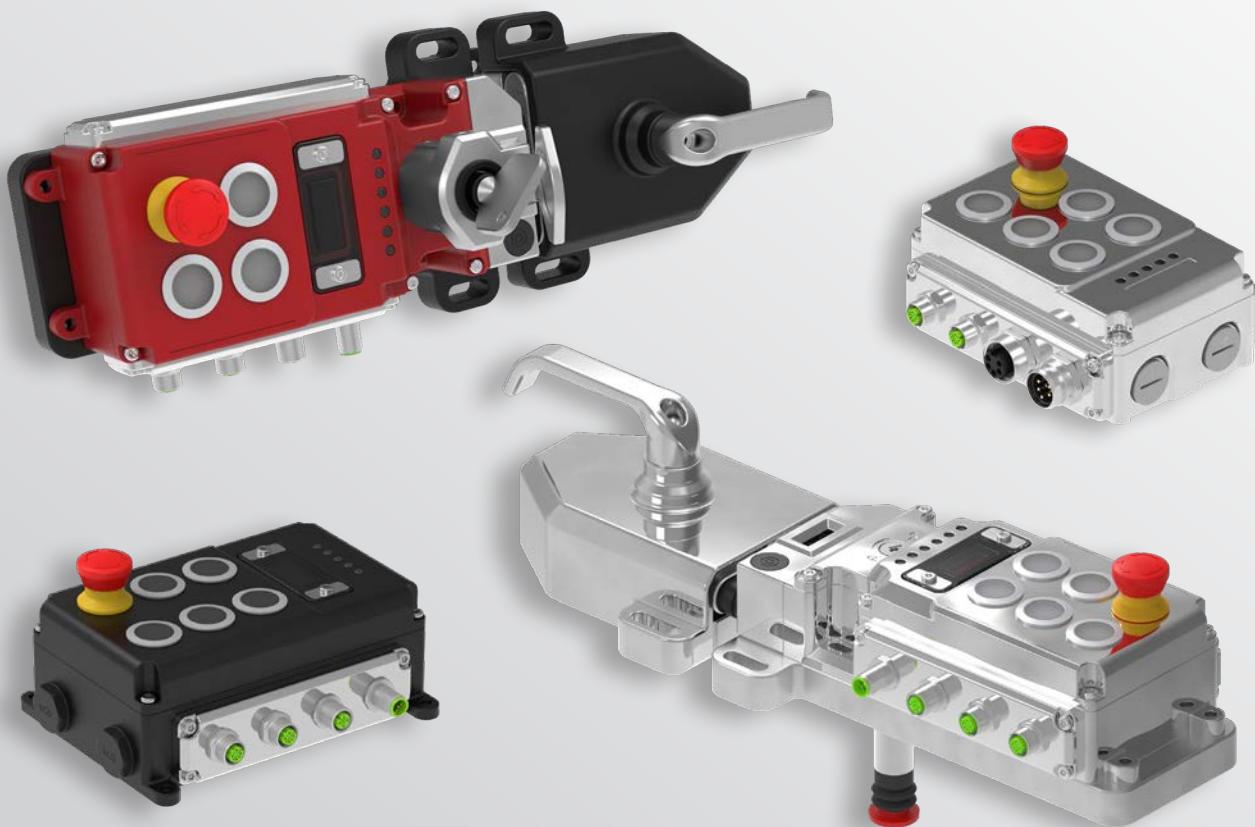




# IDEM Safety Switches

Networked Enabled Safety Devices



Leading Manufacturer of Machine Safety Switches & Solutions

**sensORMATIC**  
SPECIALIST & SOLUTIONS



## What We Do

IDEML designs and manufactures machine safety products, that make industry safer.

## Our History

### 1985

The founder of IDEM, Medi Mohtasham begins his employment at EJA Engineering where he designed Trojan, Atlas, Rotacam and LRS1 under the Guardmaster brand. Rockwell Automation acquires EJA in 1996.

### 2003

Medi leaves his position as Technical Director of Rockwell to create IDEM Safety Switches, with the vision to develop the 'Next Generation' of Safety Switches, designed and manufactured in the UK.

### 2005

IDEML manufactures the GuardianLine range of safety rope switches, specialising in products for the Food Industry, Explosion Proof applications and Factory Automation.

### Present

Today IDEM operates globally, providing reliable, cost-effective safety interlock solutions that save lives. IDEM continues to invest in new ways to protect your personnel and improve your productivity.

## Why Choose IDEM?



Global leadership in the design and manufacture of machine safety products since 1985.



IDEML's global headquarters is based in the UK with offices in the USA and Europe.



Privately owned business with in house sales, R&D and technical support teams.



Renowned for world-class product quality and reliability on a global scale.



State-of-the-art manufacturing and test facilities. This includes Ingress Protection (IP) and Shock testing.



Exceptional delivery time for both small and large orders. We put the customers' needs first.



Proud Winners of  
The Queen's Award for Enterprise:  
International Trade 2022

The King's Award for Enterprise:  
Innovation 2023

The King's Award for Enterprise:  
Innovation 2024

# TABLE OF CONTENTS



## UGB-NET NETWORKED ENABLED TYPE 4 GUARD LOCK

PAGES 2-15



The UGB-NET is a Type 4 guard locking safety switch with high-coded RFID and built-in EtherNET/IP and PROFINET connectivity, enabling seamless integration into modern industrial networks. It provides robust, monitored guard locking for sliding or rotary access doors and supports optional rear escape and trapped key features for enhanced safety.

With configurable lids for 4 or 6 pushbuttons, the UGB-NET combines safety and control in a single device. Fieldbus integration simplifies installation, reduces wiring and cabinet space, and provides real-time diagnostics and status updates for efficient maintenance and monitoring.

Additional I/O capability allows connection to external devices like light curtains and stack lights, supporting fully customized safety solutions that boost both protection and productivity.

- ▶ Integrated EtherNET/IP & PROFINET for seamless network connectivity and real-time monitoring.
- ▶ High-coded RFID guard locking ensures robust machine safety and tamper resistance.
- ▶ Configurable lid supports 4 or 6 pushbuttons and optional trapped key for flexible control options.
- ▶ Fieldbus integration reduces wiring and cabinet space while enabling real-time diagnostics and modular device control.

## NET-BOX NETWORKED ENABLED CONTROL STATION AND CONFIGURABLE I/O

PAGES 16-19



The NET-BOX is a compact, configurable control station and distributed I/O device designed for seamless integration with PROFINET PROFIsafe or EtherNET/IP CIP Safety networks. Built for tough environments, it's available in plastic, die-cast, or 316 stainless steel housings. The top connector plate supports up to four M12 connectors, simplifying connection to devices like light curtains, safety switches, and sensors.

With space for up to six customizable pilot devices – such as pushbuttons, indicators, and selector switches – the NET-BOX offers a tailored control solution. It enables real-time data exchange and centralized monitoring via industrial Ethernet, reducing wiring complexity and boosting productivity. TÜV and cULus certified, the NET-BOX delivers a reliable, high-safety solution for modern automation systems.

- ▶ Integrated EtherNET/IP & PROFINET for seamless network connectivity and real-time monitoring.
- ▶ Durable housing options in plastic, die-cast, or 316 stainless steel.
- ▶ Customizable lid with up to 6 pilot devices for tailored control.
- ▶ Fieldbus integration reduces wiring and cabinet space while enabling real-time diagnostics and modular device control.

# UGB-NET FEATURES AND BENEFITS

## DIE-CAST OR 316 STAINLESS STEEL



UGB-NET is available in robust die-cast metal painted red, or mirror polished 316 stainless steel.

The 316 stainless steel IP69K version is suitable for washdown.

## INDUSTRIAL ETHERNET READY



Compatible with both Ethernet/IP with CIP Safety and PROFINET with PROFIsafe industrial ethernet protocols.

Fully approved by cULus and TUV to the latest international safety standards.

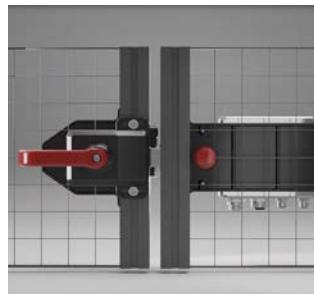
## DUAL ACTUATOR ENTRY WITH RFID CODING



UGB-NET has two entry directions for the RFID coded tongue, one on the face and the other on the side. This gives flexibility of mounting for both sliding and hinged doors.

RFID code can be re-taught to a new actuator if required. Doing so will obsolete the old code.

## EASY TO MOUNT / OPTIONAL REAR RELEASE



The UGB-NET has a choice of sliding and rotary handles, both with optional rear release functionality.

The external mounting holes make it quick and easy to install.

## CODED RELEASE KEY



The UGB-NET incorporates a coded key that can be released once the machine has stopped.

The key can then be taken inside the hazardous area to prevent inadvertent start-ups.

## UP TO 6 PILOT DEVICES



UGB-NET base models are available with either 4 or 6 illuminated push buttons on the lid.

## CONFIGURABLE CONTROL FUNCTIONALITY



Low profile design and replaceable pushbuttons reduce risk of damage and lowers maintenance costs.

The lid incorporates up to 6 pilot devices which are factory set to your specification.

## CONNECT FIELD DEVICES TO THE UGB-NET



The UGB-NET is available with up to 4 additional M12 plugs for connecting external devices. These can include emergency stops, light curtains, light towers, enabling pendants, rope switches plus many more. Please specify before ordering as they are factory configured. See page 6.

## RELIABLE MECHANICAL INTERLOCKING



The robust, industry proven cam system provides a high level of anti-tamper and a holding force of up to 3000N on a sliding handle, and up to 10000N on a rotary handle.

## EMERGENCY STOP AND PROTECTION SHROUD



If the protruding nature of the E-Stop is a concern, the UGB-NET is available with a button shroud for increased protection from external impact.

