

# LIFT TECHNOLOGY



**SAFETY SOLUTIONS**  
**build the future**



**GIOVENZANA**  
INTERNATIONAL B.V.

REV. 00\_2019

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All the images contained in this catalog are purely for explanatory purposes.

The most up-to-date version of this catalogue can be downloaded from the download section of the website:

[www.giovenzana.com](http://www.giovenzana.com)



LET US  
TAKE YOU  
**HIGHER**  
WITH OUR

**SAFETY**  
SOLUTIONS





### LONG TRADITION OF EXPERTISE

Giovenzana International B.V. is set up in 1952.

We are a historical company which designs and manufactures lifts components mostly for the industrial fields.

We study technical and bespoke solutions thanks to designing ability and manufacturing flexibility.

Our high quality products are studied, produced and assembled in our manufacturing warehouses in Italy and in Hungary.

We can guarantee to every customer the complete control of our products' quality being able to satisfy today's market needs.

Our main features are a strong international attitude and the will to innovate and accomplish customer's requests.

The wide variety of proposed products, together with our R&D department knowledge, allow us to satisfy even the most specific and unusual situations.

Giovenzana International B.V. technical and commercial employees aim to provide a full support to our clients during sales and aftersales processes.

### MISSION

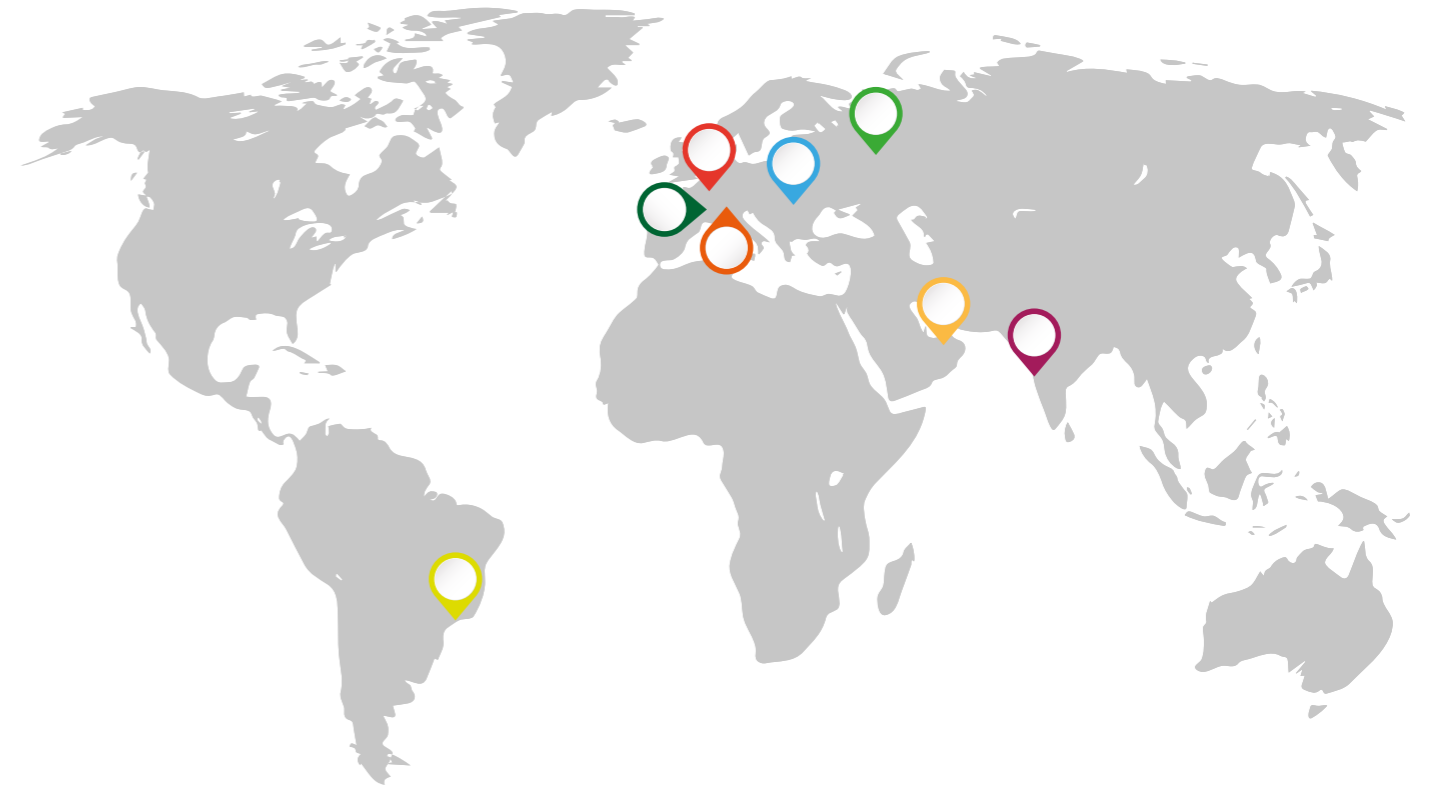
**QUALITY, COMPETENCE AND SAFETY SOLUTIONS GUIDED US IN EVERYDAY WORK, TO DEVELOP THE BEST PRODUCTS FOR ALL MARKET NEEDS.**









Our high quality products are recognizable worldwide and aim to environmental sustainability and energetic efficiency.

Our products are studied to be real advanced solutions.

### WORLDWIDE PRESENCE

Giovenzana International B.V. is present in the major world markets for its strongly will of internalisation.



-  **GIOVENZANA INTERNATIONAL B.V.**  
*Headquarter:* Strawinskylaan, 1105 - 1077XX Amsterdam - **THE NETHERLANDS**
-  **G.T.R. LLC**  
*Sales office & Logistic Hub:* Likhov lane, h.3, b.2, office 101 - 127051 Moscow - **RUSSIAN FEDERATION**
-  **G.G SPACE KFT**  
*Manufacturers units & Logistic Warehouse:*  
1) Deak ferenc ut. 9 - 3036 Gyöngyöstarján - **HUNGARY - Unit 1**  
2) Szurdokpart ut. 13 - 3200 Gyöngyös - **HUNGARY - Unit 2**
-  **G.G.T. SRL**  
*Manufacturers units & Logistic Warehouse:* Via Monsignor Mozzanica, 2 - 23889 Santa Maria Hoè (LC) - **ITALY**
-  **GIOVENZANA INTERNATIONAL B.V.**  
*Sales office & Logistic Hub:* Jafza 15, Jebel Ali Free Zone - P.o. Box 262146 Dubai - **UAE**
-  **GIOVENZANA CONTROLS INDIA Pvt. Ltd**  
*Sales office:* A-203, Knox Plaza , Chincholi, O Link Road Near Mindspace, Malad West - 400064 Mumbai - **INDIA**
-  **GIOVENZANA DO BRASIL**  
*Sales Office & Logistic Hub:* Rua Enxovia, 472 - cj1904 - Cep. 04711-030 Vila Sao Francisco, Sao Paulo - **BRASIL**  
*Manufacturer unit:* Rua Carlos Sant'Anna, 132 - Cep. 92500-000 Moradas da Colina, Guaíba - RS - **BRASIL**
-  **GIOVENZANA INTERNATIONAL B.V.**  
*Sales Office:* Lachnerring 10 - 31137 Hildesheim - **GERMANY**

Giovenzana International B.V. is continuously active all around the world thanks to its sales network that daily studies new markets and new opportunities.



**QUALITY AND ENVIRONMENTAL POLICY**

Attention for products quality, will of excellence, innovation researches and continuous development of new projects by our R&D department, represent our daily commitment.

All our commercial and industrial activities were included in the **UNI EN ISO 9001:2015** Quality System (**CSQ Certificate N 9105. GIOV.**).

The Quality System is to the end user the guarantee that all the production phases are kept under control in an effective way and that they respect the established requirements both by the company, as per the expectations of the client and in conformity with the most important international standards.

With the standard **UNI EN ISO 14001:2015** (**CSQ certificate N 9191. GIBV.**) Giovenzana uses new technologies that limit the consumption of raw materials, energy and natural resources in order to minimize waste and emissions, protecting the environment. All the products are of certified quality and follow the guidelines Rohs, Pfos, Raee and Reach.

**The company's goal is to offer safety, reliability and innovative solutions.**



**R&D DEPARTMENT**

Our **R&D Department** is composed of qualified and highly trained technicians, engineers, designers and researchers able to satisfy the technical needs of the customers.

The R&D Department works daily step by step, starting from the product design up to, through the various phases of prototyping, verification and testing, to the final products. All these activities are carried out with the highest quality managements in order to satisfy the most stringent and restrictive product specifications.

The use of advanced design tool, prototyping machine and all the technical equipment of our test laboratory allows the company to develop new technologies implementing the most featured devices.

The **R&D Department** actively cooperates with the **Consorzio Intellimech**, a private consortium of large, medium and small companies aimed at interdisciplinary research in the field of mechatronics. Our goal is to **search and develop innovative technological solutions and products in order to expand our markets.**

**CUSTOMIZED PRODUCTS**

Standard executions are accompanied by a wide range of **special and customized executions** according to customer specifications. On request we can respond to the specific customers' needs designing, developing and testing special products as:

- Push buttons design meeting standard rules and special symbology;
- Cabled and wired maintenance stations as customers electrical diagrams;
- Maintenance stations with or without feeding connectors;
- Execution with special support and metal brackets;
- Maintenance stations with PCB conductive plans.

**Giovenzana cultivated daily close synergies with its own customers to identify the right product which respond to the most different needs.**

**MANUFACTURING UNITS**

Giovenzana International B.V. has three manufacturing units, the historical one in Italy and two others in Hungary:

**G.G.T. srl - ITALY**

The company expansion of the Italian production unit was mainly characterized by the introduction of the new automatic warehouse. It has been called the **"magic box"**, thanks to which several thousand pallets are handle daily optimizing the logistics management system.

The new infrastructure speeds up the picking and shipping procedures in an automated way. This means elimination of errors with a reduction of risks for operator, as well as enabling substantial space savings on the ground and a greater control in the product picking. The load units are handled by means of automated storage and retrieval machines which run on rails, with a single mast frame. They are equipped with different gripping systems, for the storage and picking from dual depth shelves.

The **new automated warehouse** is the beating heart of the company, it handles frequent movements and it will allow a significant improvement in terms of efficiency and storage of goods.



**G.G.Space Ktf - HUNGARY**

Giovenzana International B.V. is conscious that the territorial proximity ensures a prompt and quick response aiming at offering safe and reliable products.

Over the years, the company mission has been a gradual and continuous opening to the world, with a strong idea of internationalization.

For this reason, **in 2002, Giovenzana inaugurated the first manufacturing unit in Hungary** of about 2,800 square meters for the production and assembly of automation components.

Recently, the historical Hungarian unit was equipped with two new automation lines for the production of PCW contact elements, pulsating hearts of all our maintenance stations.

**In June 2018, a second production unit was inaugurated and it is mainly responsible for the assembly of lift components.**

The core idea is, therefore, a new start and investments in the future while keeping our commitment to quality products in compliance with the new international standards.



## INTERNATIONAL CERTIFICATIONS

All Giovenzana products are manufactured according to the most relevant international directives.



Lift products comply with:

- **European Standards EN81-20 / EN81-50**  
*Safety rules for the construction and installation of lifts*
- **North America Standards CSA-B44.1 / ASME-A17.5**  
*Elevator and Escalator Electrical Equipment*
- **Russian Standards GOST33984.1-2016**  
*Safety rules for the construction and installation of lifts*
- **Brasilian Standards ABNT NBR NM 207-267**

All Giovenzana products are manufactured according the most relevant **Cee directives**. Giovenzana certifies this compliance with a **Declaration of Conformity**.

European directives set the minimum requirements in terms of all electrical materials sold within the EU. Compliance with these requirements is certified by the **CE mark** on the products.

Giovenzana's products comply with both **European EN and American UL standards**.

In order to reach its quality level Giovenzana's products are tested by multiple third parties.

They are also **IMQ, EAC, CCC, UL, CSA, CE and KTC approved**.

## INTERNATIONAL LIFT ASSOCIATIONS

**Giovenzana International B.V.** is an active member of various global lift associations. The list below:

### **ANIE ASSOASCENSORI**

**ANIE AssoAscensori** brings together companies that carry out design, construction of systems and / or components, installation, repair and maintenance of elevators, hoists, stairs and moving walkways. stair lift and lifting platforms.

### **ABNT - Associação Brasileira de Normas Técnicas**

**ABNT** is the National Forum for Standardization by recognition of Brazilian society since its foundation, on September 28, 1940, and confirmed by the federal government through various legal instruments.

### **SECIESP - Qualidade e Segurança em Elevadores**

A new social and marketing context imposed by economic evolution, the needs and demands of consumers, and society, were the basic precepts for the entrepreneurs of the vertical transport segment to unite for the creation of **SECIESP** (Union of Conservation, Maintenance and Installation of Elevators of the State of São Paulo), on the basis of which it is proposed to provide extensive advice, improvement and constant updating to its affiliates.

### **NAEC - National Association of Elevator Contractors**

**NAEC** members strive to Rise Above by staying abreast of the latest technology, tools, news and education allowing them to gain the competitive edge and exceed the status quo.

### **FEPYMA - Federación Española de Asociaciones de Pequeña y Mediana Empresa de Ascensoristas**

**FEPYMA** was established on March 22, 2004 for the development and defense of SMEs in the sector, representing their associated companies in all areas of their competence.

### **РЛО - РОССИЙСКОЕ ЛИФТОВОЕ ОБЪЕДИНЕНИЕ**

The Association **RUSSIAN ELEVATOR ASSOCIATION** unites more than 45 enterprises that provide over 10,000 jobs and more than 80% of the Russian market for elevators for mass construction and replacement of old elevator lifespan.

### **CAA - Cámara de Ascensores y Afines**

The CAA is a non-profit organization and pioneer in the Argentine vertical transport sector. For 65 years it has brought together, comprehensively, companies dedicated to the manufacture, installation, and conservation of elevators, both national and multinational, covering the entire spectrum of the elevator industry.





**NEW EUROPEAN STANDARDS FOR LIFT  
EN 81-20 / EN 81-50**

For more than 30 years, **EN 81-1** and **EN 81-2** have been the main lift standards in Europe and in many other parts of the world.

The European Committee for Standardization has released in 2014 two **new Safety Standards for the construction of lifts and for the testing of lift components**. The new Standards EN 81-20 / EN 81-50 are already in force, but compulsory from 1 September 2017. They will replace the Standards EN 81-1 and EN81-2. Both new Standards are applicable for lifts for the transport of persons and goods.

The **new European standards** for lift design and manufacture will bring considerable benefits in terms of accessibility and safety for both passengers and service engineers.

**EN 81-20** establishes updated and revised safety requirements for the construction and installation of lifts.  
**EN 81-50** defines design rules, calculations and tests of lift components.

All lifts with an EU declaration of conformity issued after August 31st 2017 shall comply with the requirements of these new standards, or an equivalent level of safety, that is supposed not to be the same as before.

**Giovenzana International B.V. offers a wide range of lift products in full compliance with the European standards set by the new safety standards EN81-20 / EN81-50.**

The new standards aim at improving safety for both passengers and service technicians of lifts. The main changes to the **safety requirements for passengers** include those related to Unintended Car Movement (UCM) and ascending car overspeed, to the door detection systems, to the car door locking mechanism, to the fire classification of the car materials, to the car and shaft lighting and to the strength of both car doors and landing doors, and of car walls as well.

On the other hand, changes aimed at improving **safety of service staff** include requirements related to the pit and machine-room access, to the car roof and pit refuge spaces and to the car roof balustrades.

EN 81-20 also introduces some changes affecting the shaft design, such as requirements related to glass walls, ventilation and fire extinguisher devices. Shaft design is under the responsibility of the building designer, so effective exchange of information between the lift installer and the building designer, concerning these new requirements, will be crucial.

**Giovenzana International B.V.** study the main changes introduced by the new standards in order to apply them in the design and manufacture of new products and to adapt the old ones to the new rules.

**Giovenzana International B.V.** also begin a partnership with others leading companies, excellence in lift industry, for the development of components for lifts and devices that meet the new requirements all around the world.

A series of international conventions focused on the harmonized standards EN 81-20 / EN 81-50, ABNT NBR NM 207-267, GOST33984.1-2016, called **CONNECTING PEOPLE LIFT ROAD** in which Harmonized Standards are present as a winning opportunity for elevator market.

Be a member of the **CONNECTING PEOPLE Network** has different benefits:

- excellent Made in Italy companies;
- trusted partners able to support you on a global level;
- solutions to grow your business;
- update on safety regulations;
- excellent products;
- consulting and integrated planning.

We strongly believe that synergy and collaboration between companies can be a plus for the market. The goal is to create shared opportunities that show competence, professionalism, dedication and a strong vision for the future. It's for that reason, we registered the specific event logo as a **Community Trade Mark** and **International Trade Mark**.



Giovenzana is working daily to develop products which meet all requirements of the EN81-20 / EN81-50.

Our R&D department is daily in contact with customers and always update about all market needs designing safety solutions for those who use our products everyday.

Today Giovenzana International B.V. is considered a **REFERENCE POINT FOR SAFETY SOLUTIONS**.

**GIOVENZANA  
EN 81-20 / EN 81-50**

**Giovenzana International B.V.**, widely recognized as a leader in elevator technology and the name that operators associate with security and quality, has created the new GM series of inspection boxes (complies with International Standard EN 81-20 / EN 81-50).

Its new design philosophy incorporates these rules:

- **Mushroom emergency device** in compliance with IEC / EN 60947-5-5;
- **Mandatory run button**;
- **Operators are always protected** against accidental impacts;
- **Cam switch** (not selector) binding to the norm for inspection operation with solid drive and without margin of error in the switching;
- **Contact blocks** with spring clamp conform to EN 60068-2-6 and EN 60068-2-27 and vibration resistant with IP20 degree of protection;
- AC-15 and DC-13 contact blocks in accordance with EN 60947-5-1:2005 (1M cycles).

**With over 60 years of experience in the lift sector, Giovenzana International B.V. offers a wide range of standard products for all installation types with updated specifications and safety guidelines.**

**Giovenzana International B.V.** installs its products in the most relevant building all over the world.



Eiffel Tower - FRANCE



Burj Khalifa - UAE



Empire State Building - NEW YORK

**IMPORTANT IMPROVEMENTS  
EN 81-20 / EN 81-50**

**GENERAL REMARKS**

The object of this standard is to define safety rules related to passenger and goods/passenger lifts in order to avoid any accidents associated with the normal use, maintenance and emergency operation of lifts.

**INSPECTION OPERATION**

To facilitate inspection and maintenance, a readily operable inspection control station shall be permanently installed:

- a) on the car roof;
- b) in the pit;
- c) in the car (if it is necessary to move the car from inside);
- d) on a platform (if it is necessary to move the car from the platform).

The limit of 2 inspection control stations, installed in a system, has been removed.

**EQUIPMENT ON TOP OF THE CAR**

The following shall be installed on top of the car:

- a) **Control device** (inspection operation) operable within 0,30 m horizontally from a refuge space;
- b) **STOP device**:
  - in an easily accessible position
  - no more than 1 m from the entry point for inspection or maintenance personnel.
  - This device may be the one in the inspection operation control if this is not placed more than 1 m from the access point.
- c) **Socket outlet**.

**THE INSPECTION CONTROL STATION**

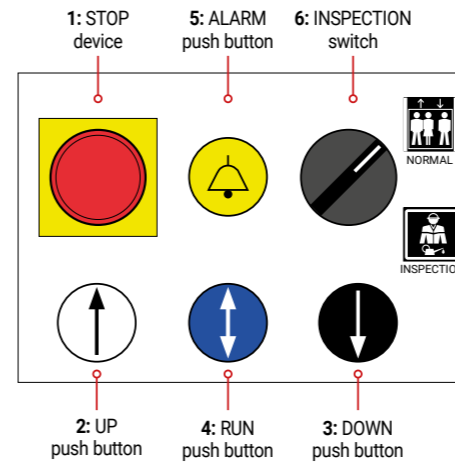
Shall consist of:

- a) A **switch** which shall satisfy the requirements for electric safety devices (EN60947-5-1), it must be bistable and protected against accidental operation.
- b) **Direction push buttons "UP" and "DOWN"** with the direction of movement clearly indicated and protected against accidental operation.
- c) a **push button "RUN"** protected against accidental operation.
- d) a **STOP device**.

The control station may also incorporate special switches protected against accidental operation for controlling the mechanism of doors from the car roof.



**THE INSPECTION CONTROL STATION**



- 1: STOP device
- 2: UPwards push button
- 3: DOWNwards push button
- 4: RUN push button
- 5: ALARM push button
- 6: Normal/Inspection switch

NOTE: Placing the alarm button in the control station is optional.

- The words "NORMAL" and "INSPECTION" shall be placed on or near the inspection operation switch.
- The direction of motion shall be identified by colors as table below of Inspection Control Station - Button Designation:

Control	Colour of Button	Colour of Symbol	Symbol Reference	Symbol
UP	White	Black	IEC 60417-5022	↑
DOWN	Black	White	IEC 60417-5022	↓
RUN	Blue	White	IEC 60417-5023	↕

**THE INSPECTION CONTROL STATION**

The inspection control station shall have a minimum protection degree of IPXXD (EN 60529).

IP54



IP65



IP65



**PUSH BUTTONS**

During inspection operation, the movement of the car shall be possible by a constant pressure on a direction push-button and the "RUN" push-button.

It shall be possible to operate the "RUN" button and a direction button with one hand simultaneously.

**THE INSPECTION OPERATION SWITCH**

If more than one inspection control station is switched to "INSPECTION", it is possible to move the car by simultaneously operate the same push buttons on the stations.

**IN THE PIT**

There shall be in the pit:

- a) **STOP device(s);**
- b) a permanently installed **inspection control station** operable within 0,30 m of a refuge space;
- c) a **socket outlet;**
- d) A **switch** to operate the well lighting, positioned within a maximum horizontal distance of 0,75 m from the pit access door frame inner edge and at a minimum height of 1,0 m above the access floor level.



**STOP DEVICE**



There shall be the marking "STOP" on or near the STOP device.

**LANDING DOORS AND CAR DOORS BYPASS DEVICE**

For maintenance of contacts of the landing door, car door, and door locking a bypass device shall be provided in the control panel or emergency and test panel.



An audible signal at the car and a flashing light under the car shall be activated during movement. The sound level of the audible warning shall be minimum 55 dB(A) below the car at 1 m distance.

**LIGHTING**

At any position of the car throughout its travel in the well, even when all doors are closed:

- > 50 lux: 1,0 m above the car roof within its vertical projection.
- > 50 lux: 1,0 m above the pit floor everywhere a person can stand, work and/or move between the working areas.
- > 20 lux outside of the locations defined in a) and b), excluding shadows created by car or components.

**EMERGENCY LIGHTS WITH AN AUTOMATICALLY RECHARGEABLE EMERGENCY SUPPLY, WHICH IS CAPABLE OF ENSURING A LIGHTING INTENSITY OF AT LEAST 5 LUX FOR 1 H:**

- a) at each alarm initiation device in the car and on the car roof;
- b) In the center of the car, 1m above the floor;
- c) in the center of the car roof, 1 m above the floor;



This lighting shall come on automatically upon failure of the normal lighting supply.

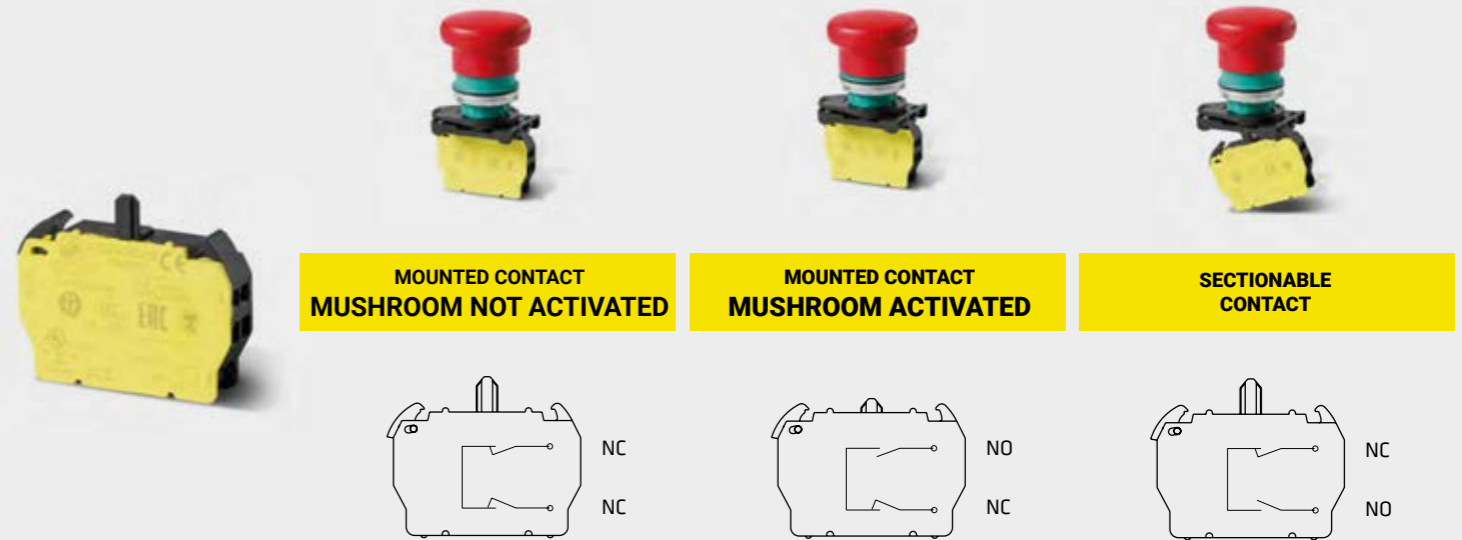
**PCW010SS**  
SELF-MONITORED CONTACT NO-NC-NO



Giovenzana International B.V. has developed in accordance with CEI EN 60204-1 a new technology in the field of industrial and lift automation. The product is designed to maximize the performance of the NC mushroom e-stop contact which results in a **risk factor of zero**.

The NC contact will open in the event of accidental release of the contact block from the base. In the unlikely event of one of the supports breaking the contact is designed to intervene and open the circuit which will block any further operation of the machine.

**This is an important step in accident prevention and emergency device intervention.**



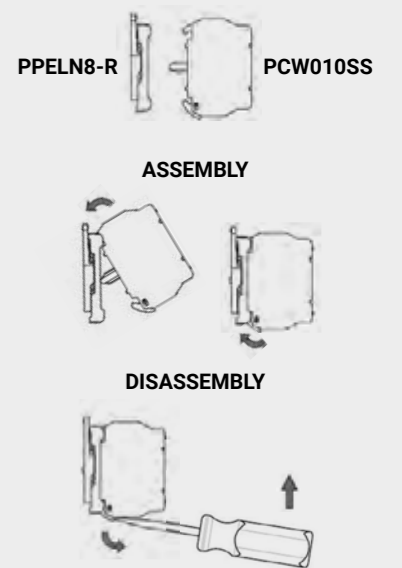
**PCW010SS** are open-type contact blocks, normally-closed (NC), spring terminals, with contacts intended and suitable for use with push buttons. A specific adapter mechanically connects the button to the contact block actuator. **The PCW010SS self-monitoring contact block offers additional safety in emergency stop applications.**

This device contains an additional normally open contact that uses a unique actuator to monitor whether the contact block is still attached to the operator. In the event of the contact block becoming detached from the emergency stop button, the self-monitoring contact block opens the circuit and stops the system, **providing an extra safety measure.**

**General Technical Details**



Rated insulation voltage $U_i$	V	690
Rated impulse withstand voltage $U_{imp}$	kV	4
Rated thermal current	A	10
Power supply		AC/DC
Contact duty		☛ NC contact with positive opening
Standard conformity		CE, cULus, CCC, EAC, RINA
Protection class	<b>EN60529</b>	IP20
Pollution grade	<b>EN60947-1</b>	3
Ambient Temperature	°C	Operating: -25 ... +70
	°C	Storage: -30 ... +70
Terminals referecing		UL486E, UL1059
Terminals block caliber		A2
Mechanical life	mil./cycles	1.000.000
Operating current	<b>AC-15</b>	Ue (V) - 24 - 250 500 690 Ie (A) - 10 - 6 4 1
	<b>DC-13</b>	Ue (V) - - 48 250 - - Ie (A) - - 2 0,4 - -
	<b>DC-14</b>	Ue (V) 12 - - - - Ie (A) 10 - - - - -





**LIFT MAINTENANCE STATIONS | GENERAL CHARACTERISTICS**

Our **Lift Maintenance Stations** comply with European standards **EN 81-20 / EN 81-50**, North America **CSA-B44.1 / ASME-A17.5**, Russian **GOST33984.1-2016** and Brazilian **ABNT NBR NM 207-267**.

They are also resistant to vibrations and shocks according to EN 60068-2-26, EN 60068-2-27 and EN 60068-2-29.

The components are manufactured in accordance with the respective product standards IEC 947-3, IEC 947-5-1, EN 60947-3, EN 60947-5-1, UL 508, IEC 204-1, EN 60204-1, EN ISO 13850 and to the RoHS, PFOS, RAEE, REACH directives.

They are also IMQ, CCC, EAC and UL approved.

Standard executions are accompanied by a wide range of special and customized executions according to customer specifications.

- Pit bottom stations, recall drive control units, inspection and maintenance stations.
- Compliance: EN 81.20, EN 81.50, EN ISO 13850, CSA-B44.1/ASME-A17.5, SIL1, SIL2;
- CSA approval;
- GM Series enclosures made of self-extinguishing ABS V0, yellow colour PANTONE 102C;
- TLP Series enclosures made of polypropylene, yellow colour PANTONE 102C;
- Protection class EN 60529: NEMA 4X, IP65 without socket, IP54;
- With socket, terminal connections IP20;
- Vibration resistance as EN 60068-2-26 and EN 60069-2-27;
- Shock resistance as EN 60068-2-29;
- Connections: spring clamp contacts for push buttons, mushrooms, screws terminals for cam switches, buzzers and socket outlets.
- Ambient temperature: operating -25°+70°C, storage -30°+70°C.

ELECTRICAL CHARACTERISTICS		CONTACT BLOCKS							CAM SWITCHES		
Conformity		IEC/EN 60947-5-1, UL508							IEC/EN 60947-3, UL508		
Approvals		IMQ, CCC, EAC, uL, RINA									
Rated insulation voltage Ui	V	690							690		
Rated impulse withstand voltage Uimp	kV	4							4		
Rated thermal current Ith/Ithe	A	16							20/16		
Frequency	Hz	50/60							50/60		
Rated operating current Ie:	V	24	60	110	240	400	500	690			
AC - 15 alternate current	A	10	8	6	5	4	4	2			
DC - 13 direct current	V	24	48	60	110	250					
AC - 21A - AC - 22A alternate current	A	2	2	1	0,4	0,4					
Conditional short circuit withstand current	A	-							16A-690V		
Fuse rating gG	A	1000							5000		
Switching mechanism	A	10A - 500V							20A - 690V		
Contact blocks	slow break double gap contacts										
Positive	contact blocks NC positive open ⚡ *							positive open ⚡ *			
Screws and clamps	flex cable & solid cable n. 1 min/max mm <sup>2</sup>	Spring clamp connections							M3,5		
Connections:	n. 2 min/max mm <sup>2</sup>	0,5/2,5							0,75/4		
	AWG	0,5/2,5							0,75/2,5		
		20-12							16-12		
UL508 characteristics: general use		10A 600V AC - 2,5A 125V DC							16A 600V AC		
Standard motors load	1 phase - 2 poles	-							1HP (16FLA) 120V AC		
	3 phases - 3 poles	-							1,5HP (10FLA) 240V AC		
		-							3HP (14,4FLA) 200V AC		
		-							5HP (15,2FLA) 240V AC		
		-							7,5HP (11FLA) 480V AC		
	-							7,5HP (9FLA) 600V AC			
Heavy Duty (HD) category		A600 - Q600							-		

\* Suitable for use as switch disconnecter 0 - 1 90° switching of 2 - 3 - 4 poles.



Lift Maintenance Stations are available in many layouts indentifying the high level of versatility and quality of the products and boasting the following features:

- Well dimensioned sizes ensuring easy of handleability;
- Operator lasered indications in according with EN81.20 & EN81.50;
- Materials have made Giovenzana a widely recognized point of reference of the field;
- The used **contact elements of PCW serie** (according to EN 60068-2-6 and EN 60068-2-27) make easier and faster all the electrical connections. Complete the serie the new **PCW010SS, self-monitored contact NO-NC-NO**. Further information to page ...

**ACCORDING TO EN81-20 / EN81-50**



Giovenzana International B.V. offers a complete range of maintenance stations for car top, under car devices and pit bottom controls fully in compliance with the new standards' requirements.

**In this catalog, all products in compliance with EN81-20 / EN81-50 are marked with this symbol.**

**CUSTOMIZABLE COVERS & BOXES**

Covers and boxes of our maintenance stations are completely customizable. We've a wide choice of types according to the applicable devices.

**LASER MARKING**

All our lift maintenance stations can be customize with indications, writings, symbols and customer logos. All indications can be lasered in all the different languages on request. They are also branded with pictograms and symbols according to the new standards EN81-20 / EN81-50.

**COMPLEMENTARY PRODUCTS**

Giovenzana Internal B.V. also offers a wide range of auxiliary controls such as push buttons diameter 22, rotary switches, emergency mushrooms and accessories, comply to the strictest safety norms (IEC/EN 60947-5-1). Customers have infinite possibilities of customization of their own product.



**LIFT MAINTENANCE STATIONS | MODULAR CONFIGURATION**

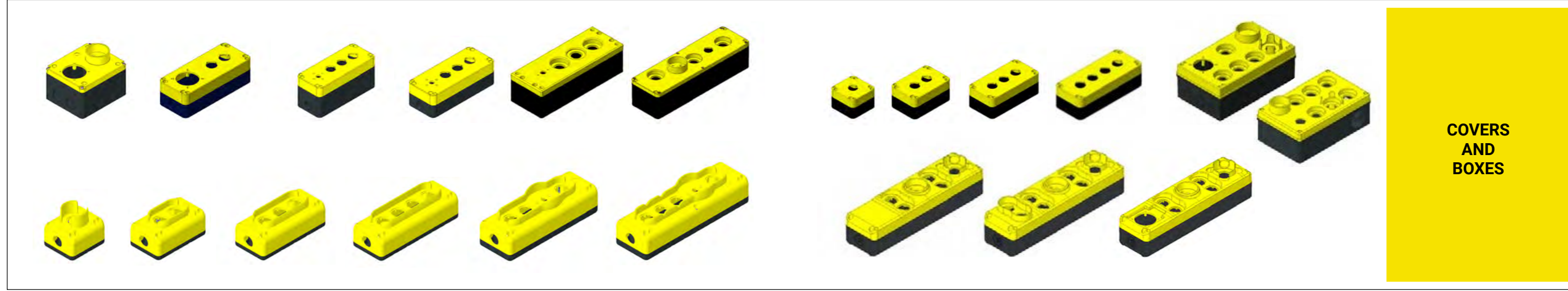
Giovenzana International B.V. offers a full range of product option and accessories sold separately to meet all customer needs. Our Inspection Stations are available in many layouts that identify high quality and versatility of the products. All customers' needs could be satisfy. Our customers technical support works everyday with the end users to realize the product version suitable for their own needs.

**Our standard lift maintenance stations are completely customizable on request.**

**CUSTOM MADE**



**PRE-WIRED PRODUCTS on request!**





**LIFT & ESCALATOR  
TECHNOLOGY**

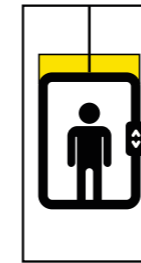
Giovenzana International B.V. is one of the leading manufacturers of safety devices for elevator field. Continuous technological research and development of quality products have made the company a reference point in equipment for lift technology, escalator device and for operators' safety.

Giovenzana International B.V. offers a complete range of devices specifically projected and realized to reach the goal to be real Safety Solution for operators.



**PRODUCT  
CATEGORIES**

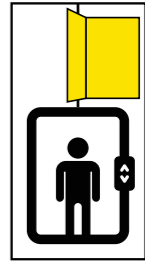
To easily consult this catalog, we divide our products based on the lift and escalator positioning. Below the product categories and the symbology that will guide you in the catalog.



