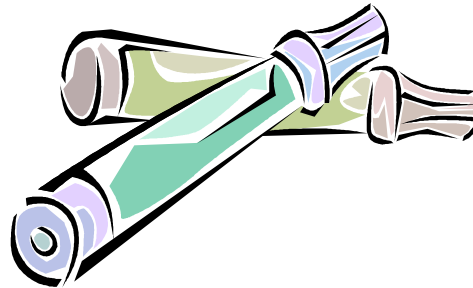


未來邁向數位化

The Future is Digital

各種fieldbus的走向與定位？
But which bus goes where?



Fieldbus
Foundation

主題

- 儀錶-更多地減少占地空間和電纜
Instrumentation - Reducing Footprint and Wiring Even Further
- 智慧型離散設備
Smart discrete devices
- 靈活應對設計變更
Flexibility to handle changes
- 減少設備數量
Reduce device count
- 消除最後的專有協議
Eliminating the last proprietary protocols
- 馬達控制
Motor controls
- **SIS** 安全儀表系統

儀錶 Instrumentation

選擇整合式Ff電源，更多減少占地和電纜

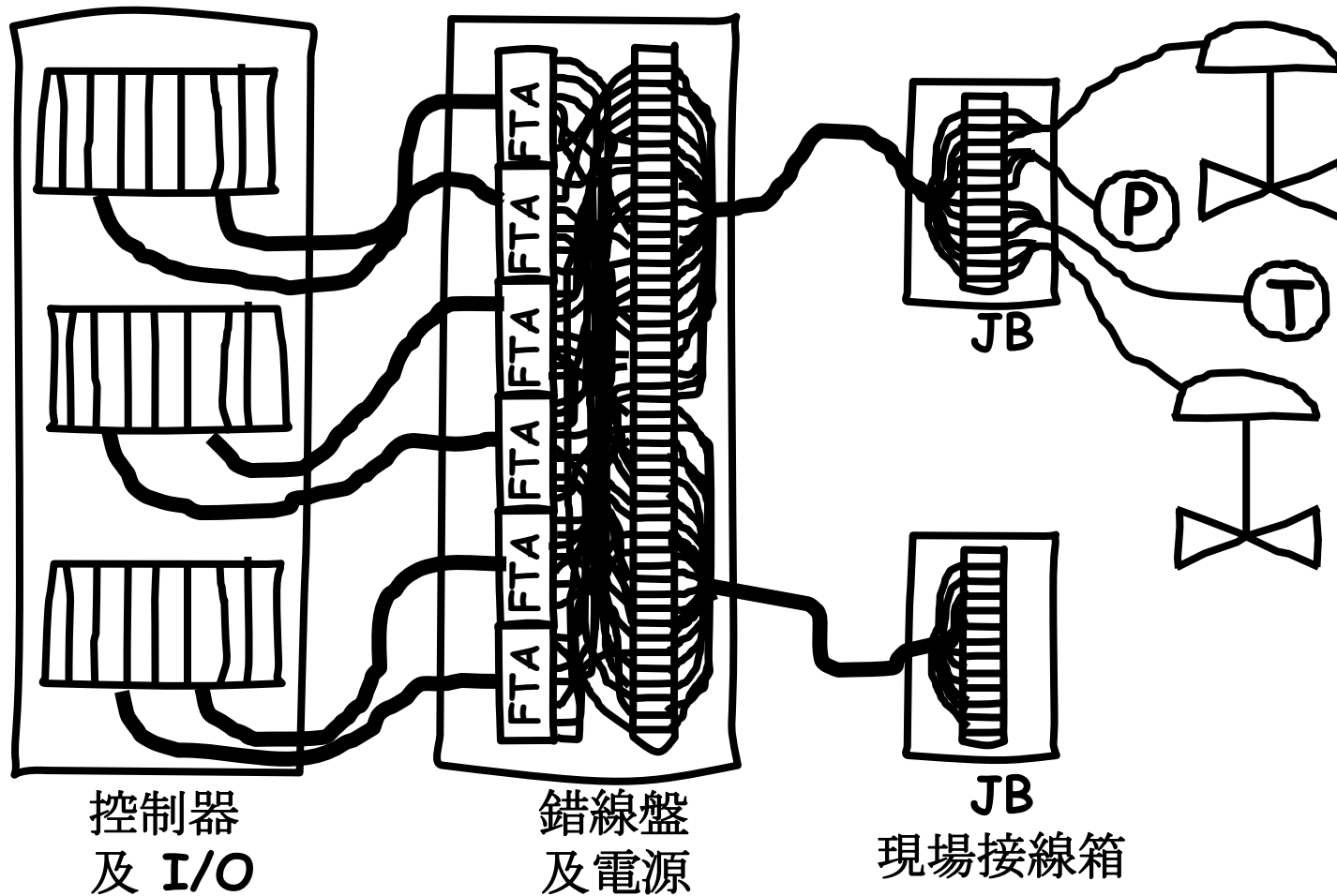
Reducing Footprint and Wiring - Even Further with Integrated
Fieldbus Power Supply



Fieldbus
Foundation

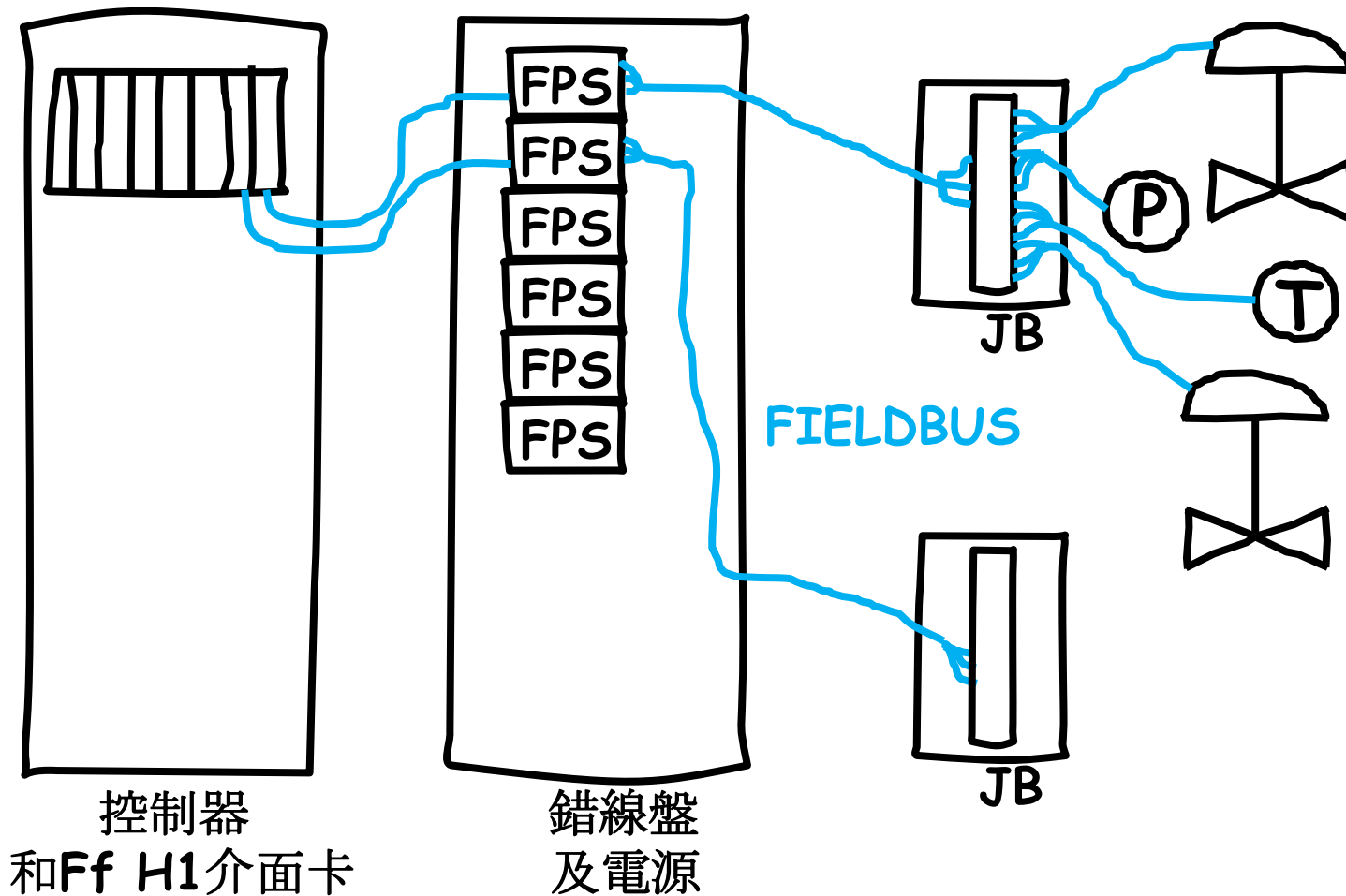
使用錯線盤 - 眾所周知，即耗時成本又高

Hardwired Marshalling - Well Known, Labor Intensive, Hardware



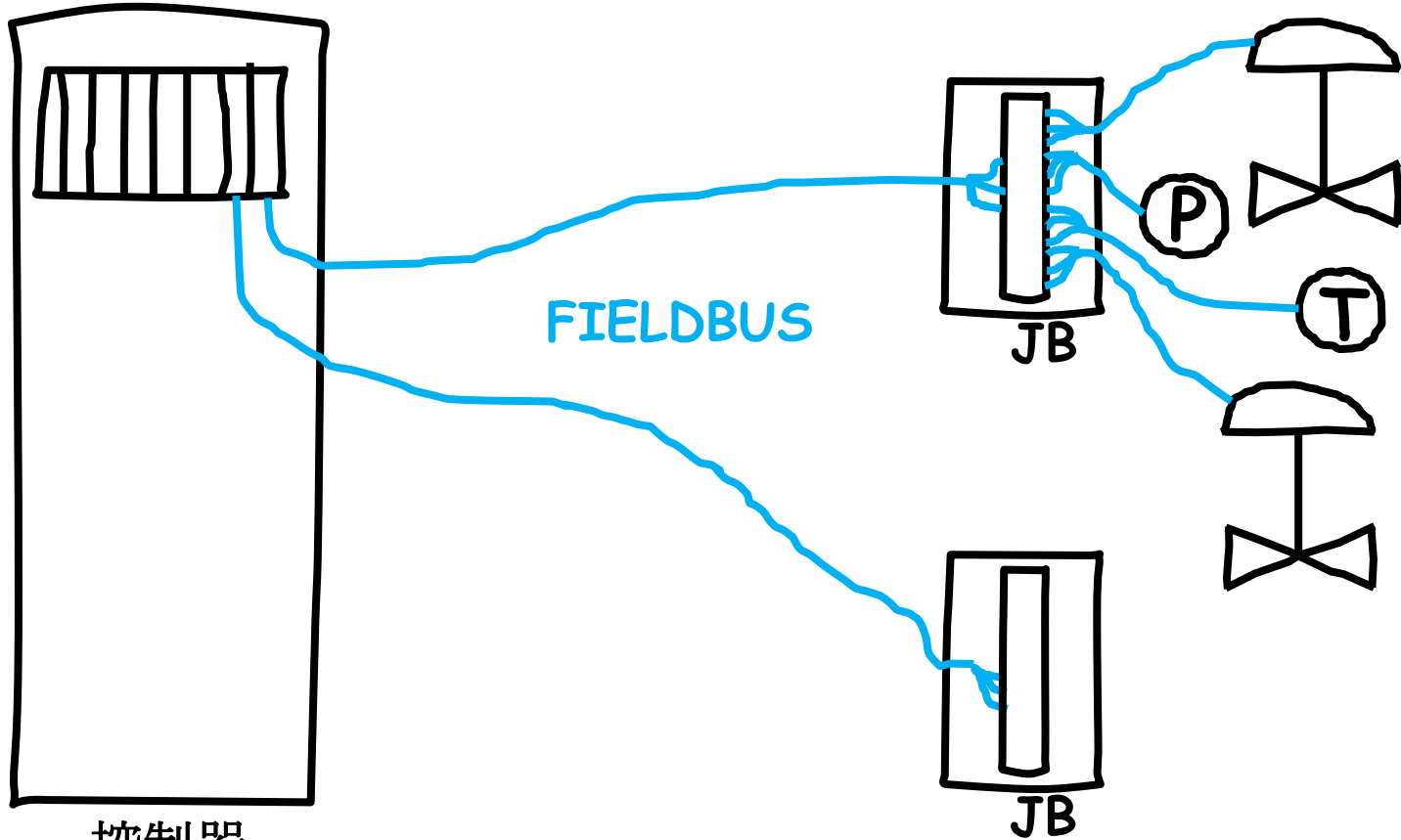
使用分離式的Ff电源 – 現幾已成為“傳統式的做法”