# CUSTOMISATION

The UGB-NET is compact and highly configurable. The lid incorporates up to 6 x 22mm pilot devices that are factory configured for your convenience. See page 9 for ordering information.

## PUSH BUTTONS

- Contacts 1NO.
- Choice of 5 colours; red, blue, green, yellow, white.

## LAMPS

- Choice of 5 colours; red, blue, green, yellow, white.

## EMERGENCY STOP

- Contacts 2NC.

## SELECTOR SWITCH

- Contacts 1NO maintained.



## REPLACEABLE LID

The UGB-NET has been designed with a replaceable lid, resulting in lower maintenance costs.

## CHOOSE YOUR REQUIRED PROTOCOL (FACTORY CONFIGURED)

Choosing your protocol is usually determined by your machine's software architecture.

- PROFIsafe
- CIP Safety

EtherNet/IP®



CIP Safety – short for “Common Industrial Protocol” – is designed to provide fail-safe communication between different nodes on a safety network.



PROFIsafe is an additional software layer that provides functional safety over the bus in PROFINET networks.

PROFIsafe will take care of the functional safety portion of communications.

## CHOOSE YOUR PREFERRED HANDLE ARRANGEMENT

- All handles are available in either painted die-cast or mirror polished 316 stainless-steel.
- If you have opted for the UGB-NET with rear release, you will need one of the rear handles below.
- It is important you that you specify if your guard is left or right hand opening.
- Handles supplied in left-hand or right-hand depending on your requirements. See page 14 for part numbers.



FRONT ROTARY HANDLE  
(RIGHT-HAND SHOWN)



FRONT SLIDING HANDLE  
(RIGHT-HAND SHOWN)



REAR ROTARY HANDLE



REAR SLIDING HANDLE

# EASE OF INSTALLATION

The UGB-NET has been designed for quick and easy installation. Networking your safety reduces the number of components, less wiring, fewer cabinets, faster installation, and faster commissioning.

## EXTERNAL MOUNTING HOLES



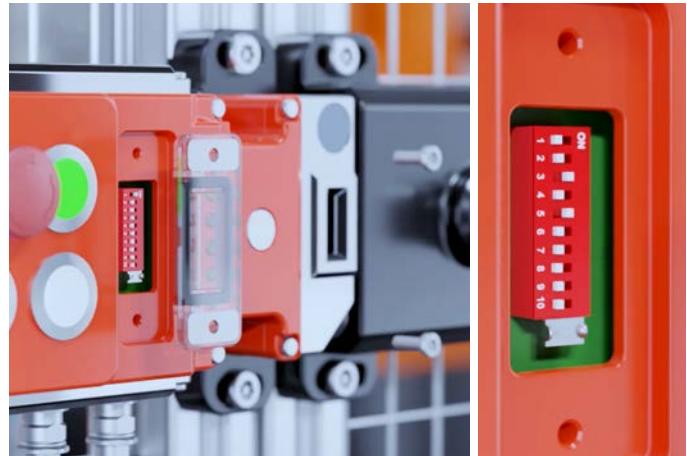
UGB-NET features external mounting holes make it quick and easy to install. No need to remove the lid during installation.

The fixings are made from metal, ensuring a firm mounting that can withstand external impact.

## EASILY ACCESSABLE DIP SWITCHES

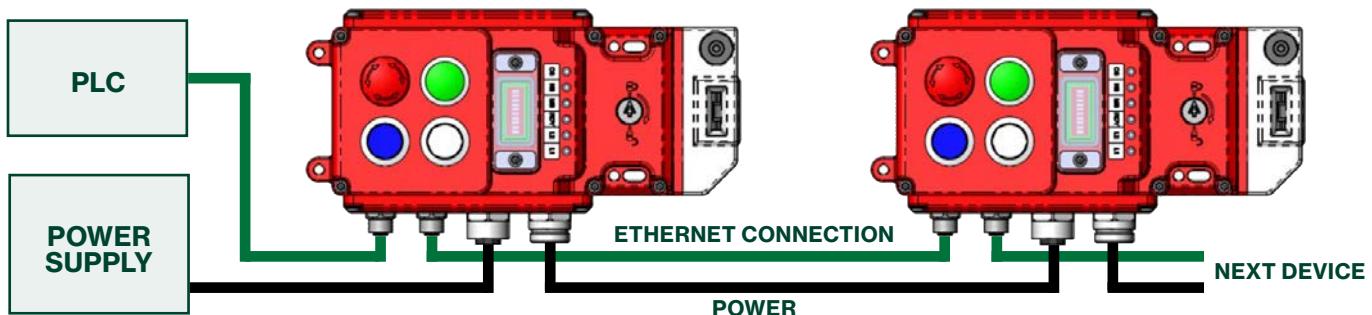
Easily accessible DIP switches, by way of removing the polycarbonate cover.

Set your network address post installation.



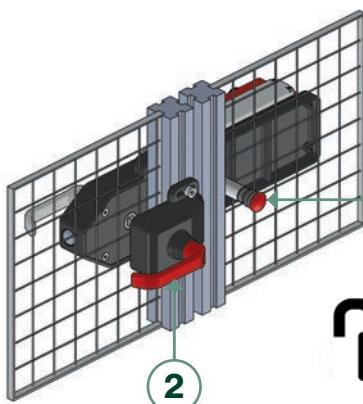
## CONNECT MULTIPLE UNITS

Simple power and data in/out connections make integration quick and efficient. With two-way communication over industrial Ethernet, there's no need to run cables back to the PLC from the last unit.

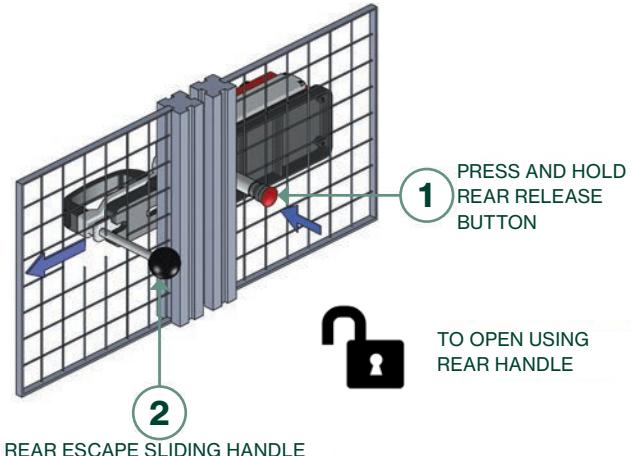


# REAR RELEASE FUNCTIONALITY

The UGB-NET is available with rear release functionality granting the operator a means of escape from the hazardous area. Depending on your handle arrangement, the UGB-NET requires a simple 2-step process to overide the solenoid (and trapped key if used) and unlatch the actuator.



REAR ROTARY HANDLE



REAR SLIDING HANDLE

## REAR ESCAPE APPLICATION EXAMPLE

Robot cells are a key example of where rear release functionality is essential.

Robots can cause serious injury if they come into contact with a person, so in the event of an unexpected start-up, a quick and safe exit from the hazardous area is critical.



## RFID CODED TONGUE

The RFID coded tongue complies with Type 4 high-level coding requirements as defined by EN ISO 14119.

If you don't want to use a handle accessory, the actuator can be removed for greater flexibility when mounting to the guard.



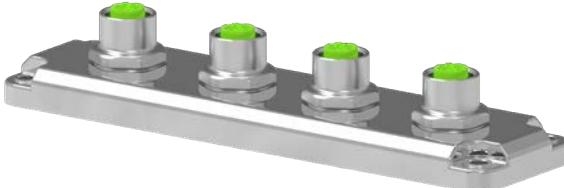
If you lose or break the actuator, the re-teach technology can pair with a new actuator (no need to replace the entire unit). Only one actuator will work at a time.

Robust 316 stainless steel construction.

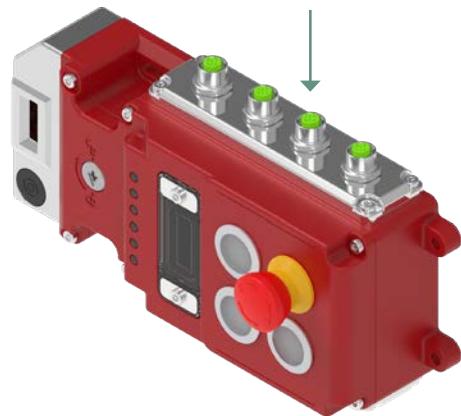
## ADDITIONAL CONTROL AND CONNECTIVITY

The UGB-NET is compatible with safe and non-safe external devices. Products such as light curtains, beacons, enabling pendants can be added to your UGB-NET's network via additional M12 connectors. These are configured at the factory for a plug-and-play solution. Additional control functionality can be added via the expandable module. Please contact IDEM Safety Switches directly for ordering details.

### FIELD DEVICE CONNECTOR PLATE



If you require additional connectivity, a connector plate can be purchased. It is available with 1, 2, 3 or 4 M12 plugs depending on your requirement. Factory assembled and configured.