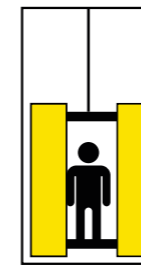
**CAR TOP**  
devices



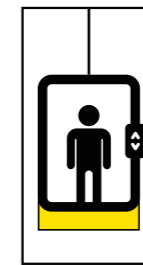
**ELEVATOR SHAFT**  
lighting



**PANEL BOARD**  
components



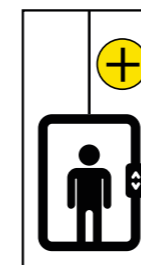
**DOOR**  
components



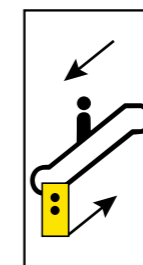
**UNDER CAR**  
devices



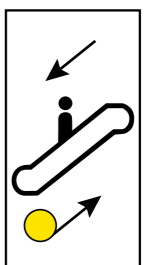
**PIT BOTTOM**  
controls



**ACCESSORIES**  
complementary products



**ESCALATOR**  
maintenance stations



**ESCALATOR**  
mushrooms



**Maintenance stations**  
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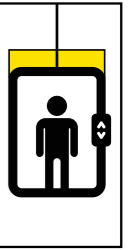


**For scenic lift**  
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**Lighting devices**  
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**CAR TOP DEVICES**

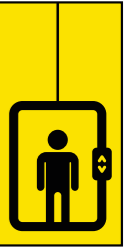


**Strip Led**  
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**Rope Limit switch**  
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**ELEVATOR SHAFT LIGHTING**



**Slim maintenance stations**  
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**Bypass devices**  
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**Rear fixing bypass devices**  
Pages 82/83

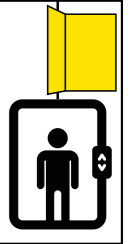


**Switch disconnectors**  
Pages 84/88



**Auxiliary controls**  
Pages 89/91

**PANEL BOARD DEVICES**

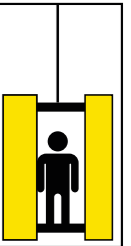


**Limit switches**  
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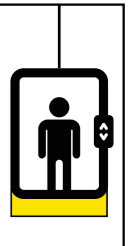
**Micro switches**  
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**DOOR DEVICES**



**Lighting devices**  
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**UNDER CAR DEVICES**



**Alarm & emergency devices**  
Pages 124/125



**Maintenance stations**  
Pages 126/128



**Slim emergency devices**  
Pages 132

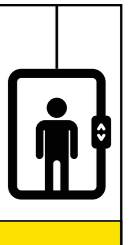


**Shaft lights**  
Pages 129/130



**Slim maintenance stations**  
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**PIT BOTTOM CONTROLS**



**Sockets**  
Page 136



**Mushroom's guards**  
Page 136



**Magnet kit**  
Page 136



**Buzzers**  
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**Wall bracket case**  
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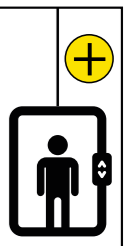


**Cam switches**  
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**Contact blocks**  
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**ACCESSORIES**





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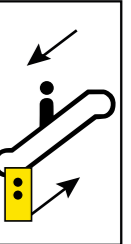


**ESCALATOR PRODUCTS' INDEX**

  
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Page 142

  
**Slim Maintenance Stations**  
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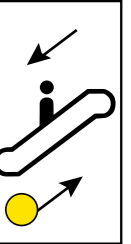
**MAINTENANCE STATIONS**



  
**Mushrooms ø90**  
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**Main switches**  
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**COMPLEMENTARY PRODUCTS**



**GIOVENZANA**  
INTERNATIONAL B.V.

**Lighting Solutions**



Giovenzana International B.V. has expanded its range of products with the new cabin roof and under car light devices completely according with new international standards EN81-20 and EN81-50.

[www.giovenzana.com](http://www.giovenzana.com)



**LIFT TECHNOLOGY & INTERNATIONAL STANDARDS**

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**| EN81.20 & EN81.50 |**  
**| GOST33984.1-2016 |**  
**| ABNT NBR NM 207-267 |**

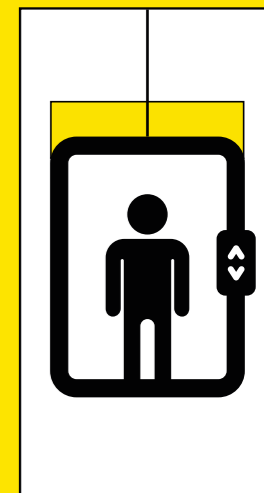




**GIOVENZANA**  
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## CAR TOP DEVICES



IP54

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		1NC	
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>COMMON Push Button</b> flush, momentary, blue colour		1NO	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>UP Push Button</b> flush, momentary, white colour		2NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO	
<b>Schuko socket outlet 16A</b>			<b>GM750/EU</b>
<b>Cenelec socket outlet</b>			<b>GM750/FR</b>
<b>USA socket outlet</b>			<b>GM750/US</b>
<b>Swiss socket outlet</b>			<b>GM750/SW</b>
<b>UK standard socket outlet</b>			<b>GM750/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM750/CH</b>

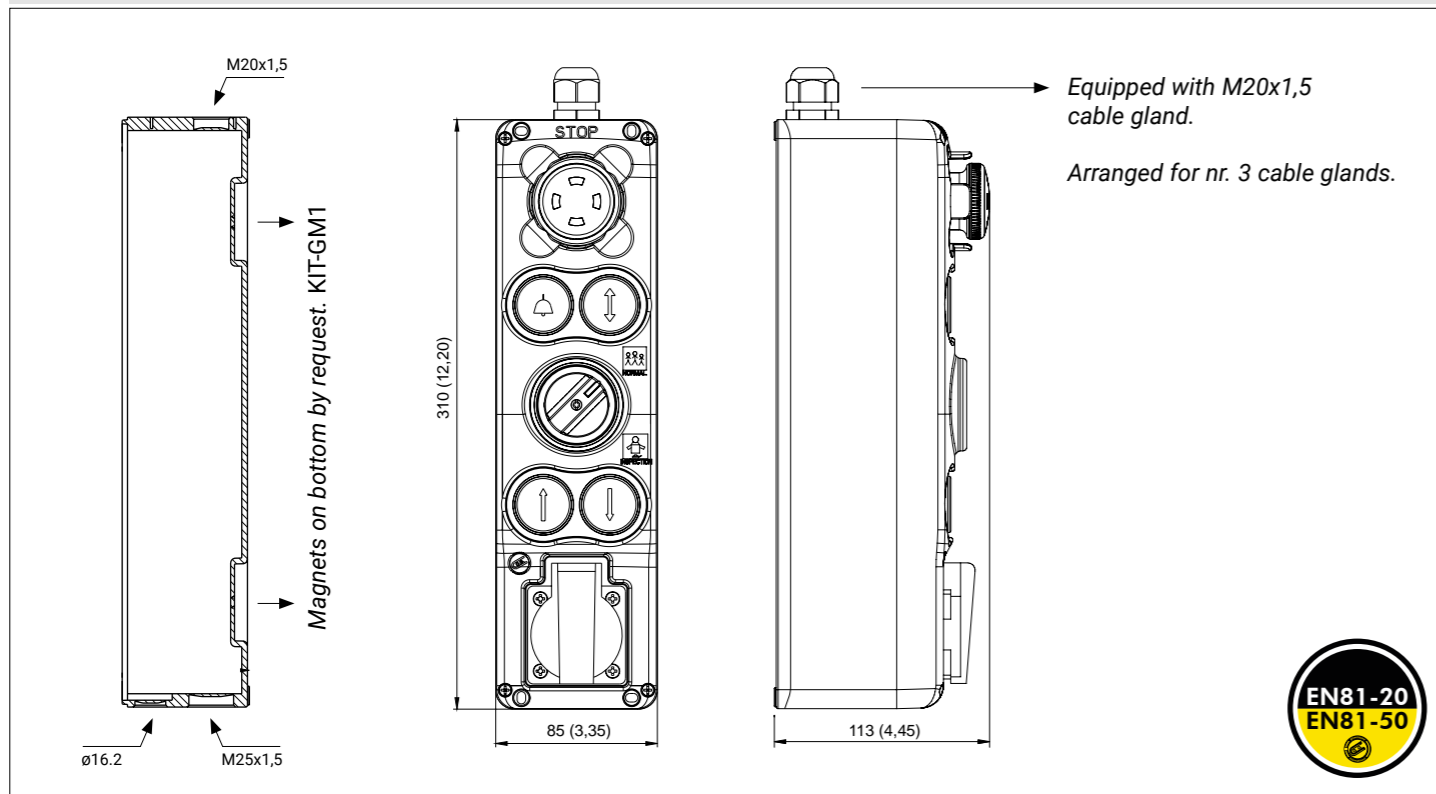


IP54

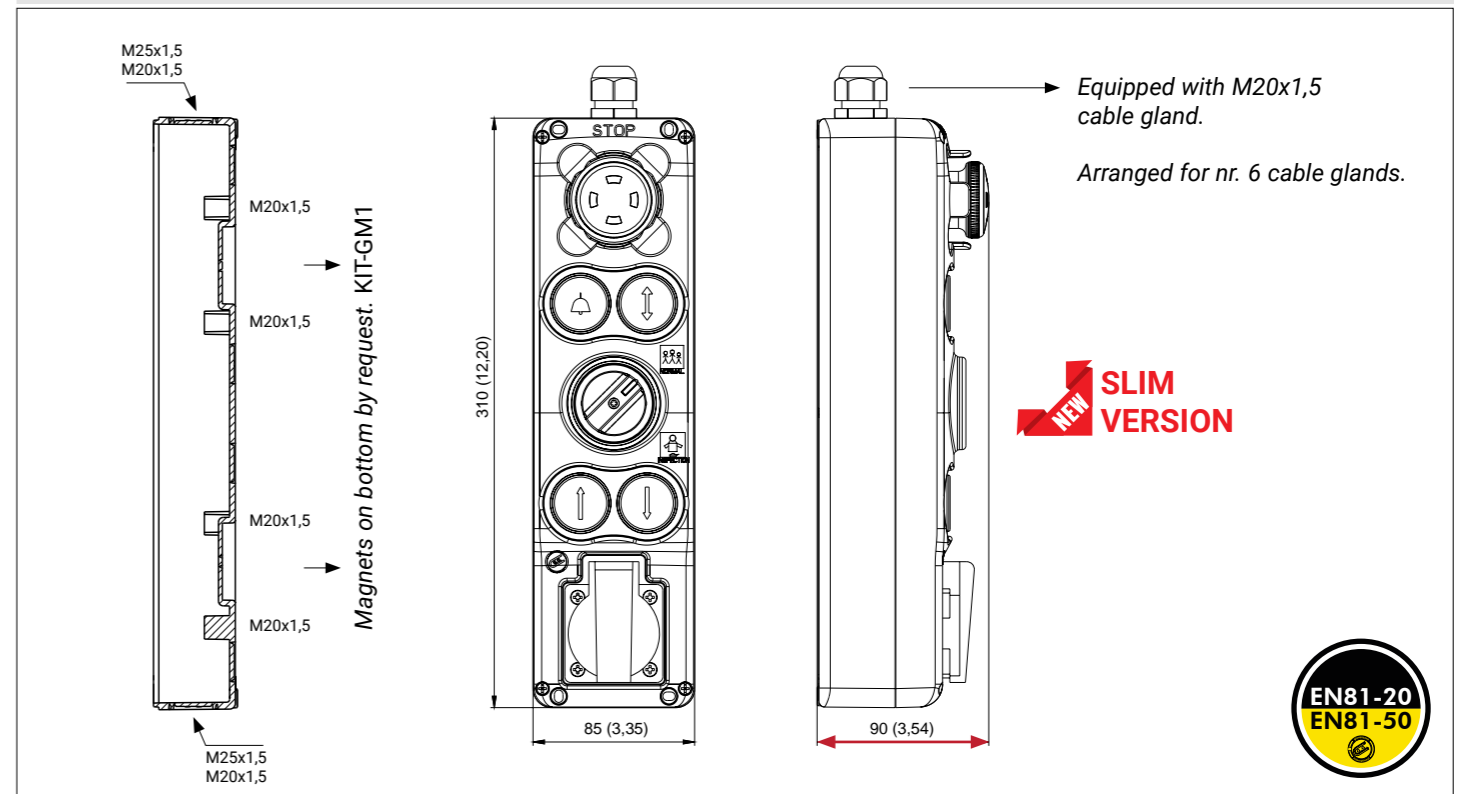
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		1NC	
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>COMMON Push Button</b> flush, momentary, blue colour		1NO	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>UP Push Button</b> flush, momentary, white colour		2NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO	
<b>Schuko socket outlet 16A</b>			<b>GM730/EU</b>
<b>Cenelec socket outlet</b>			<b>GM730/FR</b>
<b>USA socket outlet</b>			<b>GM730/US</b>
<b>Swiss socket outlet</b>			<b>GM730/SW</b>
<b>UK standard socket outlet</b>			<b>GM730/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM730/CH</b>



TECHNICAL DRAWING - GM750/..



TECHNICAL DRAWING - GM730/..



IP54

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		2NC	
<b>UP Push Button</b> flush, momentary, white colour		2NO+1NC	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO+1NC	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>Knob Selector 1-0-2</b> 3 positions, black + white indicator		2NO	
<b>COMMON Push Button</b> flush, momentary, blue colour		2NO	
<b>Schuko socket outlet 16A</b>			<b>GM757/EU</b>
<b>Cenelec socket outlet</b>			<b>GM757/FR</b>
<b>USA socket outlet</b>			<b>GM757/US</b>
<b>Swiss socket outlet</b>			<b>GM757/SW</b>
<b>UK standard socket outlet</b>			<b>GM757/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM757/CH</b>

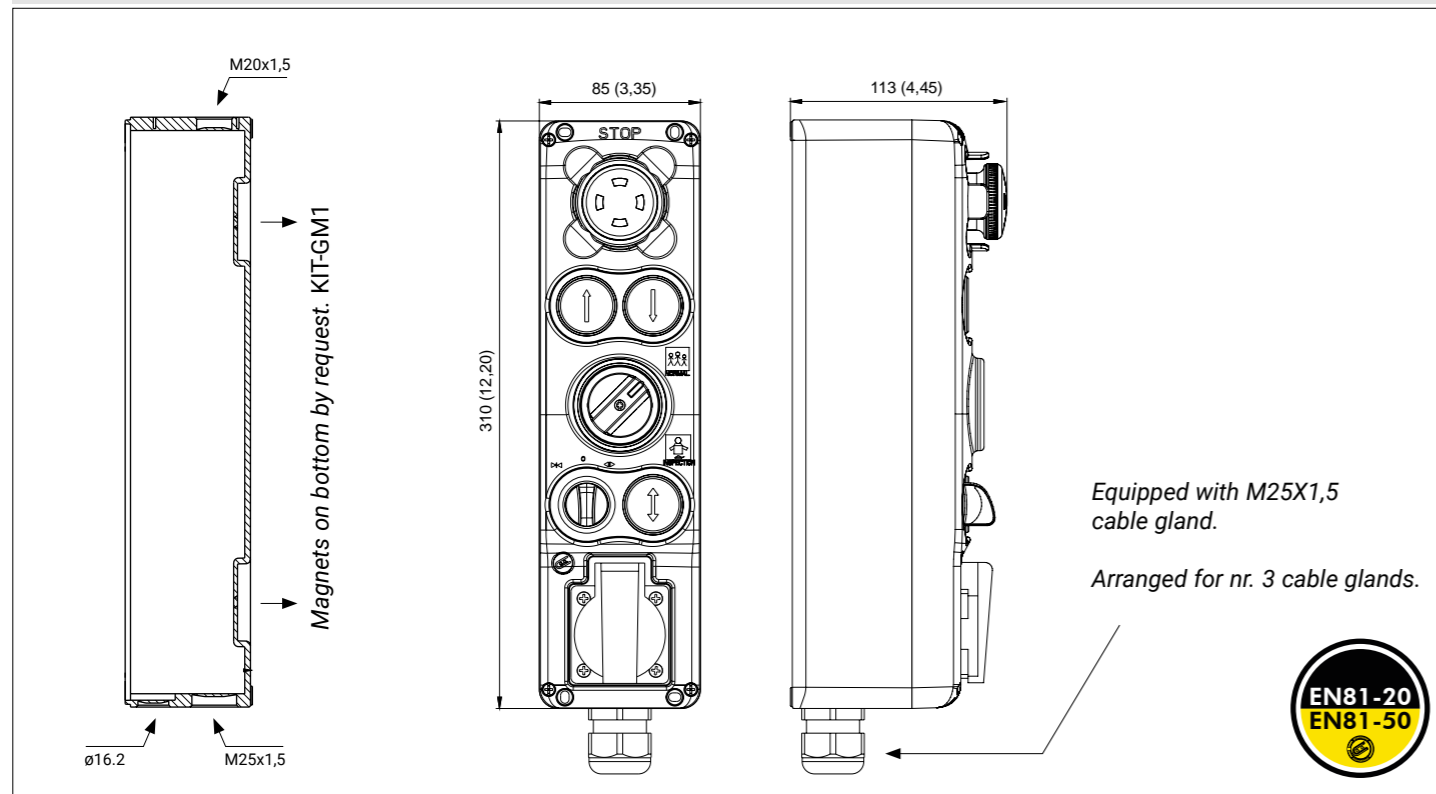


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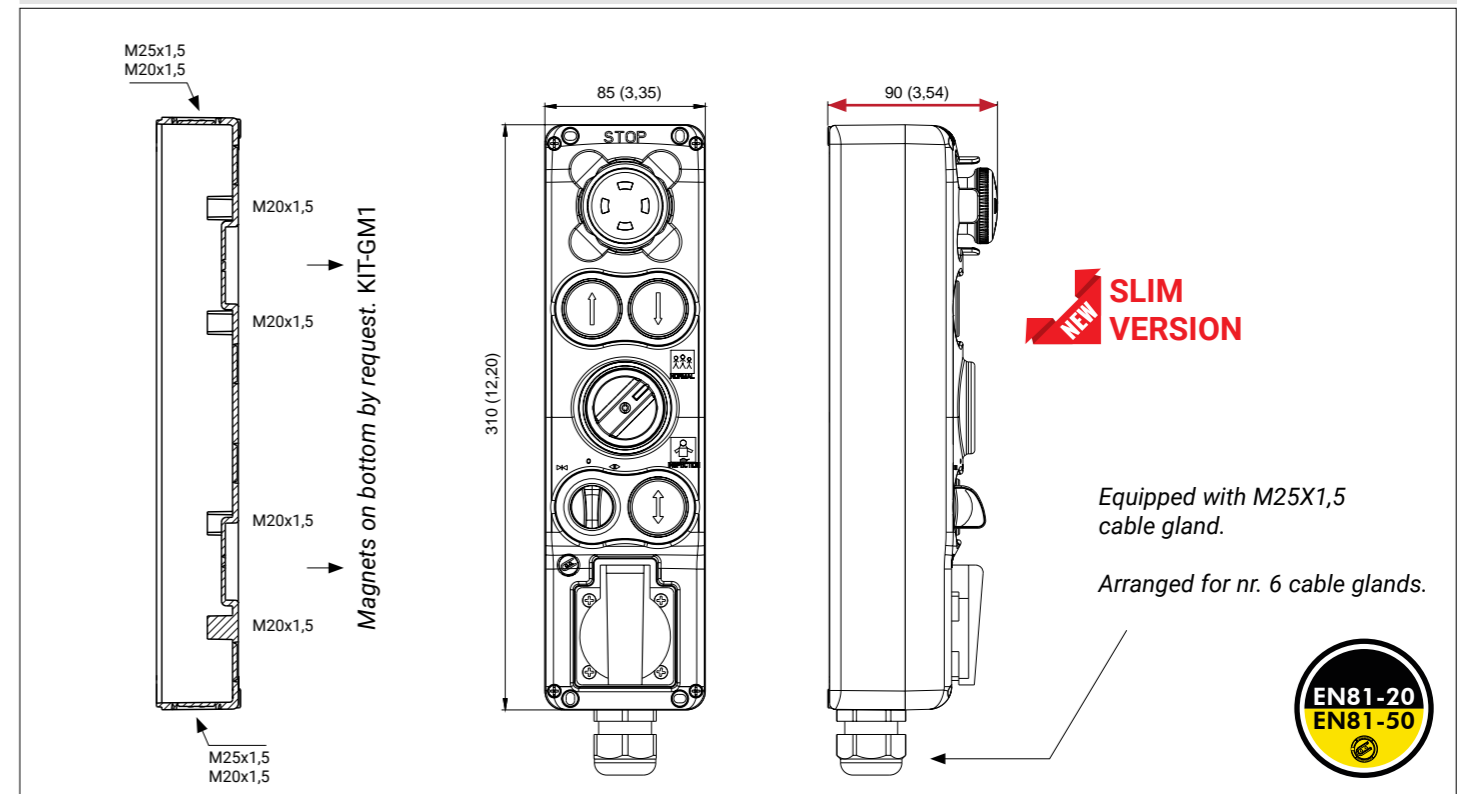
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		2NC	
<b>UP Push Button</b> flush, momentary, white colour		2NO+1NC	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO+1NC	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>Knob Selector 1-0-2</b> 3 positions, black + white indicator		2NO	
<b>COMMON Push Button</b> flush, momentary, blue colour		2NO	
<b>Schuko socket outlet 16A</b>			<b>GM737/EU</b>
<b>Cenelec socket outlet</b>			<b>GM737/FR</b>
<b>USA socket outlet</b>			<b>GM737/US</b>
<b>Swiss socket outlet</b>			<b>GM737/SW</b>
<b>UK standard socket outlet</b>			<b>GM737/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM737/CH</b>



TECHNICAL DRAWING - GM757/..



TECHNICAL DRAWING - GM737/..





IP54

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> <i>ø40 push-pull with vision</i>		2NC	
<b>LED LIGHT indicator ø40</b> <i>white colour</i>			
<b>COMMON Push Button</b> <i>flush, momentary, blue colour</i>		2NO	
<b>Cam Switch 1-2 Normal-Inspection</b> <i>90° switching</i>		2NO+2NC	
<b>UP Push Button</b> <i>flush, momentary, white colour</i>		2NO+1NC	
<b>DOWN Push Button</b> <i>flush, momentary, black colour</i>		2NO+1NC	
<b>Schuko socket outlet 16A</b>			<b>GM758/EU</b>
<b>Cenelec socket outlet</b>			<b>GM758/FR</b>
<b>USA socket outlet</b>			<b>GM758/US</b>
<b>Swiss socket outlet</b>			<b>GM758/SW</b>
<b>UK standard socket outlet</b>			<b>GM758/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM758/CH</b>

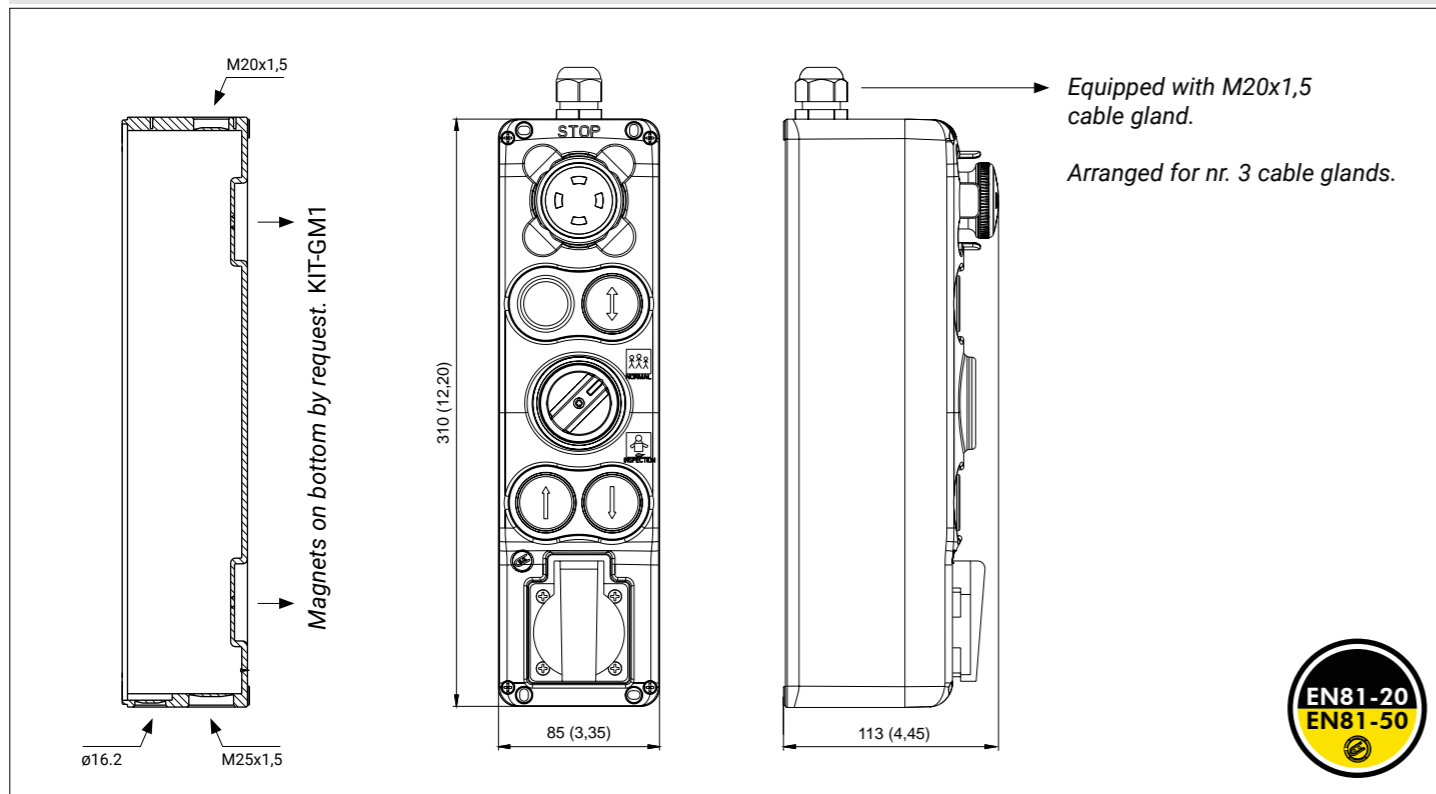


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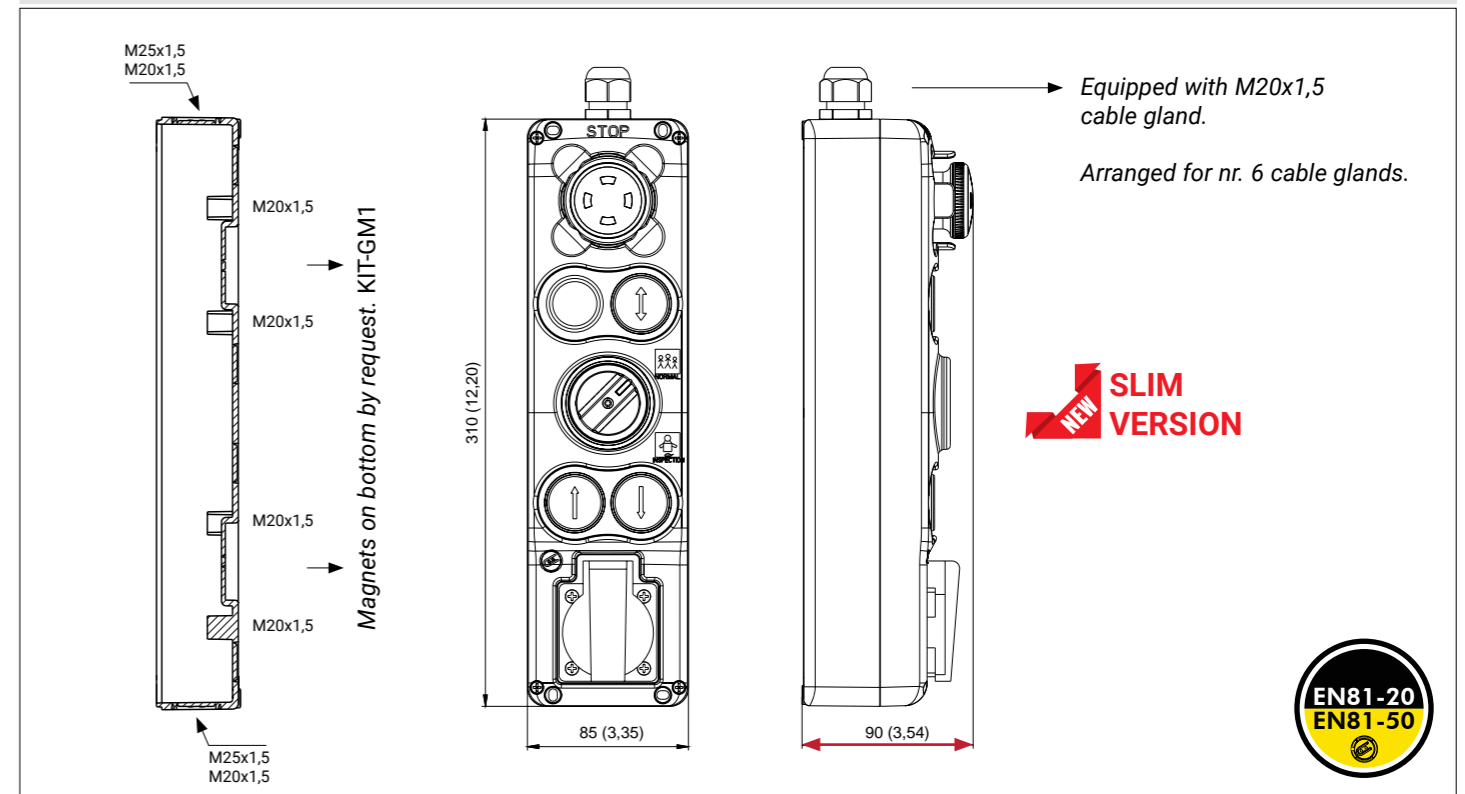
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> <i>ø40 push-pull with vision</i>		2NC	
<b>LED LIGHT indicator ø40</b> <i>white colour</i>			
<b>COMMON Push Button</b> <i>flush, momentary, blue colour</i>		2NO	
<b>Cam Switch 1-2 Normal-Inspection</b> <i>90° switching</i>		2NO+2NC	
<b>UP Push Button</b> <i>flush, momentary, white colour</i>		2NO+1NC	
<b>DOWN Push Button</b> <i>flush, momentary, black colour</i>		2NO+1NC	
<b>Schuko socket outlet 16A</b>			<b>GM738/EU</b>
<b>Cenelec socket outlet</b>			<b>GM738/FR</b>
<b>USA socket outlet</b>			<b>GM738/US</b>
<b>Swiss socket outlet</b>			<b>GM738/SW</b>
<b>UK standard socket outlet</b>			<b>GM738/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM738/CH</b>



TECHNICAL DRAWING - GM757/..



TECHNICAL DRAWING - GM737/..



IP65

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		1NC	<b>GM751</b>
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>COMMON Push Button</b> flush, momentary, blue colour		1NO	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>UP Push Button</b> flush, momentary, white colour		2NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO	



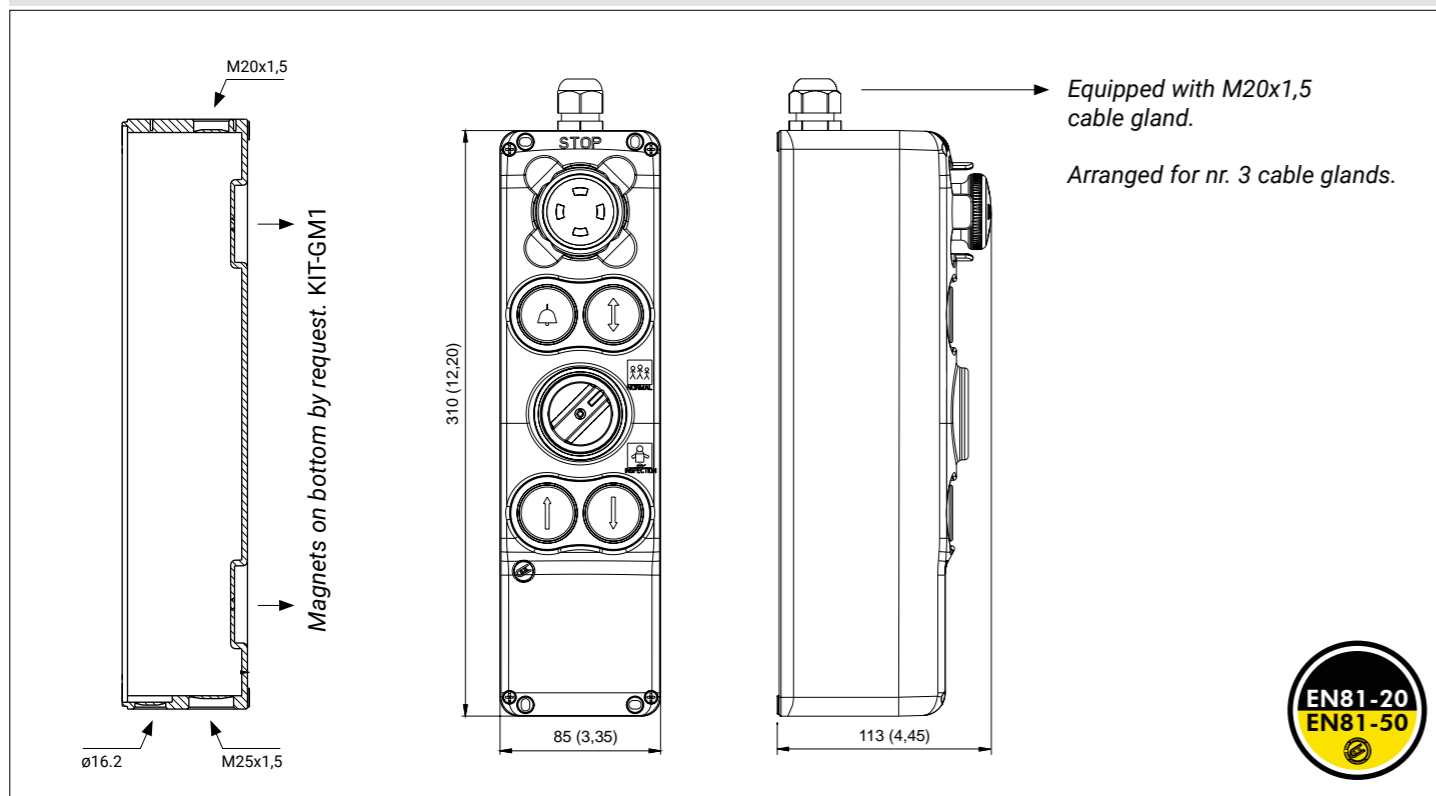
IP65

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		1NC	<b>GM731</b>
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>COMMON Push Button</b> flush, momentary, blue colour		1NO	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>UP Push Button</b> flush, momentary, white colour		2NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO	

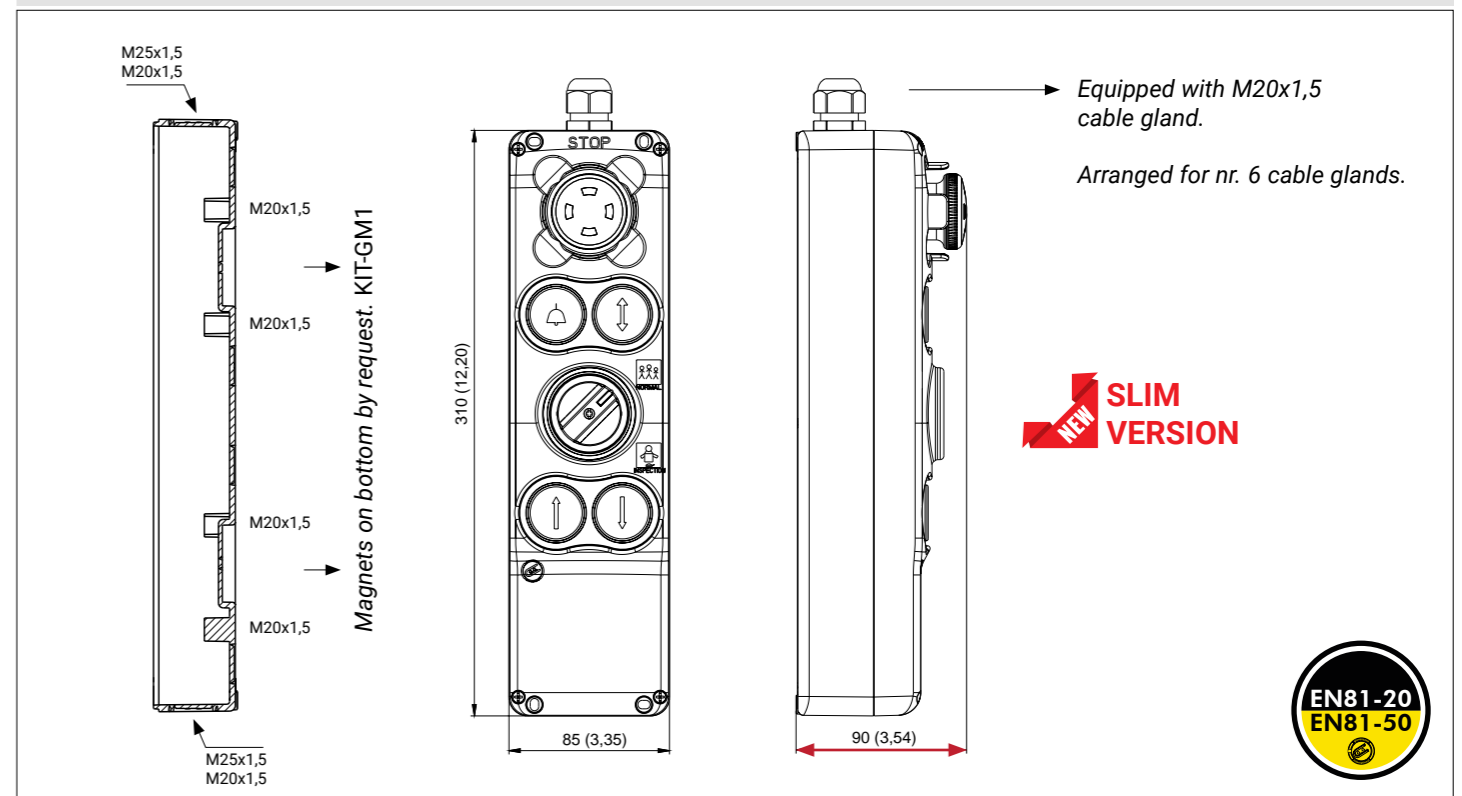


\* Magnets on bottom by request.

