



## **GJ200 • *Embedded Go*®**

PoE+ Injector • Three Port RJ45 Gigabit Ethernet



## Technical Features

### General

- ▶ PoE+ 1000BASE-T Ethernet midspan power injector
- ▶ Option NBASE-T
- ▶ Intended for rugged industrial applications, ready-for-use (Embedded Go®)
- ▶ Industrial PCB assembly
- ▶ PCB Dimensions 133.0mm x 58.0mm
- ▶ RJ45 Gigabit Ethernet connectors, 3 x IN/OUT
- ▶ M12-A Power connector
- ▶ Terminal block power connector (option)
- ▶ Nominal 48VDC/54VDC power input operation
- ▶ PSE power sourcing equipment configuration
- ▶ 802.3at PoE+ (up to 30W/port)

### I/O Connectors

- ▶ Three groups of dual RJ45 jacks, input GbE, output PoE+ GbE
- ▶ 1000BASE-T, 100BASE-TX, 10BASE-T compliant data transfer rate
- ▶ 1000BASE-T magnetics 1:1, PoE+
- ▶ NBASE-T, 2.5GBASE-T, 5GBASE-T, 10GBASE-T on request
- ▶ Up to three GJ200 boards can be mezzanine stacked for 6/9 PoE+ ports
  
- ▶ M12-A 5-position male connector for DC power input
- ▶ Option terminal block power input 3.5mm pitch 4-position screw lock

### Power over Ethernet

- ▶ PSE PoE+ according to IEEE 802.3at-2009
- ▶ Maximum power delivered per port 30W (25.4W at powered device PD per specification)
- ▶ Maximum power delivered in total 90W
- ▶ IEEE 802.3at PSE Type 2 mode A (600mA/pair, RJ45 pins 1,2 & 3,6)
- ▶ TPS23861 PSE controller, automatic mode
- ▶ Auto detect & classification, auto turn-on & disconnect

### Power Requirements

- ▶ DC Input, 44V-57V (48VDC, 54VDC)
- ▶ Rated power consumption 95W max. (@90W external load)
- ▶ Fast acting chip fuse
- ▶ Protected against reverse polarity
- ▶ TVS ESD Protection
- ▶ Common mode input filter
- ▶ M12-A 5-Position male connector for DC power input
- ▶ Pigtail cable assemblies available M12-A 5-pos. female plug
- ▶ Option 4-position terminal block power connector, 3.50mm pitch, screw lock removable cable plug

