What's New in Siemens Controls

Power Control with Communications

- IO-Link
- PROFIBUS
- PROFINET
- Modbus RTU

SIRIUS ACT

- Innovative 22mm pushbutton line
- Communication capable

Safety

- Safety Relays
- Safe Motor Starters
- Distributed Safety

John Burns

Siemens Industry

SIRIUS Innovations
2nd phase of market introduction begins in 2015

SIEMENS

in the market Part 1

Part 2: S2

Part 3: S3-S12

			AC3 Rating	12A	25A	50A	100A	185A	300A	500A
				7.5HP	15HP	40HP	75HP	150HP	250HP	400HP
	Functions	Components		S00	S0	S2	S3	S6	S10	S12
Main circuit	Switching & Starting	Contactor, Specialty Contactors								
		S.S. Contactor								
		Soft Starter								
	Protecting	MSP's								
		Overload Relays								
	Monitoring	Current Monitoring Relay								
	Feeders	Motor Starters								
		Compact Starter								
Control circuit		function modules to mount on contactors								
		function modules for connection to PLC		AS-i IO-Link	AS-i IO-Link	AS-i IO-Link				

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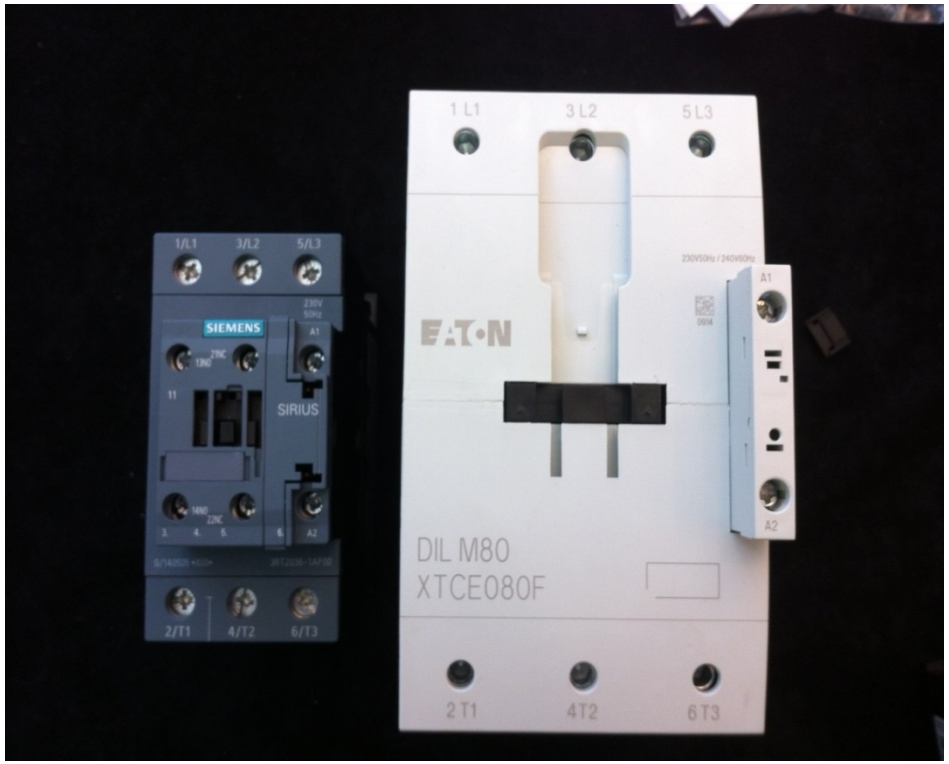
SIRIUS Innovations Frame Size S2

Major Advantages:



SIRIUS Innovations is designed to save space while delivering increased switching performance in the smallest possible footprint

SIRIUS Innovations Frame Size S2

- **Features and Benefits:**
  - **New UC coil contactors reduces energy consumption and simplifies portfolio**
  - **1NO/1NC auxiliary is now built-into the contactor. Reduces overall space requirement.**
  - **MSP will have two versions: 65kA version (3RV2031) and a 100kA version (3RV2032).**
  - **S2 3RR2 Current Monitor now available to 80A in standard wiring or IO-Link version.**
  - **MSP's 10-20% less power consumption reducing panel temperature rise and increasing energy savings.**

SIRIUS 3RR2 Current Monitoring Relays

With analog or digital setting; parallel wiring or IO-Link Communication

S00

3RR2141 1.6-16A

S0

3RR2142 4-40A

S00

3RR2241 1.6-16A

S0

3RR2242 4-40A

S2

3RR2143 8-80A

S2

3RR2243 8-80A

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SIRIUS Innovations

The new SIRIUS 3RP25 Timing Relays!

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Answers for industry.

The ideal solution for time-delayed switching

SIEMENS

+ Multi-functional
Reduces Inventory

Simple Configuration +

+ Screw & Spring
Terminals

Wide Voltage Range +

+ Space Saving @ 22.5mm

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Power Supply System SITOP PSU8600
Highlights

TIA

osts
g and

tion for

solutions

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SIRIUS ACT - Push Buttons & Pilot Lights

The new 22mm IEC Pilot Device line!

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Answers for industry.

