

wieland



Safety products Safety for all applications

Guiding you to safety









Fit for **safety** with **Wieland**

Safety Technology from A to Z

Wieland supports and advises you - from the planning stage right through to start-up throughout the entire life cycle of a machine or production system. The broad portfolio of safety switching devices covers all important safety functions and fulfills even complex customer requirements.

Certified Technology

It goes without saying that Wieland Electric only supplies tested and certified safety devices, i.e. all safety-related products are approved by recognized testing institutes and fulfill the current norms and standards.









The New Machine Directive

The new EU Machine Directive 2006/42/EG came into effect as of 29.12.2009, and applies to manufacturers and distributors of machines and safety components.

The functional safety of a machine can be verified by consulting European standards EN ISO 13849-1 and EN 62061. Both EU norms are harmonized under the new machine directive, whereby EN ISO 13849-1 will, following a transition phase of several years, permanently replace the current EN 954-1 norm.





EN ISO 13849-1

EN 62061

NEW!

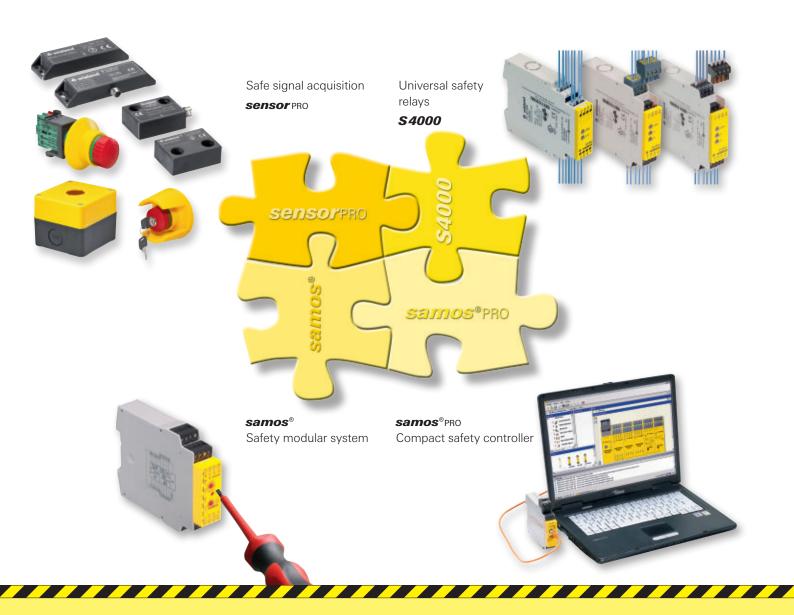
NEW!



Overview of safety technology

From the safety sensors sensor pro to the safety relay family sampset Samp

controllers **samos**® PRO, Wieland Electric offers the right product for your needs.



