

Safety modules				
Emergency stop and safety gates				
Types	NES02D	NES13D	NDS12B	NA13CT
				
Dimensions HxWxD (mm)	99 x 22.5 x 114	99 x 22.5 x 114	99 x 22.5 x 114	99 x 22.5 x 114
Safety category	Category 4 (EN ISO 13849-1:2008)	Category 4 (EN ISO 13849-1:2008)	Category 2 (EN 954-1)	Category 3 (EN 954-1)
Performance level	PL _e (EN ISO 13849-1:2008)	PL _e (EN ISO 13849-1:2008)		
Function	Category 0 emergency stop module safety gates (mech. switches)	Category 0 emergency stop module safety gates (mech. switches)	Category 0 emergency stop module (instantaneous contact), Category 1 emergency stop module (delayed contact) safety output	Category 1 emergency stop module
Output specifications				
	2 x NO safety relay	3 x NO safety relay + 1 NC relay	1 x NO safety relay instant 1 x NO safety relay delayed 1 x NO auxiliary relay instant	3 x NO safety relay + 1 NC relay
Max. load AC1	6 A @ 230 VAC	6 A @ 230 VAC	5 A @ 230 VAC	6 A @ 230 VAC
Max. load DC12	6 A @ 24 VDC	6 A @ 24 VDC	5 A @ 24 VDC	
Electrical life	> 10 ⁵ operations	> 10 ⁵ operations	> 10 ⁵ operations	> 10 ⁵ operations
Input specifications				
Type	2 x NO, voltage free	2 x NO, voltage free	2 x NO, voltage free	
General specifications				
Power supply	24 VAC / DC -15% +10%	24 VAC / DC -15% +10%	24 VAC / DC ±10%	18 VAC ±10% 24 VDC ±10%
Screw terminals	Fixed [SA, SC] Detachable [DA, DC]	Fixed [SA, SC] Detachable [DA, DC]	Fixed [SA] Detachable [DA]	Fixed
Start	Automatic / Manual [SA, DA] Monitored manual [SC, DC]	Automatic / Manual [SA, DA] Monitored manual [SC, DC]	Automatic / Manual	Automatic / Manual
Approvals / Marks	CE - UL - TÜV	CE - UL - TÜV	CE	CE - UL
References				
	NES02DB24SA	NES13DB24SA	NDS12BB24SA	NA13CT
	NES02DB24SC	NES13DB24SC	NDS12BB24DA	
	NES02DB24DA	NES13DB24DA		
	NES02DB24DC	NES13DB24DC		

Safety modules

		Two hand device	Safety mat & edge	
Types	NA13D	ND12D	NSE02C	NST02C
				
Dimensions HxWxD (mm)	99 x 22.5 x 114	99 x 22.5 x 114	80 x 22.5 x 99.5	80 x 22.5 x 99.5
Safety category	Category 4 (EN 13849-1)	Category 4 (EN ISO 13849-1:2008)	Category 3 (EN ISO 13849-1: 2008)	Category 3 (EN ISO 13849-1: 2008)
Performance level	PLe (EN 13849-1)	PLe (EN ISO 13849-1:2008)	PLd (EN ISO 13849-1:2008)	PLd (EN ISO 13849-1:2008)
Function	Category 0 emergency stop module safety gates (mech. switches)	Two hand device	Safety mat & edge module	Safety mat module
Output specifications				
	3 x NO safety relay + 1 NC relay	2 x NO safety relay	2 x NO safety relay	2 x NO safety relay
Max. load AC1	6 A @ 230 VAC	6 A @ 230 VAC	5 A @ 230 VAC	5 A @ 230 VAC
Max. load DC12		6 A @ 24 VDC	5 A @ 24 VDC	5 A @ 24 VDC
Electrical life	> 10 ⁵ operations	> 10 ⁵ operations	> 10 ⁵ operations	> 10 ⁵ operations
Input specifications				
Type	2 x NO, voltage free	2 x NO, 2 x NC, voltage free	2-wire mats or safety edges	4-wire mats (SM...)
General specifications				
Power supply	24 VAC/DC -15% +10% 110 VAC -15% +10% [110CG] 230 VAC -15% +10% [230CG]	24 VAC/DC -15% +10% 110 VAC -15% +10% [110CG] 230 VAC -15% +10% [230CG]	24 VAC/DC ±15%	24 VAC/DC ±15%
Screw terminals	Fixed	Fixed	Fixed	Fixed
Start	Automatic / Manual	Automatic	Automatic / Manual [SA, DA] Monitored manual [SC, DC]	Automatic / Manual [SA, DA] Monitored manual [SC, DC]
Approvals / Marks	CE	CE - UL - TÜV	CE - TÜV	CE - TÜV
References				
	NA13DCG	ND12D	NSE02CB24SA	NST02CB24SA
	NA13D110CG	ND12D110CG	NSE02CB24SC	NST02CB24SC
	NA13D230CG	ND12D230CG		