Fieldbus with Separate Device Power Supply
- Now Almost 'Traditional'



使用整合式Ff電源 – 不再需要錯線盤

Fieldbus with Integral Device Power Supply - No Marshalling Cabinet



控制器
和帶電源之Ff H1介面卡

智慧型離散設備

Smart Discrete Devices

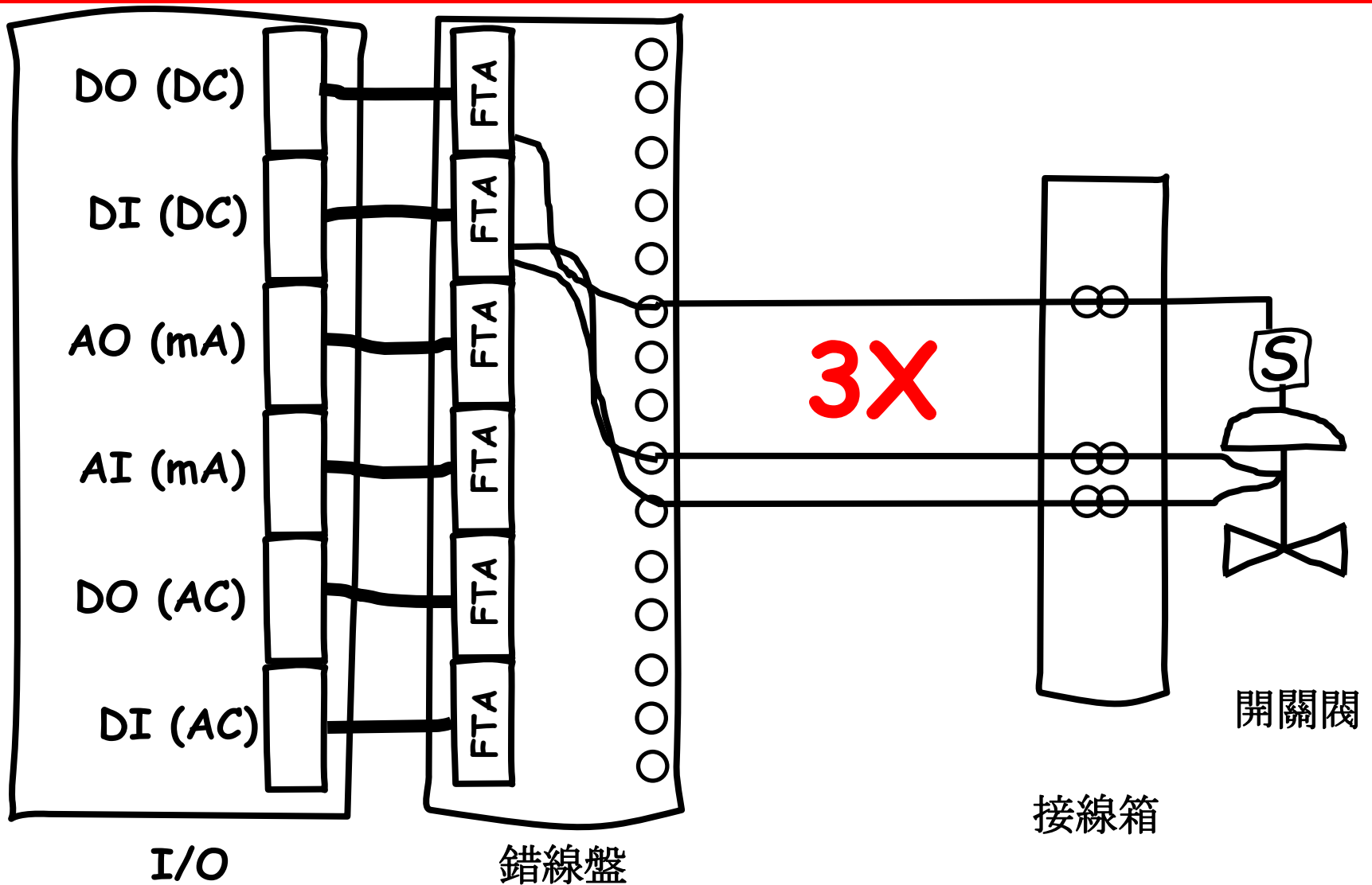
開關設備的智能化
Intelligence in on/off devices



Fieldbus
Foundation

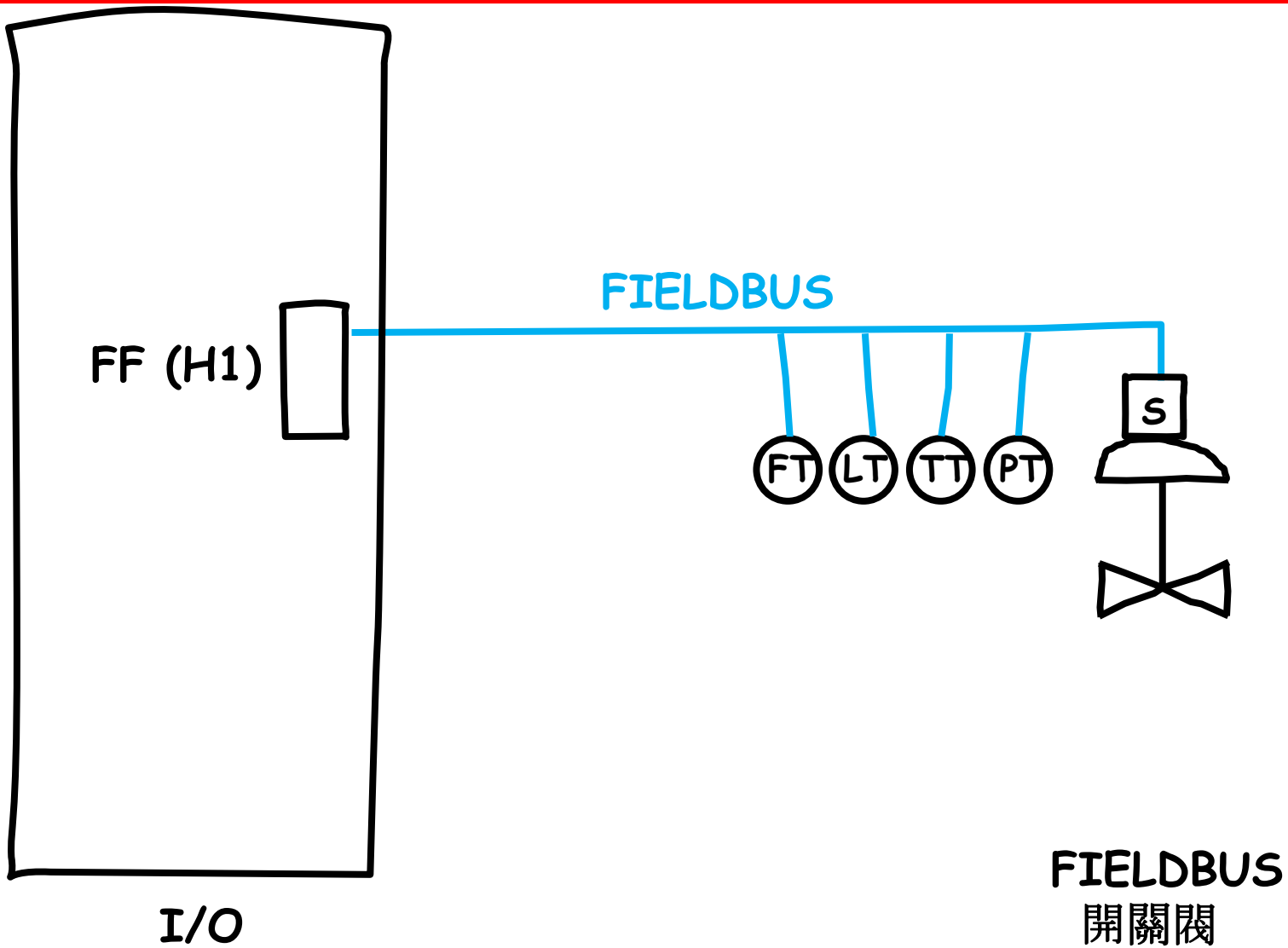
開關閥 – 硬接線方式

On/Off Valves- Hardwired



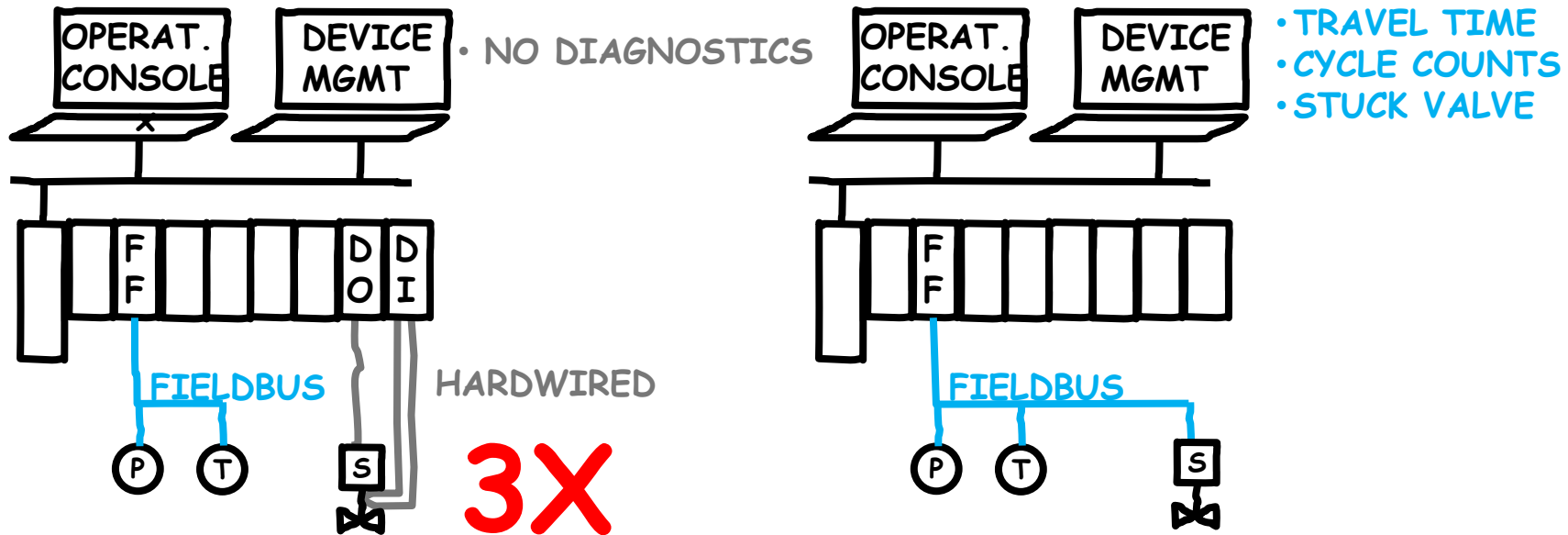
Ff智能型開關閥

