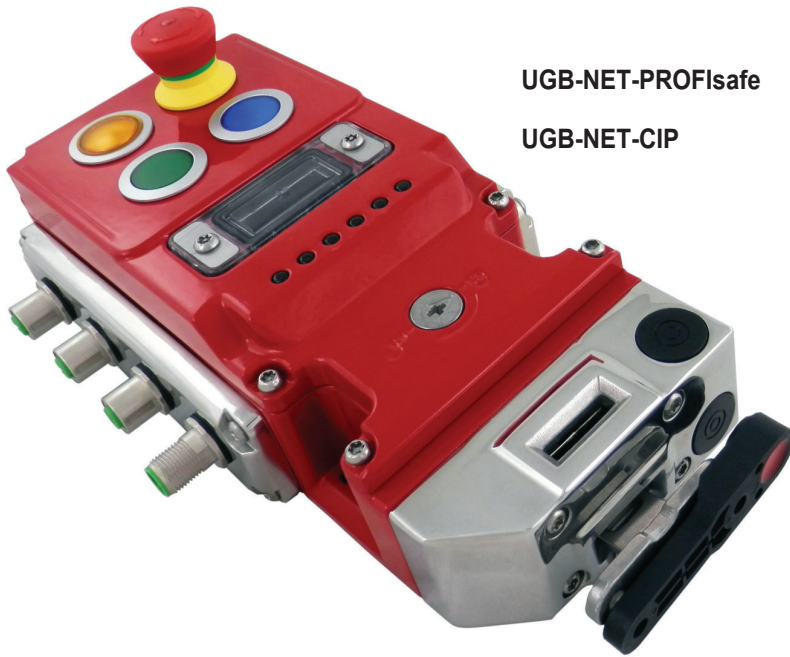# UGB-NET Gate Box with Integrated Safety Protocols (CIP Safety/PROFIsafe)

FEATURES & APPLICATION:

UGB-NET-PROFIsafe

UGB-NET-CIP

Integrated safety protocols for use with industry recognised industrial Ethernet networking capabilities.

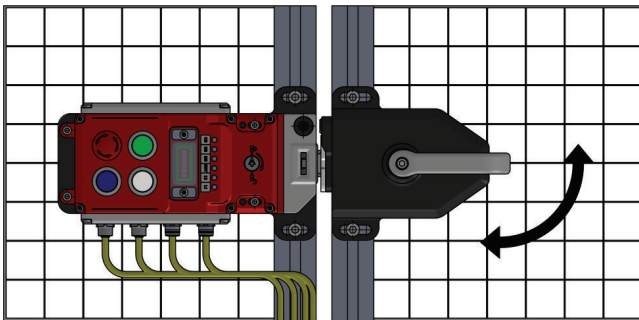Ethernet/IP (CIP Safety) or PROFINET (PROFIsafe).

Application:
IDEM's Universal Gate Boxes (UGB-NET) provide high level RFID coded interlocking and machine control functions in one heavy duty housing.
They can be easily fitted to access doors to provide guard locking, rear escape options and sliding or rotary handles.

They reduce the risk of operators being trapped inside a guarded area.

They incorporate standard machine request or control buttons and indicator lamps in an all-in-one machine safety device.

Features:

● Choice of integrated Ethernet CIP Safety or PROFIsafe versions.

● Choice of pluggable connections for quick connection (M12 or 7/8")

● Network address assignment set by DIP switches for simple and easy set up.

● Compact housing – less than 250mm long (10 inches) and 115mm (4.5 inches).

● End or front actuator insertion for flexibility of mounting.
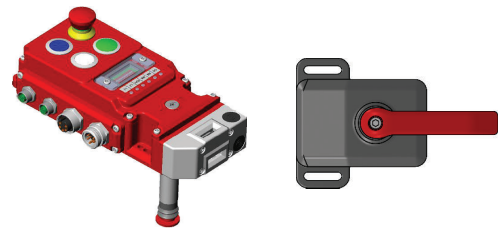
● Optional Rotary Front Handles and Rear Escape Handles.

● The UGB-NET has both RFID guard interlocking technology and electronic lock monitoring technology using a traditional tongue and cam mechanism to hold the guard closed.

● Daisy chain power and network connections (in/out).

● Choice of standard machine function buttons/lamps or custom configurable (E Stops, Start, Stop, Indication).

● Easy to mount painted solid die-cast or Stainless Steel 316 housings.

● Holds guards closed and locked up to 3000N.

● RFID uniquely coded for high coding anti-tamper.

Shown below fitted to a Right Hand door with Front Rotary Handle.

Network address set by DIP switches

Shown below with optional Rotary Front Handle and Rear Escape Handle.

TECHNICAL SPECIFICATIONS:

E-Stop, Lamps & Illuminated Push Buttons (5 different lens colours offered)
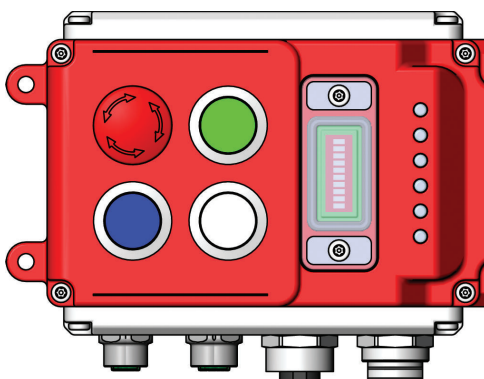
LED diagnostic for ease of status

Choice of M12 or 7/8" quick disconnect (or customer specific)

Standards:	ISO14119 EN60947-5-3
	ISO13849-1 IEC62061

Safety Classification and Reliability Data:

