Control and status messages for controllers: 12.6.2019

EM-A24-PLI, EM-241-PLI, EM-282-PLI, EM-324-PLI, EM-341-PLI, EM-348-PLI

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	0-6	Note that quantity is as 16bit registers, but data can have 8bit, 16bit and 32bit values.
CRC lsb	0-255	
CRC msb	0-255	

Read status 1 response

Data bytes	Value/range	Description
Slave address	1 – 247	
Read holding registers	3	
Byte count	2-12	
Bus mode	0-3	0=Bus not controlling direction, 1=Bus controls direction, 2=Bus control w ith 5s timeout, stop at timeout, 3=Bus control w ith local buttons stop. Returns to 0 in bus mode 2 w hen timeout and in bus mode 3 w hen local stop.
Direction	0-3	0=off, 1=Forw ard, 2=Stop, 3=Backw ard
Speed	0-255	Motor speed value. 255 = 100%
Motor current	0-255	Measured motor current. 10=1A.
Current limit	0-255	Motor current limit value.
Position status	1-5	Value show motor position regarding to move area parameters bw r stop limit=1, bw r slow dow n=2, middle area=3, fw d slow dow n=4, fw d stop limit=5.
Pulse counter, msb	0-255	Motor position, 16Bit pulse counter, msb first.
Pulse counter, lsb	0-255	
Supply voltage	0-255	Supply voltage value. 25=10V
Fault code	0-7	
Inputs	0-31	Input pins status: Forw ard,backw ard,stop,home and emergency inputs status on/off show n as a bitmap: Fw d=bit0, bw r=bit1,stop=bit2, home=bit3, emergency=bit4. Example: bitmap 0b00001001 means fw d and home inputs are on, others are off.
Speed2 input	0-255	Analog value of speed2 input. *This is not available in EM-348-SPF and set to 0.*
CRC lsb	0-255	
CRC msb	0-255	

Control command

Data bytes	Value/range	Description
Slave address	1 – 247	
Write multible registers	16	
Address msb	0x03	*Address 41001*
Address lsb	0xE8	
Quantity msb	0	
Quantity lsb	1-6	
Byte count	2-12	
Bus mode	0-6	0=Bus not controlling direction, 1=Bus controls direction, 2=Bus control w ith timeout, stop at timeout, 3=Bus control w ith local buttons stop, 4=Both 2 and 3 in use. Returns 0 in bus mode 2 w hen timeout and in bus mode 3 w hen local stop and w ith both in mode 4. To continue, reset this by first setting bus mode to 0 and then again to w anted value.
Direction	0-3	0=off, 1=Forw ard, 2=Stop, 3=Backw ard, 4=Start home run.
Speed	0-255	Motor speed. 0-255, 255 = 100%. This can be used to overw rite driver's ow n speed value. With 0 driver uses its ow n value from parameter, speed2 input or analog value depending on settings.
Current limit	0-255	Motor current limit value, 0-255. This can be used to overw rite driver's ow n current limit value. With 0 driver uses its ow n value from parameter or analog value depending on settings. During start ramp current limit is higher. Value 10= 1A.
Backw ard limit, msb	0-255	16bit stop limit counter value w hen driving backw ard. Driver stops w hen this position is reached.
Backw ard limit, lsb	0-255	
Backw ard slow dow n, msb	0-255	16bit slow dow n counter value w here speed is reduced to speed2 value w hen driving backw ard.
Backw ard slow dow n, lsb	0-255	*Speed2 is set with a parameter.*
Forw ard slow dow n, msb	0-255	16bit slow dow n counter value w here speed is reduced to speed2 value w hen driving forw ard.
Forw ard slow dow n, lsb	0-255	*Speed2 is set with a parameter.*
Forw ard limit, msb	0-255	16bit stop limit counter value w hen driving forw ard. Driver stops w hen this position is reached.
Forw ard limit, lsb	0-255	
CRC lsb	0-255	
CRC msb	0-255	

Control command response

Data bytes	Value/range	
Slave address	1 – 247	
Write multible 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	