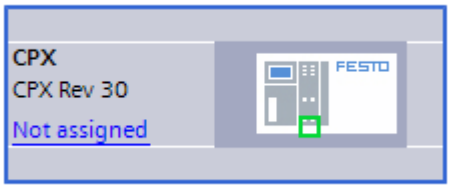
CPX/VTSA-F-CB 阀岛基于 TIA 软件的调试

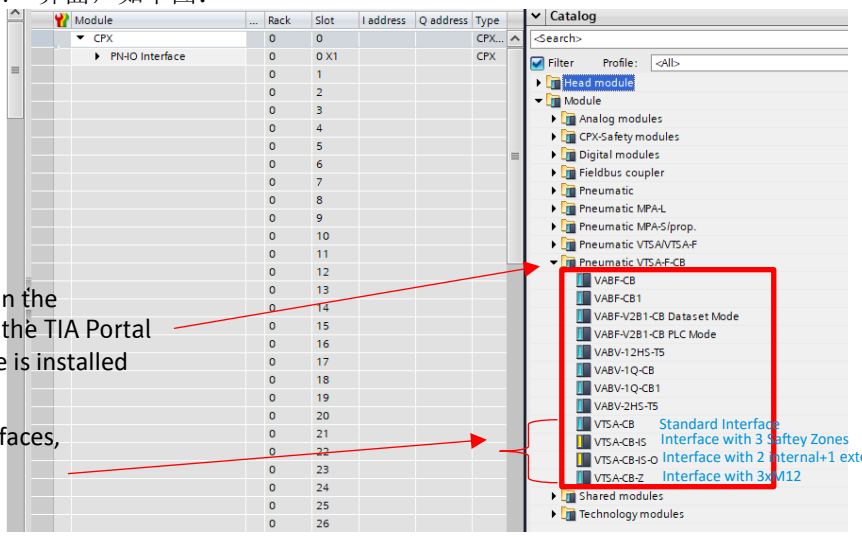
1. GSDML 文件下载：[阀岛 VTSA-F-CB | 费斯托网站 (festo.com.cn)]
   建议使用 Rev30 或更高版本。