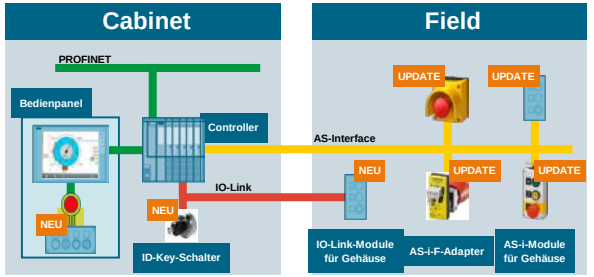
4 Unique Value Points

Design

Plastic | Metal matted | Metal chrome | Metal flat

Scalability: Standard to High End

Communication



PROFINET | AS-Interface SAFETY AT WORK | IO-Link

Easy integration into TIA-Portal

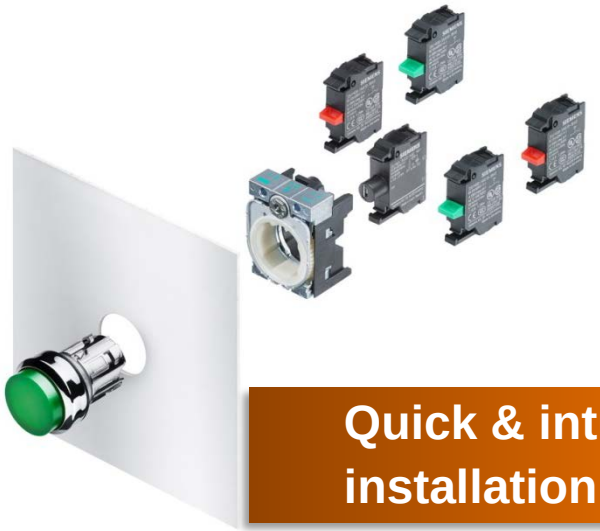
Robustness

IP69K as standard

ATEX

Suitable for harsh environments

Easy Installation



Quick & intuitive installation

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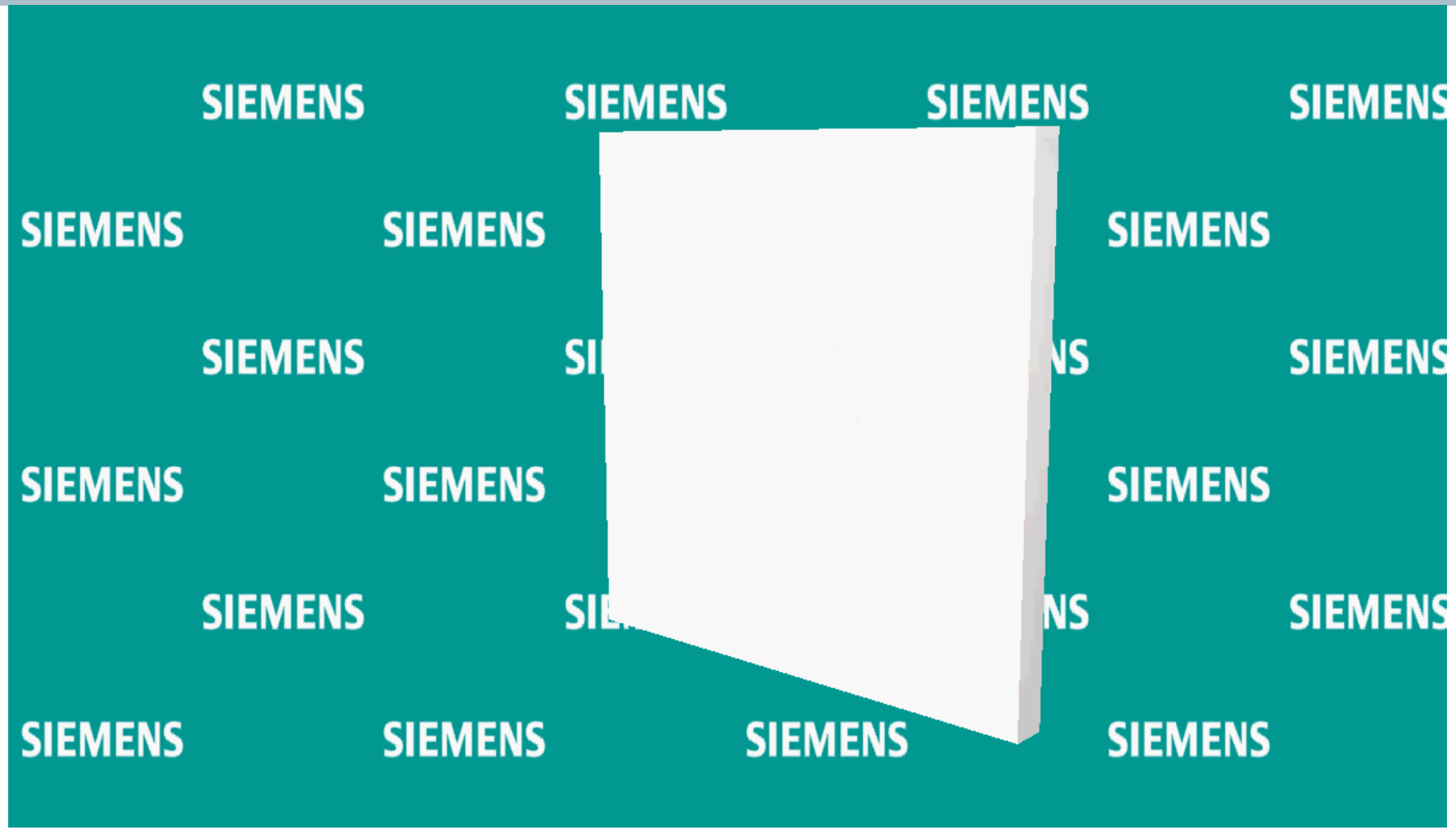
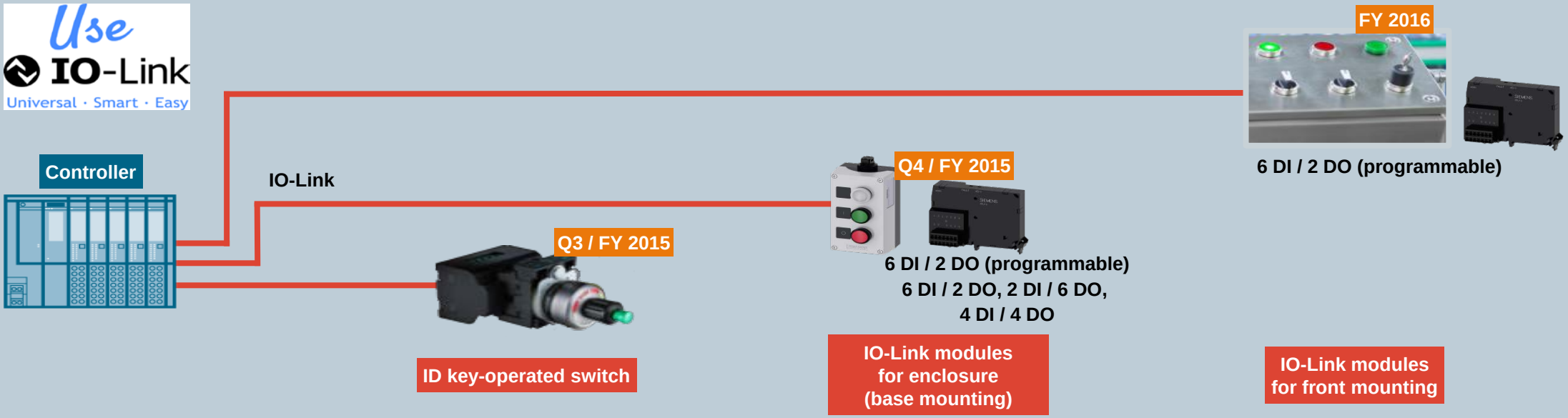
Easy Assembly!



IO-Link for SIRIUS ACT

IO-Link



Applications:

Authentication with ID-Key, enclosures for command devices, front plate mounting

Suites best for …

… limited number of devices with low and medium functionality in the field and in the control cabinet.

PROFINET for SIRIUS ACT – Advanced communication

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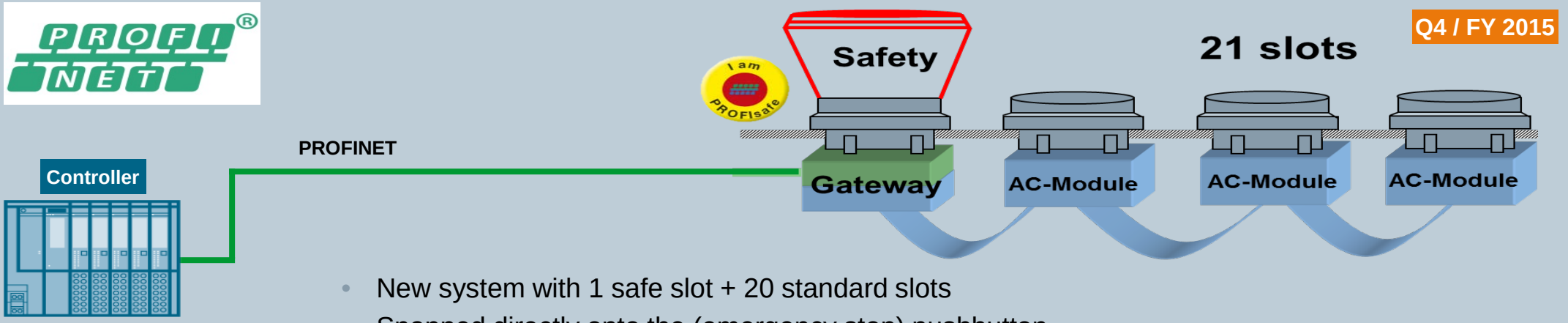
PROFINET



- New system with 1 safe slot + 20 standard slots
- Snapped directly onto the (emergency stop) pushbutton
- From there wiring between command and signaling devices using flat cable
- Easy to assemble (“just click it on”), no addressing required!

Applications:

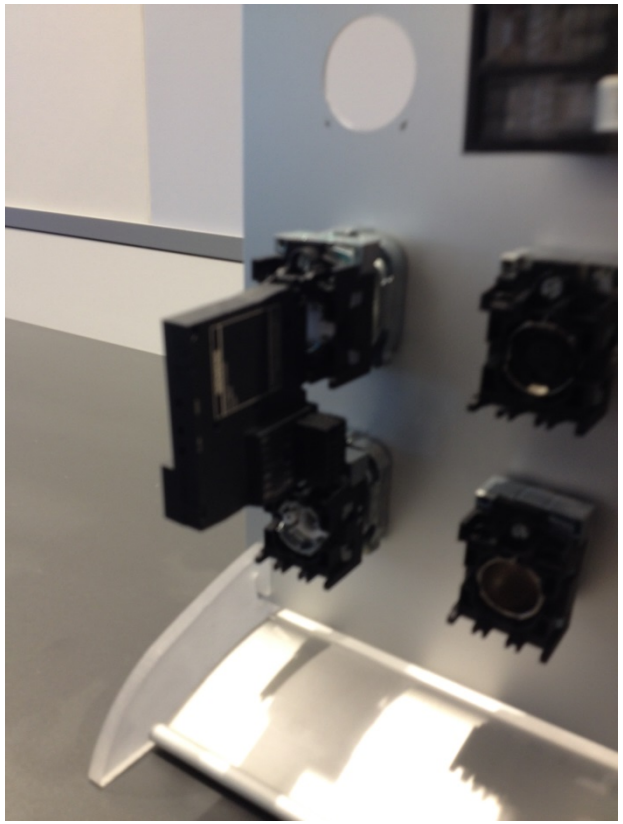
Safety, front plate mounting, device test w/o PLC, dimmable and blinking LEDs, failure detection

Suites best for …

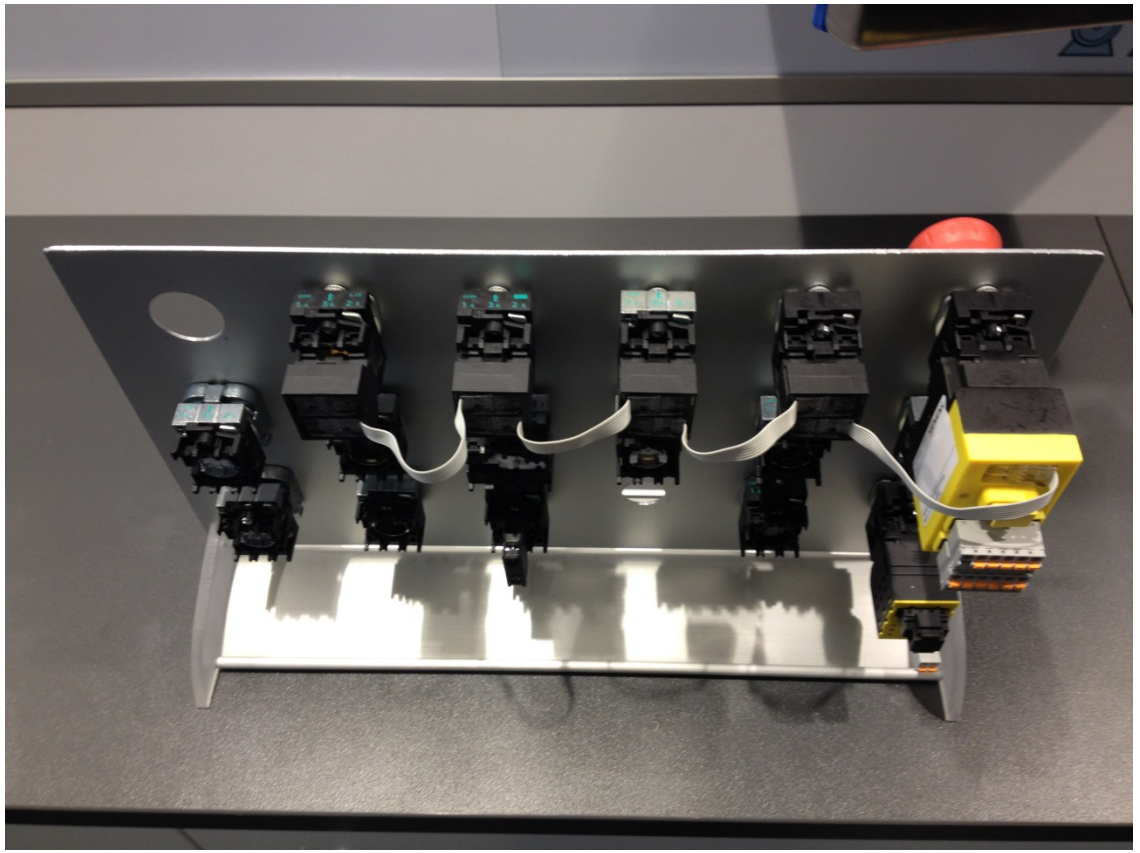
… devices with medium and high functionality in the field and in the control cabinet, also for long distances and significant number of devices.

