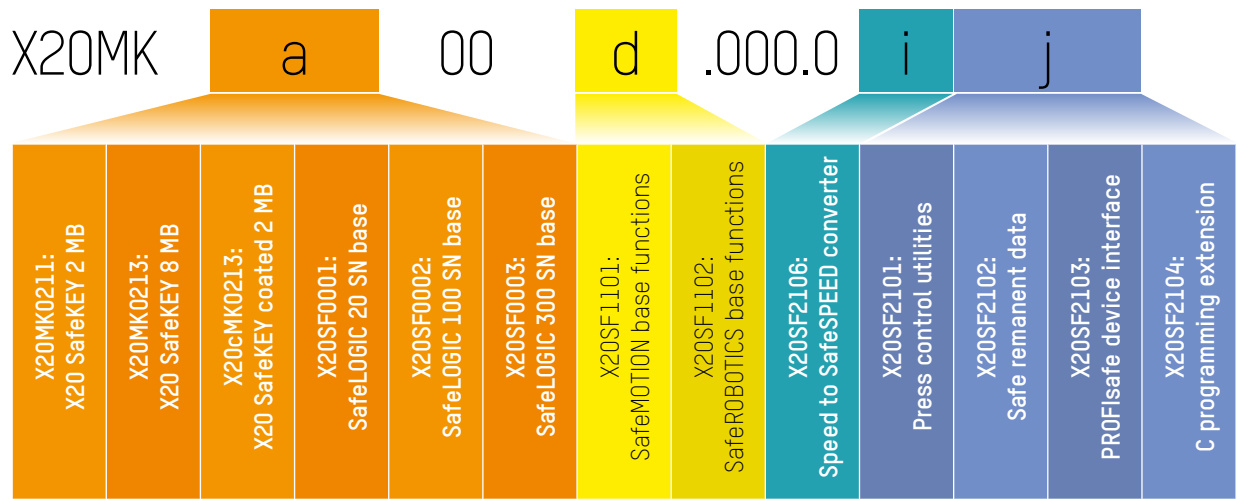


Integrated safety technology System overview

PERFECTION IN AUTOMATION
A MEMBER OF THE ABB GROUP



Safety Technology Guarding



	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	X	Y	Z
0																			
1	√																		
2		√																	
3	√		√																
4		√			√														
5		√				√													
6																			
7																			
8																			√
9																			√
A																			√
B																			√
C																			√
D																			√
E																			√
F																			√
X																			√
Y																			√
Z																			√

SafeMOTION product	Safety Technolog Guarding	AR Technology Guarding	Scope of license
ACOPOSmulti SafeMOTION	X20SF1101	not required	1x per SafeLOGIC
ACOPOSmotor SafeMOTION	X20SF1101	not required	1x per SafeLOGIC
3rd party openSAFETY drives	X20SF1101	not required	1x per SafeLOGIC
ACOPOS P3 SafeMOTION	not required	1TGACPSMCO.00-01	1 x per Axes: SOS, SS2, SLA, SLS, SMS
	not required	1TGACPSMCO.00-01	1 x per Axes: Safe Homing, SLP, SMP, RSP
	not required	1TGACPSMCO.00-01	1 x per Axes: SDI, SLI, SBT
	not required	1TGACPO000.00-99	1 x per Axes: ACOPOS P3 FLAT license

5 good reasons for integrated safety from B&R



Maximum productivity

To avoid the painfully high cost of stopping production, machinery needs to have availability designed in from the start. Intelligent safety technology plays a critical role in preventing downtime and production outages.

Custom configurations

The general approach taken with series-produced machinery is to equip it with a suite of customization options. This approach places special demands on the safety technology that can't be met by traditional safety solutions. Smart Safe Reaction from B&R makes machine options manageable without compromising the safety level.

