

News 2019



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Pictures are not true to scale.

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MINOS Series - Safety Logic Devices

These utmost compact safety logic devices with a width of just 6 mm have one common object:

To provide a modular and cost efficient safety solution, which has been reduced to the essential:

- High diagnostic via Status and Error LED's
- Extremely high modularity & cost efficiency
- Variants for several applications
- Up to PL e / Cat. 4 / SIL 3

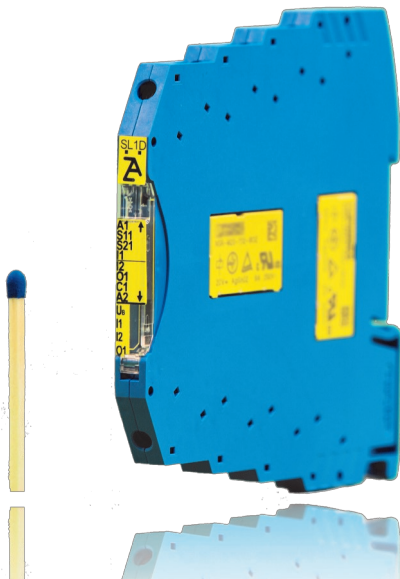
⇒ MINOS SD: with safe relay contact

⇒ MINOS SL: with safe semiconductor output



MINOS SD

Ultra Slim Safety Relay



MINOS SD - the new Safety Relays



These ultra compact safety relays with just 6.8 mm width provide the following advantages:

- 1 safe relay contact, 1 auxiliary output
- Max. switching capacity 250 V AC/DC at 6 A
- Input and start function configurable via switch
- Certified up to PL e / Cat. 4 / SIL 3
- Standards for the process industry are met

⇒ MINOS SD1E: E-STOP Relay

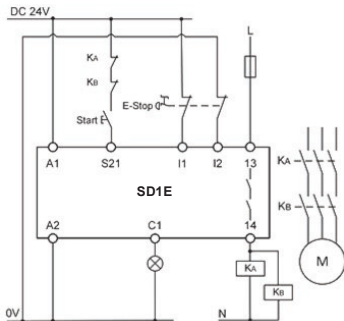
⇒ MINOS SD1K: Safe Coupling Relay



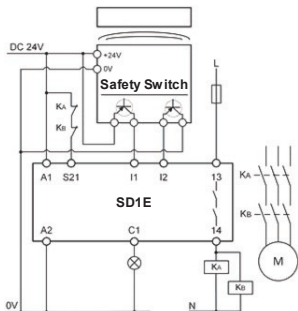
MINOS Series

Application Examples SD1E

Two-channel emergency-stop monitoring with short circuit monitoring and monitored manual start up to PL e / SIL 3.

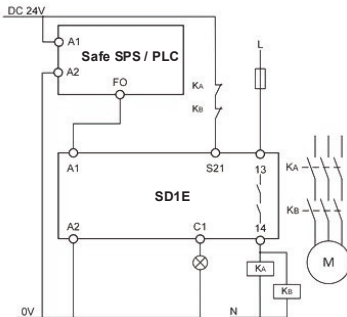


Two-channel monitoring of a non-contact safety switch with short circuit monitoring and automatic start up to PL e / SIL 3.



MINOS Series - Application Examples SD1K

SD1K as contact
reinforcement and test pulse
filtering for safe PLC output
up to PL e / SIL 3.



MINOS SL

Ultra Slim Safety Semiconductor Logic



MINOS SL - the new Safety Dimension



The utmost compact safety logic devices with a width of just 6.2 mm:

- Wearless, safe semiconductor outputs
- High diagnostic by means of 3 Status and 1 Error LEDs
- Extremely high modularity
- Variants for several applications
- Up to PL e / Cat. 4 / SIL 3
- Cost efficient



Product Safety
Functional
Safety

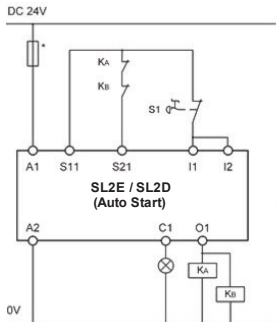
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MINOS Series

