

Mount the terminal block on spare DIN rail space.
Use the terminal block to distribute the 24V supply.

This EtherCAT chassis uses fiber for input and copper for output.
Mount the fiber feedthroughs into the IN front panel.
Using LC-to-SC fiber patch cables:
- Connect the front panel fiber input to the input of the media converter.

Mount the modular adapters to the OUT front panel.
Using CAT5 patch cables:
- Connect the output of the media converter to the input of the coupler on the right rail.
- Connect the output of this coupler to the input of the coupler in the middle rail.
- Connect the output of the middle rail coupler to the front panel output.
- Connect the first coupler on the left rail to the X1 port of the EK1122 terminal.
- Connect the second coupler on the left rail to the X2 port of the EK1122 terminal.

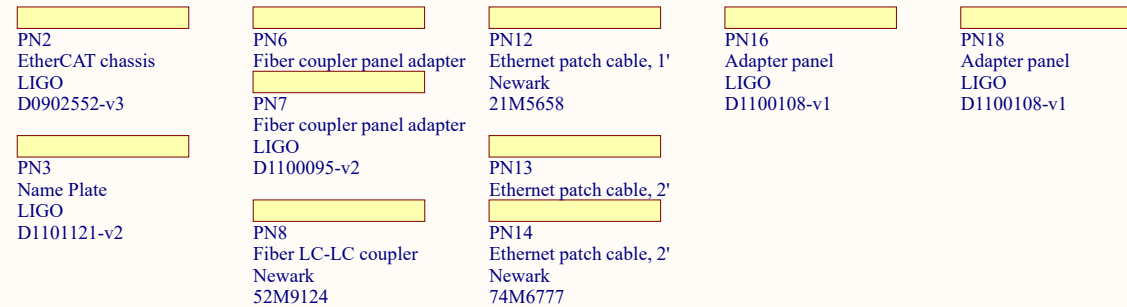
Twist power supply cable pair for motor supply, and wind around toroid 10 times.

IN

OUT

1A

2A



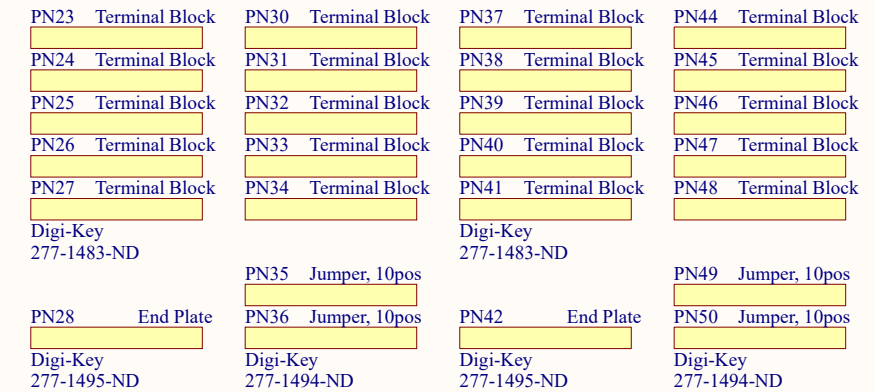
Fiber/LC Corner

CAT5 Corner

Blank

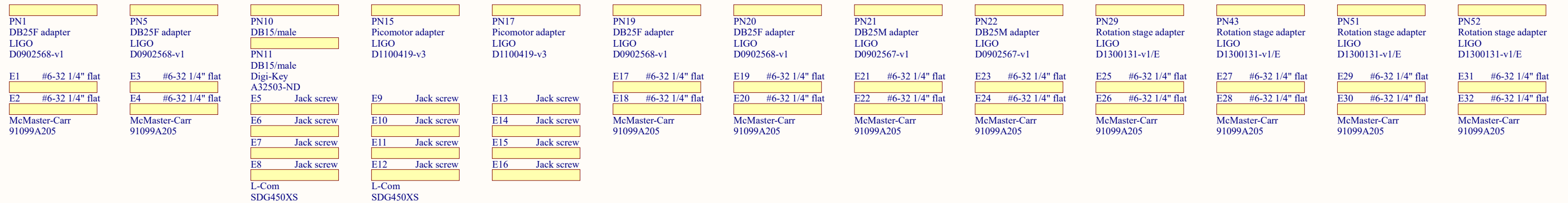
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TBLOCK



