Falcon Rotator Serial Command Language

Firmware >=v.1.3 (review Sep 2020)

Abbreviations used:

nnnn.. = one or more digits

b = Boolean (0 or 1 digit)

Connection Settings: 9600, 8N1

(All commands should be terminated by new line /n)

Command	Description	Response
F#	Status	FR_OK
FA	*Check below table for more details*	
FV	Report firmware version	FV:n.n
FD	Report position in degrees	FD:nn.nn
FP	Report position in steps	FP:n..
VS	Report input voltage in raw format	VS:n..
DR:nn..	Enable De-rotation. Provided number is the de-rotation time (in millisec) interval per step e.g (1 step per 1000 millisec) (DR:0 disables de-rotation)	DR:nn..
SD:nn.nn	Set Degrees: Set New position in degrees as the actual rotator position (without turning rotator)	SD:nn.nn
MD:nn.nn	Move to Degrees: Move motor to new degrees. (accepts a decimal number e.g 33.55)	MD:nn.nn
MS:nn..	Move to Position: Move motor to new position	MS:nn..
FH	Halt Falcon Rotator	FH:1
FR	Print 1 if rotator is running Print 0 if rotator is idle	FR:1 or FR:0
FN:b	Reverse Motor (1 = reverse, 0 = normal) **One off setting – stored in EEPROM**	FN:1 or FN:0
FF	Reload Rotator Firmware	-

Transmit: FA
Receive: FR_OK:4332:50.00:0:0:0:0
Meaning:

status : position_in_steps: position_in_deg : is_moving: limit_detect: do_derotation: motor_reverse

value	meaning
status	FR_OK means that focuser is up and running
position_in_deg	Position in degrees (double number, 2 decimals)
is_running	Boolean value: Prints 1 if falcon motor is running, 0 if not
limit_detect	Boolean value: Prints 1 if limit is detected, Print 0 if limit is not detected
do_derotation	Boolean value: Print 1 if derotation is active, Print 0 if is deactivated
motor_reverse	Boolean value: Print 1 if reverse is enabled, 0 if is disabled