SIRUS ACT with Communication

ASI or IO-Link



PROFINET

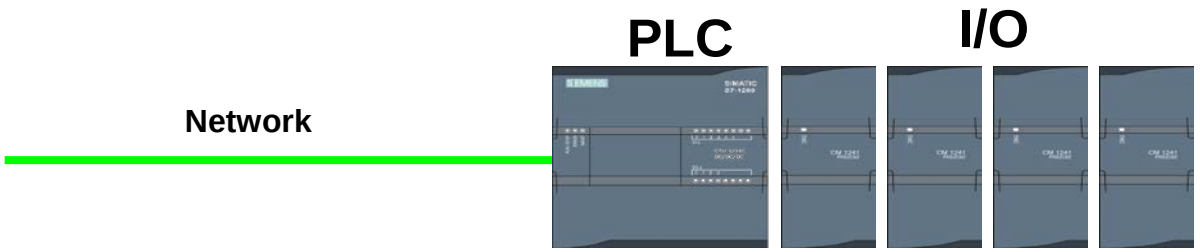


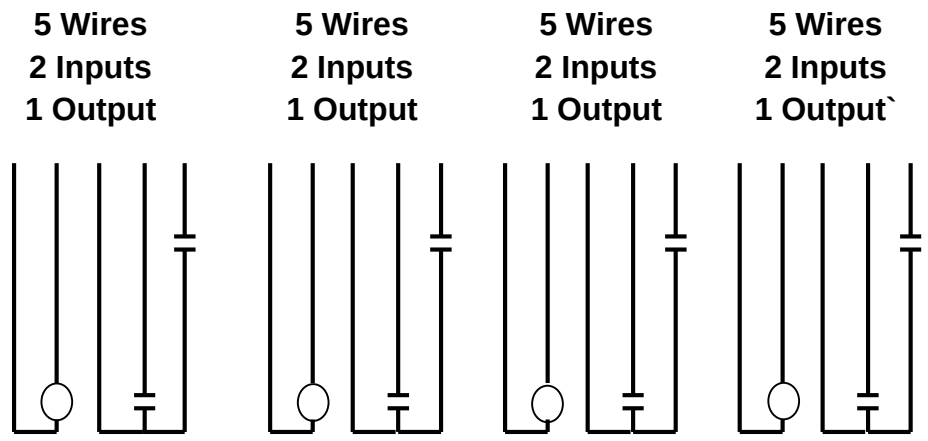
IO-Link Key Advantages

Reduced Wiring +

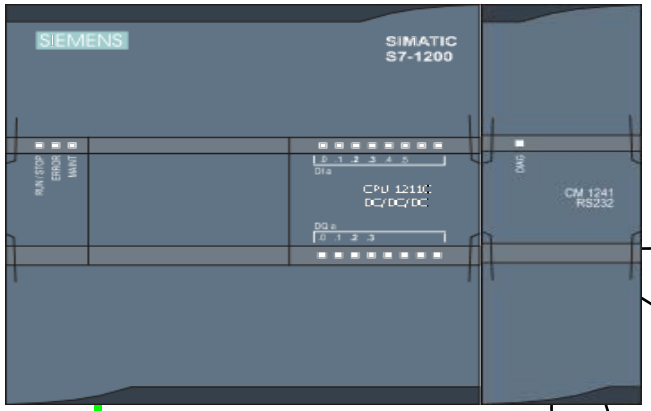
Cost Effective Access To Analog Data +

Traditional Wiring Solution





IO-Link Wiring Solution



IO-Link Master

Network

3 Wires
- L+
- C/Q
- M

Ribbon Cable

Motor Starter

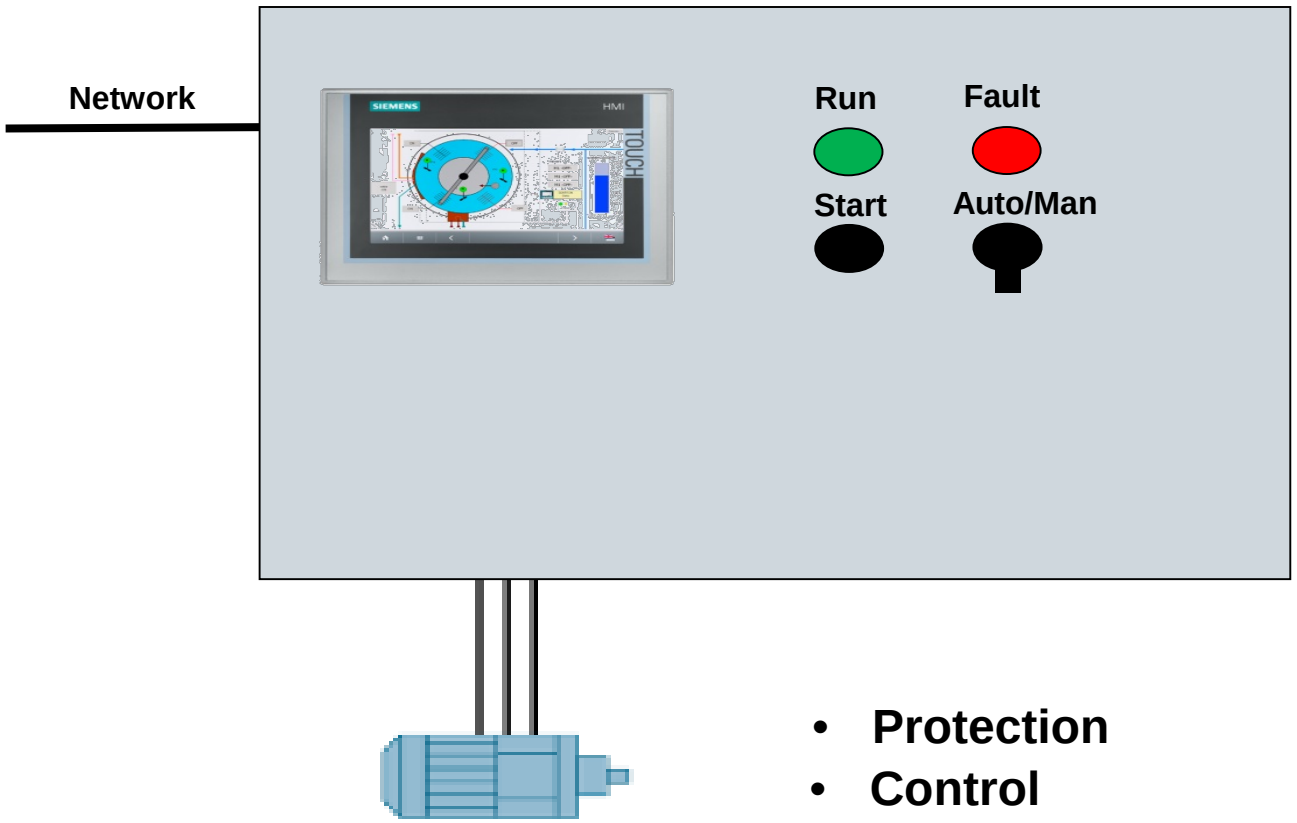
One IO-Link Master

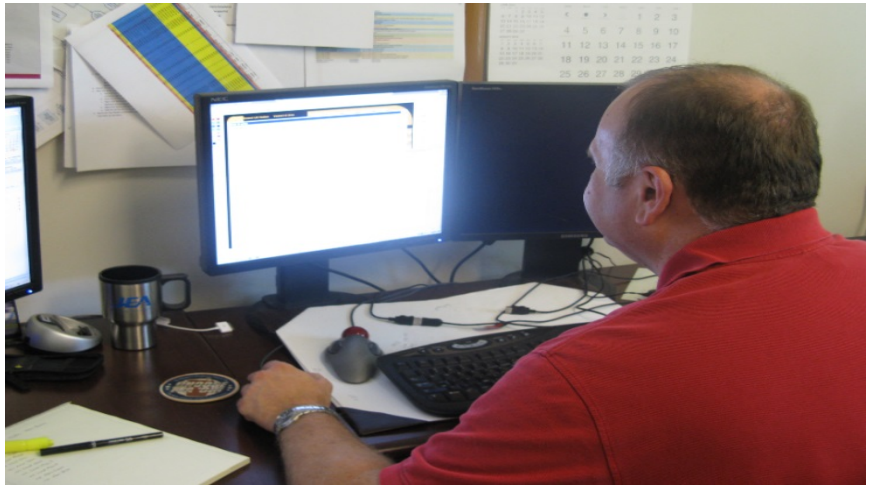
Sixteen Motor Starters

Benefits to OEM

- 1 Master to 16 Starters +
- 27% less cost +
- 75% Faster wiring +

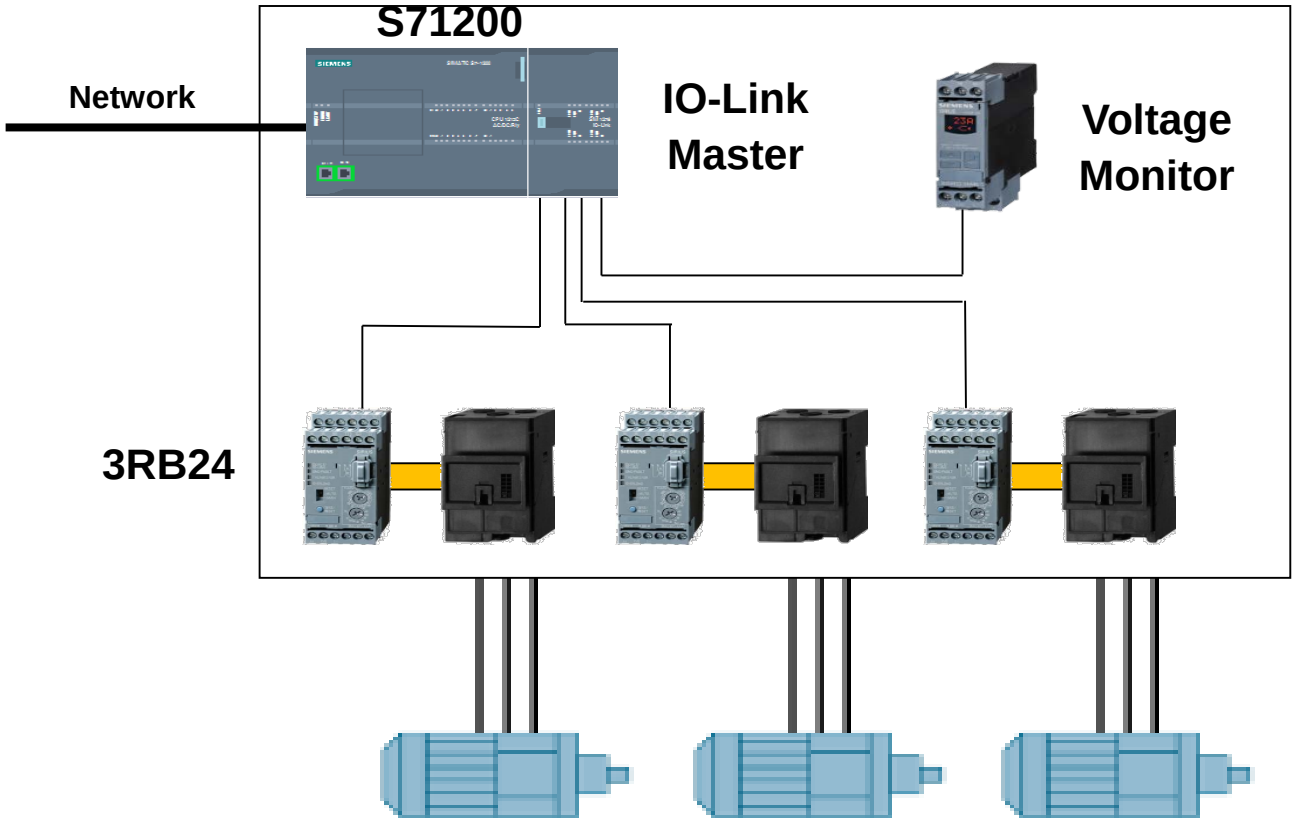
