



Safety PLC for industrial automation – small, agile, and flexible

Bosch Rexroth is redefining safe automation: ctrlX SAFETY is the most responsive and compact safety solution of its kind. The compact yet scalable system can be used as required – from the drive-integrated SafeMotion solution in ctrlX DRIVE to the complete control system ctrlX SAFETY.

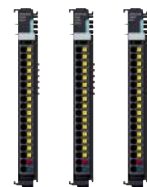
In addition to flexible use, the advantages include a very high level of safety and efficient engineering through graphic programming of the safety PLC. In combination with ctrlX SAFETYplus, the number of digital safe inputs and outputs can be perfectly adapted to the respective solution. Both secure encoders and secure analog inputs take the system to the highest level. The combination of velocity, modularity, and technological progress makes ctrlX SAFETY a safety control system that sets standards in industrial automation.

You can find more information at: www.ctrlx-automation.com/ctrlx-safety

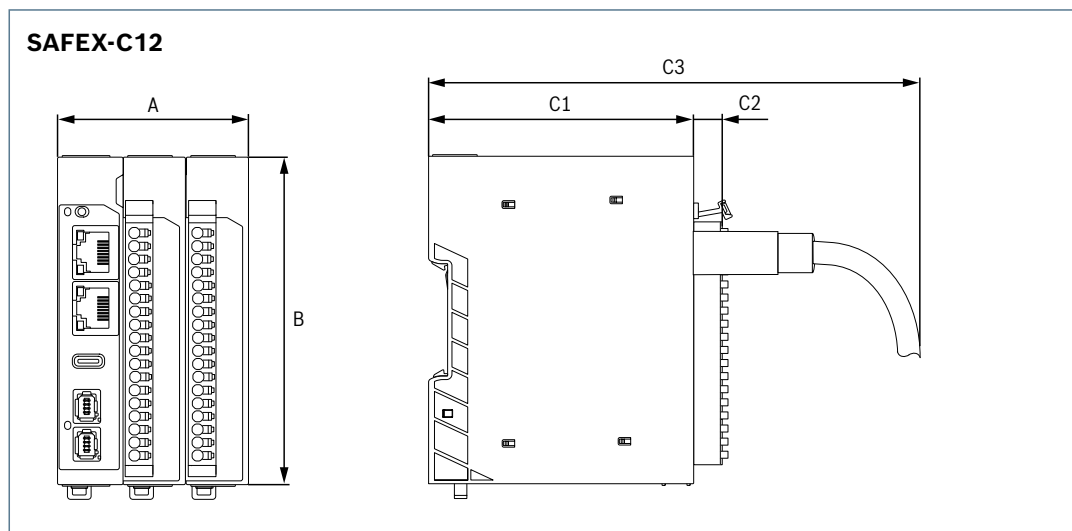
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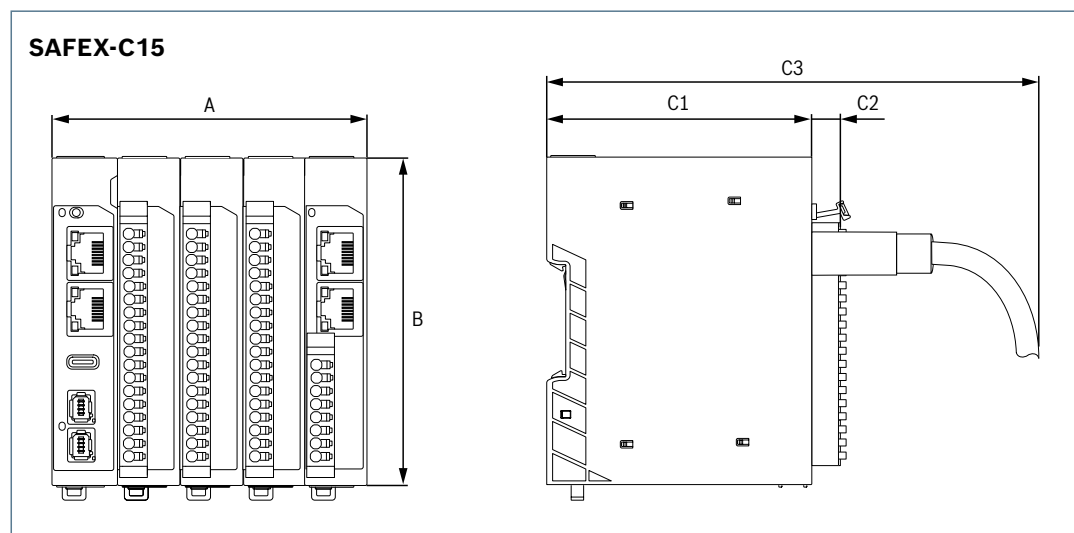
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Dimensions of compact safety controllers SAFEX-C.1x