## Technical Features

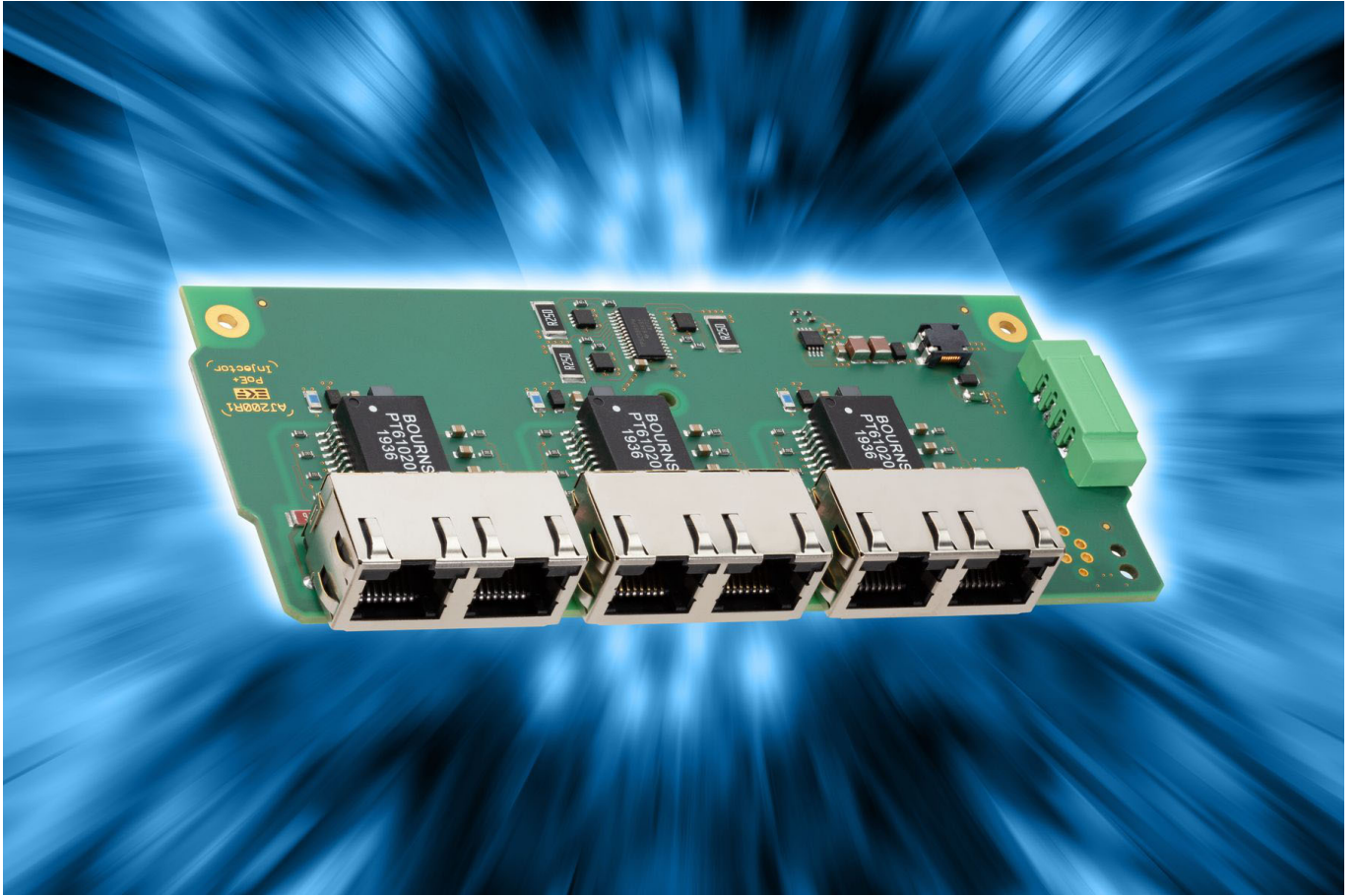
### *Applications*

- ▶ For easy system integration
- ▶ Industrial networks - IIoT
- ▶ Rugged environments
- ▶ Customized connector loading
- ▶ Customized board design

