

TALOS[®]

4



The Plug & Play Safety System

TALOS - safety in any situation

For medium and larger machines you often have to consider various requirements and tasks regarding the security. Singular emergency stop switching devices usually do not suffice if several emergency stop buttons, protection gates or protection doors simultaneously have to be supervised. If a dangerous situation arises some parts of the machine have to stop immediately while others have to stop with delay, if for instance a deceleration process or a move backwards in the home position of a tool is necessary. Perhaps in a few cases of danger you have to stop only one part of the installation while the other stations can continue.

The solution for all these applications is **TALOS**, the **modular Plug & Play** Safety System.



„Real Plug & Play“

4

TALOS®

- Inputs/outputs can be extended as desired
- Self-configuration
- Safety category 4 according to EN954-1, SIL3 according to EN61508
- Monitoring of emergency stop, guard doors, safety light grids
- Non delayed and delayed safety contacts
- Monitored manual start or automatic start
- Combination/grouping without programming
- All modules pluggable vertically
- Perfect diagnostic by integrated serial interface

„Extendable as desired without programming + configuration“



Easy Plug & Play: TALOS Safety Module

TALOS is ideal for prevention of dangerous states at small, middle and large installations. Already the basic module is a complete security system with 2 dual-channel force guided input contacts and 3 force guided safety output contacts. Later on, an individual expansion is possible at anytime.

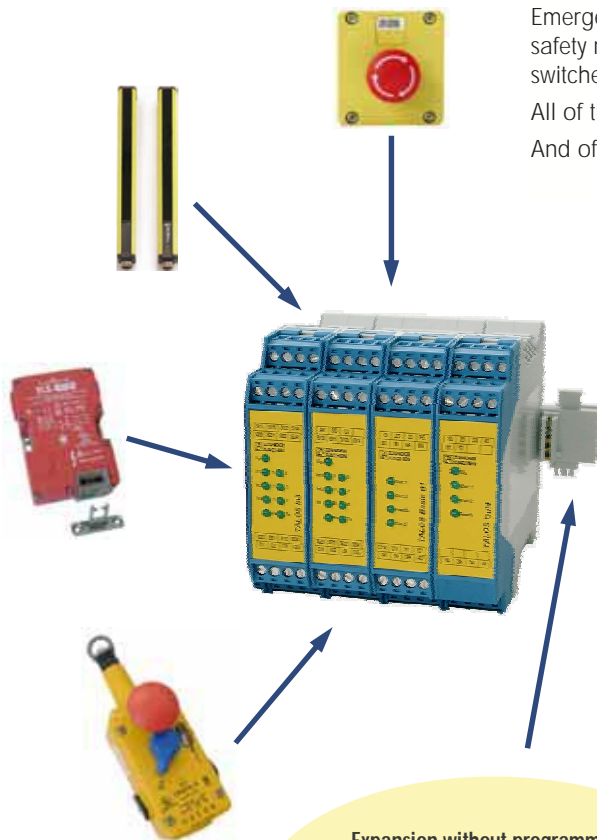
TALOS grows according to your installation: Just insert a new input or output module and the installation runs! **The system is self-configuring**, and the highest safety category 4 / SIL3 is maintained all the time. The modules communicate with each other via a bus connection in the 35mm DIN-rail. Simply by adjusting the modules - without programming - there are different functions and combinations realizable. For instance undelayed or delayed interruption or allocation of input and output modules to a group. Because the modules are pluggable vertically a perhaps necessary exchange is done in a few seconds.

In the TALOS bus integrated is a serial communication interface which offers a perfect diagnostic and fault detection. Downtime as the result of troubleshooting belongs to the past.



Each module is pluggable vertically and insertable without removing its neighbour modules. By removing one module the rest of the system is still functioning.

All safety switches are connectable to TALOS



Emergency stop button, safety switches, interlock switches, safety rope switches, safety light curtains, non contact safety switches...

All of them can be connected easily and directly to TALOS. And of course up to the highest safety category 4 / SIL3!



TALOS Know How

Expansion without programming:
If desired just plug-in additional input or output modules - that's all!
TALOS is self configuring.

