

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

This EtherCAT chassis uses fiber and copper.
Mount a fiber feedthrough adapter to the front panel input.
Mount the modular coupler into the front panel output.
Using LC-to-SC single-mode fiber patch cables:
- Connect the fiber converter CU1521-0010 input to the front panel input.
Using CAT5 patch cables:
- Connect the CU1521-0010 output to the input of the left rail EK1101 coupler.
- Connect the EK1101 coupler output to front panel output.

Ports

IN

OUT

1

2

PN1
EtherCAT chassis
LIGO
D0902552-v3

PN2
Front Panel
LIGO
D2200007-v1

PN3
Rear Panel
LIGO
D2200008-v1

PN5
Fiber coupler panel adapter
LIGO

PN6
Fiber coupler panel adapter
LIGO
D1100095-v2

PN7
Fiber LC-LC coupler
Newark
52M9124

PN8
Fiber patch cable, LC-SC
L-Com
SFODSC-LC-01

PN10
Modular coupler
L-Com
ECF504-SC5E

PN11
Ethernet patch cable, 3'
Newark
21M5874

PN12
Ethernet patch cable, 3'
Newark
21M5874

PN14
Adapter panel
LIGO
D1100108-v1

PN16
Adapter panel
LIGO
D1100108-v1

TBLOCK

PN27
Power Distribution Block
Digi-Key
277-2007-ND

SM Fiber

CAT5

Slots

1

2

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PN4
Adapter panel
LIGO
D0902557-v1

PN9
Adapter panel
LIGO
D0902557-v1

PN13
Adapter panel
LIGO
D0902557-v1

PN15
Adapter panel
LIGO
D0902557-v1

PN17
Adapter panel
LIGO
D0902557-v1

PN18
Adapter panel
LIGO
D1100793-v2

PN19 M12 socket

PN20 M12 socket

PN21 M12 socket

PN22 M12 socket

Newark
08R3678

PN23
DB37M adapter
LIGO
D2200009-v1

E1 #6-32 1/4" flat

E2 #6-32 1/4" flat

McMaster-Carr
91099A205

PN24
DB37M adapter
LIGO
D2200009-v1

E3 #6-32 1/4" flat

E4 #6-32 1/4" flat

McMaster-Carr
91099A205

PN25
DB37M adapter
LIGO
D0902569-v1

E5 #6-32 1/4" flat

E6 #6-32 1/4" flat

McMaster-Carr
91099A205

PN26
Picomotor adapter
LIGO
D1100419-v3

E7 Jack screw

E8 Jack screw

E9 Jack screw

E10 Jack screw

L-Com
SDG450XS

Blank

Blank

Blank

Blank

Blank

Temperature
Sensors

Whitening
QPD A

Whitening
QPD B

DC
Photodiodes
Concentr. 10

Picomotor
SQZT8

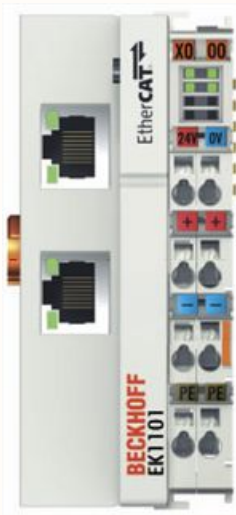
M12	Color	PT100	External Sensor
1	brown	RL+	for example
2	white	R+	Newark 35M2405
3	blue	RL-	& 15M4877
4	black	R-	

Title EtherCAT Filter Cavity End		
Size B	Number D2200006	Revision 1
Date: 1/21/2022	Sheet 1 of 4	
File: C:\Users\...\EtherCATFcEnd1.SchDoc	Drawn By: Daniel Sigg	

B1
CU1521-0010
EtherCAT media converter fibre optic



B2
EK1101
EtherCAT coupler w/ ID switch



B3
EL3102
2-channel analog input terminals, differential, 16 bits



B4
EL1014
4-channel digital input terminals, 24V



B5
EL1872
16-channel digital input terminals, 24V



B6
EL2872
16-channel digital output terminals, 24V



B7
EL9190
Feed terminal, arbitrary voltage



B8
EL2124
4-channel digital output terminals, 5V



B9
EL3104
4-channel analog input terminals, differential, 16 bits



B10
EL9410
Power supply terminals for E-bus, diagnostics



B11
EL2124
4-channel digital output terminals, 5V



B12
EL2124
4-channel digital output terminals, 5V



B13
EL2124
4-channel digital output terminals, 5V



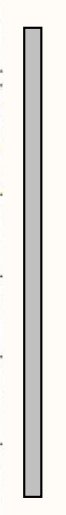
B14
EL2124
4-channel digital output terminals, 5V



B15
EL3202-0010
2-channel high precision input terminal PT100 (RTD)



B16
EL9011
End cap



B17
5V/0.6A isolated DC-DC converter, Mean Well DDR-15G-5



B18
5V/0.6A isolated DC-DC converter, Mean Well DDR-15G-5



Ebus
Power contacts

24V
24V

—
5V (DC_1) 5V (DC_2)

24V

Picomotors

DC PDs
concentrator 10

QPD whitening
Temp.

- PN28
IDC Cable, 20-pin
- PN29
IDC socket, 20pin
- PN30
IDC socket, 20pin

DC_1
DC_2

Media converter needs to be mounted sideways to prevent fiber from bending too much.

The rotary switch needs to be set to 0.

Power budget:
EL3104: 0.130 A (1x)
EL3102: 0.180 A (1x)
EL1014: 0.090 A (1x)
EL1872: 0.130 A (1x)
EL2872: 0.130 A (1x)
EL2124: 0.130 A (1x)

0.790 A

Power budget:
EL3202: 0.190 A (1x)
EL2124: 0.130 A (4x)

0.710 A

Title Filter Cavity End: Left Rail		
Size B	Number D2200006	Revision 1
Date: 1/21/2022	Sheet 2of 4	
File: C:\Users\...\EtherCATFcEnd2.SchDoc	Drawn By: Daniel Sigg	

1

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5

6

A

A

B

B

C

C

D

D

0 1 2 3 4 5 6 7 8 9 10

Ebus 24V

Power contacts 24V

Expansion Room

Title		Filter Cavity End: Middle Rail	
Size	Number	Revision	
B	D2200006	1	
Date:	1/21/2022	Sheet 3 of	4
File:	C:\Users\...\EtherCATFcEnd3.SchDoc	Drawn By:	Daniel Sigg

1

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1

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6

A

A

B

B

C

C

D

D

0 1 2 3 4 5 6 7 8 9 10

Ebus 24V

Power contacts 24V

Expansion Room

Title			Filter Cavity End: Right Rail		
Size	Number	Revision			
B	D2200006	1			
Date:	1/21/2022	Sheet 4 of 4			
File:	C:\Users\...\EtherCATFcEnd4.SchDoc	Drawn By: Daniel Sigg			

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