Line integration

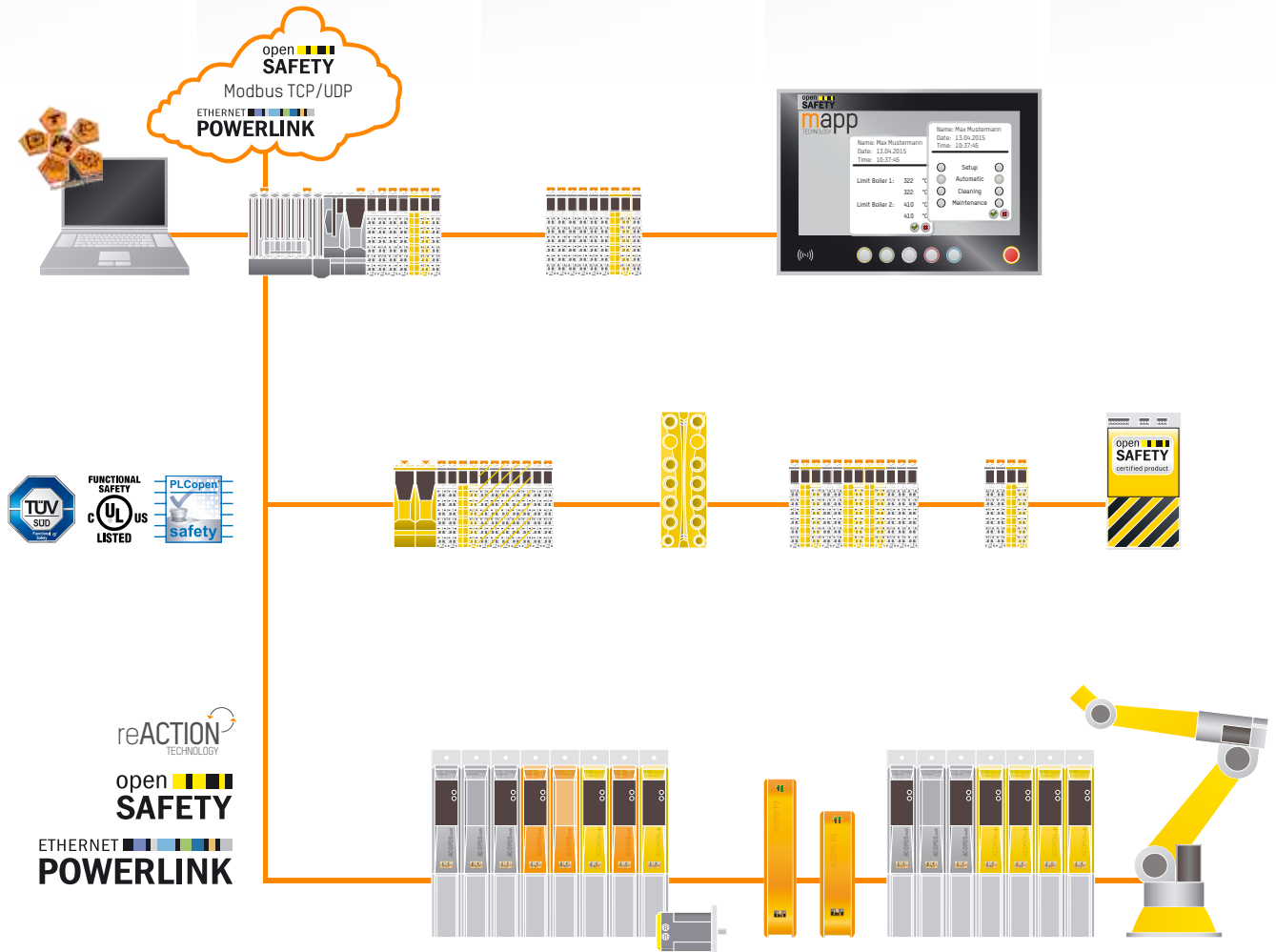
In a production line, machines from various vendors must interact. With integrated, network-based safety technology from B&R, the entire line is able to react to safety events in a coordinated way. Safe communication is provided by the bus-independent safety standard openSAFETY.

