:SLOPe?	TRIGger[:SEQuence]:SLOPe?	TRIGger[:SEQuence]:SLOPe?
	TRIGger[:SEQuence]:SOURce	TRIGger[:SEQuence]:SOURce	TRIGger[:SEQuence]:SOURce	TRIGger[:SEQuence]:SOURce

	TRIGger[:SEQuence]:SOURce?	TRIGger[:SEQuence]:SOURce?	TRIGger[:SEQuence]:SOURce?	TRIGger[:SEQuence]:SOURce?
	TRIGger[:SEQuence]:TIMer	n. a.	n. a.	n. a.
	TRIGger[:SEQuence]:TIMer?	n. a.	n. a.	n. a.
Subsystem VOLTage				
	VOLTage:CRANge	n. a.	n. a.	n. a.
	VOLTage:CRANge?	n. a.	n. a.	n. a.
	VOLTage[:LEVel][:IMMediate]	VOLTage[:LEVel][:IMMediate]	VOLTage[:LEVel][:IMMediate]	VOLTage[:LEVel][:IMMediate]
	VOLTage[:LEVel][:IMMediate]?	VOLTage[:LEVel][:IMMediate]?	VOLTage[:LEVel][:IMMediate]?	VOLTage[:LEVel][:IMMediate]?
	VOLTage[:LEVel]:TRIGgered	VOLTage[:LEVel]:TRIGgered	VOLTage[:LEVel]:TRIGgered	VOLTage[:LEVel]:TRIGgered
	VOLTage[:LEVel]:TRIGgered?	VOLTage[:LEVel]:TRIGgered?	VOLTage[:LEVel]:TRIGgered?	VOLTage[:LEVel]:TRIGgered?
	VOLTage:MODE	n. a.	n. a.	n. a.
	VOLTage:MODE?	n. a.	n. a.	n. a.
	VOLTage:PROTection[:LEVel][:LOW]	VOLTage:PROTection[:LEVel]	VOLTage:PROTection[:LEVel]	VOLTage:PROTection[:LEVel]
	VOLTage:PROTection[:LEVel][:LOW]?	VOLTage:PROTection[:LEVel]?	VOLTage:PROTection[:LEVel]?	VOLTage:PROTection[:LEVel]?
	VOLTage:PROTection:TRIPped?	n. a.	n. a.	n. a.
	VOLTage:RANGe	n. a.	n. a.	n. a.
	VOLTage:RANGe?	n. a.	n. a.	n. a.
	VOLTage:RANGe:AUTO	n. a.	n. a.	n. a.
	n. a.	VOLTage:PROTection:REGulation[:STATe]	VOLTage:PROTection:REGulation[:STATe]	VOLTage:PROTection:REGulation[:STATe]
	n. a.	VOLTage:PROTection:REGulation[:STATe]?	VOLTage:PROTection:REGulation[:STATe]?	VOLTage:PROTection:REGulation[:STATe]?