

### Standalone safety controller



The G9SP safety controller provides all local safety based in- and outputs and controls the safety application.

- Three CPU-types to suit different applications
- Clear diagnosis and monitoring via Ethernet or serial connection
- Memory cassette for easy duplication of configuration
- Unique programming software to support easy design, verification, standardization and reuse of the program.
- Certified according to PLe (EN ISO 13849-1) and SIL 3 (IEC 61508)

### Ordering information

| Appearance                   | Appearance description   | Order code |
|------------------------------|--|------------|
| Standalone safety controller | 10 PNP safety inputs<br>4 PNP safety outputs<br>4 test outputs<br>4 PNP standard outputs | G9SP-N10S  |
|                              | 10 PNP safety inputs<br>16 PNP safety outputs<br>6 test outputs                          | G9SP-N10D  |
|                              | 20 PNP safety inputs<br>8 PNP safety outputs<br>6 test outputs                           | G9SP-N20S  |

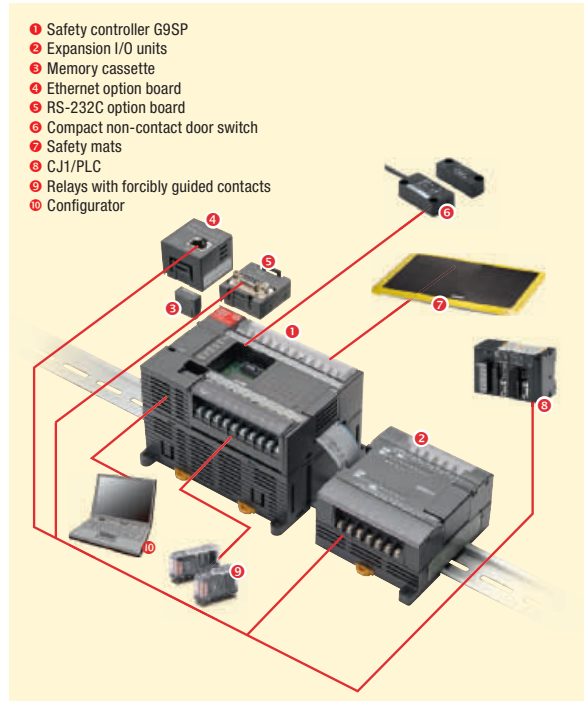
### Software

| Appearance        | Media                   | Applicable OS | Order code     |
|-------------------|-------------------------|---------------|----------------|
| G9SP configurator | Setup disk 1 license    | Windows 2000  | WS02-G9SP01-V1 |
|                   | Setup disk 10 licenses  | Windows XP    | WS02-G9SP10-V1 |
|                   | Setup disk 50 licenses  | Windows Vista | WS02-G9SP50-V1 |
|                   | Setup disk Site license | Windows 7     | WS02-G9SPXX-V1 |

### Expansion units (standard I/O)

| Appearance                       | Type     | Number of I/O |                  | Model       |
|----------------------------------|----------|---------------|------------------|-------------|
|                                  |          | In            | Out              |             |
| Expansion I/O unit               | Sinking  | 12            | 8 (solid state)  | CP1W-20EDT  |
|                                  | Sourcing | 12            | 8 (solid state)  | CP1W-20EDT1 |
|                                  | Sinking  | -             | 32 (solid state) | CP1W-32ET   |
|                                  | Sourcing | -             | 32 (solid state) | CP1W-32ET1  |
| I/O Connecting cable, 80 cm long |          |               |                  | CP1W-CN811  |