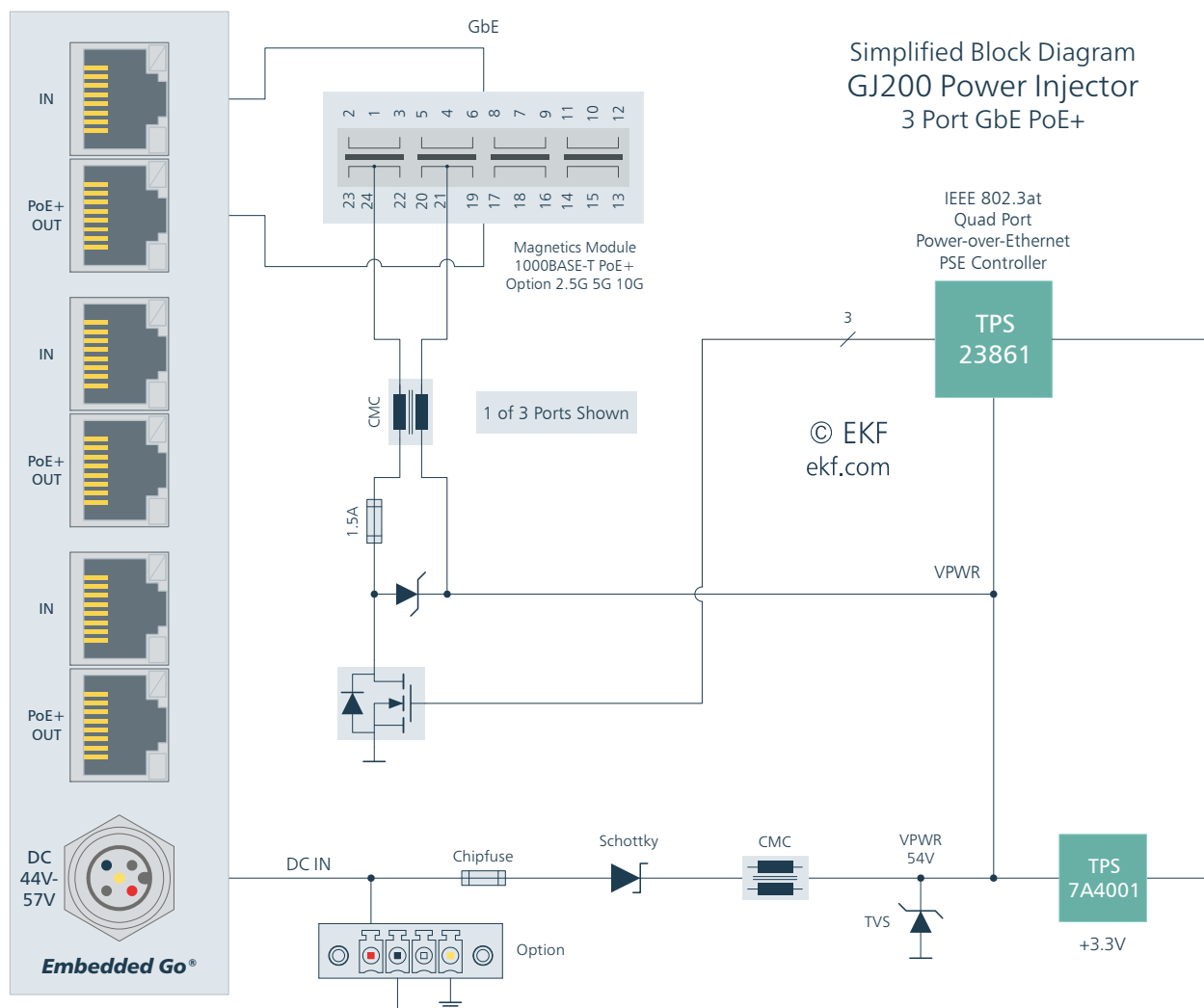
### *Environmental, Regulatory*

- ▶ Designed & manufactured in Germany
- ▶ ISO 9001 certified quality management
- ▶ Long term availability
- ▶ Rugged solution
- ▶ Conformal coating, sealing, underfilling on request
- ▶ RoHS compliant
- ▶ Operating temperature -40°C to +85°C (industrial temperature range)
- ▶ Storage temperature -40°C to +85°C, max. gradient 5°C/min
- ▶ Humidity 5% ... 95% RH non condensing
- ▶ Altitude -300m ... +3000m
- ▶ Shock 15g 0.33ms, 6g 6ms
- ▶ Vibration 1g 5-2000Hz
- ▶ EC Regulatory EN55024, EN55032, EN62368-1
- ▶ MTBF 136.2 years