TECHNICAL DRAWING - GM751



TECHNICAL DRAWING - GM731



IP65

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		2NC	<b>GM754</b>
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>COMMON Push Button</b> flush, momentary, blue colour		2NO	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>UP Push Button</b> flush, momentary, white colour		2NO+1NC	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO+1NC	
<b>Red LED PILOT LIGHT</b> red colour	 AC/DC 24V		
<b>Knob Selector 1-0-2</b> 3 positions, black + white indicator		1NO+1NO	

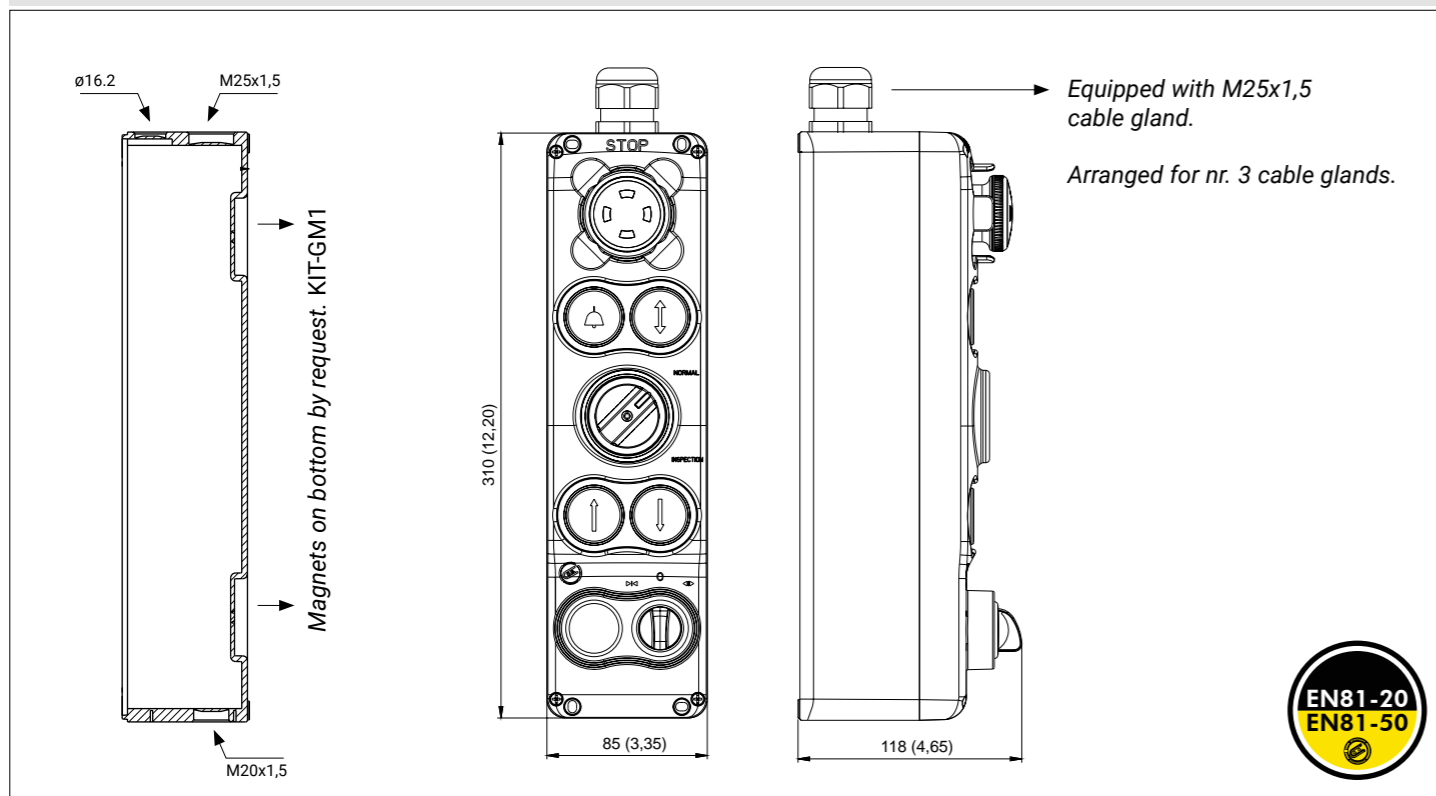


IP65

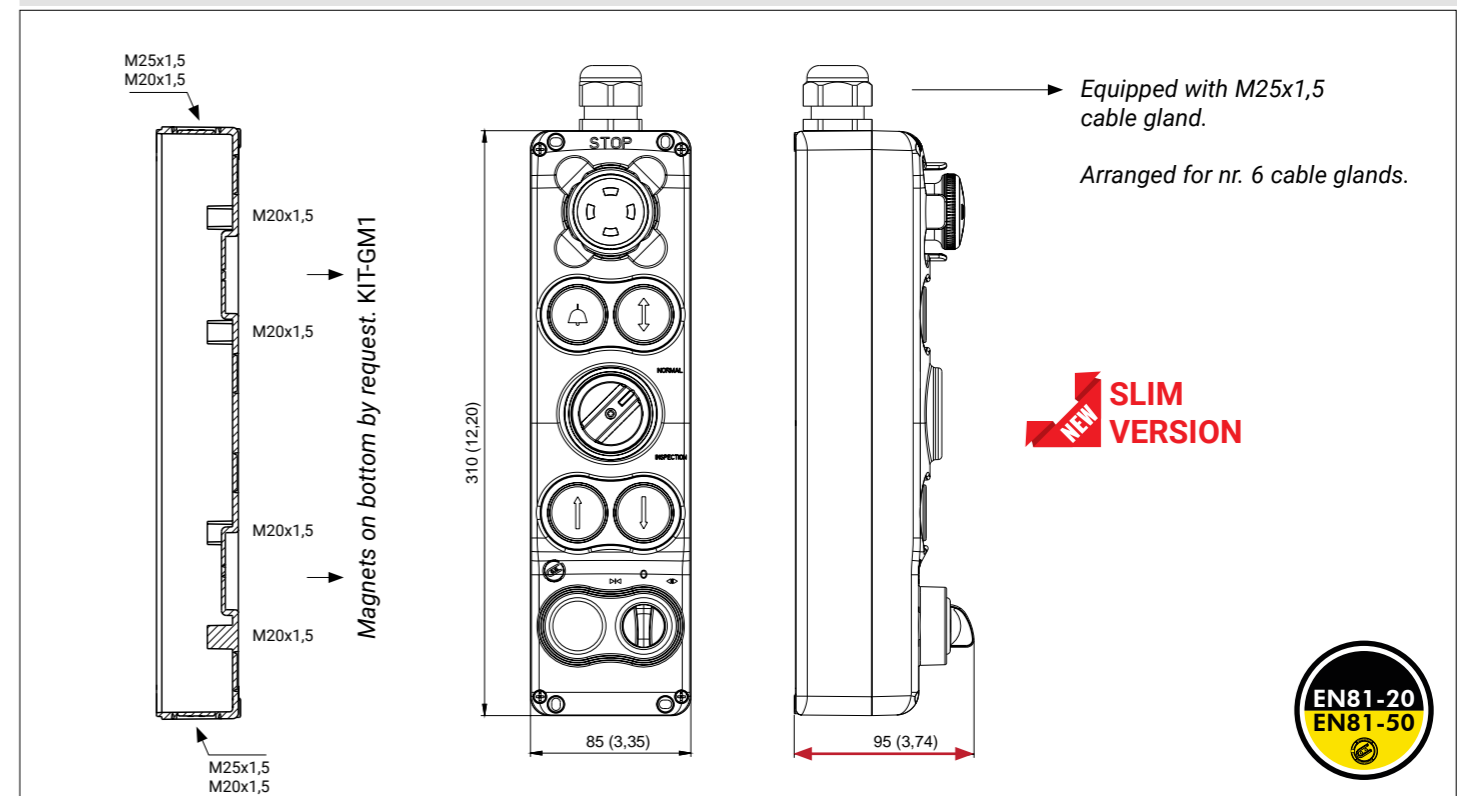
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		2NC	<b>GM734</b>
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>COMMON Push Button</b> flush, momentary, blue colour		2NO	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>UP Push Button</b> flush, momentary, white colour		2NO+1NC	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO+1NC	
<b>Red LED PILOT LIGHT</b> red colour	 AC/DC 24V		
<b>Knob Selector 1-0-2</b> 3 positions, black + white indicator		1NO+1NO	



**TECHNICAL DRAWING - GM754**



**TECHNICAL DRAWING - GM734**

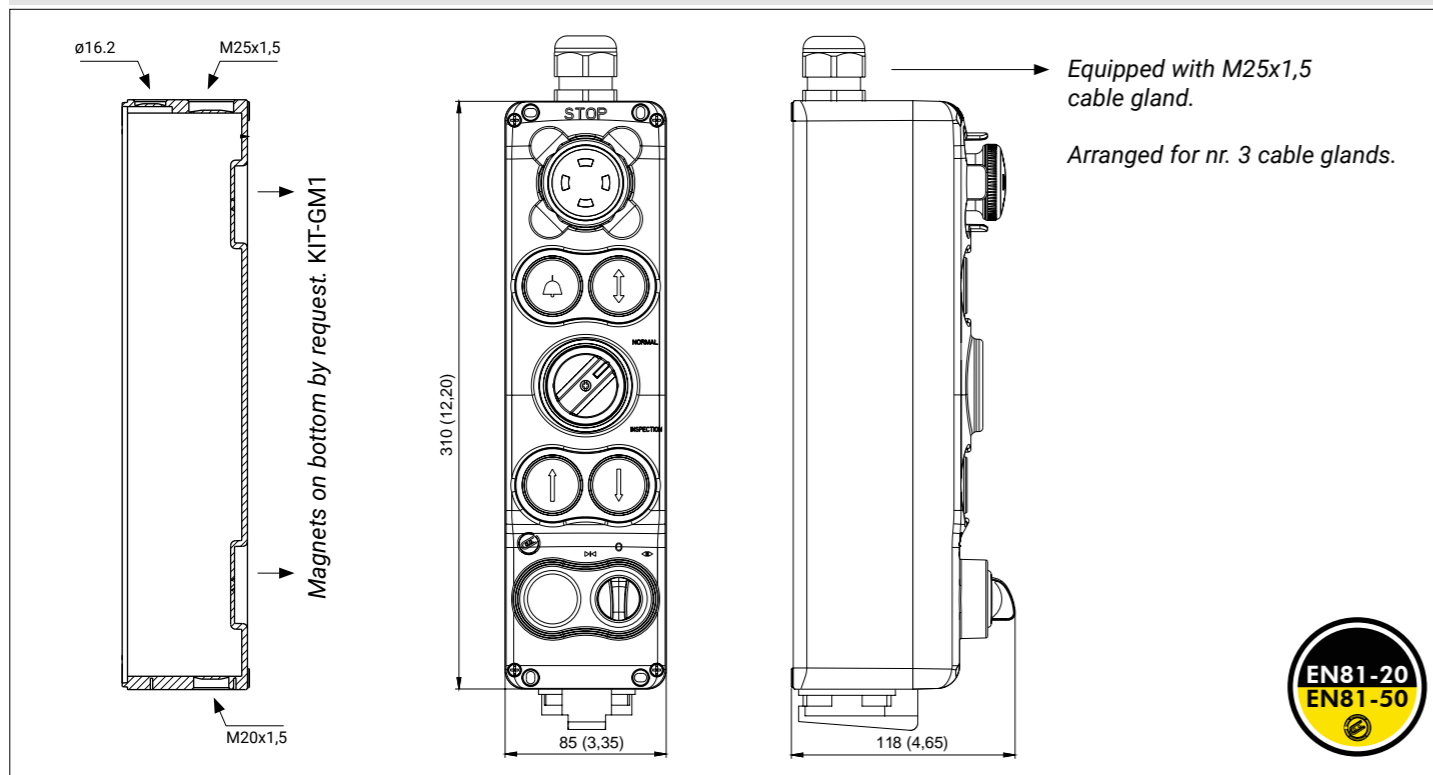


IP54

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		2NC	
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>COMMON Push Button</b> flush, momentary, blue colour		2NO	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>UP Push Button</b> flush, momentary, white colour		2NO+1NC	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO+1NC	
<b>Red LED PILOT LIGHT</b> red colour	 AC/DC 24V		
<b>Knob Selector 1-0-2</b> 3 positions, black + white indicator		2NO	
<b>Schuko socket outlet 16A</b>			<b>GM756/EU</b>
<b>Cenelec socket outlet</b>			<b>GM756/FR</b>
<b>USA socket outlet</b>			<b>GM756/US</b>
<b>Swiss socket outlet</b>			<b>GM756/SW</b>
<b>UK standard socket outlet</b>			<b>GM756/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM756/CH</b>



TECHNICAL DRAWING - GM756/..

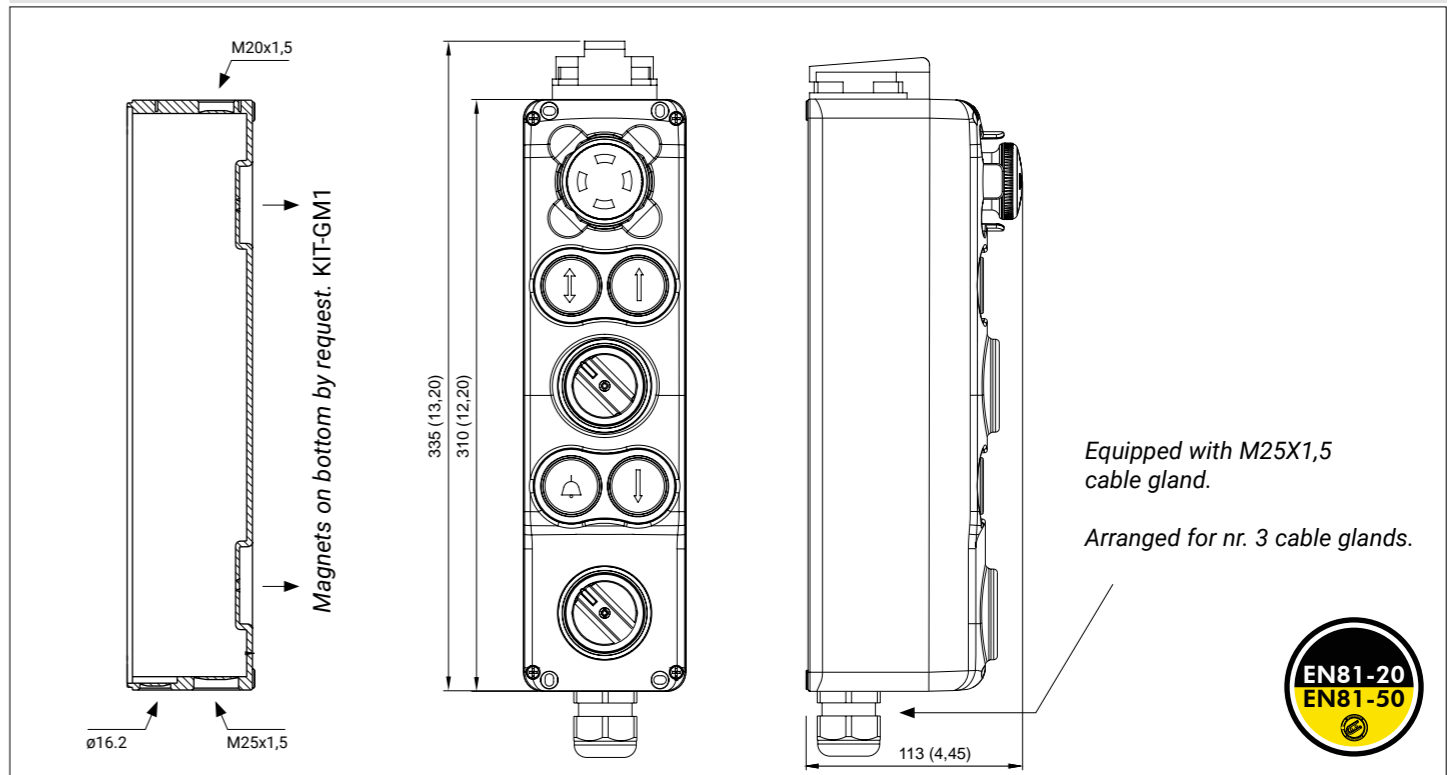


IP54

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Schuko socket outlet 16A</b>			<b>GMS309/EU</b>
<b>Cenelec socket outlet</b>			<b>GMS309/FR</b>
<b>USA socket outlet</b>			<b>GMS309/US</b>
<b>Swiss socket outlet</b>			<b>GMS309/SW</b>
<b>UK standard socket outlet</b>			<b>GMS309/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GMS309/CH</b>
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		1NC	<b>NEW</b>
<b>COMMON Push Button</b> flush, momentary, blue colour		1NO	
<b>UP Push Button</b> flush, momentary, white colour		1NO	
<b>Cam Switch 1-2</b> 90° switching		1NO+1NC	
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>DOWN Push Button</b> flush, momentary, black colour		1NO	
<b>Cam Switch 0-1</b> 90° switching		1NO	
<b>Wall Bracket case INCLUDED</b> Polypropylene material			<b>16000075</b>



TECHNICAL DRAWING - GMS309/..

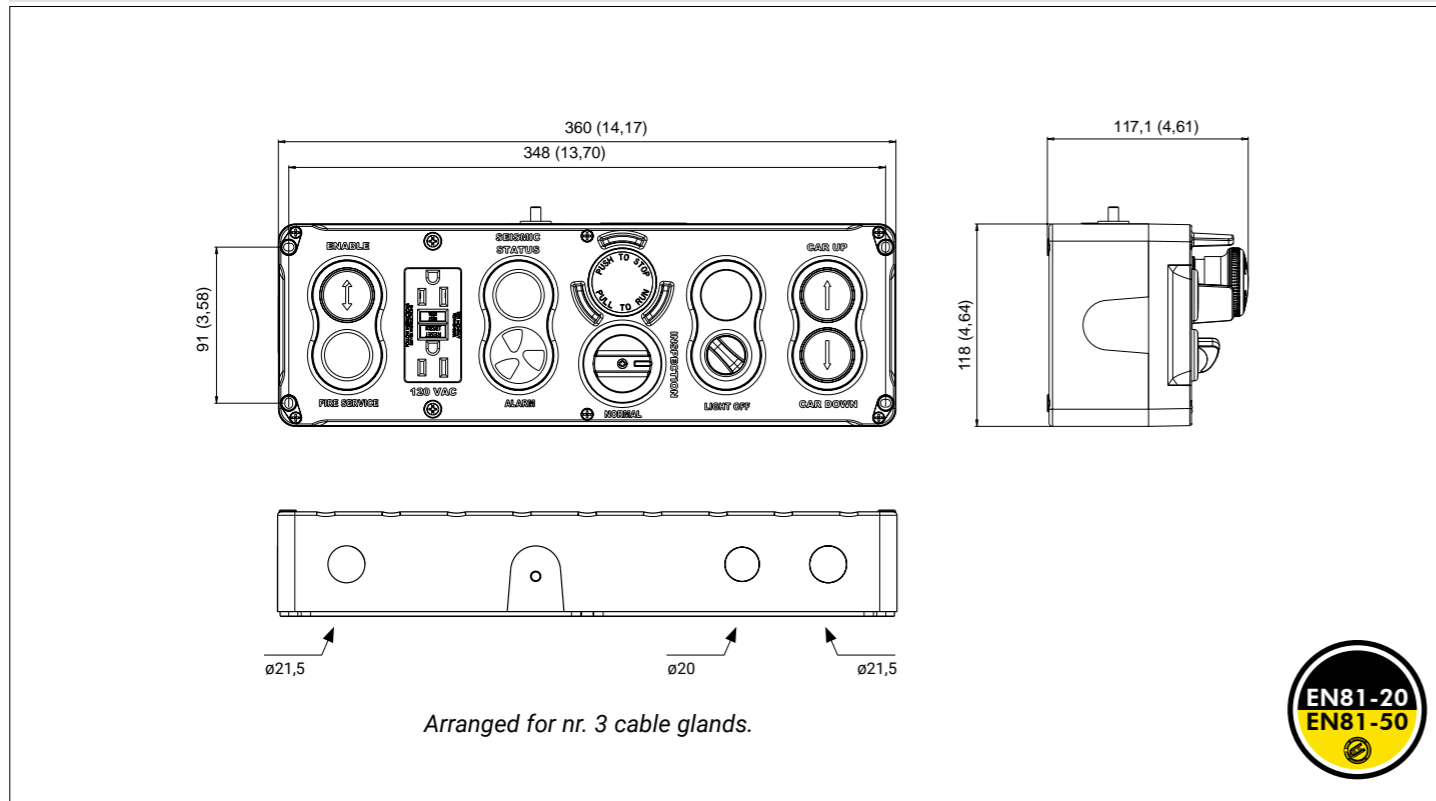


DESCRIPTION	SCHEME	CONTACTS	CODE
<b>COMMON Push Button</b> flush, momentary, blue colour		1NO	<b>GMS305</b>
<b>Red LED PILOT LIGHT</b> red colour	 AC/DC 24V		
<b>GFCI socket 15A - 125V</b>			
<b>Yellow LED PILOT LIGHT</b> yellow colour	 AC/DC 24V		
<b>BUZZER 30÷120 VAC</b>			
<b>Emergency stop EN ISO 13850</b> ø40 "push to stop/pull to run"	 2X	2PCW010SS + 1NO	
<b>Cam Switch 0-1 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>Stopping closing holes</b> black colour			
<b>Knob Selector 0-1</b> 2 positions, black + white indicator	OFF 0 ON 	1NO	
<b>UP Push Button</b> flush, momentary, white colour		1NO	
<b>DOWN Push Button</b> flush, momentary, black colour		1NO	



IP54

TECHNICAL DRAWING - GMS305

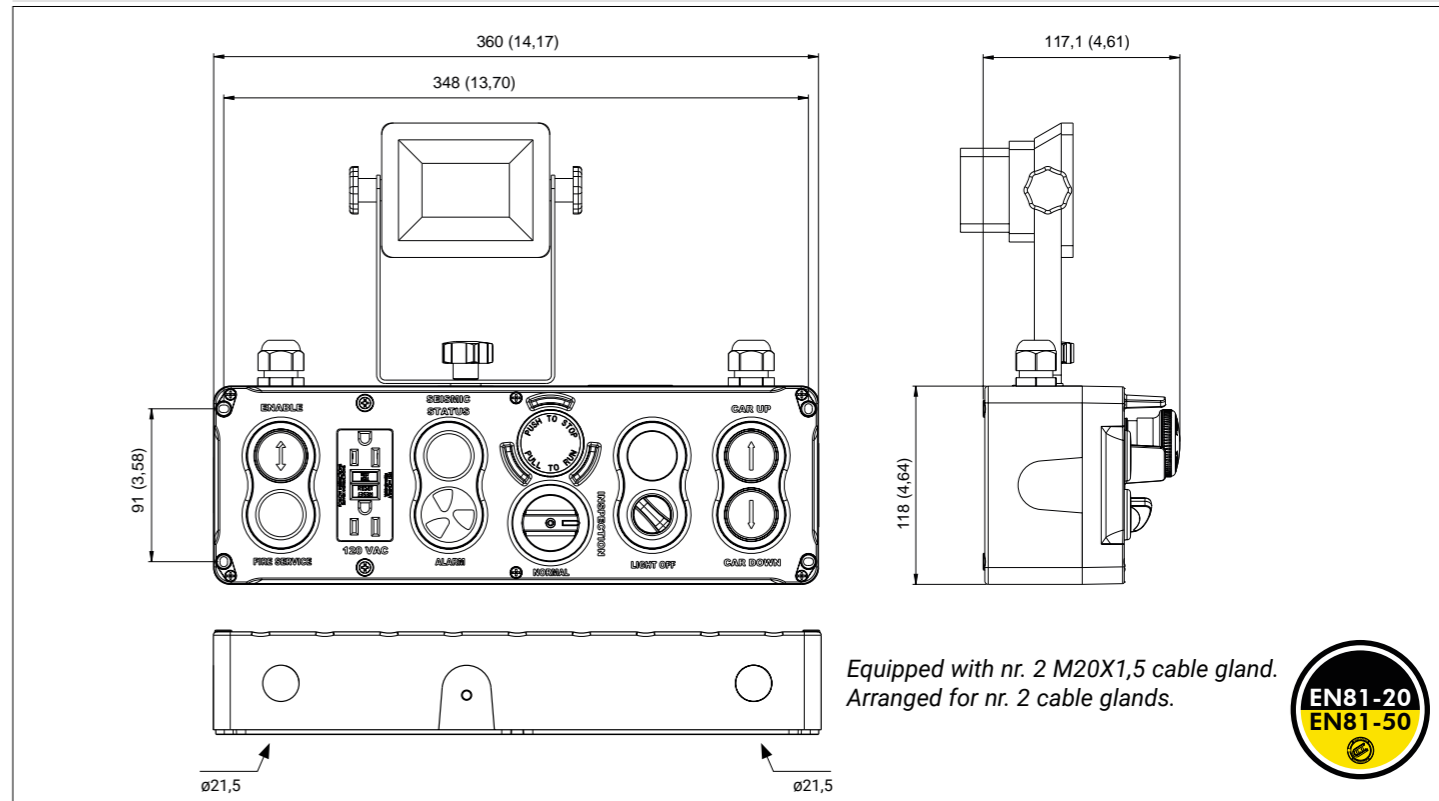


DESCRIPTION	SCHEME	CONTACTS	CODE
<b>LED LAMP</b> 12W 1000 LUMEN 120V			<b>GMS312</b>
<b>COMMON Push Button</b> flush, momentary, blue colour		1NO	
<b>Red LED PILOT LIGHT</b> red colour	 AC/DC 24V		
<b>GFCI socket 15A - 125V</b>			
<b>Yellow LED PILOT LIGHT</b> yellow colour	 AC/DC 24V		
<b>BUZZER 30÷120 VAC</b>			
<b>Emergency stop EN ISO 13850</b> ø40 "push to stop/pull to run"	 2X	2PCW010SS + 1NO	
<b>Cam Switch 0-1 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>Stopping closing holes</b> black colour			
<b>Knob Selector 0-1</b> 2 positions, black + white indicator	OFF 0 ON 	1NO	
<b>UP Push Button</b> flush, momentary, white colour		1NO	
<b>DOWN Push Button</b> flush, momentary, black colour		1NO	



IP54

TECHNICAL DRAWING - GMS312



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 twist to release		2NC	
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>UP Push Button</b> flush, momentary, white colour		2NO-1NC	
<b>COMMON Push Button</b> flush, momentary, blue colour		2NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO+1NC	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		3NO+3NC	
<b>Schuko socket outlet 16A</b>			<b>GM412/EU</b>
<b>Cenelec socket outlet</b>			<b>GM412/FR</b>
<b>USA socket outlet</b>			<b>GM412/US</b>
<b>Swiss socket outlet</b>			<b>GM412/SW</b>
<b>UK standard socket outlet</b>			<b>GM412/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM412/CH</b>



IP54



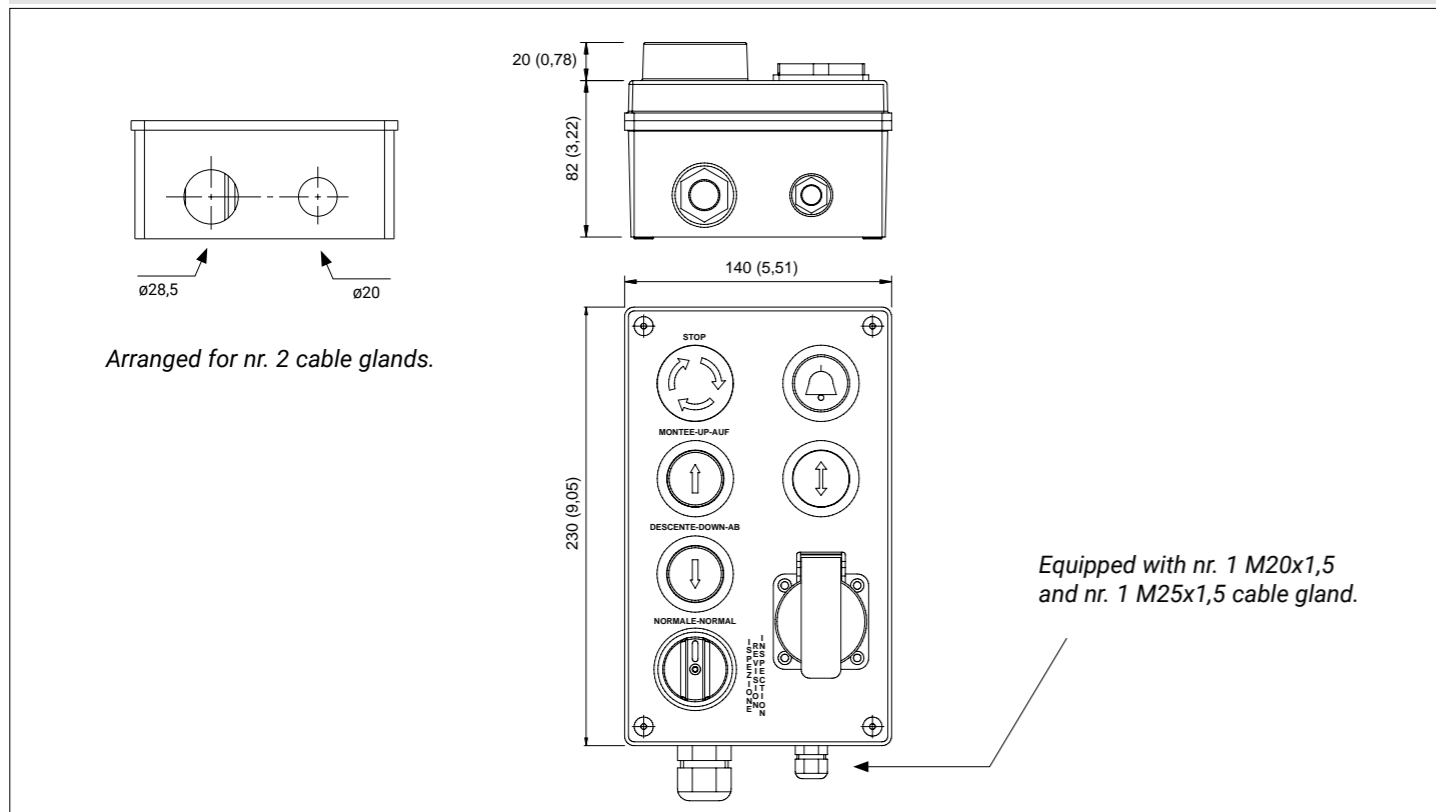
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		3NO+3NC	
<b>UP Push Button</b> flush, momentary, white colour		2NO+1NC	
<b>COMMON Push Button</b> flush, momentary, blue colour		2NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO+1NC	
<b>White LED PILOT LIGHT</b> white colour	 AC/DC 12V		
<b>Emergency stop EN ISO 13850</b> ø30 twist to release		1NC	
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>Schuko socket outlet 16A</b>			<b>GM822/EU</b>
<b>Cenelec socket outlet</b>			<b>GM822/FR</b>
<b>USA socket outlet</b>			<b>GM822/US</b>
<b>Swiss socket outlet</b>			<b>GM822/SW</b>
<b>UK standard socket outlet</b>			<b>GM822/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM822/CH</b>



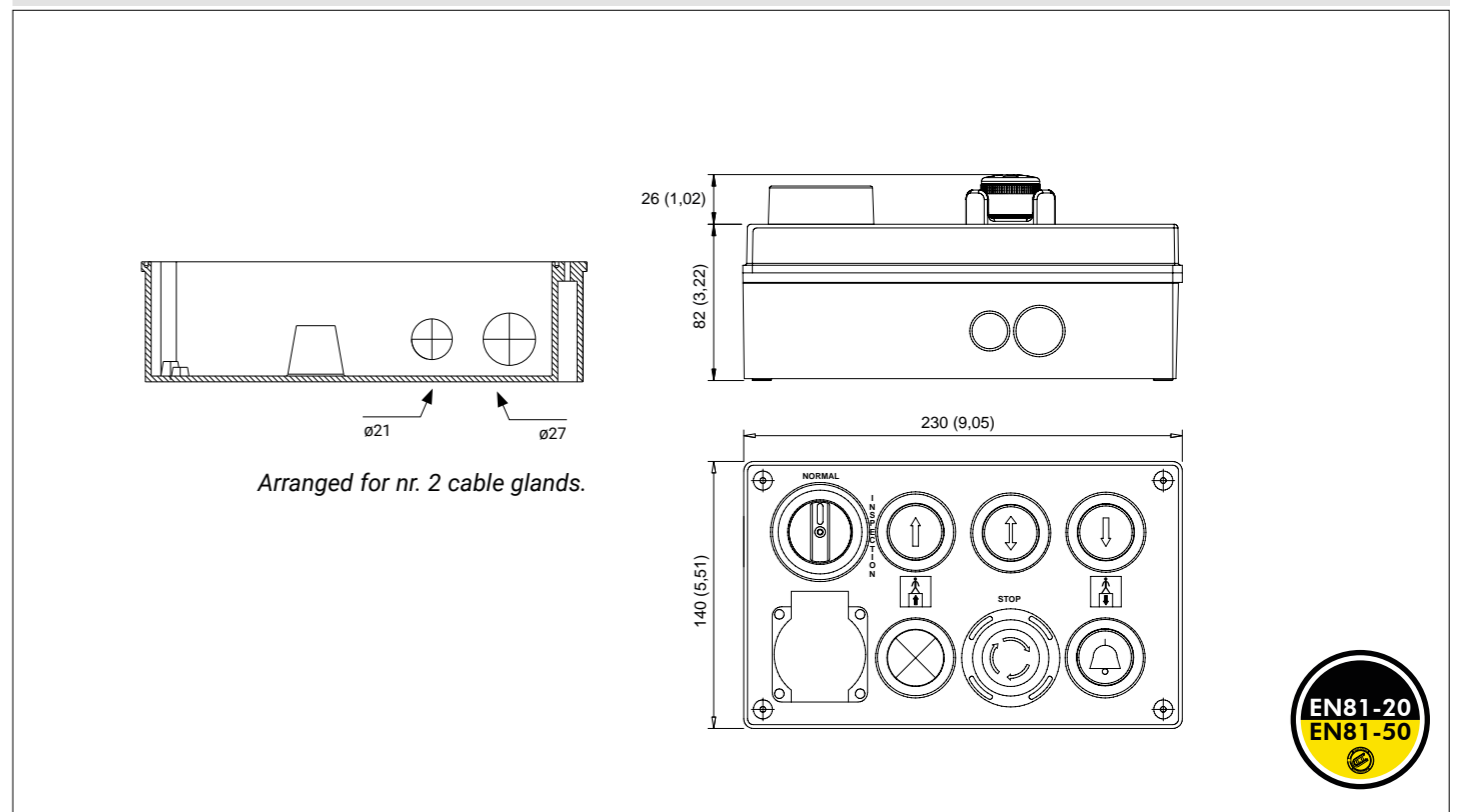
IP54



TECHNICAL DRAWING - GM412/..



TECHNICAL DRAWING - GM822/..



