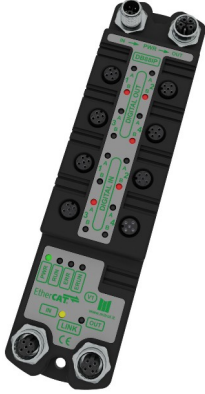




Introduction



DB88IP is a slave EtherCAT module with up to 16 isolated input/output channels. Diagnostic leds indicate EtherCAT connection status and digital I/O.

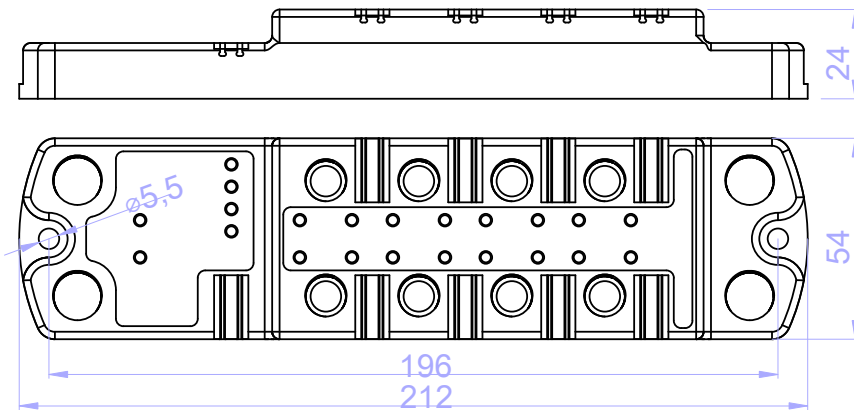


Hardware Specification

Digital Output	
Channels	8
Output current for each channel	2A
Load type	Ohmic, inductive and lamp
Output protection	Shortcircuit and overload
Switching time	<1ms
Digital Input	
Channels	8
OFF voltage level	<5V
ON voltage level	>15V
Maximum input voltage	36V
Input filter	Typical 1ms
Input current	4mA / Channel @ 24V
Electrical	
Supply voltage Vs/Vp	24 Vdc typ (range 18..36V)
Electrical isolation	2500Vrms
Power consumption (Vs)	3W
Interface	EtherCAT slave
Specification	EN 61131-2
Diagnostic leds	Power ● Run ● Error ● EtherCAT run ● Link IN ● Link OUT ●



Mechanical	
Dimensions [W x H x D]	54x212x24mm without connectors
Installation	2 fixing holes 5mm for M4 (pitch 196mm) with metal pad connected to Earth
Environment	
Operating/storage temperature	-20°C to 60°C / -20°C to 85°C
Relative humidity	Max 95% without condensation
Degree of protection	IP65

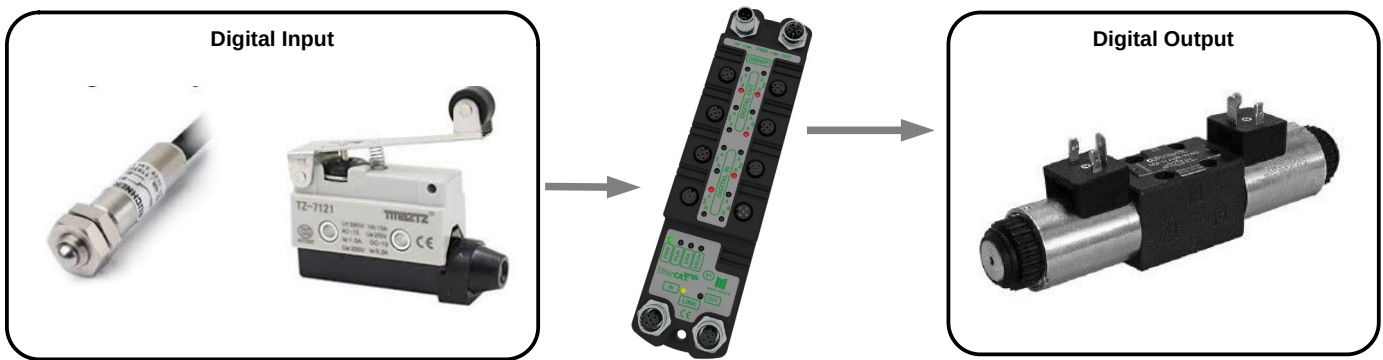


To facilitate wiring there are 9 standard label holders, one for each connector, plus one for the module name