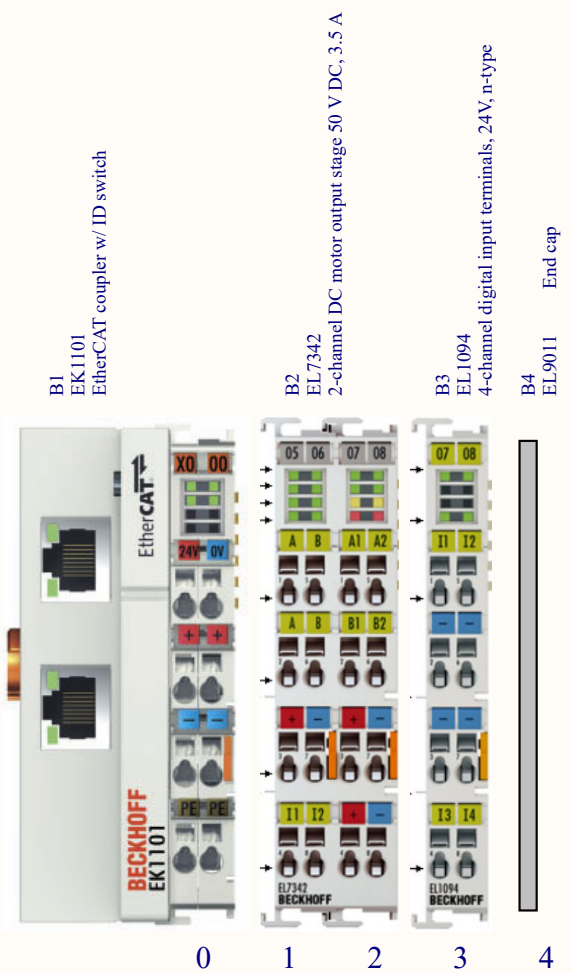
Slots

1 2 3 4 5 6A 6B 7 8 9 10 11 12



LASER ANTE DIODE/CHILLER IO PZT Picomotor PSL Picomotor Spare T-SAMS HAM6 A T-SAMS HAM6 B P-SAMS HAM7 P-SAMS HAM6 Spare Rotation Stage TCS X Rotation Stage TCS Y Rotation Stage IO/PSL Rotation Stage

Title PSL/IO/TCS Controls Chassis		
Size B	Number D1101114	Revision 8
Date: 9/01/2021	Sheet 1 of 4	
File: C:\Users\...\PSLControls1.SchDoc	Drawn By: Daniel Sigg	

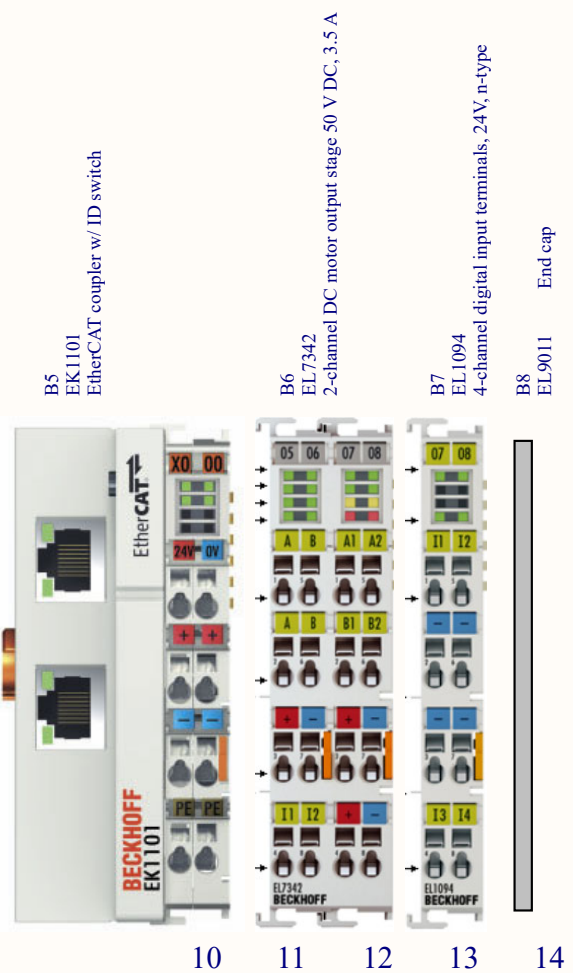


Ebus 24V
Power contacts 24V

Rotation Stage PSL

Power budget:
EL1094: 0.090 A (1x)
EL7342: 0.140 A (1x)

0.230 A



24V
24V

Rotation Stage TCS

Coupler +24V supply voltage wire is connected through relay contacts of EL2612 terminal.
PSL rotation stage on relay contact 1 NC.
TCS rotation stage on relay contact 2 NC.