Safety modules				
Safety gates (magnetic sensors)				
Types	NSO02	NSO13	NSC02	NSC13
				
Dimensions HxWxD (mm)	99 x 22.5 x 114	99 x 22.5 x 114	99 x 22.5 x 114	99 x 22.5 x 114
Safety category	Category 4 (EN ISO 13849-1:2008)	Category 4 (EN ISO 13849-1:2008)	Category 4 (EN ISO 13849-1:2008)	Category 4 (EN ISO 13849-1:2008)
Performance level	PL _e (EN ISO 13849-1:2008)	PL _e (EN ISO 13849-1:2008)	PL _e (EN ISO 13849-1:2008)	PL _e (EN ISO 13849-1:2008)
Function	Safety gates module	Safety gates module	Safety gates module	Safety gates module
Output specifications				
	2 x NO safety relay	3 x NO safety relay + 1 NC relay	2 x NO safety relay	3 x NO safety relay + 1 NC relay
Max. load AC1	6 A @ 230 VAC	6 A @ 230 VAC	6 A @ 230 VAC	6 A @ 230 VAC
Max. load DC12	6 A @ 24 VDC	6 A @ 24 VDC	6 A @ 24 VDC	6 A @ 24 VDC
Electrical life	> 10 ⁵ operations	> 10 ⁵ operations	> 10 ⁵ operations	> 10 ⁵ operations
Input specifications				
Type	2 x NO, SMS or mechanical	2 x NO, SMS or mechanical	1 x NO, 1 x NC, SMS or mechanical	1 x NO, 1 x NC, SMS or mechanical
General specifications				
Power supply	24 VAC/DC -15% +10%	24 VAC/DC -15% +10%	24 VAC/DC -15% +10%	24 VAC/DC -15% +10%
Screw terminals	Fixed [SA, SC] Detachable [DA, DC]	Fixed [SA, SC] Detachable [DA, DC]	Fixed [SA, SC] Detachable [DA, DC]	Fixed [SA, SC] Detachable [DA, DC]
Start	Automatic / Manual [SA, DA] Monitored manual [SC, DC]	Automatic / Manual [SA, DA] Monitored manual [SC, DC]	Automatic / Manual [SA, DA] Monitored manual [SC, DC]	Automatic / Manual [SA, DA] Monitored manual [SC, DC]
Approvals / Marks	CE - UL - TÜV	CE - UL - TÜV	CE - UL - TÜV	CE - UL - TÜV
References				
	NSO02DB24SA	NSO13DB24SA	NSC02DB24SA	NSC13DB24SA
	NSO02DB24SC	NSO13DB24SC	NSC02DB24SC	NSC13DB24SC
	NSO02DB24DA	NSO13DB24DA	NSC02DB24DA	NSC13DB24DA
	NSO02DB24DC	NSO13DB24DC	NSC02DB24DC	NSC13DB24DC

Safety modules

	Safety light curtains	Lift levelling	Extension
Types	NLG02D NLG13D	NA12DLIFT	NE14D
			
Dimensions HxWxD (mm)	99 x 22.5 x 114	99 x 22.5 x 114	99 x 22.5 x 114
Safety category	Category 4 (EN ISO 13849-1:2008)		Category 4 (EN ISO 13849-1:2008)
Performance level	PLe (EN ISO 13849-1:2008)		PLe (EN ISO 13849-1:2008)
Function	Light curtains safety modules	Lift levelling module (EN 81-1, 81-2, EN 12015, EN 12016)	Extension safety module
Output specifications			
	2 x NO safety relay [NLG02] 3 x NO safety relay + 1 NC relay [NLG13]	2 x NO safety relay	4 x NO safety relay + 1NC (feedback)
Max. load AC1	6 A @ 230 VAC	6 A @ 230 VAC	6 A @ 230 VAC
Max. load DC12	6 A @ 24 VDC		6 A @ 24 VDC
Electrical life	> 10 ⁵ operations	> 10 ⁵ operations	> 10 ⁵ operations
Input specifications			
Type	2 x NO min 10 mA / 17 V max 60 mA / 38 V [NLG02] max 30 mA / 38 V	2 x NO	2 x NO, voltage free
General specifications			
Power supply	24 VDC - 15% +10%	24 VAC/DC ±15%	24 VAC/DC -15% +10% 110 VAC -15% +10% [110CG] 230 VAC -15% +10% [230CG]
Screw terminals	Fixed [SA, SC] Detachable [DA, DC]	Fixed	Fixed
Start	Automatic / Manual [SA, DA] Monitored manual [SC, DC]		
Approvals / Marks	CE - UL - TÜV	CE - TÜV	CE
References			
	NLG02D724SA	NA12DLIFT	NE14D
	NLG02D724SC		NE14D110CG
	NLG02D724DA		NE14D230CG
	NLG02D724DC		
	NLG13D724SA		
	NLG13D724SC		
	NLG13D724DA		
	NLG13D724DC		