### POPULAR PRODUCTS CONNECTED TO THE UGB-NET



LIGHT CURTAINS / SCANNERS



LED TOWERS



ENABLING PENDANTS



SAFETY ROPE PULLS



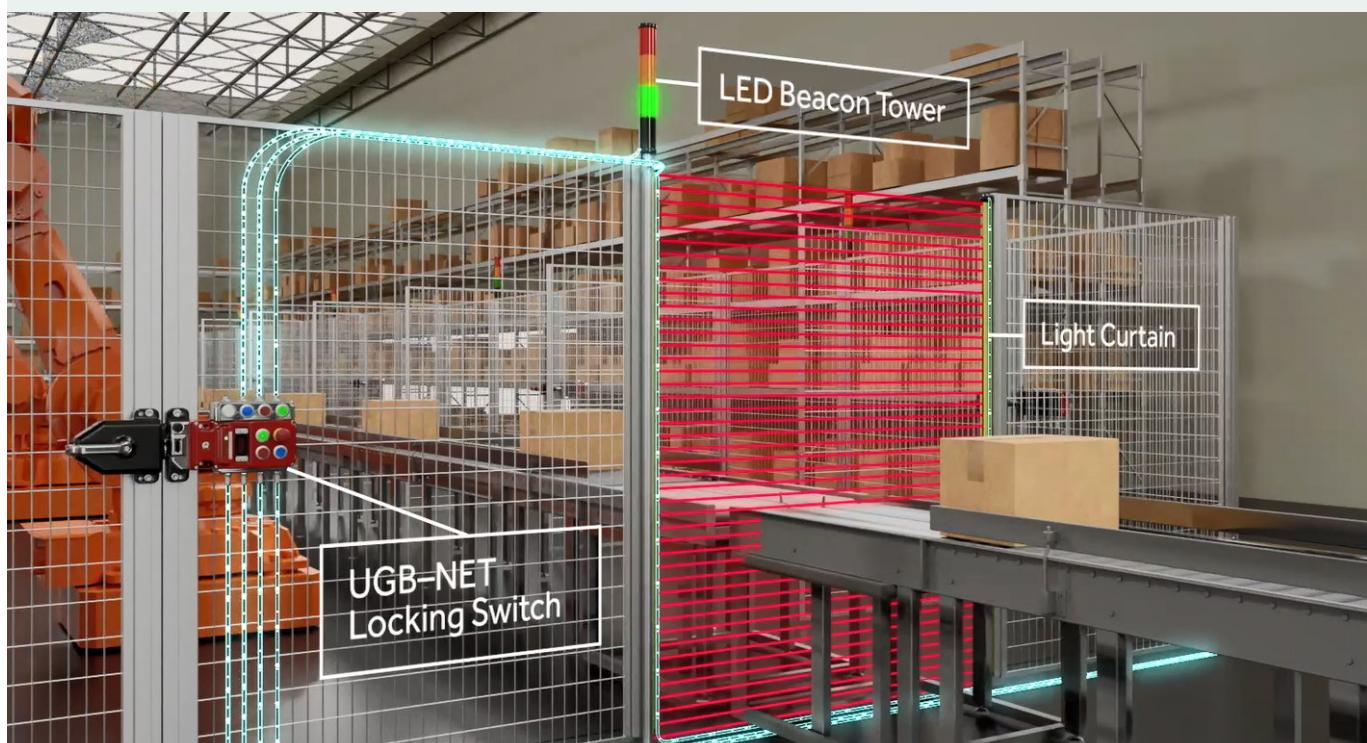
LOCKING SWITCHES



TRAPPED KEY

### APPLICATION EXAMPLE

Modern factories demand adaptable safety solutions to meet diverse guarding needs. Warehouse automation is a prime example, often requiring both part- and full-body access protection. Common safety devices in intralogistics include light curtains, LED beacon towers, and rope pull switches. Integrating these into the UGB-NET's industrial network reduces wiring, minimizes panel safety I/O, and enhances overall diagnostics.



# UGB-NET WITH CODED RELEASE KEY

The UGB-NET is available with a coded mechanical personnel key that is trapped when the guard is closed, and the machine is running. Requesting entry then energises the solenoid, allowing the key to be removed.

Removal of the key unlocks the gate, permitting access. The operator can then take the personnel key inside, ensuring no inadvertent startups can occur whilst working in the hazardous area.



## ORDERING YOUR CODED KEY

Each key code letter has a unique colour associated with it (as shown in the table).

- Thousands of key codes available
- Custom key labels available on request



Yellow	White	Green	Blue
A101	A111	B201	B211
A102	A112	B202	B212
A103	A113	B203	B213
A104	A114	B204	B214
A105	A115	B205	B215
A106	A116	B206	B216
A107	A117	B207	B217
A108	A118	B208	B218
A109	A119	B209	B219
A110	A120	B210	B220
		C301	C311
		C302	C312
		C303	C313
		C304	C314
		C305	C315
		C306	C316
		C307	C317
		C308	C318
		C309	C319
		C310	C320
		D401	D411
		D402	D412
		D403	D413
		D404	D414
		D405	D415
		D406	D416
		D407	D417
		D408	D418
		D409	D419
		D410	D420

## ORDERING A UNIQUELY CODED KEY

Uniquely coded keys available on request. These types of keys come with a key management/tracking service to ensure strict access to replacements.

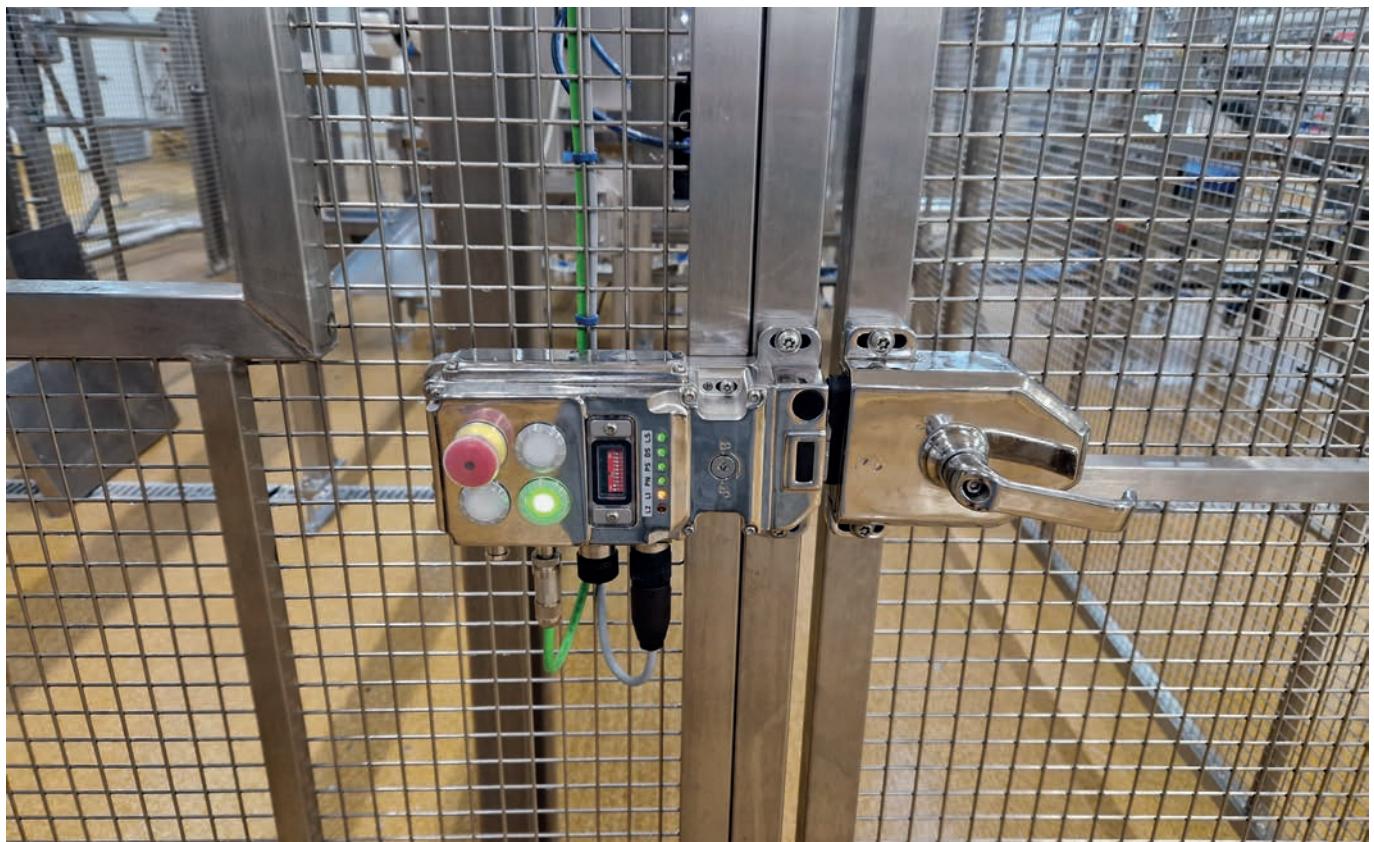
## APPLICATION EXAMPLE

The personnel key feature is primarily used to prevent inadvertent start-ups while someone is working inside a hazardous area. It can be used alongside IDEM's isolation switch to enable functions like robot teach modes and manual operation on production lines. This dual-purpose setup encourages operators to carry the personnel key with them while inside the safeguarded area.



## UGB-NET-SS TESTED TO IP69K

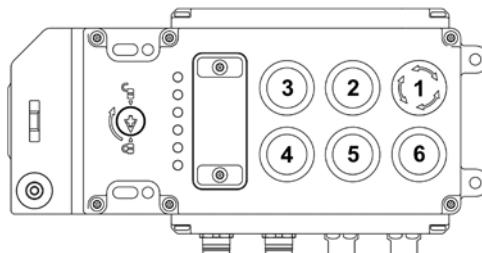
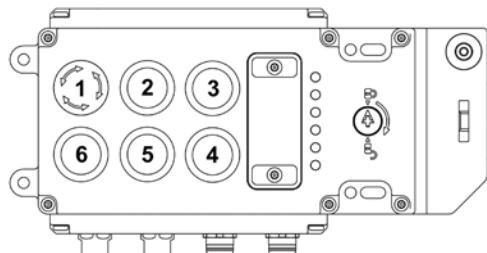
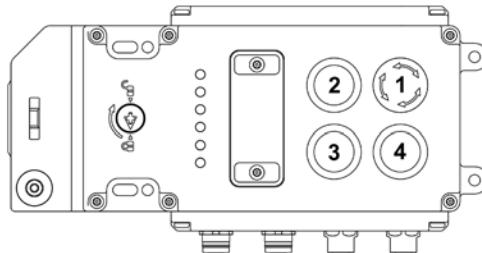
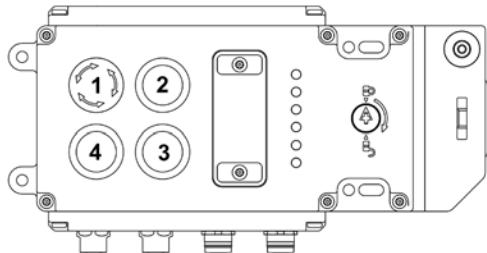
The UGB-NET-SS is the only network enabled safety device on the market with IP69K rating. The housing is manufactured using mirror polished 316 stainless steel, closed with double-seal gaskets and the buttons are protected using transparent silicone covers.