### G9SP configuration



### Option units

| Appearance   | Order code               |
|--|--------------------------|
| RS-232 option board  | CP1W-CIF01               |
| Ethernet option board (Ver. 2.0 or later)                    | CP1W-CIF41               |
| Memory cassette  | CP1W-ME05M               |
| G9SP Status Display Touchscreen with 1.8 m cable             | 82614-0010 H-T40M-P      |
| G9SP-N10S Display Kit (G9SP, Touchscreen, cable, CP1W-CIF01) | 82612-0010 G9SP-N10S-SDK |
| G9SP-N10D Display Kit (G9SP, Touchscreen, cable, CP1W-CIF01) | 82612-0020 G9SP-N10D-SDK |
| G9SP-N20S Display Kit (G9SP, Touchscreen, cable, CP1W-CIF01) | 82612-0030 G9SP-N20S-SDK |
| G9SP-N10S kit with EtherNet/IP module                        | 82608-0010 G9SP-N10S-EIP |
| G9SP-N10D kit with EtherNet/IP module                        | 82608-0020 G9SP-N10D-EIP |
| G9SP-N20S kit with EtherNet/IP module                        | 82608-0030 G9SP-N20S-EIP |

Specifications

General specifications

|                               |           |  |
|-------------------------------|-----------|--|
| Power supply voltage          |           | 20.4 to 26.4 VDC<br>(24 VDC -15% +10%) |
| Consumption current           | G9SP-N10S | 400 mA<br>(V1: 300 mA, V2: 100 mA)     |
|                               | G9SP-N10D | 500 mA<br>(V1: 300 mA, V2: 200 mA)     |
|                               | G9SP-N20S | 500 mA<br>(V1: 400 mA, V2: 100 mA)     |
| Mounting method               |           | 35-mm DIN track                        |
| Ambient operating temperature |           | 0°C +55°C                              |
| Ambient storage temperature   |           | -20°C +75°C                            |
| Degree of protection          |           | IP20 (IEC 60529)                       |

Safety input specifications

| Input type    | Sinking inputs (PNP)                           |
|---------------|--|
| ON voltage    | 11 VDC min. between each input terminal and G1 |
| OFF voltage   | 5 VDC max. between each input terminal and G1  |
| OFF current   | 1 mA max.                                      |
| Input current | 6 mA   |

Safety output specifications

| Output type          | Sourcing outputs (PNP)                         |
|----------------------|--|
| Rated output current | 0.8 A max. per output*                         |
| Residual voltage     | 1.2 V max. between each output terminal and V2 |

Test output specifications

| Output type          | Sourcing outputs (PNP)                         |
|----------------------|--|
| Rated output current | 0.3 A max. per output*                         |
| Residual voltage     | 1.2 V max. between each output terminal and V1 |

Standard output specifications (G9SP-N10S)

| Output type          | Sourcing outputs (PNP)                           |
|----------------------|--|
| ON Residual voltage  | 1.5 V max. (between each output terminal and V2) |
| Rated output current | 100 mA max.*                                     |

\*For details on the rated output current, please refer to the user manual of G9SP.