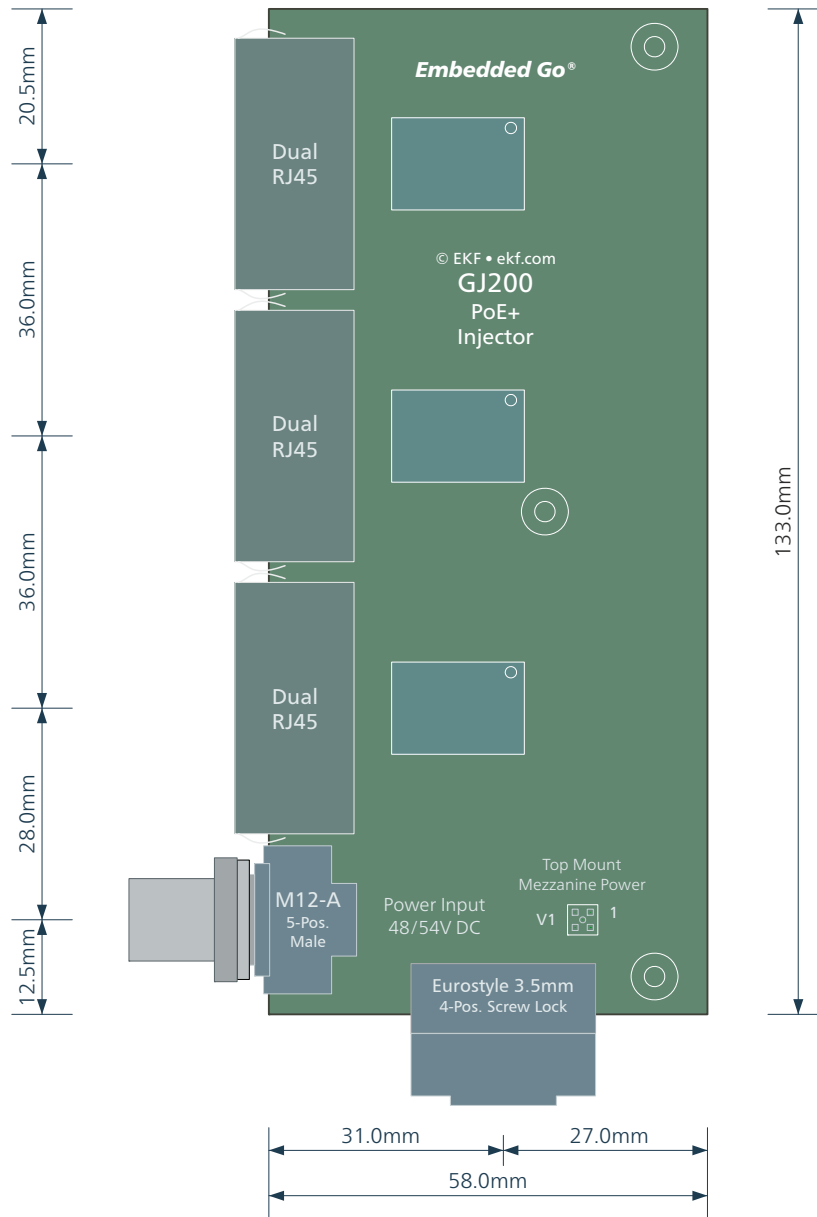
items may be subject to changes

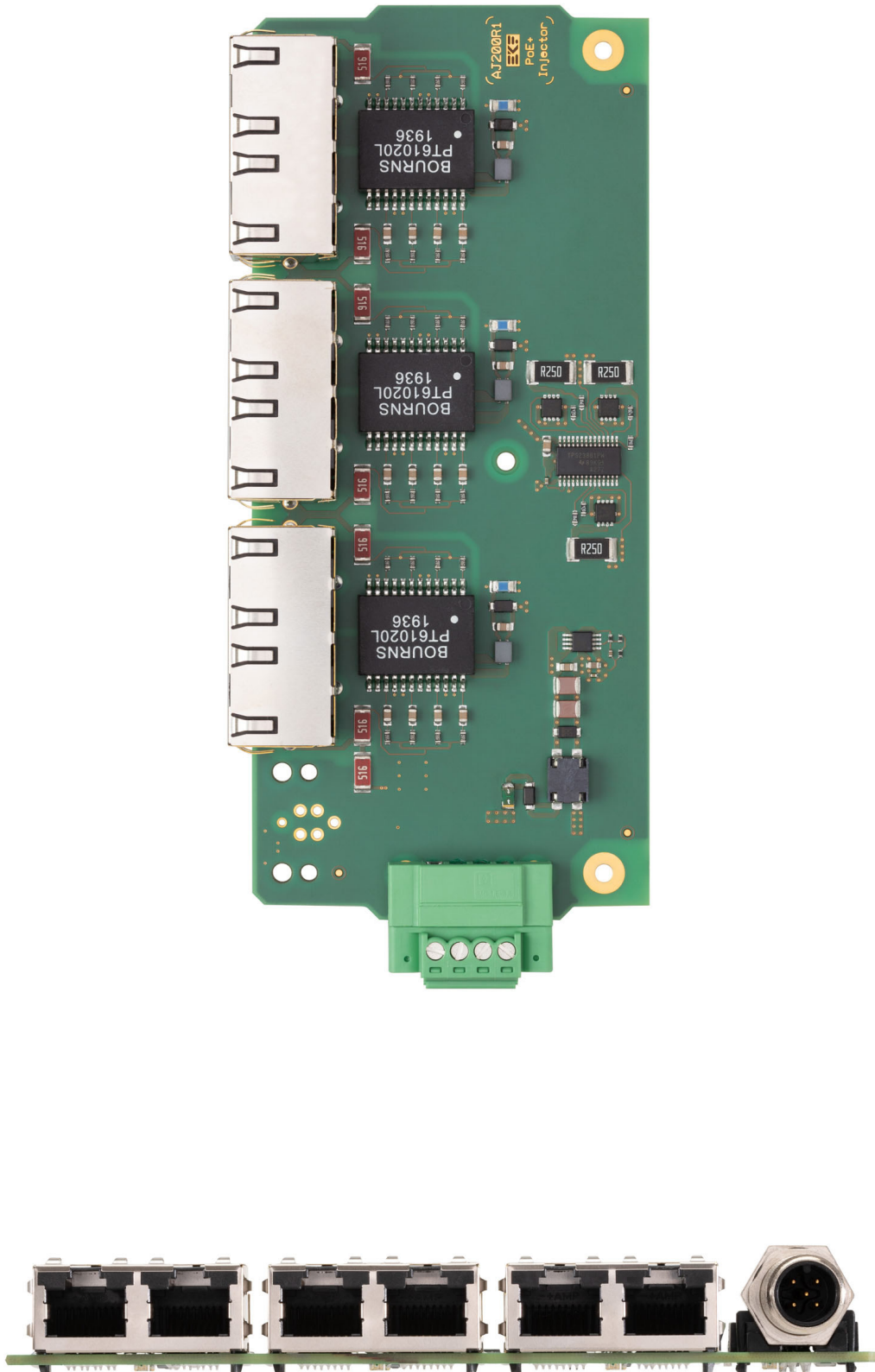


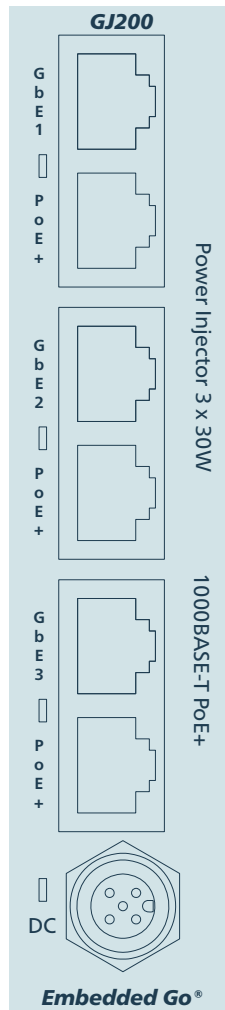
## Block Diagram



## Dimensions