To order the UGB-NET-SS, please see pages 12-13

# UGB-NET PILOT DEVICE LAYOUT

The UGB-NET is available with 4 or 6 customisable 22mm pilot devices. A plastic blanking plug (x) is used to seal any unused positions. When ordering, please confirm the position of the pilot devices via the part number as shown in the diagram below. The E-Stop (if used) can only be fitted in position 1.



RIGHT HANDED

LEFT HANDED

## UGB-NET ORDERING EXAMPLE

UGB-NET-PS-M (Right Hand) PROFIsafe. Note: E-Stop (if used) can only be fitted in position "1".

To include: 1 x Illuminated Emergency Stop + 1 x RED Illuminated Push Button + 1 x GREEN Lamp + 1 x Illuminated Selector Switch + 1 x YELLOW Illuminated Push Button + 1 x WHITE Lamp

**528201 - 1E - 2BR - 3LG - 4S - 5BY - 6LW**

Sales  
Number  
(See P10-13)

Position  
on Lid

Control  
Device Code  
Illuminated  
Push Button

Lens  
Colour  
RED

Illuminated Emergency Stop	
Contacts: 2NC	
Control Device Code	Note
<b>E</b>	E-Stop can only be fitted into Position 1 on Lid

Illuminated Sector Switch	
Control Device Code	Colour Code
<b>S</b>	1NO Maintained

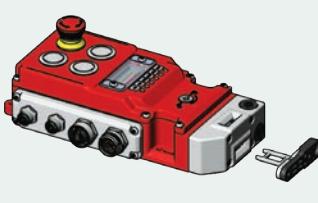
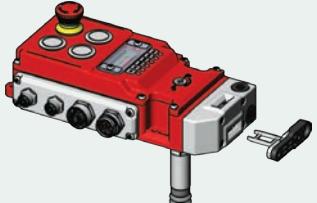
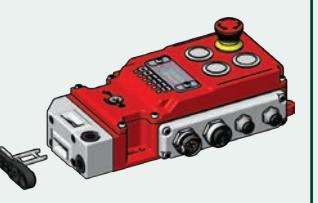
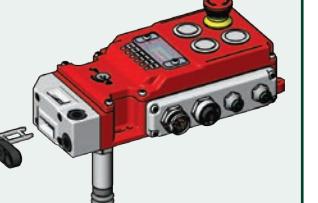
Illuminated Push Buttons		
Contacts: 1NO		
Control Device Code	Colour Code	Colour of Lens
<b>B</b>	R	<span style="color: red;">●</span>
	B	<span style="color: blue;">●</span>
	G	<span style="color: green;">●</span>
	Y	<span style="color: yellow;">●</span>
	W	<span style="color: white;">○</span>

Lamps		
Control Device Code	Colour Code	Colour of Lens
<b>L</b>	R	<span style="color: red;">●</span>
	B	<span style="color: blue;">●</span>
	G	<span style="color: green;">●</span>
	Y	<span style="color: yellow;">●</span>
	W	<span style="color: white;">○</span>

Blanking Plug	
Code	Description
<b>X</b>	Plastic Plug used to seal any unused positions

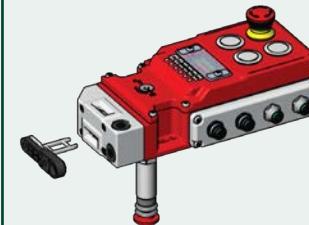
For additional connectivity (shown on page 6), please contact us directly.

# CATALOGUE NUMBERS

UGB-NET DIE-CAST (PROFISAFE) 4-STATION			
			
UGB-NET-PS-M (Right Hand)	UGB-NET-PS-M-RR (Right Hand)	UGB-NET-PS-M (Left Hand)	UGB-NET-PS-M-RR (Left Hand)
<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)	<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)	<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)	<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)
<b>4 x Control Devices:</b> Refer to page 9 for ordering information	<b>4 x Control Devices:</b> Refer to page 9 for ordering information	<b>4 x Control Devices:</b> Refer to page 9 for ordering information	<b>4 x Control Devices:</b> Refer to page 9 for ordering information
<b>Sales Number:</b> (Auxiliary Release) 528001	<b>Sales Number:</b> (Auxiliary Release) 528002	<b>Sales Number:</b> (Auxiliary Release) 528005	<b>Sales Number:</b> (Auxiliary Release) 528006
<b>Sales Number:</b> (No Auxiliary Release) 528003	<b>Sales Number:</b> (No Auxiliary Release) 528004	<b>Sales Number:</b> (No Auxiliary Release) 528007	<b>Sales Number:</b> (No Auxiliary Release) 528008
<b>Sales Number:</b> 528009 (Trapped Key) 528013 (Trapped Key + Aux. Release)	<b>Sales Number:</b> 528010 (Trapped Key) 528014 (Trapped Key + Aux. Release)	<b>Sales Number:</b> 528011 (Trapped Key) 52815 (Trapped Key + Aux. Release)	<b>Sales Number:</b> 528012 (Trapped Key) 528016 (Trapped Key + Aux. Release)
UGB-NET DIE-CAST (PROFISAFE) 6-STATION			
			
UGB-NET-PS-M (Right Hand)	UGB-NET-PS-M-RR (Right Hand)	UGB-NET-PS-M (Left Hand)	UGB-NET-PS-M-RR (Left Hand)
<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)	<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)	<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)	<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)
<b>6 x Control Devices:</b> Refer to page 9 for ordering information	<b>6 x Control Devices:</b> Refer to page 9 for ordering information	<b>6 x Control Devices:</b> Refer to page 9 for ordering information	<b>6 x Control Devices:</b> Refer to page 9 for ordering information
<b>Sales Number:</b> (Auxiliary Release) 528201	<b>Sales Number:</b> (Auxiliary Release) 528202	<b>Sales Number:</b> (Auxiliary Release) 528205	<b>Sales Number:</b> (Auxiliary Release) 528206
<b>Sales Number:</b> (No Auxiliary Release) 528203	<b>Sales Number:</b> (No Auxiliary Release) 528204	<b>Sales Number:</b> (No Auxiliary Release) 528207	<b>Sales Number:</b> (No Auxiliary Release) 528208
<b>Sales Number:</b> (With Trapped Key) Currently Not Available	<b>Sales Number:</b> (With Trapped Key) Currently Not Available	<b>Sales Number:</b> (With Trapped Key) Currently Not Available	<b>Sales Number:</b> (With Trapped Key) Currently Not Available

# CATALOGUE NUMBERS

## UGB-NET DIE-CAST (CIP SAFETY) 4-STATION

			
UGB-NET-CS-M (Right Hand)	UGB-NET-CS-M-RR (Right Hand)	UGB-NET-CS-M (Left Hand)	UGB-NET-CS-M-RR (Left Hand)
<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors
<b>4 x Control Devices:</b> Refer to page 9 for ordering information	<b>4 x Control Devices:</b> Refer to page 9 for ordering information	<b>4 x Control Devices:</b> Refer to page 9 for ordering information	<b>4 x Control Devices:</b> Refer to page 9 for ordering information
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<b>Sales Number:</b> 528109 (Trapped Key) 528113 (Trapped Key + Aux. Release)	<b>Sales Number:</b> 528110 (Trapped Key) 528114 (Trapped Key + Aux. Release)	<b>Sales Number:</b> 528111 (Trapped Key) 528115 (Trapped Key + Aux. Release)	<b>Sales Number:</b> 528112 (Trapped Key) 528116 (Trapped Key + Aux. Release)

## UGB-NET DIE-CAST (CIP SAFETY) 6-STATION

			
UGB-NET-CS-M (Right Hand)	UGB-NET-CS-M-RR (Right Hand)	UGB-NET-CS-M (Left Hand)	UGB-NET-CS-M-RR (Left Hand)
<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors
<b>6 x Control Devices:</b> Refer to page 9 for ordering information	<b>6 x Control Devices:</b> Refer to page 9 for ordering information	<b>6 x Control Devices:</b> Refer to page 9 for ordering information	<b>6 x Control Devices:</b> Refer to page 9 for ordering information
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<b>Sales Number:</b> (No Auxiliary Release) 528303	<b>Sales Number:</b> (No Auxiliary Release) 528304	<b>Sales Number:</b> (No Auxiliary Release) 528307	<b>Sales Number:</b> (No Auxiliary Release) 528308
<b>Sales Number:</b> (With Trapped Key) Currently Not Available	<b>Sales Number:</b> (With Trapped Key) Currently Not Available	<b>Sales Number:</b> (With Trapped Key) Currently Not Available	<b>Sales Number:</b> (With Trapped Key) Currently Not Available