Overview of safety technology

			/		57					
Туре	sensor Pro SMA SNH	SNO 4003K	levices SNO 4062K/KM	SNO 4063K/KM	SNA 4043K/KM	SNA 4044K/KM	SNA 4063K/KM	SNA 4064K/KM	SNO 2004K	SNS 4084K
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Safety level of the device	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8/8 8/8 8/8	8 % ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	8/2 8/2 8/2	8/2 8/2 8/2	8/3 Ve	8 % ° % °	of ore	8/2 8/2 8/3	8/6 8/6 8/6
Function / application				TYPE4	EN 81 TYPE 4	EN 81 TYPE 4	EN 81	EN 81 TYPE 4		
Input circuits		IN	+ = + + =	+	+	+ = + + =	= + + = ++		IN	
Safe enables		3 SAFE	2 SAFE	3 3	3	SAFE	3 A	4 A	2 SAFE	AFE 4
Message outputs		1	1		1		1			2
Rated voltage		24 V AC/DC 115-120 V AC 230 V AC	24 V AC/DC	12 V DC 24 V AC/DC 115-120 V AC 230 V AC	24 V AC/DC 42-48 V AC 115-120 V AC 230 V AC	24 V AC/DC 42-48 V AC 115-120 V AC 230 V AC	24 V AC/DC 42-48 V AC 115-120 V AC 230 V AC	24 V AC/DC 42-48 V AC 115-120 V AC 230 V AC	24 V AC/DC	24 V DC
Automatic Reset		AUTO- RESET	AUTO- RESET	AUTO- RESET	AUTO- RESET	AUTO- RESET			AUTO- RESET	AUTO- RESET
Reset w/o monitoring		J. T RESET	エ RESET	ス. 「 RESET	J. S RESET	J. T RESET			J. T RESET	
Reset with monitoring		ス し RESET	ス RESET	J. RESET			J.] RESET	エ し RESET		J.] RESET
Short-circuit monitoring			CROSSMON	CROSSMON	CROSSMON	CROSSMON	CROSSMON	CROSSMON		CROSSMON
Synchro-check										
Special features			INPUT MONO- FLOP Tactile operation	INPUT MONO- FLOP Tactile operation	INPUT MONO- FLOP Tactile operation	INPUT MONO- FLOP Tactile operation	INPUT MONO- FLOP Tactile operation	INPUT MONO- FLOP Tactile operation		
Housing size		22,5 mm	22,5 mm	22,5 mm	22,5 mm	22,5 mm	22,5 mm	22,5 mm	22,5 mm	22,5 mm

								Contact			
				ith time fu		l	l	expansion			ı
SNT 4M63K	SNZ 4052K	SNV 4063KL	SNV 4063KP	SNV 4074SL	SNV 4076SL	SNV 4274SL	SNV 4074ST	SNE 4004K	SNE 4004KV	samos®	samos ®PRO
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SAFE	SAFE	SAFE	SAFE	SAFE SAFE	SAFE	SAFE SAFE	SAFE SAFE	SAFE	SAFE	SAFE 2 OFF-DELAY 2	SAFE 48
	1		·	2 2	1	2 2	2 2	3	3		
24 V AC/DC 115-120 V AC 230 V AC	24 V AC/DC 115-120 V AC 230 V AC	24 V DC	24 V DC	24 V DC 115-230 V AC	24 V DC 115-230 V AC	24 V DC 115-230 V AC	24 V DC 115-230 V AC	24 V AC/DC	24 V DC	24 V DC	24 V DC
AUTO- RESET	AUTO- RESET	AUTO- RESET	AUTO- RESET	AUTO- RESET	AUTO- RESET	AUTO- RESET	AUTO- RESET			AUTO- RESET	AUTO- RESET
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CROSSMON	CROSSMON	CROSSMON	CROSSMON	CROSSMON	CROSSMON	CROSSMON	CROSSMON			CROSSMON	CROSSMON
	0,5 s										
	EN 574-1	OFF-DELAY	ON-DELAY	OFF-DELAY	OFF-DELAY	retriggerable	retriggerable		OFF-DELAY	/O 	LYO EXPANSION
22,5 mm	22,5 mm	22,5 mm	22,5 mm	45 mm	45 mm	45 mm	45 mm	22,5 mm	22,5 mm	22,5 mm	22,5 mm

* certification in preparation

Glossary of icons



in accord. with EN 61508 and EN 62061



in accord. with EN 61508 and EN 62061



Performance Level d

in accord. with EN ISO 13849-1



Performance Level e

in accord. with EN ISO 13849-1



Safety category 4

in accord. with EN 954-1



Safety category 4 or 3 in accord. with EN 954-1 (as per enable type)



Emergency Stop monitoring



Two-hand control according to EN 574-1



Output expansion

with safe enables



Protective gate monitoring



Safety mat monitoring



Controlled Stop

Corresponding to stop category 1



Standstill monitoring



Door guard lock

time-monitored



Valve position monitoring

static



AOPD-compatible

Connection of sensors with semiconductor outputs possible. Functions also with self test or overcurrent limit for the sensors semiconductor outputs



Sensors with testing

For testable ESPE Type 2 light curtains



Elevator systems / escalators

in accord. with EN 81-1



Combustion plants

according to EN 50156-1



Hardware configurable function blocks



samos®PRO

Software programmable safety controller with programming tool samos®PLAN



Base module of the samos®-

system with 8 function modules for emergency stop, protective doors, safety mats, two-hand control, light curtain monitoring with muting function for stop categories 0 and 1, AND / OR function. See the manuals of samos® and samos® PRO systems.