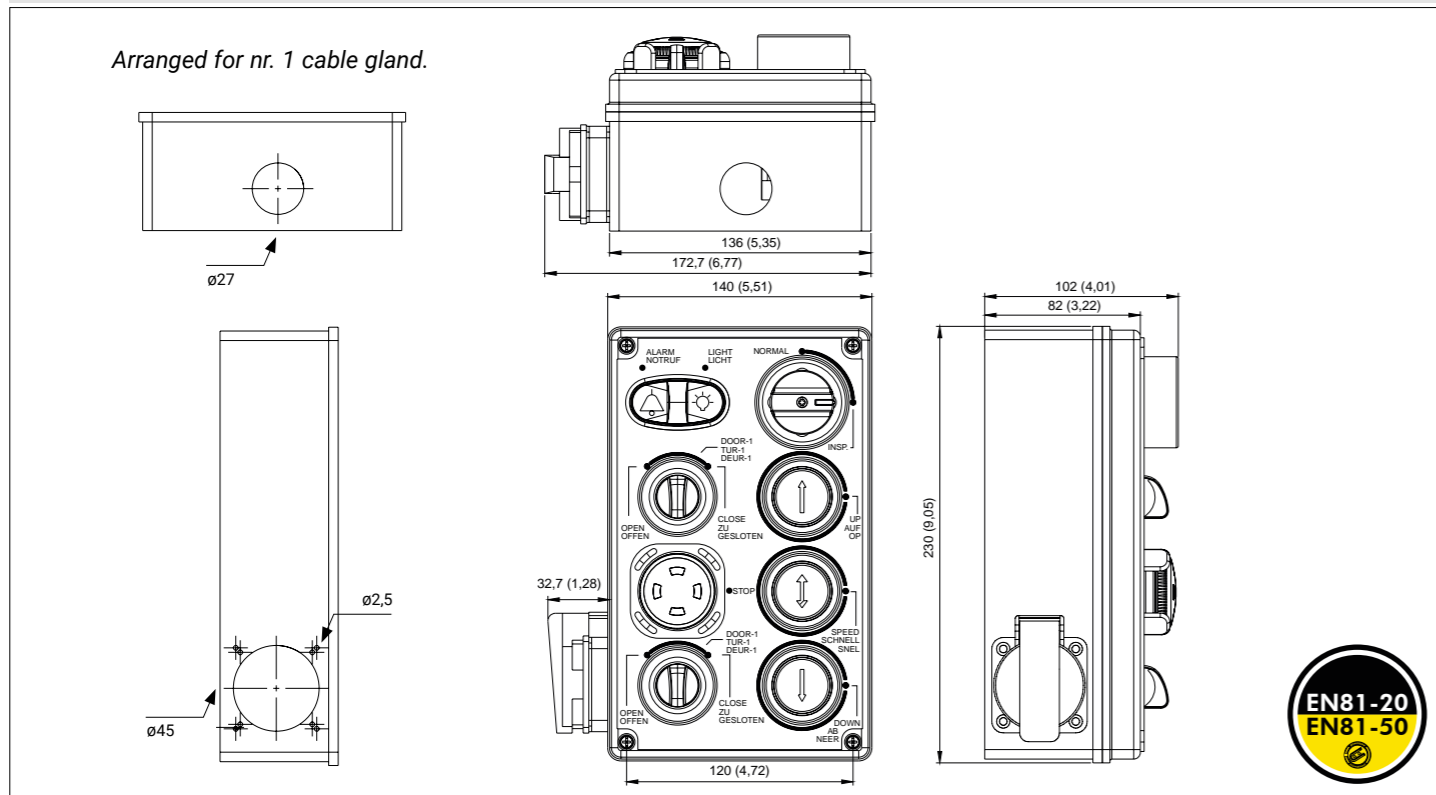
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>ALARM/LIGHT Dual Push Button</b> <i>flush, momentary, yellow/black colour</i>		1NO+1NO	 IP54
<b>Cam Switch 1-2 Normal-Inspection</b> <i>90° switching</i>		2NO+4NC	
<b>Knob Selector 1-0-2</b> <i>3 positions, return to 0</i>		1NO+1NO	
<b>UP Push Button</b> <i>flush, momentary, white colour</i>		2NO	
<b>Emergency stop EN ISO 13850</b> <i>ø40 push-pull with vision</i>		1NC	
<b>BLUE Push Button</b> <i>flush, momentary, blue colour</i>		1NO	
<b>Knob Selector 1-0-2</b> <i>3 positions, return to 0</i>		1NO+1NO	
<b>DOWN Push Button</b> <i>flush, momentary, black colour</i>		2NO	
<b>Schuko socket outlet 16A</b>		<b>GM321/EU</b>	
<b>Cenelec socket outlet</b>		<b>GM321/FR</b>	
<b>USA socket outlet</b>		<b>GM321/US</b>	
<b>Swiss socket outlet</b>		<b>GM321/SW</b>	
<b>UK standard socket outlet</b>		<b>GM321/UK</b>	
<b>Australia &amp; China standard socket outlet</b>		<b>GM321/CH</b>	



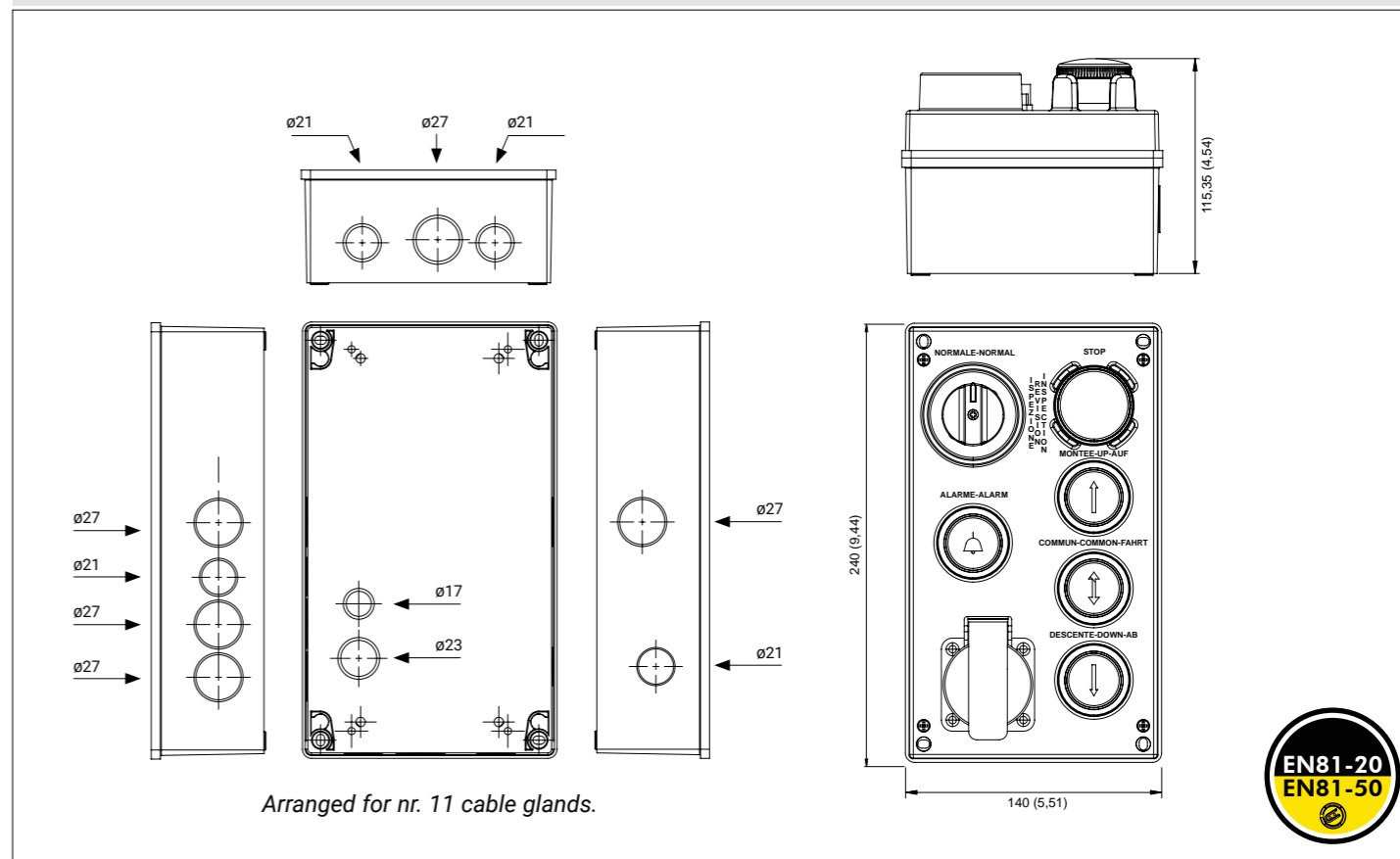
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Cam Switch 1-2 Normal-Inspection</b> <i>90° switching</i>		3NO+3NC	 IP54
<b>Emergency stop EN ISO 13850</b> <i>ø40 push-pull</i>		1NC	
<b>ALARM Push Button</b> <i>flush, momentary, yellow colour</i>		1NO	
<b>UP Push Button</b> <i>flush, momentary, white colour</i>		1NO	
<b>COMMON Push Button</b> <i>flush, momentary, blue colour</i>		1NO	
<b>DOWN Push Button</b> <i>flush, momentary, black colour</i>		1NO	
<b>Schuko socket outlet 16A</b>		<b>GM455/EU</b>	
<b>Cenelec socket outlet</b>		<b>GM455/FR</b>	
<b>USA socket outlet</b>		<b>GM455/US</b>	
<b>Swiss socket outlet</b>		<b>GM455/SW</b>	
<b>UK standard socket outlet</b>		<b>GM455/UK</b>	
<b>Australia &amp; China standard socket outlet</b>		<b>GM455/CH</b>	



TECHNICAL DRAWING - GM321/..



TECHNICAL DRAWING - GM455/..



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull		2 PCW010SS	<b>GM261</b>
<b>COMMON Push Button</b> flush, momentary, blue colour		2NO	
<b>UP Push Button</b> flush, momentary, white colour		2NO	
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	

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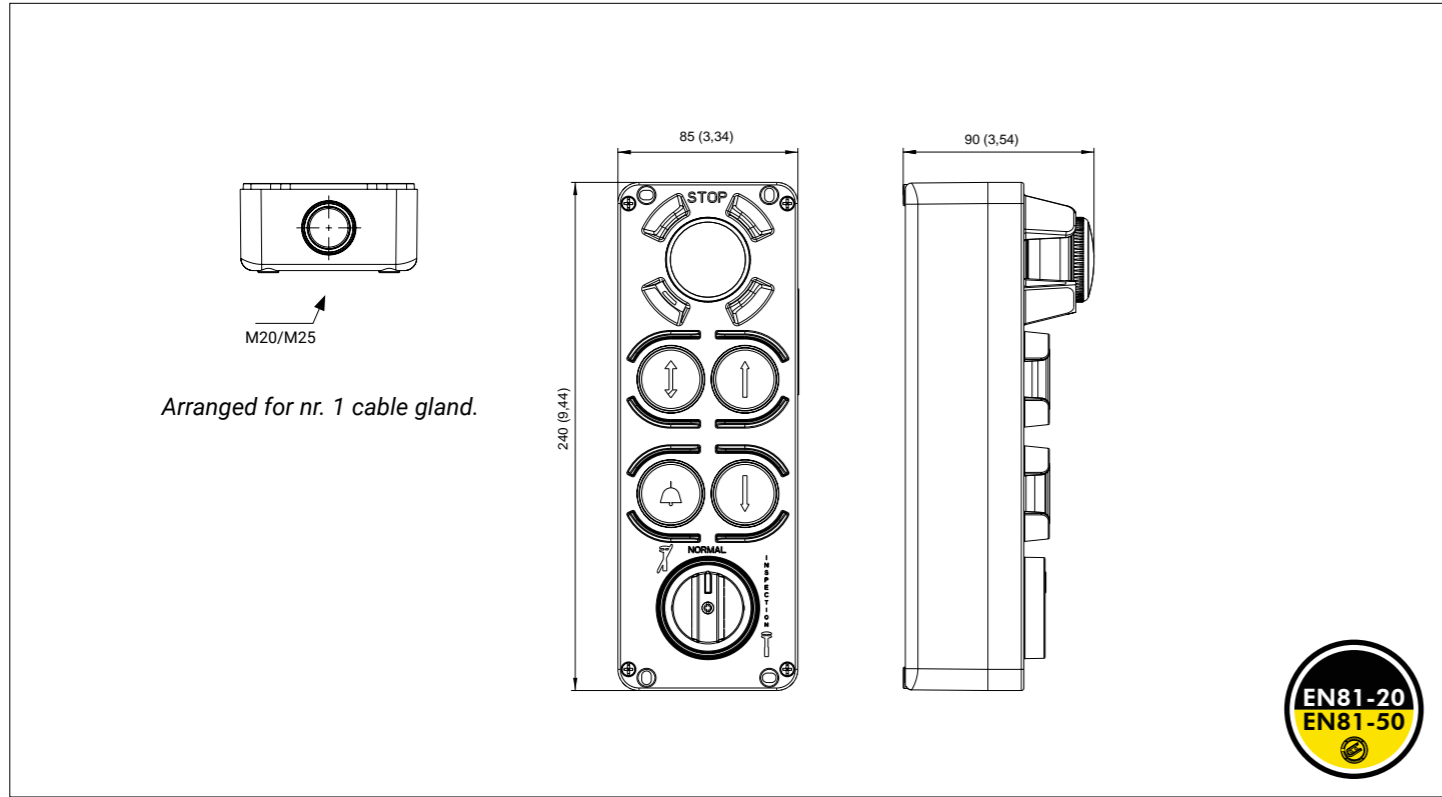


DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	<b>GM262</b>
<b>COMMON Push Button</b> flush, momentary, blue colour		2NO	
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>UP Push Button</b> flush, momentary, white colour		2NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO	
<b>Emergency stop EN ISO 13850</b> ø40 push-pull		2 PCW010SS	

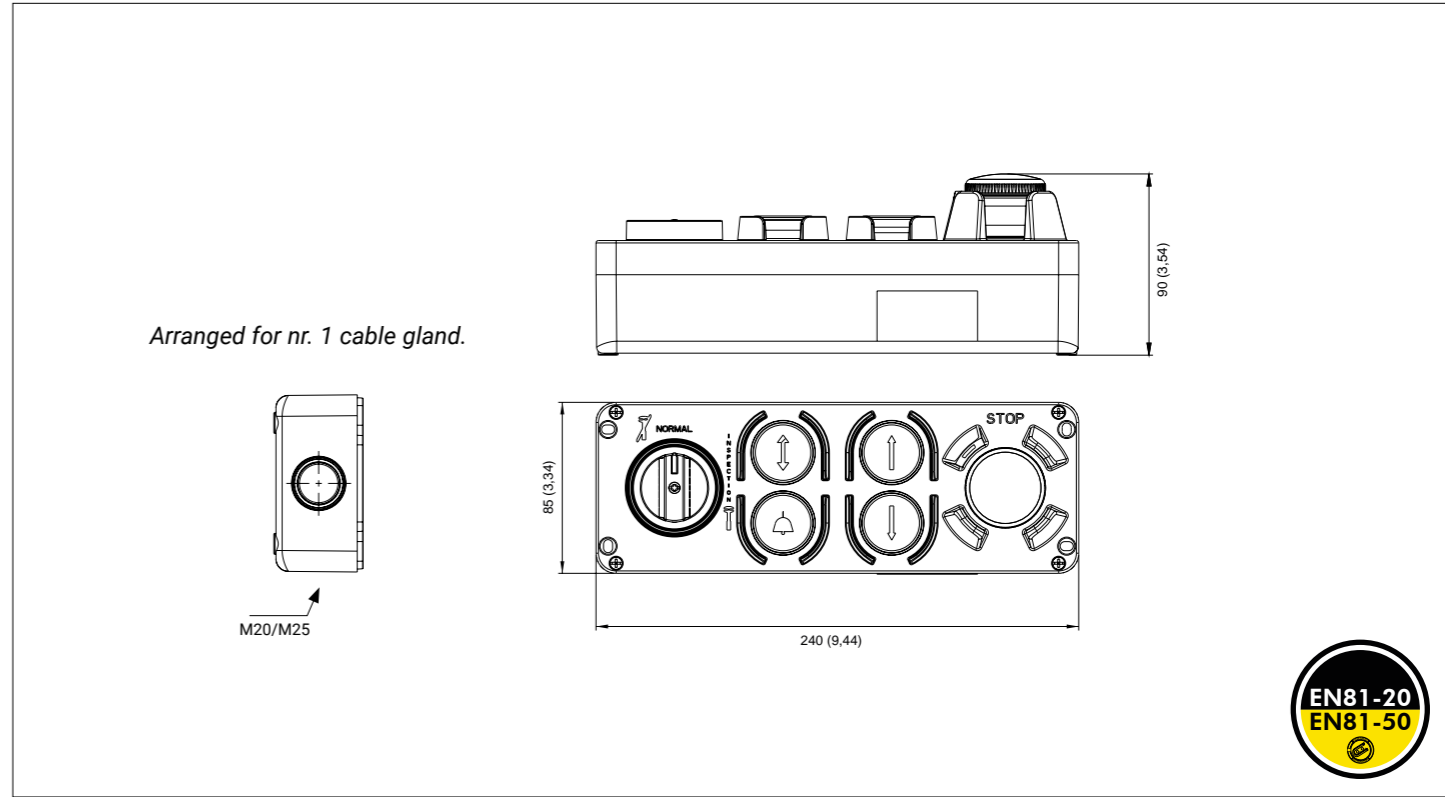
IP65



TECHNICAL DRAWING - GM261



TECHNICAL DRAWING - GM262





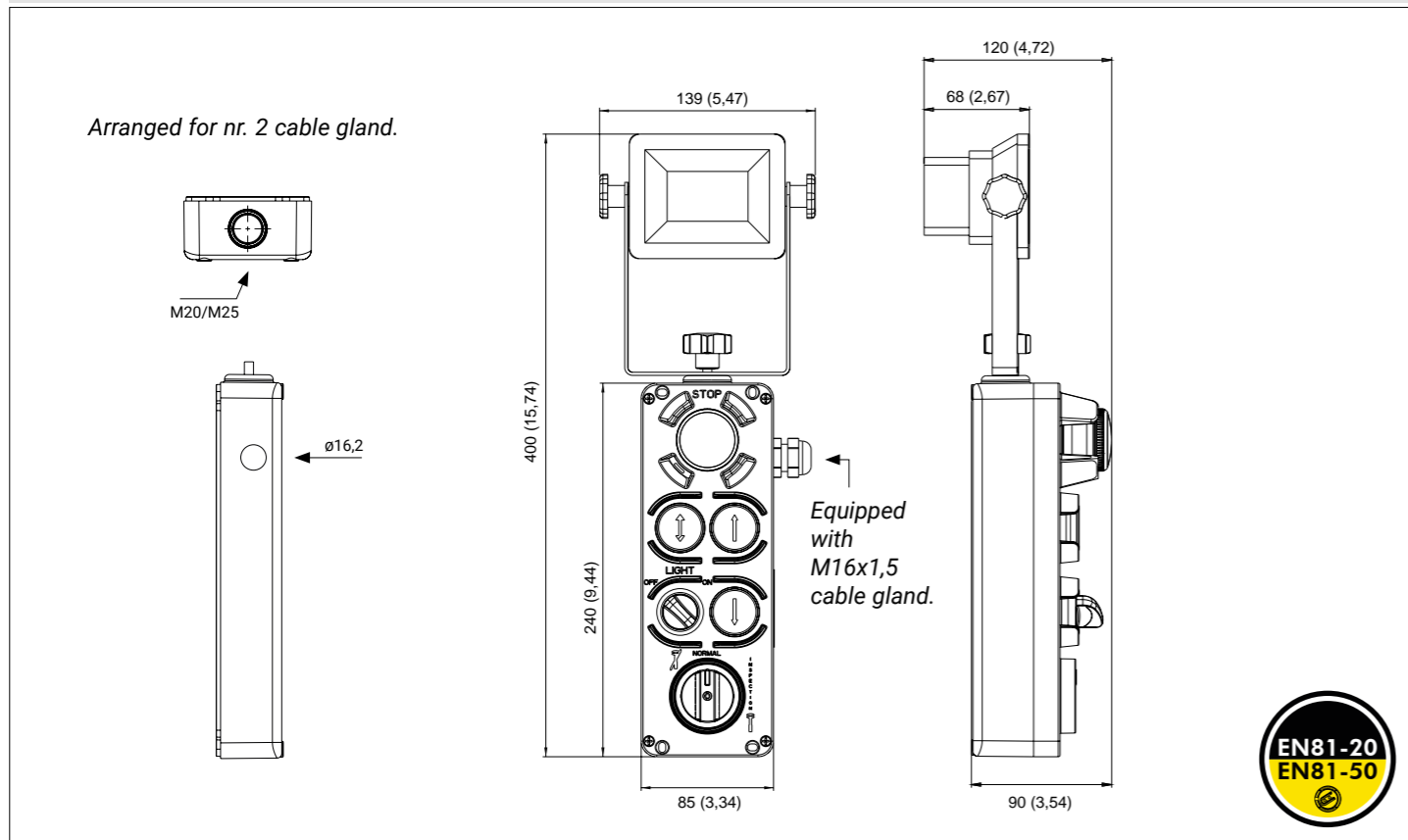
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>LED LAMP</b> 12W 1000 LUMEN 120V			<b>GM263</b>
<b>Emergency stop EN ISO 13850</b> ø40 push-pull		2 PCW010SS	
<b>COMMON Push Button</b> flush, momentary, blue colour		2NO	
<b>UP Push Button</b> flush, momentary, white colour		2NO	
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	



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**TECHNICAL DRAWING - GM263**



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>BLUE Push Button</b> flush, momentary, blue colour		1NO	<b>GMS03</b>
<b>Cam Switch 1-2</b> 90° switching		1NO+1NC	
<b>UP Push Button</b> flush, momentary, black colour		1NO+1NC	
<b>BLACK Push Button</b> black colour		1NO	
<b>DOWN Push Button</b> flush, momentary, black colour		1NO+1NC	
<b>Emergency stop EN ISO 13850</b> ø40 twist to release		1NC	
<b>GREEN Push Button</b> green colour		1NO	
<b>Schuko socket outlet 16A</b>			
<b>USA socket outlet</b>			

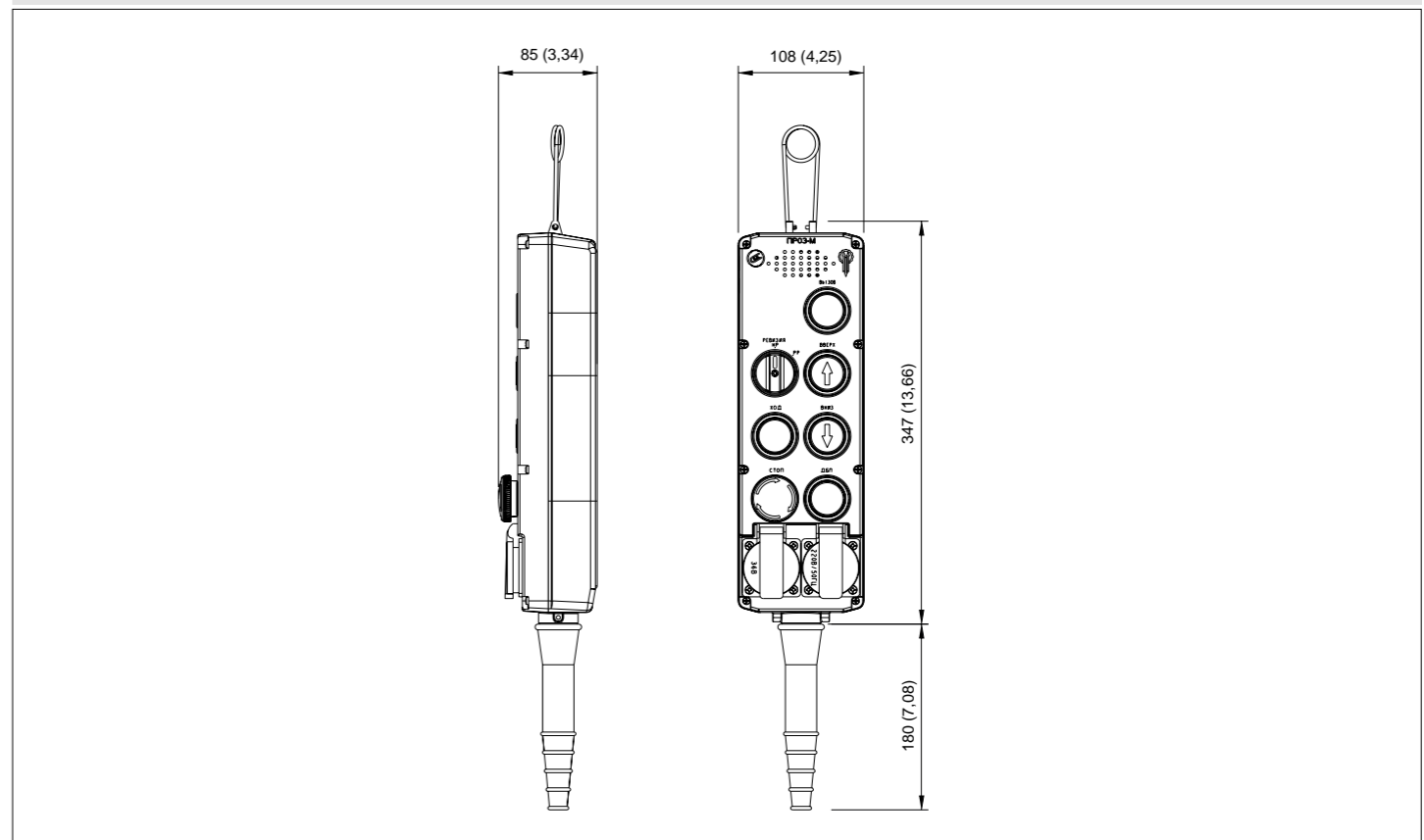


IP54



*GMS03 isn't pre-wired but, as the others maintenance stations, there's the possibility of pre-wired products on request.*

**TECHNICAL DRAWING - GMS03**



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 twist to release		1NC	<b>GM442N</b>
<b>UP Push Button</b> flush, momentary, white colour		2NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO	
<b>Cam Switch 1-0-2 Normal-Inspection</b> 90° switching		2NO+2NC	



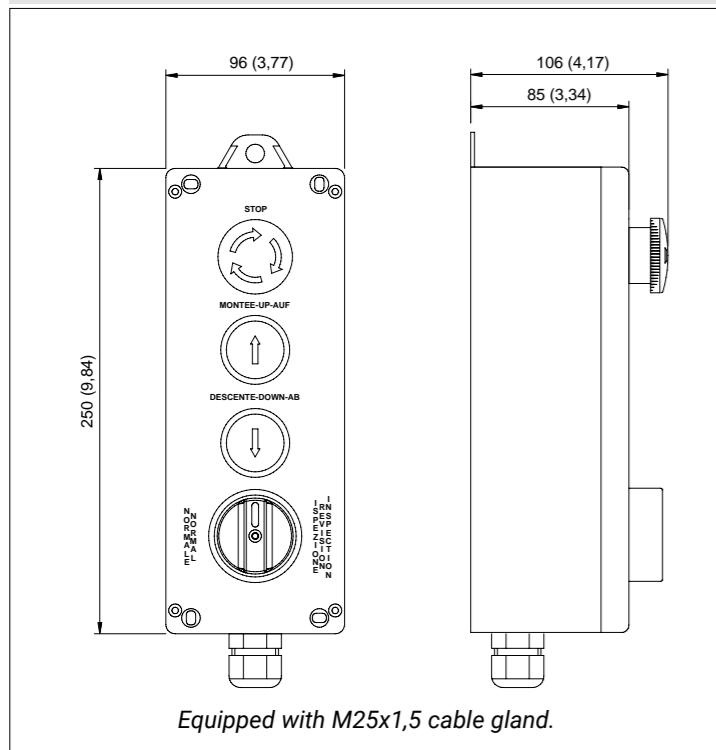
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 twist to release		1NC	<b>GM444N</b>
<b>UP Push Button</b> flush, momentary, white colour		2NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	



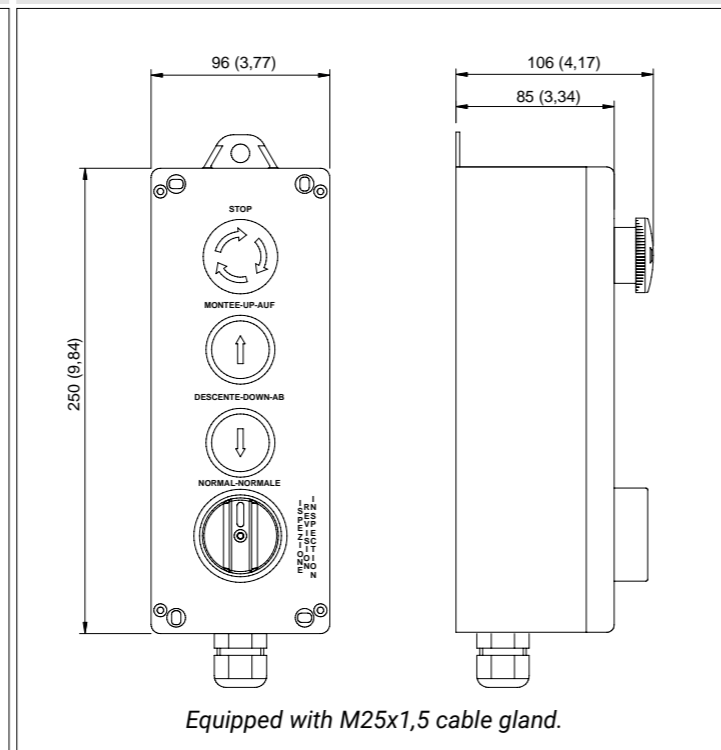
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 twist to release		1NC	<b>GM441N/..</b>
<b>UP Push Button</b> flush, momentary, white colour		2NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>Schuko socket outlet 16A</b>			<b>GM441N/EU</b>
<b>Cenelec socket outlet</b>			<b>GM441N/FR</b>
<b>USA socket outlet</b>			<b>GM441N/US</b>
<b>Swiss socket outlet</b>			<b>GM441N/SW</b>
<b>UK standard socket outlet</b>			<b>GM441N/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM441N/CH</b>



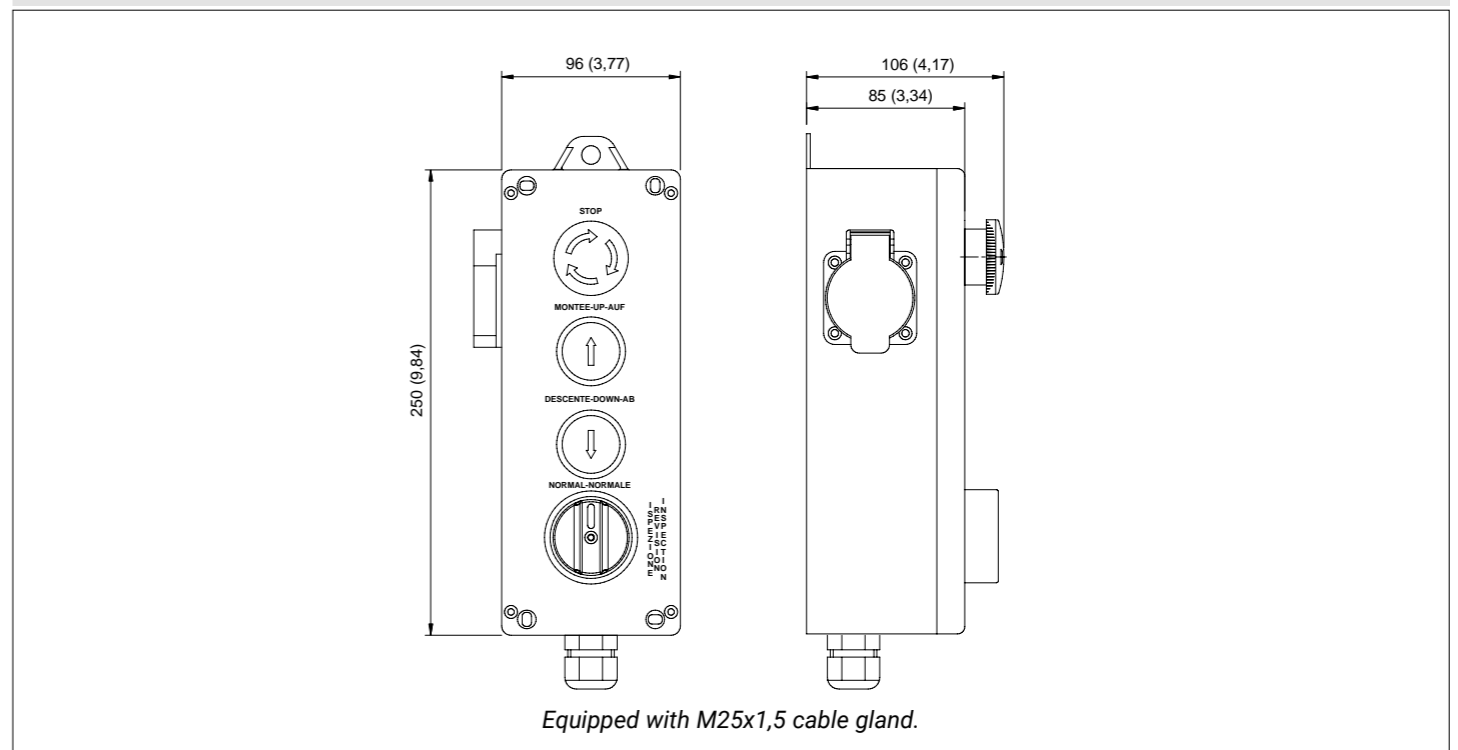
TECHNICAL DRAWING - GM442N



TECHNICAL DRAWING - GM444N



TECHNICAL DRAWING - GM441N/..



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 twist to release		1NC	
<b>UP Push Button</b> flush, momentary, white colour		2NO	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO	
<b>Cam Switch 1-0-2 Normal-Inspection</b> 90° switching		2NO+2NC	
<b>Schuko socket outlet 16A</b>			<b>GM445N/EU</b>
<b>Cenelec socket outlet</b>			<b>GM445N/FR</b>
<b>USA socket outlet</b>			<b>GM445N/US</b>
<b>Swiss socket outlet</b>			<b>GM445N/SW</b>
<b>UK standard socket outlet</b>			<b>GM445N/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM445N/CH</b>



IP54 □



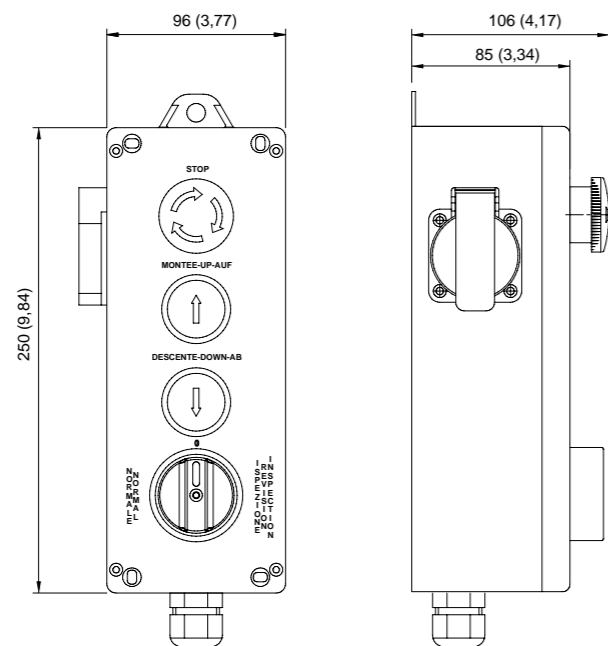
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>UP Push Button</b> flush, momentary, white colour		2NO	
<b>Emergency stop EN ISO 13850</b> ø40 twist to release		2NC	
<b>DOWN Push Button</b> flush, momentary, black colour		2NO	
<b>Cam Switch 1-2 Normal-Inspection</b> 90° switching		3NO+3NC	
<b>ALARM Push Button</b> flush, momentary, yellow colour		1NO+1NC	
<b>Schuko socket outlet 16A</b>			<b>GM660/EU</b>
<b>Cenelec socket outlet</b>			<b>GM660/FR</b>
<b>USA socket outlet</b>			<b>GM660/US</b>
<b>Swiss socket outlet</b>			<b>GM660/SW</b>
<b>UK standard socket outlet</b>			<b>GM660/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM660/CH</b>



IP54 □



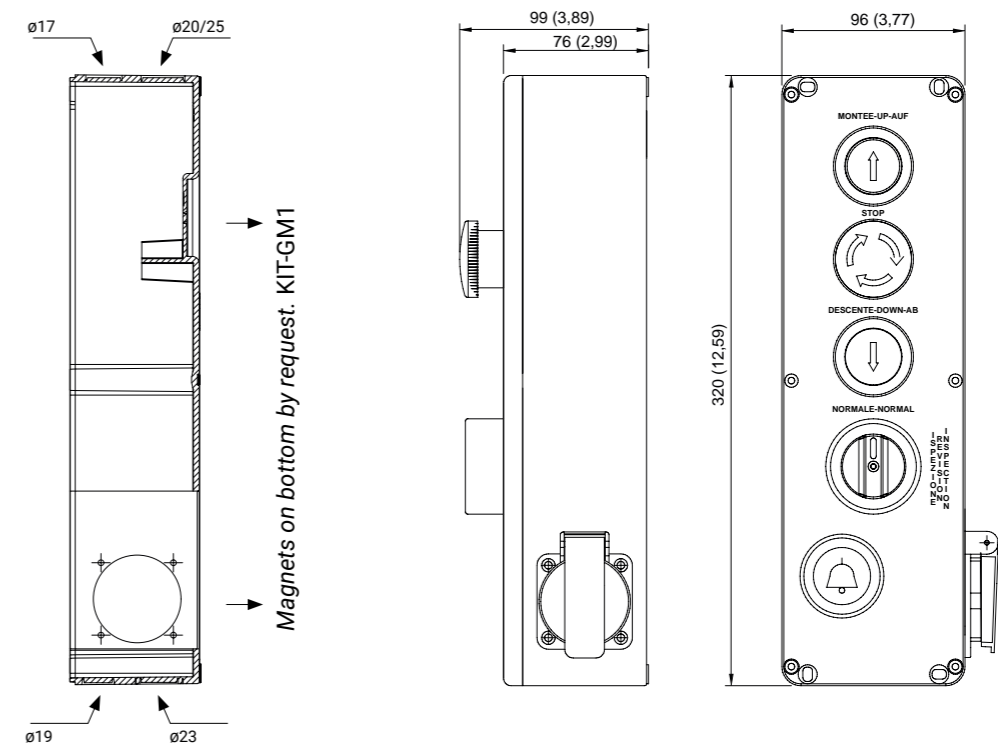
**TECHNICAL DRAWING - GM445N/..**



Equipped with M25x1,5 cable gland.

**TECHNICAL DRAWING - GM660/..**

Arranged for nr. 4 cable gland.