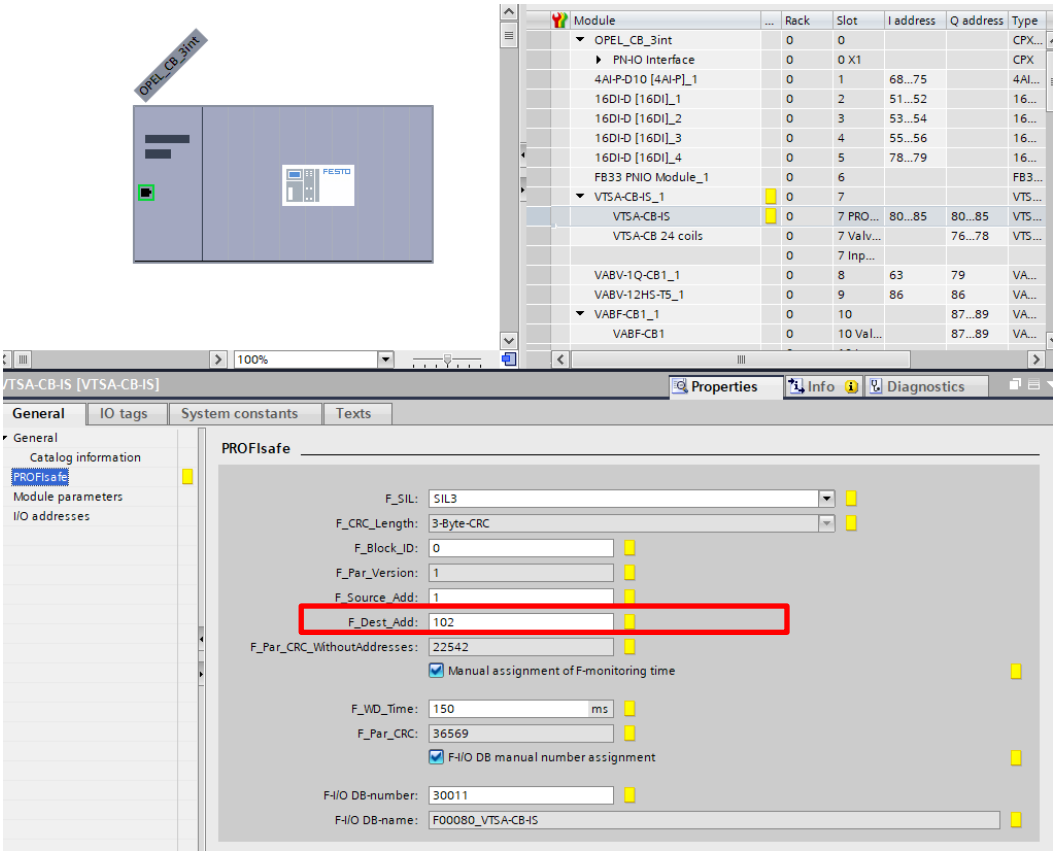
2. 双击上图图标进入“Device view”界面，如下图：

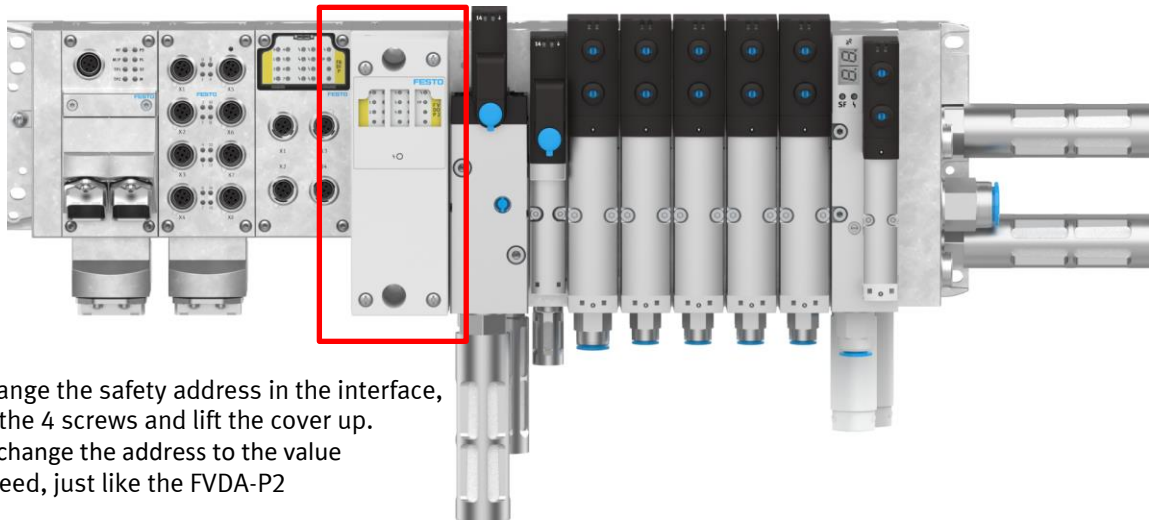
There is a new entry in the
Hardware Catalog in the TIA Portal
If the new GSDML File is installed

Here you find the 4 new Interfaces,
Plus the address extender

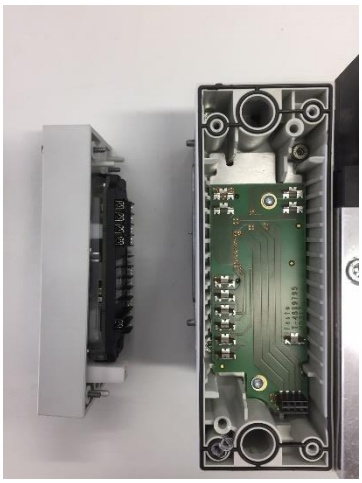


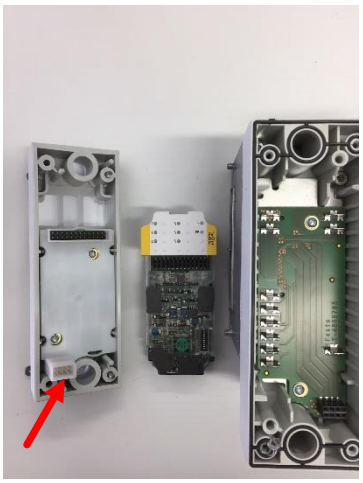
3. 安全地址查找及设置：





To change the safety address in the interface,
open the 4 screws and lift the cover up.
Then change the address to the value
You need, just like the FVDA-P2





4. 如何组态“气动接口”

Note: Father it is not allowed to put **2** FVDA-P2 into one terminal. Because the FVDA-P2 is integrated in the new VTSA-F-CB Interface, another FVDA-P2 is not possible.
Furthermore, don`t forget to put in the right PROFIsafe address.