Supply Voltage	24Vdc (+/- 10%) SELV/PELV
Power Consumption	1A (max)
Connector Option A	Data: 2 x M12 D Code 4 pin
	Power: 2 x M12 A Code 5 pin
Connector Option B	Data: 2 x M12 D Code 4 pin
	Power: 2 x 7/8" 5 pin
Safety Outputs	CIP Safety or PROFIsafe
Performance Level Category	PLe/Cat4
Rated Insulation Voltage	250V
Holding Force (ISO14119)	F1Max 3000N Fzh 2307N
Actuator insertion distance	5mm for assured locking
Sao Sar (RFID sensing)	Sao 5mm Sar 20mm
Operating Frequency	1Hz
Body Material	Die-cast painted red or Stainless Steel 316
Head/Actuator Material	Polished Stainless Steel 316
Enclosure Protection	IP65
Operating Temperature	-25C +40C

UGB-NET Gate Box with Integrated Safety Protocols (CIP Safety/PROFIsafe)

Standard Connector options (customs versions are available)
OPTION A (Ethernet/IP CIP Safety)

(2 x 4 Pin M12 'D' Code for Data)   (2 x 5 Pin M12 'A' Code for Power)

Ethernet /IP CIP Safety

FEMALE   FEMALE   FEMALE   MALE

DATA		
Port A M12 FEMALE 4 Pin 'D' Code	Port B M12 FEMALE 4 Pin 'D' Code	Function
1	1	TX +
2	2	RX +
3	3	TX -
4	4	RX -
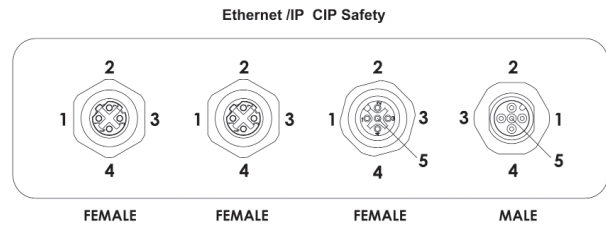
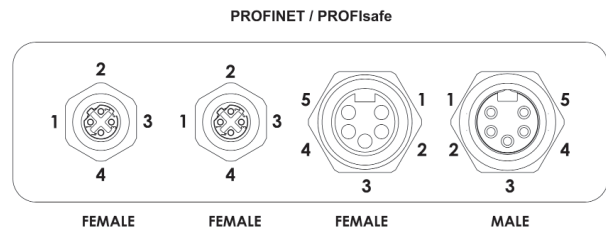| POWER		
Port C M12 FEMALE 5 Pin 'A' Code	Port D M12 MALE 5 Pin 'A' Code	Function
1	1	+24V dc supply
2	2	0V dc
3	3	0V dc
4	4	+24V dc supply
5	5	Earth (case)

Pins 1 and 4 internally connected. Pins 2 and 3 internally connected.

OPTION B (PROFINET/PROFIsafe)

(2 x 4 Pin M12 'D' Code for Data)   (2 x 5 Pin 7/8" for Power)

PROFINET / PROFIsafe

FEMALE   FEMALE   FEMALE   MALE

DATA		
Port A M12 FEMALE 4 Pin 'D' Code	Port B M12 FEMALE 4 Pin 'D' Code	Function
1	1	TX +
2	2	RX +
3	3	TX -
4	4	RX -

POWER		
Port C 7/8" FEMALE 5 Pin	Port D 7/8" MALE 5 Pin	Function
1	1	0V dc
2	2	0V dc
3	3	Earth (case)
4	4	+24V dc supply
5	5	+24V dc supply

Pins 1 and 2 internally connected. Pins 4 and 5 internally connected.

ACCESSORIES FOR ROTARY FRONT HANDLES & REAR ROTARY ESCAPE HANDLES:

UGB-NET Sliding Front Handle and Mounting Plate	Rear Sliding Handle (for use with RR versions and Sliding Front Handles)	Optional Spring Catch to prevent accidental re-closing of Sliding Front Handles
SALES NUMBER	**SALES NUMBER**	**SALES NUMBER**
UGB-NET-SFH-M (Die Cast)	**REAR HANDLE (Die Cast)**	**SPRING CATCH (Die Cast)**
527006	210005	210006

Rotary Front Handle and Mounting Plate	Rear Escape Rotary Handle
SALES NUMBER	**SALES NUMBER**
UGB-NET-RFH-M (Die Cast)	**UGB-RERH-M (Die Cast)**
527007	527005

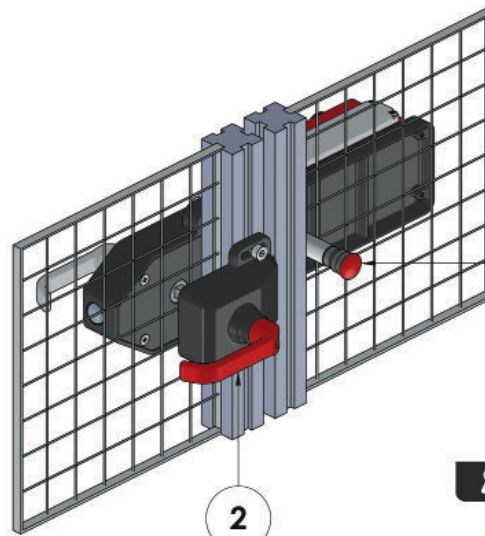# UGB-NET Gate Box with Integrated Safety Protocols (CIP Safety/PROFIsafe)

APPLICATION EXAMPLE:

UGB-NET-PROFIsafe/UGB-NET-CIP shown with Front Rotary Handle, Rear Escape Button and Rear Escape Rotary Handle.

