Simply reliable: fail-safe sensors for mobile machines

## Fail-safe inductive sensors

> **Safety sensor enters the safe state, logic "0", as soon as the sensor is damped**
>
> **Installation costs and time reduced as the target is only required in the end position**
>
> **Comprehensive self-diagnostics for maintenance-free continuous operation**
>
> **Designed for use in harsh environments**

SIL 2

TÜV —certified

Temperature range −40...+85°C

IP 69 K

Vibration and shock resistant
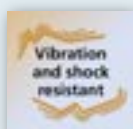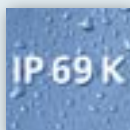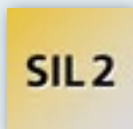
Target activates safe state

The fail-safe sensors switch into the safe state as soon as the target is detected inside the safe switch-off distance. The safety-related function is inverted when compared to the previous fail-safe sensors. This function is ideal in applications such as the protection of crane installations or industrial robots because the targets only need to be mounted at the end positions. Both the number of metallic targets and the installation complexity are considerably reduced.

Perfectly equipped for mobile use

Thanks to the robust design the sensor is perfectly suited for use in mobile machines. Applications on mobile machines such as monitoring whether supports are fully extended or waste bins gripped in the right way. Neither strong vibration nor extreme temperatures and cleaning processes affect the function of the fail-safe sensor in any way.

Design	Housing length [mm]	Installation	Enable zone [mm]	Safe switch-off distance [mm]	Order no.
M12 connector · 4 poles					
M12 x 1	60	non flush	> 6.0	< 3.0	**GF854S**
M18 x 1	60	flush	> 7.5	< 4.0	**GG855S**
M18 x 1	60	non flush	> 11.5	< 6.5	**GG854S**
M30 x 1.5	65	flush	> 14.5	< 8.0	**GI855S**
M30 x 1.5	65	non flush	> 21.5	< 12.0	**GI854S**

Connection technology

Design	Description	Order no.
	Socket, M12, 2 m, PUR cable, halogen-free, black	**EVM001**
	Socket, M12, 5 m, PUR cable, halogen-free, black	**EVM002**
	Socket, M12, 10 m, PUR cable, halogen-free, black	**EVM003**
	Socket, M12, 2 m, PUR cable, halogen-free, black	**EVM004**
	Socket, M12, 5 m, PUR cable, halogen-free, black	**EVM005**
	Socket, M12, 10 m, PUR cable, halogen-free, black	**EVM006**

Dimensions

GF854S

GG855S   GG854S

GI855S   GI854S

Wiring diagram
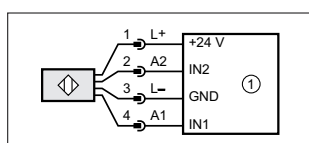
1) safety-related logic unit

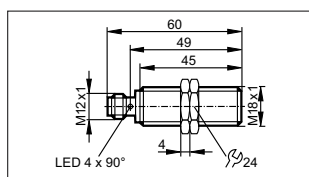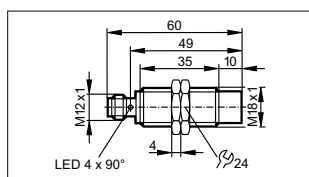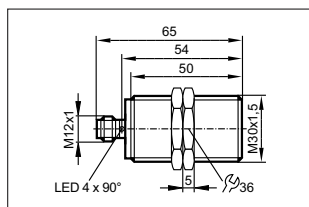| Further technical data	
Safety-related function	Safe state when properly damped
Operating mode	Permanent operation
ISO 13849-1	Category 2 PL d
IEC 61508	SIL 2
IEC 62061	SIL 2 cl 2
Applications	Use in mobile and harsh applications
Operating voltage [V DC]	8...32
Protection rating	IP 65, IP 66, IP 67, IP 68, IP 69K
Protection class	III
Electrical design	PNP
Output function	2 x OSSD, CB 24 I / C 1
Switching status indication [LED]	yellow (4 x 90°)
Permanent current rating [mA]	50
Ambient temperature [°C]	-40...85
Materials	Threaded sleeve, fixing nuts: Brass plated with white bronze Sensing face: LCP yellow Connector housing: PEI

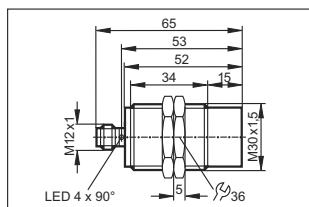## Reliable operation without interruptions

The sensor is equipped with sophisticated internal diagnostic functions. Among others, they detect component defects, short circuits or cross faults reliably and disconnect the outputs in case of a fault.

When used as intended, maintenance of the sensor is no longer necessary.

We reserve the right to make technical alterations without prior notice. · 11.2020

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