# CATALOGUE NUMBERS

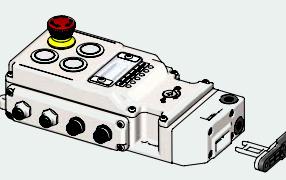
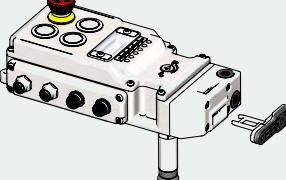
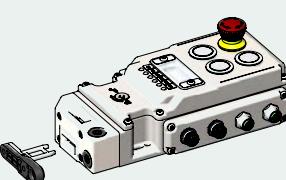
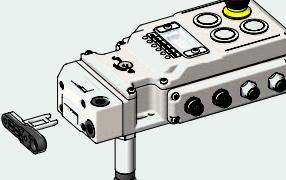
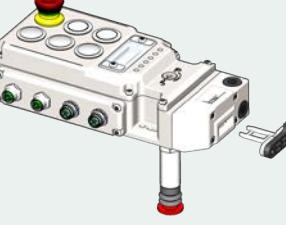
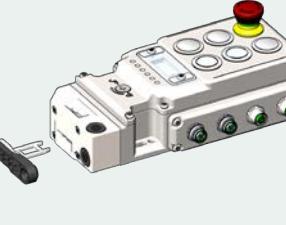
## UGB-NET STAINLESS STEEL (PROFISAFE) 4-STATION

UGB-NET-PS-SS (Right Hand)	UGB-NET-PS-SS-RR (Right Hand)	UGB-NET-PS-SS (Left Hand)	UGB-NET-PS-SS-RR (Left Hand)
<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)	<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)	<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)	<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)
<b>4 x Control Devices:</b> Refer to page 9 for ordering information	<b>4 x Control Devices:</b> Refer to page 9 for ordering information	<b>4 x Control Devices:</b> Refer to page 9 for ordering information	<b>4 x Control Devices:</b> Refer to page 9 for ordering information
<b>Sales Number:</b> (Auxiliary Release) 529001	<b>Sales Number:</b> (Auxiliary Release) 529002	<b>Sales Number:</b> (Auxiliary Release) 529005	<b>Sales Number:</b> (Auxiliary Release) 529006
<b>Sales Number:</b> (No Auxiliary Release) 529003	<b>Sales Number:</b> (No Auxiliary Release) 529004	<b>Sales Number:</b> (No Auxiliary Release) 529007	<b>Sales Number:</b> (No Auxiliary Release) 529008
<b>Sales Number:</b> 529009 (Trapped Key) 529013 (Trapped Key + Aux. Release)	<b>Sales Number:</b> 529010 (Trapped Key) 529014 (Trapped Key + Aux. Release)	<b>Sales Number:</b> 529011 (Trapped Key) 529015 (Trapped Key + Aux. Release)	<b>Sales Number:</b> 529012 (Trapped Key) 529016 (Trapped Key + Aux. Release)

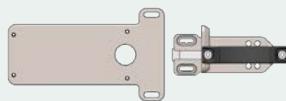
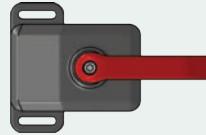
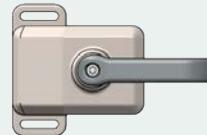
## UGB-NET STAINLESS STEEL (PROFISAFE) 6-STATION

UGB-NET-PS-SS (Right Hand)	UGB-NET-PS-SS-RR (Right Hand)	UGB-NET-PS-SS (Left Hand)	UGB-NET-PS-SS-RR (Left Hand)
<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)	<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)	<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)	<b>Connectors:</b> 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc Connectors)
<b>6 x Control Devices:</b> Refer to page 9 for ordering information	<b>6 x Control Devices:</b> Refer to page 9 for ordering information	<b>6 x Control Devices:</b> Refer to page 9 for ordering information	<b>6 x Control Devices:</b> Refer to page 9 for ordering information
<b>Sales Number:</b> (Auxiliary Release) 529201	<b>Sales Number:</b> (Auxiliary Release) 529202	<b>Sales Number:</b> (Auxiliary Release) 529205	<b>Sales Number:</b> (Auxiliary Release) 529206
<b>Sales Number:</b> (No Auxiliary Release) 529203	<b>Sales Number:</b> (No Auxiliary Release) 529204	<b>Sales Number:</b> (No Auxiliary Release) 529207	<b>Sales Number:</b> (No Auxiliary Release) 529208
<b>Sales Number:</b> (With Trapped Key) Currently Not Available			

# CATALOGUE NUMBERS

UGB-NET STAINLESS STEEL (CIP SAFETY) 4-STATION			
			
UGB-NET-CS-SS (Right Hand)	UGB-NET-CS-SS-RR (Right Hand)	UGB-NET-CS-SS (Left Hand)	UGB-NET-CS-SS-RR (Left Hand)
<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors
<b>4 x Control Devices:</b> Refer to page 9 for ordering information	<b>4 x Control Devices:</b> Refer to page 9 for ordering information	<b>4 x Control Devices:</b> Refer to page 9 for ordering information	<b>4 x Control Devices:</b> Refer to page 9 for ordering information
<b>Sales Number:</b> (Auxiliary Release) 529101	<b>Sales Number:</b> (Auxiliary Release) 529102	<b>Sales Number:</b> (Auxiliary Release) 529105	<b>Sales Number:</b> (Auxiliary Release) 529106
<b>Sales Number:</b> (No Auxiliary Release) 529103	<b>Sales Number:</b> (No Auxiliary Release) 529104	<b>Sales Number:</b> (No Auxiliary Release) 529107	<b>Sales Number:</b> (No Auxiliary Release) 529108
<b>Sales Number:</b> 529109 (Trapped Key) 529113 (Trapped Key + Aux. Release)	<b>Sales Number:</b> 529110 (Trapped Key) 529114 (Trapped Key + Aux. Release)	<b>Sales Number:</b> 529111 (Trapped Key) 529115 (Trapped Key + Aux. Release)	<b>Sales Number:</b> 529112 (Trapped Key) 529116 (Trapped Key + Aux. Release)
UGB-NET STAINLESS STEEL (CIP SAFETY) 6-STATION			
			
UGB-NET-CS-SS (Right Hand)	UGB-NET-CS-SS-RR (Right Hand)	UGB-NET-CS-SS (Left Hand)	UGB-NET-CS-SS-RR (Left Hand)
<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	<b>Connectors:</b> 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors
<b>6 x Control Devices:</b> Refer to page 9 for ordering information	<b>6 x Control Devices:</b> Refer to page 9 for ordering information	<b>6 x Control Devices:</b> Refer to page 9 for ordering information	<b>6 x Control Devices:</b> Refer to page 9 for ordering information
<b>Sales Number:</b> (Auxiliary Release) 529301	<b>Sales Number:</b> (Auxiliary Release) 529302	<b>Sales Number:</b> (Auxiliary Release) 529305	<b>Sales Number:</b> (Auxiliary Release) 529306
<b>Sales Number:</b> (No Auxiliary Release) 529303	<b>Sales Number:</b> (No Auxiliary Release) 529304	<b>Sales Number:</b> (No Auxiliary Release) 529307	<b>Sales Number:</b> (No Auxiliary Release) 529308
<b>Sales Number:</b> (With Trapped Key) Currently Not Available	<b>Sales Number:</b> (With Trapped Key) Currently Not Available	<b>Sales Number:</b> (With Trapped Key) Currently Not Available	<b>Sales Number:</b> (With Trapped Key) Currently Not Available