NOTE: suggested label code
www.phoenixcontact.com
 0801491



Application





Pin Assignments

Power supply M12 L code

1 - GND Vp/Vs
2 - GND Vp/Vs
3 - 24Vs
4 - 24Vp
FE - Earth

I/O connectors → M12 A code

PIN	Signal	LED
1	NC	
2	OUT 2	B
3	GND Vp/Vs	
4	OUT 1	A
5	Earth	

PIN	Signal	LED
1	NC	
2	OUT 4	B
3	GND Vp/Vs	
4	OUT 3	A
5	Earth	

PIN	Signal	LED
1	NC	
2	OUT 6	B
3	GND Vp/Vs	
4	OUT 5	A
5	Earth	

PIN	Signal	LED
1	NC	
2	OUT 8	B
3	GND Vp/Vs	
4	OUT 7	A
5	Earth	

PIN	Signal	LED
1	24Vs	
2	IN 2	B
3	GND Vp/Vs	
4	IN 1	A
5	Earth	

PIN	Signal	LED
1	24Vs	
2	IN 6	B
3	GND Vp/Vs	
4	IN 5	A
5	Earth	

PIN	Signal	LED
1	24Vs	
2	IN 4	B
3	GND Vp/Vs	
4	IN 3	A
5	Earth	

PIN	Signal	LED
1	24Vs	
2	IN 8	B
3	GND Vp/Vs	
4	IN 7	A
5	Earth	

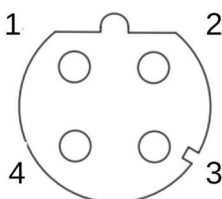
EtherCAT M12 D code

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

1 - TD+
2 - RD+
3 - TD-
4 - RD-
The metal bushing is connected to Earth

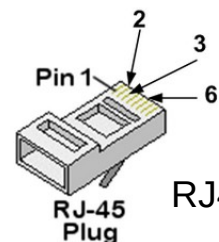
OUTPUT
INPUT

M12



- 1.TD+ ——— YE - yellow
- 2.RD+ ——— WH - white
- 3.TD- ——— OG - orange
- 4.RD- ——— BU - blue

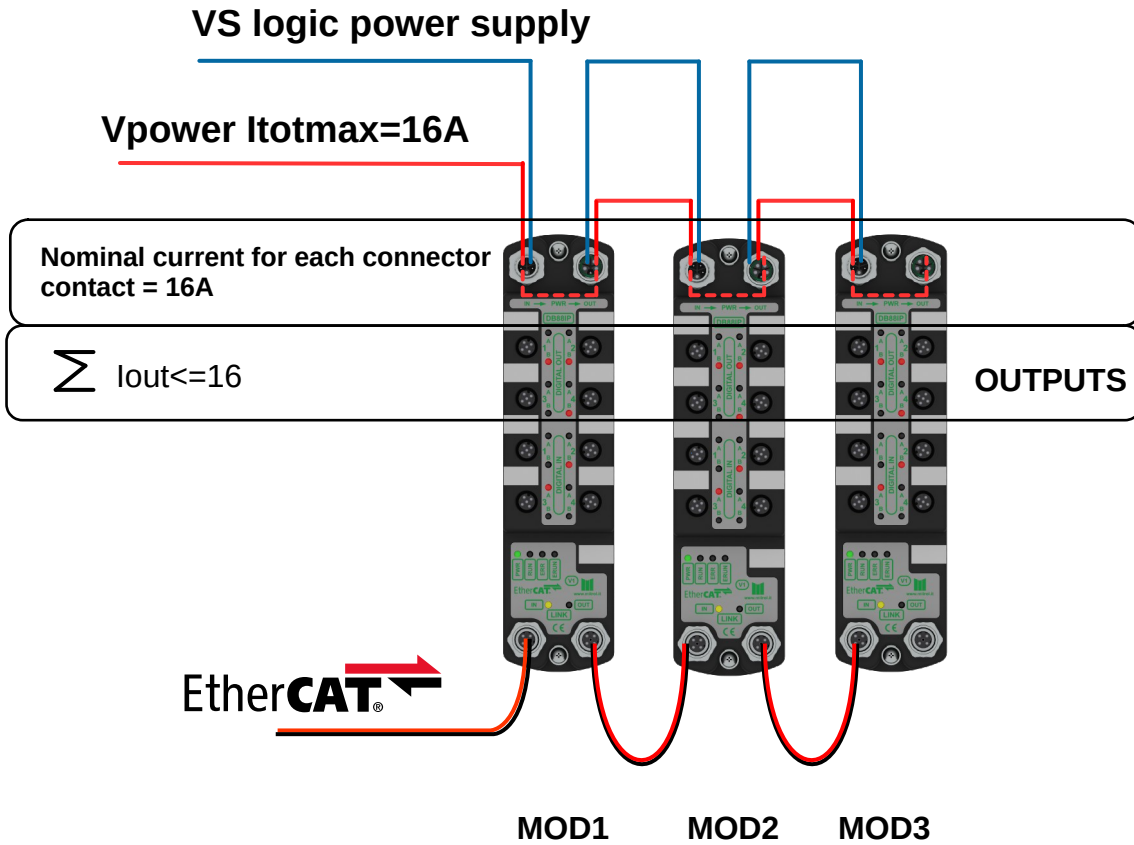
- 1.TX+
- 2.TX-
- 3.RX+
- 6.RX-



RJ45



Example: daisy chain connection for power supply



Max. current for each channels	I_{out}	2A
Total current for each single module (no daisy chain) <i>It is possible to drive, at the same time, all the channels (8) with the maximum current of 2 A.</i>	I_{tot}	16A
Max total current for N modules in daisy chain connection. <i>It is not possible to drive, at the same time, all the channels (8xN) with the maximum current. The sum of all the current output must be < 16A.</i>	I_{tot}	16A