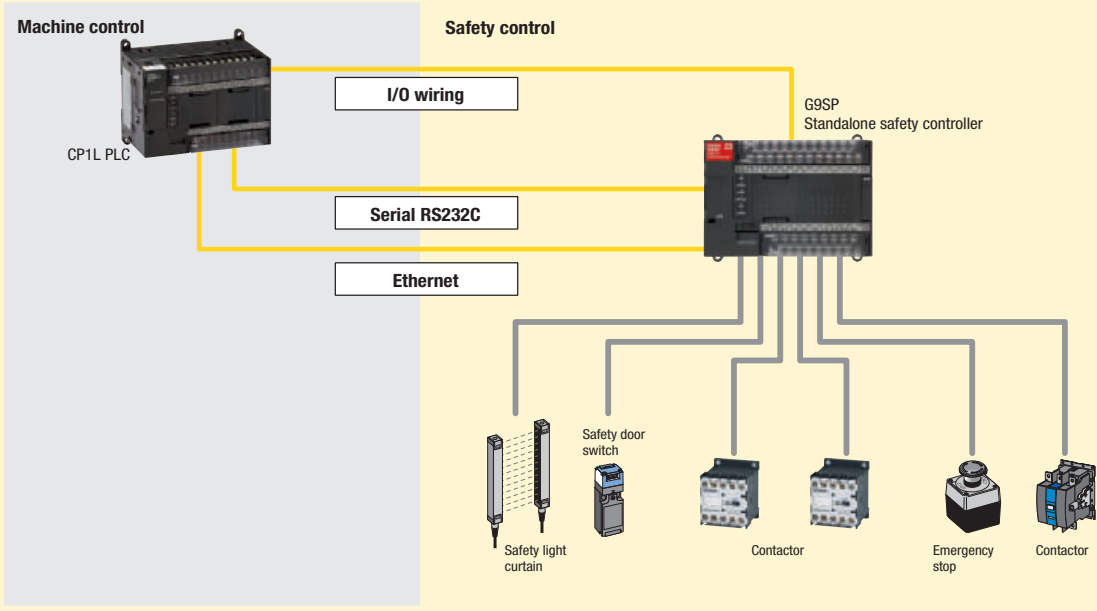
Control system integration

Safety - I/O-status becomes transparent

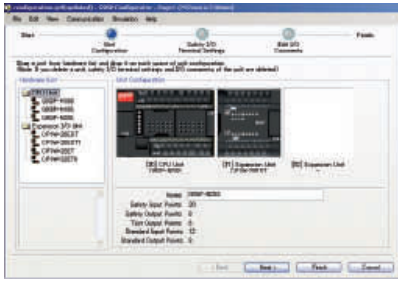
The standalone safety controller offers diagnosis information in 3 ways:

- 1) via parallel wiring
- 2) via serial RS232C interface (option)
- 3) via Ethernet interface (option).

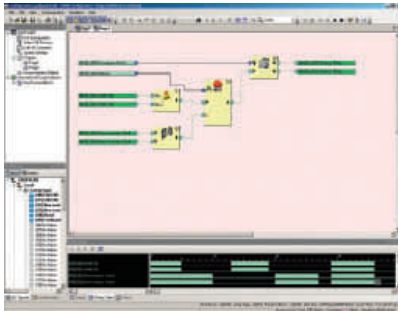
Information of all safety in- and outputs on the standard control system ensure minimum downtime of the machine.



**G9SP configuration tool**

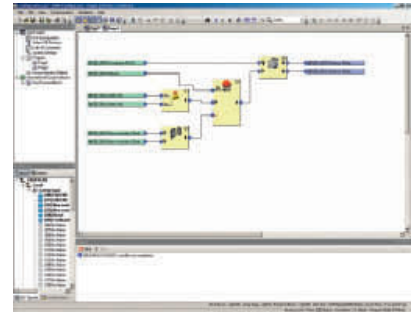


Easy setup and configuration is provided by a setup wizard supporting the hardware selection.



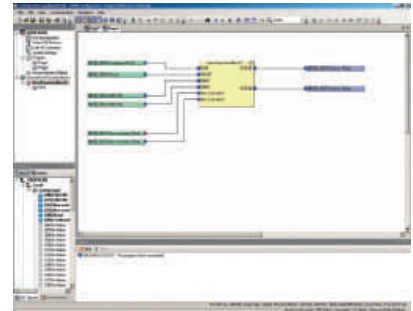
**Integrated Simulator**

All functions can be tested and simulated in the configuration tool, so there's no unnecessary additional workload for the engineer. In addition, on-line diagnosis reduces debug time to a minimum during implementation in the machine control system.



**User-defined function blocks**

Approved configuration elements such as a tested door monitoring solution can be easily stored as a user defined function block and re-used in future projects. This minimises the time it takes to create a new system configuration.



**Knowledge-building**

Existing configurations are the basis for new projects. The G9SP configuration tool supports re-use of existing and proven know-how in safety control, as well as user-defined function blocks. Which means no more repetition of effort, instead a growing library of safety solutions.