Configurable safety modules

Types	CERTUS Master Module
	CMM
	
Dimensions HxWxD (mm)	99 x 22.5 x 114
Safety category	Category 4
Safety level	SIL 3, according to IEC 61508 SIL CL 3, according to IEC 62061 PLe and Cat. 4, according to ISO/EN 13489-1
Performance level	PLe
Function	Can stand-alone managing and monitoring different safety sensors and commands at the same time. Manages up to 14 expansion units leaving out C2 R/C4 R modules

Safety inputs and outputs specifications

CMM as a stand alone unit	- 8 digital inputs, PNP active high according to EN 61131-2 - 2 pairs of solid state programmable safety outputs (OSSD), PNP active high 400 mA at 24 VDC max
Max. digital inputs with expansion modules	128
Max. digital outputs with expansion modules	16 pairs (OSSD)
Max. n° of expansion modules	14, leaving out C2 R/C4 R modules

Non-Safety inputs and outputs specifications

Test outputs	4
Programmable digital signal outputs	2
Input for Start/Restart interlock and EDM	2

General specifications

Rated voltage	24 VDC $\pm$ 20% / supply from Class II
Digital inputs	PNP active high, according to EN 61131-2
OSSD	PNP active high - 400 mA @ 24 VDC (every OSSD)
Enclosure protection class	IP 20
Terminal blocks protection class	IP 2x

Types

	C 8I 2O	C 8I / C 16I	C 12I 8TO
			

Dimensions HxWxD (mm)	99 x 22.5 x 114		
Safety category	Category 4		
Performance level	PLe		
Function	expansion modules		

General specifications

PFHd (IEC 61508:1998)	5.72E-9	5.75E-9 (C 8I); 7.09E-9 (C 16I)	3.24E-9
Rated voltage	24 VDC $\pm$ 20%		
Dissipated power	3 W max		
Digital inputs	8 / PNP active high according to EN 61131-2	PNP active high according to EN 61131-2 8 (C 8I) / 16 (C 16I)	12 / PNP active high according to EN 61131-2
Test output	4 for sensor monitoring and checking short-circuits and overloads	4 for sensor monitoring and checking short-circuits and overloads	8 for sensor monitoring and checking short-circuits and overloads

Configurable safety modules

OSSD + standard Relay Expansion Modules

Types

C 2OSSD / C 4OSSD

C 2R / C 4R



Dimensions HxWxD (mm)

99 x 22.5 x 114

Safety category

Category 4

Performance level

PL_e

Function

expansion modules

General specifications

PHFd (IEC 61508:1998)

3.16E-9 (C 2OSSD) / 3.44E-9 (C 4OSSD)

Rated voltage

24 VDC ±20%

Dissipated power

3 W max

Digital output

PNP active high 2 (C 2OSSD); 4 (C 4OSSD)

Switching voltage

240 VAC

Switching current

6 A max

Contacts

2 NO + 1 NC (C 2R) connectable to 1 OSSD pair
4 NO + 2 NC (C 4R) connectable to 2 OSSD pairs

Feedback contacts

1 NC (C 2R) / 2 NC (C 4R)

Data and Diagnostics Communication + Bus Transfer Expansion Modules

Types

C DDC

C BT



Dimensions HxWxD (mm)

99 x 22.5 x 114

Safety category

Category 4

Performance level

PL_e

Rated voltage

24 VDC ±20%

Function

Communication with most common industrial fieldbus system

Interface expansion module allowing the connection of remote expansions. Ideal solution for the interconnection of the safety functions of several machines in a production line

General specifications

Connection

Shielded cable compatible with RS485

Max connection distance

50 m

Max number of CBT modules per system

6

References

C PFBUS - Profibus
C DNET - DeviceNET
C CAN - CANopen
C EIP - Ethernet IP
C ECAT - EtherCAT
C PFNET - PROFINET
C OMMS - Universal Serial Bus

C BT1 - 1 connection (1 input or 1 output)
C BT2 - 2 connections (1 input and 1 output)

The C BT1 is placed at the beginning or at the end of the network connected with a single cable, whilst the C BT2 goes in the middle.