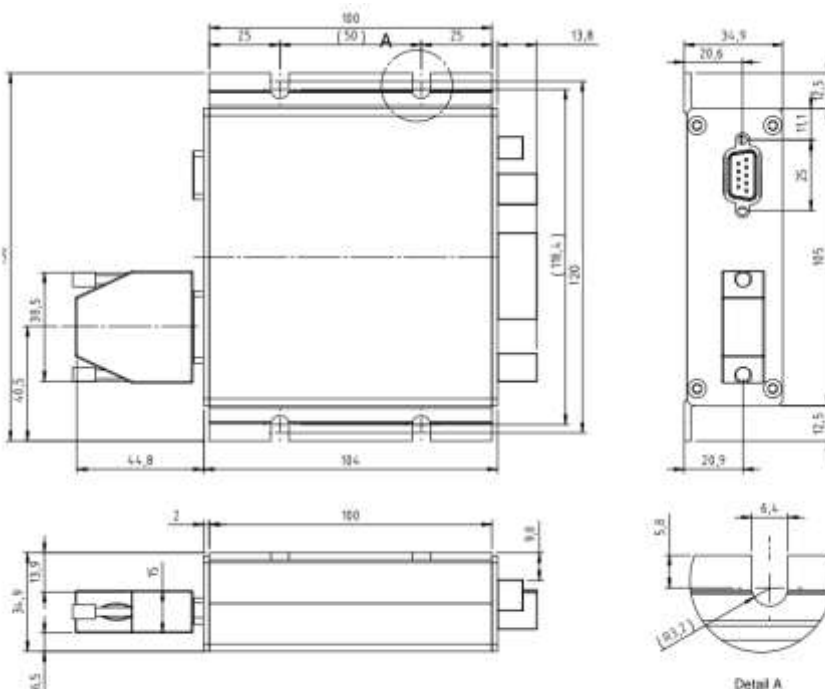


LAF-C3

Motor Interface for LAF Auto Focus & Tracking System



- Enables Hybrid Laser/Image auto focus function (license required)
 - 2x 3W isolated LED supply , controlled by user interface
 - Single connection to LAF, all connections from MSG Autofocus to your machine going through the LAF-C3
 - Industrial equipment suitable robust I/O interfacing, power supply/ground isolation, protection circuits, supply 24-48V, 2x 3W isolated LED supply if wanted.
 - 2 directions pulse output current source to drive optoisolator of motor (stepper/servo) drive
 - Optoisolated analog output for measurement quality signal output
- Configurable:
- Analog output giving a distance Signal or a configurable Speed signal with a future firmware release (control servo drives)
 - Inputs for Limit switches and safety stop
 - Isolated RS232 for sensor communication with PC



IO Specifications Front (Figure 1)



Figure 1

RS232	PIN	SIGNAL	RS232
9 PIN D-SUB FEMALE			
	2	TxD	RS 232 Level
	3	RxD	RS 232 Level
	5	RS232 Ground	
SENSOR	PIN	SIGNAL	Sensor
15 PIN D-SUB MALE			
	1-15	-----	LAF sensor cable
LED A	PIN		
	1	Positive LED A	Isolated voltage 2.5-7V, max 3.5W
	2	Negative LED A	

LED B	PIN		
	4	Positive LED B	Isolated voltage 2.5-7V, max 3.5W
	5	Negative LED B	
	6	Negative gate signal	0-48V max. consumption 5 mA
	3	Positive gate signal	0-48V max. consumption 5 mA

IO Specifications Back (Figure 1)



Figure 2

DRIVER POWER	PIN	SIGNAL	
V in	1	+24V to +48V, less than 7W, less than 20W for LAF-C3	
V in	2	0V Return	

DRIVER CONTROL	PIN	SIGNAL
Motor current on +	1	Pin 1, 3 & 5 = +12V via series resistor for short circuit protection Pin 2,4,6,8 & 8 = 10mA current sink to drive photo coupler Connect the photo coupled input pairs of the motor driver to the according +/- signals.
Motor current on -	2	
Motor direction +	3	
Motor direction -	4	
Motor Pulse +	5	
Motor Pulse 1 -	6	
Motor Pulse 2 -	7	
Motor Pulse -	8	
DIGITAL IO	PIN	SIGNAL
Laser enable+	9	Optoisolated LASER ON or SYNC Signal 3-48V input, 5mA current limited, polarity protected
Laser enable -	10	
Signal Good +	11	-Optoisolated (NPN Transistor output) Signal Quality output, max 5mA
Signal Good -	12	
Sync +	13	
Sync -	14	
+12V	15	
GND	16	

CW LIMITSWITCH		
	PIN	SIGNAL
Limit switch CW V in	1	V in on Pin 1 is the 24..48V operating voltage via a short circuit protection resistor, can be used for operating photo interrupters. GND is the signal ground also via a short circuit protection resistor. For switching between NC (normally closed = default shipping state) or NO (normally open) limit switch operation mode 0R resistors need to be changed inside the LAF-C2 as shown in figure 18.
Limit switch CW input	2	
Limit switch CW GND	3	
CCW LIMIT SWITCH		
	PIN	SIGNAL
Limit switch CWW V in	4	V in on Pin 4 is the 24..48V operating voltage via a short circuit protection resistor, can be used for operating photo interrupters. GND is the signal ground also via a short circuit protection resistor. For switching between NC (normally closed = default shipping state) or NO (normally open) limit switch operation mode 0R resistors need to be changed inside the LAF-C2 as shown in figure 18.
Limit switch CWW input	5	
Limit switch CWW GND	6	
SAFETY STOP		
	PIN	SIGNAL
	1	Connect a normally closed safety switch. Current is between 2-5mA. If this connection is left open it indicates a safety stop, so the laser will be off and motor will not move.
	2	