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>UP Push Button</b> <i>flush, momentary, white colour</i>		2NO	
<b>Emergency stop EN ISO 13850</b> <i>ø40 twist to release</i>		2NC	
<b>DOWN Push Button</b> <i>flush, momentary, black colour</i>		2NO	
<b>Cam Switch 1-2 Normal-Inspection</b> <i>90° switching</i>		3NO+3NC	
<b>COMMON Push Button</b> <i>flush, momentary, blue colour</i>		2NO	
<b>Schuko socket outlet 16A</b>			<b>GM663/EU</b>
<b>Cenelec socket outlet</b>			<b>GM663/FR</b>
<b>USA socket outlet</b>			<b>GM663/US</b>
<b>Swiss socket outlet</b>			<b>GM663/SW</b>
<b>UK standard socket outlet</b>			<b>GM663/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM663/CH</b>

IP54

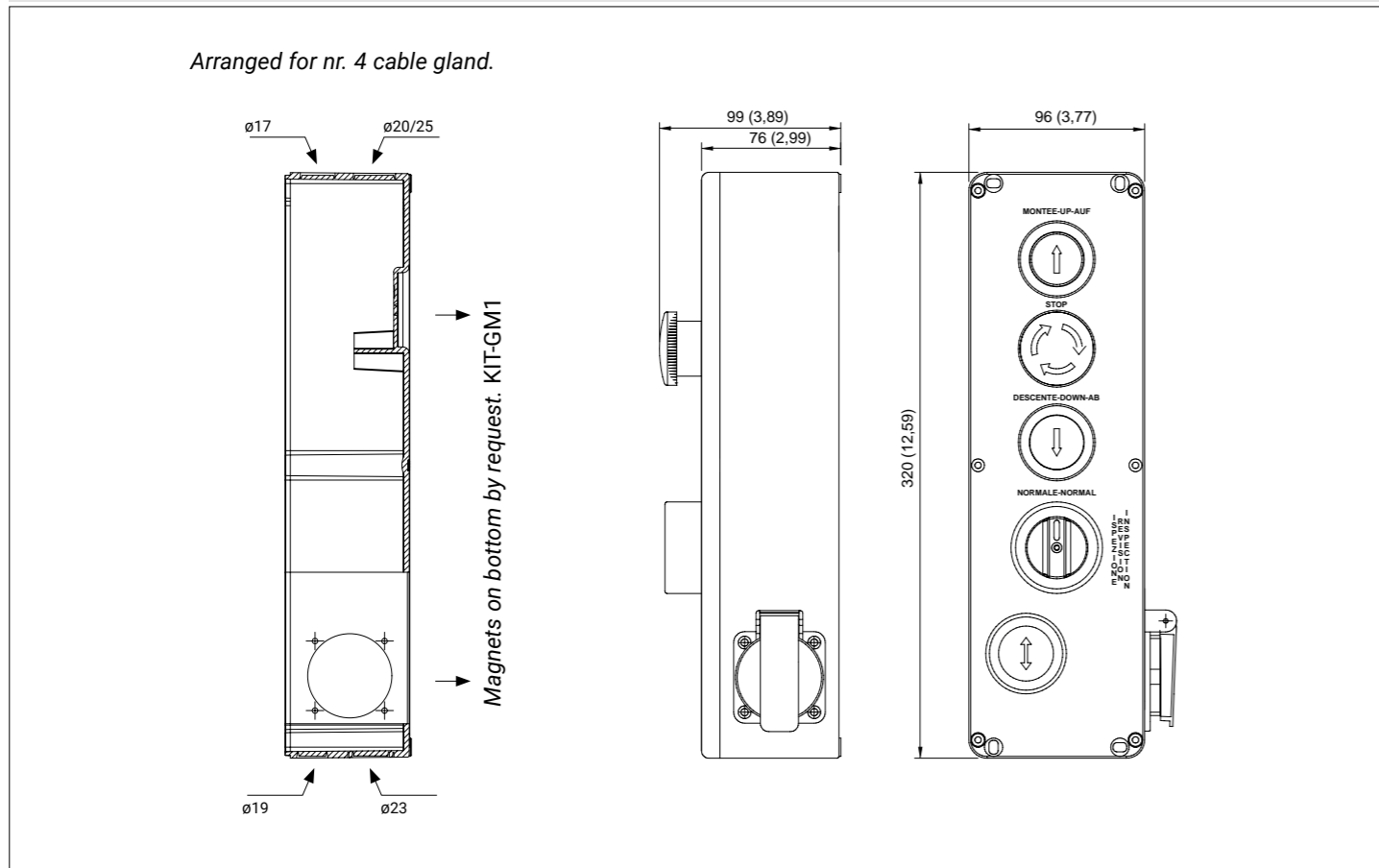


DESCRIPTION	SCHEME	CONTACTS	CODE
<b>UP Push Button</b> <i>flush, momentary, white colour</i>		2NO	
<b>Emergency stop EN ISO 13850</b> <i>ø40 twist to release</i>		2NC	
<b>DOWN Push Button</b> <i>flush, momentary, black colour</i>		2NO	
<b>Cam Switch 1-0-2 Normal-Inspection</b> <i>90° switching</i>		2NO+2NC	
<b>ALARM Push Button</b> <i>flush, momentary, yellow colour</i>		1NO+1NC	
<b>Schuko socket outlet 16A</b>			<b>GM670/EU</b>
<b>Cenelec socket outlet</b>			<b>GM670/FR</b>
<b>USA socket outlet</b>			<b>GM670/US</b>
<b>Swiss socket outlet</b>			<b>GM670/SW</b>
<b>UK standard socket outlet</b>			<b>GM670/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM670/CH</b>

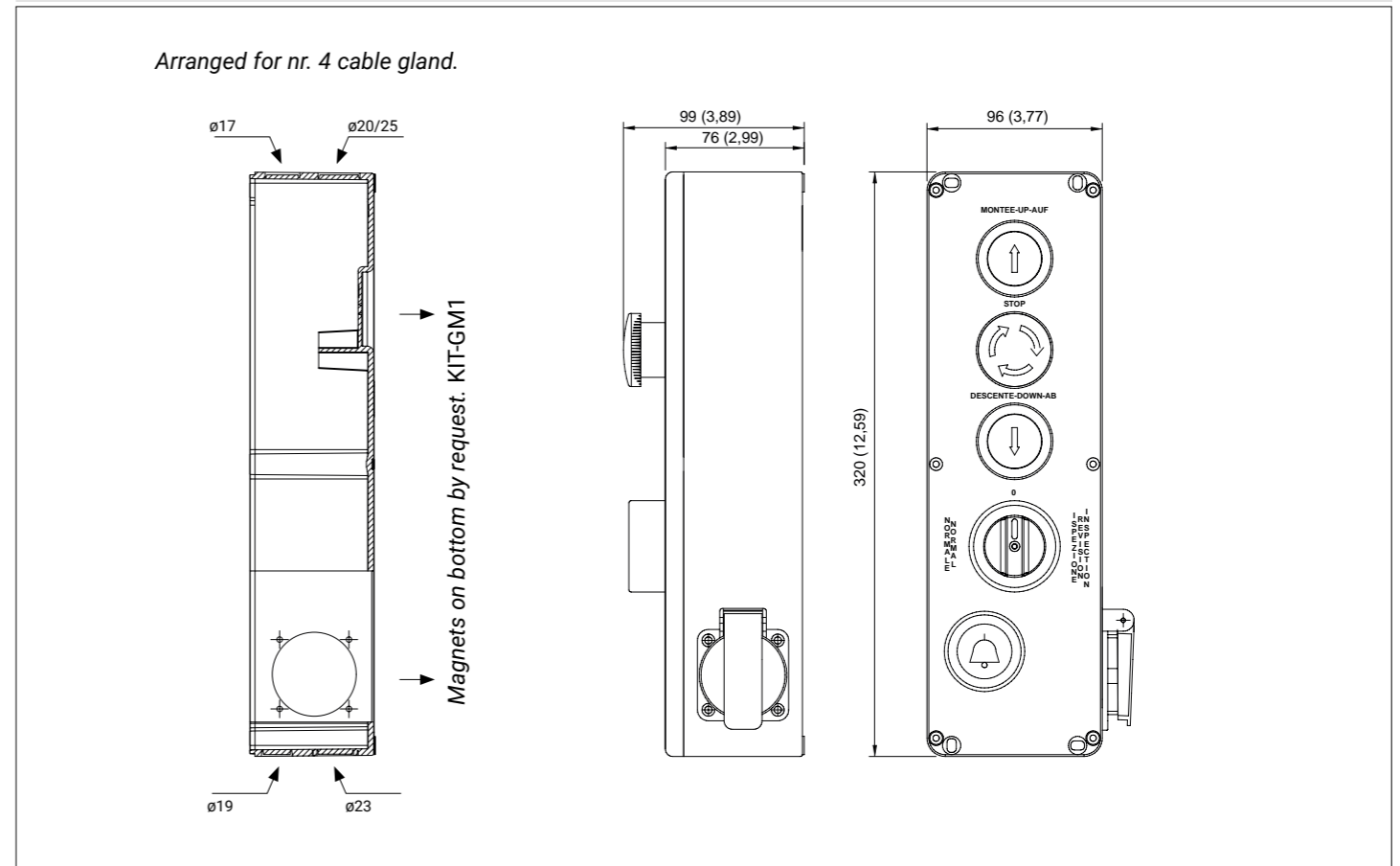
IP54



TECHNICAL DRAWING - GM663/..



TECHNICAL DRAWING - GM670/..



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>UP Push Button</b> <i>flush, momentary, white colour</i>		2NO	
<b>Emergency stop EN ISO 13850</b> <i>ø40 twist to release</i>		2NC	
<b>DOWN Push Button</b> <i>flush, momentary, black colour</i>		2NO	
<b>Cam Switch 1-0-2 Normal-Inspection</b> <i>90° switching</i>		3NO+3NC	
<b>COMMON Push Button</b> <i>flush, momentary, blue colour</i>		2NO	
<b>Schuko socket outlet 16A</b>			<b>GM677/EU</b>
<b>Cenelec socket outlet</b>			<b>GM677/FR</b>
<b>USA socket outlet</b>			<b>GM677/US</b>
<b>Swiss socket outlet</b>			<b>GM677/SW</b>
<b>UK standard socket outlet</b>			<b>GM677/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM677/CH</b>

IP54

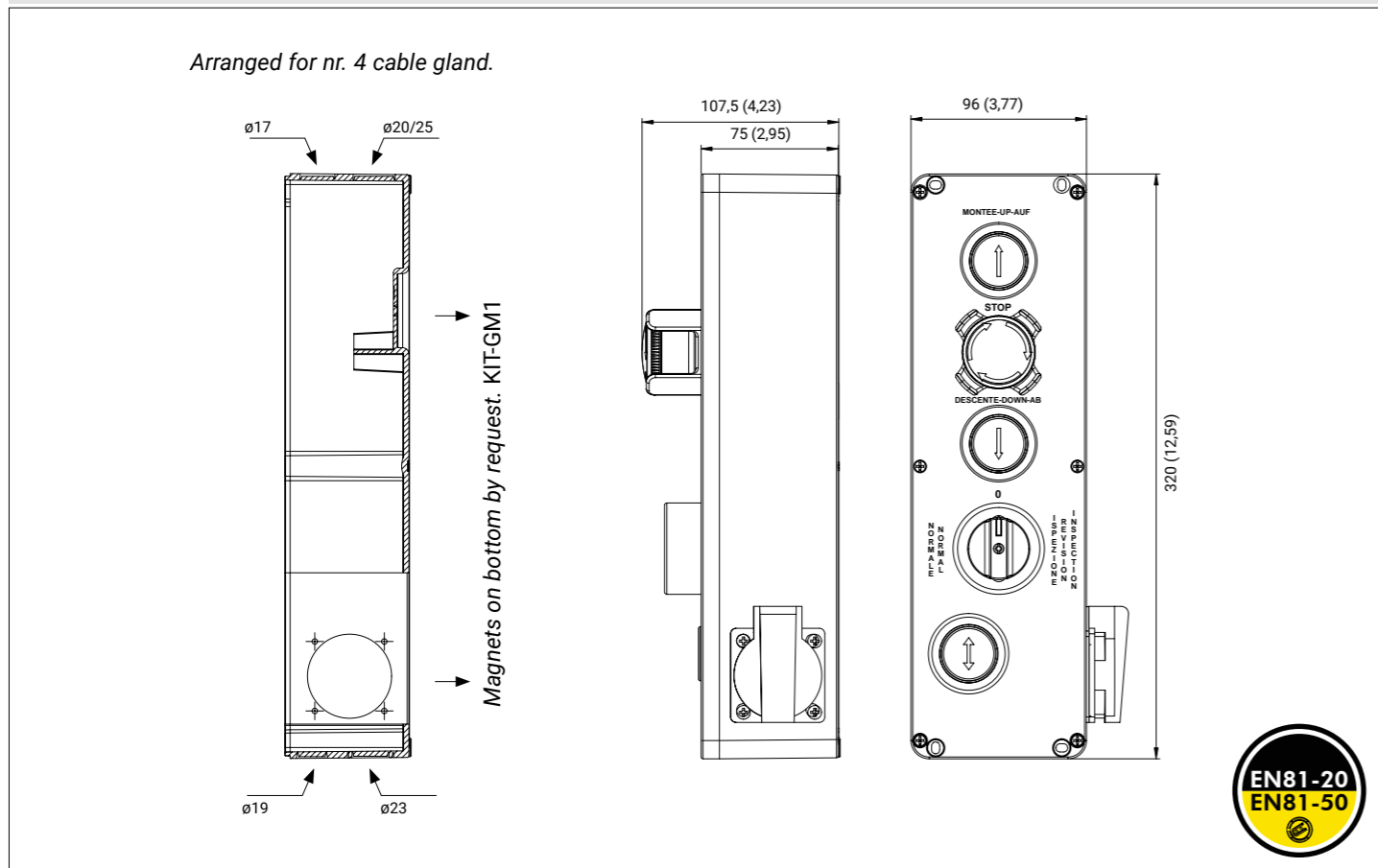


DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> <i>ø40 twist to release</i>		2NC	
<b>ALARM Push Button</b> <i>flush, momentary, yellow colour</i>		1NO	
<b>UP Push Button</b> <i>flush, momentary, white colour</i>		2NO+1NC	
<b>COMMON Push Button</b> <i>flush, momentary, blue colour</i>		2NO	
<b>DOWN Push Button</b> <i>flush, momentary, black colour</i>		2NO+1NC	
<b>Cam Switch 1-2 Normal-Inspection</b> <i>90° switching</i>		3NO+3NC	
<b>Schuko socket outlet 16A</b>			<b>GM412BK/EU</b>
<b>Cenelec socket outlet</b>			<b>GM412BK/FR</b>
<b>USA socket outlet</b>			<b>GM412BK/US</b>
<b>Swiss socket outlet</b>			<b>GM412BK/SW</b>
<b>UK standard socket outlet</b>			<b>GM412BK/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM412BK/CH</b>

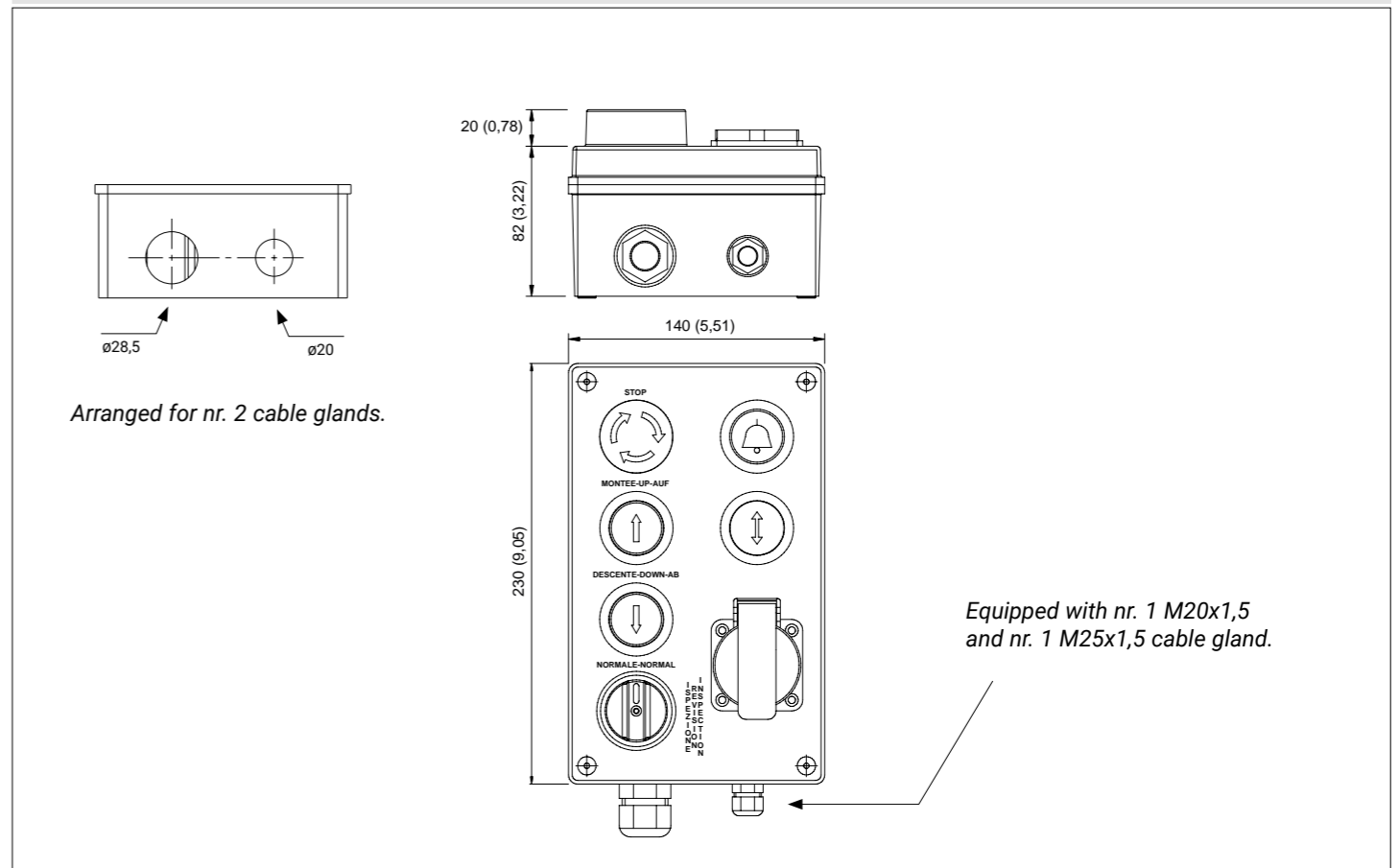
IP54



TECHNICAL DRAWING - GM677/..



TECHNICAL DRAWING - GM412BK/..



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>UP Push Button</b> <i>flush, momentary, white colour</i>		2NO	
<b>Emergency stop EN ISO 13850</b> <i>ø40 twist to release</i>		2NC	
<b>DOWN Push Button</b> <i>flush, momentary, black colour</i>		2NO	
<b>Cam Switch 1-0-2 Normal-Inspection</b> <i>90° switching</i>		3NO+3NC	
<b>COMMON Push Button</b> <i>flush, momentary, blue colour</i>		2NO	
<b>Schuko socket outlet 16A</b>			<b>GM677BK/EU</b>
<b>Cenelec socket outlet</b>			<b>GM677BK/FR</b>
<b>USA socket outlet</b>			<b>GM677BK/US</b>
<b>Swiss socket outlet</b>			<b>GM677BK/SW</b>
<b>UK standard socket outlet</b>			<b>GM677BK/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM677BK/CH</b>



IP54

DESCRIPTION

**Stopping closing holes**  
*black colour*

**WHITE LED PCB**  
*5LUX@12 VDC / 5LUX@24 VDC*

CODE

**GM034**



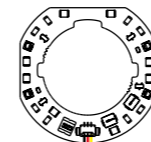
IP65



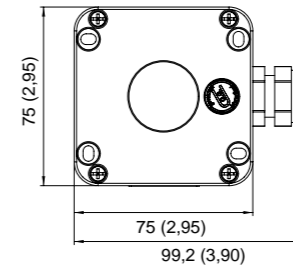
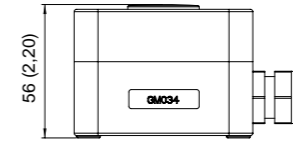
TECHNICAL DRAWING - GM034

BOARD POWER SUPPLY

- █ 12V - Red
- █ 24V - Yellow
- █ GND - Black



Use 12V or 24V only  
NOT TOGETHER!



Operating voltage VDC	12	24
Max current consumption [mA]	130	100
Max power [W]	1,56	2,4
Operating temperature	-25°C ÷ +70°C	
Dimensions	75x75x56mm	
Light color	White	
Light diffusion angle	120°	
Flame retardant	V0 UL94	
IP rating	IP65	
Printed circuits certification	UL	
Total light intensity [lux] a 1 m	5	

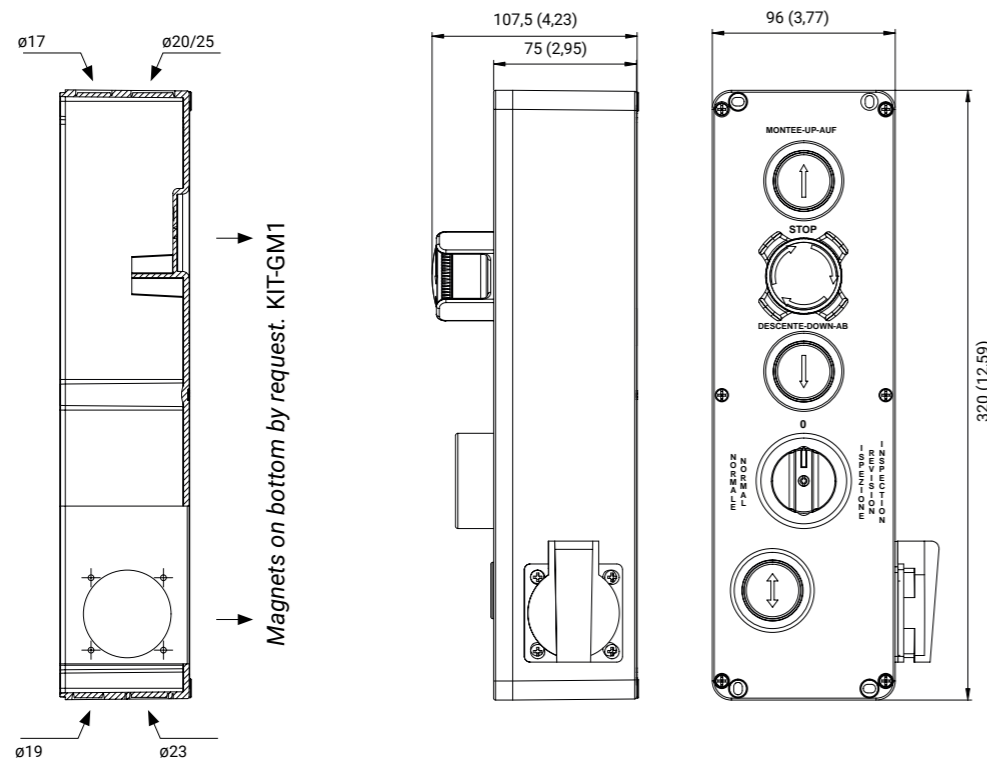
Equipped with M16x1,5  
cable gland.

Arranged for nr. 1 cable gland.



TECHNICAL DRAWING - GM677BK/..

Arranged for nr. 4 cable gland.



DESCRIPTION

**ALARM Mushroom Button**  
*ø40, flush, momentary, yellow colour*

**WHITE LED PCB**  
*5LUX@12 VDC / 5LUX@24 VDC*

SCHEME CONTACTS

1NO

CODE

**GMS169**



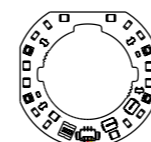
IP65



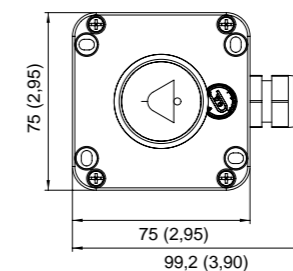
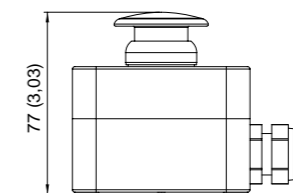
TECHNICAL DRAWING - GMS169

BOARD POWER SUPPLY

- █ 12V - Red
- █ 24V - Yellow
- █ GND - Black



Use 12V or 24V only  
NOT TOGETHER!



Operating voltage VDC	12	24
Max current consumption [mA]	130	100
Max power [W]	1,56	2,4
Operating temperature	-25°C ÷ +70°C	
Dimensions	75x75x56mm	
Light color	White	
Light diffusion angle	120°	
Flame retardant	V0 UL94	
IP rating	IP65	
Printed circuits certification	UL	
Total light intensity [lux] a 1 m	5	
Alarm mushroom contact	NO	

Equipped with M16x1,5  
cable gland.

Arranged for nr. 1 cable gland.



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>ALARM Push Button</b> <i>flush, momentary, yellow colour</i>		1NC	
<b>Stopping closing holes</b> <i>black colour</i>			
<b>WHITE LED PCB</b> <i>5LUX@24 VDC</i>			
<b>Schuko socket outlet 16A</b>			<b>GM033/EU</b>
<b>Cenelec socket outlet</b>			<b>GM033/FR</b>
<b>USA socket outlet</b>			<b>GM033/US</b>
<b>Swiss socket outlet</b>			<b>GM033/SW</b>
<b>UK standard socket outlet</b>			<b>GM033/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM033/CH</b>

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DESCRIPTION	SCHEME	CONTACTS	CODE	
<b>Knob Selector 0-1</b> <i>2 positions, 90° switching</i>		1NO		
<b>Stopping closing holes</b> <i>black colour</i>				
<b>WHITE LED PCB</b> <i>50LUX@230 VAC 5LUX@12 VDC</i>			50LUX@230 VAC 5LUX@12 VDC	50LUX@230 VAC 5LUX@24 VDC
<b>Schuko socket outlet 16A</b>			<b>GM036/EU</b>	<b>GM359/EU</b>
<b>Cenelec socket outlet</b>			<b>GM036/FR</b>	<b>GM359/FR</b>
<b>USA socket outlet</b>			<b>GM036/US</b>	<b>GM359/US</b>
<b>Swiss socket outlet</b>			<b>GM036/SW</b>	<b>GM359/SW</b>
<b>UK standard socket outlet</b>			<b>GM036/UK</b>	<b>GM359/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM036/CH</b>	<b>GM359/CH</b>

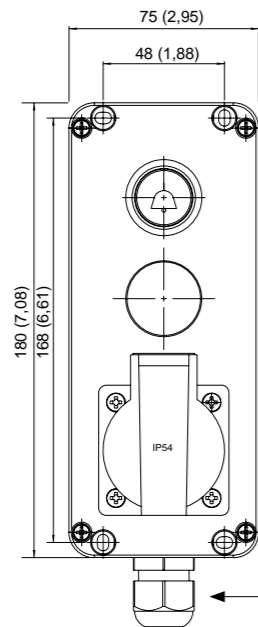
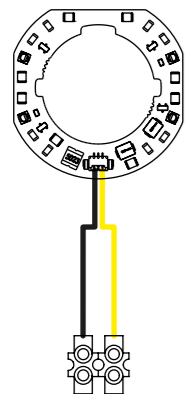
IP54



TECHNICAL DRAWING - GM033/..

BOARD POWER SUPPLY

- 24V - Yellow
- GND - Black



Operating voltage VDC	24
Max current consumption [mA]	100
Max power [W]	2,4
Operating temperature	-25°C ÷ +70°C
Dimensions	75x180x80mm
Light color	White
Light diffusion angle	120°
Flame retardant	V0 UL94
IP rating	IP65
Printed circuits certification	UL
Total light intensity [lux] a 1 m	5
Push button light supply	24VDC at 20mA
Alarm button contact	NC

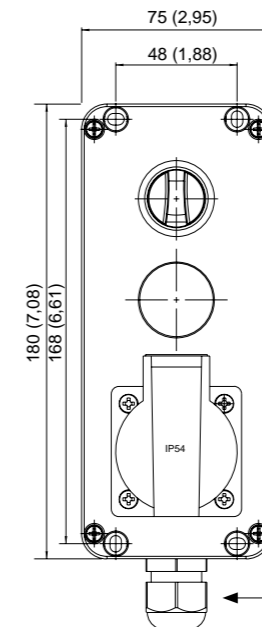
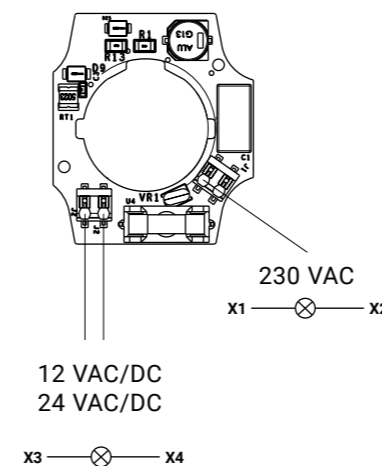
Equipped with M20x1,5 cable gland.

Arranged for nr. 1 cable gland.



TECHNICAL DRAWING - GM036/..

BOARD POWER SUPPLY



Operating voltage VDC	12	24	230
Max current consumption [mA]	130	50	50mA
Max power [W]	1,56	1,2	-
Operating temperature	-25°C ÷ +70°C		
Dimensions	75x180x80mm		
Light color	White		
Light diffusion angle	120°		
Flame retardant	V0 UL94		
IP rating	IP65		
Printed circuits certification	UL		
Total light intensity [lux] a 1 m	5		
Knob selector contact	NO		

Equipped with M20x1,5 cable gland.

Arranged for nr. 1 cable gland.

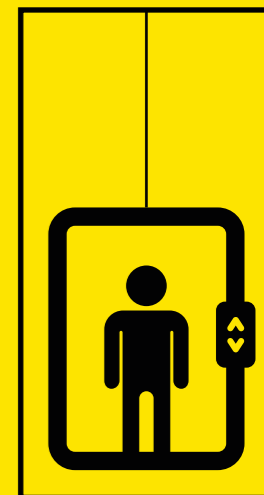




**GIOVENZANA**  
INTERNATIONAL B.V.



# ELEVATOR SHAFT LIGHTING

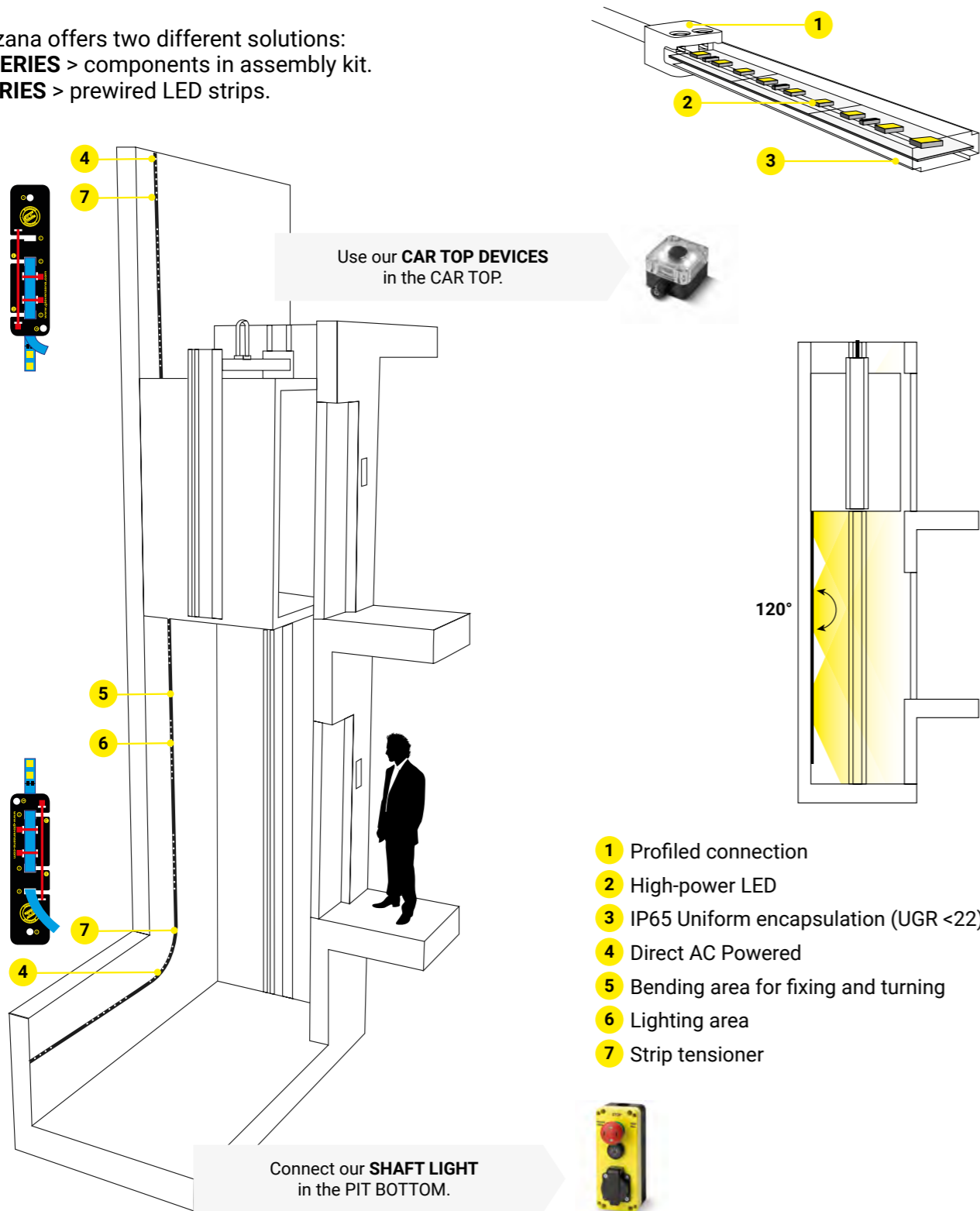




**NEW ELEVATOR SOLUTIONS  
SILICONE LED STRIP**

**Giovenzana Elevator Solutions** is a range of products specifically designed to be installed in elevator shafts. This new patented product range is in compliance with the EN 81-20 / EN 81-50, GOST 33984.1-2016 and ABNT NBR NM 207-267 standards. It considerably reduces installation times and costs. Due to its innovative design, this AC solution can be easily adapted to shaft contours.

Giovenzana offers two different solutions:  
**GSLC SERIES** > components in assembly kit.  
**GSL SERIES** > prewired LED strips.



- 1 Profiled connection
- 2 High-power LED
- 3 IP65 Uniform encapsulation (UGR <22)
- 4 Direct AC Powered
- 5 Bending area for fixing and turning
- 6 Lighting area
- 7 Strip tensioner



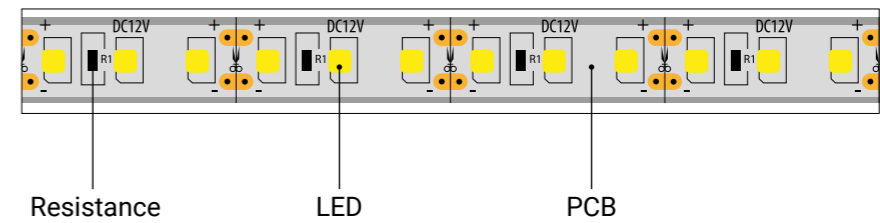
**GSLC SERIES | ASSEMBLY KIT | Components sold separately |**

**GSLC Series** is a solder-free connection solution specially designed to facilitate the installation of Giovenzana products. It uses profiled technology connectors, guaranteeing quick installation, reliability and connection sealing. Giovenzana's new **GSLC Series flexible strips** consists of a complete range of products that are sold separately to form a customized assembly kit. You can choose the codes of the components you need to install your own LED strip line from those below.

**FLEXIBLE LED STRIPS**

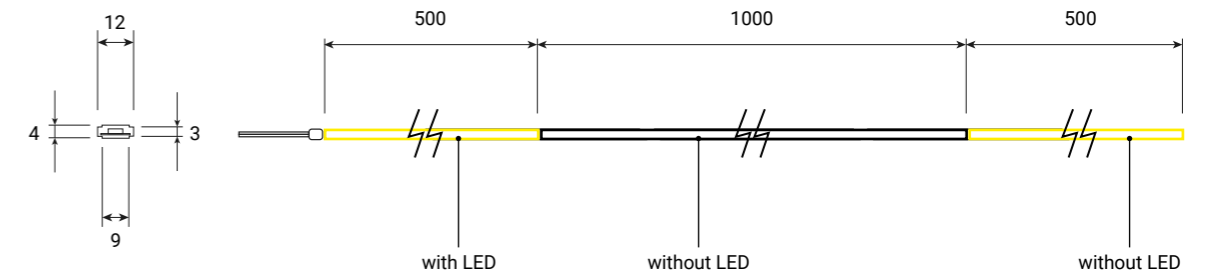
A LED strip is a specific linear lighting solution where all the electrical and electronic components are placed on a substrate (usually a flexible PCB) and encapsulated in a material that provides mechanical and electrical insulation properties.

Giovenzana propose two different types of flexible LED strips: **GSL30** and **GSL60**.



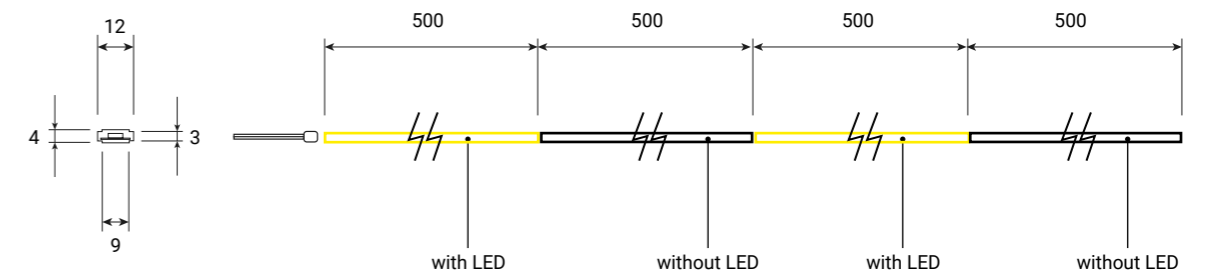
**GSL30**  
FLEXIBLE STRIPS  
300-metre coil.

240 VAC



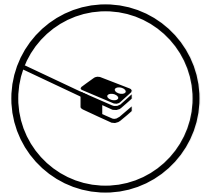
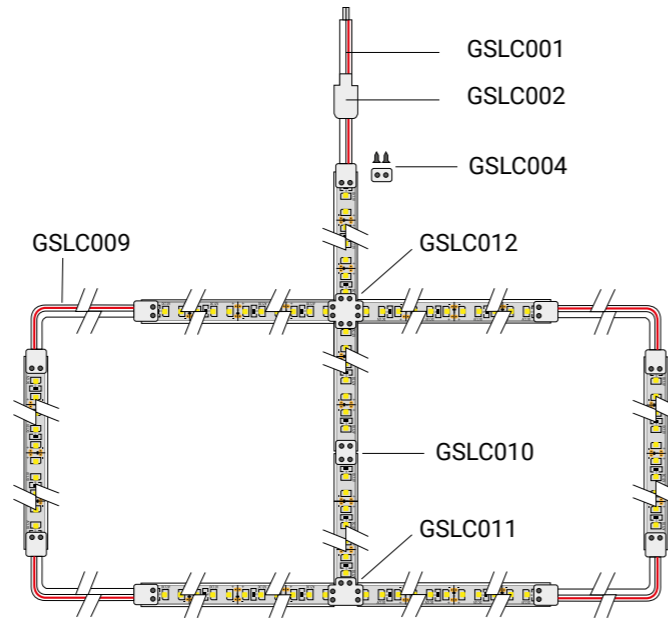
**GSL60**  
FLEXIBLE STRIPS  
300-metre coil.

240 VAC



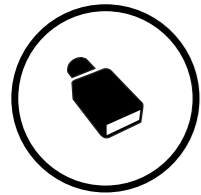
**CONNECTIONS AND ACCESSORIES**

Giovenzana provides all the components and accessories needed for installation and power connection. The connectors are designed with a patented profiled technology. We recommend the use of our components and accessories in order to ensure correct system performance.