Single-channel input circuit

NC contact or semiconductor



Two-channel input circuit

NC contacts or semiconductors



2x two-channel input circuits

in each case NC and NO, e.g. for two-hand control



Two-channel input circuit

NO/NC contacts or semiconductors



2x single channel input circuits

NC contacts or semiconductors



2 safety related enables

semiconductors



2 safety related enables

OFF-delayed semiconductors



2 safety related enables relay

NO contacts



4 safe enables relay OFF-delayed

NO contacts



1 safety related enable relay

ON-delayed

NO contact



1 signaling output relay

undelayed NC contact



Automatic Reset

after application of the voltage and/or after safety request



Manual Reset

in the case of a rising edge at the reset input after application of the voltage and/or safety request



Reset button monitoring

in the case of a falling edge at the reset input or dynamic monitoring after application of the voltage and/or safety request



Cross monitoring

between the input circuits



Synchrocheck

with synchronous time during the closing of the safety gate



Synchrocheck

of both channels; synchronous time 0.5 s max.



Modular extension

of inputs/outputs and function modules



Input debouncing

through monoflop function. Sensors for rapid tactile applications (safety mats in automatic mode; light curtain on feeds)



Safe OFF-delay



Safe ON-delay



Two-hand control monitoring

Corresponds to Typee III C in accord. with EN 574-1



Housing size 22.5 mm

Excerpt from the **product range** "Safe System Solutions for Automation Technology"

Basic devices

R1.188.1680.0 R1.188.1690.0 R1.188.1700.0 R1.188.1710.0 R1.188.1810.0 R1.188.1730.0 R1.188.1740.0 R1.188.1750.0 R1.188.1760.0 R1.188.1760.0 R1.188.1860.0 R1.188.1960.0 R1.188.1620.0
R1.188.1700.0 R1.188.1710.0 R1.188.1810.0 R1.188.1940.0 R1.188.1730.0 R1.188.1740.0 R1.188.1750.0 R1.188.1760.0 R1.188.1860.0 R1.188.1960.0
R1.188.1710.0 R1.188.1810.0 R1.188.1940.0 R1.188.1730.0 R1.188.1740.0 R1.188.1750.0 R1.188.1760.0 R1.188.1860.0 R1.188.1960.0
R1.188.1810.0 R1.188.1940.0 R1.188.1730.0 R1.188.1740.0 R1.188.1750.0 R1.188.1760.0 R1.188.1860.0 R1.188.1960.0
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R1.188.1950.0
R1.188.1770.0
R1.188.1780.0
R1.188.1790.0
R1.188.1800.0
R1.188.1900.0
R1.188.1970.0
R1.188.0410.3
R1.188.0400.1
R1.188.0880.1
R1.188.0890.1
R1.188.0500.1
R1.188.1990.0
R1.188.0690.2
R1.188.0700.2
R1.188.2000.0
R1.188.0710.2
R1.188.0720.2
R1.188.0960.0
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R1.188.1030.0 R1.188.1040.0
R1.188.1040.0 R1.188.1050.0
R1.188.0450.1
R1.188.0920.1
R1.188.0930.1
R1.188.0530.1
R1.188.2020.0