Intelligent On/Off Valves- Fieldbus



開關閥智能設備管理：診斷、規劃和設定

On/Off Valve Intelligent Device Management: Diagnostics & Setup



靈活應對設計變更

Flexibility to Handle Changes

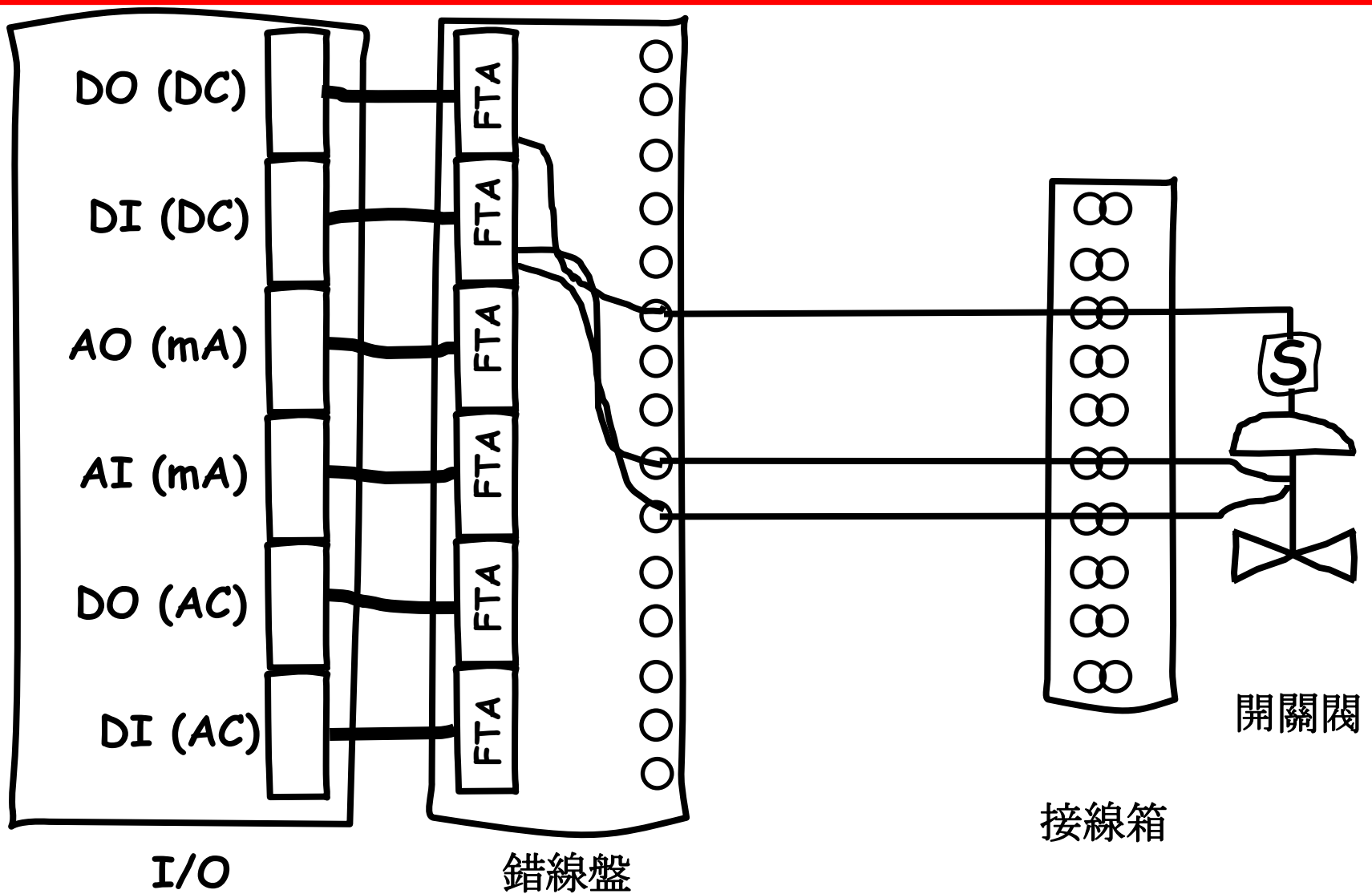
虛擬錯線方式
Virtual Marshalling



Fieldbus
Foundation

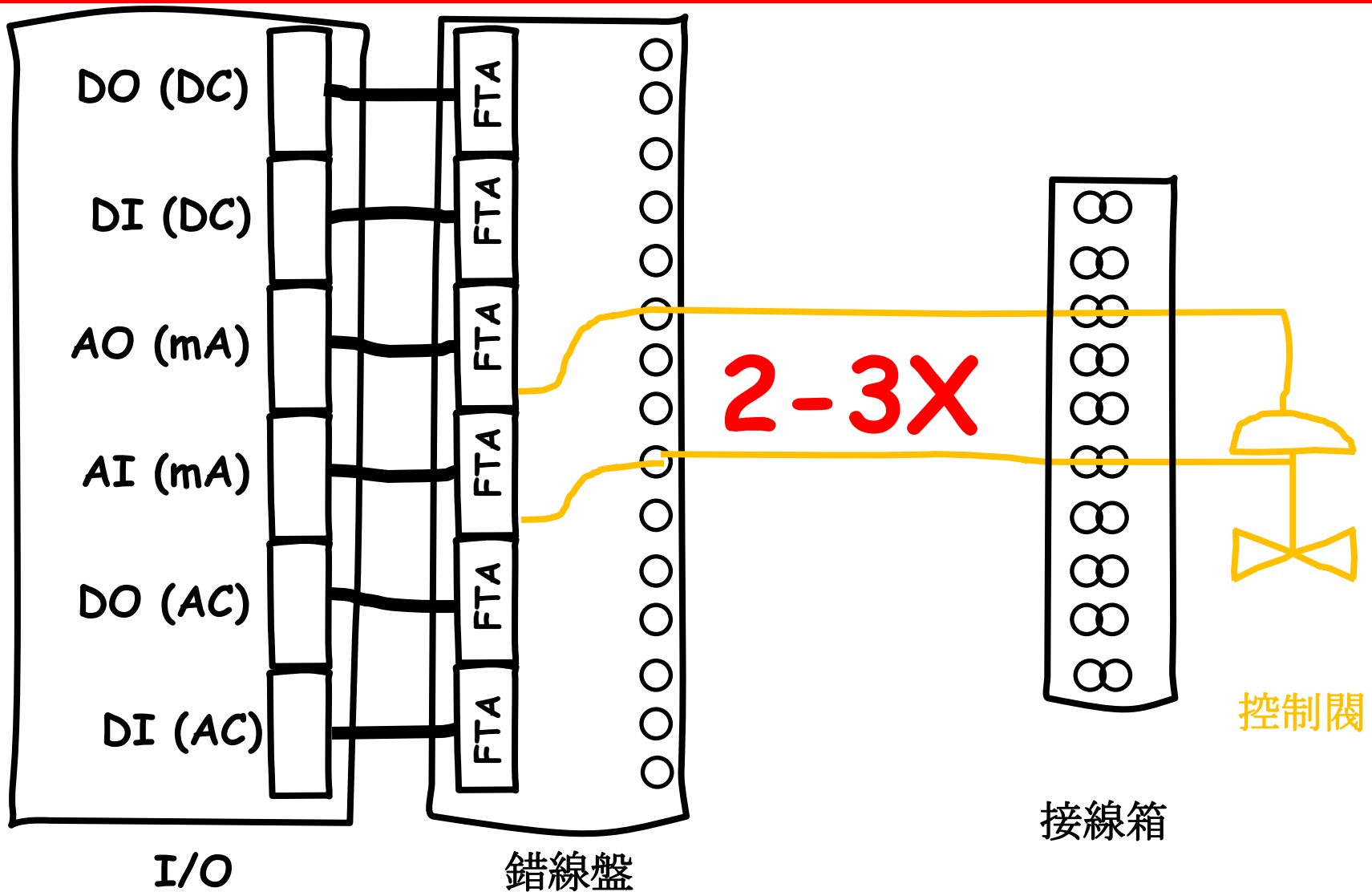
硬接線 – 開關閥

Hardwired Marshalling- On/Off Valve



硬接線方式- 需為控制閥變更重新設計

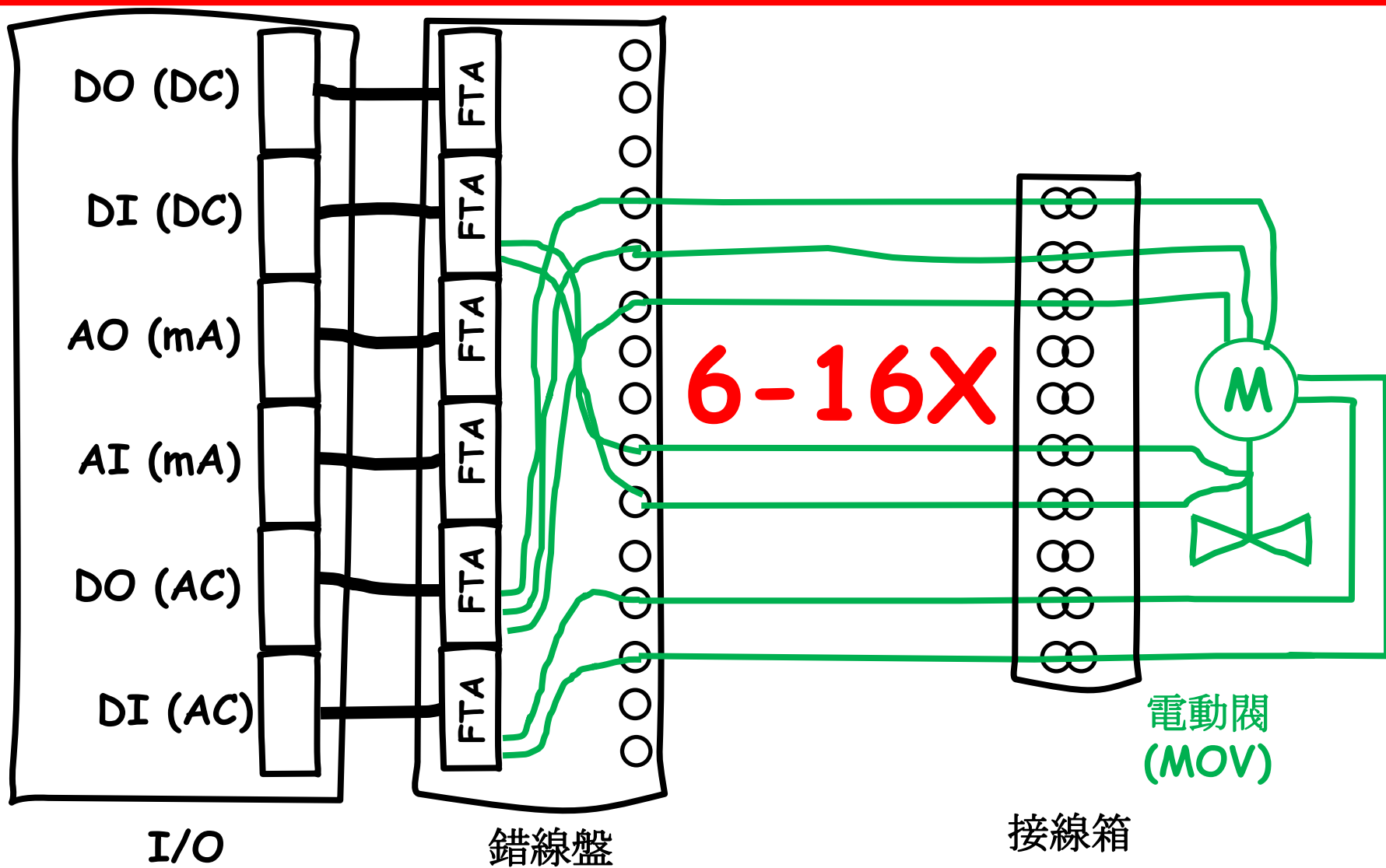
Hardwired Marshalling- Redesign for Control Valve



