

Protocol v2.1. Check version with info msg.

Read status 1

Data bytes	Value/range	Description
Slave address	1 – 247	
Read holding registers	3	
Address msb	0x04	Address 41101
Address lsb	0x4C	
Quantity msb	0	It can be selected to read all or only part of the status data. When zero is used all status data is returned.
Quantity lsb	0-8	
CRC lsb	0-255	Note that quantity is as 16bit registers, but data can have 8bit, 16bit and 32bit values. Read only status data that is needed to keep com. fast.
CRC msb	0-255	

Read status 1 response

Data bytes	Value/range	Description
Slave address	1 – 247	
Read holding registers	3	
Byte count	2-24	
Bus mode	0-4	0=Bus not controlling direction, 1=Bus controls direction, 2=Bus control with timeout, stop at timeout, 3=Bus control with local buttons stop, 4=Both 2 and 3 in use. Returns 0 in bus mode 2 when timeout and in bus mode 3 when local stop and with both in mode 4.
Direction	0-5	0=off, 1=Forward, 2=Stop, 3=Backward.
Motor A current:	0-255	Measured motor current. Value 10=1A and so on.
Motor B current:	0-255	Measured motor current.
Motor C current:	0-255	Measured motor current.
Motor D current:	0-255	Measured motor current.
Current limit	0-255	Motor current limit value. Value 10=1A and so on.
Motor A position counter	0-255	16bit pulse counter, msb
Motor A position counter	0-255	16bit pulse counter, lsb
Motor B position counter	0-255	16bit pulse counter, msb
Motor B position counter	0-255	16bit pulse counter, lsb
Motor C position counter	0-255	16bit pulse counter, msb
Motor C position counter	0-255	16bit pulse counter, lsb
Motor D position counter	0-255	16bit pulse counter, msb
Motor D position counter	0-255	16bit pulse counter, lsb
Supply voltage	0-255	Measured supplyvoltage. 100=20.4V
Motor A pwm value	0-255	pwm value 255 = 100%
Motor B pwm value	0-255	pwm value 255 = 100%
Motor C pwm value	0-255	pwm value 255 = 100%
Motor D pwm value	0-255	pwm value 255 = 100%
Fault code	1-7	1=Homing, or position lost, 2=over current, 3=No pulses detected, 4=Position dif. too high, 5=Over voltage. 6=Safety edge activated, 7=Bus timeout with bus mode 2 and 4.
Position status	1-5	Value shows where motors are regarding to move area parameters. rev stop=1, rev slow down=2, middle area=3, fwd slow down=4, fwd stop=5.
Inputs	0-31	Fwd,rev,stop,home and emergency inputs status on/off shown as bitmap: Fwd=bit0,rev=bit1,stop=bit2, home=bit3, emergency=bit4. Example: bitmap 0b00001001 means fwd and home inputs are on, others are off. Example: bitmap 0b00001001 means fwd and home inputs are on, others are off.
Safety edge input	0-255	Analog value of safety edge input.
CRC lsb	0-255	
CRC msb	0-255	

Control command		
Data bytes	Value/range	Description
Slave address	1 – 247	
Write multiple registers	16	
Address msb	0x03	Address 41001
Address lsb	0xE8	
Quantity msb	0	
Quantity lsb	1-6	
Byte count	2-12	
Bus mode	0-4	0=Bus not controlling direction, 1=Bus controls direction, 2=Bus control with timeout, stop at timeout, 3=Bus control with local buttons stop, 4=Both 2 and 3 in use. Returns 0 in bus mode 2 when timeout and in bus mode 3 when local stop and with both in mode 4. To continue, reset this by first setting bus mode to 0 and then again to wanted value.
Direction command	0-5	0=off, 1=Forward, 2=Stop, 3=Backward, 4=Activates home run, 5=Reset faults, with fail 7 you need also set bus mode to 0.
Speed	0-255	Motor speed setting. 0-255, 255 = 100%. This can be used to overwrite driver's own speed value. With 0 driver uses speed value regarding to speed and slowdown parameters. However actual speed value (= motor voltage) is affected by various things like current limit, compensation, voltage regulation and synchronization. When this is used slow down positions aren't affecting speed because this value overwrites it.
Current limit	0-255	Motor current limit value, 0-255. This can be used to overwrite driver's own current limit value. With 0 driver uses its own value from parameter. Overcurrent atop is not active during During start ramp current . Value 10=1A and so on.
Backward limit, msb	0-255	16bit stop position as pulses when driving backward. When these limits are zero, then driver uses values given by parameters.
Backward limit, lsb	0-255	
Backward slowdown, msb	0-255	16bit slowdown position when driving backward. This is added to backward limit so changing backward limit keeps the slow down distance still the same.
Backward slowdown, lsb	0-255	
Forward slowdown, msb	0-255	16bit slowdown position when driving forward. This is decreased from forward limit so changing forward limit keeps the slow down distance still the same.
Forward slowdown, lsb	0-255	
Forward limit, msb	0-255	16bit stop position when driving forward.
Forward limit, lsb	0-255	
CRC lsb	0-255	
CRC msb	0-255	
Control command response		
Data bytes	Value/range	
Slave address	1 – 247	
Write multiple registers	16	
Address msb	0x03	Address 41001
Address lsb	0xE8	
Quantity msb	0	
Quantity lsb	1-6	
CRC lsb	0-255	
CRC msb	0-255	