Device overview

Module	...	Rack	Slot	I address	Q address	Type
CPX		0	0			CPX Rev 30
PN-IO Interface		0	0 X1			CPX
FB34 PNIO Module_1		0	1			FB34 PNIO Module
8DI-D [8DI]_1		0	2	2		8DI-D [8DI]
F8DI-P word [8DI-F]_1		0	3	3...8	3...9	F8DI-P word [8DI-F]
F8DI-P word [8DI-F]_2		0	4	10...15	10...16	F8DI-P word [8DI-F]
FVDO-P2 [3DO-F]_1		0	5	17...22	17...22	FVDO-P2 [3DO-F]
VTSA-CB-IS_1		0	6			VTSA-CB-IS
VTSA-CB-IS		0	6 PRO...	23...28	23...28	VTSA-CB-IS
VTSA-CB 24 coils		0	6 Valv...		29...31	VTSA-CB 24 coils
		0	6 Inp...			

Device overview

	Module	...	Rack	Slot	I address	Q address	Type
	CPX		0	0			CPX Rev 30
	PN-IO Interface		0	0 X1			CPX
	FB34 PNIO Module_1		0	1			FB34 PNIO Module
	8DI-D [8DI]_1		0	2	2		8DI-D [8DI]
	F8DI-P word [8DI-F]_1		0	3	3...8	3...9	F8DI-P word [8DI-F]
	F8DI-P word [8DI-F]_2		0	4	10...15	10...16	F8DI-P word [8DI-F]
✓	VTSA-CB-IS_1		0	5			VTSA-CB-IS
	VTSA-CB-IS		0	5 PRO...	23...28	23...28	VTSA-CB-IS
	VTSA-CB 24 coils		0	5 Valv...		29...31	VTSA-CB 24 coils
			0	5 Inp...			

5. 如何实现安全电压的控制：

To switch the 3 different zones, it is like the FVDA-P2.
At this example, the channels are:

CH0 = Q 17.0
CH1 = Q 17.1
CH2 = Q 17.2

VTSA-CB-IS_1	0	5			VTSA-CB-IS
VTSA-CB-IS	0	5 PRO...	17...22	17...22	VTSA-CB-IS
VTSA-CB 24 spulen	0	5 Valv...		23...25	VTSA-CB 24 coils

6. 功能阀的控制：

14 = Q 23.0
12 = Q 23.1
14 = Q 23.2
12 = Q 23.3
And so on.....

VTSA-CB-IS_1	0	5			VTSA-CB-IS
VTSA-CB-IS	0	5 PRO...	17...22	17...22	VTSA-CB-IS
VTSA-CB 24 spulen	0	5 Valv...		23...25	VTSA-CB 24 coils

7. 软启动阀的控制：

To switch the Soft Start Valve, you need to switch the first bit of the output address. The pressure switch is on the first bit of the input byte. If is there no pressure, it is on „1“.