硬接線 - 需為電動閥重新設計

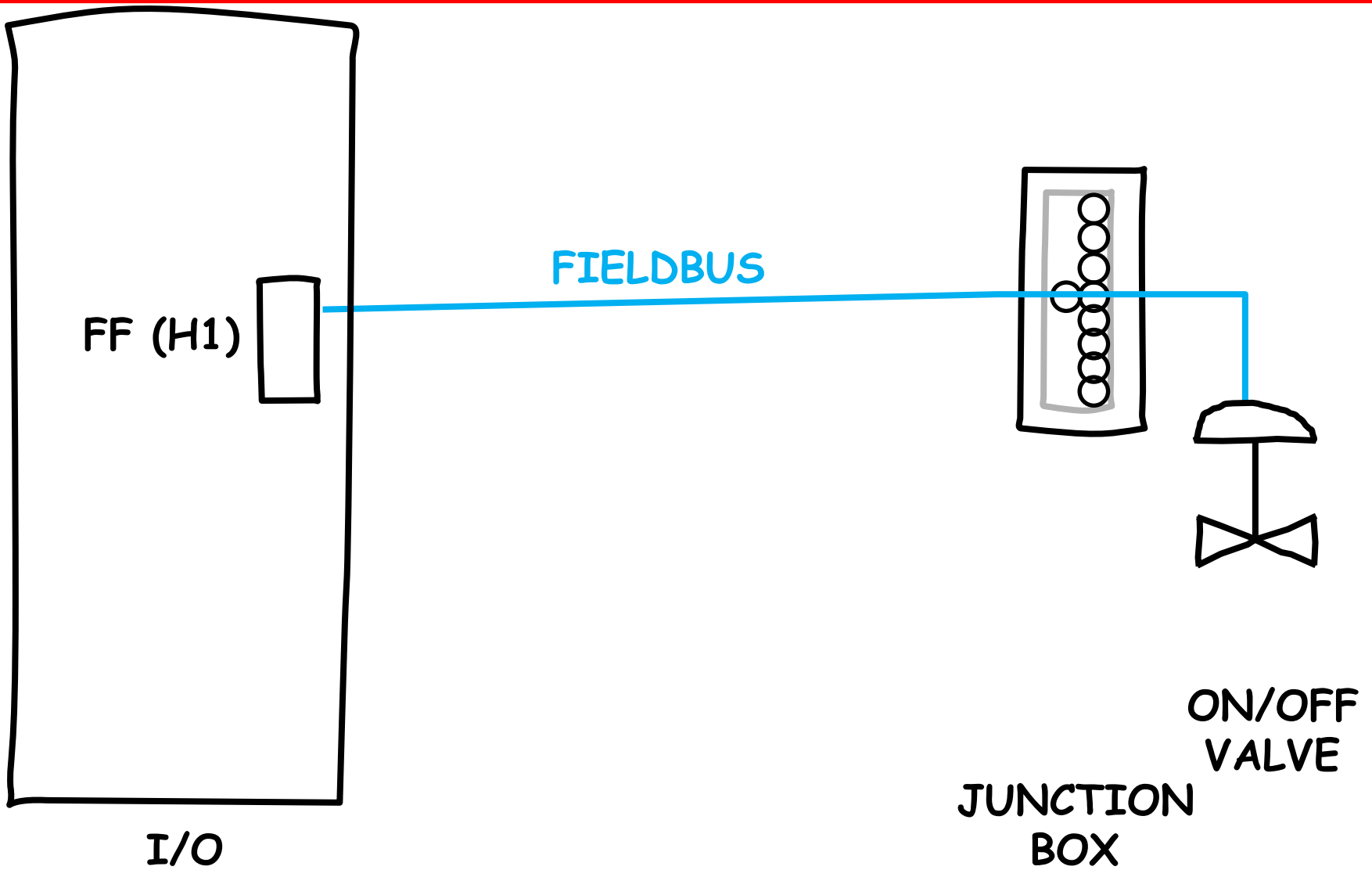
Hardwired Marshalling

- Redesign for Electric Actuator (MOV)