Basic devices with time function

Туре	Rated voltage	Terminals	Specification	Part number
SNV 4063KL	24 V DC	Screw terminals, fixed	0.15 - 3 s	R1.188.0610.0
	24 V DC	Screw terminals, fixed	1.5 - 30 s	R1.188.0630.0
SNV 4063KL-A	24 V DC	Screw terminals, pluggable	0.15 - 3 s	R1.188.0620.0
	24 V DC	Screw terminals, pluggable	1.5 - 30 s	R1.188.0640.0
SNV 4063KL-C	24 V DC	Cage clamp, pluggable	0.15 - 3 s	R1.188.2010.0
SNV 4063KP	24 V DC	Screw terminals, fixed	0.15 - 3 s	R1.188.0650.0
SNV 4063KP	24 V DC	Screw terminals, fixed	1.5 - 30 s	R1.188.0670.0
SNV 4063KP-A	24 V DC	Screw terminals, pluggable	0.15 - 3 s	R1.188.0660.0
SNV 4063KP-A	24 V DC	Screw terminals, pluggable	1.5 - 30 s	R1.188.0680.0

Basic devices with time function

Туре	Rated voltage	Terminals	Specification	Part number
SNV 4074SL	24 V DC	Screw terminals, fixed	0 - 3 s	R1.188.2120.0
SNV 4074SL	24 V DC	Screw terminals, fixed	0 - 30 s	R1.188.2150.0
SNV 4074SL	24 V DC	Screw terminals, fixed	0 - 300 s	R1.188.2180.0
SNV 4074SL	115-230 V AC, 50-60 Hz	Screw terminals, fixed	0 - 3 s	R1.188.2300.0
SNV 4074SL	115-230 V AC, 50-60 Hz	Screw terminals, fixed	0 - 30 s	R1.188.2330.0
SNV 4074SL	115-230 V AC, 50-60 Hz	Screw terminals, fixed	0 - 300 s	R1.188.2360.0
SNV 4074SL-A	24 V DC	Screw terminals, pluggable	0 - 3 s	R1.188.2130.0
SNV 4074SL-C	24 V DC	Cage clamp, pluggable	0 - 3 s	R1.188.2140.0
SNV 4074ST	115-230 V AC, 50-60 Hz	Screw terminals, fixed	0.3 - 3 s	R1.188.2730.0
SNV 4074ST	115-230 V AC, 50-60 Hz	Screw terminals, fixed	0 - 30 s	R1.188.2760.0
SNV 4074ST	115-230 V AC, 50-60 Hz	Screw terminals, fixed	0 - 300 s	R1.188.2790.0
SNV 4074ST	24 V DC	Screw terminals, fixed	0.3 - 3 s	R1.188.2550.0
SNV 4074ST	24 V DC	Screw terminals, fixed	0 - 30 s	R1.188.2580.0
SNV 4074ST	24 V DC	Screw terminals, fixed	0 - 300 s	R1.188.2610.0
SNV 4076SL	24 V DC	Screw terminals, fixed	0 - 3 s	R1.188.2030.0
SNV 4076SL	24 V DC	Screw terminals, fixed	0 - 30 s	R1.188.2060.0
SNV 4076SL	24 V DC	Screw terminals, fixed	0 - 300 s	R1.188.2090.0
SNV 4076SL	115-230 V AC, 50-60 Hz	Screw terminals, fixed	0 - 3 s	R1.188.2210.0
SNV 4076SL	115-230 V AC, 50-60 Hz	Screw terminals, fixed	0 - 30 s	R1.188.2240.0
SNV 4076SL	115-230 V AC, 50-60 Hz	Screw terminals, fixed	0 - 300 s	R1.188.2270.0
SNV 4076SL-A	24 V DC	Screw terminals, pluggable	0 - 3 s	R1.188.2040.0
SNV 4076SL-C	24 V DC	Cage clamp, pluggable	0 - 3 s	R1.188.2150.0
SNV 4274SL	AC 115-230 V 50-60 Hz	Screw terminals, fixed	0.3 - 3 s	R1.188.2640.0
SNV 4274SL	AC 115-230 V 50-60 Hz	Screw terminals, fixed	0 - 30 s	R1.188.2670.0
SNV 4274SL	AC 115-230 V 50-60 Hz	Screw terminals, fixed	0 - 300 s	R1.188.2700.0
SNV 4274SL	24 V DC	Screw terminals, fixed	0.3 - 3 s	R1.188.2460.0
SNV 4274SL	24 V DC	Screw terminals, fixed	0 - 30 s	R1.188.2490.0
SNV 4274SL	24 V DC	Screw terminals, fixed	0 - 300 s	R1.188.2520.0

