



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

This EtherCAT chassis uses fiber.  
Mount the modular couplers into the front panel.  
Mount a fiber feedthrough adapter to the rear panel port 1.  
Using LC-to-SC fiber patch cables:  
- Connect the third coupler input and output (right rail) to rear panel slot 1 (SM).  
- Connect the second coupler input/output (middle rail) to rear panel slot 3 (SM).  
- Connect the EK1521 to the rear panel port 1 (MM).  
Using CAT5 patch cables:  
- Connect the front panel input to the input of the first coupler (left rail).  
- Connect the end extension (right rail) to the EL6692 input.  
- Connect the EL6692 output to the rear panel port 1.  
- Connect the remote extension (left rail) to rear panel slot 1.  
- Connect the second coupler input/output (middle rail) to slot 3.

### Ports

#### IN

#### OUT

#### 1

#### 2

PN1  
EtherCAT chassis  
LIGO  
D0902552-v3

PN2  
Name Plate  
LIGO  
D1101833-v1

PN7  
Modular coupler  
L-Com  
ECF504-SC5E

PN8  
Ethernet patch cable, 1'  
Newark  
21M5658

PN11  
Modular coupler

PN12  
Ethernet patch cable, 3'  
Newark  
21M5874

PN17  
Fiber LC-LC coupler  
L-com  
FOA-550A

PN18  
Fiber coupler panel adapter

PN19  
Fiber coupler panel adapter  
LIGO  
D1100095-v2

PN20  
Fiber patch cable, LC-SC  
L-Com  
FODSC50-LC-01

PN22  
Adapter panel  
LIGO  
D1100108-v1

PN24  
Fiber patch cable, LC-SC

PN25  
Fiber patch cable, LC-SC  
L-Com  
SFODSC-LC-01

PN26  
Ethernet patch cable, 1'

PN27  
Ethernet patch cable, 3'

