

## Compact67

IP67 Extensible Distributed I/O Modules



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# Compact67



## Description

The Compact 67 I/O modules for fieldbus provide a reliable solution for connecting industrial controllers to I/O devices in harsh environments.

Compact67 I/O modules with IP67 housing can be standardized installation, and operate in harsh dust, underwater, and vibration condition. These features make them ideally suited for many applications, such as material handling equipment and automated assembly machinery etc. The functions of supporting PNP and NPN signal input, embedded bright LED diagnosis help maintenance personnel to easily judge I/O, module and network status.

## Features

- Classic design realizes space savings for directly mounting to machine
- Fast and reliable plug and socket connection MiniChange (7/8"), MicroChange (M12)
- Support PNP and NPN input
- Free selection I/O configuration
- LED status indication
- Online diagnosis of modules and channels

## 04 / Profibus

FCDP-1600P-M12	16 input, PNP, 8 x M12
FCDP-0808P-M12	8 input+8 output, PNP, 8 x M12
FCDP-16UP-M12	16 configurable input/output, PNP, 8 x M12

## 06 / Profinet

FCPN-1600P-M12	16 input, PNP, 8 x M12
FCPN-0808P-M12	8 input+8 output, PNP, 8 x M12
FCPN-16UP-M12	16 configurable input/output, PNP, 8 x M12
FCPN-1600P-M12-F	16 input, PNP, 8 x M12
FCPN-0808P-M12-F	8 input+8 output, PNP, 8 x M12
FCPN-16UP-M12-F	16 configurable input/output, PNP, 8 x M12

## 08 / DeviceNet

FCDN-1600P-M12	16 input, PNP, 8 x M12
FCDN-0808P-M12	8 input+8 output, PNP, 8 x M12
FCDN-16UP-M12	16 configurable input/output, PNP, 8 x M12

## 10 / CC-Link

FCCL-1600N-M12	16 input, NPN 8 x M12
FCCL-0808N-M12	8 input+8 output, NPN 8 x M12
FCCL-16UN-M12	16 configurable input/output, NPN 8 x M12
FCCL-1600P-M12	16 input, PNP 8 x M12
FCCL-0808P-M12	8 input+8 output, PNP 8 x M12
FCCL-16UP-M12	16 configurable input/output, PNP 8 x M12

<ul style="list-style-type: none"> <li>■ Integrated structure design</li> <li>■ Free selection input and output channels</li> <li>■ Short-circuit and overload protection</li> </ul>				
	<b>Ordering data</b>			
	Type	FCDP-1600P-M12	FCDP-0808P-M12	FCDP-16UP-M12
I/O Configurations	16 input PNP, 8 x M12	8 input+8 output, PNP, 8 x M12	16 configurable input/output, PNP, 8 x M12	
<b>Fieldbus</b>	Profibus-DP			
Transfer protocol	Profibus-DP			
Operating mode	Sync- and freeze mode are support			
Transfer rate	9.6Kbps...12Mbps			
Address settings	1...125, rotary switch			
<b>Power supply</b>				
Supply voltage	24 VDC (18...30V)			
Module consumption current	Max. 200 mA			
Output supply current	Total max. 8 A			
Electrical isolation	Module / Ui and Uo voltage isolation			
<b>Port type</b>				
Power supply	2 x 7/8" 5pin, male+female			
Bus communication	2 x M12 B-code 5pin, male+female			
Signal connection	8 x M12 A-code 4pin, female			
<b>Electrical parameters</b>				
Number of input channels	16	8	Max.16	
Input supply current	Max.200 mA per channel			
Input signal type	PNP sensor, stroke switch, dry contact, etc.			
Input delay	2.5 ms			
Number of output channels	-	8	Max.16	
Output rated current	Max. 2 A per channel, total max. 8 A			
Output signal type	Indicator, miniature solenoid valve, etc.			
Output switch frequency	Resistive load 100 Hz, inductive load 5 Hz			
<b>Diagnostics</b>				
Communication status	LED indicator, communication message			
Supply monitoring	Yes, low voltage alarm			
Short-circuit and overload protection	Yes, LED indicator			
<b>General data</b>				
Protection class	IP67			
Temperature range	Operating temperature -25...+70 °C, storage temperature -40...+85 °C			
Mounting method	4-hole screw mounting			
Dimensions	60 x 220 x 39 mm			