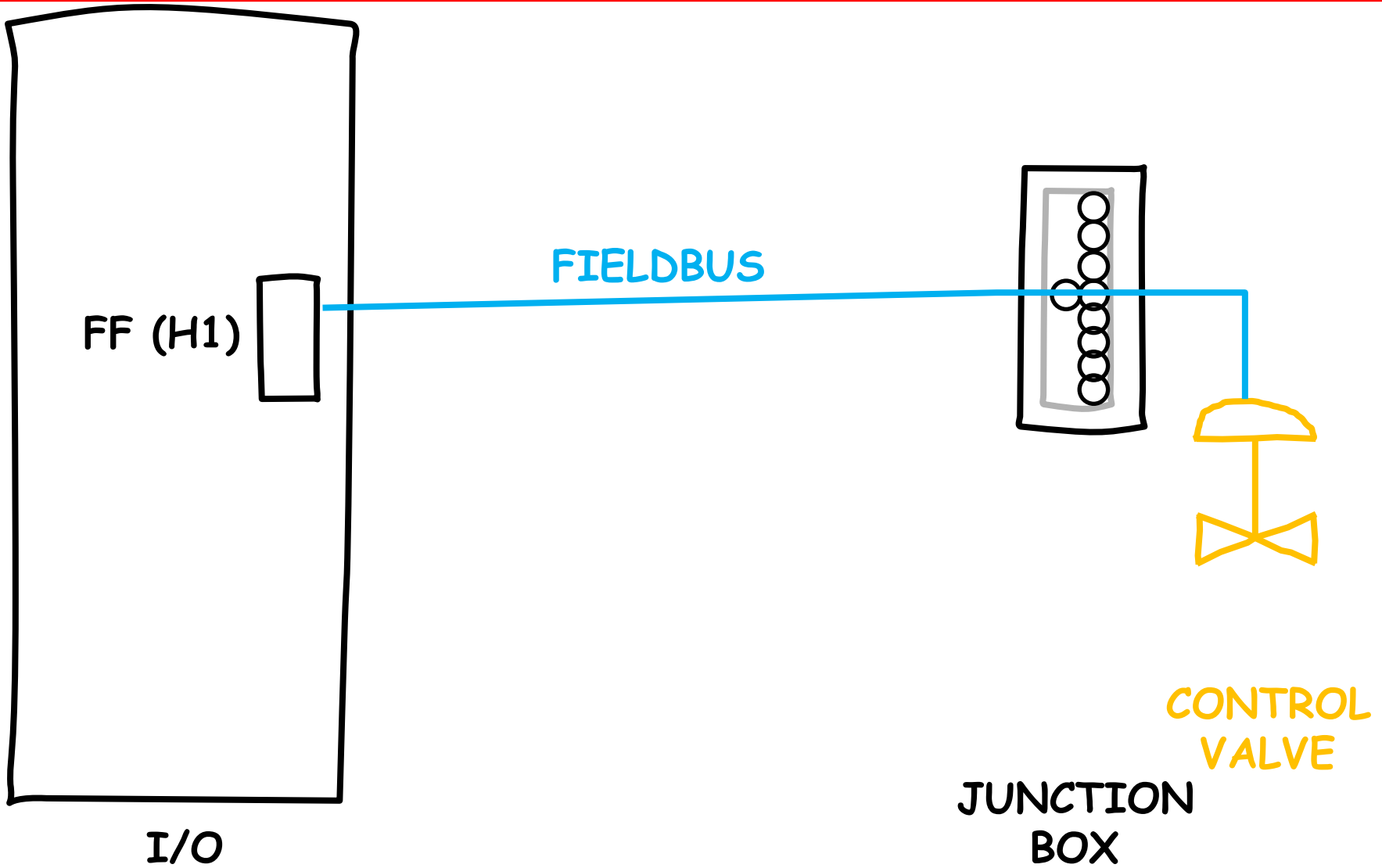
虛擬錯線方式：靈活 – 與Ff設備類型無關

Virtual Marshalling: Flexibility- For Fieldbus Device Type Doesn't Matter



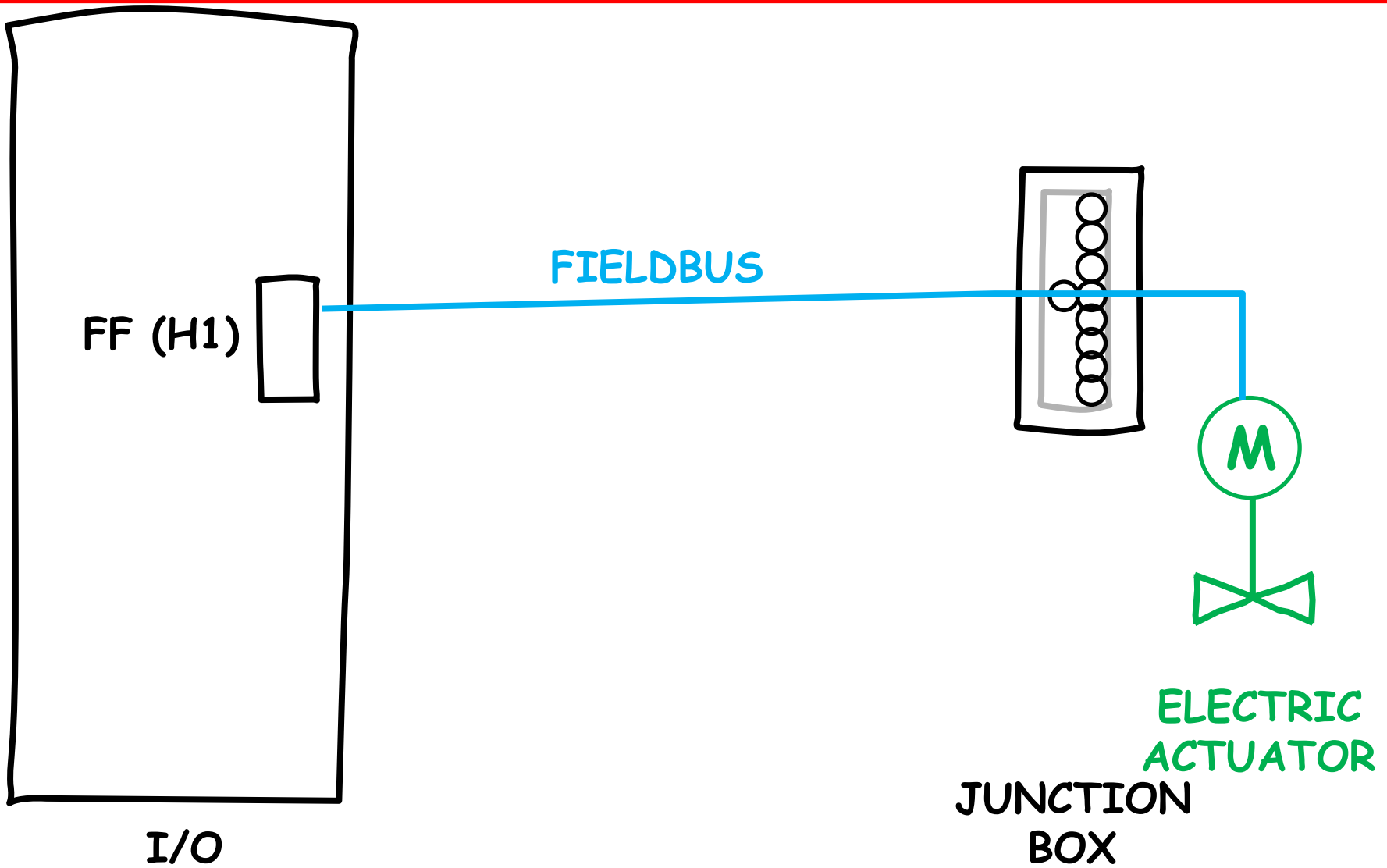
虛擬錯線方式 – 無需改變I/O卡件或接線設計

Virtual Marshalling- No Card Change or Wire Redesign



虛擬錯線方式 – 無需改變I/O卡件或接線設計

Virtual Marshalling- No Card Change or Wire Redesign



減少現場設備數量

Reducing Device Count

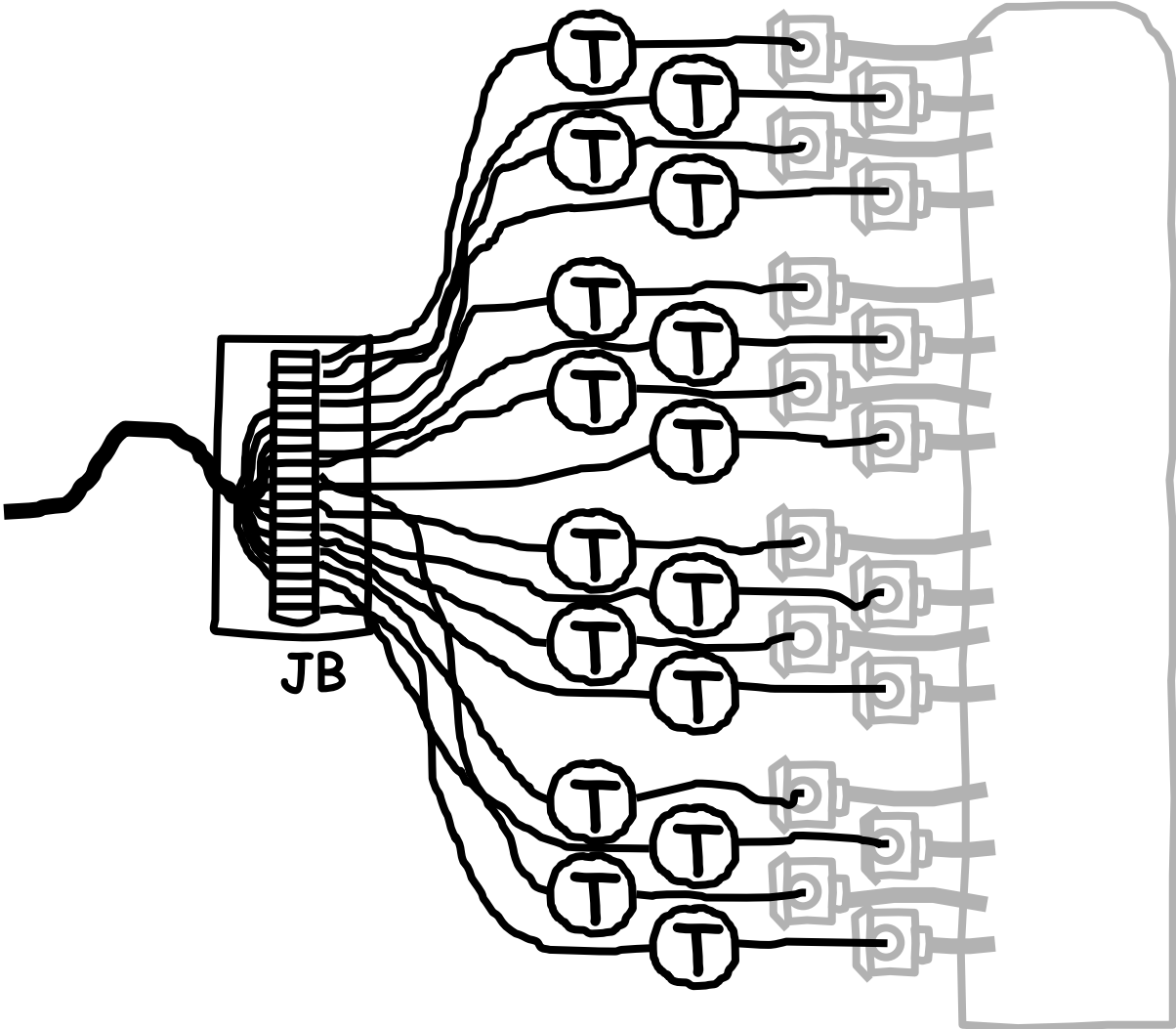
多變量輸入傳送器
Multi-Input Transmitters



Fieldbus
Foundation

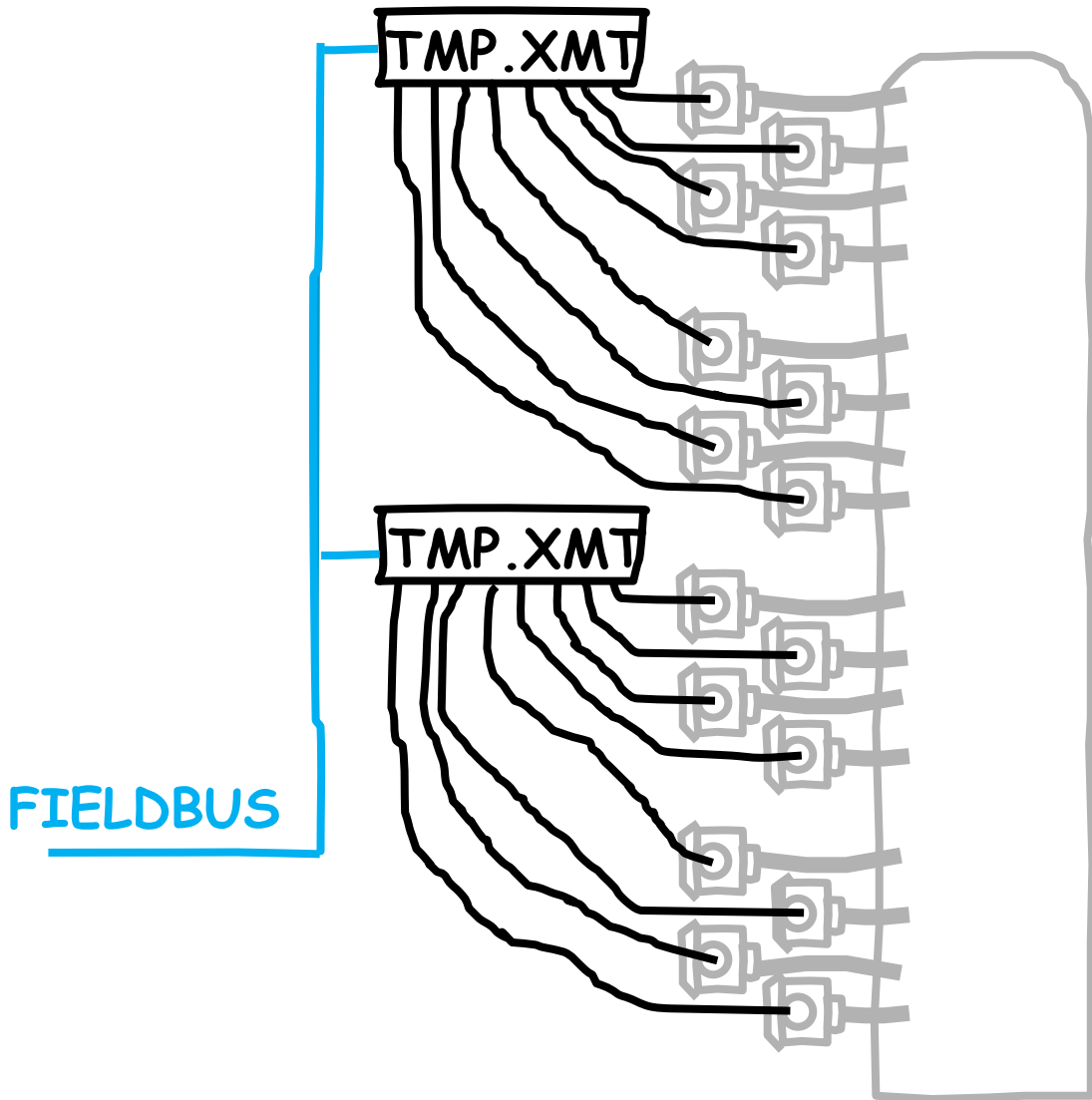