Application Examples SL

Single-channel emergency stop monitoring with automatic start

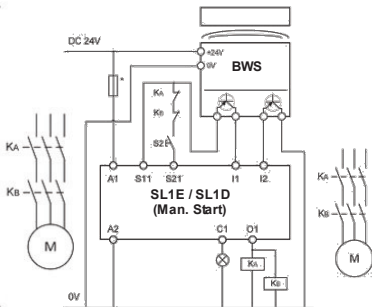
SL2E: Up to PL c / SILCL 1



Two-channel monitoring of a non-contact safety device with monitored manual start

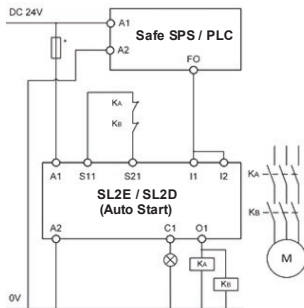
SL1E: Up to PL e / SILCL 3

SL1D: Up to PL d / SILCL 2

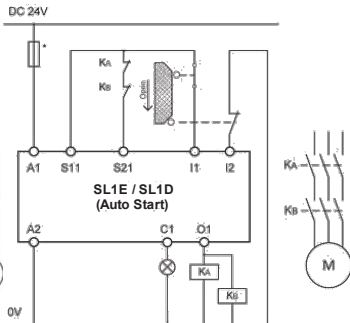


MINOS Series - Application Examples SL

Contact reinforcement and test pulse filtering for safe PLC output, automatic start
SL2E: up to PL e / SIL 3



Dual channel safety door monitoring, automatic start
SL1E: up to PL e / SIL 3
SL1E: up to PL d / SIL 2



SCB

Mini Safety Timer



SCB - the Mini Safety Timer



Configure different combinations of time-delayed and non time-delayed contacts in one device:

- Variants up to 99 s, 99 min, 99 h
- Variants with up to 3 semiconductor outputs and / or 2 relay contacts
- Time parametrization and high diagnostic with a push/rotary button and the built-in display
- Resolution 0.1 sec
- ON and OFF Delay
- Certified up to PL e / Cat. 4 / SIL 3
- Certified according to EN 50156-1, IEC 61511-1, EN 746-2



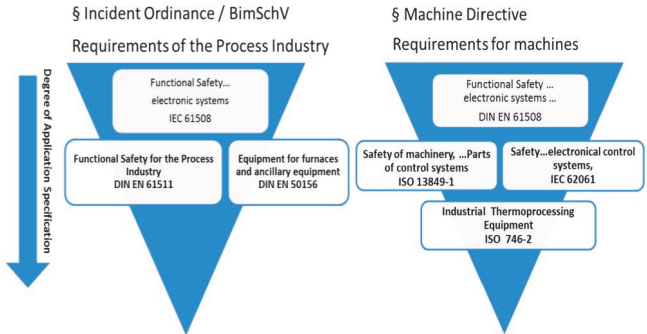
Process Technology

Safe Firing



- SR3D - Safety Relay; 3 NC / 1 NO
- SCB - Safety Timer; 99 sec, 99 min, 99 h
- TALOS - Compact Safety Controller; up to 99 h
- SK3D - Safe Coupling Relay / Extension Module
- MINOS SD - Ultra compact Safety Relay
- MINOS SL - Safe Logic Device

Relevant Standards - for Process Applications



Type-examined and TÜV certified products, for the process industry as well as the machine engineering.

Your advantage

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SR3E

Safety Relay according to
Elevator standard EN 81-20/50



SR3E - New Safety Relay for Elevators



The new safety relay SR3E meets the requirements of the new standard EN81-20:2014 and EN81-50:2014 and is therefore ideally suited for the use in elevators.