Plugging instead of programming

All you have to learn:

1. Plug in input modules to the left of the TALOS basic module .

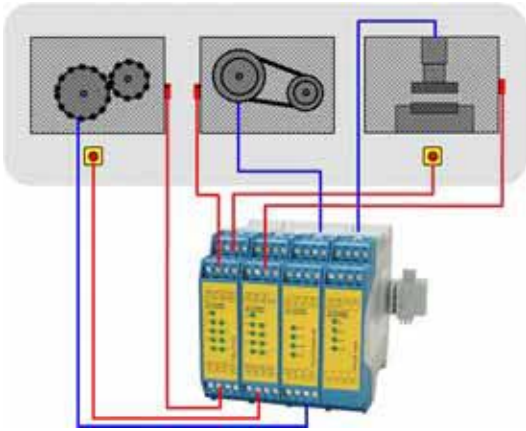


2. Plug in output modules to the right of the TALOS basic module.

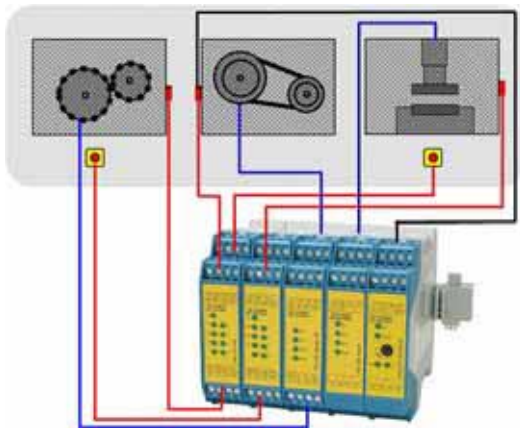
3. If desired: Specify end of the group with connection cable.

... Done !!

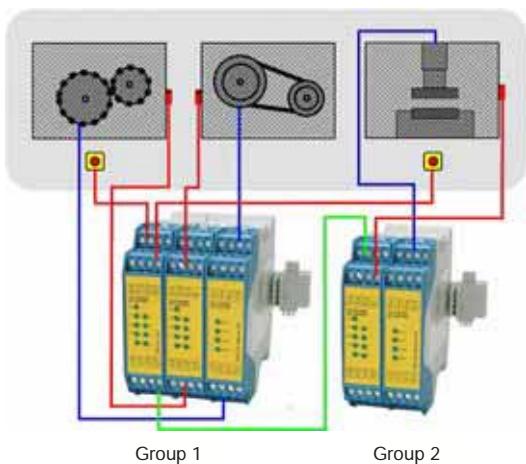
Application examples



Monitoring of 3 guard doors and 2 emergency stop switches, interruption of 3 drives.



Monitoring of 3 guard doors and 2 emergency stop switches, interruption of 3 drives, time-delayed opening of the middle guard door.



Group 1

Group 2

Monitoring of 3 guard doors and 2 emergency stop bottoms, interruption of 3 drives, grouping in 2 groups with higher-level stop switch

With TALOS an installation consisting of several guard doors, emergency stop bottoms and drives can be protected individually. The specified example shows that severe injuries caused by the moving machine parts are possible if the guard doors would be opened and the drives not reliably switched-off. And if furthermore a more frequent access to the dangerous area is necessary and a dangerous situation is not be signalled, then the complete safety installation needs to comply with the safety category 4 according to EN 954-1. With the TALOS system you fulfil these requirements without restrictions.

Without programming various functions are realizable with TALOS, e.g. if a time delayed output signal is needed then just the plugging of such a module is sufficient to realize for example the delayed opening of the guard door in connection with an interlock switch. The adjustment of the time-delay at the potentiometer is the only needed configuration.

"Grouping"

Sometimes it makes sense to shut down just one special drive instead of the whole system, when a security door is opened. The figure shows that the left and the middle guard door belongs to group 1 and the right door to group 2. Each group has its own basic module, to which the necessary input and output modules are adjoined. Opening the left or the middle guard door causes the stop of the drives of group 1, while the punch behind the right guard door will still be running. Opening the right guard door causes the stop of the punch, but accordingly both drives of the group 1 will still be running. On the other hand both emergency stop switches will stop **all** drives. That shows the green connection cable in the figure – all input modules which are to the left of the green connection also have effect on group 2.

Save with TALOS

- No programming necessary, TALOS is self-configuring
- Already the basic module is a complete security system with inputs and outputs
- Fast and inexpensive installation by consistent plug-in technology
- Low cost modules
- Simple und fast extendable
- High speed exchange of the modules
- Complete pre-wiring is possible
- Just the necessary hardware will be installed
- Perfect diagnostic by signalling contact and communication via RS485, RS232, Profibus...



