



Setting the Standard for Automation™

Things to consider when selecting a safety system

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ICS Triplex | Rockwell Automation


Standards
Certification
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Presenter



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- ISA Fellow, Former Section President, Division Director, Dept VP & more
- Member of the ISA 84 standard committee
- Developer and instructor of ISA courses on safety systems
- Co-author of the ISA textbook on the subject
- B.S.M.E. Illinois Institute of Technology
- Licensed Professional Engineer (PE) in Texas
- Certified Functional Safety Expert (CFSE)
- ISA 84 Expert



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SIS Selection Criteria



- When you have only two possible selections, choosing is easy (pizza or spaghetti).
- When you have dozens of selections, choosing is not as simple (a 10 page menu)
- What follows is a set of 3 dozen criteria for selecting a safety system based on:
 - Company issues
 - Hardware issues
 - Software issues

Ranking Criteria



- Most items ranked:

-2	-1	0	+1	+2
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- Criteria that are not important should be ranked 0
- Items that are more important should have a weighting (multiplication factor) applied

-6	-3	0	+3	+6
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- Scores can be totaled at the end and/or the table can be viewed for a visual comparison

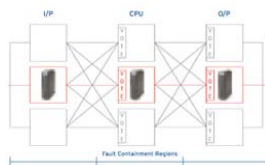
Company Issues



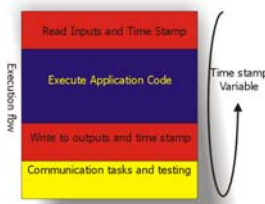
1. Knowledgeable staff
2. Your relationship with the vendor
3. Support
4. Integration by third parties



Hardware Issues



5. Fault tolerance
6. Configuration flexibility
7. Size
8. Distributiveness
9. Environmental ruggedness
10. Scan time
11. SOE resolution
12. Range of I/O modules
13. Configuration restrictions

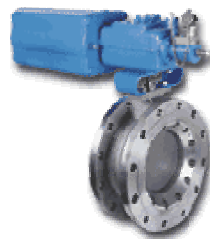


Hardware Issues



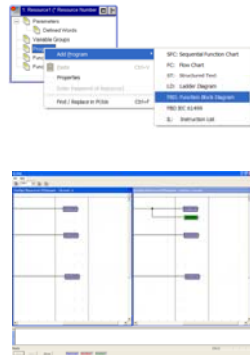
14. Module DIP switches or settings
15. Ease of changing a module
16. Time synchronization
17. Same modules for remote I/O, line monitoring
18. Certified safety communications
19. Connectivity
20. Remote I/O capabilities

Hardware Issues



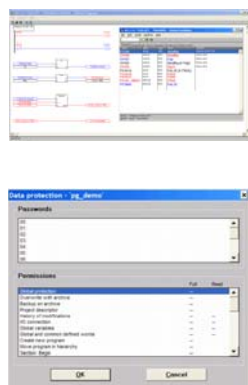
21. Automatic built-in valve testing
22. Capability of adding modules online
23. Conformal coating
24. Busses
25. Ability to detect field faults
26. Size of installed base
27. Years the product has been in service
28. Documentation

Software Issues



- 29. Programming languages
- 30. Ease of programming / configuration
- 31. Version control & comparison
- 32. Online changes (programs and firmware)
- 33. Simulation capabilities

Software Issues



- 34. Ability to see field and logic values of forced tags
- 35. Security / access control
- 36. Diagnostic reporting and asset management

Questions?



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