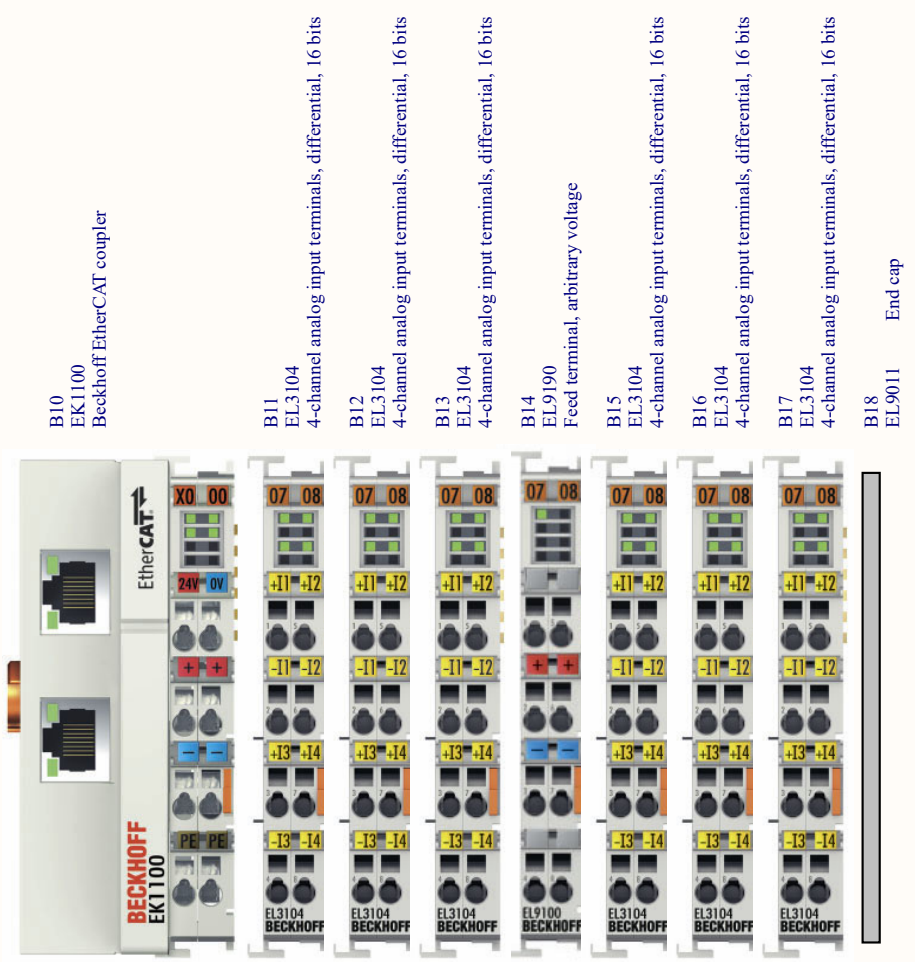


24V

Media Converter

Media converter needs to be mounted sideways to prevent fiber from bending too fast.
The rotary switch needs to be set to 0.

Title P/I/T Controls Chassis: Left Rail		
Size B	Number D1101114	Revision 8
Date: 9/01/2021	Sheet 2 of 4	
File: C:\Users\...\PSLControls2.SchDoc	Drawn By: Daniel Sigg	



