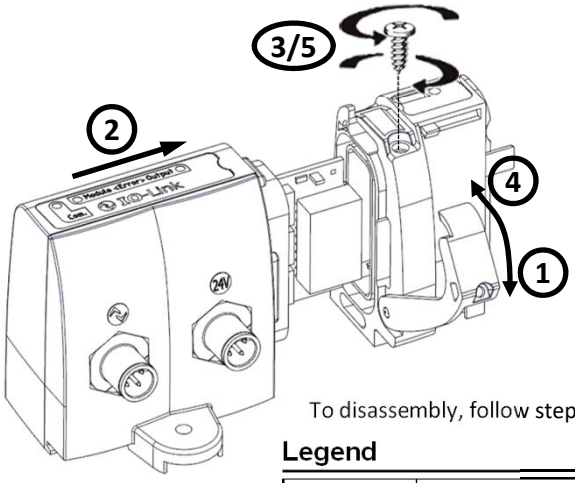
P2M2HBVL12400…
Instruction Sheet

For further details, refer to the User Manual: Can be downloaded from www.parker.com/pde/io-link

Module assembly / disassembly

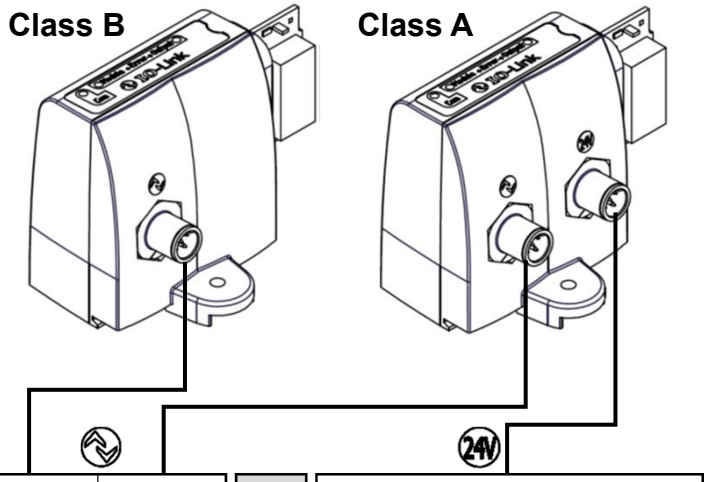


To disassembly, follow steps backward

Legend

Symbol	Description
L+	IO-Link Power Supply "+"
L-	IO-Link Power Supply "-"
C/Q	IO-Link communication
Aux +	Auxiliary Power Supply 24 Vdc
Aux -	Auxiliary Power Supply 0 Vdc

Module connection



Class B	Class A	M12 Pin's	Class A		
			3 Pin's		5 Pin's
5 Pin's	3 Pin's				
P2M…B..	P2M…A..		P2M…A13	P2M…A43	P2M…A42
L+	L+	1	Aux +	not used	not used
Aux +	-	2	-	-	Aux –
L-	L-	3	Aux –	Aux –	not used
C/Q	C/Q	4	not used	Aux +	Aux +
Aux -	-	5	-	-	not used

Class A & B units are compatible with SAFE power source for valve control. For further details, please refer to the user manual.

Configuration IODD file

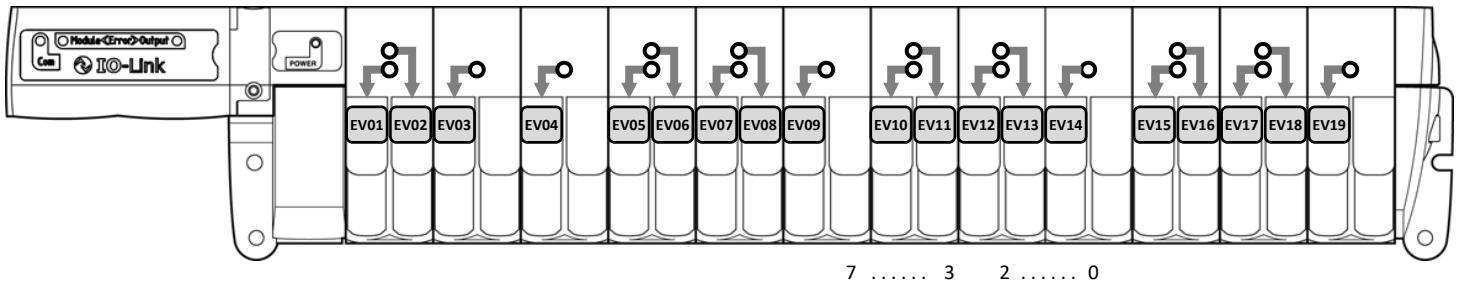
IODD file can be downloaded from either IODD Finder or the Moduflex IO-Link web site:

- https://ioddfinder.io-link.com > PARKER
- www.parker.com/pde/io-link

Solenoid pilots addressing and process data mapping

IO-Link module addressing used with Moduflex Valve System

The Moduflex IO-Link module used with Moduflex Valve System can handle up to 19 pilot solenoid valves. Addressing will be done as shown below:



PLC Process outputs data mapping

	7 3	2 0
Byte 0	EV08	EV01
Byte 1	EV16	EV09
Byte 2*	EV24 . . . . . EV20	EV19 … EV17

