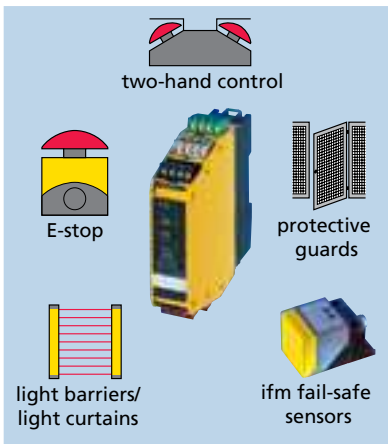




## Top product features!

- Multi-function safety relays are compatible with a variety of devices including switches, light curtains, e-stops and two-hand controls
- Connects e-stop buttons with cross-fault and optional simultaneous monitoring
- Two safety output versions available: relay or solid-state
- Solid-state auxiliary non-safety output provides feedback to PLC
- Meets requirements of Category 4 PL e and SIL 3 (IEC 61508)

## Multi-function safety relays reduce stock levels



ifm's multi-functional safety relays are compatible with industry standard safety devices. The versatile safety relays connect single or dual channel emergency stops, mechanical safety switches, transistor-based safety devices, light curtains, two-hand controls and ifm's non-contact safety sensors. All of these devices can be monitored with one relay. The benefit is a large reduction in stock levels that eliminates the need for different types of safety relays for various applications. Dual channel safety devices can be configured to monitor simultaneous logic and cross fault detection across the inputs.

### Safety Relays for Series Connection

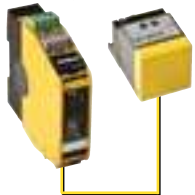
Up to 10 non-contact, fail-safe sensors can be connected in a series with the ifm clocked input versions. Ideal for monitoring multiple stations, such as robotics cells, the fail-safe sensors will provide an output if the one point along chain is stopped. Using ifm's quick disconnect T-piece connectors, wiring is greatly reduced and simplified.

ifm's multi-functional safety relay is compatible with industry standard devices



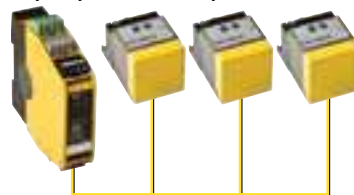
#### Single connection

Safety relay Safety sensor



#### Series connection (up to 10 sensors)

Safety relay Safety sensors



#### IO-Link

Company

IO-Link

#### Position Sensors

Inductive

Capacitive

Cylinder / valve position

Photoelectrics / lasers / fiber optics

Distance / Application specific

Ultrasonic

#### Motion Control

Encoders / Speed monitors

#### Vision Sensors

2D / 3D inspection



1 - 5



6 - 21



22 - 55



56 - 61



62 - 71



72 - 111



112 - 117



118 - 119



120 - 127



128 - 143



## Product + accessory selector

Type	Dimensions	Supply Voltage	Safety Outputs	Non-Safe Outputs	Part No.	List Price (1-pc.)
<b>Safety relays</b>						
	100 x 25 x 105 mm	19.2...30 V DC	2 x N.O. contacts	1 N.O. transistor output (PNP)	<b>G1501S</b>	<b>\$181.00</b>
	100 x 25 x 105 mm	19.2...30 V DC	2 x N.O. transistor outputs (PNP)	1 N.O. transistor output (PNP)	<b>G1503S</b>	<b>\$165.00</b>
	114 x 25 x 105 mm	19.2...30 V DC	2 x N.O. contacts with delay 3 x N.O. contacts	1 N.O. contact 1 N.C. contact 1 N.O. transistor (PNP)	<b>G1502S</b>	<b>\$292.00</b>
<b>Safety relays for Muting Applications *</b>						
	114 x 35 x 99 mm	19.2...28.8 V DC	2 x N.O. contacts	1 N.O. transistor (PNP)	<b>G2001S</b>	<b>\$504.00</b>

\* Can be used with all ifm safety light curtains.