PN29  
D-Sub cable, DB9, female

PN30  
D-Sub cable, DB9, female  
Digi-Key  
H7SXH-0906G-ND

PN31  
D-Sub cable, DB9, male

PN32  
D-Sub cable, DB9, male  
Digi-Key  
H7PXH-0906G-ND

PN34 IDC socket, 10pin

PN35 IDC socket, 10pin

PN36 IDC socket, 10pin

PN37 IDC socket, 10pin  
Digi-Key  
MKC10A-ND

PN38  
D-sub screw/retainer  
L-Com  
SDF1

PN46 Terminal Block

PN47 Terminal Block

PN48 Terminal Block

PN49 Terminal Block

PN50 Terminal Block

Digi-Key  
277-1483-ND

PN51 End Plate  
Digi-Key  
277-1495-ND

PN52 Terminal Block

PN53 Terminal Block

PN54 Terminal Block

PN55 Terminal Block

PN56 Terminal Block

PN57 Jumper, 10pos

PN58 Jumper, 10pos  
Digi-Key  
277-1494-ND

#### CAT5 End

#### CAT5 End

#### MM Fiber End

#### Blank

### Slots

#### 1

#### 2

#### 3

#### 4

#### 5

#### 6

#### 7

#### 8

#### 9

PN3  
Adapter panel  
LIGO  
D1100665-v1

PN4  
Modular coupler

PN5  
Fiber LC-LC coupler  
L-Com  
FOA-801

PN6  
Fiber LC-LC coupler  
L-Com  
FOA-801

PN9  
Adapter panel  
LIGO  
D1100662-v1

PN10  
DB37M adapter  
LIGO  
D0902569-v1

E1 #6-32 1/4" flat

E2 #6-32 1/4" flat

McMaster-Carr  
91099A205

PN13  
Adapter panel  
LIGO  
D1101829-v1

PN14  
Modular coupler

PN15  
Fiber LC-LC coupler  
L-Com  
FOA-801

PN16  
Fiber LC-LC coupler  
L-Com  
FOA-801

PN21  
Adapter panel  
LIGO  
D0902557-v1

PN23  
Adapter panel  
LIGO  
D0902557-v1

PN28  
Adapter panel  
LIGO  
D0902557-v1

PN33  
Adapter panel  
LIGO  
D0902557-v1

PN39  
Adapter panel  
LIGO  
D1100793-v2

PN40 M12 socket

PN41 M12 socket

PN42 M12 socket

PN43 M12 socket

Newark  
08R3678

PN44  
Adapter panel  
LIGO  
D1100661-v1

PN45  
Serial adapter  
LIGO  
D1100638-v1

E3 #6-32 1/4" flat

E4 #6-32 1/4" flat

McMaster-Carr  
91099A205

E5 #2 3/8" pan

E6 #2 3/8" pan

E7 #2 3/8" pan

E8 #2 3/8" pan

McMaster-Carr  
90272A079

E9 #2 washer

E10 #2 washer

E11 #2 nut

E12 #2 nut

E13 #2 nut

E14 #2 nut

McMaster-Carr  
90480A003

E15 #2 washer

E16 #2 washer

E17 #2 washer

E18 #2 washer

E19 #2 washer

E20 #2 washer

McMaster-Carr  
90126A501

E21 #2 lock washer

E22 #2 lock washer

E23 #2 lock washer

E24 #2 lock washer

McMaster-Carr  
98449A500

#### Fiber/Ext.

#### Safety Contacts

#### Safety Network

#### Blank

#### Temperature Sensors

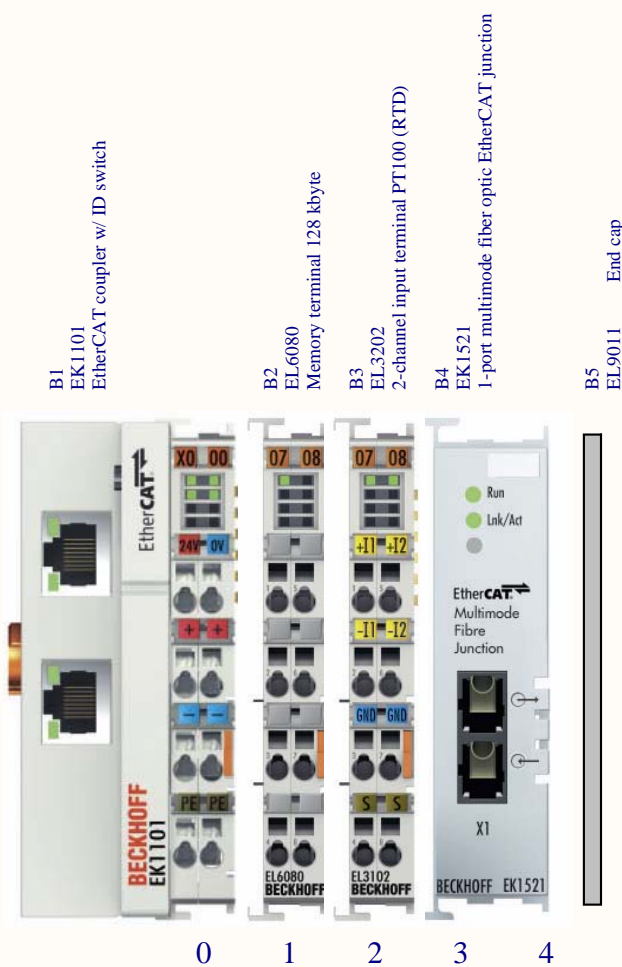
#### Serial Concentrator

Fiber/Ext.:  
SM Fiber from corner  
SM Fiber corner ext.  
CAT5 corner ext.

M12	Color	PT100
1	brown	RL+
2	white	R+
3	blue	RL-
4	black	R-

External Senso:  
for example  
Newark 35M2405  
& 15M4877

Title <b>EtherCAT H1 Remote Access End</b>		
Size B	Number <b>D1101831</b>	Revision <b>1</b>
Date: 9/21/2011	Sheet 1 of 4	
File: C:\Users\...\EtherCAT4kmH1End1.SchDoc	Drawn By: Daniel Sigg	