Control Panel Application - Functional Scope





- Protection
- Control
- Diagnostics
- Monitoring

Control Panel Application – Product Scope



- Protection
- Control
- Diagnostics
- Monitoring

- Ready
- Direction
- Group Error
- Group Warning
- Overload
- Thermistor
- Low Supply
- Ground Fault
- Current (Amps)
- Current (%FLA)
- Voltage/Power

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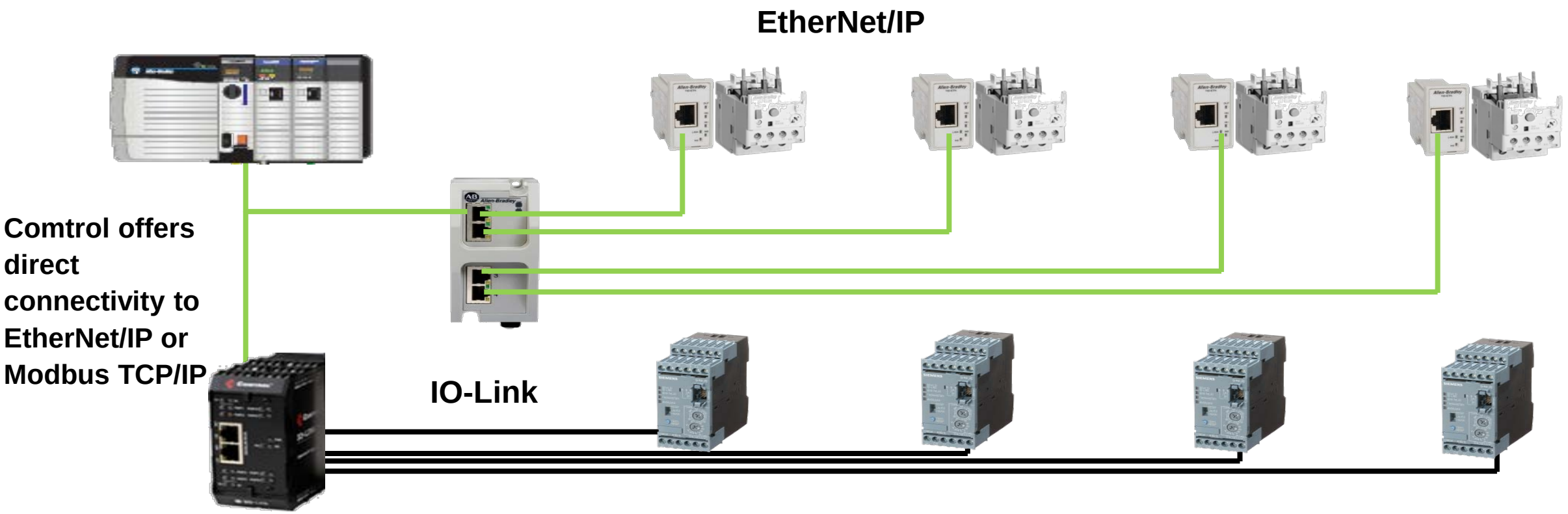
Benefits to End User



Less Ethernet Addresses Required +

Lower Cost +

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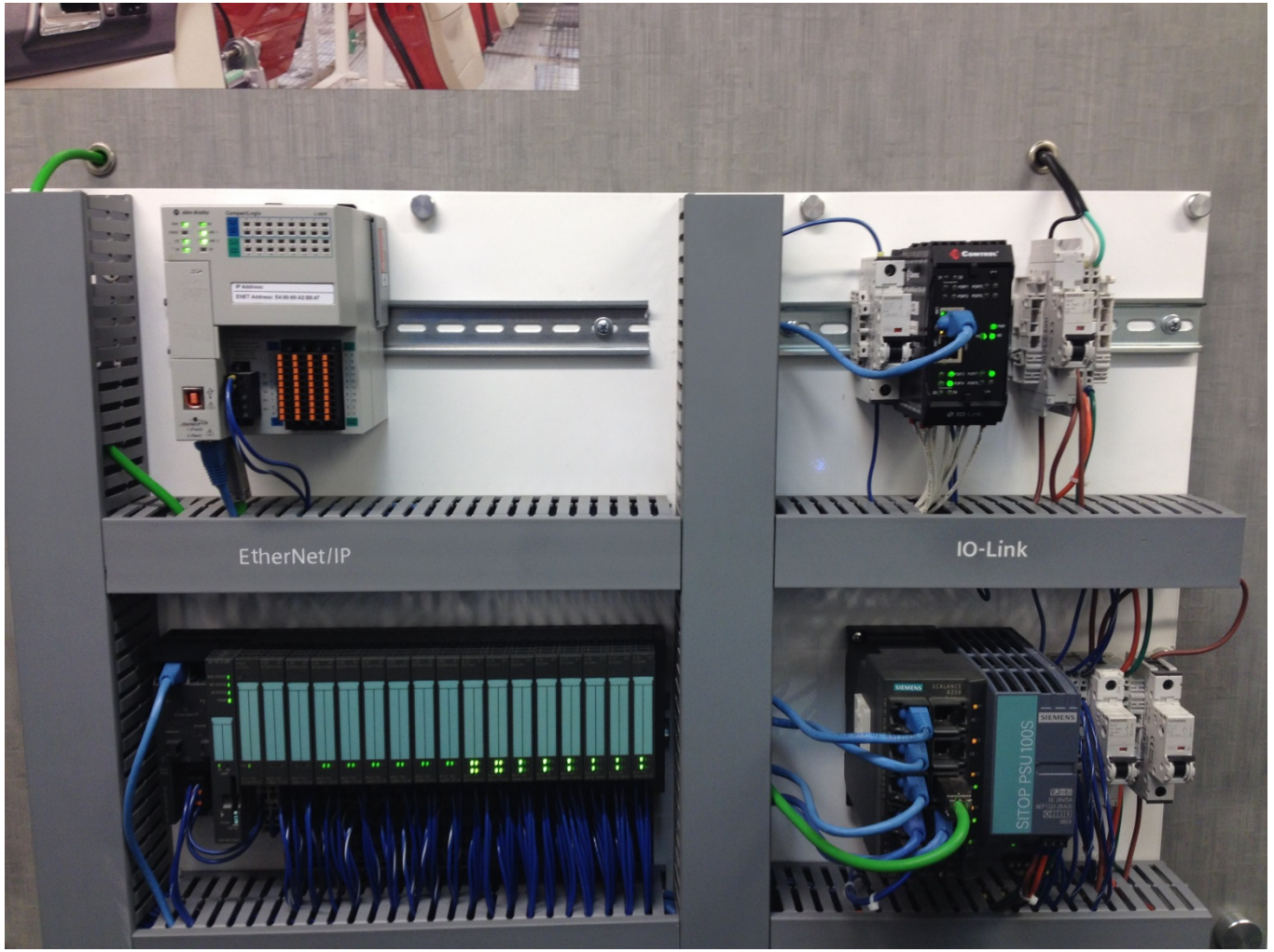
Benefits to End User