14 = Q 2.0
PS = I 9.0

VABV-1Q-CB_1	0	6	9	2	VABV-1Q-CB	TN 8068610
VABV-12HS-T5_1	0	7	16	26	VABV-12HS-T5	TN 8068911

8. 先导气电磁阀的控制

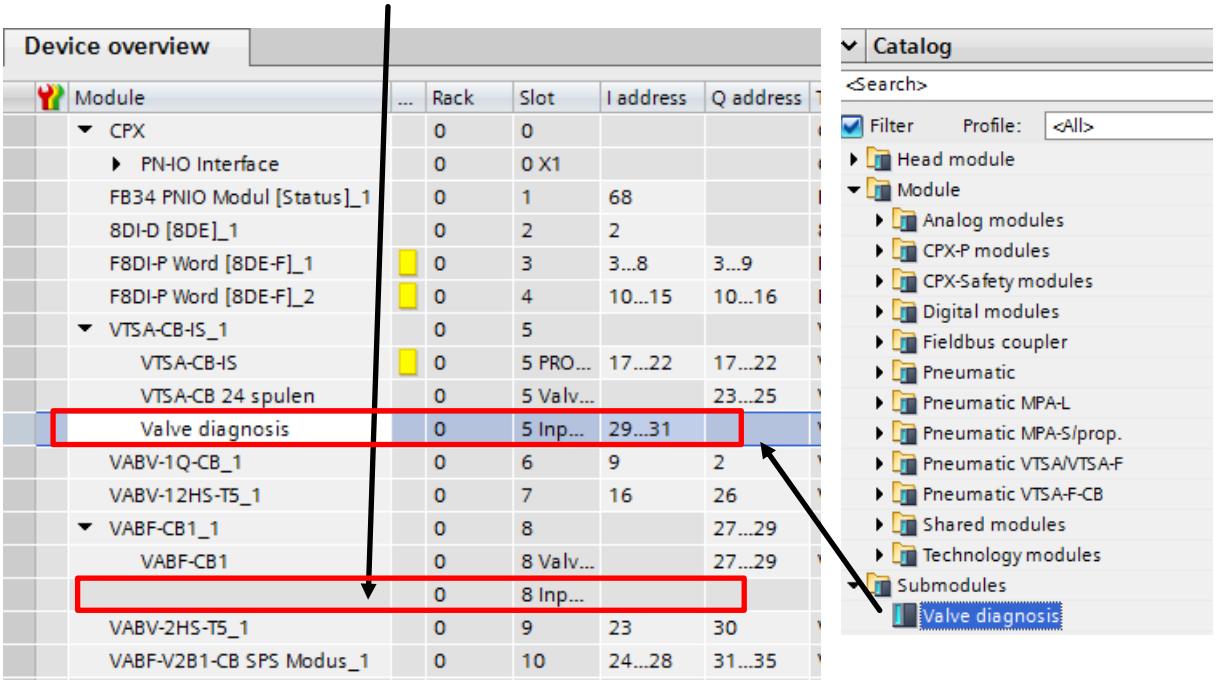
14 = Q 26.0
PS = I 16.0

VABV-1Q-CB_1	0	6	9	2	VABV-1Q-CB	TN 8068610
VABV-12HS-T5_1	0	7	16	26	VABV-12HS-T5	TN 8068911

9. 功能阀的诊断

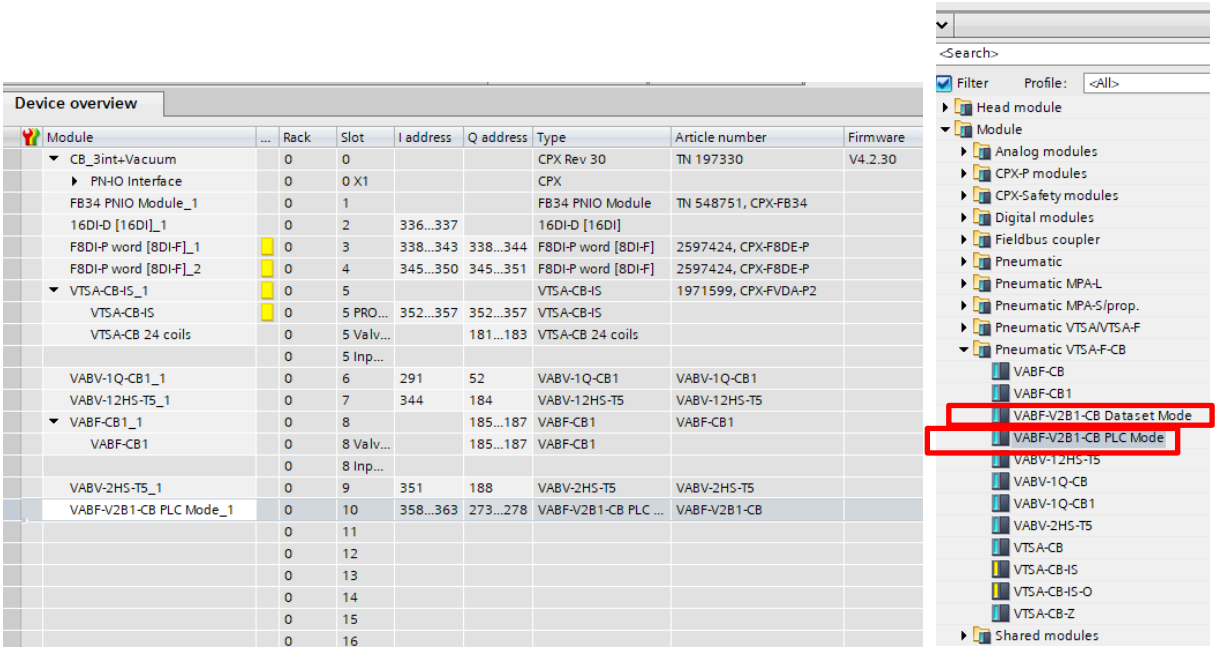
Because the existing VTSA-F with Diagnostic is implemented in the new VTSA-F-CB Interface you have the possibility to get the diagnosis via EA cycling date of the interface.