VIEWED FROM OUTSIDE GUARDED AREA
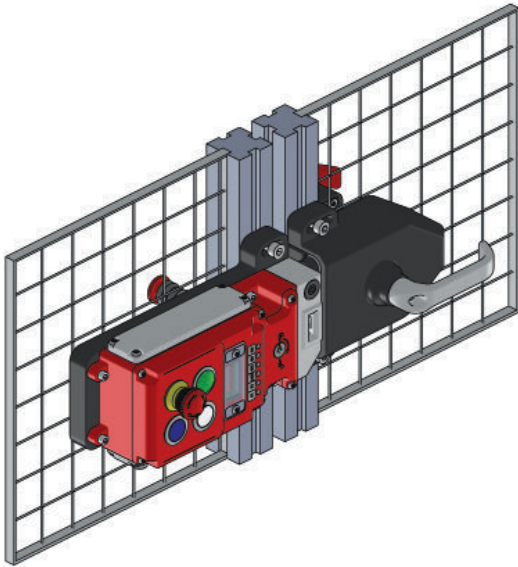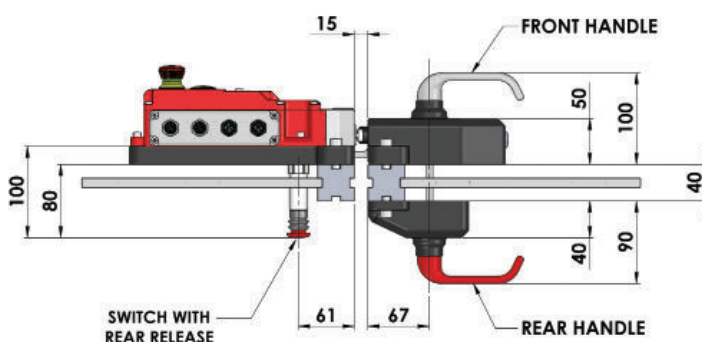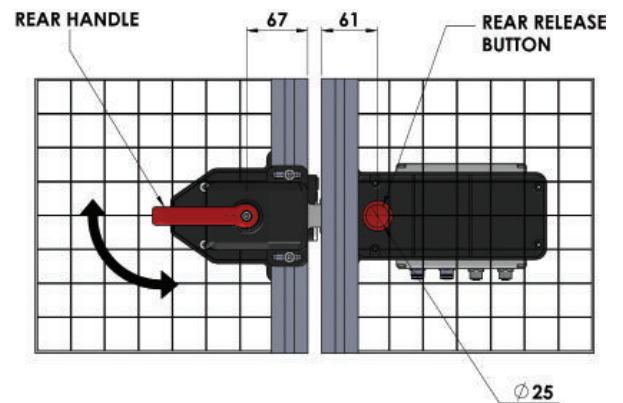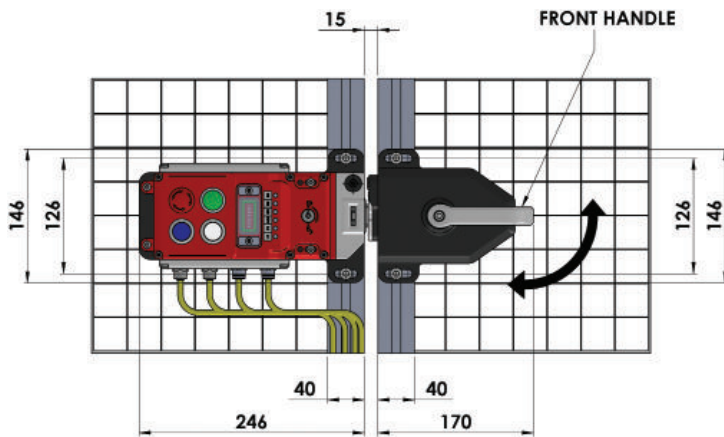
VIEWED FROM INSIDE GUARDED AREA

1 PRESS AND HOLD REAR RELEASE BUTTON

TO OPEN USING REAR HANDLE

2 TURN REAR HANDLE ANTI-CLOCKWISE

15 FRONT HANDLE

REAR HANDLE 67 61 REAR RELEASE BUTTON

146 126 126 146

40 40

246 170

Ø 25

15 FRONT HANDLE

50 100

100 80 40
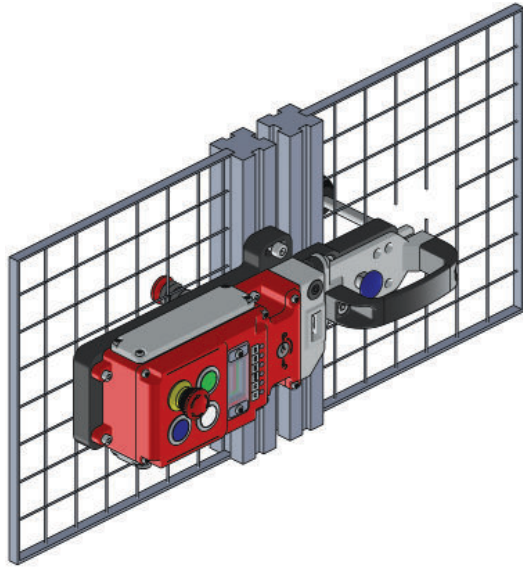
40 90

SWITCH WITH REAR RELEASE 61 67 REAR HANDLE

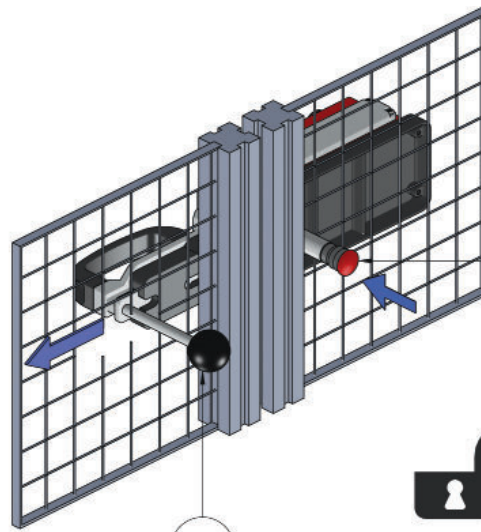# UGB-NET Gate Box with Integrated Safety Protocols (CIP Safety/PROFIsafe)

APPLICATION EXAMPLE:

UGB-NET-PROFIsafe/UGB-NET-CIP shown with Sliding Front Handle, Rear Escape Button and Rear Escape Sliding Handle.