**Dimensions**

**Power port diagram**

Power in male

Power out female

1 - output load power supply 2M  
2 - gateway / input load power 1M  
3 - PE  
4 - gateway / input load power 1L+  
5 - output load power supply 2L+

**Bus port diagram**

Bus-in female

Bus-out female

1 - N.C  
2 - Bus-A  
3 - N.C  
4 - Bus-B  
5 - Shield

**Signal port diagram**

Signal port female

1 - power supply 24V+  
2 - signal input / output B  
3 - power supply GND  
4 - signal input / output A

<ul style="list-style-type: none"> <li>■ Integrated structure design</li> <li>■ Free selection input and output channels</li> <li>■ Short-circuit and overload protection</li> </ul>			
<b>Ordering data</b>			
Type	FCPN-1600P-M12	FCPN-0808P-M12	FCPN-16UP-M12
I/O Configurations	16 input, PNP, 8 x M12, star topology	8 input+8 output, PNP, 8 x M12, star topology	16 configurable input/output, PNP, 8 x M12, star topology
Type	FCPN-1600P-M12-F	FCPN-0808P-M12-F	FCPN-16UP-M12-F
I/O Configurations	16 input, PNP, 8 x M12, star topology, ring topology, FSU	8 input+8 output, PNP, 8 x M12, star topology, ring topology, FSU	16 configurable input/output, PNP, 8 x M12, star topology, ring topology, FSU
<b>Fieldbus</b>			
Transfer protocol	Profinet		
Operating mode	Autonegotiation, automatic MDI/MDIX		
Transfer rate	10/100 Mbps		
Address settings	Profinet, DCP		
<b>Power supply</b>			
Supply voltage	24 VDC (18...30V)		
Module consumption current	Max. 200 mA		
Output supply current	Total max. 8 A		
Electrical isolation	Module / Ui and Uo voltage isolation		
<b>Port type</b>			
Power supply	2 x 7/8" 5pin, male+female		
Bus communication	2 x M12 D-code 4pin, female		
Signal connection	8 x M12 A-code 4pin, female		
<b>Electrical parameters</b>			
Number of input channels	16	8	Max.16
Input supply current	Max.200 mA per channel		
Input signal type	PNP sensor, stroke switch, dry contact, etc.		
Input delay	2.5 ms		
Number of output channels	-	8	Max.16
Output rated current	Max. 2 A per channel, total max. 8 A		
Output signal type	Indicator, miniature solenoid valve, etc.		
Output switch frequency	Resistive load 100 Hz, inductive load 5 Hz		
<b>Diagnostics</b>			
Communication status	LED indicator, communication message		
Supply monitoring	Yes, low voltage alarm		
Short-circuit and overload protection	Yes, LED indicator		
<b>General data</b>			
Protection class	IP67		
Temperature range	Operating temperature -25...+70 °C, storage temperature -40...+85 °C		
Mounting method	4-hole screw mounting		
Dimensions	60 x 220 x 39 mm		

**Dimensions**

**Power port diagram**

Power in male

Power out female

- 1 - output load power supply 2M
- 2 - gateway / input load power 1M
- 3 - PE
- 4 - gateway / input load power 1L+
- 5 - output load power supply 2L+