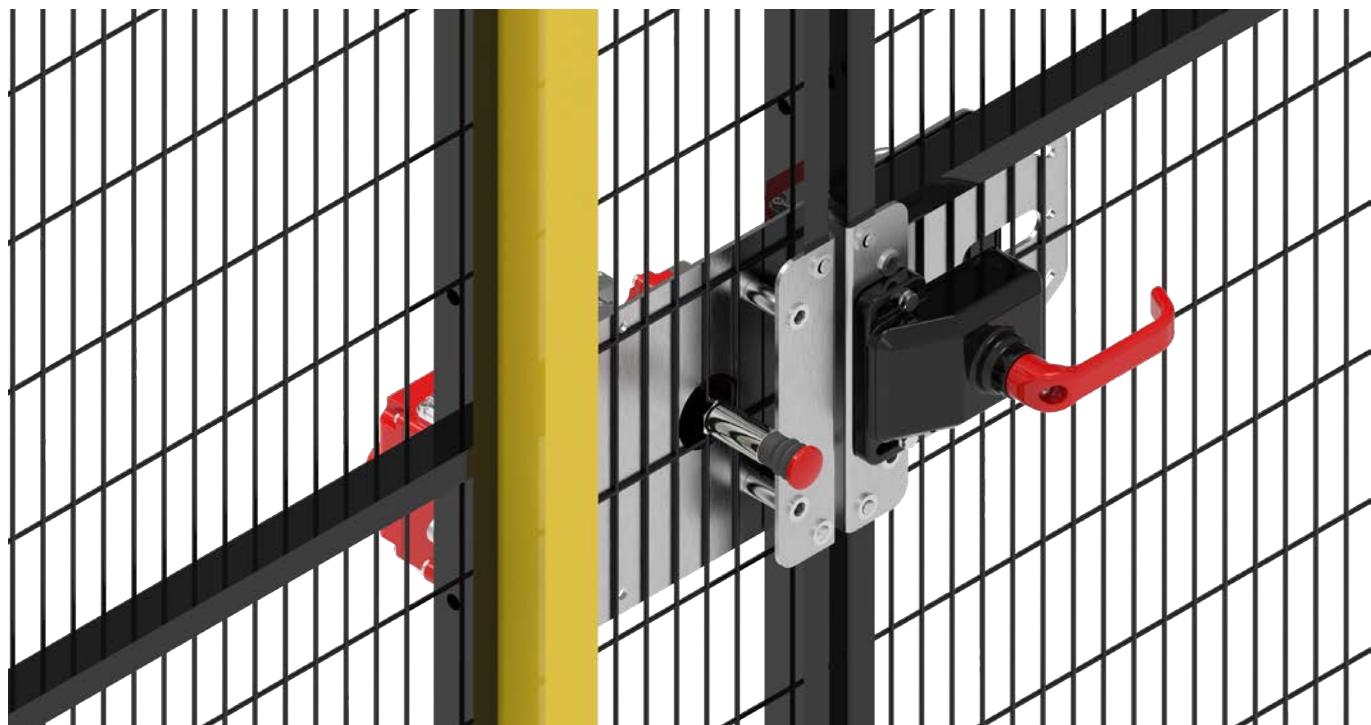
# CATALOGUE NUMBERS

HANDLES AND MOUNTING PLATE ACCESSORIES			
			
SLIDING HANDLE WITH MOUNTING PLATE	ROTARY HANDLE WITH MOUNTING PLATE	SLIDING HANDLE WITH MOUNTING PLATE	ROTARY HANDLE WITH MOUNTING PLATE
<b>Material:</b> Painted Die-Cast	<b>Material:</b> Painted Die-Cast	<b>Material:</b> 316 Stainless Steel	<b>Material:</b> 316 Stainless Steel
<b>Sales Number (Right + Left Hand):</b> 527006	<b>Sales Number (Right Hand):</b> 527007-R	<b>Sales Number (Right + Left Hand):</b> 522006	<b>Sales Number (Right Hand):</b> 522007-R
	<b>Sales Number (Left Hand):</b> 527007-L		<b>Sales Number (Left Hand):</b> 522007-L
REAR ESCAPE HANDLE ACCESSORIES			
			
SLIDING REAR HANDLE	ROTARY REAR HANDLE	ROTARY REAR HANDLE	
<b>Material:</b> Stainless Steel Rod / Plastic Knob	<b>Material:</b> Painted Die-Cast	<b>Material:</b> 316 Stainless Steel	
<b>Sales Number:</b> 210005	<b>Sales Number (Right Hand):</b> 527005-R / 527005-R-140	<b>Sales Number (Right Hand):</b> 522005-R / 522005-R-140	
	<b>Sales Number (Left Hand):</b> 527005-L / 527005-L-140	<b>Sales Number (Left Hand):</b> 522005-L / 522005-L-140	

## BRACKET FOR MODULAR GUARDING

The UGB-NET is fully compatible with modular guarding systems when used with the appropriate mounting bracket.

For more information, please contact our office.



# NET-BOX FEATURES AND BENEFITS



PROFINET

EtherNet/IP



## BENEFITS OF INDUSTRIAL ETHERNET

- ▶ Real-time data exchange for faster and more responsive control.
- ▶ Reduced wiring and hardware simplifies installation and lowers costs.
- ▶ Scalable and flexible architecture supports future expansion.
- ▶ Improved diagnostics and monitoring enable predictive maintenance.

The NET-BOX is a configurable pushbutton and distributed I/O station that communicates with the main industrial network protocols: PROFINET with PROFIsafe and EtherNet/IP with CIP Safety.

Each NET-BOX unit can be configured to your applications specific requirements and can accommodate up to 4 additional connectors for implementing external field devices and distributed I/O. This highly configurable product is compatible with pushbuttons, emergency stops, lamps, selector switches and can easily be configured using our NET-BOX part number diagram.

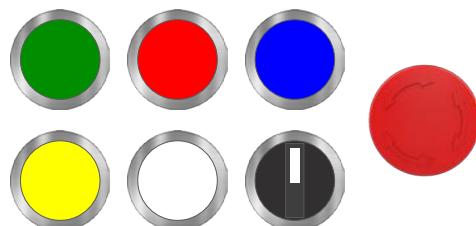
NET-BOX combines machine control functions with I/O for connecting external field devices, reducing cabling cost compared to traditional 'hard-wire' methods. Each module can house up to three dual channel safety inputs; this can include safety interlocks, light curtains, enabling pendants, scanners and much more. There are also up to 40+ non-safe inputs and outputs for pilot devices, stack lights, buzzers and much more.

Unlike a traditional networked I/O block, the NET-BOX can be configured to a specific products making it the perfect solution for customer specific applications in all industries.

## MACHINE CONTROL



A choice of illuminated push buttons, lamps, emergency stops and selector switches can be configured for operator and maintenance control. Legacy labels or text / images can be added to the buttons for easy identification of functionality.

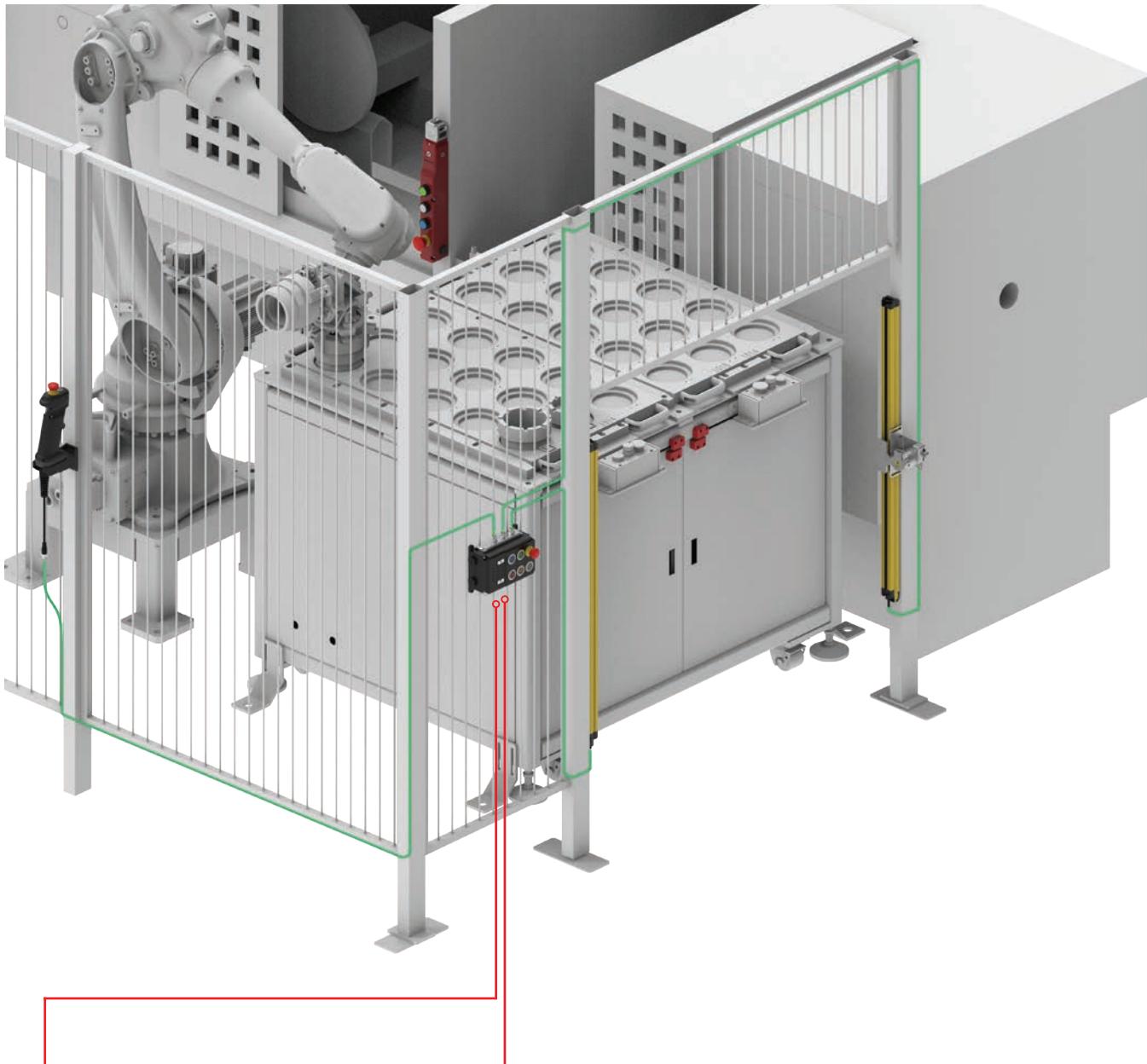


# NET-BOX FOR SMART MANUFACTURING

More companies are starting to seek the benefits of Smart manufacturing in their factories, connecting their automation and control systems to their IT infrastructure via the use of Industrial Ethernet.

Now, factories want to incorporate their safety in the same way.

Making machinery safe often requires a multitude of devices to achieve the correct safety standard, the NET-BOX provides the ability to mix safety and non-safety devices on the same network.



## DATA

The NETBOX features simple to use connectivity for data communication.

- Two Female D-Code M12 Ports.

Special connectors can be used on request. Talk to our technical team for more information.