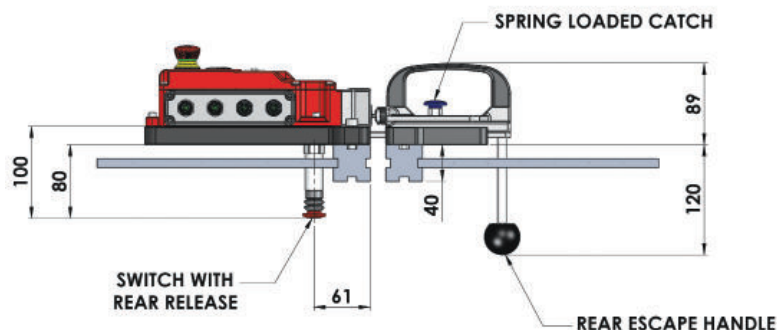**VIEWED FROM OUTSIDE GUARDED AREA**

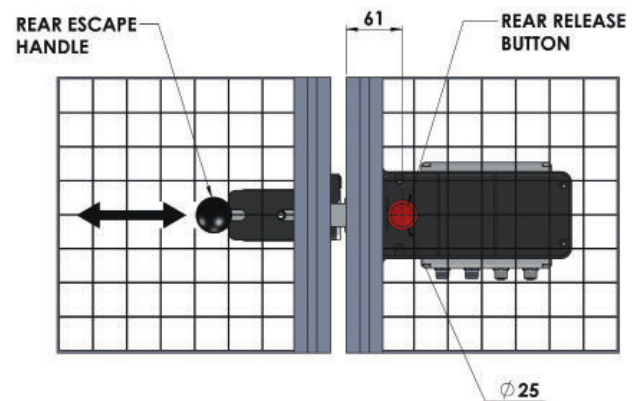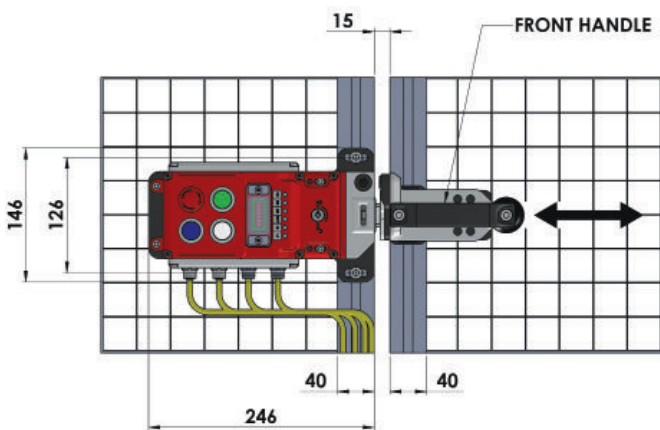**VIEWED FROM INSIDE GUARDED AREA**