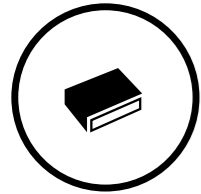
**GSLC001**  
**CABLE-PROFILED**

- Connect power line cable to LED strips.
- To be connected to the shaft light.



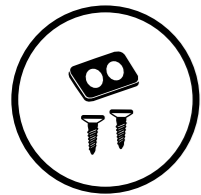
**GSLC002**  
**PROFILED SILICONE END CAP FOR POWER**

- Insulates the input power cable.



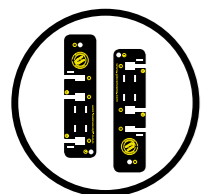
**GSLC003**  
**PROFILED SILICONE END CAP TERMINATIONS**

- Insulates the LED strip termination.



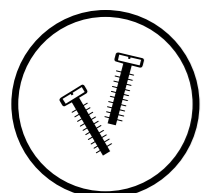
**GSLC004**  
**PROFILED SCREW SET**

- LED strip mechanical and electrical connection with caps to cover screws and LED sealant.



**GSLC005**  
**LED STRIP TENSIONERS (2 pieces)**

- Part that tensions the LED strip.



**GSLC006**  
**WALL PLUGS**

- For LED strip mounting.
- Distance between plugs: 1.5 m for vertical installation, 0.5 m for horizontal installation. ON REQUEST.



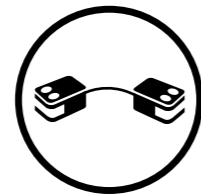
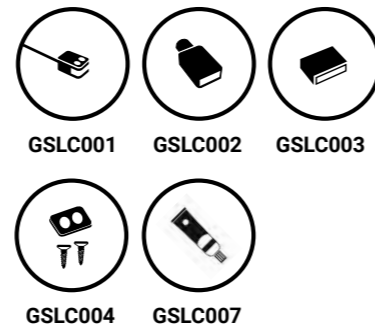
**GSLC007**  
**LED SEALANT**

- Sealant that provides the proper insulation. ON REQUEST.



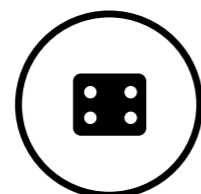
**GSLC008 - INSTALLATION KIT**  
**PROFILED CONNECTION SET**

- Including:



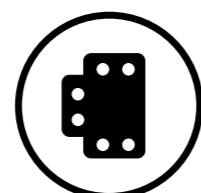
**GSLC009**  
**PROFILED - PROFILED**

- Connects two LED strips at a flexible angle.



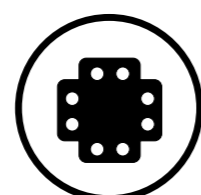
**GSLC010**  
**PROFILED BRIDGE CONNECTOR**

- Connects two LED strips in a straight line.



**GSLC011**  
**PROFILED T CONNECTOR**

- Connects three LED strips.



**GSLC012**  
**PROFILED CROSS CONNECTOR**

- Connects four LED strips.

**GSLC SERIES | COMPONENTS GENERAL CHARACTERISTICS |**



**GSL30 & GSL60 FLEXIBLE STRIPS**

- 300-metre coil.
- 2 versions: GLS30 and GLS60.



**240VAC**



Power (W/m)	<b>3.2</b>	<b>6.4</b>
Flux (lm/m)	<b>300</b>	<b>600</b>
Shaft area (m <sup>2</sup> )	<b>3.5</b>	<b>9.2</b>

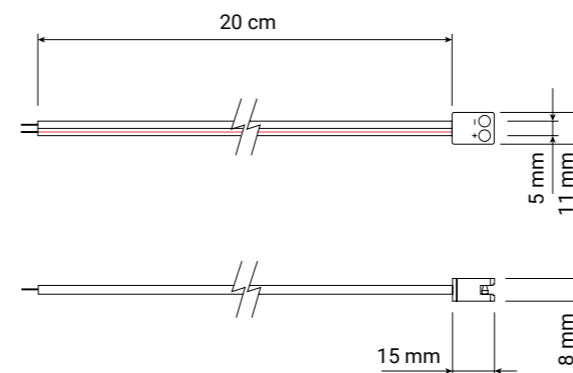
- UV Rating F1.
- Flame retardant and resistant class V0 (UL94).
- VOC free (Volatile Organic Compound).
- Anti-Glare Treatment UGR <22 (market standard <25).
- Silicone has excellent resistance to oil, solvents and other chemicals.
- High flexibility and mechanical resistance.
- IP65 Protection.
- Beam angle 120°.
- Voltage 240VAC.
- Operating temperature -40° ~ +70°.
- Dimmable & flickerless with PF > 0.85.
- Different lengths available.
- To divide every 1.5 m (GSL30) or 1 m (GSL60).



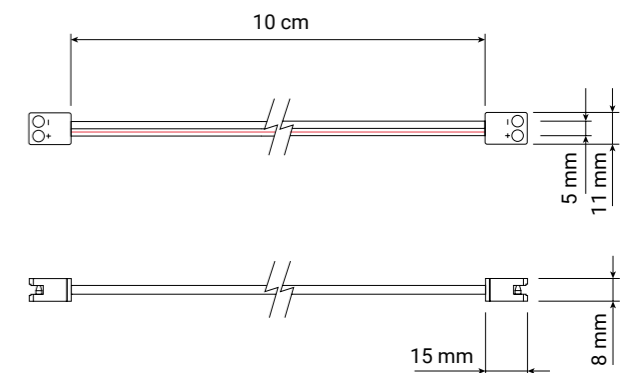
**GSLC001 & GSLC009 CABLES**

- Connect power line cable to LED strips.
- Standard length: 20 cm (cable-profiled) and 10 cm (profiled-profiled).
- Customizable lengths on request.
- Mounting composed of two cables (2x0.5).
- To be connected to the shaft light.

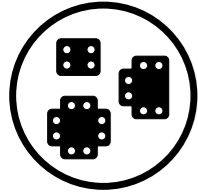
**GSLC001**  
**CABLE - PROFILED**



**GSLC009**  
**PROFILED - PROFILED**



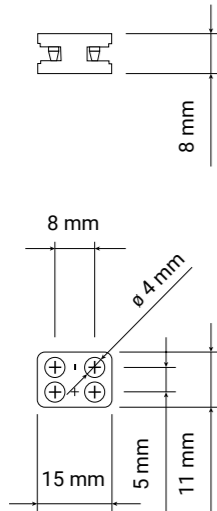
- Maximum current 6A.
- Profiled and double profiled connection.
- Voltage 240VAC.
- Operating temperature -40° ~ +70°.
- IP65 protection.



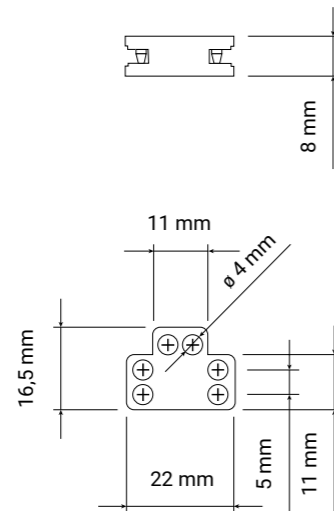
**GSLC0010 - GSLC0011 - GSLC0012 CONNECTIONS**

- PROFILED BRIDGE CONNECTOR connects two LED strips in a straight line.
- PROFILED T CONNECTOR connects three LED.
- PROFILED CROSS CONNECTOR connects four LED strips.

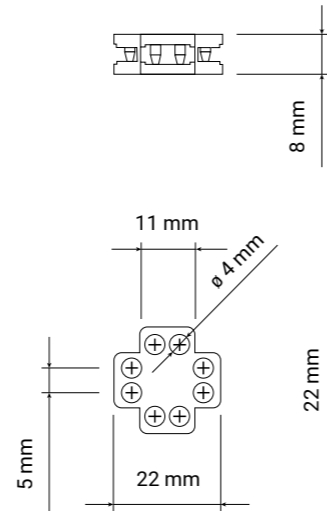
**GSLC010**  
PROFILED BRIDGE CONNECTOR



**GSLC011**  
PROFILED T CONNECTOR



**GSLC012**  
PROFILED CROSS CONNECTOR



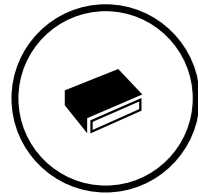
- Maximum current 6A.
- Profiled connection.
- Voltage 240VAC.

- Operating temperature -40° ~ +70°.
- IP65 protection.

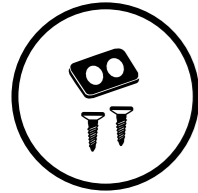
**GSLC0002 - GSLC0003 - GSLC0004 - GSLC0005 - GSLC0006 - GSLC0007 ACCESSORIES**



**GSLC0002**  
PROFILED SILICONE END CAP FOR POWER

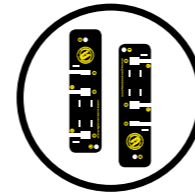


**GSLC0003**  
PROFILED SILICONE END TERMINATIONS

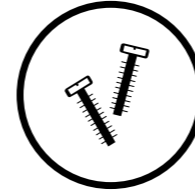


**GSLC0004**  
PROFILED SCREW SET

- Profiled connection.
- Stainless screw system.
- High quality silicone parts.
- Long lifespan products.
- UV resistance.
- Dust-proof connection.
- IP65 protection.
- Operating temperature -40° ~ +70°.



**GSLC0005**  
LED STRIP TENSIONERS (2 PIECES)



**GSLC0006**  
WALL PLUGS



**GSLC0007**  
LED SEALANT



**GSLC0008**  
PROFILED CONNECTION SET

KIT including different components to easily order the necessary for the installation of the LED strip line.

- Plastic material.
- Wall mounted.
- To keep the LED strip in tension without using dowels.

- Press-in dowel for internal shaft installation.
- To mount LED strip on the wall.
- Distance between plugs: 1.5 m for vertical installation, 0.5 m for horizontal installation.
- 100-piece packs on request.

**KIT INCLUDES:**

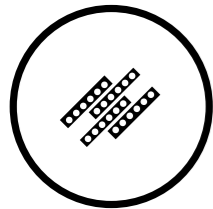
- GSLC0001**  
Cable-profiled
- +
- GSLC0002**  
Profiled silicone end cap for power
- +
- GSLC0003**  
Profiled silicone end terminations
- +
- GSLC0004**  
Profiled screw set
- +
- GSLC0007**  
LED sealant



**GSL SERIES | PREWIRED LED STRIPS | including everything necessary for installation |**

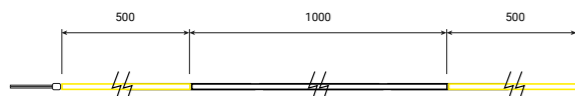
**GSL Series** flexible strips are specially designed to provide continuous light flux for elevator in shaft in compliance with EN 81-20 / EN 81-50. They can be cut and bent and can be produced in up to 300 metres per coil. Different lengths are available.

Giovenzana new GSL Series flexible strips consisting in a **complete product composed of:**

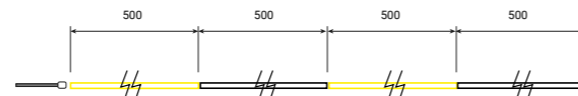


**FLEXIBLE STRIPS**

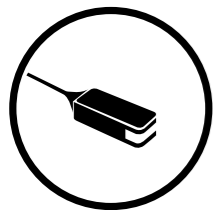
- A LED strip is a specific linear lighting solution where all the electrical and electronic components are placed on a substrate (usually a flexible PCB) and encapsulated in a material that provides mechanical and electrical insulation properties.
- Available in two different versions: GSL30 and GSL60.
- Available in different lengths: 15 m, 18 m, 21 m, 24 m, 40 m and 60 m.



**GSL30**

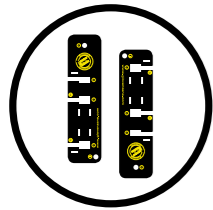


**GSL60**



**CABLE-PROFILED**


- Connect power line cable to LED strips.
- Standard Length mounted: 10 m.
- Mounting is composed of two double insulation cables (2x0.75).
- To be connected to the shaft light.



**LED STRIP TENSIONERS (2 pieces)**

- Part that tensions the LED strip.
- Plastic material.

**COMPLETE PRODUCT | CODE TABLE**

LENGTH	INCLUDING	GSL30	GSL60	PROTECTION CLASS
12 metres	 Flexible strips of chosen length + Cable-profiled + LED Strip Tensioners (2 pieces)	<b>GSL30012</b>	<b>GSL60012</b>	<b>IP65</b>
15 metres		<b>GSL30015</b>	<b>GSL60015</b>	
18 metres		<b>GSL30018</b>	<b>GSL60018</b>	
21 metres		<b>GSL30021</b>	<b>GSL60021</b>	
24 metres		<b>GSL30024</b>	<b>GSL60024</b>	
29 metres		<b>GSL30029</b>	<b>GSL60029</b>	
40 metres		<b>GSL30040</b>	<b>GSL60040</b>	
60 metres	<b>GSL30060</b>	<b>GSL60060</b>		

**COMPLEMENTARY PRODUCTS | GIOVENZANA Lift Line |**

**▶ CAR TOP DEVICES WITH 5 LUX LED LIGHT**



**GM034**



**GMS169**



**GM033**

**▶ MAINTENANCE STATION WITH 50/5 LUX LED LIGHT 12/24 VDC**



**GM036/EU**

**GM359/EU**

Different sockets on request.

**▶ SHAFT LIGHT**

Maintenance station available with different sockets on request.



**IP54**

- GM250/EU** with socket: Schuko - Europe
- GM250/FR** with socket: Cenelec - France
- GM250/US** with socket: USA
- GM250/SW** with socket: Swiss
- GM250/UK** with socket: England
- GM250/CH** with socket: Australia & China



**IP54**

- GM403/EU** with socket: Schuko - Europe
- GM403/FR** with socket: Cenelec - France
- GM403/US** with socket: USA
- GM403/SW** with socket: Swiss
- GM403/UK** with socket: England
- GM403/CH** with socket: Australia & China



**IP54**

- GM243/EU** with socket: Schuko - Europe
- GM243/FR** with socket: Cenelec - France
- GM243/US** with socket: USA
- GM243/SW** with socket: Swiss
- GM243/UK** with socket: England
- GM243/CH** with socket: Australia & China



**IP54**

- GM265/EU** with socket: Schuko - Europe
- GM265/FR** with socket: Cenelec - France
- GM265/US** with socket: USA
- GM265/SW** with socket: Swiss
- GM265/UK** with socket: England
- GM265/CH** with socket: Australia & China

### FTN198 - ROPE LIMIT SWITCH

The **FTN198** switch has been specifically studied to control the lift shaft lights. The norm EN81-20 paragraph 5.2.1.5 states the necessity to have a light switching point next to the working area access and in the machines room.

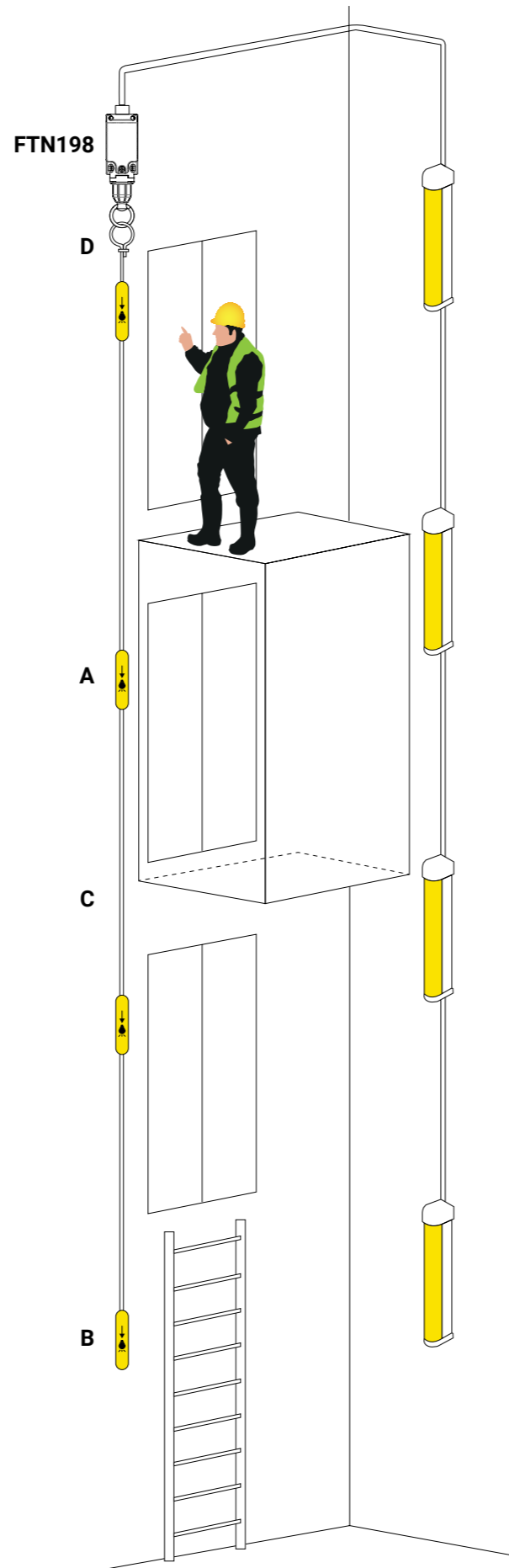
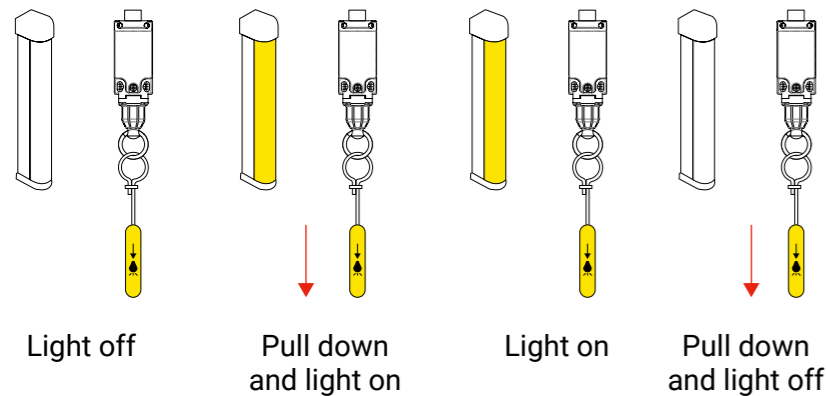
To comply with this standard usually at every floor there are installed lighting points which control a step relay with its considerable costs due to the number of the control points and their wiring. The **FTN198** switch itself allows to control the shaft lights through its own wiring, without any need of different lighting points, relays or wiring.

### INSTALLATION

The FTN198 switch is fixed to the superior part of the lift shaft and it's connected to a rope which goes down in the shaft next to the cabin. The rope has to be guided through rings in order to avoid the excessive oscillation caused by the cabin windage. At regular intervals along the rope, usually at every floor, an indicator is fixed to make the rope and its function clearly visible. The last indicator at the end of the rope has a weight inside to keep the rope tight. This way the operator on the cabin roof or in any position along the shaft has the possibility to operate the switch by pulling the practical indicator or the rope itself.

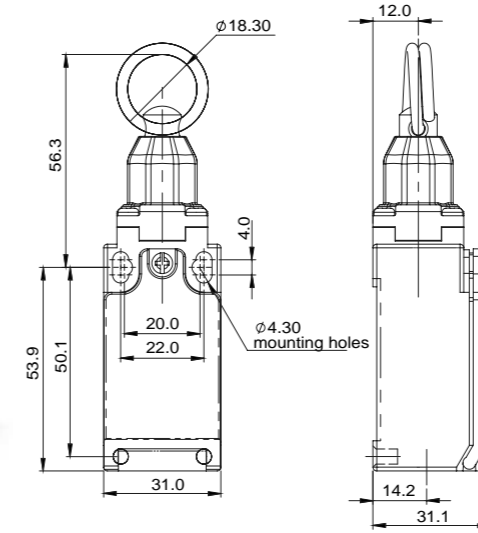
### OPERATION

The FTN198 switch hasn't maintained operating mode. This means that a bistable relay must be inserted in the system in order to maintain the position. To turn on the light in the elevator shaft it is therefore sufficient to pull the rope, to turn off the light simply repeat the operation.



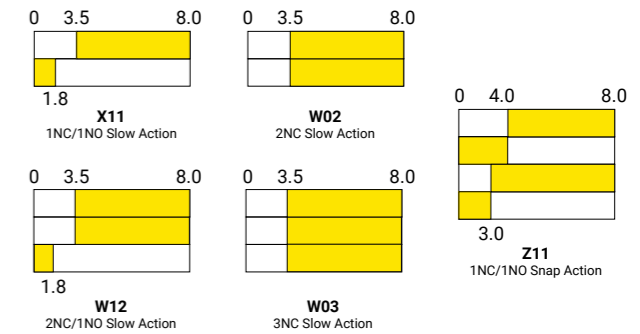
### FTN198: Rope pull lever limit switch

FTN	1	98	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit
	1 - Without Reset Function	98 - Rope pull lever	X11 - 1NC/1NO Slow Action W02 - 2NC Slow Action Z11 - 1NC/1NO Snap Action W12 - 2NC/1NO Slow Action W03 - 3NC Slow Action	Standard: <b>BLANK</b> - M16 On request: <b>M</b> - M20 <b>N</b> - 1/2NPT <b>G1</b> - PG11 <b>G3</b> - PG13.5 <b>C</b> - Connector



Slow Action and Snap Action: **Type "Zb"**

#### OPERATION DIAGRAMS



	CONTACT BLOCK	OPERATING TRAVEL		OPERATING FORCE	TOTAL TRAVEL
		PT	PT2nd	OF	
X11	1NC/1NO Slow Action	3.5 mm	-	20N	8.0 mm
W02	2NC Slow Action	3.5 mm	-	20N	
Z11	1NC/1NO Snap Action	4.0 mm	-	20N	
W12	2NC/1NO Slow Action	3.5 mm	-	20N	
W03	3NC Slow Action	3.5 mm	-	20N	

### ACCESSORIES



#### Rope function indicators

Screw tightening torque closure > 0.8 ... 1.0 Nm

- A FTN198-KNOB** End clamp for rope fixing
- B FTN198-KNOBT** Intermediate rope function indicators



#### Rope roll

ø3mm galvanized steel rope in transparent PVC sheath

- C FTN198-ROPE-050** Galvanized steel rope in transparent PVC sheath ø3mm - L = 50m.
- FTN198-ROPE-100** Galvanized steel rope in transparent PVC sheath ø3mm - L = 100m.



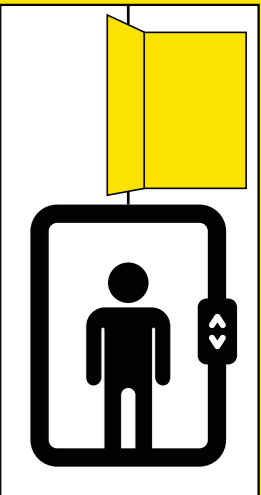
#### Rope roll

ø3mm galvanized steel rope in transparent PVC sheath

- D 11001003** Extremity clamp for steel rope

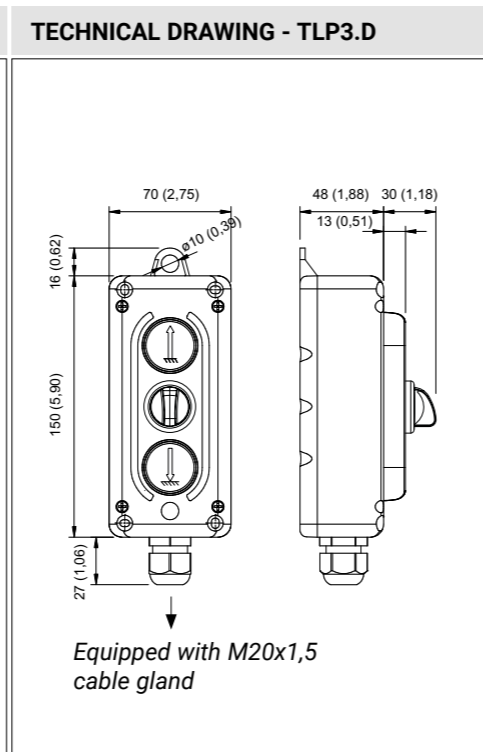
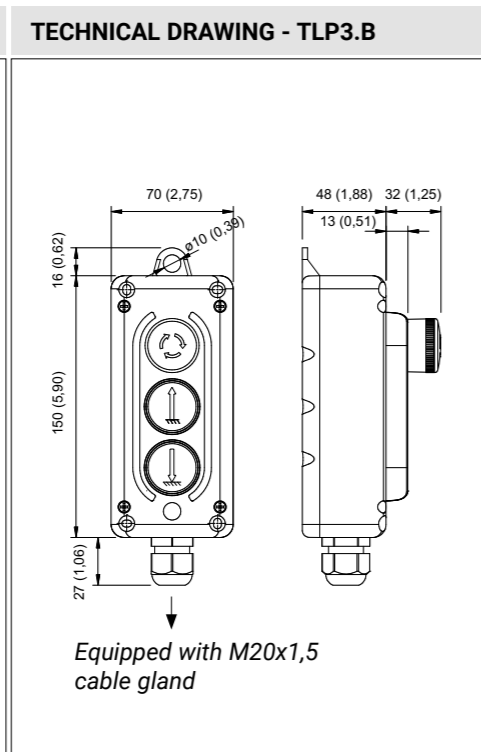
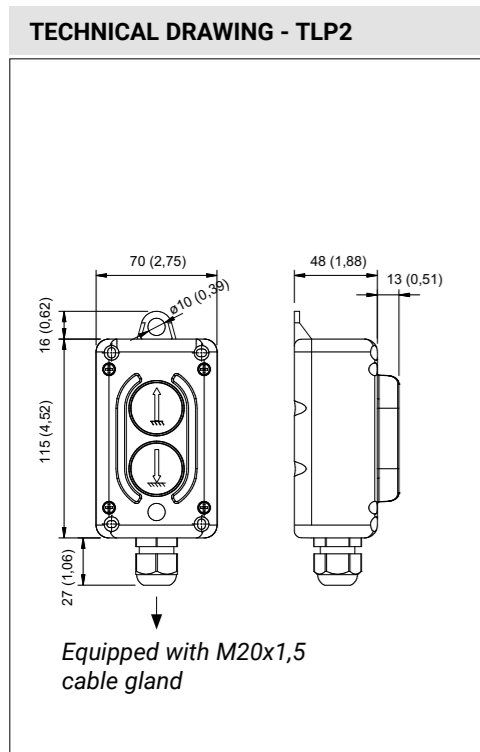


**PANEL BOARD COMPONENTS**



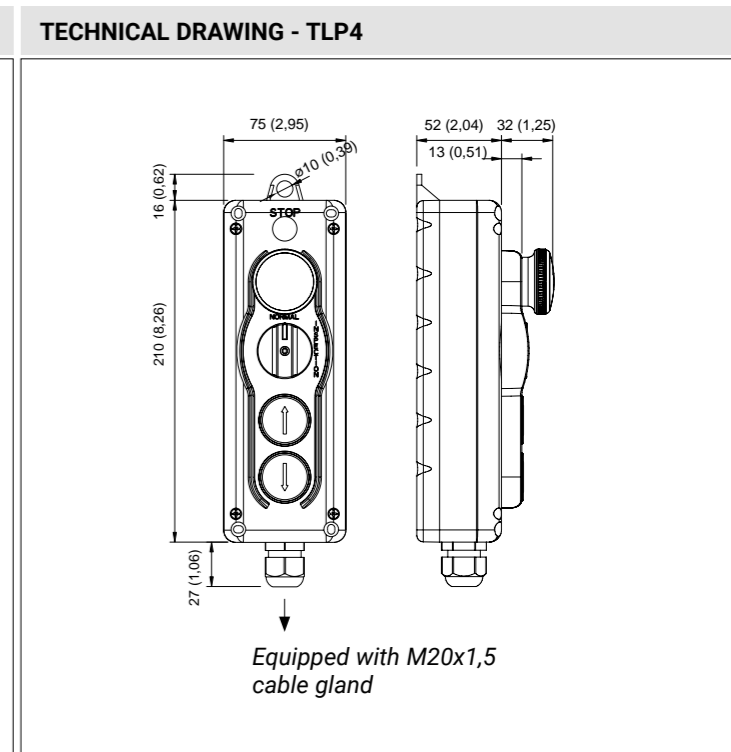
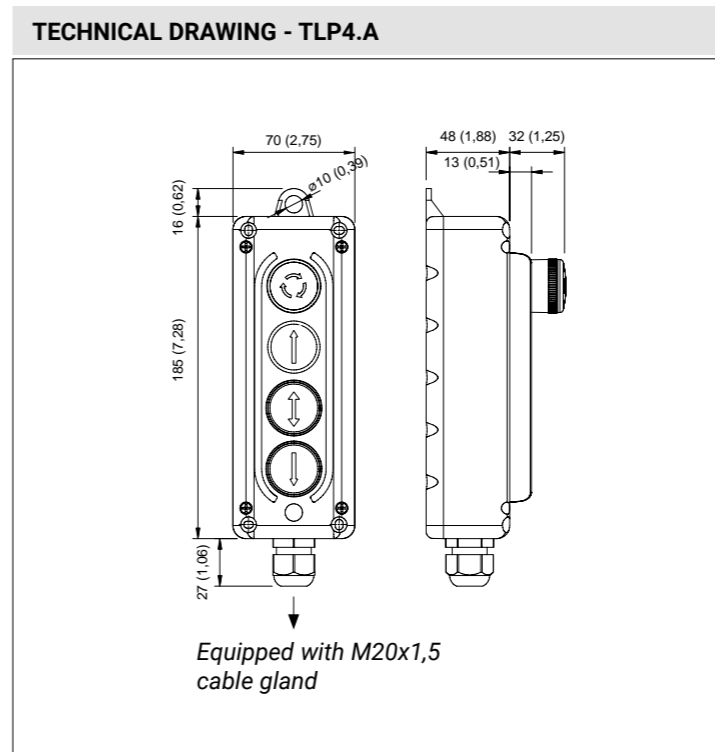
**MAINTENANCE STATIONS**

DESCRIPTION	SCHEME	CONTACTS	CODE	IP65
<b>UP Push Button</b> white colour		1NO	<b>TLP2</b>	
<b>DOWN Push Button</b> black colour		1NO		
DESCRIPTION	SCHEME	CONTACTS	CODE	IP65
<b>Emergency stop EN ISO 13850</b> ø30 twist to release		1NC	<b>TLP3.B</b>	
<b>UP Push Button</b> white colour		1NO		
<b>DOWN Push Button</b> black colour		1NO		
DESCRIPTION	SCHEME	CONTACTS	CODE	IP65
<b>UP Push Button</b> white colour		1NO	<b>TLP3.D</b>	
<b>Knob Selector 0-1</b> 2 positions, black + white indicator	OFF 0 ON 	1NO		
<b>DOWN Push Button</b> black colour		1NO		



<b>Wall Bracket case NOT INCLUDED. On request!</b> Polypropylene material, logo mold-printed	From 1 to 3 buttons	From 4 to 5 buttons
	<b>16000061</b>	<b>16000062</b>

DESCRIPTION	SCHEME	CONTACTS	CODE	IP65
<b>Emergency stop EN ISO 13850</b> ø30 twist to release		1NC	<b>TLP4.A</b>	
<b>UP Push Button</b> white colour		1NO		
<b>COMMON Push Button</b> blue colour		1NO		
<b>DOWN Push Button</b> black colour		1NO		
DESCRIPTION	SCHEME	CONTACTS	CODE	IP65
<b>Emergency stop EN ISO 13850</b> ø40 push-pull		1NC	<b>TLP4</b>	
<b>Cam Switch 1-2</b> 90° switching		3NO+3NC		
<b>UP Push Button</b> white colour		1NO		
<b>DOWN Push Button</b> black colour		1NO		



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>COMMON Push Button</b> <i>blue colour</i>		1NO	<b>TLP4S006</b>
<b>Cam Switch 0-1 Normal-Inspection</b> <i>90° switching</i>		2NO+2NC	
<b>UP Push Button</b> <i>white colour</i>		1NO	
<b>DOWN Push Button</b> <i>black colour</i>		1NO	

IP65



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> <i>ø40 push-pull with vision</i>		1NC	<b>GM266</b>
<b>UP/DOWN Dual Push Button</b> <i>flush, momentary, white/black colour</i>		2NO+2NO	
<b>ALARM/Common Dual Push Button</b> <i>flush, momentary, yellow/blue colour</i>		1NO+1NO	
<b>Cam Switch 1-2 Normal-Inspection</b> <i>90° switching</i>		2NO+2NC	

IP65



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Green LED PILOT LIGHT</b> <i>green colour</i>		AC/DC 24V	<b>GM483</b>
<b>UP Push Button</b> <i>flush, momentary, white colour</i>		1NO	
<b>DOWN Push Button</b> <i>flush, momentary, black colour</i>		1NO	
<b>Cam Switch 1-2 Normal-Inspection</b> <i>90° switching</i>		2NO+2NC	

IP65

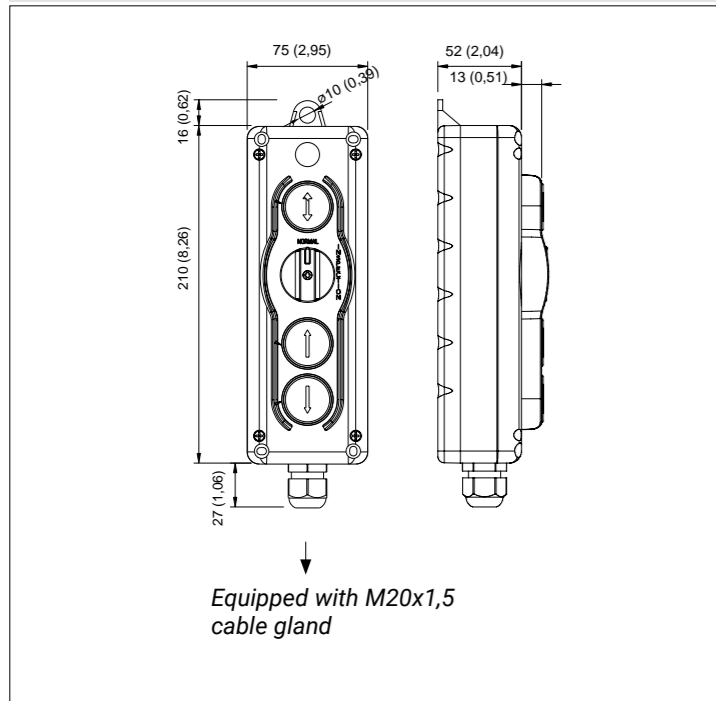


DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> <i>ø30 twist to release</i>		1NC	<b>GM488</b>
<b>UP Push Button</b> <i>flush, momentary, white colour</i>		2NO	
<b>DOWN Push Button</b> <i>flush, momentary, black colour</i>		2NO	
<b>Cam Switch 1-0-2 Normal-Inspection</b> <i>90° switching</i>		2NO+2NC	

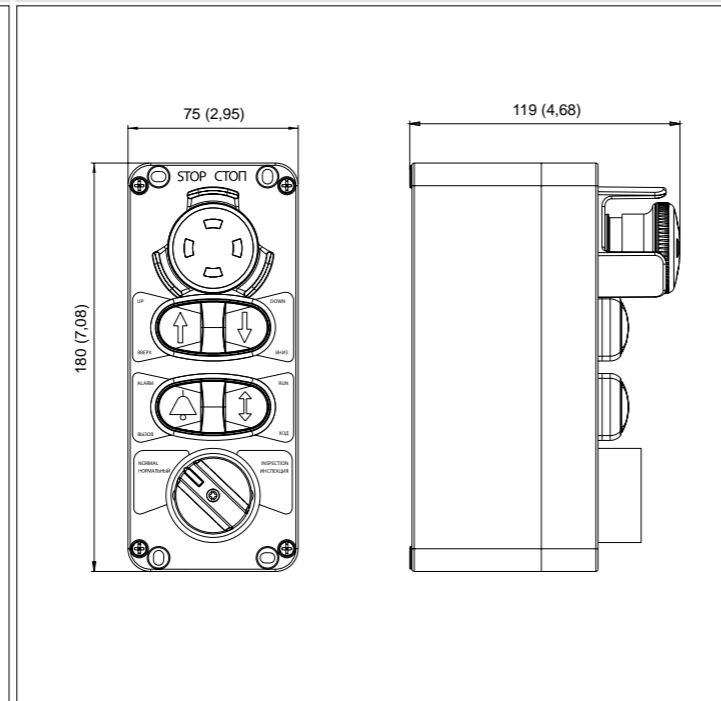
IP65



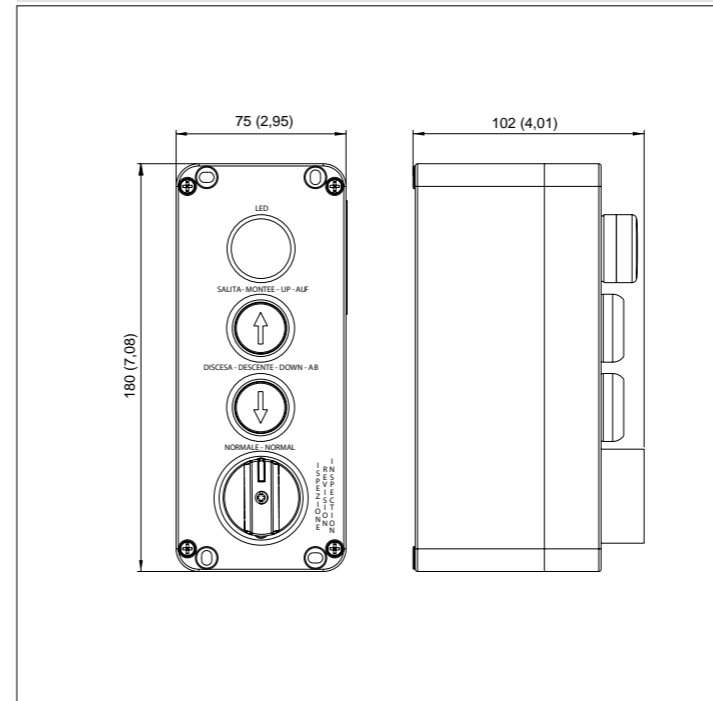
TECHNICAL DRAWING - TLP4S006



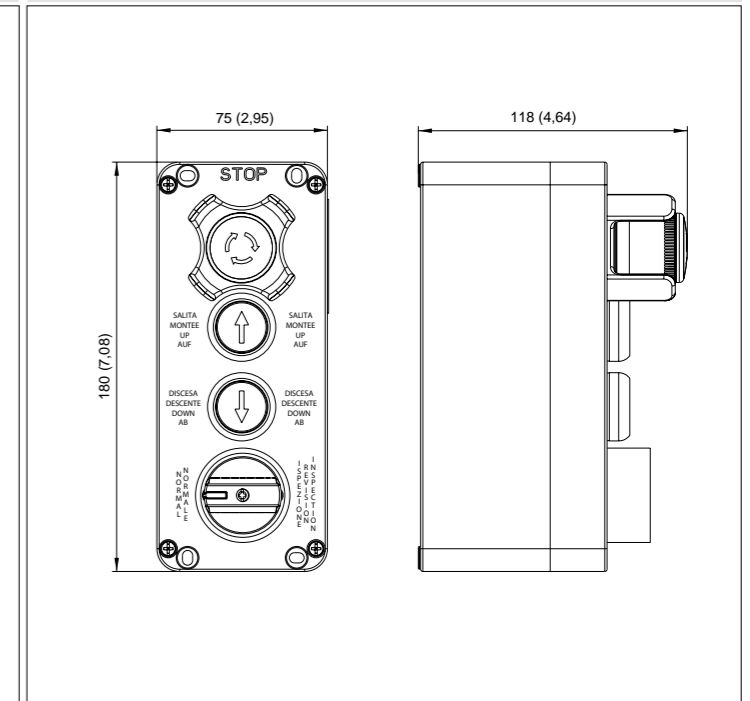
TECHNICAL DRAWING - GM266



TECHNICAL DRAWING - GM483



TECHNICAL DRAWING - GM488



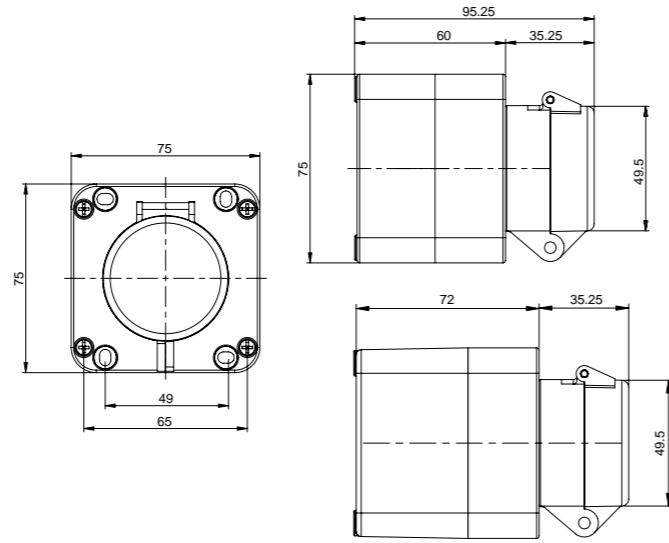
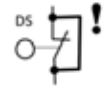


**ENCLOSURE BYPASS DEVICES**

**LANDING DOORS AND CAR DOORS BYPASS DEVICE**

The landing and car door bypass devices shall be identifiable by the word **"BYPASS"** written on or near to them. In addition, the contacts to be bypassed shall be indicated with the identifiers according to the electrical diagrams.

