Status commands:

Read Status
'S1' //Read internal status/interlocks
'S1H' //Read internal status in hex-format
'S1FIRST' //Read the first catch interlock status
'S1FIRSTH' //Read the first catch interlock status in hex-format

CHARACTER NO. CONTENTS
1 ..... MAIN POWER OFF (!=OFF .=ON)
2 ..... POLARITY NORMAL (!=Polarity Normal)
3 ..... POLARITY REVERSED (!=Polarity REVERSED)
4 ..... NOT USED
5 ..... CROWBAR ON (!=ON .=OFF)
6 ..... I-MODE (!=I-mode .=V-mode)
7 ..... != % , . = AMPS and VOLTS
8 ..... EXTERNAL INTERLOCK 0 (!=Interlock .=No interlock)
9 ..... NOT USED.
10 ..... SUM – INTERLOCK (!=Sum interlock .=No sum interlock)
11 ..... OVER VOLTAGE (OVP) (!=over voltage .=No over voltage)
12 ..... DC OVER CURRENT (OCP) (!=over current .=No over current)
13 ..... DC UNDERVOLTAGE (!=Fault .=OK))
14 ..... NOT USED
15 ..... PHASE FAILURE (AC LINE OK) (!=Fault .=OK)
16 ..... NOT USED
17 ..... EARTH LEAKAGE (!=Fault .=OK)
18 ..... FAN (!=Fault .=OK)
19 ..... MPS OVERTEMPERATURE (!=Fault .=OK)
20 ..... EXTERNAL INTERLOCK 1 (!=Interlock .=No interlock)
21 ..... EXTERNAL INTERLOCK 2 (!=Interlock .=No interlock)
22 ..... EXTERNAL INTERLOCK 3 (!=Interlock .=No interlock)
23 ..... MPS NOT READY (!=Not ready .=Ready)
24 ..... NOT USED

Read extended Status
'S3' //Read internal status
'S3H' //Read internal status in hex-format

CHARACTER NO. CONTENTS
1-15 ..... Not Used
16 ..... INT/EXT SPI INTERFACE (!=EXTERNAL .=INTERNAL)

Read Analog channel
'AD X' where X=0-18

0 : Output current	1 : Ambient temperature
2 : Output Voltage	3 : Internal +15V sup.
4 : Internal -15V sup	5 : Internal +5V sup.
6 : Delta Temperature	7 : I set value
8 : Optional Iout (16 Bit)	9 : Iout (16 Bit)(Crtl panel)
10 : Not used	11 : Output current display
12 : Output voltage display	13 : Not used
14 : Not used	15 : Not used
16 : Not used	17 : I set value
18 : Spare.	

Read control mode
'CMD' //Read current control mode
'CMDSTATE' //Read current control state

Read address
'ADR'

Read software version
'VER'
'PRINT'

Read user settable information
'ID'

Setup commands:

Configure analog to digital channel
'Esc<AD ch,scale_factor,no_Offset,digits,format,ch_reroute,Dot'
ch: ASCII digit 0 to 15
Scale_factor: 9 digit floating point value plus sign.
Offset: 5 digit floating point value plus sign.
No_digit: 1 to 6
format: A (Absolute), D (Signed) or U (Unsigned)
ch_reroute: ASCII digit 0 to 15
Dot: ASCII digit 1 to 3 (for ch 11 and 12 only)

Read analog to digital channel setup
'Esc<AD X' where x=0-18 //Read a channel setup

Analog to Digital converter setting
'Esc<ADSET ch,val1,val2'
ch: ASCII digit 0 to 15
val1: Z, F, B or T *see abbreviation at Digital to Analog converter setting
val2: ASCII 00000 to 999999

Configure digital to analog channel
'Esc<DA ch,scale_factor,Offset,no_digits,format,ch_reroute'
ch: 0=Output current, 4=Output voltage
Scale_factor: 9 digit floating point value plus sign.
Offset: 5 digit floating point value plus sign.
No_digit: 1 to 6
format: A (Absolute), D (Signed) or U (Unsigned)
ch_reroute: ASCII digit 0 to 15

Read digital to analog channel setup
'Esc<DA X' where x=0 or 4 //Read a channel setup

Digital to Analog converter setting
'Esc<DASET ch,val1,val2'
ch: 0=Output current, 1=I-slewrate, 2=V-slewrate, 3=NU, 4=Output Voltage
val1: Z, F, B or T
Z: Offset adjustment (to Zero)
F: Gain adjustment (To full scale)
B: Restores the Offset value to the factory default. (Bottom)
T: Restores the Gaint value to the factory default. (Top)
I : Initial value after reset
L: Low value
M: Max value
val2: ASCII 00000 to 999999