- Supply: DC 24V
- 3 safe relay contacts and 1 auxiliary contact
- Single- or dualchannel operation
- Automatic or monitored manual start
- Just 22.5 mm width
- Certified up to PL e / Cat. 4 / SIL 3
- 3 Status LEDs



ZCode-PR/-LR

Non-Contact RFID Safety Switches



RFID

ZCode-PR/-LR - RFID Safety Switch



- Highest degree of anti-tamper according to DIN EN 14119
- Series connection possible
- IP67/69K, up to +80°C
- PL e according to DIN EN 13849
- TÜV Rhld. and UL certified

Available versions:

- Uni or Master Code
- Design of housings: PR or LR
- Connection via M12 connector or 5 m cable



ZCode Stainless Steel Sensors

For the Food and Process Industry



RFID

Only ZCode-MZ

ZCode - Stainless Steel Safety Switches



- High specified housings (316) with high surface smoothness with minimal gaps and corners
- Series connection possible
- IP67/69K, up to +105°C
- PL e according to DIN EN 13849-1
- Suitable for CIP & SIP Cleaning

Available versions:

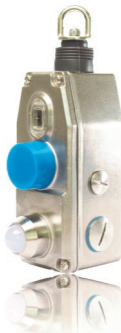
- ZCode-MZ Process Interlock
- ZCode Non-Contact Switches TCE, CCE, CCEF, MCF, MC



Product Safety
SILPL
Capability
www.tuv.com
ID: 9800000350

ZL Safety Rope Switches

Protection of extended plants



ZL - Safety Rope Switches



- Protection of extended plants and machines (e.g. conveyor belts)
- E-Stop Button can be installed additionally
- Up to 100 m rope span
- Certified according to IEC 60947, ISO 13850, ISO 13849-1
- Wide range of auxiliary material (also in Stainless Steel available)



Available versions:

- ZLM up to 50 m rope span
- ZLS up to 80 m rope span
- ZLSE, ZLMS Stainless Steel versions up to 100 m rope span



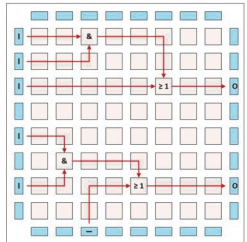
World of Automation

ZANDER High-Speed PLCs



FPGA - The heart of the ZX Series

- **Field Programmable Gate Array**
 - Programming in Hardware
 - > 200.000 logic gates
- **Advantages**
 - Cycle and jitter free
 - No sequential processing
 - 100% reproducible switching points for different machine speeds
 - Real parallel processing
- **Completely reprogrammable**



ZX20 Product Group

High-Speed PLCs



ZX20 - When High-Speed is necessary



- **Function**
 - Micro PLC for small to medium-sized systems
 - Almost Limitless configurable timers
 - Easily programmable with EX_PRESS 5
 - Almost no processing time: 1 μ s
- **Variations**
 - ZX20T: 20 digital Inputs, 16 digital Outputs
 - ZX20TP: 2x Additional PROFINET port
 - ZX20TC: 1x Additional In/Out EtherCAT port
- **The Advantages**
 - Cost efficient high-speed solution with no cycle time; Reaction time < 9 μ s
 - Integrable in existing Networks, programmable within the Network

ZX09 Product Group

More High-Speed PLCs



ZX09 and ZX09A - Even more diverse



- **Function**
 - Micro PLC for small to medium-sized systems
 - Almost limitless configurable timers
 - Easily programmable with EX_PRESS 5
- **Variations**
 - ZX09: 10 digital Inputs, 4 digital Outputs, 1x RS232 / RS485 Interface, 1x SSI Interface
 - ZX09A: same as ZX09 + 1x analog Input
- **The Advantages**
 - Cost efficient high-speed solution with no cycle time
 - Reaction time $< 3 \mu s$
 - Integrable in existing Networks, programmable within the Network