單點式溫度傳送器

Single Point Temperature Transmitters



多點式溫度傳送器

Multi-Input Fieldbus Temperature Transmitters



消除最後的專有協議

Eliminating the Last Proprietary Protocols

Ff大大減少複雜設備的接線數量

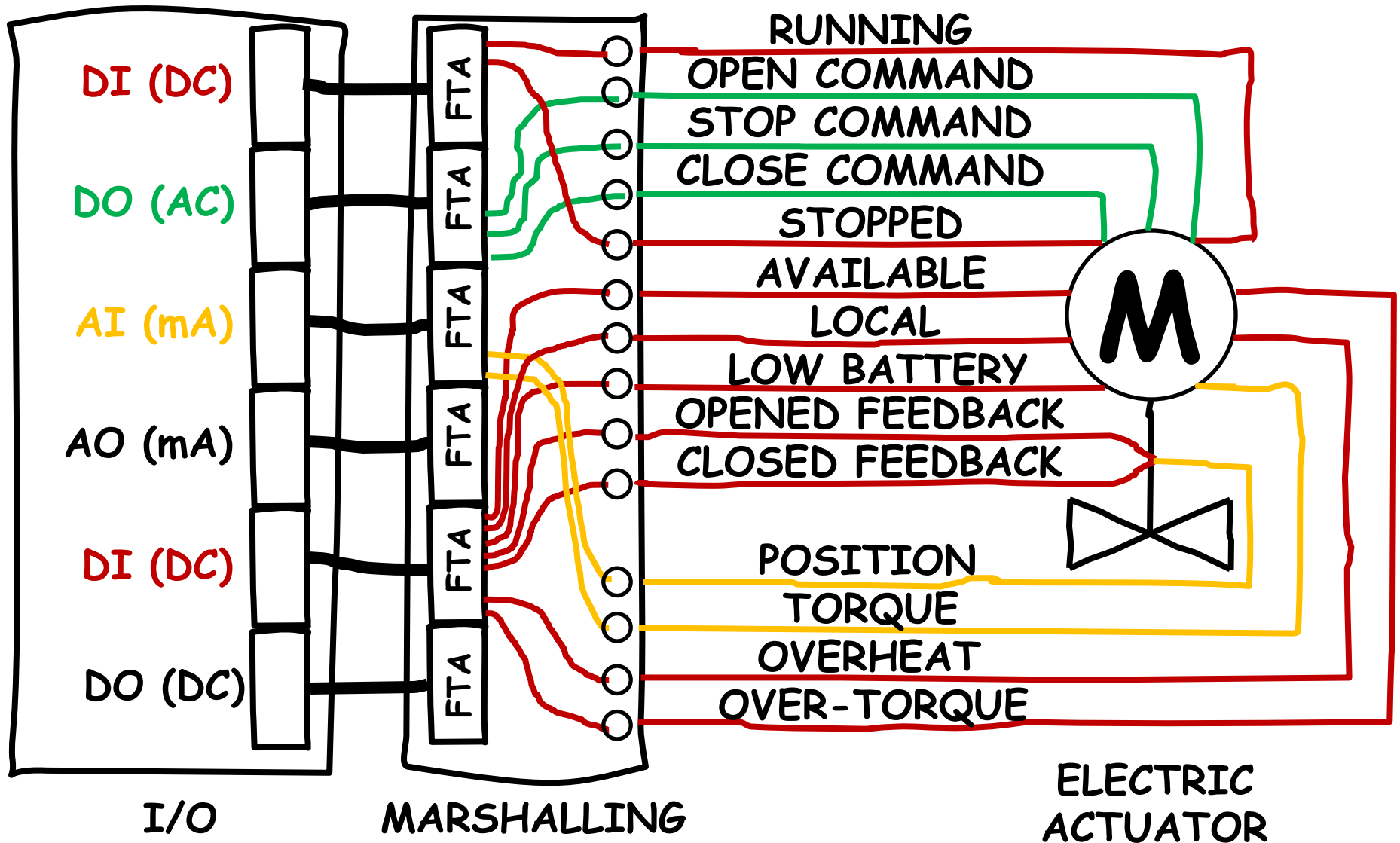
Fieldbus in complex devices reduce wiring the most



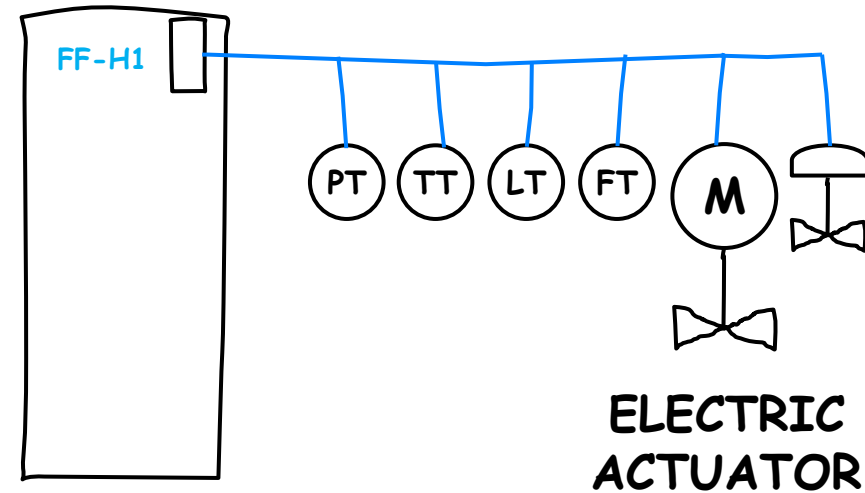
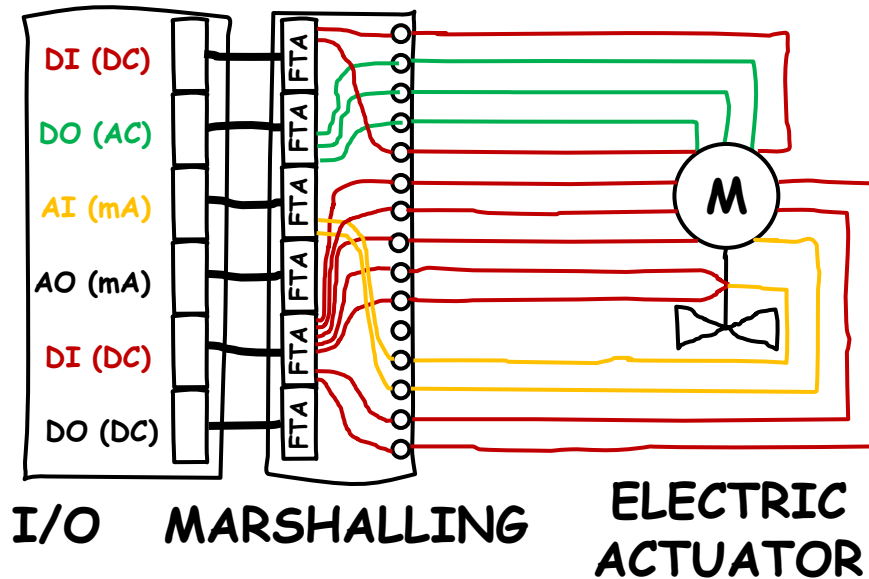
Fieldbus
Foundation

複雜設備往往會有很多信號

Complex Devices Have Many Signals

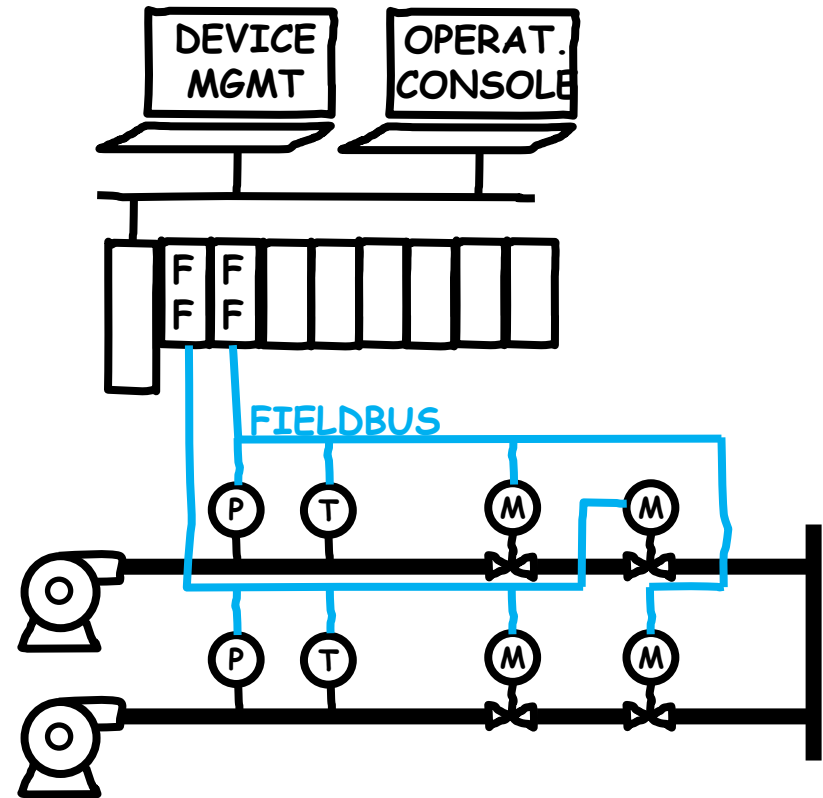
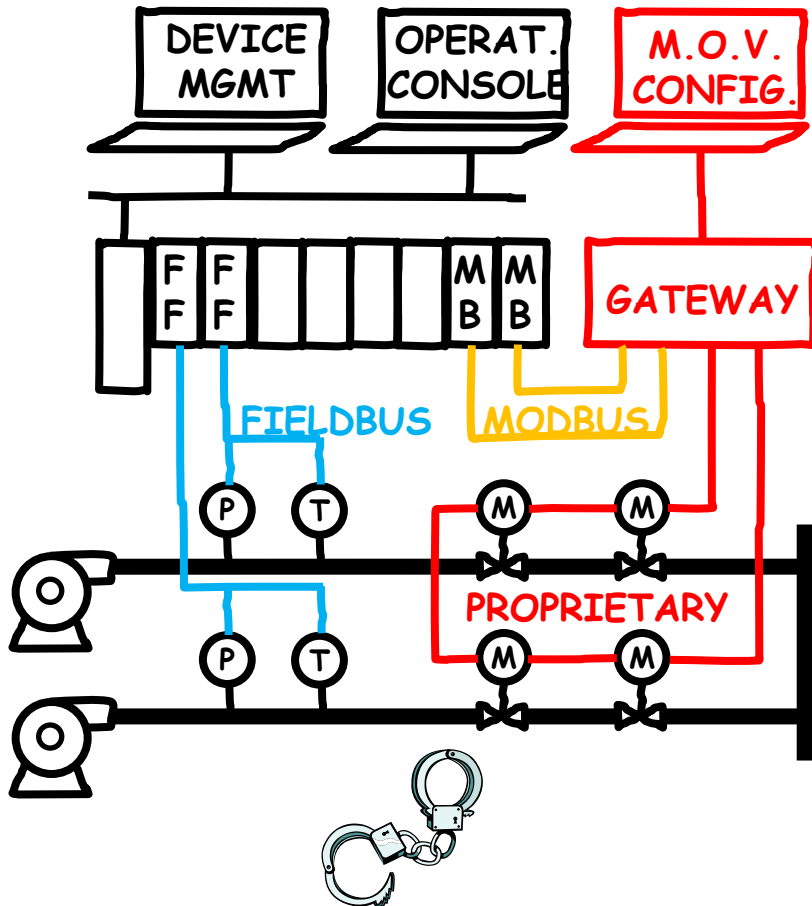