Configure address
RS422 multidrop mode
Remote : 'ESC<ADR 0,X' where X=0-255
Local : 'ESC<ADR 1,X' where X=0-255

Configure special options
'Esc<AUX b1,b2,b3,b4,b5,b6,b7,b8'
b1 : DAC 16: 0: Transparent 1: = 1 0: = 0 1: = 1
b2 : DAC 17: 0: 0: = 0 1: = 11: = 1
b3 : Interlock clear 0:RS resets Interlocks 1:RS and OFF resets interlocks
b4: WA zeroes 0:WA uses trailing zeroes 1:WA uses leading zeroes
b5: Display Units 0:Display in V and A 1:Display in %
b6: SPI mode 0: HW detect* 0: HW detect* 1: SW ctrl ext 1: SW ctrl int
b7: SPI mode 0: 1: 0: 1:
b8: Uni/BI-polar (read only) 0:Uni polar DAC 1:Bipolar DAC
*Hardware detection of the SPI mode. If SPI module is inserted, then the mode is external, see S3 command for status

Read special options setup
'ESC<AUX'

Configure special options 2
'Esc<AUX2 b1,b2,b3,b4,b5,b6,b7,b8'
b1-b2 : Not Used
b3 : Polarity switch 0:Disable 1:Enable
b4-b8 : Not Used

Read special options setup2
'ESC<AUX2'

Configure Wake up mode
'Esc<COLDBOOT b1,b2,b3,b4,b5,b6,b7,b8'

b1 :	Remote addressing:	0:Enabled	1:Disabled				
b2 :	Local addressing:	0:Enabled	1:Disabled				
b3 :	Default line in	0:Remote	1:Local				
b4:	Auto answer	0:Disabled	1:Enabled				
b5:	ERR response	0:: ?♫	1: ?♫ and	0: ?♫ and	1: ?♫ and		
b6:	ERR response	0: only	0: ERR code	1: ERR text	1: ERR text		
b7:	I/V mode	0:I-Mode	1:V-mode				
b8:	Control mode*	0:CPU control	1:Analog control				

*from version SCY204

Read Wake up mode
'Esc<COLDBOOT'

Write user settable information field
'Esc<ID val'
val: ASCII character (up to 64 characters). \r (CR + LF)

Read user settable information field
'Esc<ID'

Configure Serial LINE working mode
'Esc<LINE ch,b1,b2,b3,b4,b5,b6,b7,b8'

ch:	1=local , 0=remote				
b1:	RS485 Com :	0: Disabled	1: Enabled		
b2:	Line turn around	0: no	1: 1ms	0: 2ms	1: 3ms
b3:	Line turn around	0: delay	0: delay	1: delay	1: delay
b4:	'OK' Answer Mode:	0: Disabled	1: Enabled		
b5:	BOOT character:	0: "FF"	1: "R" (remote) "L"(local)		
b6:	ACK/NACK Protocol:	0: Disabled	1: Enabled		
b7:	XON/XOFF Protocol:	0: Disabled	1: Enabled		
b8:	ACK/NACK error code	0:Not included	1: Included		

Read Serial line setup
Remote : 'ESC<LINE 0'
Local : 'ESC<LINE 1'

Software reset
'ESC<CPURESET'

Baudrate setup write *
'Esc<BAUD'sp'ch,baud,parity, odd/even,no_bits,stop_bits'
ch: 1=local , 0=remote
baud: 9600, 19200, 38400, 57600, 76800, 115200
parity: 0: OFF 1: ON
odd/even: 0=odd 1=even
no_bits: 0=8 , 1=7
Stop_bits: 0=1 , 1=2

Baudrate setup read
Remote : 'ESC<BAUD 0'
Local : 'ESC<BAUD 1'

*Address configuration and baudrate change require a hardware or software reset in order for the changes to take effect

Control Mode
Enabling these modes, set J502 and J503 in position 3+4 on control module
'ANACTRL' // Set to analog control (external)
'CPUCTRL //Set to CPU control (internal)

Ramp profile, Equal Time slot method:

Writes data to the stack

'R [value]'
Value: Floating point number between 0.0000000 to 1.0000000

'R S' // Ends the writing

Reads data from the stack
'R'

Controls the stack execution
'RAMP [RNSHT],[LWN]'
R: Run. Starts the stack execution
S: Stop. Stops the stack execution
H: Halt. Halts the stack execution
T: Trig. Prepares the stack for a HW trigger start
L: Loop. Loop the stack.
W: Wait.
N: Normal.