Can't find the right product for your application, call 800-441-8246 or visit [www.ifm.com/us](http://www.ifm.com/us)

### Technical Specs

Protection rating: IP20  
 Operating temperature: -13...131 °F (-25...55 °C)  
 Housing material: PA  
 Contact rating: G1501S, G1502S: 6A, 250 V AC / 24 V DC  
 Maximum load current: G1503S: 100 mA per safe output  
 Approvals: 2008 Category 4 PL e, SIL 3 (IEC 61508), Type IIIc (EN 574)

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Safety Technology	Process Sensors				Industrial Networks	ID Systems	Machine Condition	Power Supplies	Wiring Technology	
Safety products	Pressure	Flow	Level	Temperature	AS-i network	Safety systems	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
144 - 155	156 - 175	176 - 191	192 - 207	208 - 225	226 - 239	240 - 251	252 - 253	254 - 259	260 - 263	264 - 277





## Top product features!

- Safe standstill / underspeed and overspeed models are available
- Safe speed monitors use 2 standard sensors as pick-ups
- 2 safety outputs (contacts)
- Meets requirements of Category 4 PL e and SIL 3
- Low profile safety speed monitors use minimal cabinet space

## Speed monitors for safety applications

**NEW!** ifm offers speed monitors developed for safety applications. Models are available for standstill and overspeed applications. Both styles of speed monitors are suitable for rotational or linear movement and evaluate pulses received from standard PNP sensors.

The DA101S speed monitor is ideal for both standstill and underspeed safety applications. A common application for this monitor is to ensure access doors stay locked until tooling has stopped moving. When the target speed is below the switchpoint, the two OSSD outputs will open.

The DD110S and DD111S speed monitors have been developed for safety-related overspeed monitoring as used in carousels and centrifuges. The DD111S is specifically designed for the low rotational speed of wind turbines. Both units are easily configured via rotary switches. When the switchpoint is exceeded, the 2 OSSD outputs will open.







Speed monitor switch when critical rotational speeds are exceeded or not reached.

Company	IO-Link	Position Sensors		Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Motion Control	Vision Sensors
	IO-Link	Inductive	Capacitive					Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



## Product + accessory selector

Type	Dimensions	Adjustable Frequency Range	Safety Outputs	Non-Safe Outputs	Part No.	List Price (1-pc.)
<b>Safety speed monitor – standstill</b>						
	105 x 25 x 100 mm	–	2 x N.O. contacts	1 fault output (PNP)	<b>DA102S</b>	<b>\$393.00</b>
<b>Safety speed monitor – underspeed</b>						
	114.5 x 22.5 x 108 mm	0.5...990 Hz	2 x N.O. contacts	1 fault output (PNP) 1 diagnostic output (PNP)	<b>DU110S</b>	<b>\$420.00</b>
<b>Safety speed monitor – overspeed</b>						
	114.5 x 22.5 x 108 mm	0.5...990 Hz	2 x N.O. contacts	1 fault output (PNP) 1 diagnostic output (PNP)	<b>DD110S</b>	<b>\$452.00</b>
	114.5 x 22.5 x 108 mm	0.1...99.9 Hz	2 x N.O. contacts	1 fault output (PNP) 1 diagnostic output (PNP)	<b>DD111S</b>	<b>\$443.00</b>

▶ Can't find the right sensor for your application, call 800-441-8246 or visit [www.ifm.com/us/vision](http://www.ifm.com/us/vision)

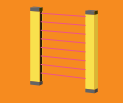










### Technical Specs

	DA102S	DD110S, DD111S and DU110S
Operating voltage:	19.2...30 V DC	19.2...28.2 V DC
Current consumption:	≤ 200 mA	≤ 125 mA
Input frequency:	≤ 3500 Hz	≤ 2000 Hz
Power-on delay time:	≤ 6 s	≤ 3 s
Contact rating:	6 A	6 A
Operating temp:	-13...131 °F (-25...55 °C)	-40...131 °F (-40...55 °C)
Protection:	IP20	IP20
Approvals:	EN ISO 13849-1: Category 4 PL e IEC 61508: SIL 3	EN ISO 13849-1: Category 4 PL e IEC 61508: SIL 3



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Safety Technology	Process Sensors				Industrial Networks		ID Systems	Machine Condition	Power Supplies	Wiring Technology
Safety products	Pressure	Flow	Level	Temperature	AS-i network	Safety systems	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
										
144 - 155	156 - 175	176 - 191	192 - 207	208 - 225	226 - 239	240 - 251	252 - 253	254 - 259	260 - 263	264 - 277