為智能型MOV實現軟體“虛擬錯線” “Virtual Marshalling” of Intelligent MOV in Software



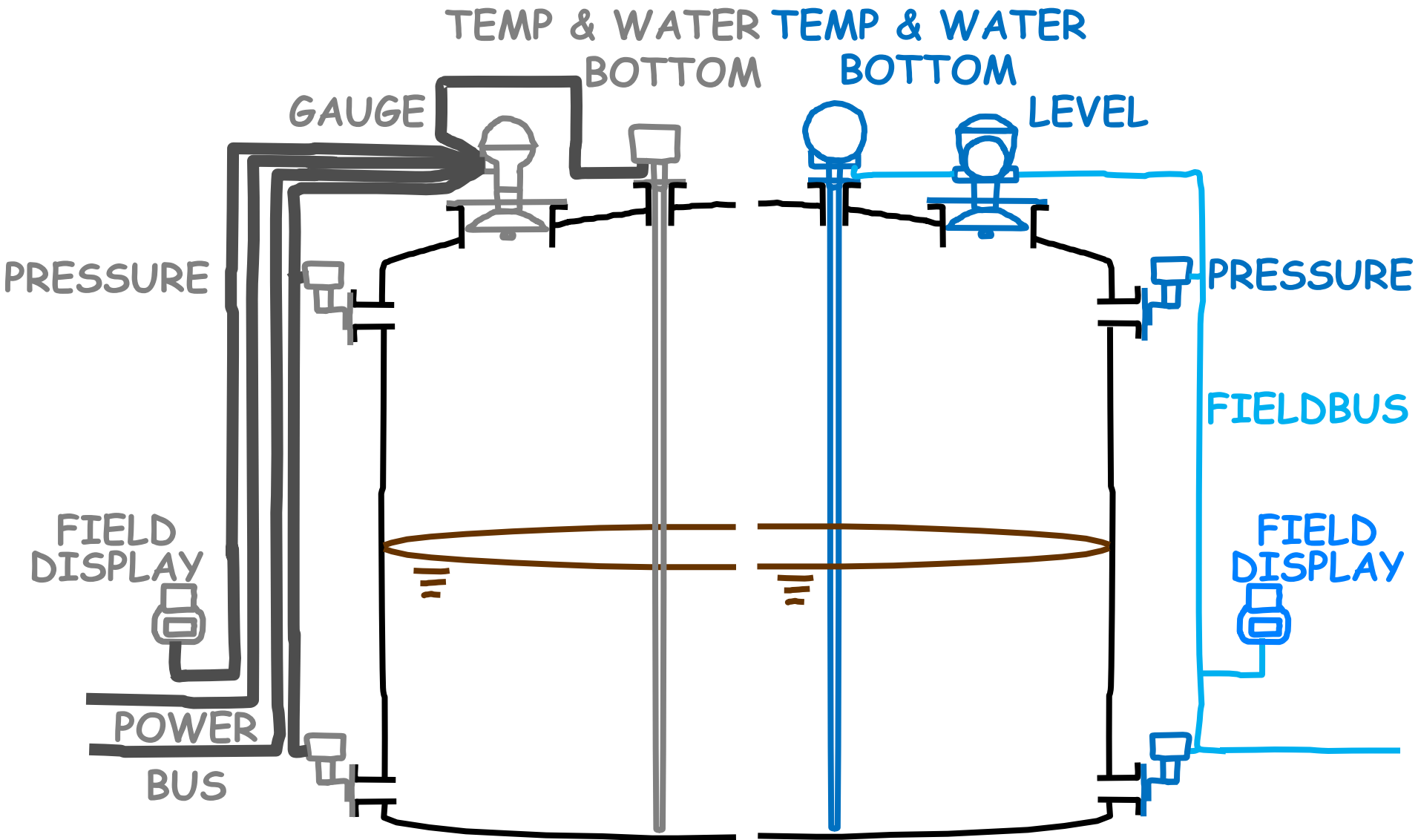
消除最後的專有協定， 閘道和軟體

Eliminate Proprietary Protocols, Gateways, and Proprietary Software



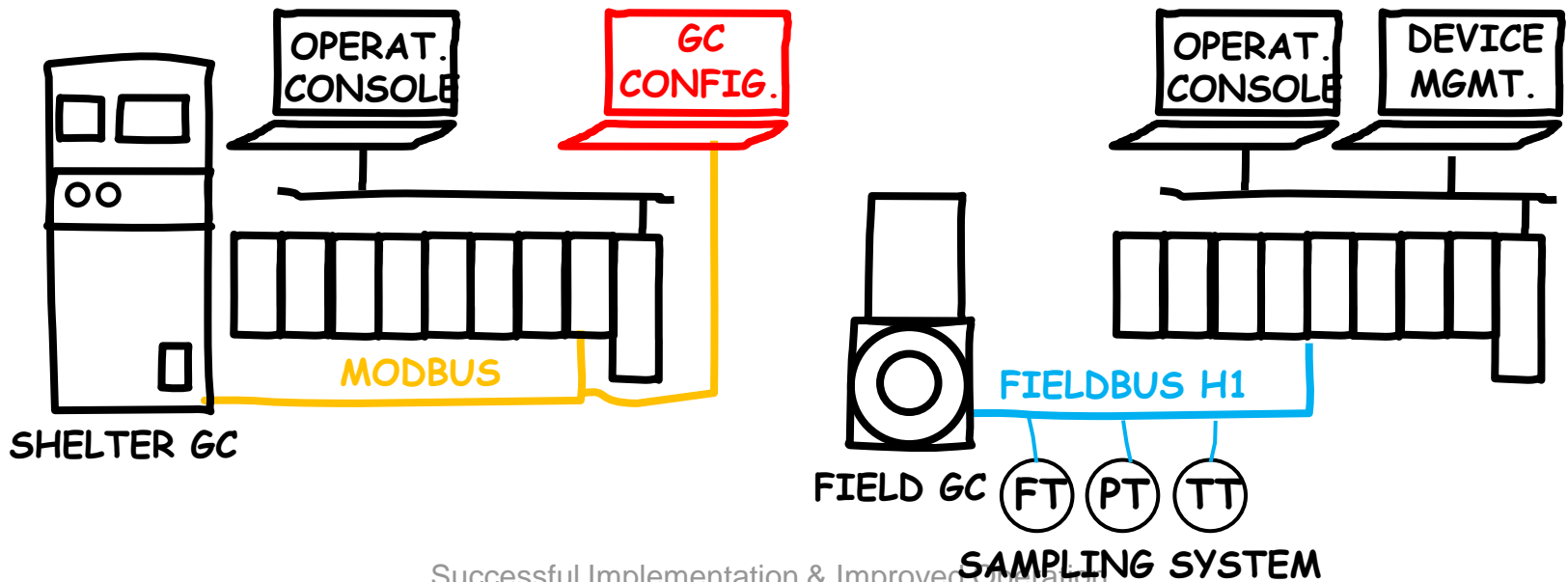
本質安全型兩線式智慧型儲罐計量系統

Intrinsically Safe Two-Wire Intelligent Tank Gauging System



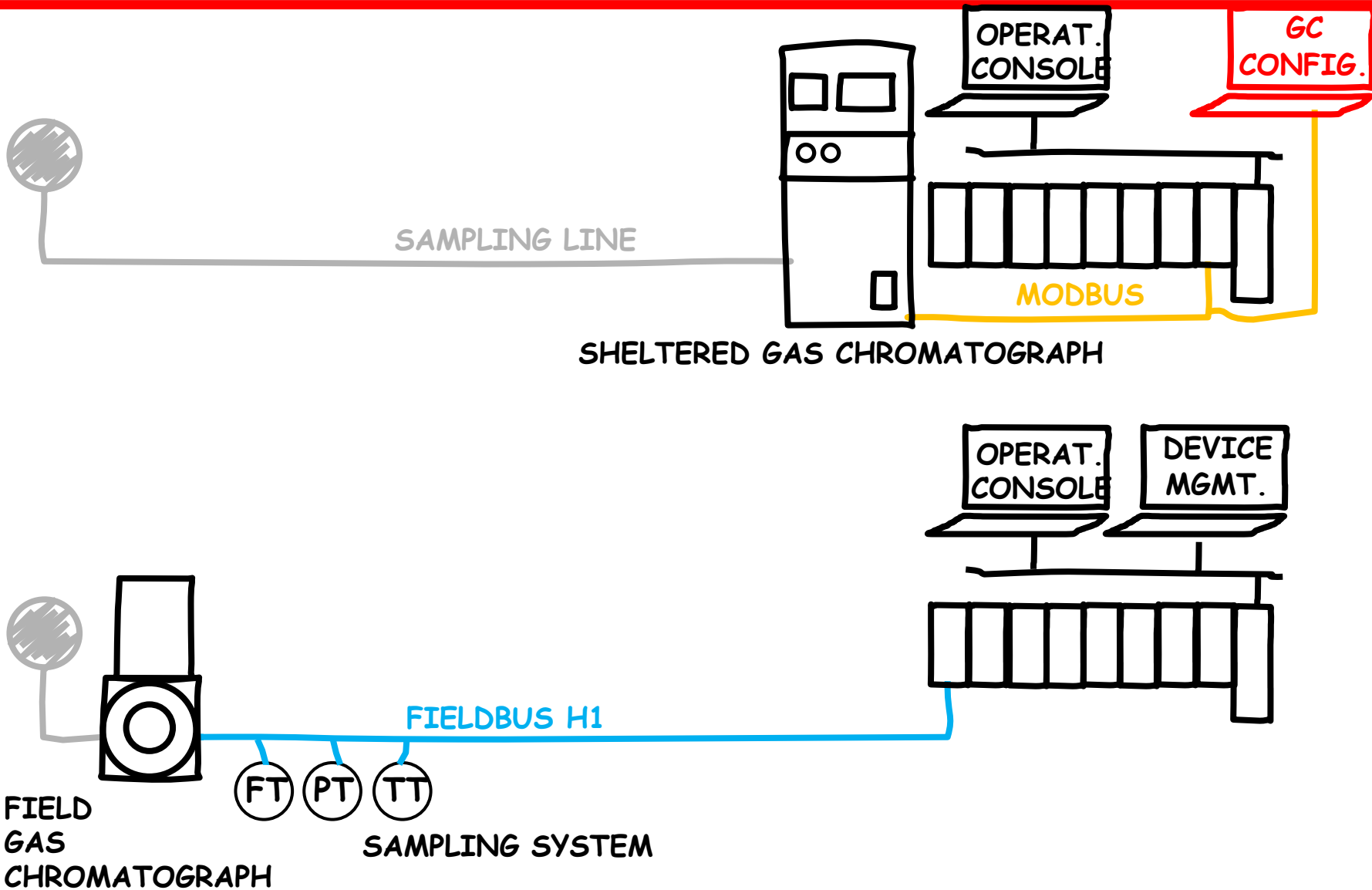
整合式製程分析系統 - 分享式架構

IPAS: Integrated Process Analyzer System - Shared Infrastructure



用Ff來實現“電子式取樣”

FOUNDATION fieldbus as “Electronic Sampling Line”