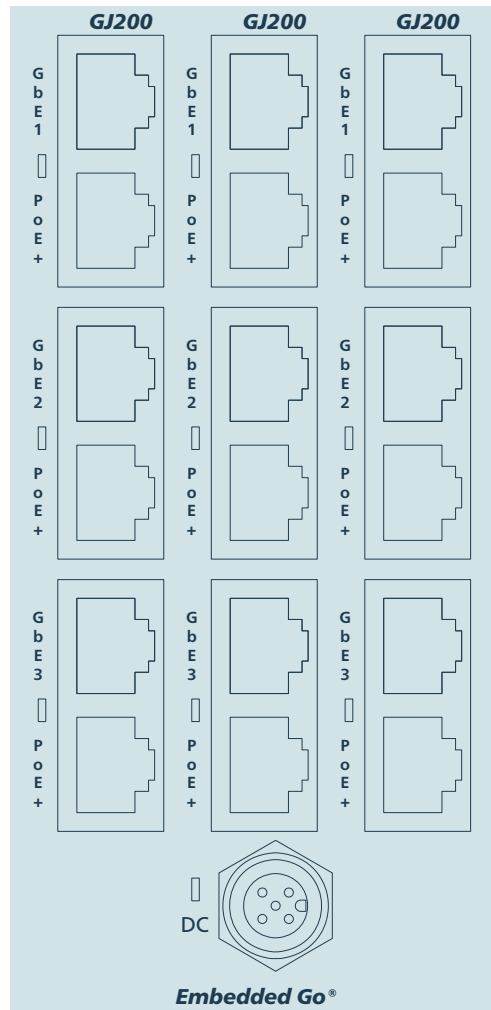
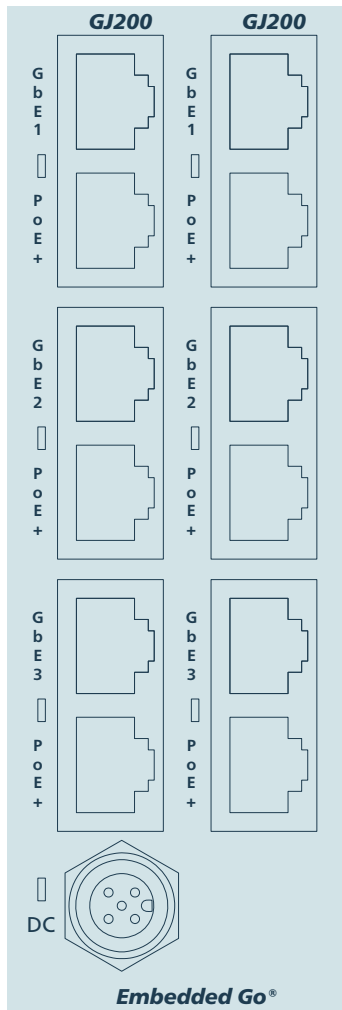


Sample F/P

Ethernet Port 1-3 LEDs	
green (weak)	PoE+ ready
blue	PoE+ active, normal operation
red (blinking or permanent)	internal fault (port chip fuse must be replaced)

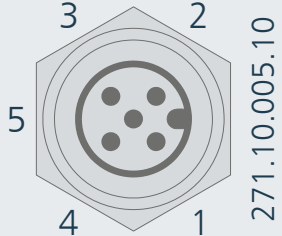
DC LED	
green	DC input power present
red	internal fault (main chip fuse must be replaced)