If you don’t need this function, just leave it blank



10. 真空发生器的配置形式

There are two control modes provided: “Dataset Mode” and “PLC Mode”



10.1 EA – assignment “Dataset Mode”

6 bytes Input/2 bytes Output

过程输入数据

字节	位	说明
I5	40 … 47	未占用
I4	32 … 39	故障编号
I3	31	真空值 A1 诊断
	30	控制参数诊断
	29	参数诊断
	28	超出两倍破真空时间诊断
	27	超出两倍抽空时间诊断
	26	超出破真空时间诊断
	25	超出抽空时间诊断
	24	过程质量诊断
I2	16 … 23	过程质量 [%]
I1	8 … 15	压力值 [kPa]
I0	3 … 7	未占用
	2	断路/短路
	1	开关输出 B
	0	开关输出 A

Tab. 19 过程输入数据

过程输出数据

字节	位	说明
05	40 … 47	未占用
04	32 … 39	未使用
03	24 … 31	未使用
02	16 … 23	未使用
01	8 … 15	参数组选择
00	7 … 3	未占用
	2	未使用
	1	真空发生
	0	喷射脉冲

Tab. 20 数据组工作模式过程输出数据

10.2 EA – assignment “PLC Mode”

6 bytes Input/6 bytes Output

过程输入数据

字节	位	说明
I5	40 … 47	未占用
I4	32 … 39	故障编号
I3	31	真空值 A1 诊断
	30	控制参数诊断
	29	参数诊断
	28	超出两倍破真空时间诊断
	27	超出两倍抽空时间诊断
	26	超出破真空时间诊断
	25	超出抽空时间诊断
	24	过程质量诊断
I2	16 … 23	过程质量 [%]
I1	8 … 15	压力值 [kPa]
I0	3 … 7	未占用
	2	断路/短路
	1	开关输出 B
	0	开关输出 A

Tab. 19 过程输入数据

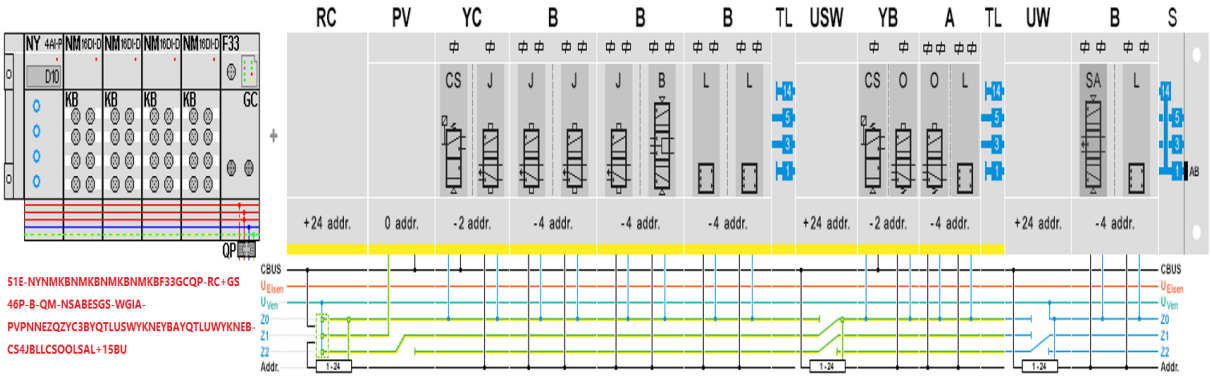
字节	位	说明
05	40 … 47	未占用
04	32 … 39	过程质量极限值
03	24 … 31	开关点 B1
02	16 … 23	迟滞 A
01	8 … 15	开关点 A1
00	3 … 7	未占用
	2	节气功能
	1	真空发生
	0	喷射脉冲

Tab. 21 PLC 工作模式过程输出数据

11. 调试案例分享：

阀岛示例型号：
8073100
51E-NYNMKBNMKBNMKBF33GCQP-RC+GS
46P-B-QM-NSABESGS-WGIA-PVPNNEZQZYC3BYQTLUSWYKNEYBAYQTLUWYKNEB-CS4JBLLCSOOSAL+15BU

选型软件中所呈现的阀岛概览：



TIA 软件中对应组态格式：