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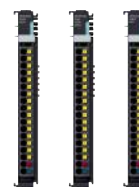
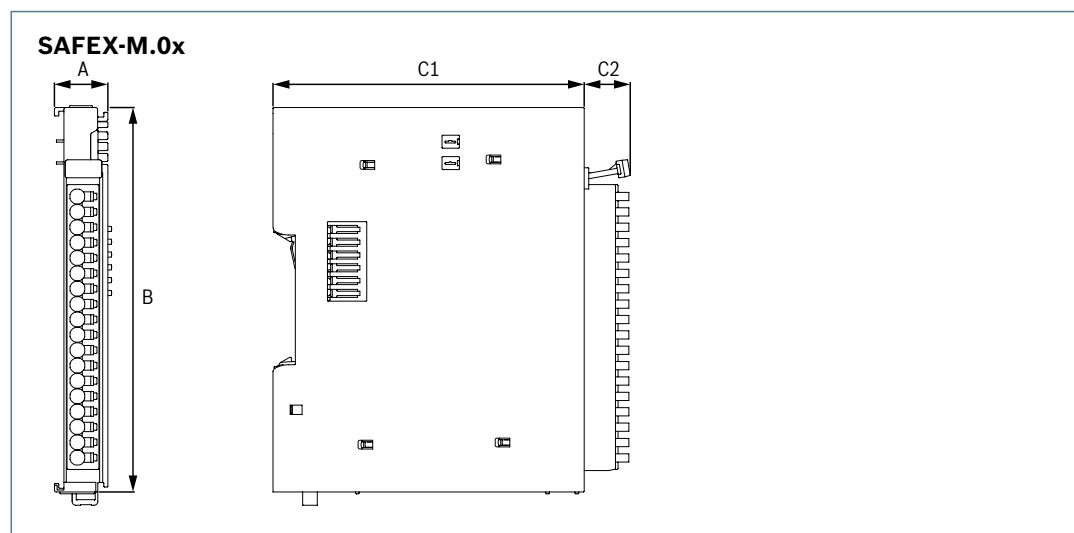


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Dimensions of modular safe input/output modules



Type	SAFEX-C.12	SAFEX-C.15	SAFEX-M.0x
A	61 mm	101 mm	12 mm
B	105 mm	105 mm	105 mm
C1	85 mm	85 mm	85 mm
C2	9 mm	9 mm	9 mm
C3	160 mm	160 mm	–

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Modular safe input/output modules

Safety characteristics	ctrlX SAFETY – SAFEX-C.12	ctrlX SAFETY – SAFEX-C.15
Performance level	PL e (EN ISO 13849-1)	PL e (EN ISO 13849-1)
PFH / Architecture	Category 4	Category 4
Safety Integrity Level	SIL 3 (IEC 61508)	SIL 3 (IEC 61508)
Proof test interval	20 years = max. service life	20 years = max. service life

Electrical data	ctrlX SAFETY – SAFEX-C.12	ctrlX SAFETY – SAFEX-C.15
Main program	4 ms	4 ms
Fast channel	1 ms	1 ms

Interfaces	ctrlX SAFETY – SAFEX-C.12	ctrlX SAFETY – SAFEX-C.15
ctrlX SAFETY ^{link}	Master interface	Master interface
EtherCAT	Slave	Slave
Safety over EtherCAT (FSoE)	Master/Slave	Master/Slave
PROFINET	Slave	Slave
USB-C	Default Engineering	Default Engineering
SD card	1 x Micro-SD	1 x Micro-SD

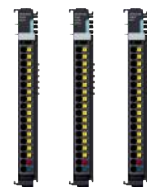
Electrical data	ctrlX SAFETY – SAFEX-C.12	ctrlX SAFETY – SAFEX-C.15
Power supply – logic	Supply Type (SELV/PELV) 24 VDC (21.6 – 28.8 VDC), 350 mA (5 A Fuse)	Supply Type (SELV/PELV) 24 VDC (21.6 – 28.8 VDC), 350 mA (5 A Fuse)
Power supply – peripherals	Supply Type (SELV/PELV) 24 VDC (21.6 – 28.8 VDC), 8 A	Supply Type (SELV/PELV) 24 VDC (21.6 – 28.8 VDC), 8 A

Environmental conditions	ctrlX SAFETY – SAFEX-C.12	ctrlX SAFETY – SAFEX-C.15
Permissible temperature (operation)	0 °C to +50 °C for UL compliance 0 °C to +45 °C	0 °C to +50 °C for UL compliance 0 °C to +45 °C
Permissible temperature (storage)	-40 °C to +70 °C	-40 °C to +70 °C
Permissible humidity	8 % to 95 %	8 % to 95 %
Degree of protection	IP20	IP20
Pollution degree	2 (EN 60664-1)	2 (EN 60664-1)

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Modulare sichere Ein-/Ausgangsmodule

Safety characteristics ctrlX SAFETY^{plus} – SAFEX-M.0x

Performance level	PL e (EN ISO 13849-1)
PFH / Architecture	Category 4
Safety Integrity Level	SIL 3 (IEC 61508)
Proof test interval	20 years = max. service life

Electrical data ctrlX SAFETY^{plus} – SAFEX-M.0x

Power supply – logic	by backplane
Power supply – peripherals	24 VDC (21.6 - 28.8 VDC)
	SAFEX-M.02: up to 4 A
	SAFEX-M.05: up to 8 A
	SAFEX-M.08: up to 4 A

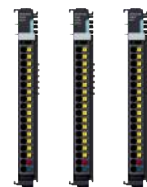
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