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

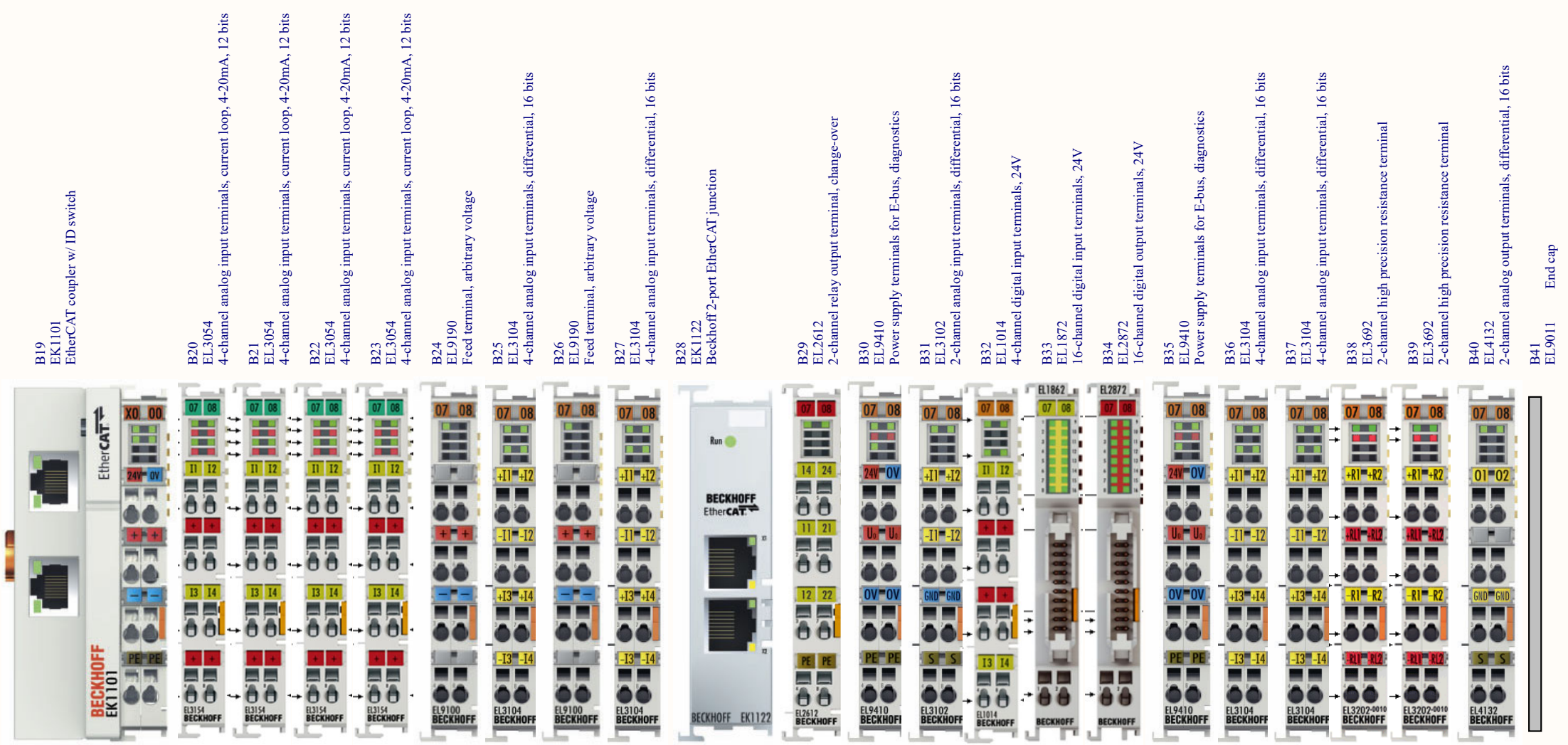
Ebus 24V — 24V
 Power contacts — 5V

Piezo SAMS

Power budget:
 EL3104: 0.130 A (6x)
 EL4134: 0.265 A (0x)

 0.780 A

Title		
P/I/T Controls Chassis: Middle Rail		
Size	Number	Revision
B	D1101114	8
Date:	9/01/2021	Sheet 3 of 4
File:	C:\Users\...\PSLControls3.SchDoc	Drawn By: Daniel Sigg



B19
EK1101
EtherCAT coupler w/ ID switch

B20
EL3054
4-channel analog input terminals, current loop, 4-20mA, 12 bits

B21
EL3054
4-channel analog input terminals, current loop, 4-20mA, 12 bits

B22
EL3054
4-channel analog input terminals, current loop, 4-20mA, 12 bits

B23
EL3054
4-channel analog input terminals, current loop, 4-20mA, 12 bits

B24
EL9190
Feed terminal, arbitrary voltage

B25
EL3104
4-channel analog input terminals, differential, 16 bits

B26
EL9190
Feed terminal, arbitrary voltage

B27
EL3104
4-channel analog input terminals, differential, 16 bits

B28
EK1122
Beckhoff 2-port EtherCAT junction

B29
EL2612
2-channel relay output terminal, change-over

B30
EL9410
Power supply terminals for E-bus, diagnostics

B31
EL3102
2-channel analog input terminals, differential, 16 bits

B32
EL1014
4-channel digital input terminals, 24V

B33
EL1872
16-channel digital input terminals, 24V

B34
EL2872
16-channel digital output terminals, 24V

B35
EL9410
Power supply terminals for E-bus, diagnostics

B36
EL3104
4-channel analog input terminals, differential, 16 bits

B37
EL3104
4-channel analog input terminals, differential, 16 bits

B38
EL3692
2-channel high precision resistance terminal

B39
EL3692
2-channel high precision resistance terminal

B40
EL4132
2-channel analog output terminals, differential, 16 bits

B41
EL9011
End cap

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Ebus 24V — — 24V 24V
 Power contacts 24V — — 24V —

Environmental

Power budget:
 EL3054: 0.130 A (4x)
 EL3104: 0.130 A (2x)
 EK1122: 0.220 A
 EL2612: 0.150 A

 1.150 A

IO PZT

Rotation Stage Feed

Picomotors

Power budget:
 EL3102: 0.180 A (1x)
 EL1014: 0.090 A (1x)
 EL1872: 0.130 A (1x)
 EL2872: 0.130 A (1x)

 0.530 A

Thermal SAMS

Power budget:
 EL3104: 0.130 A (2x)
 EL3692: 0.220 A (2x)
 EL4132: 0.210 A (1x)

 0.910 A

Title P/I/T Controls Chassis: Right Rail		
Size B	Number D1101114	Revision 8
Date: 9/01/2021	Sheet 4 of 4	
File: C:\Users\...\PSLControls4.SchDoc	Drawn By: Daniel Sigg	