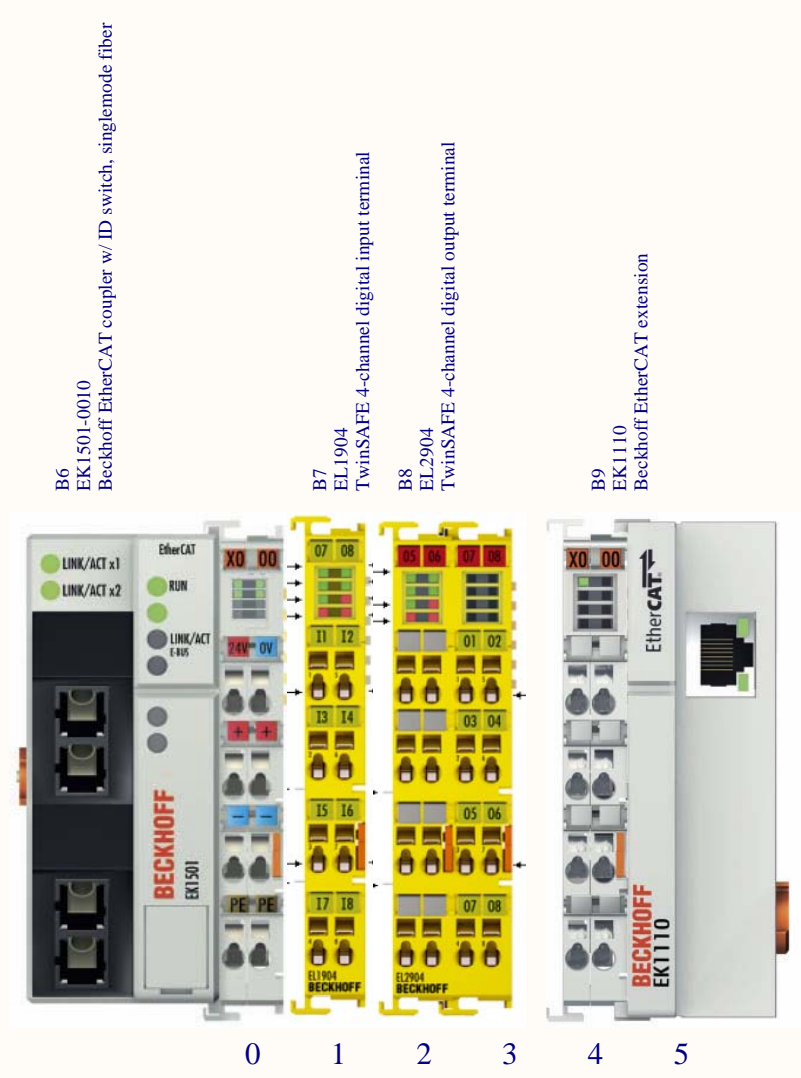


Ebus 24V  
 Power contacts 24V

End EtherCAT      End Temp.

Power budget:	
EL6080:	0.130 A
EK1521:	0.400 A
EL3202:	0.190 A
EK1110:	0.125 A
-----	
	0.845 A

Title <b>Remote Access End: Left Rail</b>		
Size B	Number <b>D1101831</b>	Revision <b>1</b>
Date:	9/21/2011	Sheet 2 of 4
File:	C:\Users\...\EtherCAT4kmH1End2.SchDoc Drawn By: Daniel Sigg	