Alternatively the symbol shown below together with identifier according to electric diagrams can be used.



IP65



IP65



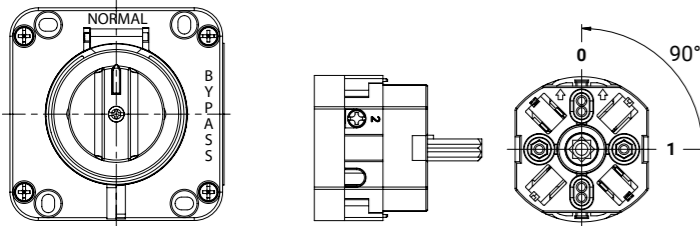
IP65



DESCRIPTION	CODE
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**Cam Switch 0-1**  
Switching angle 90°, 2 positions

**GM092BYPASS**

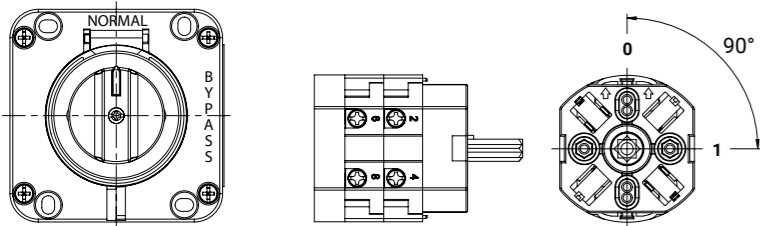


1	1-2	X
WAFER	CONTACT	0 1 POS.

DESCRIPTION	CODE
-------------	------

**Cam Switch 0-1**  
Switching angle 90°, 2 positions

**GM092BYPASS-01**

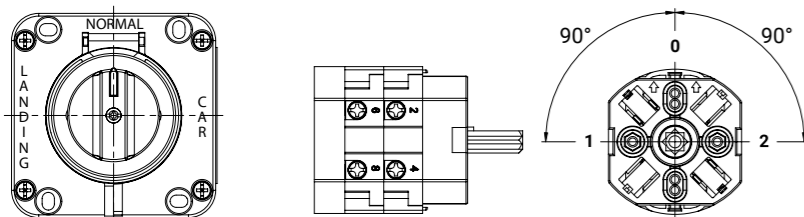


2	7-8	X
	5-6	X
1	3-4	X
	1-2	X
WAFER	CONTACT	0 1 POS.

DESCRIPTION	CODE
-------------	------

**Cam Switch 1-0-2**  
Switching angle 90°, 3 positions

**GM092BYPASS-02**

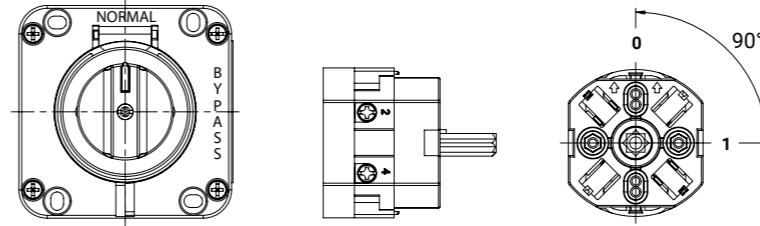


2	7-8	X
	5-6	X
1	3-4	X
	1-2	X
WAFER	CONTACT	1 0 2 POS.

DESCRIPTION	CODE
-------------	------

**Cam Switch 0-1**  
Switching angle 90°, 2 positions

**GM092BYPASS-03**



1	3-4	X
	1-2	X
WAFER	CONTACT	0 1 POS.

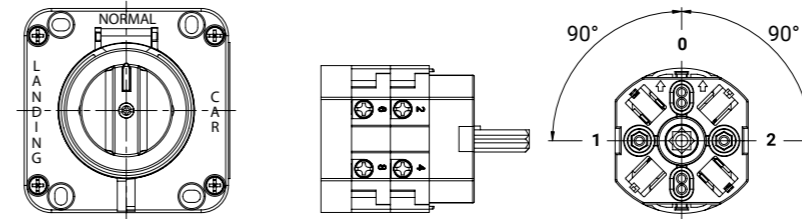
IP65



DESCRIPTION	CODE
-------------	------

**Cam Switch 1-0-2**  
Switching angle 90°, 3 positions

**GM092BYPASS-04**



2	7-8	X
	5-6	X
1	3-4	X
	1-2	X
WAFER	CONTACT	1 0 2 POS.

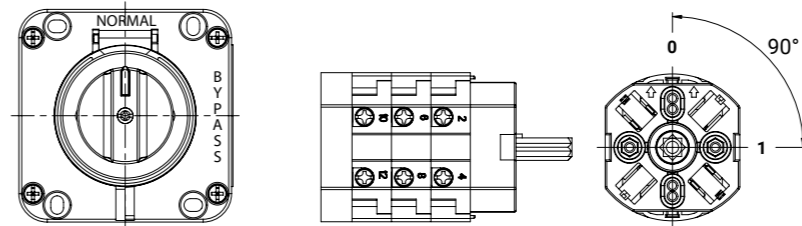
IP65



DESCRIPTION	CODE
-------------	------

**Cam Switch 0-1**  
Switching angle 90°, 2 positions

**GM092BYPASS-05**



3	11-12	X
	9-10	X
2	7-8	X
	5-6	X
1	3-4	X
	1-2	X
WAFER	CONTACT	0 1 POS.

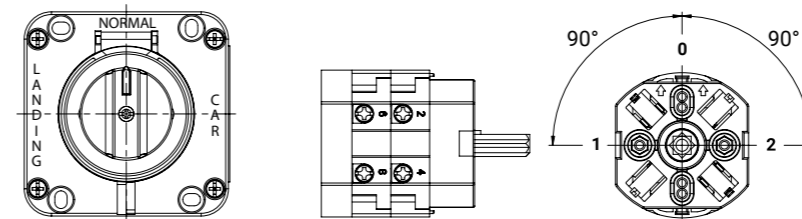
IP65



DESCRIPTION	CODE
-------------	------

**Cam Switch 1-0-2**  
Switching angle 90°, 3 positions

**GM092BYPASS-06**



2	7-8	X
	5-6	X
1	3-4	X
	1-2	X
WAFER	CONTACT	1 0 2 POS.

IP65

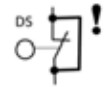


Available a wide range of electrical schemes of cam switches to customize your own specific bypass device.

**REAR FIXING BYPASS DEVICES**

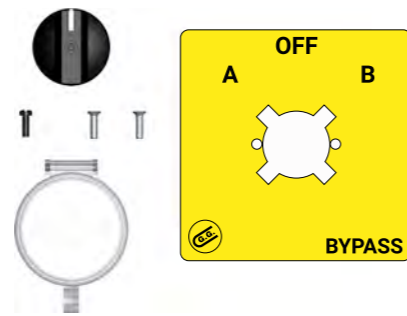
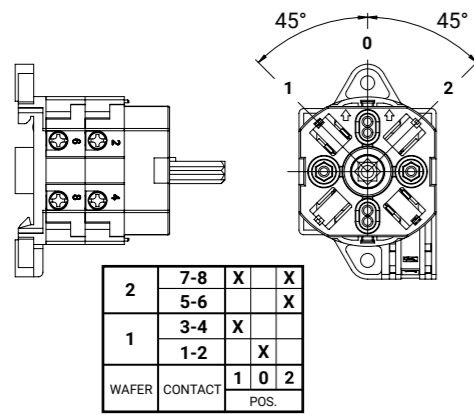
The landing and car door bypass devices shall be identifiable by the word **"BYPASS"** written on or near to them. In addition, the contacts to be bypassed shall be indicated with the identifiers according to the electrical diagrams.

Alternatively the symbol shown below together with identifier according to electric diagrams can be used.

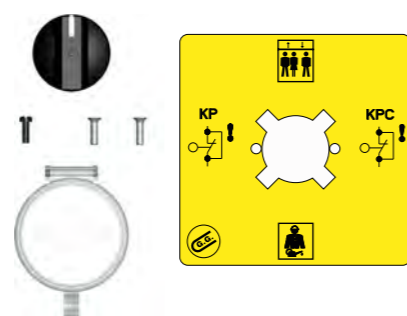
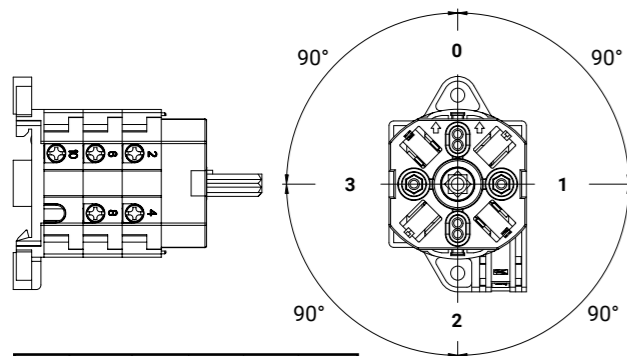


Available a wide range of electrical schemes of cam switches to customize your own specific bypass device.

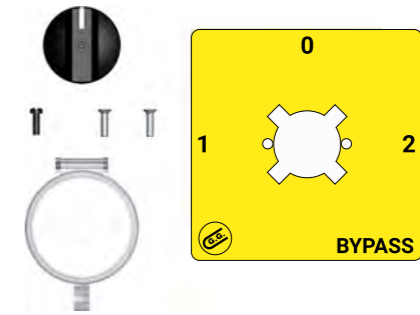
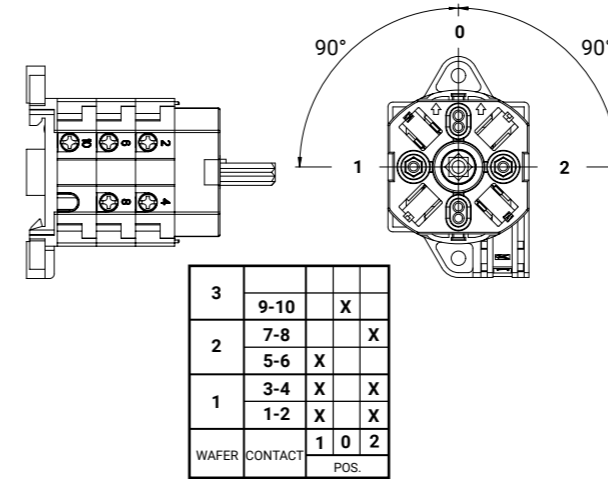
DESCRIPTION	CODE	DESCRIPTION	CODE
<b>Cam Switch 1-0-2</b> Switching angle 45°, 3 positions	P0122869S	<b>KIT PROTECTION PLATE</b> A-OFF-B	KIT-018P-BYP-B06



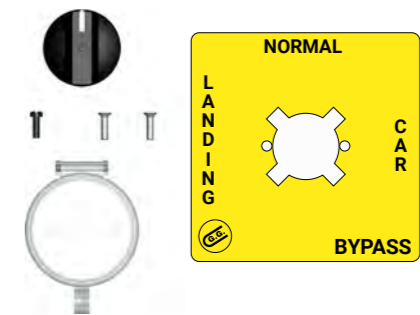
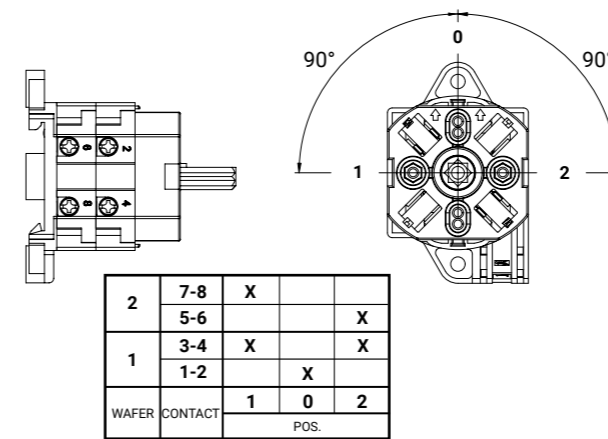
DESCRIPTION	CODE	DESCRIPTION	CODE
<b>Cam Switch</b> Switching angle 90°, 4 positions	P0162718S	<b>KIT PROTECTION PLATE</b> NORMAL-KPC-INSP-KP	KIT-018P-BYP-B03



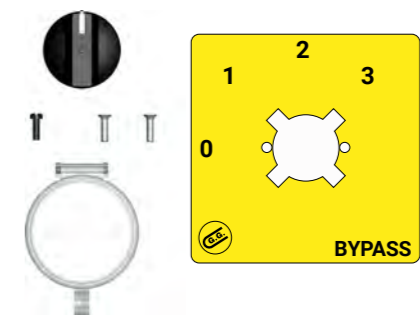
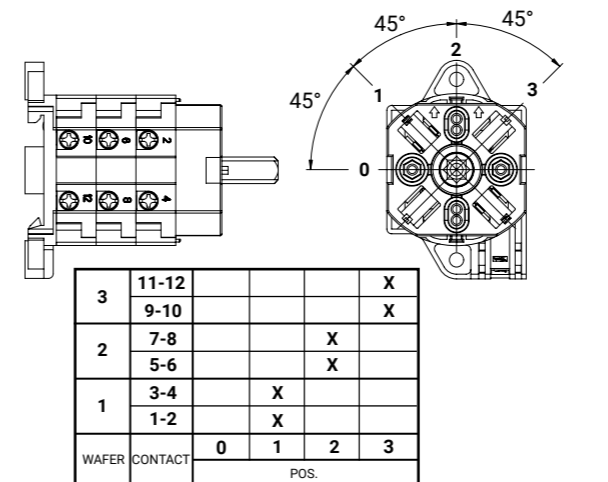
DESCRIPTION	CODE	DESCRIPTION	CODE
<b>Cam Switch 1-0-2</b> Switching angle 90°, 3 positions	P0162671S	<b>KIT PROTECTION PLATE</b> 1-0-2	KIT-018P-BYP-B01



DESCRIPTION	CODE	DESCRIPTION	CODE
<b>Cam Switch</b> Switching angle 90°, 3 positions	P0162807S	<b>KIT PROTECTION PLATE</b> LANDING-NORMAL-CAR	KIT-018P-BYP-B07



DESCRIPTION	CODE	DESCRIPTION	CODE
<b>Cam Switch</b> Switching angle 45°, 4 positions	P0162830S	<b>KIT PROTECTION PLATE</b> 0-1-2-3	KIT-018P-BYP-B

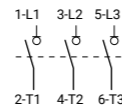


**SWITCH DISCONNECTORS AND SWITCH DISCONNECTORS IN ENCLOSURES**

DESCRIPTION	SERIES	AC-21A 690V	AC-23A 400V	CODE 3 POLES
<b>COMPLETE DEVICE in thermoplastic enclosure</b>  • Opening in "0" position. • Arranged for nr. 8 Pg16 cable glands of which nr. 2 on the bottom. • With locking facility in "0 - OFF" (Max 3 locks). • Dimensions: 120x100x85 mm.	SQ025	32 A	25 A	SQ025003BC10
	SQ032	40 A	32 A	SQ032003BC10

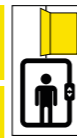


IP65

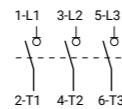


For Grey cover and black knob version, replace "10" with "09" in the code.

DESCRIPTION	SERIES	AC-21A 690V	AC-23A 400V	CODE 3 POLES
<b>COMPLETE DEVICE in thermoplastic enclosure</b>  • Opening in "0" position. • Arranged with nr. 4 cable glands M25/M32 + nr. 2 closed holes ø22,5 mm on the bottom. • With locking facility in "0 - OFF" (Max 3 locks). • Dimensions: 130x180x106 mm.	SQ040	63 A	50 A	SQ040003BE10
	SQ032	80 A	75 A	SQ063003BE10

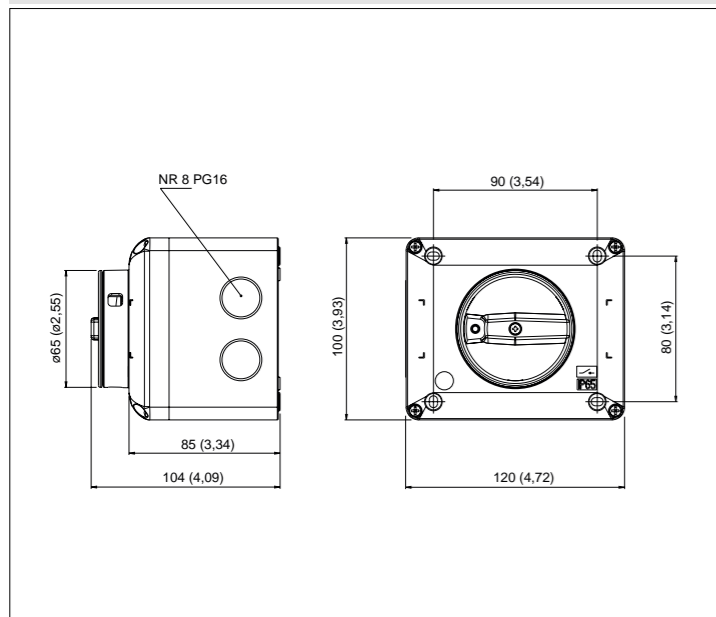


IP65

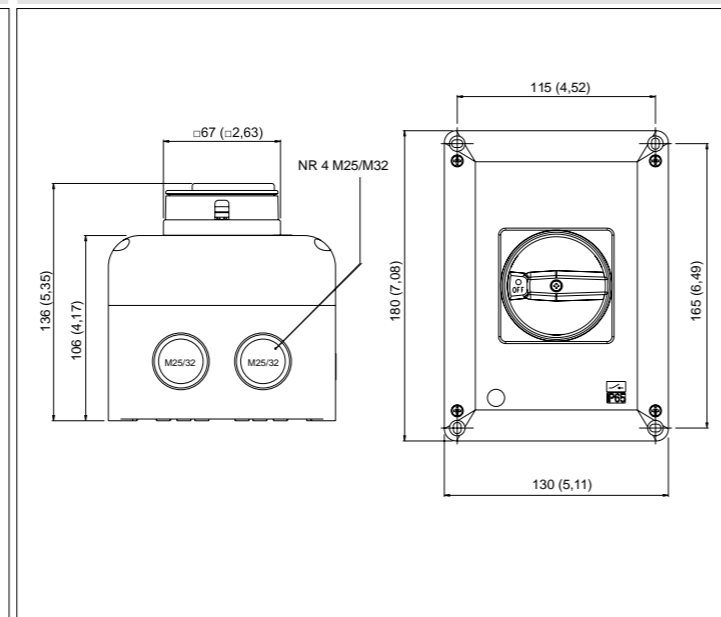


For Grey cover and black knob version, replace "10" with "09" in the code.

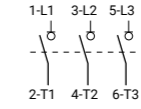
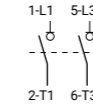
TECHNICAL DRAWING - SQ025 / SQ032



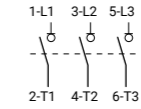
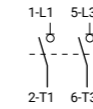
TECHNICAL DRAWING - SQ040 / SQ063



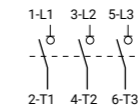
DESCRIPTION	SERIES	AC-21A 690V	AC-23A 400V	CODE 2 POLES	CODE 3 POLES
<b>BASE MOUNTING with direct command</b>	SQ025	32 A	25 A	SQ025002DL1N	SQ025003DL1N
<b>TYPE D-L1N</b>  • Fixing box DIN RAIL DIN-EN 50022-35. • Black knob locking in "0-OFF" position.	SQ032	40 A	32 A	SQ032002DL1N	SQ032003DL1N



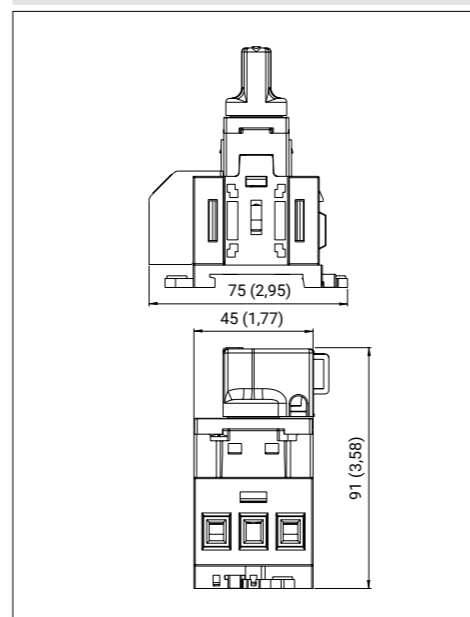
DESCRIPTION	SERIES	AC-21A 690V	AC-23A 400V	CODE 2 POLES	CODE 3 POLES
<b>BASE MOUNTING with direct command</b>	SQ040	63 A	50 A	SQ040002DL5N	SQ040003DL5N
<b>TYPE D-L5N</b>  • Fixing box DIN RAIL DIN-EN 50022-35. • Black knob locking in "0-OFF" position.	SQ063	80 A	75 A	SQ063002DL5N	SQ063003DL5N



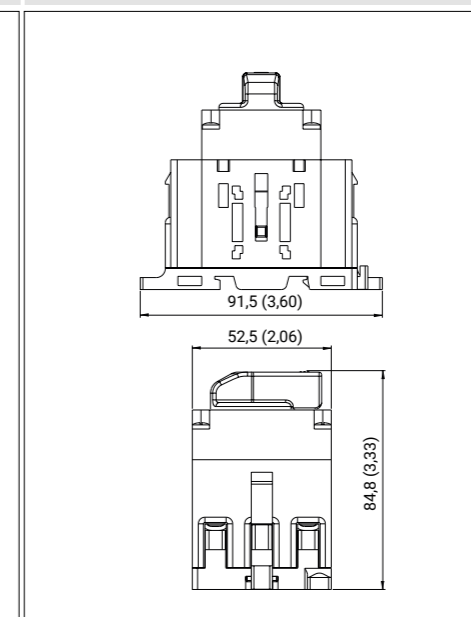
DESCRIPTION	SERIES	AC-21A 690V	AC-23A 400V	CODE 3 POLES
<b>BASE MOUNTING</b>	SQN125	125 A	125 A	SQN125003B
<b>TYPE B</b>  • Direct command and Door Locking. • Fixing box DIN RAIL DIN-EN 50022-35. • Black knob locking in "0-OFF" position.	SQN160	160 A	160 A	SQN160003B



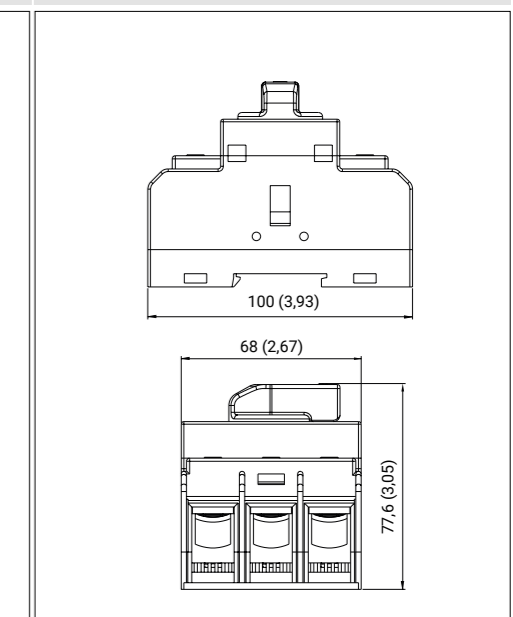
TECHNICAL DRAWING - SQ025 / SQ032



TECHNICAL DRAWING - SQ040 / SQ063



TECHNICAL DRAWING - SQN125 / SQN160



**SWITCH DISCONNECTORS AND SWITCH DISCONNECTORS IN ENCLOSURES**



**REGOLUS SWITCH DISCONNECTORS**

The disconnectors Regolus Series, built to the most stringent European and international standards (IEC / EN 60947-3, UL508), meet all the safety requirements.

GENERAL CHARACTERISTICS		SQ025 - SQ032	SQ040 - SQ063	SQN125 - SQN160			
Protection class control terminals	<b>EN 60529 (UL50) NEMA 4X</b>	IP65 (Type 1 - 4 -4X)	IP65 (Type 1 - 4 -4X)	-			
Material Group	<b>EN 60947-1</b>	II	II	II			
Pollution Grade	<b>EN 60947-1</b>	3	3	3			
Flammability	<b>UL94</b>	VO (Live Electric parts)	VO (Live Electric parts)	VO (Live Electric parts)			
Ambient Temperature	°C	Operating: -25 +55	Operating: -25 +55	Operating: -25 +55			
	°C	Storage: -30 +70	Storage: -30 +70	Storage: -30 +70			
Climate Withstand	<b>IEC 68 part 2-3</b>	Constant Hot Damp	Constant Hot Damp	Constant Hot Damp			
	<b>IEC 68 part 2-30</b>	Cyclical Hot Damp	Cyclical Hot Damp	Cyclical Hot Damp			
Connections Terminal Block Caliber	<b>EN60947-1</b>	A6	A8	A11			
Terminal Screw		M4	M5	M8			
Screwing Torque	<b>EN60947-1</b>	1,2 Nm	3 Nm	6 Nm			
	<b>UL508</b>	7 lb. in. (0,8 Nm)	32,0 lb. in. (3,6 Nm)	53,0 lb. in. (6 Nm)			
Connectable Section Flexible Conductors n°1 min/max	<b>mm²</b>	1,5 - 10	6 - 25	6 - 25			
	<b>AWG</b>	12 - 8	10 - 2	10 - 2			
Solid Conductors n°1 min/max	<b>mm²</b>	1,5 - 10	10 - 35	10 - 35			
	<b>AWG</b>	12 - 8	10 - 2	10 - 2			
Contacts		Slow Opening Double-Break	Slow Opening Double-Break	Slow Opening Double-Break			
Opening Angles		90°	90°	90°			
Mechanical Lifetime	<b>nr. of cycles</b>	100.000	100.000	100.000			
Maximum Altitude	Until 2000 mt	Standard	Standard	Standard			
	Over 2000 mt	<b>Derating Voltage Derating (V)</b>	< 1% each 100 m	< 1% each 100 m			
		<b>Power Derating (A)</b>	< 1% each 1000 m	< 1% each 1000 m			
CERTIFICATIONS		SQ025	SQ032	SQ040	SQ063	SQN125	SQN160
CE	CE mark - Europe	■	■	■	■	■	■
cUL	cUL Listed - USA and Canada	●	●	●	●	●	●
IMQ	Istituto Marchio Qualità (IMQ) - Italy	●	●	●	●	●	●
CCC	CCC China						
EAC	EAC Russia						

■ Comply to the requirements by passed test ● Approved



ELECTRICAL CHARACTERISTICS		SQ025	SQ032	SQ040	SQ063	SQN125	SQN160
EN 60947-3 CHARACTERISTICS		SQ025	SQ032	SQ040	SQ063	SQN125	SQN160
Rated operating voltage Ue	<b>V</b>	690	690	690	690	690	690
Rated insulation voltage Ui	<b>V</b>	690	690	690	690	800	800
Rated impulse withstand voltage Uimp (sectionable)	<b>kV</b>	8	8	8	8	8	8
Rated thermal current Ith	<b>A</b>	32	40	63	80	125	160
Rated thermal current in enclosed Ithe	<b>A</b>	32	40	63	80	125	160
Frequency	<b>Hz</b>	50/60	50/60	50/60	50/60	50/60	50/60
RATED OPERATING CURRENT Ie: alternate current		SQ025	SQ032	SQ040	SQ063	SQN125	SQN160
<b>AC-21A</b> Switching resistive loads with light overloads	<b>690V A</b>	32	40	63	80	125	160
<b>AC-22A</b> Switching mixed resistive and inductive loads at light overloads	<b>500V A</b>	-	-	-	-	125	160
	<b>690V A</b>	25	32	63	80/-	125	160
<b>AC-23A</b> Periodic switching of motors 3 phases - 3 poles	<b>230V A/kW</b>	25/7,5	32/10	63/-	80/-	-	-
	<b>400V A/kW</b>	25/15	32/18,5	50/-	75/-	125	160
	<b>500V A/kW</b>	25/15	32/22	50/-	75/-	100	125
	<b>690V A/kW</b>	16/15	20/18,5	26/-	32/-	80	100
<b>AC3</b> Starting of cage motors (interruption hile running) 3 phases - 3 poles	<b>230V A/kW</b>	22/5,5	27/7,5	45/-	60/-	-	-
	<b>400V A/kW</b>	22/11	27/15	40/-	60/-	-	-
	<b>500V A/kW</b>	22/11	27/18,5	35/-	45/-	-	-
	<b>690V A/kW</b>	16/11	20/15	22/-	25/-	-	-
Nominal interruption power <b>AC-23A</b> (cosfi 0,45)	<b>230V A</b>	200	256	360	600	-	-
	<b>400V A</b>	200	256	360	536	-	-
	<b>500V A</b>	200	256	280	536	-	-
	<b>690V A</b>	128	160	176	256	-	-
<b>DC-21B</b> (4P Series positive opening)	<b>600V A</b>	-	-	-	-	10	10
SHORT CIRCUIT CHARACTERISTICS		SQ025	SQ032	SQ040	SQ063	SQN125	SQN160
Rated short-time short circuit withstand current Icw (1 s)	<b>A</b>	800	800	1200	1500	3000	3000
Rated short circuit making capacity Icm	<b>A</b>	1500	1500	2200	2800	4500	4500
Conditional rated short circuit withstand current	<b>kA</b>	10	10	10   5	10   5	10   10	10   10
Fuse rating gG	<b>500V A</b>	-	-	-	-	-	-
	<b>690V A</b>	40	40	63   80	63   80	125	125
UL 508 CHARACTERISTICS		SQ025	SQ032	SQ040	SQ063	SQN125	SQN160
General Use	<b>600V AC A</b>	32	40	60	80	125	150
Standard motor load single phase - 2 poles	<b>120V AC HP (FLA)</b>	1,5 (20)	2 (24)	2 (24)	3 (34)	-	-
	<b>200-208V AC HP</b>	2	3	3	5	-	-
	<b>240V AC HP (FLA)</b>	3 (17)	5 (28)	5 (28)	7,5 (40)	-	-
Standard motor load 3 phases - 3 poles	<b>200-208V AC HP</b>	7,5	10	7,5	10	-	-
	<b>240V AC HP (FLA)</b>	7,5 (22)	10 (28)	10 (28)	15 (42)	25	25
	<b>480V AC HP (FLA)</b>	10 (14)	15 (21)	25 (34)	30 (40)	50	50
	<b>600V AC HP (FLA)</b>	15 (17)	20 (22)	30 (32)	40 (41)	60	60

**SWITCH DISCONNECTORS COMPONENTS**



ADDITIONAL POLES	DESCRIPTION	SQ025/SQ032	SQ040/SQ063	SQN125/SQN160	DIAGRAMS
	Additional Pole NO	SQ025AFPB	SQ040AFPB	SQN125AFPB	7 — 8
		SQ032AFPB	SQ063AFPB	SQN160AFPB	
	4th Pole (early make contact)	SQ025ANIB	SQ040ANIB	SQN125ANIB	N — N
		SQ032ANIB	SQ063ANIB	SQN160ANIB	
	Neutral Terminal	SQ025ANPB	SQ040ANPB	SQN125ANPB	N — N
SQ032ANPB		SQ063ANPB	SQN160ANPB		
Ground Terminal	SQ025APEB	SQ040APEB	SQN125APEB	PE — PE	
	SQ032APEB	SQ063APEB	SQN160APEB		



AUXILIARY CONTACTS	DESCRIPTION	SQ025/SQ032	SQ040/SQ063	SQN125/SQN160	DIAGRAMS
	AUX 1NC	SQ010AS1B	SQ010AS3B	SQ010AS5B	1 — 2
	AUX 1NO	SQ010AS2B	SQ010AS4B	SQ010AS6B	3 — 4



TERMINAL PROTECTIONS	DESCRIPTION	SQ025/SQ032	SQ040/SQ063	SQN125/SQN160
	1 POLE	20900025	20900040	20900065
	3 POLES	20900023	20900041	20900064



SHAFT EXTENSIONS □ 6 FOR DOOR INTERLOCK	DESCRIPTION	SQN125/SQN160
	L 185 mm	20900010
	L 300 mm	20900011

**PUSH BUTTONS Ø22 | IP65**

DESCRIPTION	CODE	Icon
ALARM push button <i>flush, yellow colour</i>	PPRN3BL-AL	



DESCRIPTION	CODE	Icon
UP push button <i>flush, white colour</i>	PPRN5BL/F	



DESCRIPTION	CODE	Icon
Lighted ALARM push button <i>flush, yellow colour</i>	PPRL3BL-AL	



DESCRIPTION	CODE	Icon
COMMON push button <i>flush, blue colour</i>	PPRN4BL/COM	



DESCRIPTION	CODE	Icon
Lighted LIGHT push button <i>flush, yellow colour</i>	PPRN3LBL	



DESCRIPTION	CODE	Icon
DOWN push button <i>flush, black colour</i>	PPRN8BL/F	



DESCRIPTION	CODE	Icon
Lighted LIGHT push button <i>flush, black colour</i>	PPRN8LBL	



DESCRIPTION	CODE	Icon
Extended dual push button <i>UP/DOWN</i>	PPDNR.7BL	



DESCRIPTION	CODE	Icon
Extended dual push button <i>UP/DOWN</i>	PPDNR.9ABL	



DESCRIPTION	CODE	Icon
Multifunction push button <i>UP/STOP/DOWN</i>	PPMNSBL.B	



**ROTARY SWITCHES Ø22 | IP65**

WITH OPERATOR

WITH LIGHT OPERATOR

WITH KEY



POSITION	COLOUR INDEX	CODE	COLOUR INDEX	CODE	KEY REMOVAL			CODE
					L	O	R	
	■	PSMB1D0BL	■	PSML1D0BL		*		PSCR8D0CBL
	■	PSMB2D0BL	■	PSML2D0BL			*	PSCR8D0EBL
	■	PSMB3D0BL	■	PSML3D0BL			*	PSCR8D0NBL
	■	PSMB4D0BL	■	PSML4D0BL			*	
	■	PSMB5D0BL	■	PSML5D0BL			*	
	■	PSMB8D0BL	■				*	
	■	PSMB1D1BL	■	PSML1D1BL		*		PSCR8D1CBL
	■	PSMB2D1BL	■	PSML2D1BL			*	PSCR8D1EBL
	■	PSMB3D1BL	■	PSML3D1BL			*	PSCR8D1NBL
	■	PSMB4D1BL	■	PSML4D1BL			*	
	■	PSMB5D1BL	■	PSML5D1BL			*	
	■	PSMB8D1BL	■				*	
	■	PSMB1D2BL	■	PSML1D2BL			*	PSCR8D2CBL
	■	PSMB2D2BL	■	PSML2D2BL			*	
	■	PSMB3D2BL	■	PSML3D2BL			*	
	■	PSMB4D2BL	■	PSML4D2BL			*	
	■	PSMB5D2BL	■	PSML5D2BL			*	
	■	PSMB8D2BL	■				*	
	■	PSMB1T0BL	■	PSML1T0BL		*		PSCR8T0CBL
	■	PSMB2T0BL	■	PSML2T0BL		*		PSCR8T0ABL
	■	PSMB3T0BL	■	PSML3T0BL		*	*	PSCR8T0EBL
	■	PSMB4T0BL	■	PSML4T0BL		*	*	PSCR8T0GBL
	■	PSMB5T0BL	■	PSML5T0BL		*	*	PSCR8T0HBL
	■	PSMB8T0BL	■			*	*	PSCR8T0KBL
	■	PSMB1T3BL	■	PSML1T3BL			*	PSCR8T3CBL
	■	PSMB2T3BL	■	PSML2T3BL			*	
	■	PSMB3T3BL	■	PSML3T3BL			*	
	■	PSMB4T3BL	■	PSML4T3BL			*	
	■	PSMB5T3BL	■	PSML5T3BL			*	
	■	PSMB8T3BL	■				*	
	■	PSMB1T2BL	■	PSML1T2BL		*		PSCR8T2CBL
	■	PSMB2T2BL	■	PSML2T2BL			*	PSCR8T2ABL
	■	PSMB3T2BL	■	PSML3T2BL			*	PSCR8T2HBL
	■	PSMB4T2BL	■	PSML4T2BL			*	
	■	PSMB5T2BL	■	PSML5T2BL			*	
	■	PSMB8T2BL	■				*	
	■	PSMB1T1BL	■	PSML1T1BL		*		PSCR8T1CBL
	■	PSMB2T1BL	■	PSML2T1BL			*	PSCR8T1EBL
	■	PSMB3T1BL	■	PSML3T1BL			*	PSCR8T1NBL
	■	PSMB4T1BL	■	PSML4T1BL			*	
	■	PSMB5T1BL	■	PSML5T1BL			*	
	■	PSMB8T1BL	■				*	

■ For standard rotary switches suitable to operate a central contact, replace the letter "B" with the letter "C": PSMB1D0 or PSCR8D0E  
 ■ For rotary switches with Left - Right operating angles replace the letters "DO" with "SD": PSMB1D0 or PSCR8D0E

\* Key removable position

**PUSH BUTTONS Ø22 | IP65**

DIN RAIL MOUNTING ADAPTOR



DESCRIPTION	CODE
DIN EN50022 rail mounting for 46 mm standard grey enclosures	11708351

CONTACTS SUPPORT



DESCRIPTION	CODE
Contact support for 5 contact elements PL - PCW - PSC	PPELN8-5

PROTECTION CAPS



DESCRIPTION	CODE
Protection cap for flush button Orion Series	PCRN



DESCRIPTION	CODE
Protection cap for multifunctional push button Orion Series (PPDNGL - PPDGL)	PCDNL



DESCRIPTION	CODE
Protection cap for extended push button Orion Series	PCSNL



DESCRIPTION	CODE
Protection cap for multifunctional push button Orion Series (PPMNG)	PCMNL



DESCRIPTION	CODE
Protection cap for multifunctional push button Orion Series (PPDNRL - PPDRL)	PCNNL

CENTRAL CONTACT OPERATION



DESCRIPTION	CODE
For GL - BL - NEMA 4X Series	11708555

KEY FIXING BULB EXTRACTOR



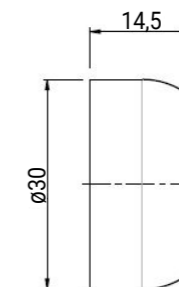
DESCRIPTION	CODE
Key fixing bulb extractor	PCF

STOPPER CLOSING HOLES Ø22,5

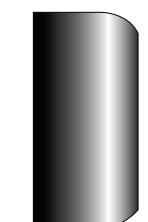


DESCRIPTION	CODE
Stopper closing holes Ø22,5	PTRN8

SPECIAL FRAMES: SHROUDED FOR ORION SERIES



The auxiliary controls of Orion Series are available also with shrouded seal.