Global installations

Network-based safety solutions from B&R are designed to be used anywhere in the world. Integrated diagnostic functions turn any smartphone into a highly effective troubleshooting instrument able to perform rapid and precisely targeted remote service. Across global markets, international certifications guarantee smooth implementation.

Ultimate scalability

SafeLOGIC and SafeLOGIC-X controllers give B&R safety technology the scalability it takes to create a cost-optimized solution for any application. Hardware components and software functions remain fully compatible, regardless of which safety controller is selected.





SafeLOGIC

Max. no. of supported safety nodes	
openSAFETY domain gateway instances	
Max. payload data size on network	
Network interface	
Machine option	SafeB00L
	Safe INT
	Safe UINT
	SafeDINT
	SafeUDINT
CPU / SafeLOGIC communication area	
Shortest task class cycle time	
Interface modules	
Onboard SafeI/O	
Protection - IP 20	
Protection - IP 20 coated	

	X20SL8100	X20SL8101	X20SL8110	X20SLX210	X20SLX402	X20SLX410	X20SLX806	X20SLX811
Max. no. of supported safety nodes	300	300	300	10	10	10	10	10
openSAFETY domain gateway instances	20	20	20	-	-	-	-	-
Max. payload data size on network	1x 1490 bytes	4x 1490 bytes	4x 1490 bytes	300 bytes	300 bytes	300 bytes	300 bytes	300 bytes
Network interface	ETHERNET POWERLINK	ETHERNET POWERLINK	ETHERNET POWERLINK	X2X Link	X2X Link	X2X Link	X2X Link	X2X Link
Machine option: SafeB00L	512	512	512	64	64	64	64	64
Machine option: Safe INT	64	64	64	-	-	-	-	-
Machine option: Safe UINT	64	64	64	-	-	-	-	-
Machine option: SafeDINT	64	64	64	-	-	-	-	-
Machine option: SafeUDINT	64	64	64	-	-	-	-	-
CPU / SafeLOGIC communication area	128 bytes	128 bytes	128 bytes	8 bytes	8 bytes	8 bytes	8 bytes	8 bytes
Shortest task class cycle time	1 ms	1 ms	1 ms	2 ms	2 ms	2 ms	2 ms	2 ms
Interface modules	-	-	X20IF10E3-1	-	-	-	-	-
Onboard SafeI/O	-	-	-	√	√	√	√	√
Protection - IP 20	√	√	√	√	√	√	√	√
Protection - IP 20 coated	√	√	-	-	-	√	-	-

Digital SafeI/O

Safe dig. input channels
Pulse output channels
Safe dig. output channels HS/HS type
Safe dig. output channels HS/LS type
Safe dig. output relais channels
Door lock interface (2DE, 2D0, 2A device supply)
SafeLOGIC-X technology
reACTION technology for safety
IP 20 protection
IP67 protection
IP 20 coated protection
Option for HMI interfaces

	X20SI2100	X20SI4100	X20SI8110	X20SI9100	X20SP1130	X20SO2110
Safe dig. input channels	2	4	8	20	-	-
Pulse output channels	2	4	4	4	-	-
Safe dig. output channels HS/HS type	-	-	-	-	1 x 10 A	-
Safe dig. output channels HS/LS type	-	-	-	-	-	2 x 0.5 A
Safe dig. output relais channels	-	-	-	-	-	-
Door lock interface (2DE, 2D0, 2A device supply)	-	-	-	-	-	-
SafeLOGIC-X technology	-	-	-	-	-	-
reACTION technology for safety	-	-	-	-	-	-
IP 20 protection	√	√	√	√	√	√
IP67 protection	-	-	-	-	-	-
IP 20 coated protection	-	√	-	√	-	-
Option for HMI interfaces	-	-	-	-	-	-