SIMOCODE pro Family

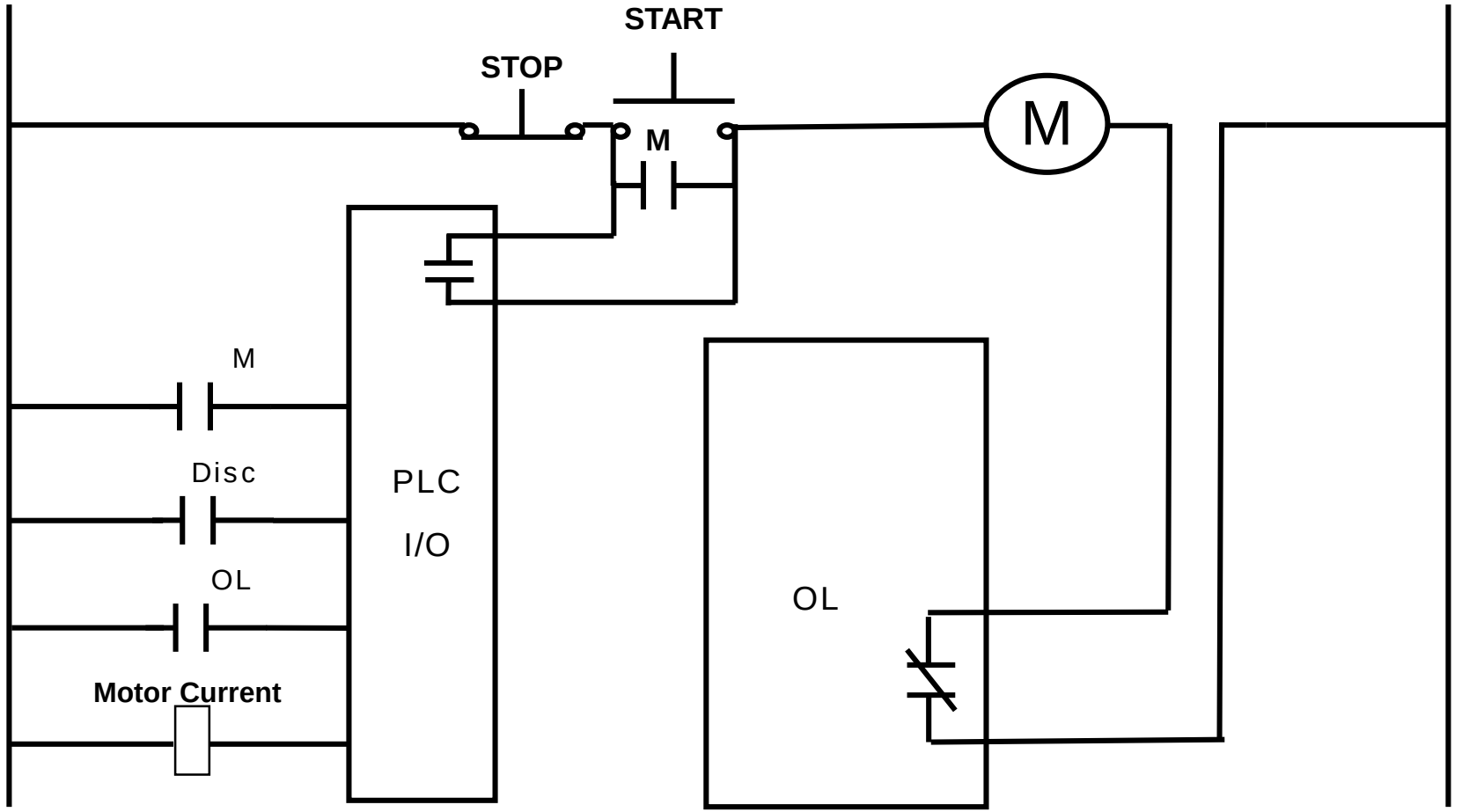
pro C	pro V	pro V PN	pro V MR	pro S
3UF7000…	3UF7010…	3UF7011…	3UF7012…	3UF7020…

Main Functions:

- Protection
- Control
- Monitoring

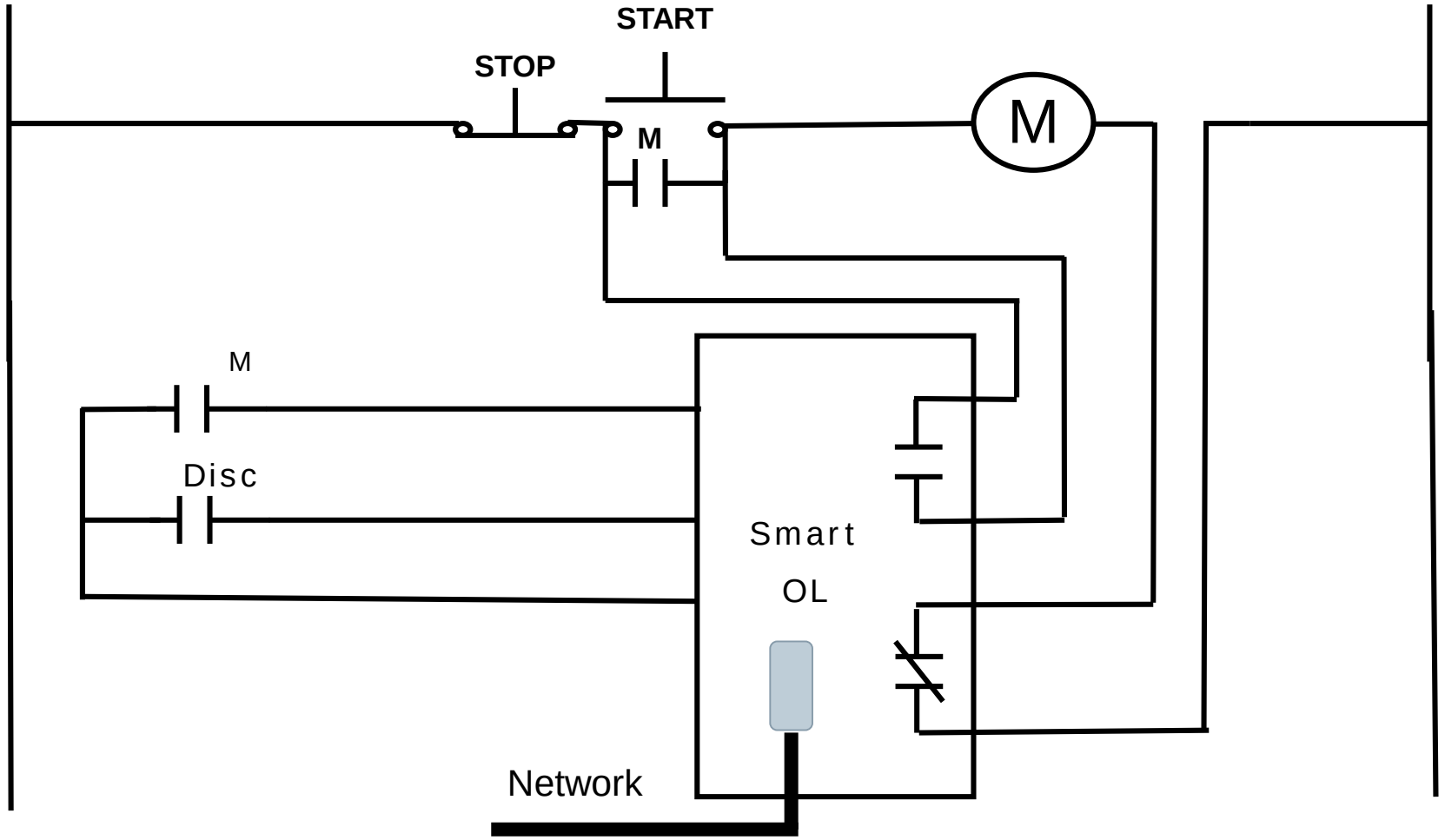
Theory Of Operation

Traditional Overload

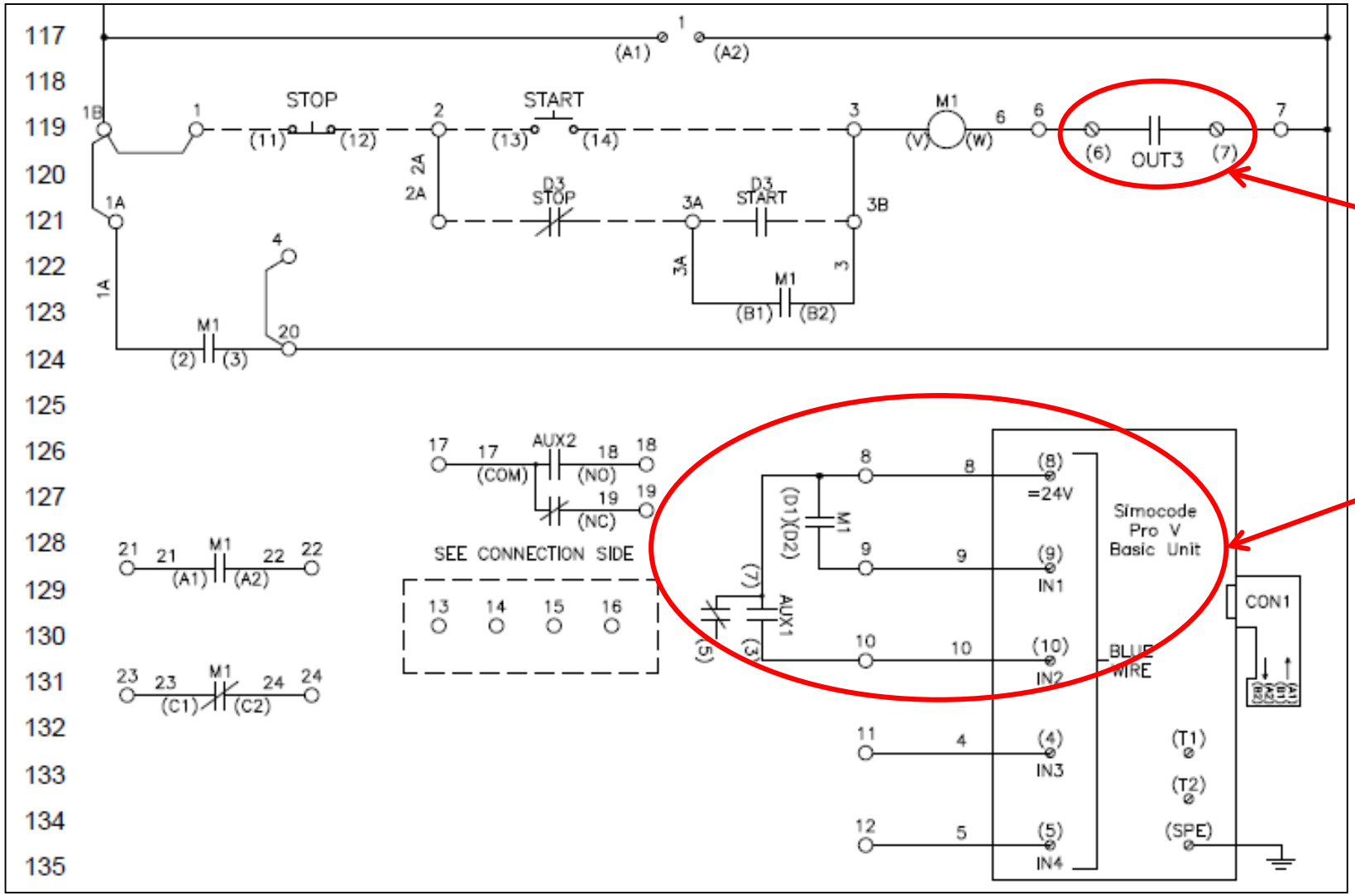


Theory Of Operation

Overload with Communication



MCC Wiring



Fault Contact
Output

Feedback Inputs

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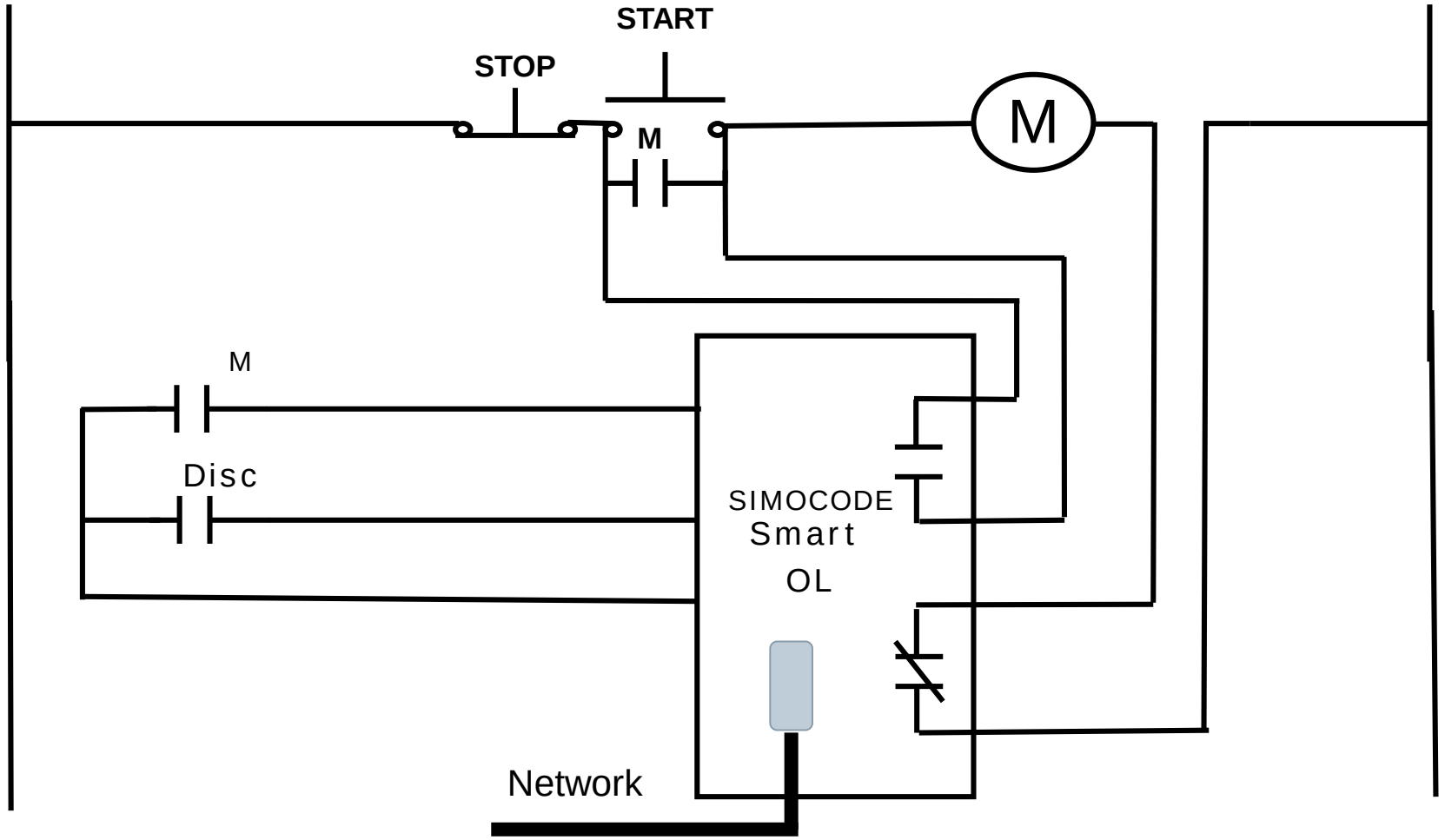
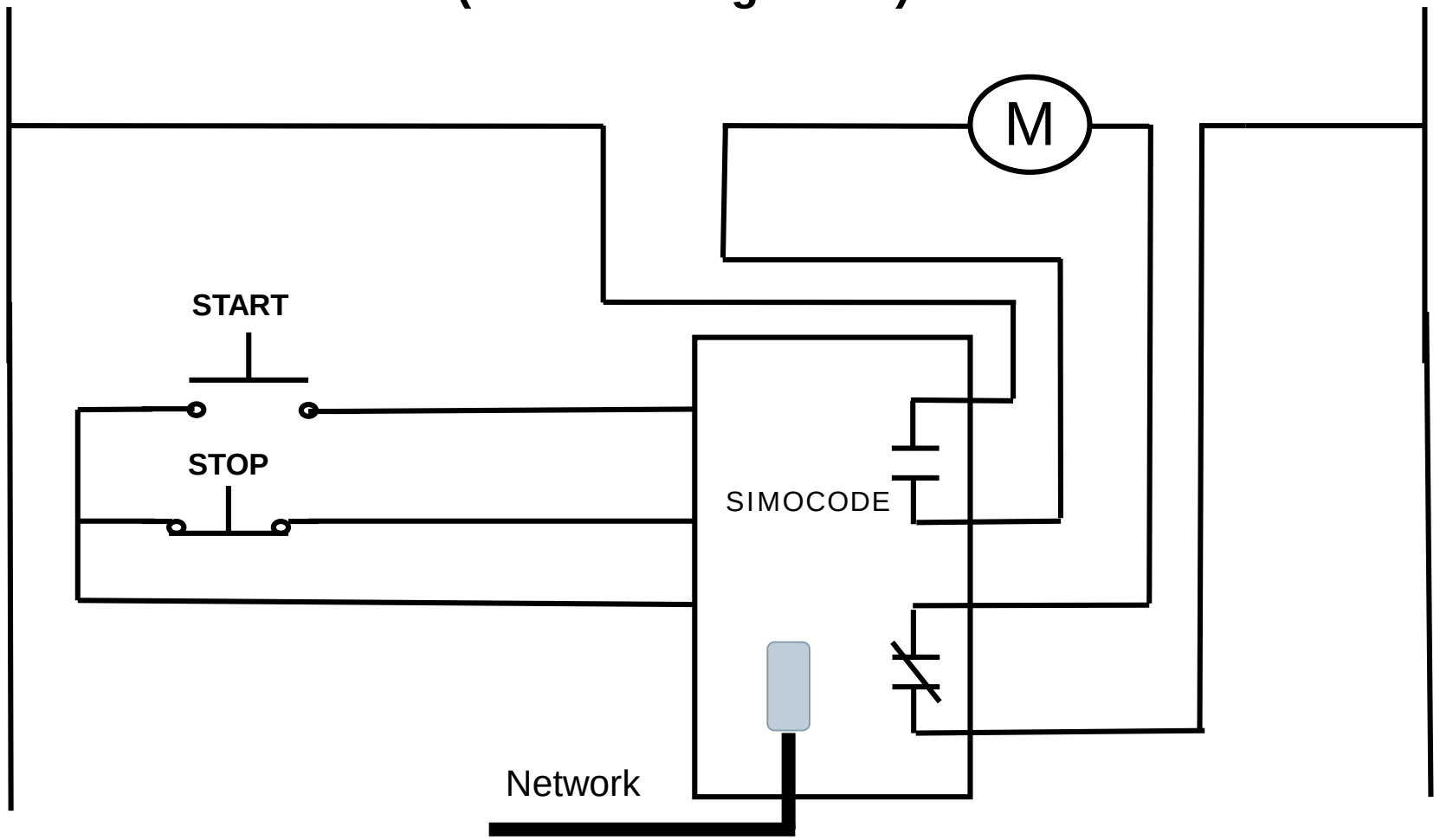
Theory Of Operation

