

# WE ARE AUTOMATION

A collection of Rexroth industrial automation components is displayed on a reflective surface. In the background, a tall vertical PLC rack and a large circular component are visible. The foreground features various smaller units, including a PLC with a digital display, several safety modules with yellow and black wiring, and a motor. The background is a dark gradient.

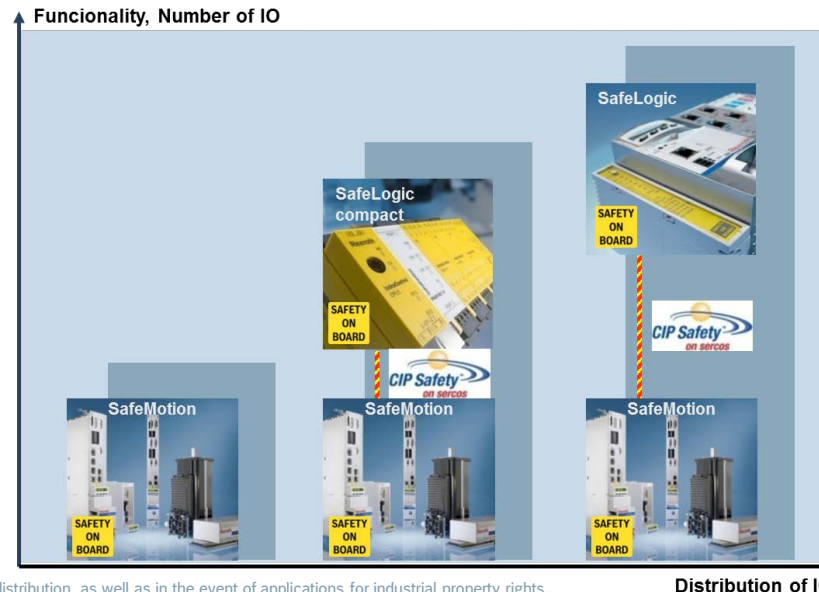
[www.boschrexroth.com](http://www.boschrexroth.com)

## Rexroth Safety Workshop SafeMotion – SafeLogic

CNC | MOTION CONTROL | PLC & IOT | PROCESS CONTROL | DRIVES | SERVICES

# Rexroth Safety Workshop Agenda

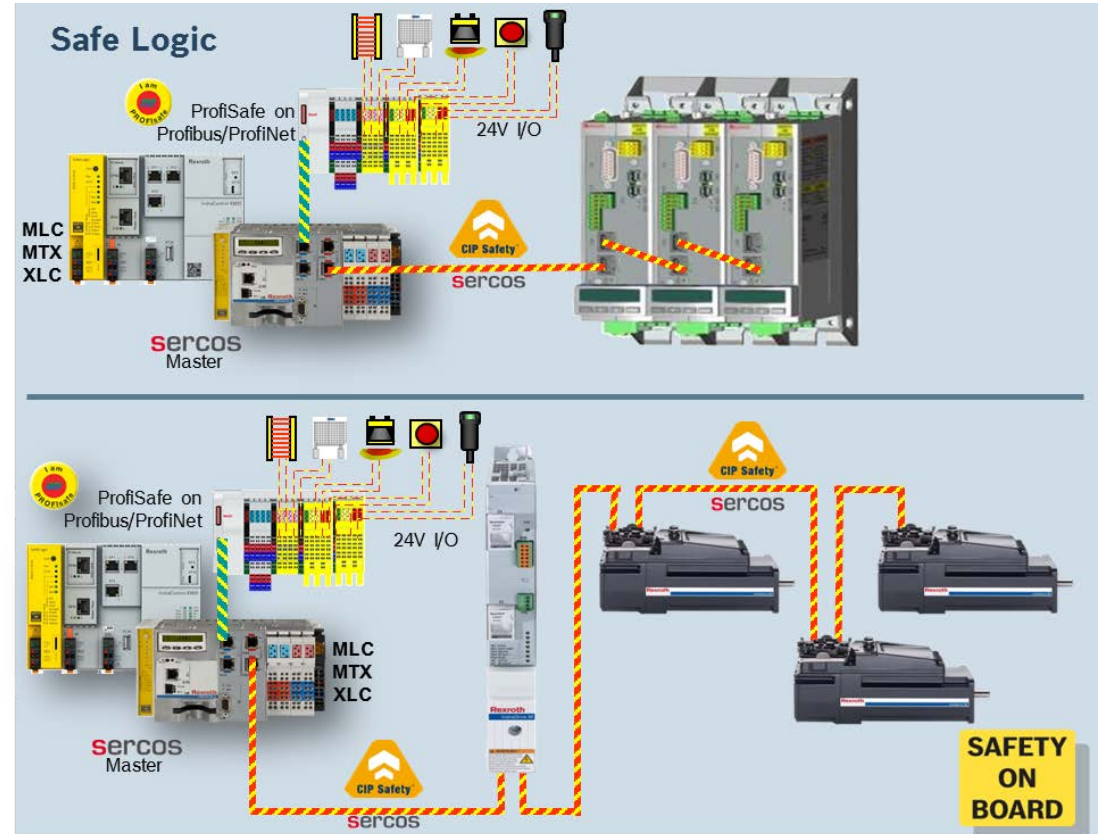
- Safety Abbreviations
- Standards Overview
  - Introduction to Standards (European Machinery Directive)
    - Current standards ISO 13849 & IEC 62061
    - ISO 13849-1 Architecture categories
    - Performance Level (PL) & Safety Integrity Level (SIL) overview\comparison
    - Legal Regulations USA (from TUV Rheinland)
- Rexroth Safety Products Overview
  - Safety Controls
    - SafeLogic compact
    - SafeLogic
  - Safety in the Drive
    - STO - Safe Torque Off
    - SMO - Safe Motion
    - Safety Functions
    - Summary





# Rexroth Safety Workshop Agenda

- SafeLogic Overview
  - Project Structure
  - Logical I/O
  - Safety Data Structure
  - Safety Libraries
- Disable-Activate Safety
  - Disable safety – enable functional commissioning, run axis (easy startup mode)
  - Active safety



# Rexroth Safety Workshop Agenda

- SafeLogic-IndraDrive-CSos
  - Single axis IndraDrive with SafeMotion and Safety PLC SafeLogic (SL)
    - Wire safety circuit (hard wired to safety I/O)
    - Configure IndraDrive using the SafeMotion commissioning tools in IndraWorks software
      - All safety parameters including CIP safety on sercos (CSos) network connection between SafeLogic and IndraDrive
      - Axis validation
  - Configure Safety PLC SafeLogic (SL) using IndraWorks SafeLogic Software
    - Configure CIP safety on sercos (CSos) network connection between SafeLogic and IndraDrive
    - Add logic in safety PLC to transfer relevant signals between SafeLogic<->IndraDrive & SafeLogic<->IndraLogic (standard PLC)
  - Manipulate wiring and use fault diagnostics to localize the wiring problem
- SafeLogic Diagnostics and Status Information

# Rexroth Safety Workshop Agenda

- Safely Monitored Deceleration
  - Safely Monitored Deceleration
    - Use the oscilloscope to setup parameters for either normal operation or troubleshooting a F7051/F8351 Safely-monitored deceleration exceeded fault
- Save/Load parameters via serial commissioning in IndraWorks software
- Machine acceptance test
- Links to Manuals



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**Unexpected  
movements**

Risk for human  
and machine

**Safety on  
Board**

Always on the  
safe way

**Thank you!**

