SMX 10P/ 11P – Programmable safety in accordance with DIN EN 81-20/50:2014

Designation	SMX 10P	SMX 11P
		
EU type approval	Use as PESSRAL in accordance with DIN EN 81-20/50:2014	
MAx. SIL/PL	SIL 3/PL e	
Max. number of extension modules	2	
Interface for extension modules	CAN/Ethernet	
Safe digital In	14	14
Safe digital Out	2	2
Safe relays outputs	1	1
Standard signal outputs	2	2
Pulse outputs	2	2
Type of connectors I/O	Clamp-type terminals	
Axis monitoring	-	1
Encoder Interface	-	1 Incr. TTL SIN/COS SSI
Power consumption	2,4 W	2,4 W
Supply voltage	24 VDC/2A	
Ratings digital In	24 VDC; 20mA, typ1 acc. to EN 61131-2	
Ratings digital Out	24 VDC; 250 mA	
Ratings relays	24 VDC/2A 230 VAC/2A	
Pulse outputs	Max. 250 mA	
Data Interface	56 bit logic and 64 bit process data free configurable CAN 2.0/CANopen/Real Time Ethernet (UDP)	
Dimensions (HxDxW [mm])	100x115x45	100x115x45

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BBH PRODUCTS

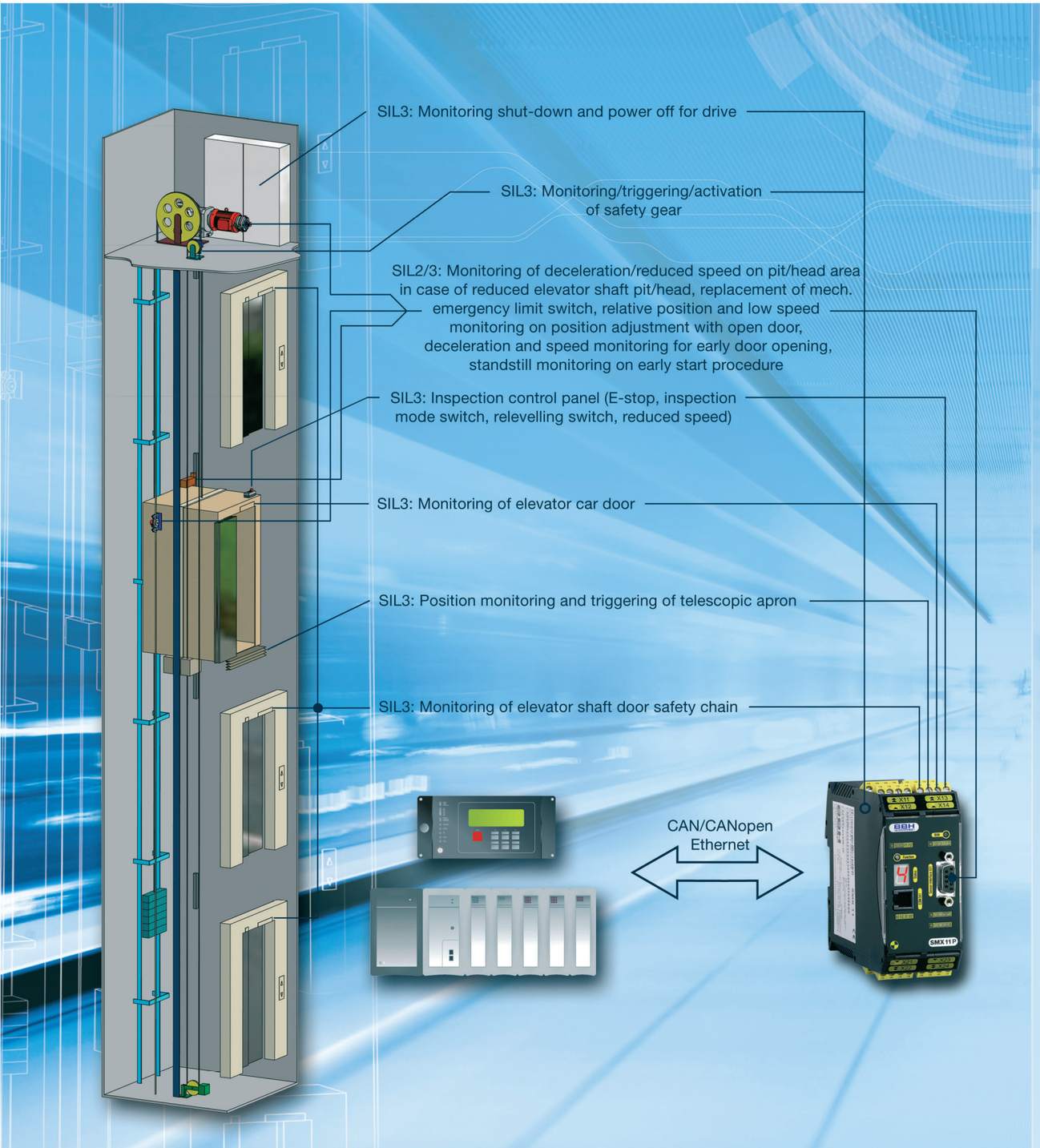
SMX PESSRAL

Advanced Safety for Advanced Elevator Technology !