Contact expansion relay

Туре	Rated voltage	Terminals	Specification	Part number
SNE 4004K	24 V AC/DC, 50-60 Hz	Screw terminals, fixed		R1.188.0520.0
SNE 4004K-A	24 V AC/DC, 50-60 Hz	Screw terminals, pluggable		R1.188.0590.0
SNE 4004K-C	24 V AC/DC, 50-60 Hz	Cage clamp, pluggable		R1.188.1980.0
SNE 4004KV	24 V DC	Screw terminals, fixed	0.5 s	R1.188.0550.0
SNE 4004KV	24 V DC	Screw terminals, fixed	1 s	R1.188.0560.0
SNE 4004KV	24 V DC	Screw terminals, fixed	2 s	R1.188.0570.0
SNE 4004KV	24 V DC	Screw terminals, fixed	3 s	R1.188.0580.0
SNE 4004KV-A	24 V DC	Screw terminals, pluggable	0.5 s	R1.188.0460.0
SNE 4004KV-A	24 V DC	Screw terminals, pluggable	1 s	R1.188.0470.0
SNE 4004KV-A	24 V DC	Screw terminals, pluggable	2 s	R1.188.0480.0
SNE 4004KV-A	24 V DC	Screw terminals, pluggable	3 s	R1.188.0490.0

Modular safety modules samos®

Туре	Rated voltage	Terminals	Specification	Part number
samos®				
SA-BM-S1-4EKL-A	24 V DC	Screw terminals, pluggable	5 s	R1.180.0010.0
SA-BM-S1-4EKL-A	24 V DC	Screw terminals, pluggable	50 s	R1.180.0020.0
SA-BM-S1-4EKL-A	24 V DC	Screw terminals, pluggable	5 min	R1.180.0030.0
SA-BM-S1-4EKL-C	24 V DC	Cage clamp, pluggable	5 s	R1.180.0360.0
SA-BM-S1-4EKL-C	24 V DC	Cage clamp, pluggable	50 s	R1.180.0370.0
SA-BM-S1-4EKL-C	24 V DC	Cage clamp, pluggable	5 min	R1.180.0380.0

Compact safety controls samos®PRO

Type	Rated voltage	Terminals	Brief description	Part number
<i>samos</i> ®PRO				
SP-SCON-P1-K	24 V DC		Controller module	R1.190.0010.0
SP-SDI084-P1-K-A	24 V DC	Screw terminals, pluggable	Input-output module	R1.190.0030.0
SP-SDI084-P1-K-C	24 V DC	Cage clamp, pluggable	Input-output module	R1.190.0040.0
SP-SDI8-P1-K-A	24 V DC	Screw terminals, pluggable	Input module	R1.190.0050.0
SP-SDI8-P1-K-C	24 V DC	Cage clamp, pluggable	Input module	R1.190.0060.0
SP-PLAN	24 V DC		Programming software + manual	R1.190.0070.0
SP-MEMORY	24 V DC		Program memory	R1.190.0080.0
SP-CABLE1	24 V DC		Connection cable, M8	R1.190.0090.0

Application manuals

safety Application manual D, BA000382, german	R1.188.3000.0
safety Application manual EN, BA000383, english	R1.188.3010.0

Replacement device types

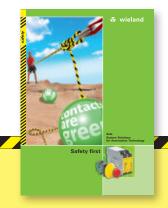
This list includes devices that are no longer available for delivery, or that should no longer be used in new systems. The part numbers of the replacement types are indicated in the list on pages 7 and 8.