## POWER

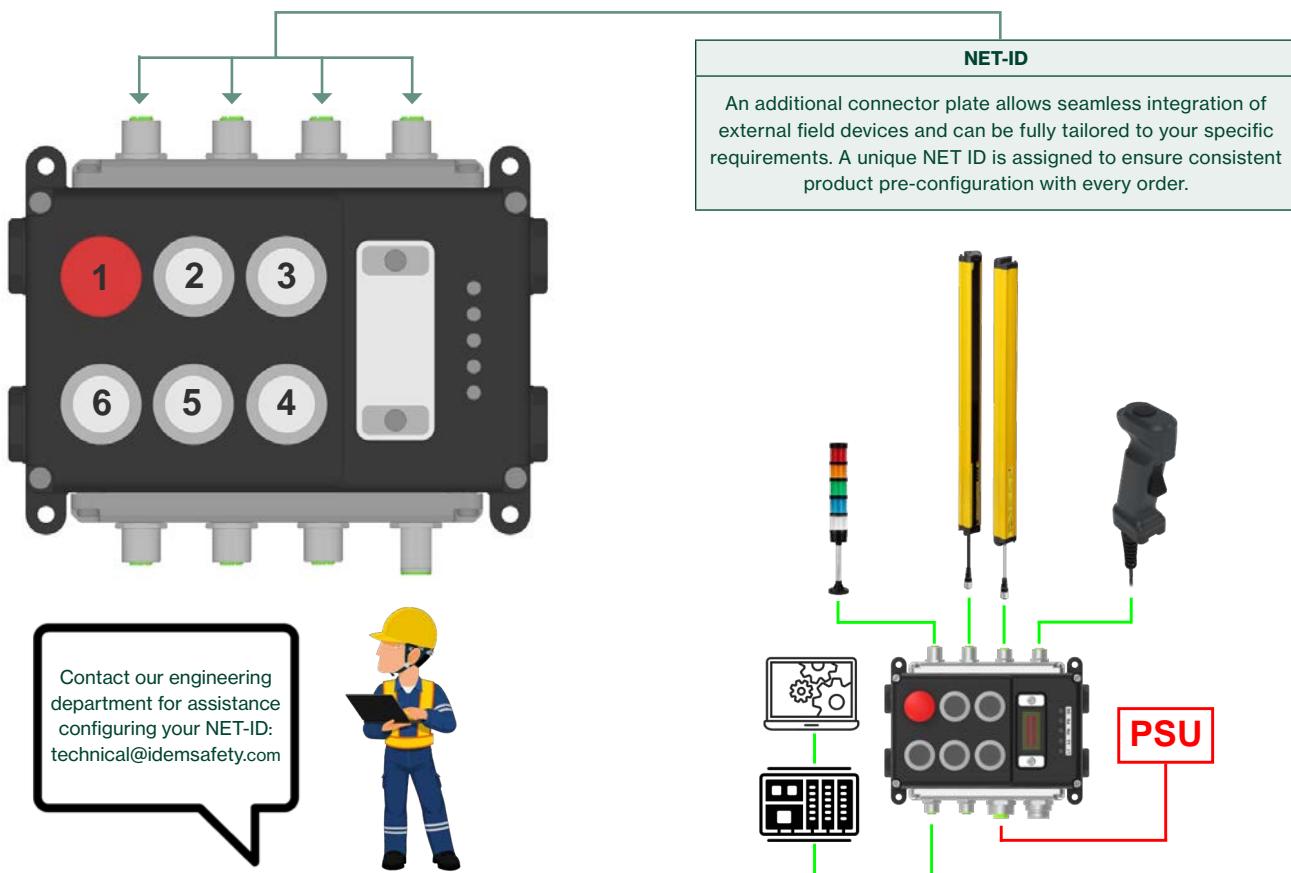
The POWER is supplied via two industry standard connectors.

- PROFISAFE: x1 Female x1 Male 7/8" Connectors
- CIP SAFETY: x1 Female x1 Male M12 Connectors

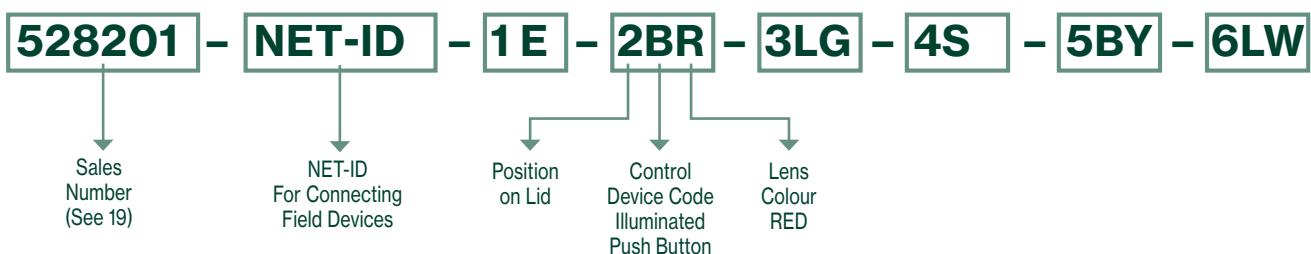
Special connectors can be used on request. Talk to our technical team for more information.

# HOW TO CONFIGURE YOUR NET-BOX

Configuring your NET-BOX is easy with our step-by-step configuration diagram. To make the most of the configurable I/O options, refer to the NET ID section or contact our technical team for expert support.



## PART NUMBER CONFIGURATOR



Illuminated Emergency Stop	
Contacts: 2NC	
Control Device Code	Note
<b>E</b>	E-Stop can only be fitted into Position 1 on Lid

Illuminated Sector Switch	
Control Device Code	Colour Code
<b>S</b>	1NO Maintained
90°	

Illuminated Push Buttons		
Contacts: 1NO		
Control Device Code	Colour Code	Colour of Lens
<b>B</b>	R	●
	B	●
	G	●
	Y	●
	W	○

Lamps		
Control Device Code	Colour Code	Colour of Lens
<b>L</b>	R	●
	B	●
	G	●
	Y	●
	W	○

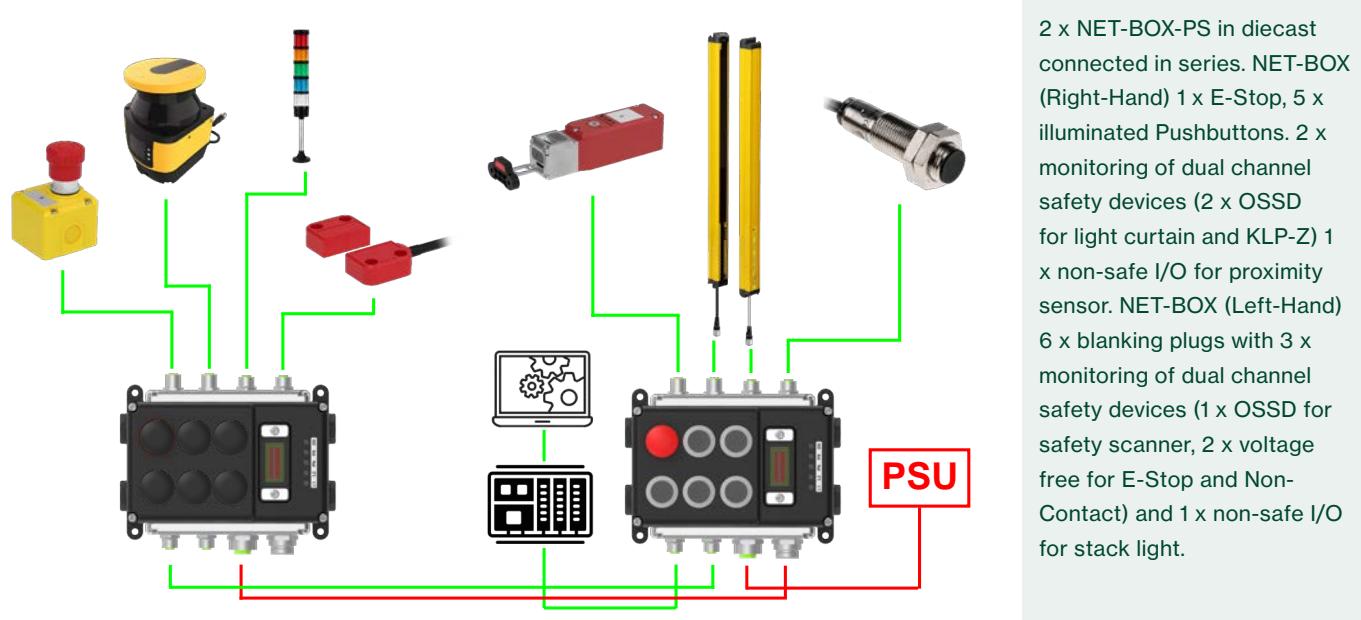
Blanking Plug	
Code	Description
<b>X</b>	Plastic Plug used to seal any unused positions

# HOW TO CONFIGURE YOUR NET-BOX

## NET-BOX SALES NUMBERS

NET-BOX (PROFISAFE)		
530001 NET-BOX PLASTIC PROFISAFE (M20)	531001 NET-BOX DIE-CAST PROFISAFE (M20)	532001 NET-BOX STAINLESS STEEL PROFISAFE (M20)
530002 NET-BOX PLASTIC PROFISAFE (1/2" NPT)	531002 NET-BOX DIE-CAST PROFISAFE (1/2" NPT)	532002 NET-BOX STAINLESS STEEL PROFISAFE (1/2" NPT)
<b>Notes:</b> Comes with external mounting plate installed.	<b>Notes:</b> External mounting points available.	<b>Notes:</b> Designed for wet environments.
NET-BOX (CIP SAFETY)		
530101 NET-BOX PLASTIC CIP SAFETY (M20)	531101 NET-BOX DIE-CAST CIP SAFETY (M20)	532101 NET-BOX STAINLESS STEEL CIP SAFETY (M20)
530102 NET-BOX PLASTIC CIP SAFETY (1/2" NPT)	531102 NET-BOX DIE-CAST CIP SAFETY (1/2" NPT)	532102 NET-BOX STAINLESS STEEL CIP SAFETY (1/2" NPT)
<b>Notes:</b> Comes with external mounting plate installed.	<b>Notes:</b> External mounting points available.	<b>Notes:</b> Designed for wet environments.

