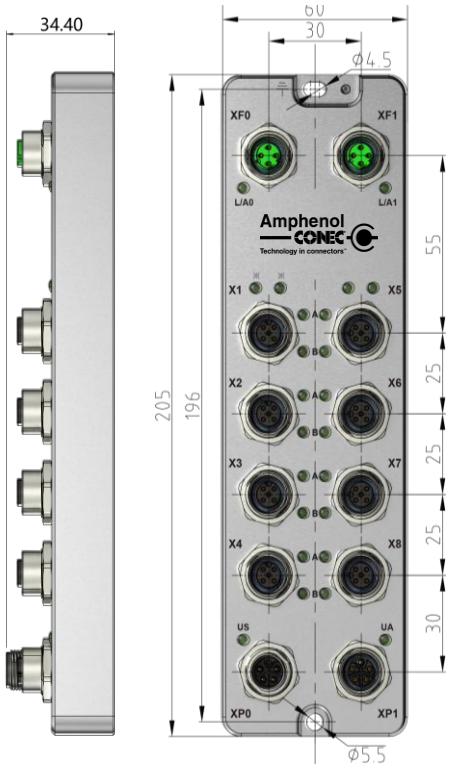
Part number: 43-08008
SAL-12L-FK4FE-FS4FE-8FK5-12D-EC2FK4

- EtherCAT protocol slave station
- 16-channel PNP input and output adaptive M12 5PIN A-code interface
- Integrated Ethernet switch function
- Port has short circuit, over-voltage, under-voltage, reverse connection protection
- IP67 protection level

Basic parameters

Shell material	Aluminum alloy
Shell color	Metallic silver color
Protection level	IP67, epoxy full potting
Dimensions	205mm×60mm×34.4mm
Weight	515g
Operating temperature	-25℃...70℃
Storage/transport temperature	-40℃...85℃
Operating humidity	5%...95%
Storage/transport humidity	5%...95%
Operating atmospheric pressure	80KPa...106KPa
Storage/transport atmospheric pressur	80KPa...106KPa
I/O port tightening torque	M12:0.5Nm
Application environment	Comply with EN-61131
Vibration test	Comply with IEC60068-2
Impact test	Comply with IEC60068-27
Free drop test	Comply with IEC60068-32
Electromagnetic compatibility (EMC)	Comply with IEC61000-4-2,-3,-4
Certification	CE, RoHS
Mounting hole size	Φ4.5mm×1, Φ5.5mm×1



Module LED indicators

PWR	Green: Power supply is normal
	Red: Module power supply is connected in reverse/UA power is not connected/voltage is too high/voltage is too low
IO	Green: Channel signal is normal
	Red: Port power supply short circuit/current is too large
LINK	Green: Link is normal, data communication is abnormal
	Yellow flashing: Link is normal, data communication is norm
	Off: Link is not established
RUN	Green: OP state
	Green slow flashing: SAFEOP state
	Green fast flashing: Pre-OP state
	Off: Init state
ERR	Red flashing: Communication error occurs
	Off: Module status is normal

I/O signal distribution table

Input/Output	Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7
	0	X1P4	X2P4	X3P4	X4P4	X5P4	X6P4	X7P4	X8P4
	Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7
	1	X1P2	X2P2	X3P2	X4P2	X5P2	X6P2	X7P2	X8P2

Communication interface

M12 D-code female

Pin	Definition		Description
1	TX+		Data sent +
2	RX+		Data received +
3	TX-		Data sent -
4	RX-		Data received -

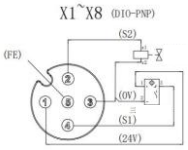
Port parameters

Connection mode	2×M12 D-code; 4-pin socket
Physical layer	Ethernet
Transmission speed	10/100 Mbps, full duplex
Characteristics	Complies with protocol characteristics
Alarm function	Diagnostic alarm, process alarm
Minimum cycle time	1ms
Communication port tightening t	M12: 0.5Nm

I/O port wiring diagram Input/Output (X1-X8)

M12 A-code Female

1. 24VDC+
2. Input/Output
3. 0 V
4. Input/Output
5. FE

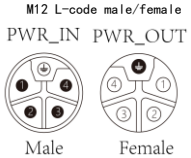


Port parameters

Number of input channels	16
Type	PNP
Input signal	3-wire PNP sensor or 2-wire passive signal
Input signal "0"	Low level 0~5V
Input signal "1"	High level 11~30V
Low level current	<1.5mA
High level current	>2mA
Switching threshold	EN 61131-2 Type 1/3
Switching frequency	250Hz
Input delay	20μs
Maximum input supply current	200mA
Process data	2-byte input
I/O connection method	M12 5pin socket A-code
Number of output channels	16
Type	PNP
Output voltage	24V (follow UA)
Channel output current	0.5A/ch
Output diagnostic type	Point diagnosis
Synchronization factor	####
Switching frequency	250Hz
Load type	Resistance, inductance, lamp
Short circuit protection	Yes
Overload protection	Yes
Process data	2-byte output
I/O connection method	M12 5pin socket A-code

Power port

M12 L-code male/female



Pin	Definition		Description
1	+24V_Us		System/Input Power +24V
2	GND_Ua		Output Power GND
3	GND_Us		System/Input Power GND
4	+24V_Ua		Output Power +24V
5	FE		Functional Ground

※Us is the system and input power supply, Ua is the output power supply

Port parameters

Power connection method	M12 5-pin L-code male/female
System power voltage US	18...30 VDC (type.24VDC)
Auxiliary power voltage UA	18...30 VDC (type.24VDC)
Total current IS/IA	12A
Quiet operating current IC	≤150mA
Overvoltage protection	Yes
Power reverse connection protec	Yes
Power port tightening torque	M12:0.5Nm