EX_PRESS 5

The Programming System

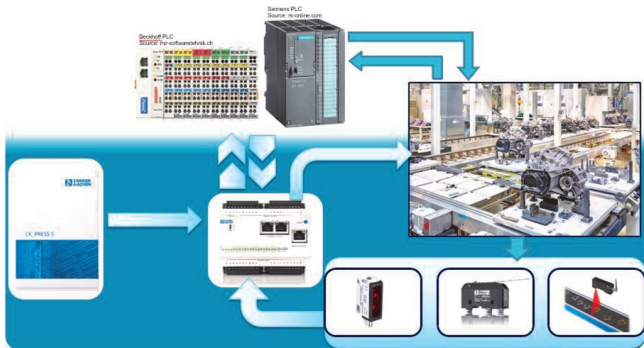




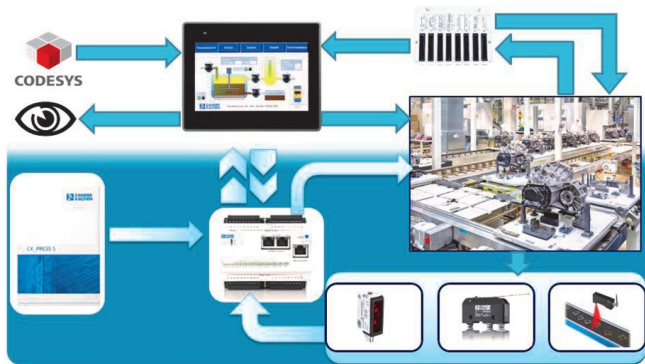
- **Function**
 - Programming of ZX20 and ZX09 PLCs
 - Programming in Structured Text (ST) according to EN 61131-3
- **The Advantages**
 - Easy to use and comfortable development system
 - Familiar Windows interface

ZX20 and ZX09 Product Group

High-Speed Applications

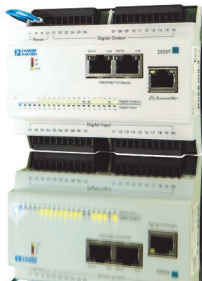
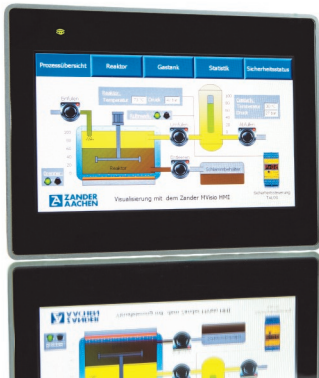


MVisio and ZX09 - Applications



MVisio Product Group

Visualization



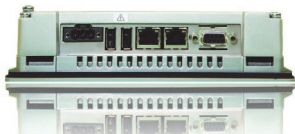


- **Function**
 - HMI PLC for small to medium-sized systems
 - 7 inch 16:9 Display (800 x 480 px)
 - 64 K colors
 - Resistive Touchscreen
- **Programmability and Visualization**
 - CODESYS
- **The Advantages**
 - Cost efficient HMI-Solution
 - Connectable with the High-Speed PCL ZX20TP
 - Allows an easy and convenient way to control and watch your processes



MVisio 7 HMI

Communication





- **Communication**
 - 2x RJ45 Ethernet ports, 10/100 Mbit with an integrated switch
 - Ethernet
 - PROFINET
 - 1x serial Interface RS 232 / RS 485 / RS422
 - 2x I/O module ports
 - 2x USB 2.0 ports
 - 1x SD-Card slot

MVisio I/O-Module

Multifunctional Plug-In Module

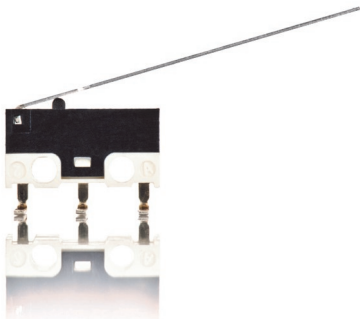




- **Function**
 - Multifunctional Plug-In I/O Module for the MVisio 7
- **Inputs and Outputs**
 - 20 digital Inputs
 - 12 digital Outputs
 - Encoder, Frequency and Counter Inputs
 - Up to 8 analog Inputs
 - 4 analog Outputs
 - Pt100 and Thermocouple Inputs
- **The Advantages**
 - Easy installation via Plug-In
 - Transforms the MVisio into a multifunctional independent HMI PLC

Micro-Switches

High degree of precision and minimum dimension



Micro-Switches - precise switching



ZANDER Micro-Switches are used wherever machine positions have to be identified or switching functions with a high electrical output are essential.

Typical applications are path sensors on machines, door contact switches, tamper switches or cam switches.



Available are various types with different

- Geometries
- Actuators
- Connectors
- Actuating forces



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