B6  
EK1501-0010  
Beckhoff EtherCAT coupler w/ ID switch, singlemode fiber

B7  
EL1904  
TwinSAFE 4-channel digital input terminal

B8  
EL2904  
TwinSAFE 4-channel digital output terminal

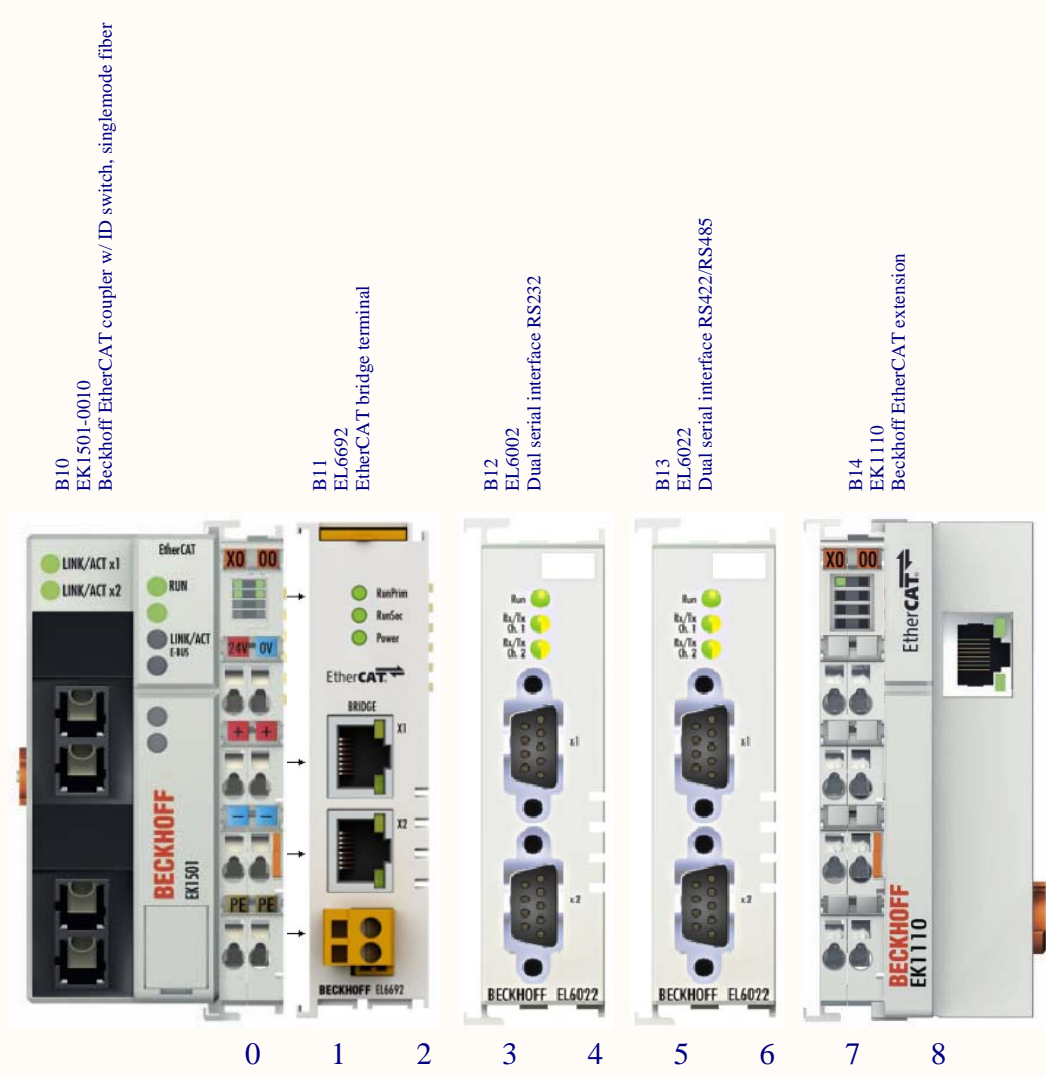
B9  
EK1110  
Beckhoff EtherCAT extension

Ebus                    24V  
Power contacts        24V

### Safety Network

Power budget:  
 EL1904: 0.200 A  
 EL2904: 0.221 A  
 EK1110: 0.125 A  
 -----  
                   0.546 A

Title		
<b>Remote Access End: Middle Rail</b>		
Size	Number	Revision
B	<b>D1101831</b>	<b>1</b>
Date:	9/21/2011	Sheet 3 of 4
File:	C:\Users\...\EtherCAT4kmH1End3.SchDoc Drawn By: Daniel Sigg	



Ebus 24V  
 Power contacts 24V

Corner EtherCAT      End EtherCAT      RS232 RS422      Remote corner extension

Power budget:  
 EL6692: 0.120 A  
 EL6002: 0.170 A  
 EL6022: 0.350 A  
 EK1110: 0.125 A  
 -----  
 0.595 A

Title <b>Remote Access End: Right Rail</b>		
Size B	Number <b>D1101831</b>	Revision <b>1</b>
Date: 9/21/2011	Sheet 4 of 4	
File: C:\Users\...\EtherCAT4kmH1End4.SchDoc Drawn By: Daniel Sigg		