Device type	Replacement type	Remark
SNO 1002-x	SNA 4043K / SNA 4063K	Note the rated voltage and terminal design
SNO 1004-x	SNA 4043K / SNA 4063K	Note the rated voltage and terminal design
SNO 1005-x	SNA 4043K / SNA 4063K	Note the rated voltage and terminal design
SNO 2001-115	SNO 4063K, 115 -120 V AC	Note the terminal design
SNO 2001-120	SNO 4063K, 115 –120 V AC	Note the terminal design
SNO 2001-17	SNO 4062K	Note the terminal design
SNO 2001-230	SNO 4063K, 230 V AC	Note the terminal design
SNO 2003-120	SNO 4063K	Note the rated voltage and terminal design
SNO 2003-17	SNO 4062K	Note the terminal design
SNO 2003-230	SNO 4063K, 230 V AC	Note the terminal design
SNO 2003-24	SNO 4062K	Note the terminal design
SNO 2003-x	SNA 4043K / SNA 4063K	Note the rated voltage and terminal design
SNO 2004-17	SNO 2004K	
SNO 2010-x	SNV 4076SL	Note the rated voltage and terminal design
SNO 2011-x	SNV 4076SL	Note the rated voltage and terminal design
SNO 3001-x	SNE 4004K / SNA 4044K	Note the rated voltage and terminal design
SNO 3002-17	SNE 4004KV	Note the terminal design and fixed time
SNO 3004-x	SNO 4003K / SNE 4004K	Note the rated voltage and terminal design
SNO 5001.1K	SNO 5002K	Note the rated voltage
SNO 5001K	SNO 5002K	Note the rated voltage
SNO 5002.1K	SNO 5002K	Note the rated voltage
SNT 1003-x	SNT 4M63K / SNA 4043K	Note the rated voltage and terminal design
SNT 4053K	SNA 4043K	Note the rated voltage, terminal design and start inhibit
SNT 4453K	SNT 4M63K	Note the rated voltage, terminal design and start inhibit
SNV 2020-17	SNV 4076SL	Note the terminal design
SNV 2021-17	SNV 4074SL	Note the rated voltage and terminal design
SNV 2022-17	SNV 4074SL	Note the rated voltage and terminal design
SNZ 5052K	SNZ 4052K	Note the rated voltage and terminal design

NOTICE:

Technical data, terminal name, terminal location and housings of the replacement types may be different. Please consult the data sheets!

For further products and technical information go to www.wieland-electric.com at our e-catalog or contact our hotline +49 (951) 93 24-9 99.



More Information is available in the brochure "Safety first"

Order no: 0152.0



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Industrial technology

Solutions for the control cabinet

- DIN rail terminal blocks
 - Screw, spring clamp or IDC connection technology
 - Wire cross sections up to 240 mm²
 - Numerous special functions
 - Software solutions interfacing to CAE systems
- Safety
 - Safety sensors
 - Safety relays
 - Modular safety systems with fieldbus link
- PLC and fieldbus components
 - Standard applications in IP 20
 - Increased environmental conditions with railroad and ship approvals
- Interface
 - Coupling relays, semiconductor switches
 - Measuring and monitoring relays
 - Timer and switching relays
 - Analog modules
 - Passive interfaces
 - Power supply units
 - Overvoltage protection

Solutions for field applications

- Remote automation technology
 - Power distribution
 - Fieldbus interfaces and motor starters
- Connectors for industrial applications
 - Square and round connectors
 - Aluminum or plastic housings
 - Degree of protection up to IP 68
 - Current-carrying capacity up to 100 A
 - Connectors for hazardous areas
 - Modular, application specific technology

PC board terminals and connectors

- Screw or spring clamp connection technology
- Spacings: 3.5 mm to 10.16 mm
- Reflow or wave soldering process

Building and installation technology

- Building installation systems
 - Main power supply connectors IP 20/IP 65 ... IP 68
 - Bus connectors
 - Combined connectors
 - Low-voltage connectors
 - Power distribution system with flat cables
 - Distribution systems
 - Bus systems in KNX, LON and radio technology
 - DIN rail terminal blocks for electrical installations
 - Overvoltage protection

contacts are green.

Product Range

0152.5 S 06/10