Benefit from combination discount

Reduce your costs. emergency stop - switching devices and safety switches fit together optimally

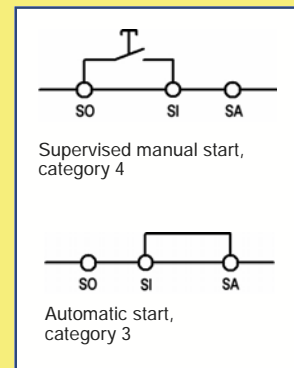
Order them together and get a combination discount.



Supervised start / automatic start

The basic module monitors the switching-on of the output modules. If the input modules give signal that all connected safety switches are closed, the output modules can be activated by pushing the start button which is connected to the basic module. This results in an error check procedure of the start button.

Alternatively the basic module can be used in the auto start mode, if for example safety doors are supervised or a two-hand input module is applied. Then the output modules will be automatically activated, as soon as all input modules are activated.



Perfect communication and diagnostic

For monitoring an installation by PC, PLC or a monitoring system, TALOS provides diagnostic information via the RS485 interface which is always integrated in the TALOS bus.

This way the switching status and also possible fault detection can be transferred to a PC or PLC and be visualized there. TALOS configures and addresses each module automatically.

Besides the always integrated RS485 interface a connection to Profibus or RS232 via TALOS-Gateway-Module is possible (in preparation).

A PC software package, which contains a complete description of the protocol and programming tools for every actual common programming language under Windows, can be downloaded for free

A communication module with web server function will be available, which enables any internet browser to control and diagnose the TALOS modules.

TALOS - perfect diagnostic - no downtime during troubleshooting.



BASIC B1

Basic module

Basic unit with 2 safety inputs, 3 safety outputs, several signal and communication functions. Extendable with all TALOS modules.



- Safety category 4
- Monitoring/Controlling of TALOS input / output modules
- 2 inputs, dual-channel
- 3 outputs
- Short circuit monitoring and earth fault monitoring
- 6 monitoring outputs
- Activation: manual or automatic
- RS485 interface

Order-No	Type
472500	TALOS B1 Inputs 2 NC
472501	TALOS B1-A Inputs NC/NO
Operating voltage	
DC 24V, ± 10%	
Inputs / outputs	
2 inputs, dual channel 3 safety outputs 6 semiconductor monitoring outputs Input for manual start Input for automatic start Input for group connection TALOS bus connection	
Switching capacity outputs	
AC: 250V, 2000VA, 8A*, AC-12 DC: 24V, 8A DC-12; 3A DC-13	
According to	
EN60204-1, EN954-1, EN61508	

In2-G

Standard input module

with 2 dual channel inputs, 2 monitoring outputs, Diagnostic-LED and TALOS bus connection. Outputs for establishing safety groups.



- 2 inputs, dual-channel NC/NC
- Safety category 4
- Short circuit monitoring and earth fault monitoring
- 2 monitoring outputs
- Diagnostic LED's
- Only in combination with basic module B1
- Output group connection

Order-No	Type
472522	TALOS In2-G
Operating voltage	
DC 24V via TALOS bus	
Inputs / outputs	
2 inputs, dual-channel 2 semiconductor monitoring outputs Output group connection TALOS bus connection	
According to	
EN60204-1, EN954-1, EN61508	

In3

Standard input module

with 3 dual channel inputs, 3 monitoring outputs and diagnostic LED.



- 3 inputs, dual-channel NC/NC or NC/NO
- Safety category 4
- Short circuit monitoring and earth fault monitoring
- 3 monitoring outputs
- Diagnostic LED's
- Only in combination with basic module B1

Order-No	Type
472511	TALOS In3 Inputs NC/NC
472523	TALOS In3-A Inputs NC/NO
Operating voltage	
DC 24V via TALOS bus	
Inputs / outputs	
3 inputs, dual-channel 3 semiconductor monitoring outputs TALOS bus connection	
According to	
EN60204-1, EN954-1, EN61508	

In3-6

Standard input modules

with 6 single-channel NC inputs, 3 monitoring outputs and diagnostic-LED.



- 6 Inputs, single-channel, NC
- Safety category 4
- earth fault monitoring
- 3 monitoring outputs
- Diagnostic LED's
- Only in combination with basic module B1

Order-No	Type
472510	TALOS In3-6
Operating voltage	
DC 24V via TALOS bus	
Inputs / outputs	
6 inputs, single-channel 3 semiconductor monitoring outputs TALOS bus connection	
According to	
EN60204-1, EN954-1, EN61508	



Any questions?