1 PRESS AND HOLD REAR RELEASE BUTTON

TO OPEN USING REAR ESCAPE HANDLE

2 PULL REAR ESCAPE SLIDING HANDLE

15 FRONT HANDLE

146

126

40 40

246

REAR ESCAPE HANDLE

61 REAR RELEASE BUTTON

Ø 25

SPRING LOADED CATCH
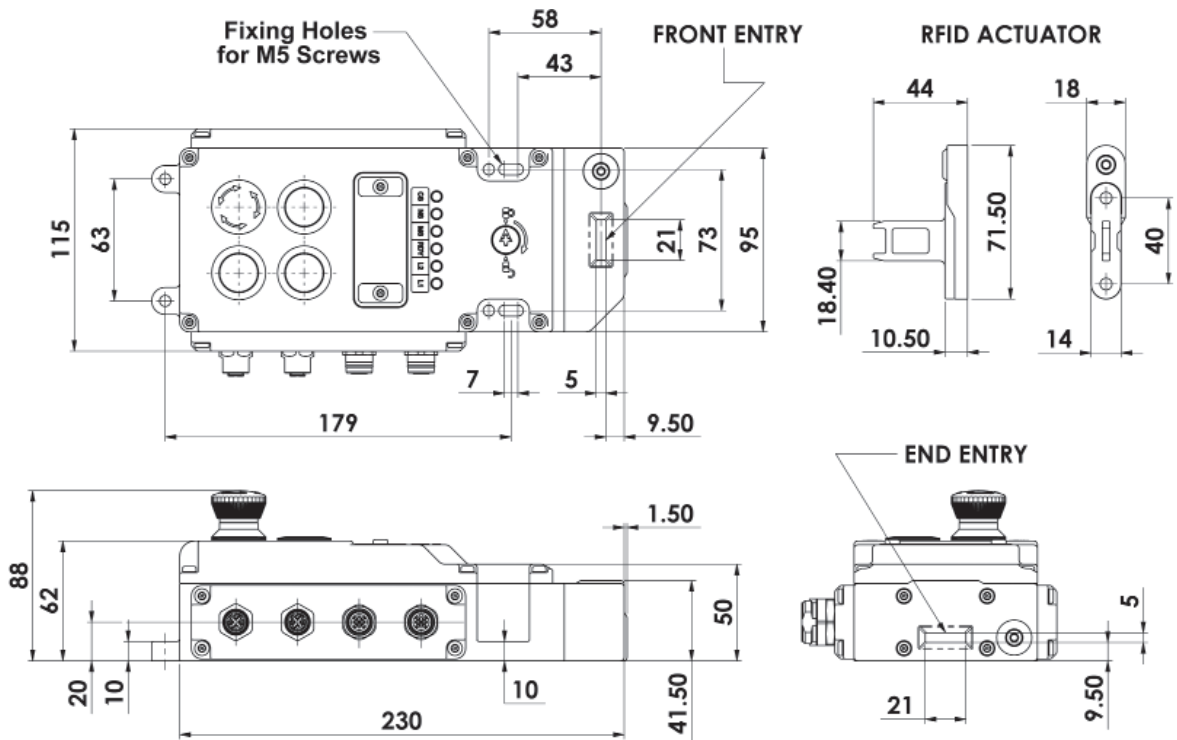
89

100

80

40

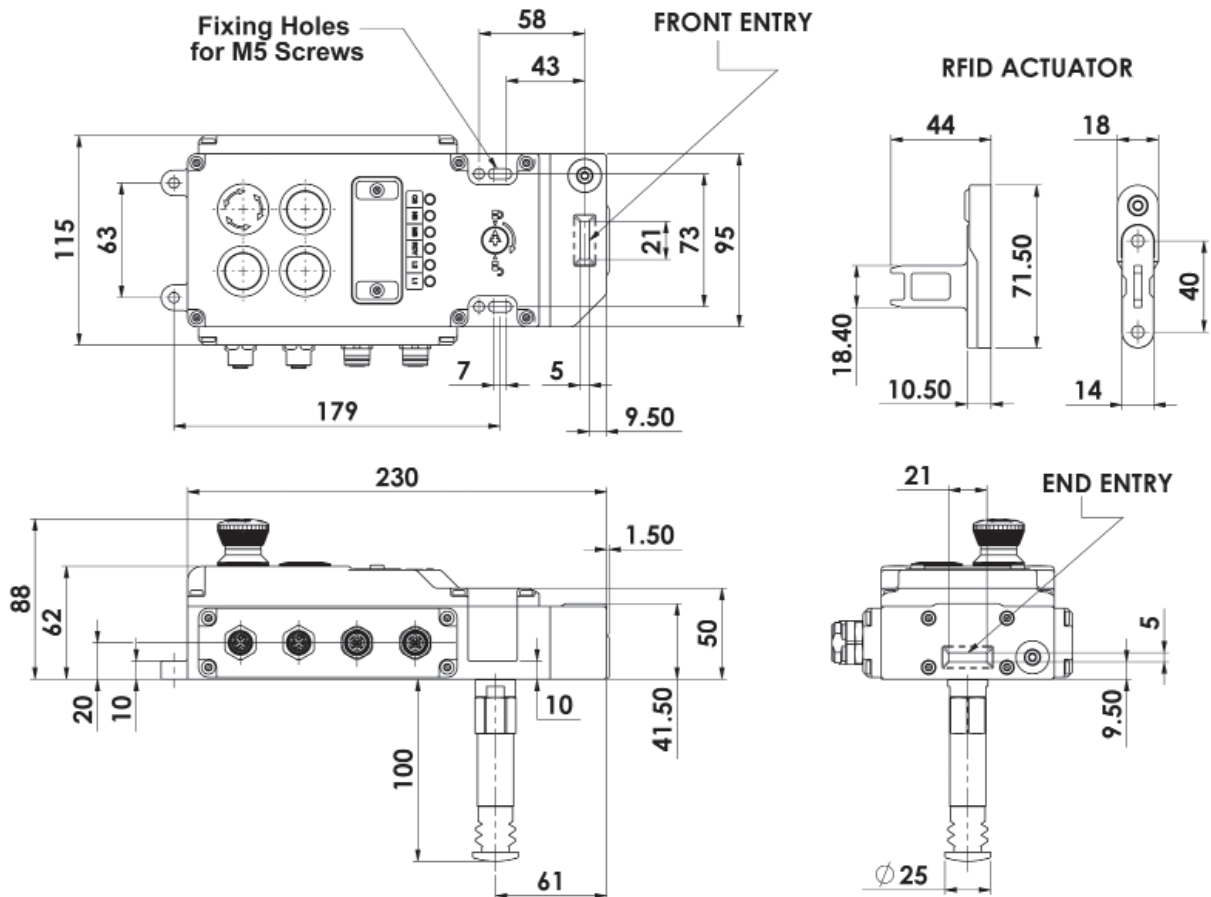120

SWITCH WITH REAR RELEASE

61

REAR ESCAPE HANDLE

UGB-NET Gate Box with Integrated Safety Protocols (CIP Safety/PROFIsafe)