## CONNECTIVITY EXAMPLE



# TECHNICAL SPECIFICATION



UGB-NET

Safety	
Standards	ISO 13849-1, IEC 62061, IEC 61508, IEC 60947-5-3, ISO 14119
Safety functions	<b>Guard interlocking</b> complies with the requirements of IEC 60947-5-3. Classified as a type 4 device with high coding acc. to ISO 14119. <b>Guard locking</b> with lock monitoring for person and process protection. <b>Emergency stop</b>
Certifications	CE, TUV, cULus

Safety Data	
Category	4
Performance Level	e
MTTFd	High
DC	99%
Mission Time	20 years
PFHd Guard Locking, Lock Monitoring	7.3 x 10-10 (0.7 % of SIL 3)
PFHd Emergency Stop	2.3 x 10-9 (2.3 % of SIL 3)

Power Supply	
Operating voltage	24 V DC +10%/-15% SELV/PELV acc. to IEC 61131-2 UL – Class 2 Power Supply Functional Earth must be connected.
Current – Normal Operation	200 mA
Current – Peak	650 mA

Device Characteristics	
Actuator coding level	Type 4 (RFID), High

Mechanical Data	
Maximum holding force (F1)	3000 N

Environmental Data	
Storage Temperature	-20°C to 85°C
Operating temperature	-5°C to 40°C
Enclosure Protection	IP 65 (IP69K for Stainless Steel)



NET-BOX

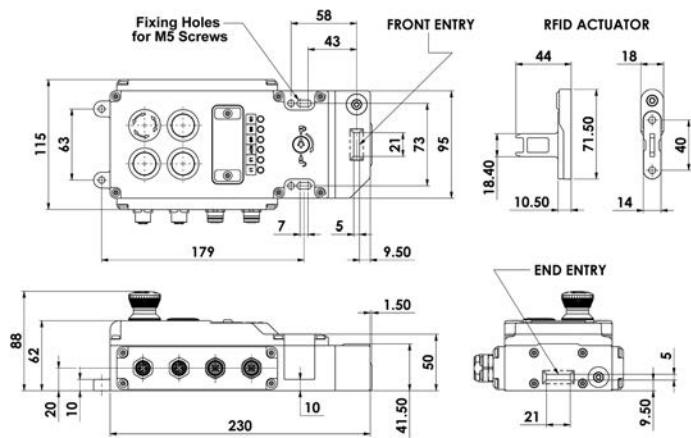
Mechanical Data	
Body Material (Plastic)	PBT
Body Material (Metal)	Die-Cast Painted Black
Body Material (Stainless Steel)	Stainless Steel 316

Environmental Data	
Storage Temperature	-20°C to 85°C
Operating temperature	-5°C to 40°C
Enclosure Protection	IP 65 (IP69K for Stainless Steel)

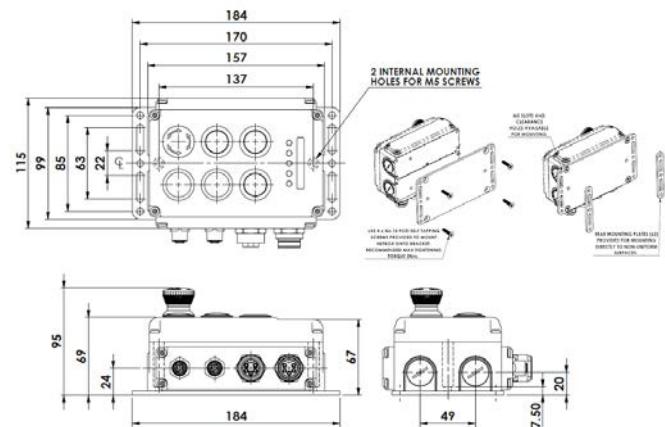
Safety Data	
Category	4
Performance Level	e
MTTFd	High
DC	>99%

# TECHNICAL SPECIFICATION

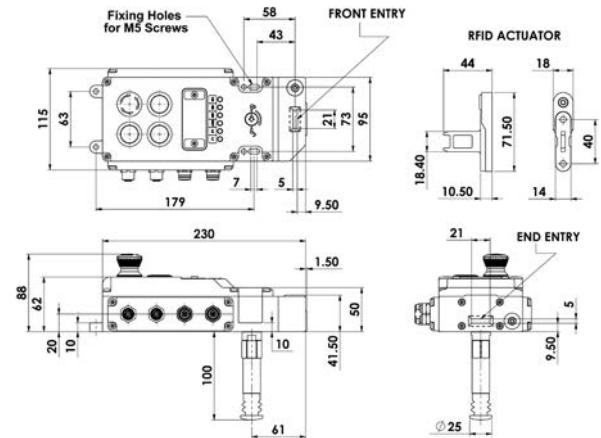
## TECHNICAL DRAWINGS



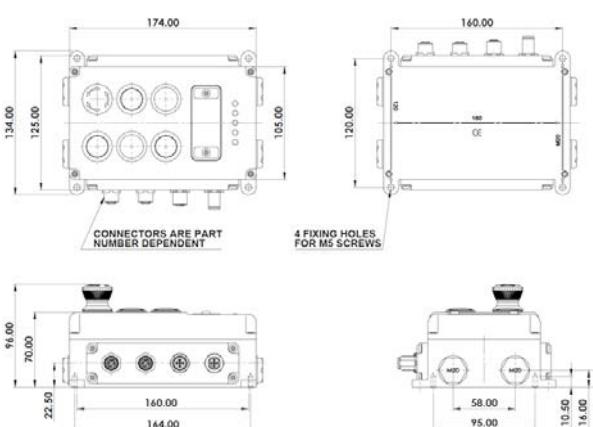
UGB-NET



NET-BOX PLASTIC + STAINLESS STEEL



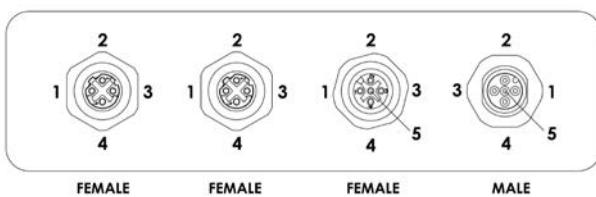
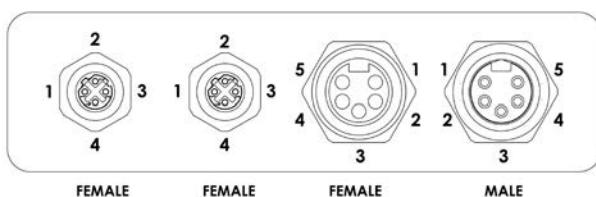
UGB-NET-RR



NET-BOX DIECAST

## CONNECTION PLATE

See default connectivity layouts below. If you have a different requirement, these can be configured to your specification.

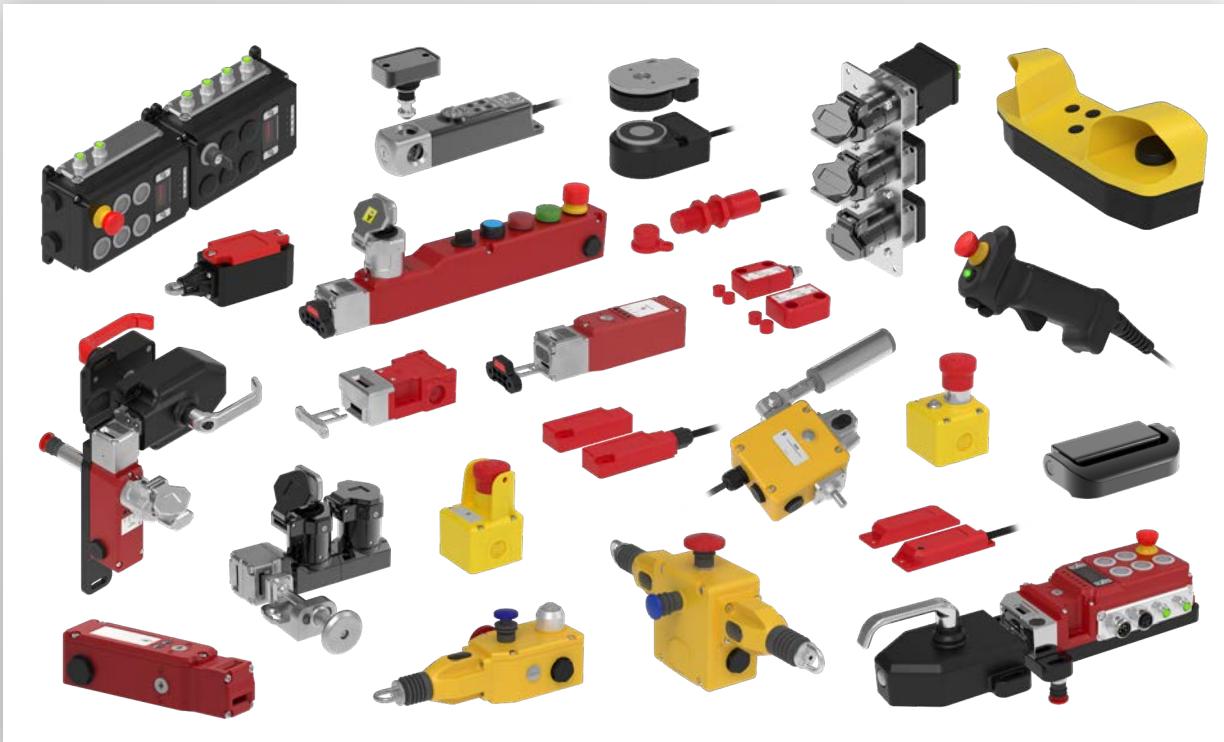


Power - PROFINET/ PROFIsafe			
Port C FEMALE 7/8" 5-Pin	Port D MALE 7/8" 5-Pin	Function	
1	1	0V dc	
2	2	0V dc	
3	3	Earth (Case)	
4	4	+24 dc supply	
5	5	+24 dc supply	

Power - Ethernet/IP CIP Safety		
Port C M12 FEMALE 5-Pin A Code	Port D M12 MALE Pin-5 A Code	Function
1	1	+24 dc supply
2	2	0V dc
3	3	0V dc
4	4	+24 dc supply
5	5	Earth (Case)

# IDEIM Safety Switches

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WN2 4HR

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