Overload with Communication



Theory Of Operation

Starter with Communication (Motor Management)



Additional Values

- Voltage/Power
- Digital I/O
- Analog I/O
- RTD
- Local Logic
- Motor Profiles

SIMOCODE pro with Safety

SIMOCODE pro V – Variable

SIMOCODE pro V PN also supports the Integrated Safety I/O Modules

Safety Portfolio

	3SK1	3SK2	MSS ASIsafe	MSS 3RK3	F-CPU: S7-1200 / S7-1500 / ET 200SP
Safety device	Safety Relays SIRIUS 3SK		Modular Safety System SIRIUS 3RK3		Failsafe SIMATIC PLCs and distributed I/O
Engineering	Hardware-parameterized	Software-parameterized			Software-programed
Number of safety functions	Up to 3*	Up to 6	Up to 20		From 10
Communication	none		AS-i and PROFIBUS		AS-i, PROFIBUS, PROFINET, PROFIsafe, I-WLAN

* Independent enabling circuits

3SK1 Advantages

3SK1

Power Supply

Input Expansion

Output Expansion

Device Connector

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US / I / IA / CE

3SK2 Features Overview

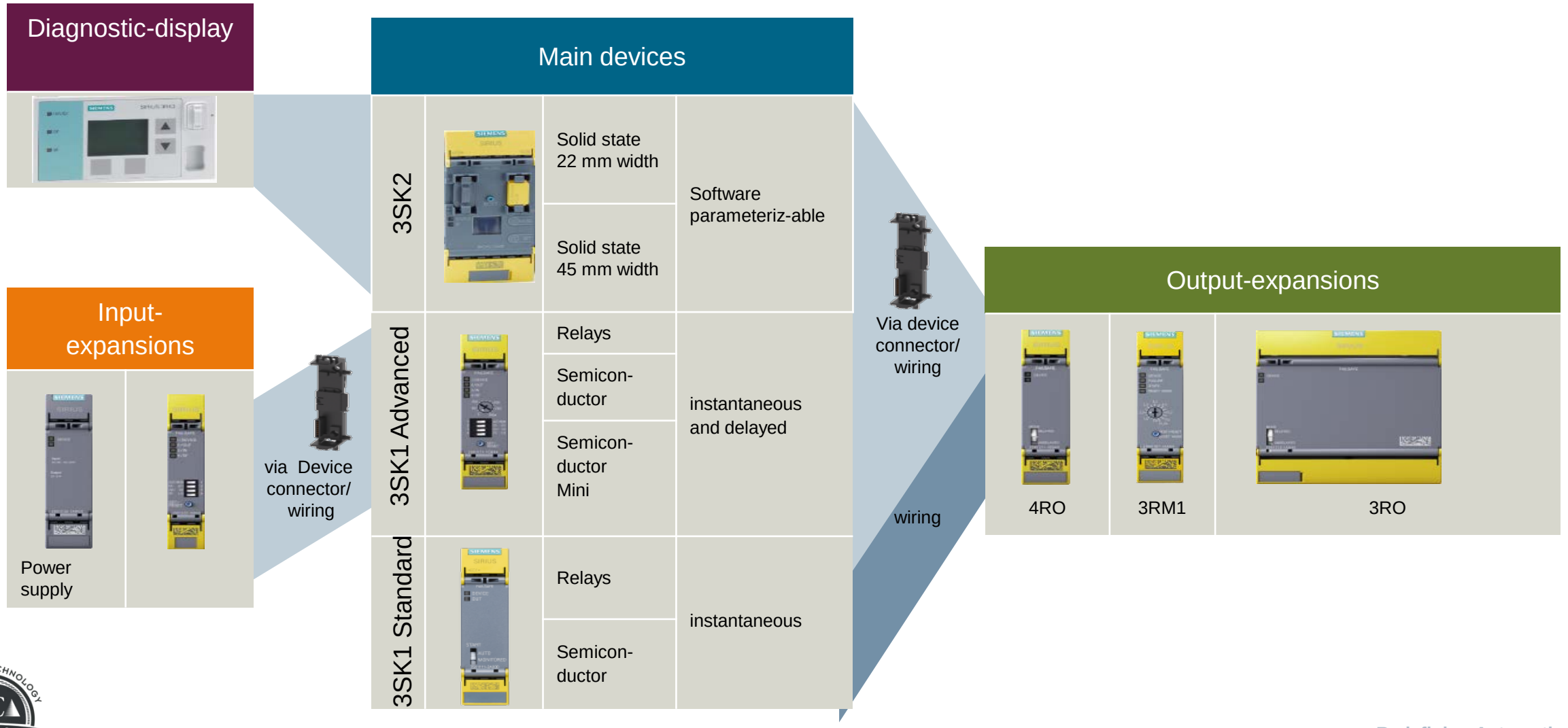
Basic device 22.5 mm

- 10 F-Inputs
- 2 F-outputs (electronic)+ 2 additional with device connector
- 1 signaling output

Basic device 45 mm

- 20 F-Inputs
- 4 F-outputs (electronic)+ 2 additional with device connector
- 2 signaling outputs
- Integrated display for diagnosis
- Memory module

3SK Combinable Components



Hybrid Compact Starters 3RM1
Value Prop - Significant Space Savings

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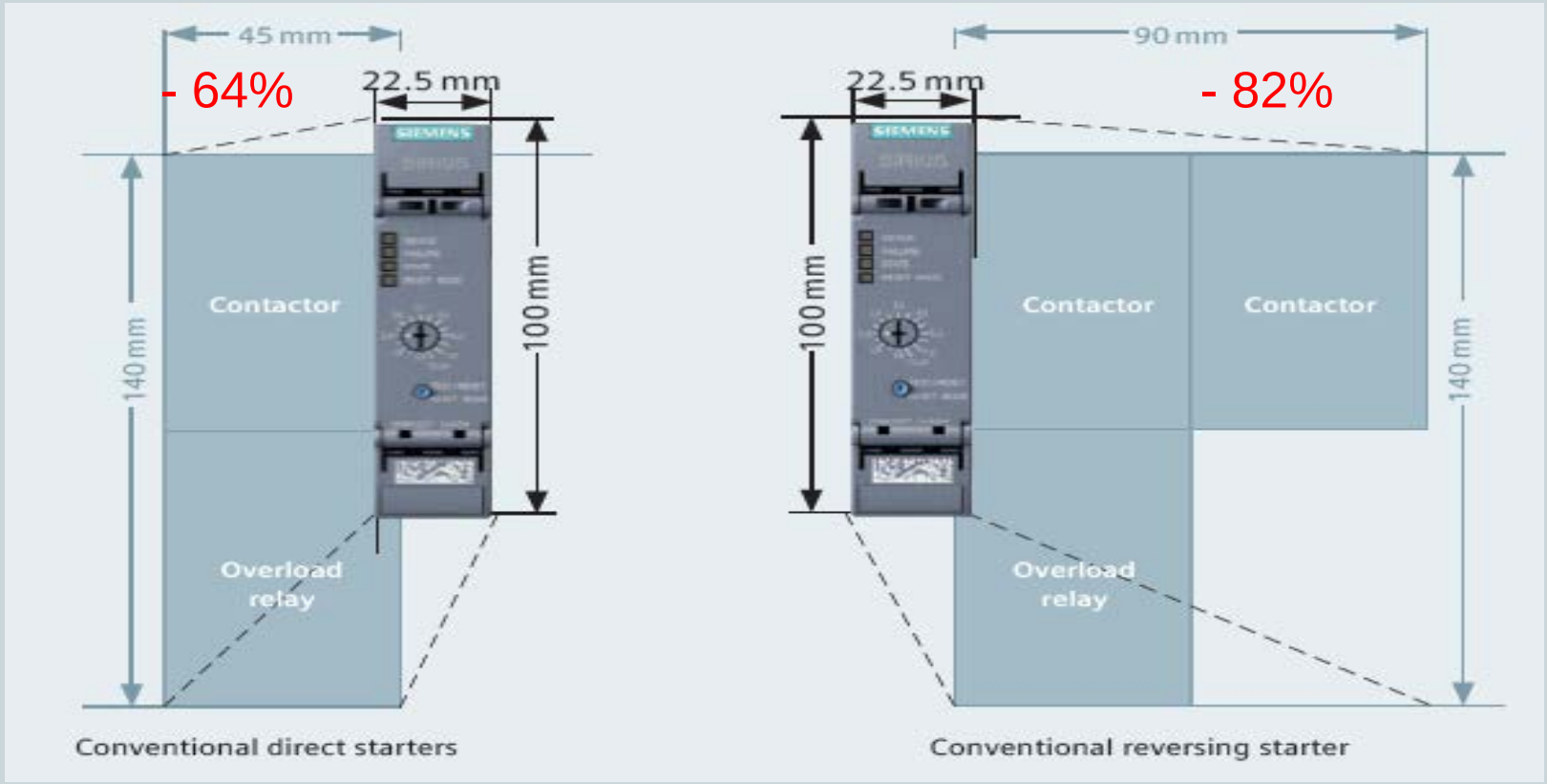