PRODUCT DIMENSIONS:
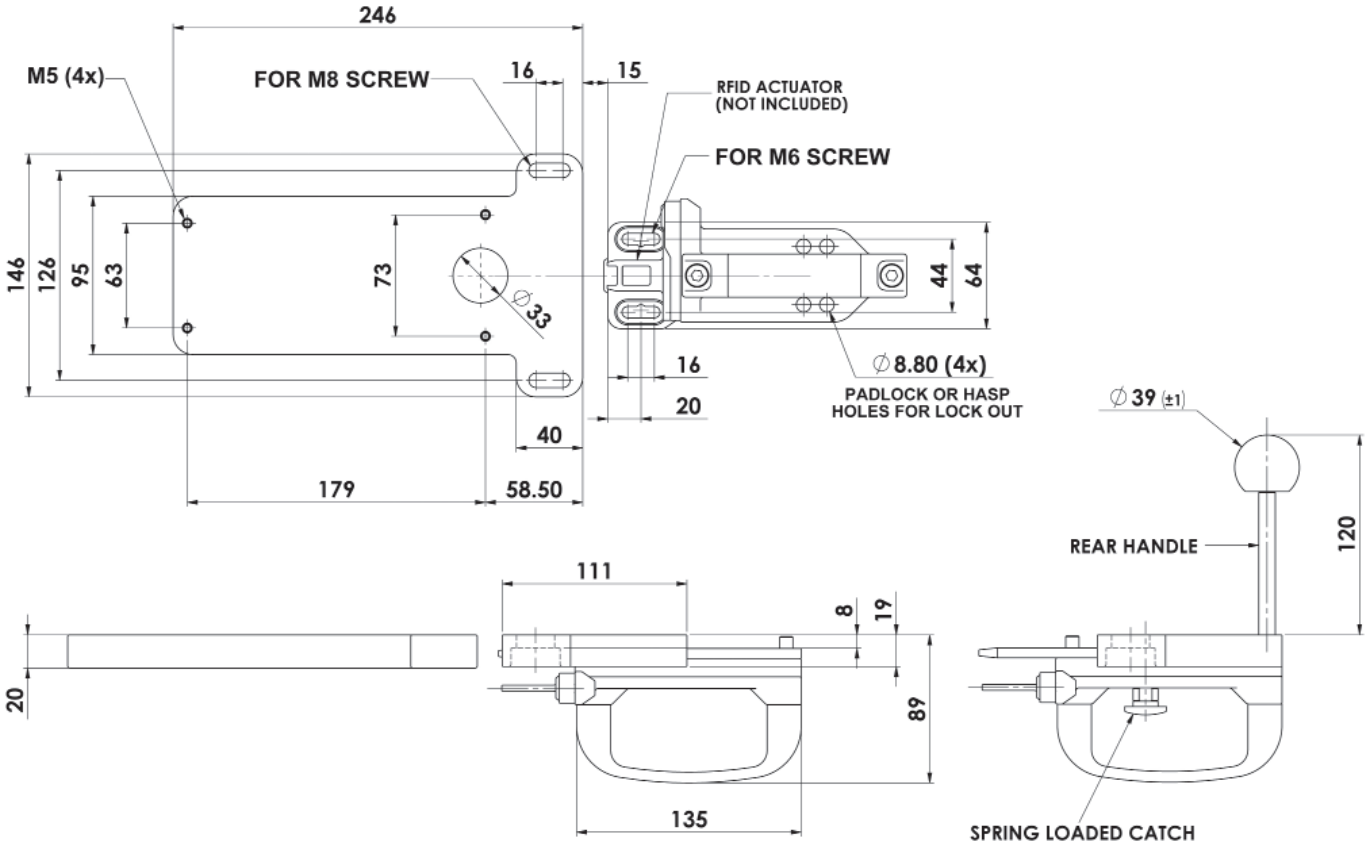
TYPE: UGB-NET

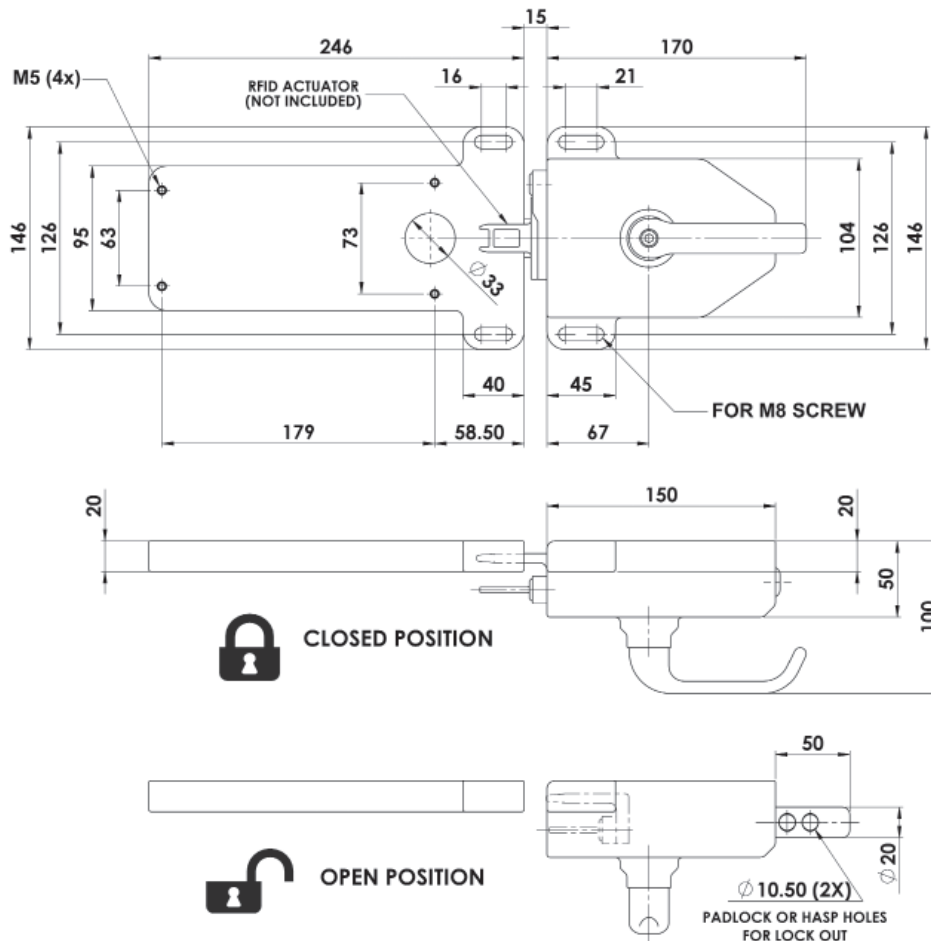

TYPE: UGB-NET-RR (Rear Release)

UGB-NET Gate Box with Integrated Safety Protocols (CIP Safety/PROFIsafe)

PRODUCT DIMENSIONS:

TYPE : UGB-NET SLIDING HANDLE

M5 (4x)
FOR M8 SCREW
RFID ACTUATOR (NOT INCLUDED)
FOR M6 SCREW
246 / 16 / 15
146 / 126 / 95 / 63 / 73
Ø 33
44 / 64
16 / 20
Ø 8.80 (4x)
PADLOCK OR HASP HOLES FOR LOCK OUT
179 / 58.50 / 40
Ø 39 (±1)
REAR HANDLE
120
20
111 / 8 / 19 / 89
135
SPRING LOADED CATCH

TYPE : UGB-NET ROTARY HANDLE

M5 (4x)
RFID ACTUATOR (NOT INCLUDED)
15 / 246 / 16 / 170 / 21
146 / 126 / 95 / 63 / 73
Ø 33
104 / 126 / 146
179 / 58.50 / 40 / 45 / 67
FOR M8 SCREW

20 / 150 / 20
50 / 100

CLOSED POSITION

OPEN POSITION

50
20
Ø 10.50 (2X)
PADLOCK OR HASP HOLES FOR LOCK OUT

UNIVERSAL GATE BOXES AND GATE BOLTS FOR IDEM SWITCHES
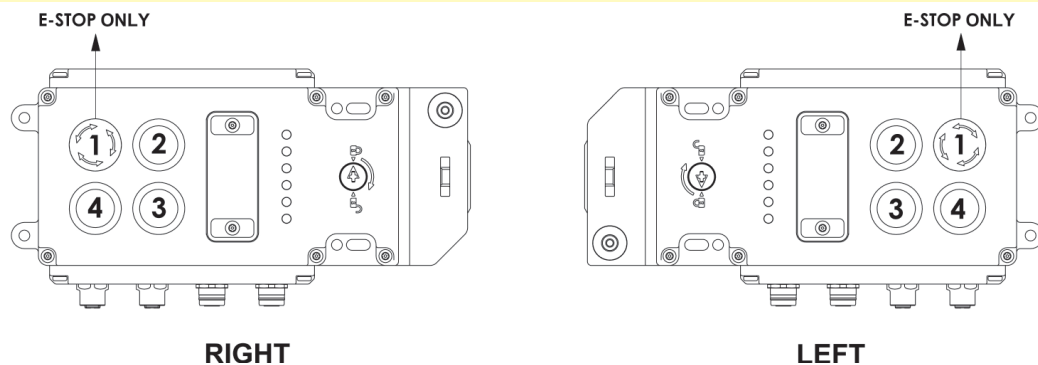
UGB-NET Gate Box with Integrated Safety Protocols (CIP Safety/PROFIsafe)

UGB-NET-PS (PROFIsafe) GATE BOX SWITCHES SALES NUMBERS:

Note: ALL UGB-NET Gate Boxes are supplied complete with RFID coded tongue actuator. These can be fitted directly where no rear escape or rotary handles are preferred.

| TYPE: UGB-NET-M-PS (RIGHT HAND)	TYPE: UGB-NET-M-PS-RR (RIGHT HAND)	TYPE: UGB-NET-M-PS (LEFT HAND)	TYPE: UGB-NET-M-PS-RR (LEFT HAND)
PROFISAFE	PROFISAFE	PROFISAFE	PROFISAFE
Connectors: 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc) Connectors	Connectors: 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc) Connectors	Connectors: 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc) Connectors	Connectors: 2 x M12 Data Connectors 2 x 7/8" Power (24Vdc) Connectors
4 x Control Devices*: Illuminated Emergency Stop (x1) Illuminated Push Buttons Lamps Illuminated Selector Switches	4 x Control Devices*: Illuminated Emergency Stop (x1) Illuminated Push Buttons Lamps Illuminated Selector Switches	4 x Control Devices*: Illuminated Emergency Stop (x1) Illuminated Push Buttons Lamps Illuminated Selector Switches	4 x Control Devices*: Illuminated Emergency Stop (x1) Illuminated Push Buttons Lamps Illuminated Selector Switches
SALES NUMBER (Manual Override)	SALES NUMBER (Manual Override)	SALES NUMBER (Manual Override)	SALES NUMBER (Manual Override)
528001	528002	528251	528252
SALES NUMBER (No Manual Override)	SALES NUMBER (No Manual Override)	SALES NUMBER (No Manual Override)	SALES NUMBER (No Manual Override)
528003	528004	528253	528254
*For control devices and lens colours of Push Buttons, Lamps and Selector Switches please refer to the tables below explaining ordering system.	*For control devices and lens colours of Push Buttons, Lamps and Selector Switches please refer to the tables below explaining ordering system.	*For control devices and lens colours of Push Buttons, Lamps and Selector Switches please refer to the tables below explaining ordering system.	*For control devices and lens colours of Push Buttons, Lamps and Selector Switches please refer to the tables below explaining ordering system.

POSITIONS ON LID:

RIGHT   **LEFT**

PART NUMBER AND POSITIONS ORDERING EXAMPLE:

Customer requirement:

UGB-NET-M-PS (Right Hand) PROFIsafe with manual release. Note: Position 1 on lid is always Illuminated Emergency Stop.
To include: 1 x Illuminated Emergency Stop + 1 x RED Illuminated Push Button + 1 x GREEN Lamp + 1 x Illuminated Selector Switch

528001 - 1E - 2BR - 3LG - 4S

Switch | Position on Lid | Control Device Code Illuminated Push Button | Lens Colour RED
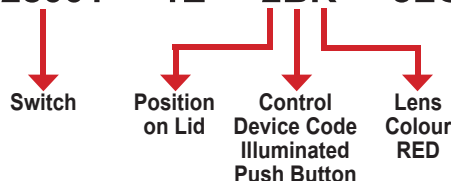
Illuminated Emergency Stop		Illuminated Push Buttons			Lamps			Illuminated Selector Switch		Blanking Plug	
Contacts: 2NC		Contacts: 1NO									
Control Device Code	Note	Control Device Code	Colour Code	Colour of Lens	Control Device Code	Colour Code	Colour of Lens	Control Device Code	Description	Code	Description
E	E-Stop can only be fitted into Position 1 on Lid	B	R B G Y W	🔴 🔵 🟢 🟡 ⚪	L	R B G Y W	🔴 🔵 🟢 🟡 ⚪	S	1NO Maintained 90°	X	Plastic Plug used to seal any unused positions.

