

The reliable solution for the integration of industrial safety components

## THE CIP SAFETY I/O MODULE FROM BALLUFF

Automation needs safety and reliability. To ensure these for systems and operators, Balluff offers a comprehensive safe networking portfolio, that now includes our new CIP Safety I/O module.

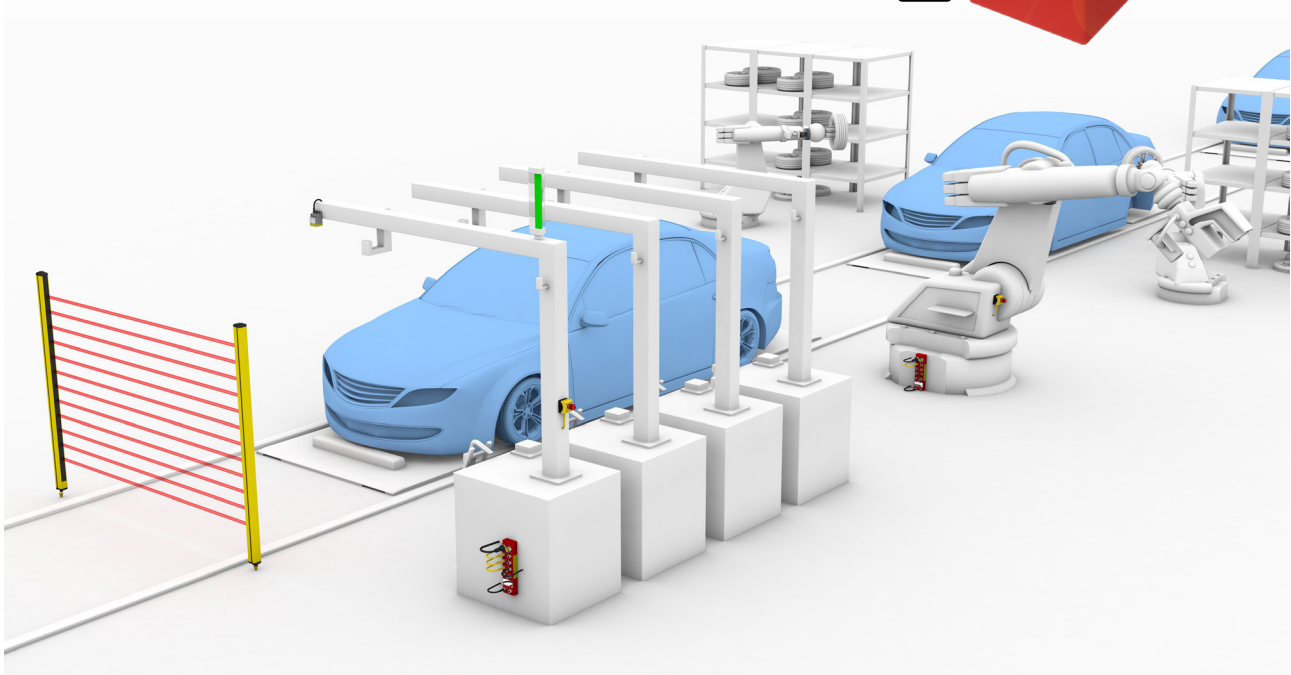
The module is a reliable solution for the safe connection of sensors and actuators to industrial controllers, even in harsh environments with influences such as dust, vibration or liquid. The module, which can be mounted directly on the machine and has an IP67-certified housing, communicates with safety components via EtherNet/IP using the CIP Safety protocol. The combination of protocols enables the exchange of safety and standard control data as well as diagnostic information over a single Ethernet network.

### Implementing safety functions in an industrial environment

In the field of functional safety technology, the CIP Safety I/O module from Balluff is a state-of-the-art solution that meets even the high demands of the industrial environment. It is extremely flexible and enables the connection of conventional and safety components. The combination of 12 safe inputs and 4 safe outputs predisposes the module for versatile use in safe automation technology, including automotive applications. The integrated memory key enables the module to be exchanged in less than one minute without special tools and renewed commissioning.

### Features

- Integration, acquisition and control of safety components in safe applications up to SIL3, CAT4/PLe
- TÜV and ODVA certified
- Reliable processing of safe application data
- Connection of single and dual channel safety devices
- Space-saving mounting on the machine
- IP67 protection class
- Self-monitoring and diagnostic LEDs



Safe application within the automotive industry in production lines or in body shop



## SAFE I/O MODULE

	BNI00HN
Ethernet connection	M12 male, 4-pin, D-coded
Connection safe inputs/outputs	M12 female, 5-pin, A-coded
Power IN connection	7/8" male, 4-pin
Power OUT connection	7/8" female, 4-pin
Response time input/output	11 ms/4.5 ms
PL (EN ISO 13849-1), SIL CL (EN/IEC 62061)	PL e, Cat. 4, SIL CL 3
SIL (IEC 61508)	SIL 3
Power supply	24 V DC (-15 %/+20 %)
IP rating per IEC 60529	IP67
Ambient temperature	-25...+70 °C
Number of inputs/safe inputs	12
Number of outputs/safe outputs	4
Total current $I_{Actuator}$	4A
Interface	CIP Safety EtherNet/IP
Approval/conformity	TÜV, ODVA, CE, UL/cUL, RoHS, REACH

## ACCESSORIES



	BAM01Z4	BCC09MU	BCC0F58	BCC07WR
Description	Anti-sabotage protection	Tee	Tee	Tee
Connection 1		M12 male, 5-pin, A-coded	M12 male, 5-pin, A-coded	M12 female, 5-pin, A-coded
Connection 2		M12 female, 5-pin, A-coded	M12 female, 5-pin, A-coded	M12 female, 5-pin, A-coded
Connection 3		M12 female, 5-pin, A-coded	M12 female, 5-pin, A-coded	M12 male, 5-pin, A-coded

## CONNECTIVITY



	BCC0H1T	BCC0H1E	BCC0H25	BCC09H1
Connection 1	M12 female, straight, 5-pin, A-coded	M12 female, straight, 5-pin, A-coded	M12 female, straight, 8-pin, A-coded	M12 female, straight, 5-pin, A-coded
Connection 2	M12 male, straight, 5-pin, A-coded	M12 male, straight, 4-pin, A-coded	M12 male, straight, 8-pin, A-coded	M12 male, straight, 5-pin, A-coded
Cable	2 m PUR, yellow, drag chain compatible	2 m PUR, black, drag chain compatible	2 m PUR, yellow, drag chain compatible	2 m PUR, black, drag chain compatible