**Bus port diagram**

Bus-in female

Bus-out female

- 1 - emitter TD+
- 2 - receiver RD+
- 3 - emitter TD-
- 4 - receiver RD-

**Signal port diagram**

Signal port female

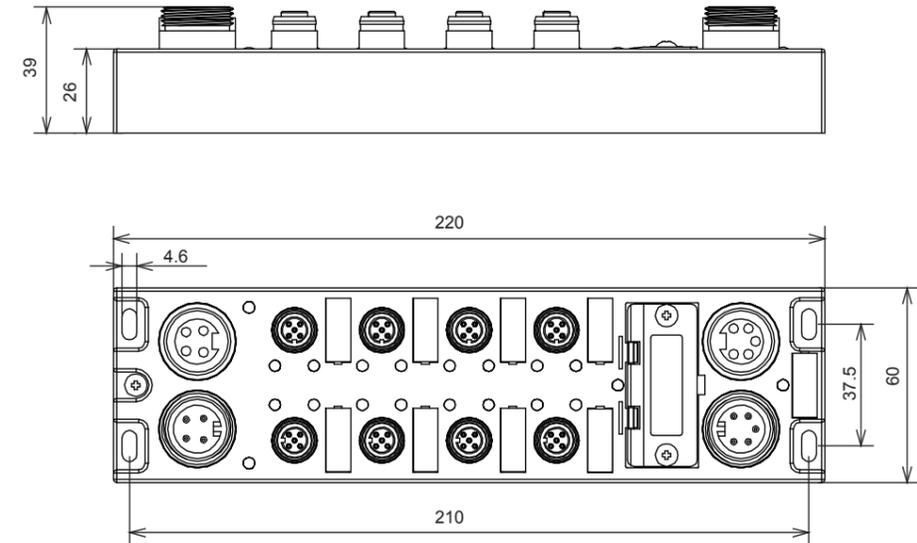
- 1 - power supply 24V+
- 2 - signal input / output B
- 3 - power supply GND
- 4 - signal input / output A

- Integrated structure design
- Free selection input and output channels
- Short-circuit and overload protection

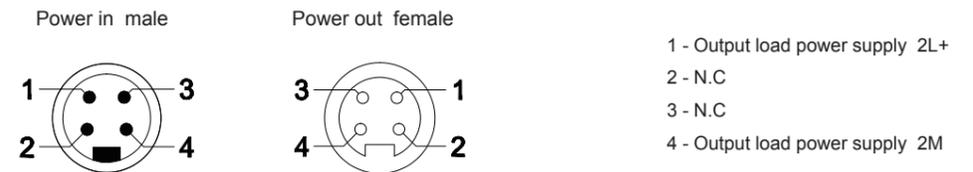


Ordering data			
Type	FCDN-1600P-M12	FCDN-0808P-M12	FCDN-16UP-M12
I/O Configurations	16 input PNP, 8 x M12	8 input+8 output PNP, 8 x M12	16 configurable input/output, PNP, 8 x M12
Fieldbus			
Transfer protocol	DeviceNet		
Operating mode	Polling; change of state; cyclic		
Transfer rate	125, 250, 500 kbps		
Address settings	0...63, rotary switch		
Power supply			
Supply voltage	24 VDC (18...30V)		
Module consumption current	Max. 200 mA		
Output supply current	Total max. 8 A		
Electrical isolation	Module / Ui and Uo voltage isolation		
Port type			
Power supply	2 x 7/8" 4pin, male+female		
Bus communication	2 x 7/8" 5pin, male+female		
Signal connection	8 x M12 A-code 4pin, female		
Electrical parameters			
Number of input channels	16	8	Max.16
Input supply current	Max.200 mA per channel		
Input signal type	PNP sensor, stroke switch, dry contact, etc.		
Input delay	2.5 ms		
Number of output channels	-	8	Max.16
Output rated current	Max. 2 A per channel, total max.8 A		
Output signal type	Indicator, miniature solenoid valve, etc.		
Output switch frequency	Resistive load 100 Hz, inductive load 5 Hz		
Diagnostics			
Communication status	LED indicator, communication message		
Supply monitoring	Yes, low voltage alarm		
Short-circuit and overload protection	Yes, LED indicator		
General data			
Protection class	IP67		
Temperature range	Operating temperature -25...+70 °C, storage temperature -40...+85 °C		
Mounting method	4-hole screw mounting		
Dimensions	60 x 220 x 39 mm		