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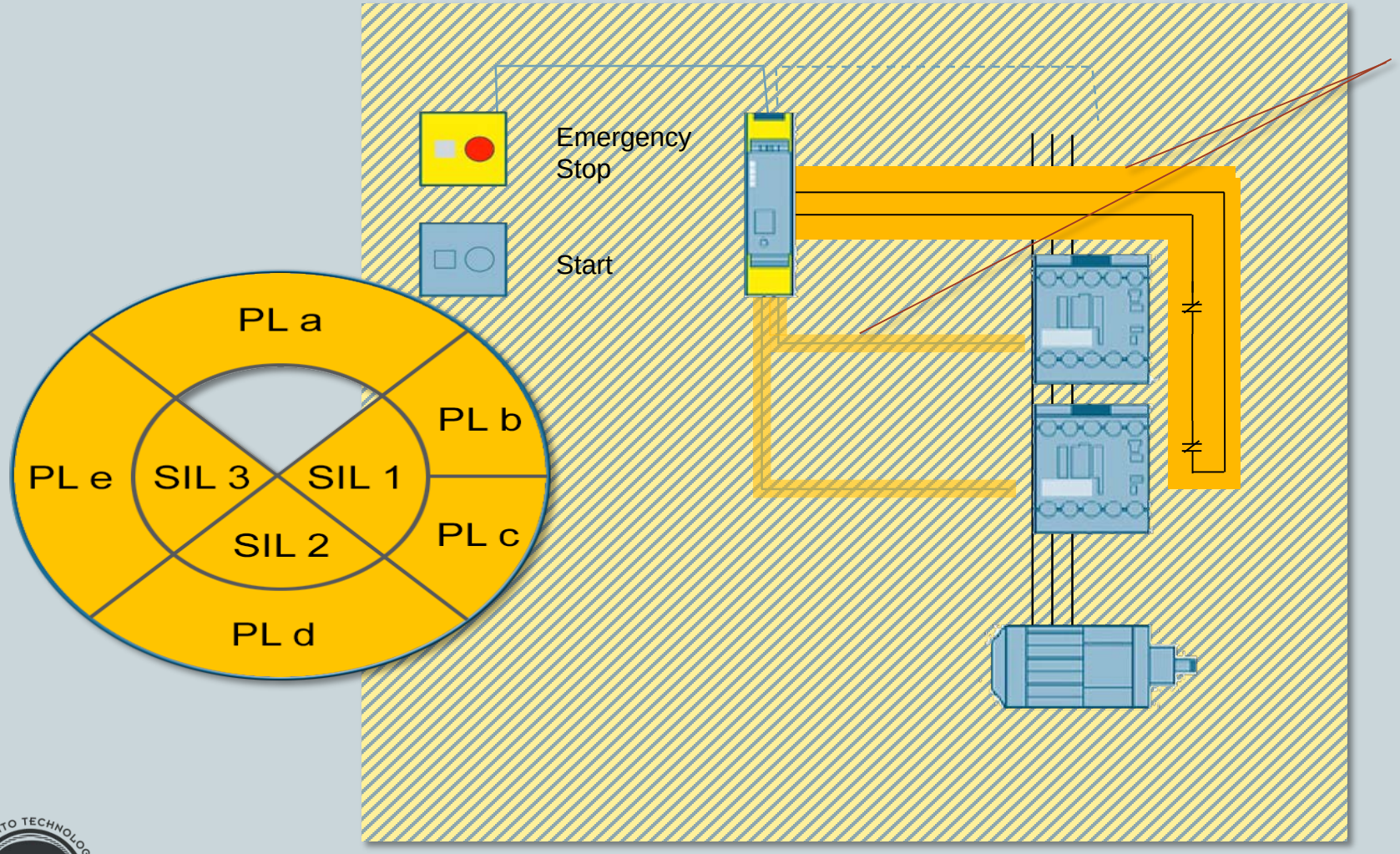
Evaluation
SIL 3 application with a safety relay



6 Wires / starter
- 4 wires for 2 coils
- 2 wires for feedback

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SIRIUS 3SK1 and 3RM1 Failsafe
Application

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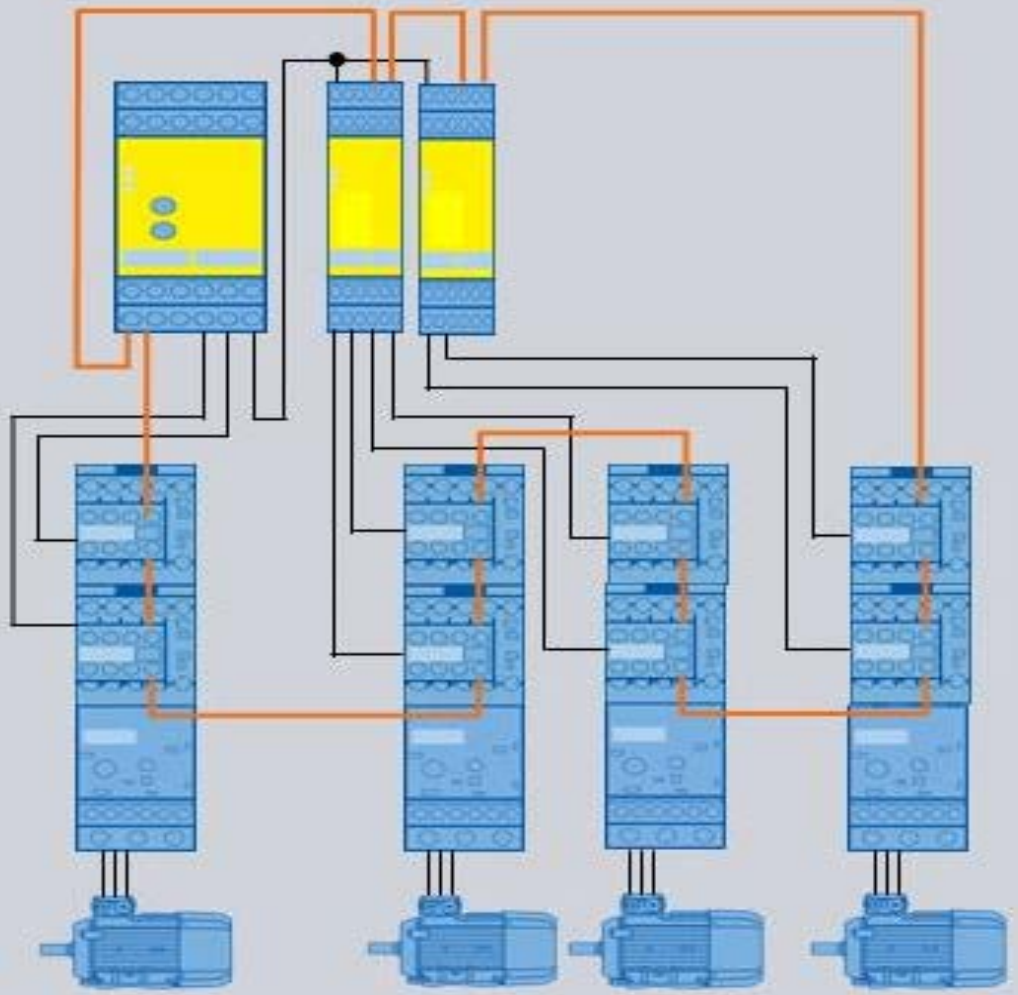
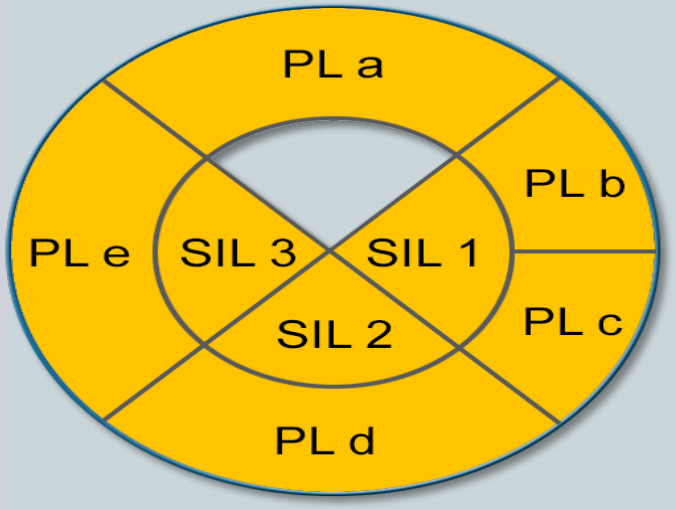
Until Now





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Planning Efficiency Highlights http://www.usa.siemens.com/planning-efficiency

Intuitive product selection

Fast and intuitive product selection

http://www.usa.siemens.com/industrymall

Universal product data

Universal product data for your CAE and CAD system

http://www.siemens.com/cax

Individual documentation

Simplified compilation of project specific documentation

http://www.siemens.com/mydocumentationmanager

http://www.usa.siemens.com/controlpaneldesign

Comprehensive support

Comprehensive support - 24/7 around the globe

http://support.automation.siemens.com/US

http://www.usa.siemens.com/sccr

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