馬達控制

Motor Controls

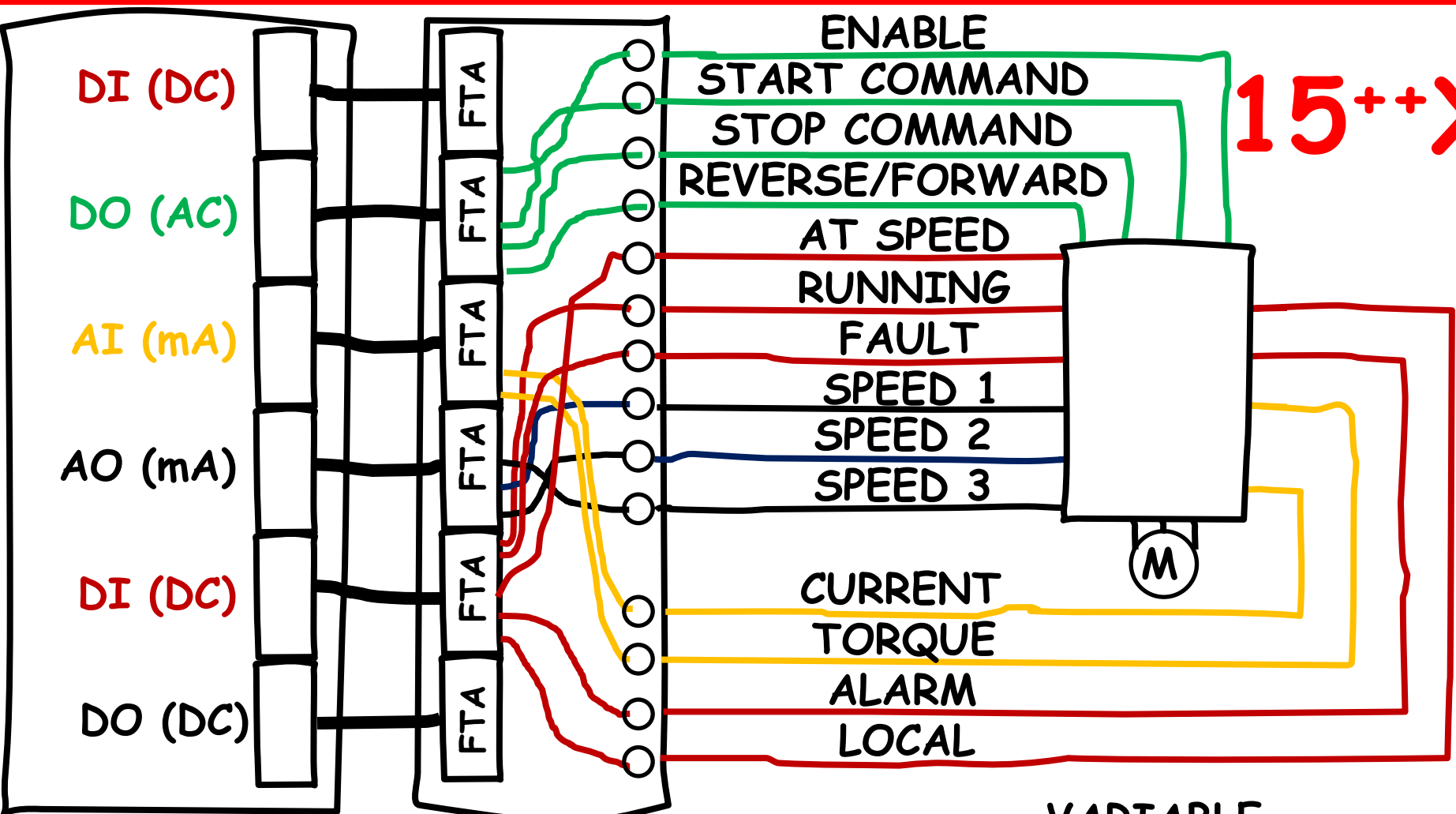


Fieldbus
Foundation

調速器/變頻器

Variable/Adjustable Speed/Frequency Drive

15++X

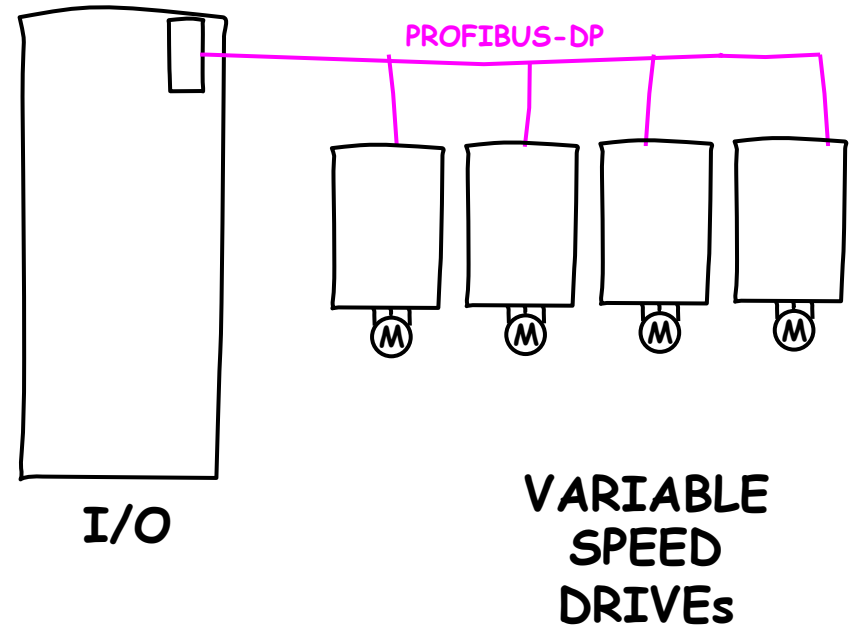
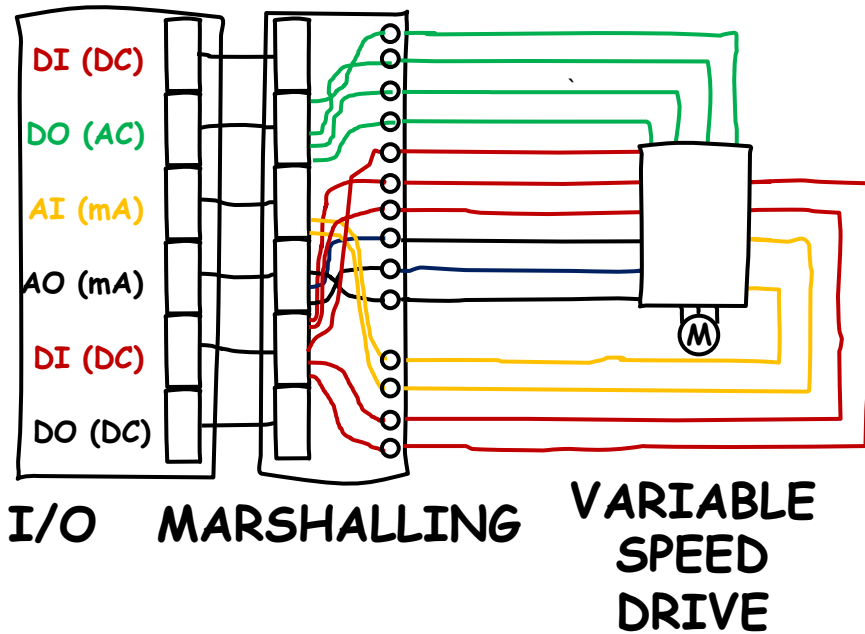


I/O

MARSHALLING

VARIABLE
SPEED
DRIVE

為智能VSD實現軟體“虛擬錯線” “Virtual Marshalling” of VSD in Software



安全儀錶系統

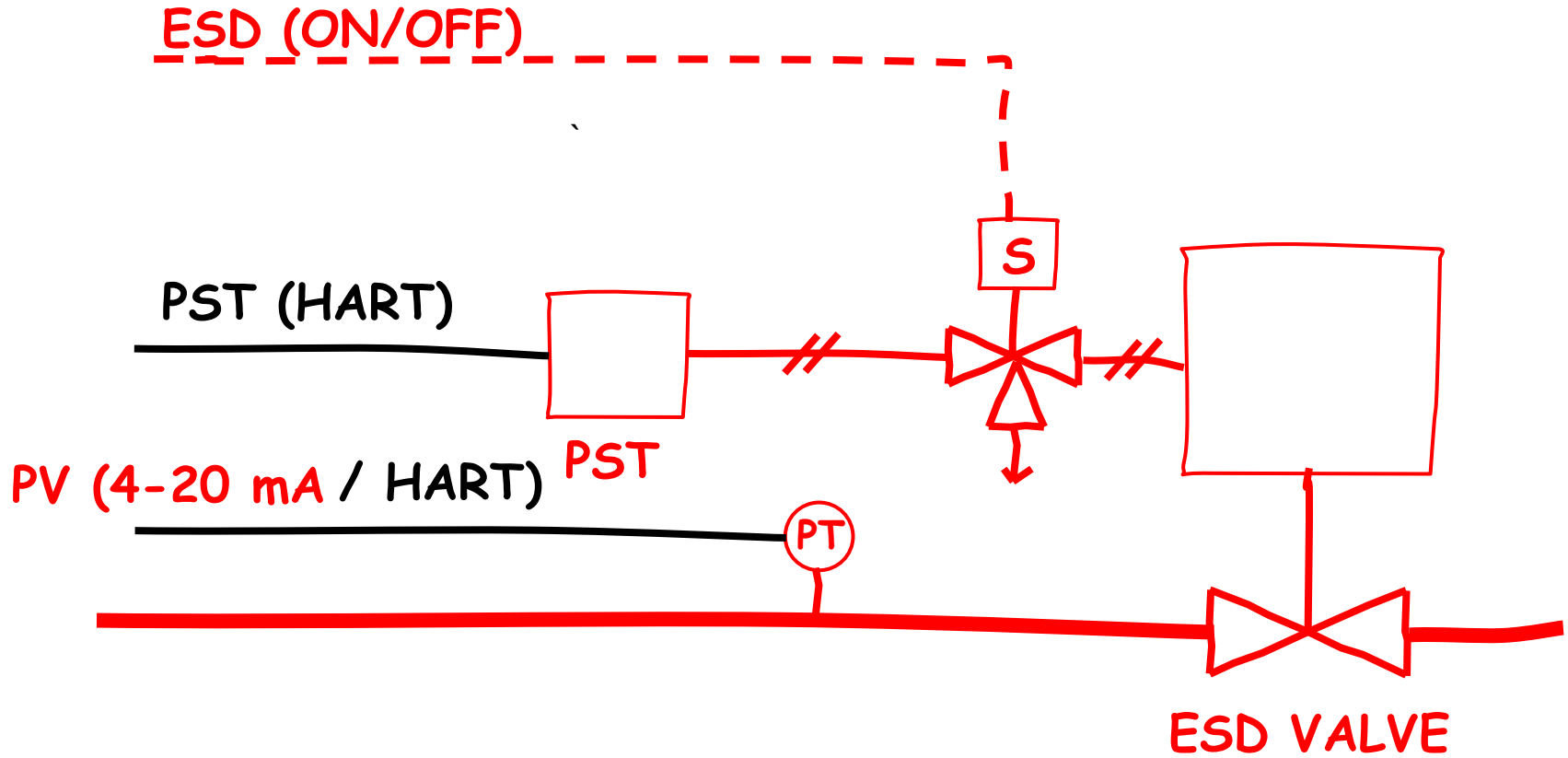
Safety Instrumented Systems (SIS)

產品採硬接線方式
Products are hardwired



Fieldbus
Foundation

SIS



總結 Summary

- 比以往能更進一步**減少**設備佔地空間和接線
Reducing footprint and wiring further than ever
- 智慧型離散設備
Smart discrete devices
- 靈活應對設計變更
Flexibility to handle changes
- 減少設備的數量
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Motor controls
- **SIS**