Safety functions

With the compact, programmable safety control SMX 10P/11P the stringent requirements of DIN EN 80-20/50:2014 can be easily and flexibly implemented.
The safety devices SMX 10P/11P are EU type certified as PESSRAL component for apllications up to SIL3. The integrated Safe logic control in conection with a vast number of safety functions for speed, ramp and position monitoring delivers you any required margin for specific solution approaches and the use of well established components. With the simple to configure data interface you will quickly and reliably succeed in adapting to your elevator control.

- EU type certified, suitable for the use as PESSRAL in accordance with DIN EN 81-20/50:2014, in safety functions up to SIL3
- 14 Safe inputs, 2 signal outputs, 3 safe output channels, 1 of these a Safe relay output
- Safe logic control and extensive safety functions for speed, ramp and position monitoring
- Flexible interface for speed and position encoders
- Configurable data interface for communication with standard elevator control via CAN/CANopen/Real-Time Ethernet
- Optional decentralized extension/arangement via CAN or Ethernet connection



Function	Component		Data interface for elevator control		Description
Monitoring, shut-down/ power-off for drive	STO+mains contactor readback contact STO+motor contactor	0 I	Start travel ready for travel	I 0	Control of mains contactor and STO with signal „Start travel“ of the elevator control, monitoring of correct switching
Drive stop with ramp monitoring	Motor and/or position encoder Enable door opening Motor brake and remote tripping of max. speed limiter/elevator shaft brake in case of failure	0	Drive stop inactive/active stop monitoring inactive door opening enable	0 0	Tripping of controlled stop of drive and setting of service brake at V=0, monitoring of stop ramp and speed limit for early door opening, tripping of elevator shaft brake in case of violation of ramp monitoring/malfunction of early door opening function
Monitoring of closing position/ locking of elevator shaft doors	Monitoring contact chain of elevator shaft doors Motor and/or position encoder (optional)	I I	Destination unlocking zone active, elevator car doors open/locked	I 0	Monitoring of door contact chain, muting of monitoring at destination unlocking zone active AND V<0,1 m/s or activated ramp monitoring, tripping of drive stop with ramp monitoring in case of detected malfunction
Monitoring of closing position/ locking of car doors	Monitoring contacts car doors Motor and/or position encoder (optional)	I I	Destination unlocking zone active, elevator car doors open/locked	I 0	As above
Monitoring of repositioning function with door open	Monitoring contacts car shaft doors Motor and/or position encoder (optional)	I I	Repositioning enable	0	Repositioning monitoring with active relative position limitation and reduced speed limit, tripping of drive stop with ramp monitoring in case of detected malfunction
Monitoring, emergency unlocking shaft/ car door	Monitoring contact chain emergency unlocking, Tripping quick-stop and telescopic apron	I 0	Door emergency lock open pit zone	0 I	Monitoring of door emergency unlocking chain, tripping of drive stop with ramp monitoring and telescopic apron in case of door emergency unlocking
Monitoring of maintenance and emergency doors, idler pulley, etc., E-stops on machine room/ elevator shaft pit etc.	Monitoring of safety contact chain	I	External safety loop open	0	Tripping of drive stop with ramp monitoring and telescopic apron in case of external safety loop open
Monitoring of max. speed limiter reset	Contact switch on max. speed limiter, reset	I	Contact switch reset active	0	Monitoring of contact switch tripping of drive stop with ramp monitoring if the monitoring loop responds
Monitoring and control of inspection control panel functions	E-stop, inspection mode and revelling switch on inspection control panel	I	E-stop inspection mode relevelling switch	0 0 0	Control status transfer to standard control, E-stop (ramp+ cut off) monitoring, limited speed monitoring, direction monitoring
Monitoring of max. speed	Speed sensor	I	Monitoring of max. speed active	0	Monitoring of max. speed (accuracy >5%), monitored quick stop (ramp+ cut off) in case of overspeed
Position monitoring telescopic apron	Position switch apron, control of release	I	Telescopic apron inactive	0	Monitoring of status telescopic apron, monitored quick-stop if malfunction detected, control of apron
Emergency limit switch top/ and bottom	Position sensor Speed sensor	I I	emergency limit switch active	0	Monitoring of maximum position top/bottom with position/speed limit curve, tripping of drive stop with ramp monitoring in case of response
Reduced speed in elevator shaft pit	Position sensor Speed sensor	I I	Reduced pit speed malfunction	0	Monitoring of deceleration/reduced speed on pit/ head area in case of reduced elevator shaft pit/head, monitored quick-stop in case of malfunction