ACOPOSmulti

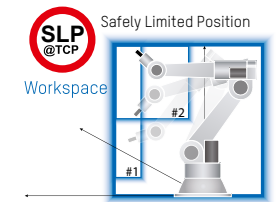
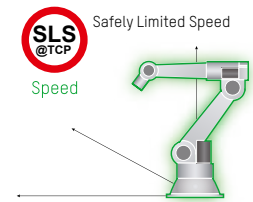
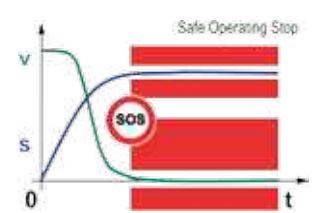
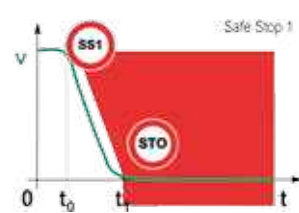
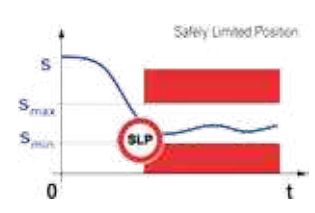
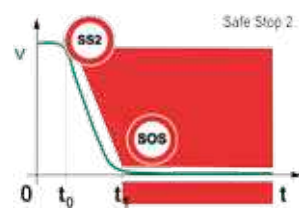
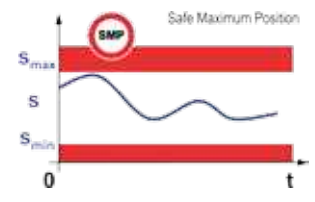
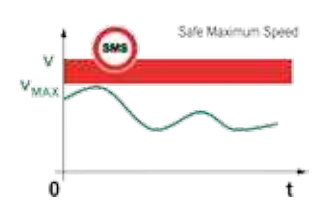
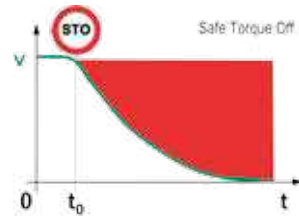
ACOPOSmotor

ACOPOSdrive system	Motor-integrated				
	3rd party ENDAT 2.2	3rd party sin/cos	Others	D8/D9/DA/DB	S8/S9/SA/SB
5	√ ¹	√ ³	√	√	√
	√ ¹	√ ³	√	√	√
	√ ¹	√ ³	√	√	√
	-	-	-	-	-
	√ ¹	√ ³	-	√	√
	√ ¹	√ ³	√	√	√
	√ ¹	√ ³	-	√	√
	√ ¹	√ ³	-	√	√
	√ ¹	√ ³	-	√	√
	√ ¹	√ ³	-	√	√
	√ ¹	√ ³	-	√	√
	√ ¹	√ ³	-	√	√
	√ ¹	√ ³	-	√	√
	√ ²	√ ^{2,3}	-	-	√
	√ ²	√ ^{2,3}	-	-	√
	√ ²	√ ^{2,3}	-	-	√
	√ ²	√ ^{2,3}	-	-	√
	√ ²	√ ^{2,3}	-	-	√

Characteristics of 3rd party encoder (possible up to CAT 4 / PL e / SIL 3)

06	X20SLX842	X67SI8103	X67SC4122.L12	9APLK.01-000 9AX2X.01-000
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	8	8	8	8
	4	4	8	-
A	2 x 50mA	-	4 x 2 A	-
	4 x 3 A	-	-	-
	-	-	-	-
	-	√	-	-
	√	-	-	-
	-	-	-	-
	√	-	-	-
	-	√	√	-
	-	-	-	-
	-	-	-	√



Integrated automation
Global presence
Solid partnership



ETHERNET 
POWERLINK

open 
SAFETY