Read the stack control
'RAMP'

Seting up the stack parameter
'RAMPSET [Time,[Mult],[TrDly]],[LWN]'
Time: Sets the time slot value in 0.00125 second steps.
Mult: Sets the multiplicate factor. (Gain control)
TrDly: Sets a delay time in seconds from the trig time to the stack execution.
L: Loop the stack. After the last data is put through will the execution automatically restart from the beginning.
W: After a stack run will the process wait for a HW trigger signal before a new run will be restarted.
N: Normal. Set ramp execution to normal. (No loops)

Reading the setup stack parameter
'RAMPSET'

Ramp profile, Arbitrary point method:

Continue sequence
'CONT'

Clear Sequence Stack
'CSS stack'
stack: ASCII digit 0 to 15

FAST/SLOW/SPEED sequence timing
'FAST 'stack' // Sets the time unit to 0.1 second
'SLOW stack' // Sets the time unit to 1 second
'SPEED stack' // Returns the actual speed-mode set to a given stack
stack: ASCII digit 0 to 15

HALT/STOP sequence
'HALT' // Puts the running sequence into a momentary stop
'STOP' // Terminates the sequence execution

Multiply factor Write
'MULT stack,factor'
stack: ASCII digit 0 to 15
factor: ASCII digit 000000 to 999999 in PPM

Multiply factor Read
'MULT stack'
stack: ASCII digit 0 to 15

Reset Read Sequence Pointer (by auto increment)
'RRSP stack'
stack: ASCII digit 0 to 15

Read Sequence and Auto increment
'RSA stack'
stack: ASCII digit 0 to 15

Read Sequence Position
'RSP stack,posit'
stack: ASCII digit 0 to 3
posit: ASCII digit 00 to 15

Reset Write-Sequence Pointer
'RWSP stack'
stack: ASCII digit 0 to 15

Read ramp profile status
'S2'

Set synchronisation
'SYNC stack,dly'
stack: ASCII digit 0 to 15
dly: ASCII digit 0 to 10000000 in µ seconds

Trig sequence
'TS stack'
stack: ASCII digit 0 to 15

Write Sequence and Auto increment
'WSA stack, start, stop, time'

stack:	ASCII digit 0 to 15	
start:	ASCII digits 000000 to 999999	in PPM
stop:	ASCII digits 000000 to 999999	in PPM
time:	ASCII digits 00001 to 65535	in time units

Write Sequence Position
'WSP stack,posit,start,stop,time'

stack:	ASCII digit 0 to 15	
posit:	ASCII digits 00 to 15	
start:	ASCII digits 000000 to 999999	in PPM
stop:	ASCII digits 000000 to 999999	in PPM
time:	ASCII digits 00001 to 65535	in time units

Auto slewrate:

Write auto slewrate
'ESC<SLOPETIME val1,val2,val3'
val1-val3: ASCII floating digit 0.005 to 1000. val3 ≥ val1 or val2

Read auto slewrate
'ESC<SLOPETIME'

.....

Change and read polarity
'PO +' //Set positive polarity
'PO –' //Set negative polarity
'PO' //Read polarity
'POLOOL val' //Polarity output off limit
Val: 000 to 100 in % of full scale

Directive commands:

MPS Power ON/OFF
'N' //Turn MPS ON
'F' //Turn MPS OFF

Set current
'WA ±XXXXXX' //X is a number from 0 to 9
'DA 0,±XXXXXX' //X is a number from 0 to 9

Read set current
'RA' //Read currently numerical set value
'DA 0'

Set current/voltage slewrate
'DA 1,XXXXXX' //Current slewrate, X is a number from 0 to 9
'DA 2,XXXXXX' //Voltage slewrate, X is a number from 0 to 9

Read current/voltage slewarate
'DA 1' //Current slewrate
'DA 2' //Voltage slewrate

Set voltage
'DA 4,XXXXXX' //X is a number from 0 to 9

Read set voltage
'DA 4'

Error message
'NERR' //No error message
'ERRC' //Coded error message
'ERRT' //Text string error message

Set & Unlock REMOTE/LOCAL mode
'REM' //Set to remote mode
'LOC' //Set to local mode
'LOCK' //Lock to local mode
'RLOCK' //Lock to remote mode
'UNLOCK' //Unlock the MPS

Put in listen all mode
'LALL' // Will respond to any setup command regardless of its addressed state, except for the on (N) command.

Reset interlocks
'RS'

Set address
'ADR X' where X=0-255

Read ADC type
'TYPE' // 0=No 16bit ADC
8=16bit ADC