* Byte 2 / Bits 3 to 7 are not connected to valves with Moduflex Valve Range

For usage with H Micro or H ISO Valve Series, please refer to the user manual

IO-Link module electrical specifications

IO-Link power supply	According to IO-Link standard V1.1.2
Speed Communication	Com 2 – 38 kBd
Auxiliary Power Supply	20,4 Vdc to 26,4 Vdc
Current Limit per channel	150 mA
Max Current Limit	4 A
Polarity inversion protection	YES
Short Circuit protection	YES
Operating Temperature	0°C to +55°C
Storage Temperature	-25°C to +70°C
Shock	According to IEC 60068-2-27:2008
Vibration	According to IEC 60068-2-6:2007
EMC	According to EN 55011 & EN 61000-4-2 to -4-6

Diagnostic

Local diagnostic through LED:

The Moduflex IO-Link module offers a local diagnostic by 4 LED's with interpretation described in the table below:

Com — Green LED

LED Status	Description	Solving
OFF ○	IO-Link L+ / L- line not powered	Check IO-Link power supply from IO-Link Master (pin's 1 & 3)
ON ●	IO-Link L+ / L- line powered IO-Link master port set as SIO mode	Set IO-Link master channel in IO-Link mode
Blinking ✱	IO-Link communication active	N/A

Module ←Error — Red LED

LED Status	Description	Solving
OFF ○	Standard mode (No error active)	N/A
ON ●	24 Vdc Auxiliary power missing or any active malfunction	Check Auxiliary power supply. If auxiliary power supply OK, module must be replaced

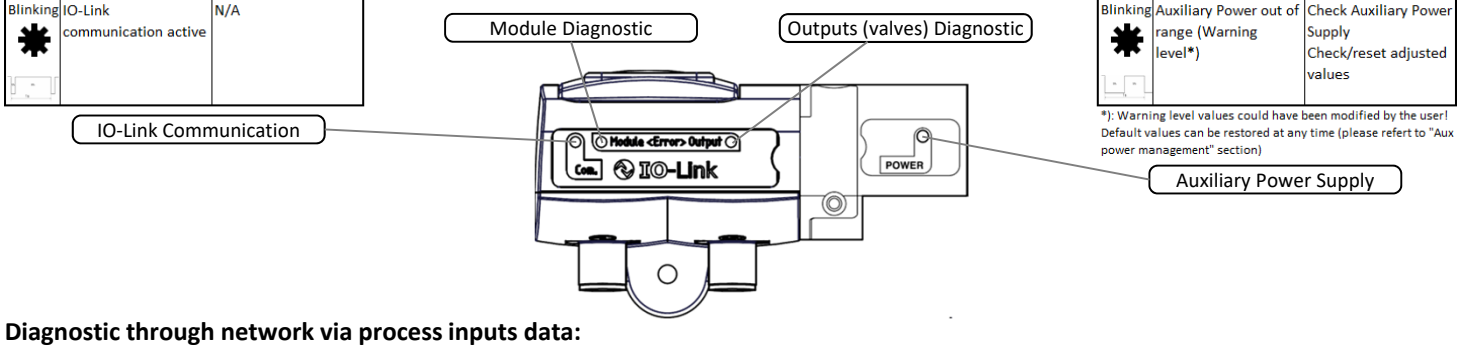
Error→Output — Red LED

LED Status	Description	Solving
OFF ○	Standard mode (No error active)	N/A
ON ●	Any outputs driver error (Auxiliary power error, overload, short circuit, over temperature, …)	If auxiliary power OK (see Power LED status), check error messages and related troubleshooting

POWER — Green LED

LED Status	Description	Solving
OFF ○	Auxiliary power failure < 18V or > 28,5V	Check Auxiliary Power Supply
ON ●	Standard mode (Auxiliary power within normal range 20,4V* to 26.4V*)	N/A
Blinking ✱	Auxiliary Power out of range (Warning level*)	Check Auxiliary Power Supply Check/reset adjusted values

*): Warning level values could have been modified by the user! Default values can be restored at any time (please refert to "Aux power management" section)



Diagnostic through network via process inputs data:

The Moduflex IO-Link module offers diagnostic data transmitted to the PLC as inputs process data through the IO-Link master:

		7 0
PLC Process input data mapping	Byte 0	Diag 7 . . . . . Diag 0

Diag bit	Error message	Detail
Diag 0	Fail-Safe Status	Acknowledgment Required
Diag 1	Auxiliary Voltage Warning	Auxiliary Voltage Out of range. Check Auxiliary Power line
Diag 2	Auxiliary Voltage failure	Auxiliary Voltage Out of order. Check Auxiliary Power source
Diag 3	Module Failure	Switch OFF / ON auxiliary power. If error message persists, replace the module
Diag 4	Module Over-Temperature	Switch OFF / ON auxiliary power. If error message persists, replace the module
Diag 5	Module Over-Load	Check overall Pilot Solenoid valves. If error message persists, replace the module
Diag 6	Pilot Solenoid(s) Short Circuit	Check faulty pilot solenoid valve(s), replace if necessary
Diag 7	Outputs Stage Failure	Switch OFF / ON auxiliary power. If error message persists, replace the module

For further details, refer to the User Manual: Can be downloaded from www.parker.com/pde/io-link