

On-Line Modification

On-Line Modification (OLM) is a TÜV-approved Safety Manager™ option that is supported by Safety Manager configurations with redundant Controller. It enables modification of the application software, system software and Safety Manager hardware configuration, while maintaining the system's critical control function for the operational plant. This means that the system can be upgraded without the need of a plant shutdown. During on-line modification, the changes are carried out in one Control Processor at a time. Meanwhile, the other Control Processor continues to monitor the process. The system will always perform a compatibility check across the control program in order to guarantee a safe changeover from the old control function to the new one. It will also report the numbers of the functional logic diagrams (FLDs) that have been changed, which complies with the 'verification requirements' of IEC 61508 and ANSI/ISA S84.01.

Hot-swap of Safety Manager Controller Modules

The user is able to exchange "not safety-related" Safety Manager Controller modules while the Safety Manager Controller continues operation. The communication module type USI-0001 and the battery and key switch module type BKM-0001 can be swapped on-line without stopping the affected control processor

Self Educating Safety Manager Controller Modules

If required, the user can replace the QPP-0001, QPP-0002 and / or the USI-0001 with a spare module. If the other control processor is running, the spare modules inserted will automatically be updated with all the software (including embedded software), which is already used in the running Control Processor. Note: If the controller number in the spare QPP is equal to the already running controller number, the update will not take place: reset the controller number first.

Power System

Reliability of process data depends on the reliability of **all** related hardware of the process loop, i.e. sensing device, IO wiring, IO channel hardware and the required power supply voltages. Where possible, Safety Manager™ provides the supply power to the electronics of the entire loop, including the field instrumentation. The result is a fully integrated solution for reliable (safety) data gathering and related safeguarding actions, with the following advanced features:

- Electronically short-circuit proof,
- Loop-monitoring for short-circuiting and lead breakage, and
- Checking of the operational band of analog transmitters.

Where other systems require linkage of several externally mounted parts to establish the entire data collection chain, Safety Manager solution offers the fully integrated and tested loop approach as demanded by IEC 61508 and ANSI/ISA S84.01.

Model Numbers

Identification

All non-conformal coated products have type numbers starting with 'FS-'. All conformal-coated products have type numbers starting with 'FC-'. E.g. FS-QPP-0001

In this way materials related to Safety Manager can always be recognized directly in overall Honeywell SMS product listings.

SM Controller Modules

SM Controller Modules

Description	Model Number
Quad Processor Pack (QPP)	QPP-0001
Enhanced Performance Quad Processor Pack (QPP)	QPP-0002
Universal Interface Module (USI)	USI-0001
Battery and Key-switch Module (BKM)	BKM-0001
24 Vdc to 5 Vdc DC/DC converter, 16 A	PSU-240516

Power Supply Modules

Description	Model Number
System Power supply Input 115/230VAC Output 24Vdc, 50A	FC-PSU-UNI2450
System Power supply Input 115/230VAC Output 48Vdc, 25A	FC-PSU-UNI4825
System Power supply Input 115/230VAC Output 110Vdc, 11A	FC-PSU-UNI110
24 Vdc Power Supply Unit, 45 A, input: 100-264 Vac, 230-340 Vdc	1200 S 24 P067
48 Vdc Power Supply Unit, 25 A, input: 100-264 Vac, 230-340 Vdc	1200 S 48 P067
110 Vdc Power Supply Unit, 13 A, input: 90-265Vac	SM120-13