

SystemFacts

HIQuad systems

- SIL 3
- For highest fault-tolerance requirements
- Scalable redundancy
- Central & distributed installations
- Broad range of I/O modules

Engineering tools

HIQuad systems can be engineered using ELOP II, which include:

- Function Block Diagrams
- Sequential Function Charts

List of certificates

- IEC 61508, Part1-7:2000 (up to SIL 3)
- IEC 61511:2004
- ANSI/ISA-84.00.01-2004
- EN 50156-1:2004
- EN 12067-2:2004
- EN 298:2003
- EN 230:2005
- EN 61131-2:2003
- EN 61000-6-2:2001
- EN 61000-6-4:2001
- EN 54-2:1997/A1:2006
- NFPA 85:2007
- NFPA 86:2007
- NFPA 72:2002
- EN 60079-15:2003 ATEX (Zone 2, T4)
- ANSI/ISA-S 71.04 Class G3
- FM CLASS 1 DIV2 (FM 3600, 3611, 3810)
- Marine: Bureau Veritas
- Lloyd's Register Type Approval
- ABS Design Assessment



HIQuad systems

Proven performance

Designed to provide maximum guaranteed safety, HIQuad solutions are an ideal choice for small and mid-size safety-critical applications requiring high levels of process availability. HIQuad solutions are available with different combinations of scalable availability at the I/O and CPU level. HIQuad systems are extremely flexible and can be easily adapted to all application requirements.

SystemFacts | HIQuad

List of modules

The H41q and H51q system families use the same extensive range of I/O modules. This allows them to be individually matched to application-specific requirements, and makes upgrades, obtaining spare parts, training and documentation much easier.

HIQuad modules	SIL	COM-interfaces	Programming interfaces	Protocols	Note
CPU					
F 8650X	3	2	yes	Modbus Master & Slave, HIPRO-S/N	CPUs for H51q each with 1 MB user, operating system and data memory
F 8652X	3	2	yes	Modbus Master & Slave, HIPRO-S/N	CPUs for H41q each with 1 MB user, operating system and data memory
Communication modules					
F 8621A	3	2	yes	Modbus Slave, HIPRO-S/N	RS485 interfaces
F 8627	3*	1	-	OPC DA, safe ethernet	100 Base-T, RJ-45 interface
F 8627X	3*	1	-	OPC DA, OPC A&E, safe ethernet , ELOP II via TCP, Modbus TCP	100 Base-T, RJ-45 interface
F 8628	0	1	-	PROFIBUS DP Slave	
F 8628X	0	1	-	PROFIBUS DP Slave, ELOP II via TCP	
I/O modules	SIL	Channels	LB/LS	Ex	Note
Input modules digital					
F 3236	3	16	-	-	Contacts, 1 signal 24 VDC
F 3240	3	16	-	-	Contacts, 1 signal 110 VDC/127 VAC
F 3248	3	16	-	-	Contacts, 1 signal 48 VDC
Input modules initiators					
F 3237	3	8	yes	-	SN-, proximity switches (NAMUR), wired contacts
F 3238	3	8	yes	yes	SN-, proximity switches (NAMUR), wired contacts, 8 DU wide, ATEX
Input modules analog					
F 6217	3	8	yes	-	Current, voltage
F 6221	3	8	yes	yes	Current, voltage, ATEX
Output modules digital					
F 3325	3	6	-	yes	Ex transmitter supply module for F 6221, ATEX
F 3330	3	8	-	-	24 VDC to 0.5 A (Optional: H7014, 8 electronic fuses 12 W)
F 3331	3	8	yes	-	24 VDC to 0.5 A
F 3333	3	4	-	-	24 VDC to 2 A
F 3334	3	4	yes	-	24 VDC to 2 A
F 3335	3	4	-	yes	24 VDC, ATEX
F 3348	3	8	-	-	48 VDC to 0.5 A
F 3349	3	8	yes	-	24 VDC/48 VDC to 0.5 A
Output modules analog					
F 6705	3	2	-	-	Current
Special modules					
F 3430	3	4	-	-	Relay module, 110 VDC/250 VAC to 4 A
F 5220	3	2	yes	-	Counter module initiator, 5 DC, 24 VDC to 1 MHz, 2 integral digital outputs 24 VDC to 0.5 A
F 6220	3	8	yes	yes	Ex thermocouple module, ATEX

Specifications are subject to change.

* in conjunction with safety-related protocol

Typical applications

- Emergency Shutdown Systems (ESD)
- Fire & Gas Systems (F&G)
- High Integrity Pressure Protection Systems (HIPPS)
- Solutions for Pipeline Management & Control (PMC)
- Solutions for Burner Control Systems and Boiler Protection (BCS)

Operating conditions and CE-Mark

- IEC/EN 61131-2:2006 Programmable Controllers Part 2, Equipment requirement and tests
- IEC/EN 61000-6-2:2001 EMC, Generic Standards, Immunity for Industrial Environments
- IEC/EN 61000-6-4:2001 EMC, Generic emission standard, residential, commercial, and light industry
- EMC Directive
- Low Voltage Directive
- Machinery Directive
- ATEX Directive

Additional local certificates available

Operating principles

- De-energize to trip
- Energize to trip

Communication options

- SIL 3 via safe**ethernet** or RS485 (HIPRO-S)
- OPC DA and A&E
- Modbus TCP
- Modbus RTU Master & Slave
- PROFIBUS DP Slave
- PROFINET

Selecting HIQuad

	H41q	H51q
Total I/O modules	13	256
Total 19" I/O racks	1	16
Redundant system supplies	Yes	Yes
Communication module slots	2	10
Combined 19" rack	Yes	No
Separate I/O racks	No	Yes
Single processor rack	No	Yes

SAFETY
NONSTOP