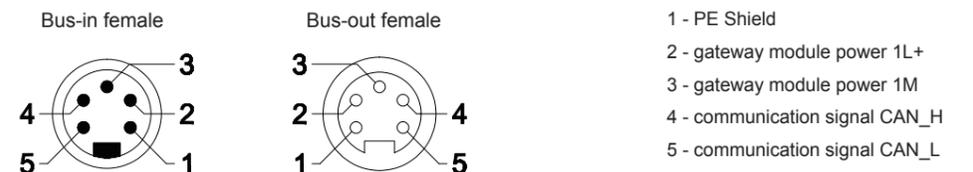
Dimensions



Power port diagram



Bus port diagram



Signal port diagram



<ul style="list-style-type: none"> <li>■ Integrated structure design</li> <li>■ Free selection input and output channels</li> <li>■ Short-circuit and overload protection</li> </ul>			
<b>Ordering data</b>			
Type	FCCL-1600P-M12	FCCL-0808P-M12	FCCL-16UP-M12
I/O Configurations	16 input PNP, 8 x M12	8 input+8 output PNP, 8 x M12	16 configurable input/output, PNP, 8 x M12
Type	FCCL-1600N-M12	FCCL-0808N-M12	FCCL-16UN-M12
I/O Configurations	16 input NPN, 8 x M12	8 input+8 output NPN, 8 x M12	16 configurable input/output, NPN, 8 x M12
<b>Fieldbus</b>			
Transfer protocol	CC-Link		
Operating mode	Remote device station (4 station)		
Transfer rate	156Kbps...10Mbps		
Address settings	1...64, rotary switch		
<b>Power supply</b>			
Supply voltage	24 VDC (18...30V)		
Module consumption current	Max. 200 mA		
Output supply current	Total max. 8 A		
Electrical isolation	Module / Ui and Uo voltage isolation		
<b>Port type</b>			
Power supply	2 x 7/8" 5pin, male+female		
Bus communication	2 x M12 A-code 5pin, male+female		
Signal connection	8 x M12 A-code 4pin, female		
<b>Electrical parameters</b>			
Number of input channels	16	8	Max.16
Input supply current	Max. 200 mA per channel		
Input signal type	PNP / NPN sensor, stroke switch, dry contact, etc.		
Input delay	2.5 ms		
Number of output channels	-	8	Max.16
Output rated current	Max. 2 A per channel, total max. 8 A		
Output signal type	Indicator, miniature solenoid valve, etc.		
Output switch frequency	Resistive load 100 Hz, inductive load 5 Hz		
<b>Diagnostics</b>			
Communication status	LED indicator, communication message		
Supply monitoring	Yes, low voltage alarm		
Short-circuit and overload protection	Yes, LED indicator		
<b>General data</b>			
Protection class	IP67		
Temperature range	Operating temperature -25...+70 °C, storage temperature -40...+85 °C		
Mounting method	4-hole screw mounting		
Dimensions	60 x 220 x 39 mm		

**Dimensions**

**Power port diagram**

Power in male

Power out female

1 - output load power supply 2M  
2 - gateway / input load power 1M  
3 - PE  
4 - gateway / input load power 1L+  
5 - output load power supply 2L+

**Bus port diagram**

Bus-in female

Bus-out female

1 - Shield  
2 - Bus signal DB  
3 - Bus signal DG  
4 - Bus signal DA

**Signal port diagram**

Signal port female

1 - power supply 24V+  
2 - signal input / output B  
3 - power supply GND  
4 - signal input / output A