.. Together we will find a solution

Hotline +49 / 5481 / 9385-21

In3-L

Light curtain input module

With 3 dual-channel inputs for the connection of safety light grids, 3 auxiliary outputs, diagnostic LED and TALOS bus connection.



- 3 inputs, dual-channel safety light grid connection
- Safety category 4
- Earth fault monitoring
- 3 monitoring outputs
- Diagnostic LED's
- Only in combination with basic module B1

Order-No	Type
472521	TALOS In3-L
Operating voltage	
DC 24V via TALOS bus	
Inputs / outputs	
3 inputs, dual-channel 3 semiconductor monitoring outputs TALOS bus connection	
According to	
EN60204-1, EN954-1, EN61508	

Out4

Standard output module

With 4 non delayed safety contacts, safety by redundant and force-guided contacts. TALOS bus connection.



- Stop category 0
- Safety category 4
- 4 safety contacts
- 3 safety / 1 fault monitoring contact
- Only in combination with basic module B1
- Diagnostic LED

Order-No	Type
472512	TALOS Out4; 4 NO
472514	TALOS Out4-A; 3 NO/1NC auxiliary contact
Switching capacity	
AC: 250V, 2000VA, 8A*, AC-12 DC: 24V, 8A DC-12; 3A DC-13	
Inputs / outputs	
4 non delayed NO or 3 NO/1 NC TALOS bus connection	
According to	
EN60204-1, EN954-1, EN61508	

DelOut4

Timer output module

With 4 signal off-delayed safety contacts, safety by redundant and force-guided contacts. TALOS bus connection.



- Stop category 1
- Safety category 4
- 4 delayed safety contacts
- 1..30s variabel or 0,5s fixed
- 1 monitoring output
- Only in combination with basic module B1
- Diagnostic LED

Order-No	Type
472513	TALOS DelOut4 1..30s variabel
472515	TALOS DelOut4-A 0.5s fixed
Switching capacity	
AC: 250V, 2000VA, 8A*, AC-12 DC: 24V, 8A DC-12; 3A DC-13	
Inputs / outputs	
4 time delayed NO 1 semiconductor monitoring output TALOS bus connection	
According to	
EN60204-1, EN954-1, EN61508	

* maximal summary current 15A

TC

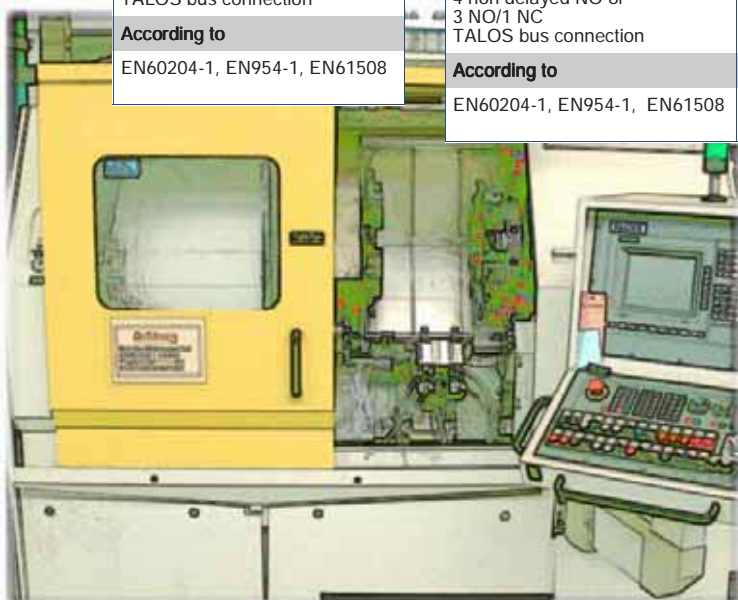
Communication module

Gateway module for the connection of TALOS to RS232, RS485 or Profibus. Transferring the current operating status, e.g. status of the safety inputs.



- Perfect diagnostic
- No downtimes
- Automatic communication with TALOS basic module, inputs, TALOS bus
- Free PC configuration and diagnostic software
- Easy connection to PC and PLC
- All common protocols

Order-No	Type
472520	TALOS TC RS232
472529	TALOS TC Profibus
Operating voltage	
DC 24V via TALOS bus	
Serial interface	
each max. 9600 baud	



TALOS is still growing:

In preparation:

2-Hand input module
Webserver communication module

4-23

R05

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