UGB-NET Gate Box with Integrated Safety Protocols (CIP Safety/PROFIsafe)

UGB-NET-CIP (Ethernet/IP CIP Safety) GATE BOX SWITCHES SALES NUMBERS:

Note: ALL UGB-NET Gate Boxes are supplied complete with RFID coded tongue actuator. These can be fitted directly where no rear escape or rotary handles are preferred.

TYPE: UGB-NET-M-CIP (RIGHT HAND)	TYPE: UGB-NET-M-CIP-RR (RIGHT HAND)	TYPE: UGB-NET-M-CIP (LEFT HAND)	TYPE: UGB-NET-M-CIP-RR (LEFT HAND)
CIP Safety	**CIP Safety**	**CIP Safety**	**CIP Safety**
Connectors: 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	**Connectors:** 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	**Connectors:** 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors	**Connectors:** 2 x M12 Data Connectors 2 x M12 Power (24Vdc) Connectors
4 x Control Devices*: Illuminated Emergency Stop (x1) Illuminated Push Buttons Lamps Illuminated Selector Switches	**4 x Control Devices*:** Illuminated Emergency Stop (x1) Illuminated Push Buttons Lamps Illuminated Selector Switches	**4 x Control Devices*:** Illuminated Emergency Stop (x1) Illuminated Push Buttons Lamps Illuminated Selector Switches	**4 x Control Devices*:** Illuminated Emergency Stop (x1) Illuminated Push Buttons Lamps Illuminated Selector Switches
SALES NUMBER (Manual Override)	**SALES NUMBER (Manual Override)**	**SALES NUMBER (Manual Override)**	**SALES NUMBER (Manual Override)**
528501	528502	528751	528752
SALES NUMBER (No Manual Override)	**SALES NUMBER (No Manual Override)**	**SALES NUMBER (No Manual Override)**	**SALES NUMBER (No Manual Override)**
528503	528504	528753	528754
*For control devices and lens colours of Push Buttons, Lamps and Selector Switches please refer to the tables below explaining ordering system.	*For control devices and lens colours of Push Buttons, Lamps and Selector Switches please refer to the tables below explaining ordering system.	*For control devices and lens colours of Push Buttons, Lamps and Selector Switches please refer to the tables below explaining ordering system.	*For control devices and lens colours of Push Buttons, Lamps and Selector Switches please refer to the tables below explaining ordering system.

POSITIONS ON LID:

RIGHT

LEFT

E-STOP ONLY

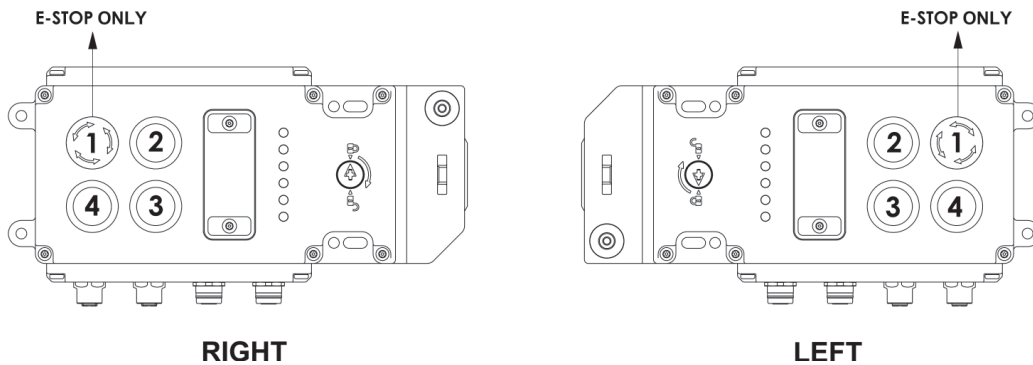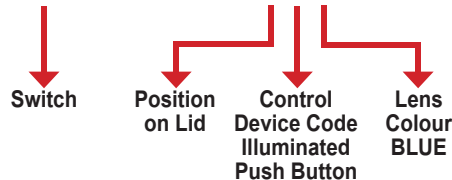## PART NUMBER AND POSITIONS ORDERING EXAMPLE:

Customer requirement:
UGB-NET-M-CIP (Right Hand) CIP safety with manual release. Note: Position 1 on lid is always Illuminated Emergency Stop.
To include: 1 x Illuminated Emergency Stop + 1 x BLUE Illuminated Push Button + 1 x GREEN Lamp + 1 x Illuminated Selector Switch

528501 - 1E - 2BB - 3LG - 4S

Switch — Position on Lid — Control Device Code Illuminated Push Button — Lens Colour BLUE

Illuminated Emergency Stop

Contacts: 2NC

Control Device Code	Note
E	E-Stop can only be fitted into Position 1 on Lid

Illuminated Push Buttons

Contacts: 1NO

Control Device Code	Colour Code	Colour of Lens
B	R	🔴
	B	🔵
	G	🟢
	Y	🟡
	W	⚪

Lamps

Control Device Code	Colour Code	Colour of Lens
L	R	🔴
	B	🔵
	G	🟢
	Y	🟡
	W	⚪

Illuminated Selector Switch

Control Device Code	Description
S	1NO Maintained 90°

Blanking Plug

Code	Description
X	Plastic Plug used to seal any unused positions.