

Monitoring technology comes from TELE



TELE is a pioneer in the field of monitoring technology and has had a significant impact on technology trends in this area. With more than 40 years' experience of development, production, marketing and core competence in the monitoring technology segment, TELE occupies a leading position in the international marketplace. Technical expertise, tested quality and optimized processes as well as an efficient organization make TELE a strong partner in all aspects of monitoring technology and automation components.

At TELE headquarters in Vienna, products are manufactured to international standards and to the latest state of the art for worldwide application at the highest quality level. TELE volume products and customized solutions are used in all branches of industry to monitor and control a variety of processes and thereby assure and enhance the availability and reliability of plant, buildings and machinery.

TELE was founded in Vienna as a family business in 1963. Today the TELE group comprises the development and production divisions in Austria together with branches in Germany and Great Britain as well as a dense network of more than 50 trading partners throughout the world. Long-standing customers from all areas of industry form the basis of this success, while the company's international orientation is opening up new markets all the time.



SuperSafe S²

SuperSafe: Safety for man and machine

The safety relays in the new S² range perform almost any safety application a modern safety design may call for. The consistent multifunctional and modular development of **TELE** safety relays means each individual device, individually and in combination, can be used for multiple applications.

The extremely flexible safety inlets make it possible to use the most diverse sensors. Conventional guard switch contacts such as for example emergency stop switches can be analyzed in the same way as modern semiconductor outputs which provide light gates. Test signals from the associated sensor are neither influenced by this nor incorrectly interpreted thus ensuring error free operation.

Inside the extremely compact casing made from environmentally friendly plastics, a range of safety relays with a width of a mere 22.5 mm was developed to the highest technical standards which, combined with the small number of devices required, offers an optimal total solution – economically as well – for virtually all your control cabinet and engineering safety requirements.

The New Generation: Comprehensive, Flexible, Modular

The multifunctional concept means that each device in the new S² range is able to perform a multitude of tasks. For example, the S2NT030 is capable of analyzing not only equivalent safety signals from emergency stop control switches or protective wire grids but also antivalent signals e.g. from safety valves. Many devices are capable of operating the safety channels over either **one or two channels** depending on the degree of safety required by the guard. To ensure that a **protective wire grid** is closed sufficiently quickly, many devices are also capable of monitoring the simultaneity of contact actuation. To increase the safety level to safety **category 4**, all 2 channel devices possess cross **circuit detection**.

Emergency stop functions, with and without crossfault monitoring
Safety gate applications
Controlled stop of movements
Light curtain applications
Position control
Delayed unlocking
Valve position monitoring
Applications for intermittent edges and switching pads
Two-hand applications according to DIN EN 574 Typ IIIC, IEC 204 - 1 and EN 954 – 1
Automatically or manual Reset with / without control, start- and restart inhibition

The S2NGS021 also uses this function to analyze cross circuit creating pressure sensitive mats without monitoring resistance. To reduce the sensitivity of the safety circuit to very rapid switching involving the connected safety signal emitters and thereby to prevent fluttering of the output relay, this device was fitted with **input debouncing**. This suppresses the bouncing of the pressure sensitive mat and thereby ensures error free operation.

Delayed and undelayed enabler combinations

When emergency stop occurs the S2NGR120 allows controlled stopping of a drive through the delay-release enabling current path. After stopping the machine part is released safely.



Safety gate and emergency stop

The S2NT030 device is a two-channel safety switching device with self-monitoring on each ON-OFF cycle. It is intended for monitoring connected switching elements on separating safety devices and generating a safety-oriented output signal (enable). Depending on the design, separating safety devices may include protective screens, safety doors, enclosures, covers, screens, etc.

Two-hand analysis

is part of the extended functionality of TELE safety relays. The S2Z021 was specially developed to analyze signals from two-hand switches, commonly used on presses.

This device as well is cleared for use up to safety level 4 and as such is always the correct solution when you need to plan or upgrade machinery two-hand relays to EN 574 Type III C standards.

Contact extensions

If at any time the contacts of the S² basic device being used should prove inadequate for ensuring all the necessary enabling or feedback reports to and from the machine, as of now, TELE is offering contact expansion units. The S2K043 offers 4 additional enabling electrical circuits, 2 reporting electrical circuits and 1 feedback electrical circuit for safety locking of the basic device.

If delayed contacts are to be added to a basic device without delay or if the number of delayed contacts is increased, this can be achieved using the S2KR403. It provides 4 delayed enabling and 3 delayed reporting or feedback circuits which decay after a preset period of 3 s when the security switch is actuated on the basic device.

The **ZK31X45** is used for monitoring control units in emergency stop devices and guards. It is a dual-channel safety switching device for emergency stop equipment conforming to EN 60204-1, with self-monitoring on each ON-OFF cycle and positively driven relays.

The devices of the new **SuperSafe S²**-Series are designed for worldwide use, fulfill the directives of the BG (Berufsgenossenschaft), and are accredited to UL (Underwriters Listing Laboratories) and CSA (Canadian Standards Association). They comply to the newest requirements for functional standards as IEC 61508, DIN EN 62061 und EN ISO 13849-1.

Article number	Maximum Achievable Safety-Category	Stop-Category	Applications									Reset (equipment start)			Input Circuit				Output Circuit			Supply Voltage			
			Emergency Stop	Safety Gate	Safety Mat	OSSD (light grill)	Monitoring of Valve-State	Two-Channel Activation	Contact Expansion Without Delay	Contact Expansion With Delay	Automatic Start	Start with Reset Monitoring	Start without Reset Monitoring	Synchronous Time Check Selectable	Cross Monitoring	Actuation via Semic. Output (OSSD) poss.	Input Debouncing	Delayed Enabling Current Path	Enabling current Path without Delay	Signalling current Paths	24VDC	24VAC	115-120V AC	230V AC	
S2NG021	588814	4	0	■	■		■						■	■	■	■	■	0	2	1	■	■			
S2NGS021	588815	4	0	■	■	■	■						■	■	■	■	■	0	2	1	■	■			
S2NGR120	588816	4/3	0/1	■	■		■						■	■	■			1	2	0	■	■			
S2NT030	588826	4	0	■	■		■	■					■	■	■			0	3	0	■	■	o.req.	o.req.	
S2NT031	588811	2	0	■	■								■	■	■			0	3	1	■	■	o.req.	o.req.	
S2LST030	588823	4	0	■			■						■	■	■			0	3	0	■	■	o.req.	o.req.	
S2Z021	588818	4	0						■				■	■				0	2	1	■	■	o.req.	o.req.	
S2K043	588821	4	0							■								0	4	3	■	■			
S2KR403	588822	4	1								■							4	0	3	■				
ZK31X45 24VDC	588000	4	0	■	■								■	■	■			0	3	1	■				
ZK31X45 230VAC	588033	4	0	■	■	■							■	■	■			0	3	1				■	