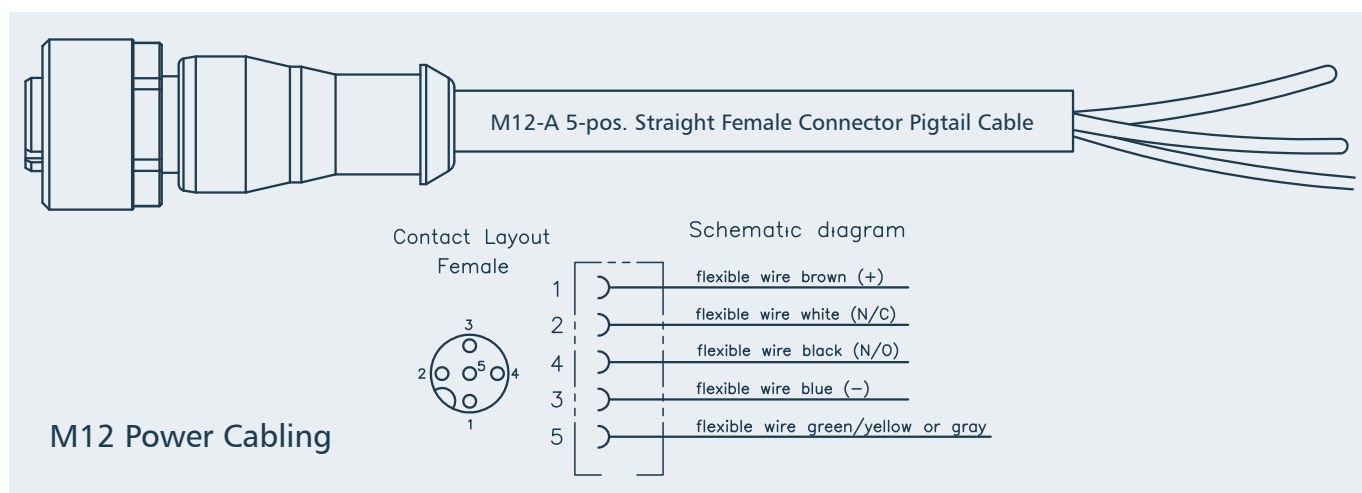


Sample F/P for Mezzanine Stack

## M12 Power Connector Pin Assignment

PCB Connector M12-A 5-Position Male 4A/Pin	
 <p>271.10.005.10</p>	V=48/54VDC
	1 +V
	2 RSV
	3 GND
	4 RSV
5 FE (Shield)	

Mating Pigtail Cable Assemblies 1.5m w. Female Straight Plug	
EKF	271.10.505.22.015
Phoenix Contact	1669822
Tyco (TE)	2273035-1



pre-assembled standard pigtail cables - wires #2 and #4 not in use with GJ200 (reserved)

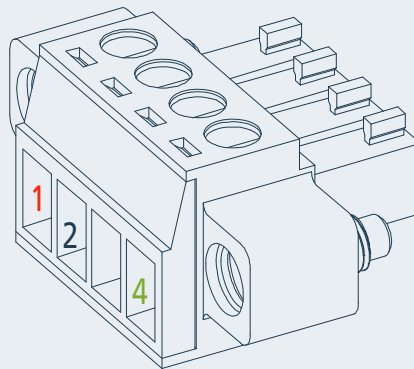
Mating DIN Rail Power Supply	
EKF	352.1.120.48.1
Meanwell	NDR-120-48, 120W 48VDC/2.5A

## Option Terminal Block Power Connector Pin Assignment

3.50mm 4-Position Terminal Block 8A/Contact		
<p>245.35.04.00</p> <p>1 2 3 4</p>	<p>V=48/54VDC</p>	1 +V
		2 GND
		3 RSV
		4 FE (Shield)

Mating Plugs w. Screw Lock	
EKF	245.35.04.20
FCI Amphenol	20020000-C041B01LF
Molex	39504-0004
Phoenix Contact	1847071
Tyco	284510-4

### Option Terminal Block Plug Power Cabling



245.35.04.20

Ordering Information

For popular GJ200 SKUs please contact [sales@ekf.de](mailto:sales@ekf.de)

Product Homepage

<https://www.ekf.com/g/gj200/gj200.html>

# ***Embedded Go***®

Ready-for-Use Industrial PCB Assemblies

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