Black Line Orion Series



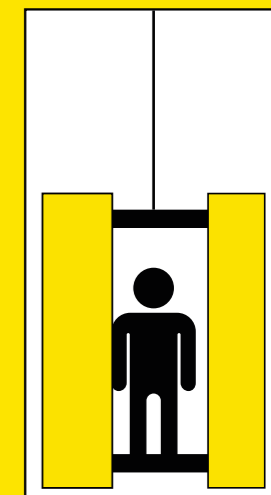
Grey Line Orion Series



**GIOVENZANA**  
INTERNATIONAL B.V.



## DOOR COMPONENTS



**THERMOPLASTIC LIMIT SWITCHES AND MICRO SWITCHES**



FTN131



FTN134



FTN137



FTN138



FTN139



FTN140



FTN140L



FTN140R



FTN140RL



FTN141



FTN144



FTN144S



FTN1R31



FTN1R34



FTN1R37



FTN1R38



FTN1R39



FTN1R40



FTN1R40R



FTN1R41



FTN1R44



AFT2T16Y11



AFT2T16X11



AFT2T38Y11



AFT2T38X11



MFI.1



MFI.2



MFI.3



MFI.4



MFI.5



MFI.6



MFI.7



MFI.T

**FTN SERIES - GENERAL CHARACTERISTICS**

<b>FTN Series one threaded conduit entry</b>	Standard: M16; On request: M20, 1/2NPT, PG11, PG13.5, Connector			
<b>Protection degree</b>	IP67 according to EN60529 with cable gland having equal or higher protection degree			
<b>Positive opening operation</b>	NC contact ⊕			
<b>Utilization category</b>	<b>Contact type</b>	<b>Categories/Ratings</b>		
	X11 - W02 - W20	A600 Q600	AC15 400V 4A	DC13 24V 6A
	Z11 - Z02	B600 Q600		
W12 - W03	A300 Q300			
<b>Minimum admissible current</b>	5V, 5mA, DC			
<b>Insulation resistance</b>	100MΩ min (DC 500V)			
<b>Contact resistance</b>	25mΩ max (Initial)			
<b>Enclosure material</b>	UL approved glass-filled polybutylene terephthalate			
<b>Operating temperature</b>	Min -25°C (-18°F) / Max 80°C (+176°F)			
<b>Mechanical life expectancy</b>	1x10 <sup>7</sup> cycles min			
<b>Electrically life expectancy</b>	150.000 cycles min			
<b>Vibration resistance</b>	IEC 68-2-6, 10-55Hz ± 1Hz, Excursion: 0.35mm, 1 octave/min			
<b>Fixing</b>	2xM4			

**FTN SERIES - ELECTRICAL CHARACTERISTICS**

<b>Rated thermal current (I<sub>th</sub>)</b>	10A
<b>Rated insulation voltage (U<sub>i</sub>)</b>	500V AC
<b>Rated impulse withstand voltage (U<sub>imp</sub>)</b>	2500V AC
<b>Pollution degree</b>	3
<b>Protection against electric shock</b>	Class II (Double insulation)

**FTN SERIES - STANDARDS & APPROVALS**

<b>Standards</b>	EN60947-5-1, UL508, EN50047
<b>Approvals</b>	cULus, EAC and CCC marked for all applicable directives





**OPERATING FORCE - FTN SERIES**

TYPE	CONTACT BLOCK		OPERATING TRAVEL		OPERATING FORCE	TOTAL TRAVEL
			PT	PT2nd	OF	
 FTN131	X11	1NC/1NO Slow Action	2.8 mm	3.8 mm	7.3 N	6.0 mm
	W02	2NC Slow Action	2.8 mm	-	7.3 N	
	W20	2NO Slow Action	2.4 mm	-	8.2 N	
	W12	2NC/1NO Slow Action	2.6 mm	3.2 mm	7.3 N	
	W03	3NC Slow Action	2.6 mm	-	7.3 N	
	Z11	1NC/1NO Snap Action	3.0 mm	-	6.7 N	
	Z02	2NC Snap Action	2.7 mm	-	6.7 N	
 FTN134	X11	1NC/1NO Slow Action	2.2 mm	3.2 mm	7.4 N	9.0 mm
	W02	2NC Slow Action	2.2 mm	-	7.4 N	
	W20	2NO Slow Action	2.0 mm	-	8.3 N	
	W12	2NC/1NO Slow Action	2.2 mm	3.0 mm	7.4 N	
	W03	3NC Slow Action	2.2 mm	-	7.4 N	
	Z11	1NC/1NO Snap Action	2.5 mm	-	6.8 N	
	Z02	2NC Snap Action	2.5 mm	-	6.8 N	
 FTN137	X11	1NC/1NO Slow Action	30°	45°	1.8 N	80°
	W02	2NC Slow Action	30°	-	1.8 N	
	W20	2NO Slow Action	32°	-	1.8 N	
	W12	2NC/1NO Slow Action	32°	40°	1.8 N	
	W03	3NC Slow Action	32°	-	1.8 N	
	Z11	1NC/1NO Snap Action	34°	-	1.9 N	
	Z02	2NC Snap Action	34°	-	1.9 N	
 FTN138	X11	1NC/1NO Slow Action	30°	45°	6.5 N	80°
	W02	2NC Slow Action	30°	-	6.5 N	
	W20	2NO Slow Action	32°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	34°	-	5.3 N	
	Z02	2NC Snap Action	34°	-	5.3 N	
 FTN139	X11	1NC/1NO Slow Action	30°	45°	6.5 N	80°
	W02	2NC Slow Action	30°	-	6.5 N	
	W20	2NO Slow Action	32°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	34°	-	5.3 N	
	Z02	2NC Snap Action	34°	-	5.3 N	
 FTN140	X11	1NC/1NO Slow Action	30°	45°	6.5 N	80°
	W02	2NC Slow Action	30°	-	6.5 N	
	W20	2NO Slow Action	32°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	34°	-	5.3 N	
	Z02	2NC Snap Action	34°	-	5.3 N	

**OPERATING FORCE - FTN SERIES**

TYPE	CONTACT BLOCK		OPERATING TRAVEL		OPERATING FORCE	TOTAL TRAVEL
			PT	PT2nd	OF	
 FTN140L	X11	1NC/1NO Slow Action	30°	45°	6.5 N	80°
	W02	2NC Slow Action	30°	-	6.5 N	
	W20	2NO Slow Action	32°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	34°	-	5.3 N	
	Z02	2NC Snap Action	34°	-	5.3 N	
 FTN140R	X11	1NC/1NO Slow Action	30°	45°	6.5 N	80°
	W02	2NC Slow Action	30°	-	6.5 N	
	W20	2NO Slow Action	32°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	34°	-	5.3 N	
	Z02	2NC Snap Action	34°	-	5.3 N	
 FTN140RL	X11	1NC/1NO Slow Action	30°	45°	6.5 N	80°
	W02	2NC Slow Action	30°	-	6.5 N	
	W20	2NO Slow Action	32°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	34°	-	5.3 N	
	Z02	2NC Snap Action	34°	-	5.3 N	
 FTN141	X11	1NC/1NO Slow Action	30°	45°	6.5 N	80°
	W02	2NC Slow Action	30°	-	6.5 N	
	W20	2NO Slow Action	32°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	34°	-	5.3 N	
	Z02	2NC Snap Action	34°	-	5.3 N	
 FTN144	X11	1NC/1NO Slow Action	30°	45°	6.5 N	80°
	W02	2NC Slow Action	30°	-	6.5 N	
	W20	2NO Slow Action	32°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	34°	-	5.3 N	
	Z02	2NC Snap Action	34°	-	5.3 N	
 FTN144S	X11	1NC/1NO Slow Action	30°	45°	6.5 N	80°
	W02	2NC Slow Action	30°	-	6.5 N	
	W20	2NO Slow Action	32°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	34°	-	5.3 N	
	Z02	2NC Snap Action	34°	-	5.3 N	

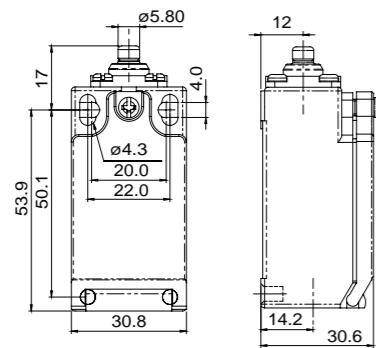
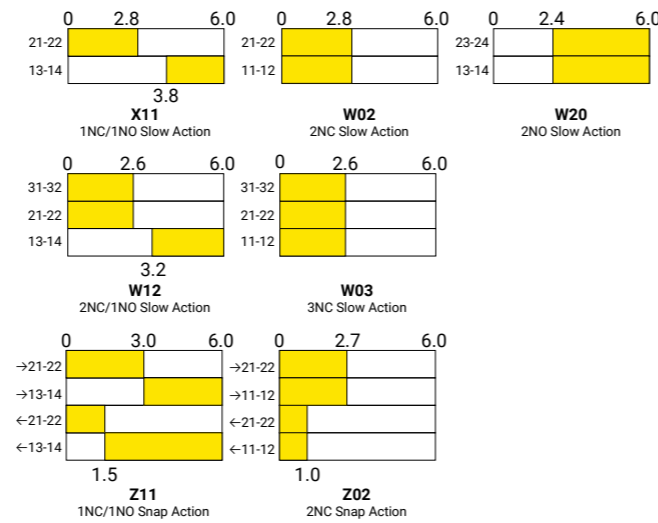


**FTN131: Short plastic end plunger with protective boot**

FTN	1	31	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit
	1 - Without Reset Function	31 - Short plastic end plunger with protective boot	X11 - 1NC/1NO Slow Action W02 - 2NC Slow Action W20 - 2NO Slow Action W12 - 2NC/1NO Slow Action W03 - 3NC Slow Action Z11 - 1NC/1NO Snap Action Z02 - 2NC Snap Action	Standard: <b>BLANK</b> - M16 On request: <b>M</b> - M20 <b>N</b> - 1/2NPT <b>G1</b> - PG11 <b>G3</b> - PG13.5 <b>C</b> - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**

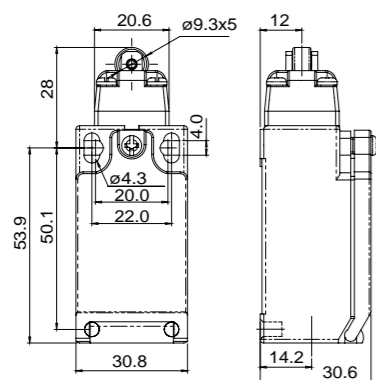
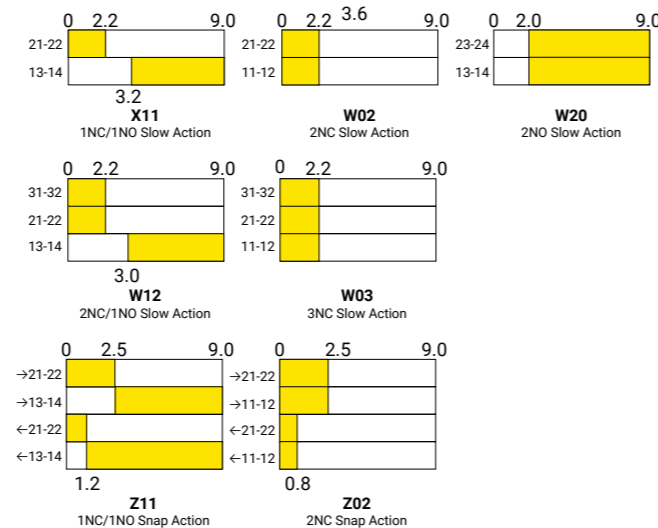


**FTN134: Roller lever plunger**

FTN	1	34	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit
	1 - Without Reset Function	34 - Roller lever plunger	X11 - 1NC/1NO Slow Action W02 - 2NC Slow Action W20 - 2NO Slow Action W12 - 2NC/1NO Slow Action W03 - 3NC Slow Action Z11 - 1NC/1NO Snap Action Z02 - 2NC Snap Action	Standard: <b>BLANK</b> - M16 On request: <b>M</b> - M20 <b>N</b> - 1/2NPT <b>G1</b> - PG11 <b>G3</b> - PG13.5 <b>C</b> - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**

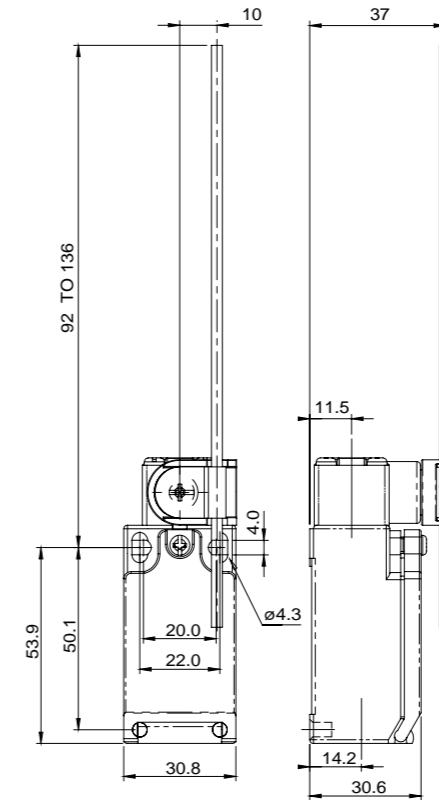
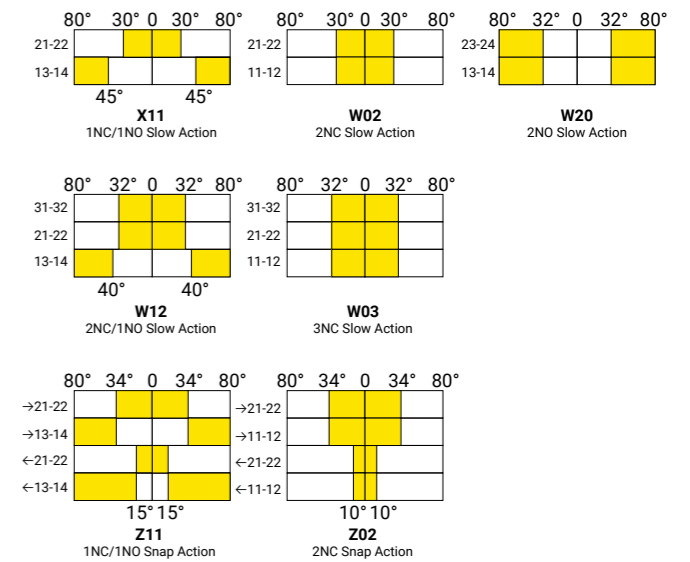


**FTN137: Rod lever type**

FTN	1	37	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit
	1 - Without Reset Function	37 - Rod lever type	X11 - 1NC/1NO Slow Action W02 - 2NC Slow Action W20 - 2NO Slow Action W12 - 2NC/1NO Slow Action W03 - 3NC Slow Action Z11 - 1NC/1NO Snap Action Z02 - 2NC Snap Action	Standard: <b>BLANK</b> - M16 On request: <b>M</b> - M20 <b>N</b> - 1/2NPT <b>G1</b> - PG11 <b>G3</b> - PG13.5 <b>C</b> - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**

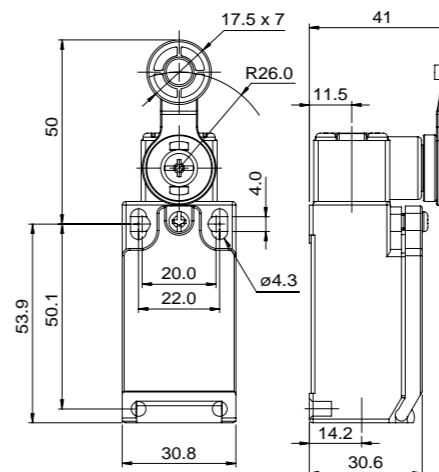
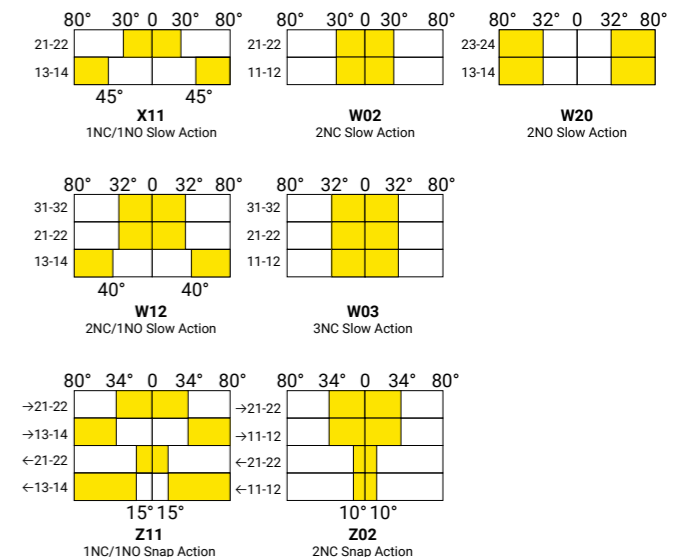


**FTN138: ø18 PA roller lever**

FTN	1	38	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit
	1 - Without Reset Function	38 - ø18 PA roller lever	X11 - 1NC/1NO Slow Action W02 - 2NC Slow Action W20 - 2NO Slow Action W12 - 2NC/1NO Slow Action W03 - 3NC Slow Action Z11 - 1NC/1NO Snap Action Z02 - 2NC Snap Action	Standard: <b>BLANK</b> - M16 On request: <b>M</b> - M20 <b>N</b> - 1/2NPT <b>G1</b> - PG11 <b>G3</b> - PG13.5 <b>C</b> - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**





**FTN139: Variable length roller lever ø18**

FTN	1	39	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit

1 - Without Reset Function

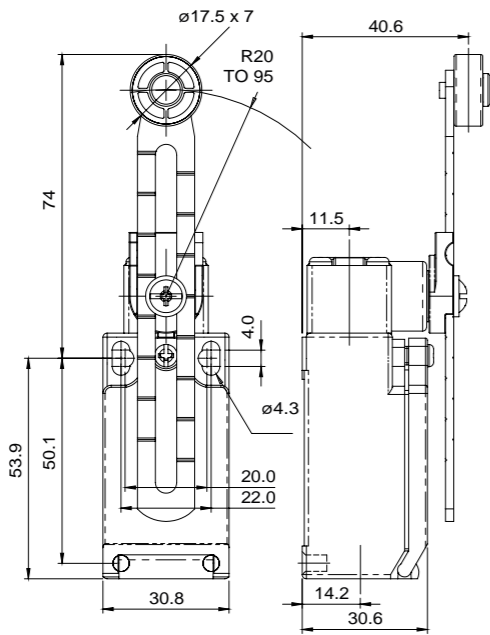
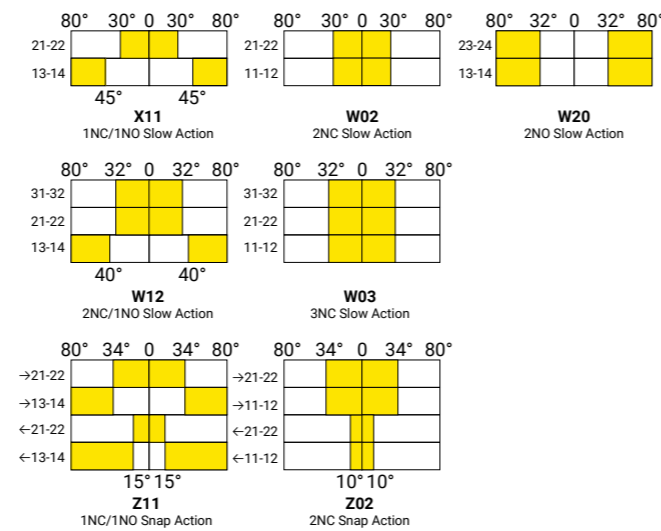
39 - Variable length roller lever ø18

X11 - 1NC/1NO Slow Action  
W02 - 2NC Slow Action  
W20 - 2NO Slow Action  
W12 - 2NC/1NO Slow Action  
W03 - 3NC Slow Action  
Z11 - 1NC/1NO Snap Action  
Z02 - 2NC Snap Action

Standard: **BLANK** - M16  
On request:  
**M** - M20  
**N** - 1/2NPT  
**G1** - PG11  
**G3** - PG13.5  
**C** - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



**FTN140L: Variable length rubber roller lever ø50 (Long Arm)**

FTN	1	40L	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit

1 - Without Reset Function

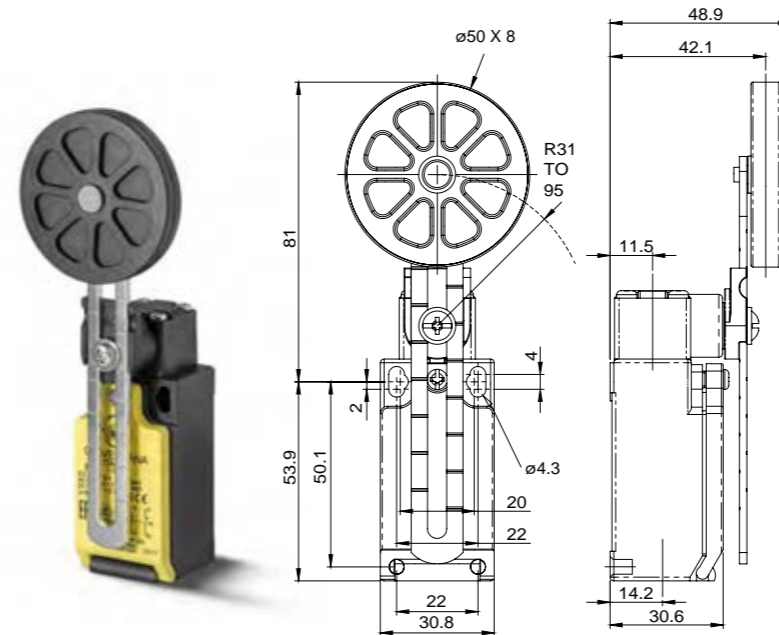
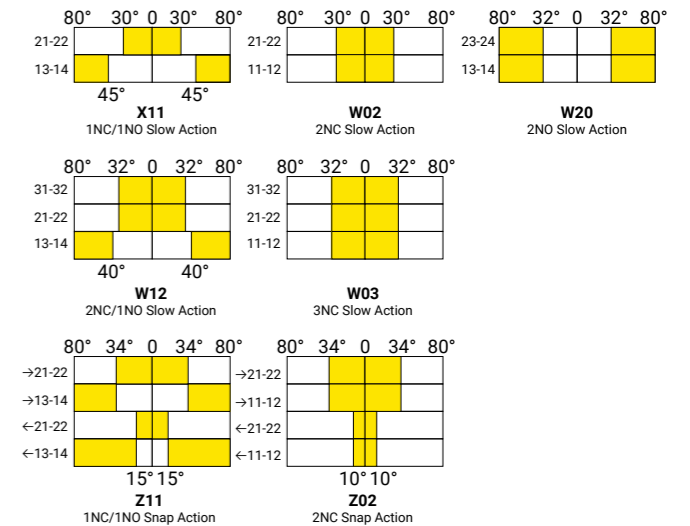
40L - Variable length rubber roller lever ø50 (Long Arm)

X11 - 1NC/1NO Slow Action  
W02 - 2NC Slow Action  
W20 - 2NO Slow Action  
W12 - 2NC/1NO Slow Action  
W03 - 3NC Slow Action  
Z11 - 1NC/1NO Snap Action  
Z02 - 2NC Snap Action

Standard: **BLANK** - M16  
On request:  
**M** - M20  
**N** - 1/2NPT  
**G1** - PG11  
**G3** - PG13.5  
**C** - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



**FTN140: Variable length rubber roller lever ø50**

FTN	1	40	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit

1 - Without Reset Function

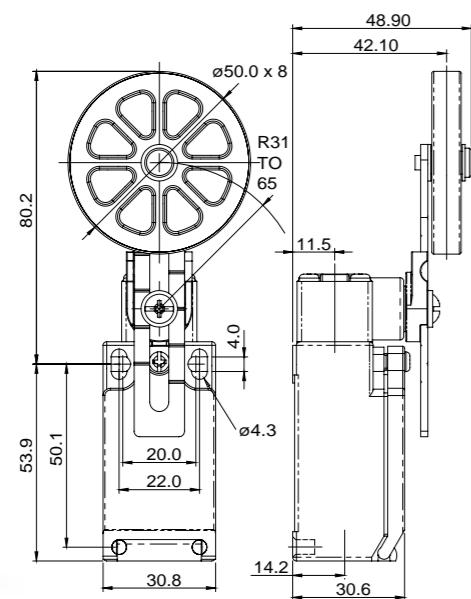
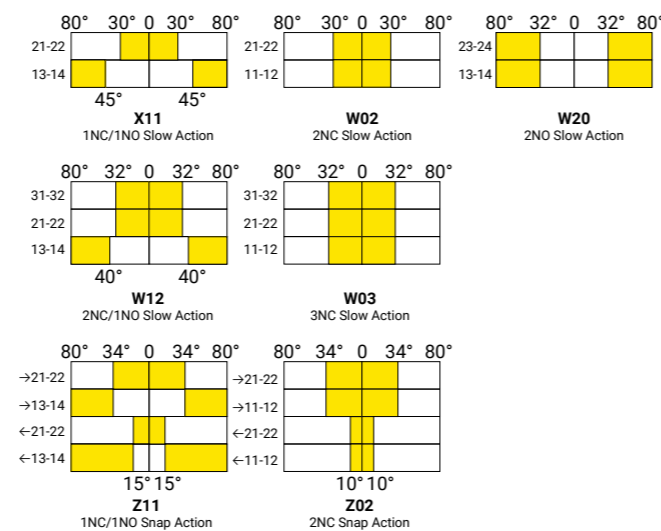
40 - Variable length rubber roller lever ø50

X11 - 1NC/1NO Slow Action  
W02 - 2NC Slow Action  
W20 - 2NO Slow Action  
W12 - 2NC/1NO Slow Action  
W03 - 3NC Slow Action  
Z11 - 1NC/1NO Snap Action  
Z02 - 2NC Snap Action

Standard: **BLANK** - M16  
On request:  
**M** - M20  
**N** - 1/2NPT  
**G1** - PG11  
**G3** - PG13.5  
**C** - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



**FTN140R: Variable length and rubber roller lever ø50**

FTN	1	40R	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit

1 - Without Reset Function

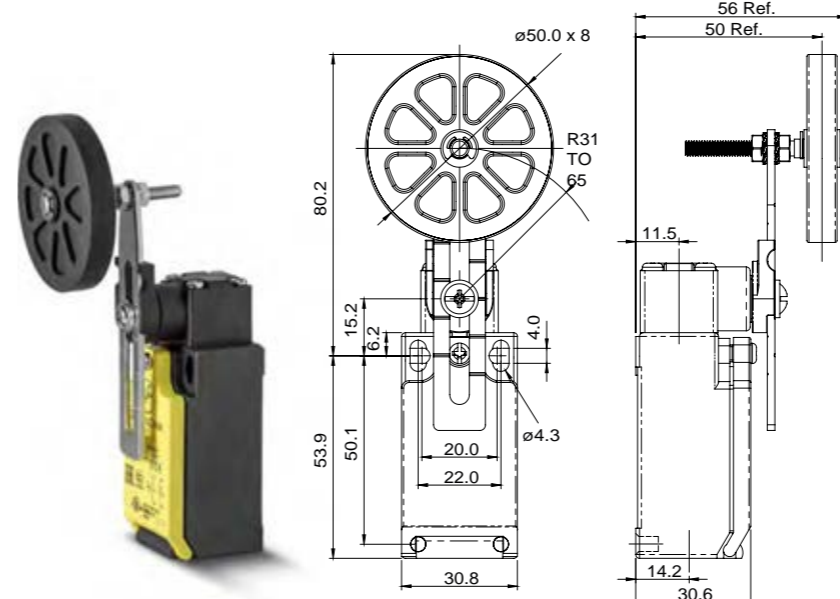
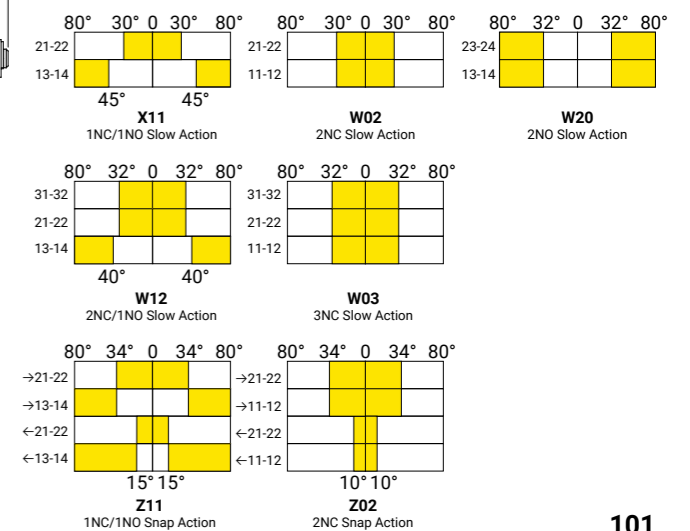
40R - Variable length and rubber roller lever ø50

X11 - 1NC/1NO Slow Action  
W02 - 2NC Slow Action  
W20 - 2NO Slow Action  
W12 - 2NC/1NO Slow Action  
W03 - 3NC Slow Action  
Z11 - 1NC/1NO Snap Action  
Z02 - 2NC Snap Action

Standard: **BLANK** - M16  
On request:  
**M** - M20  
**N** - 1/2NPT  
**G1** - PG11  
**G3** - PG13.5  
**C** - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



**FTN140RL: Variable length and rubber roller lever ø50 (Long Arm)**

FTN	1	40RL	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit

1 - Without Reset Function

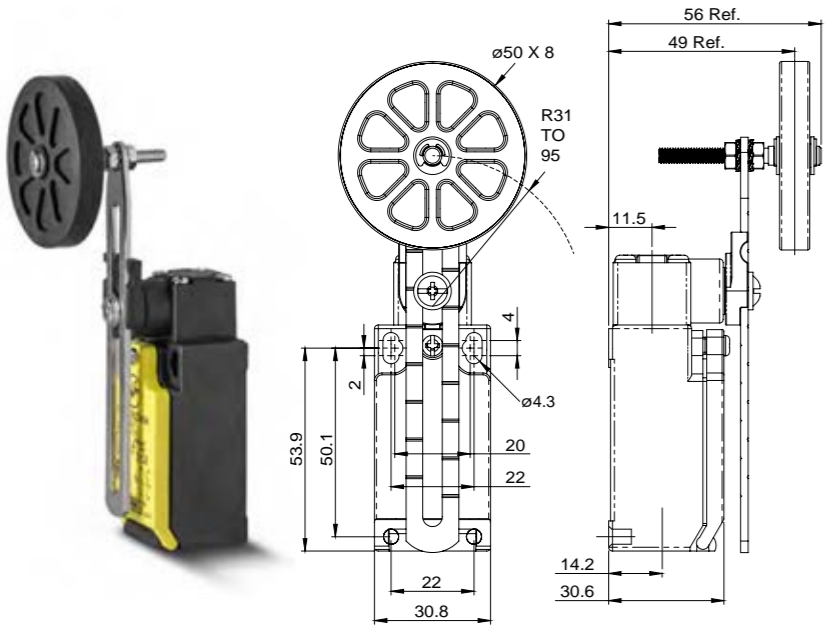
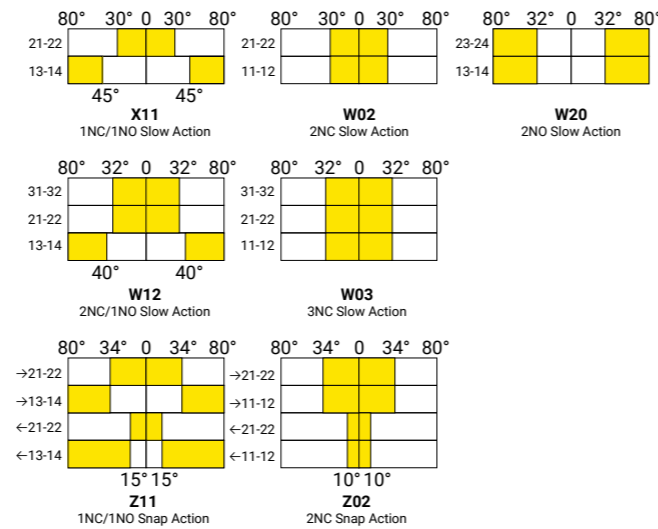
**40RL** - Variable length and rubber roller lever ø50 (Long Arm)

**X11** -1NC/1NO Slow Action  
**W02** - 2NC Slow Action  
**W20** - 2NO Slow Action  
**W12** - 2NC/1NO Slow Action  
**W03** - 3NC Slow Action  
**Z11** - 1NC/1NO Snap Action  
**Z02** - 2NC Snap Action

Standard: **BLANK** - M16  
On request:  
**M** - M20  
**N** - 1/2NPT  
**G1** - PG11  
**G3** - PG13.5  
**C** - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



**FTN141: ø50 Rubber roller lever**

FTN	1	41	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit

1 - Without Reset Function

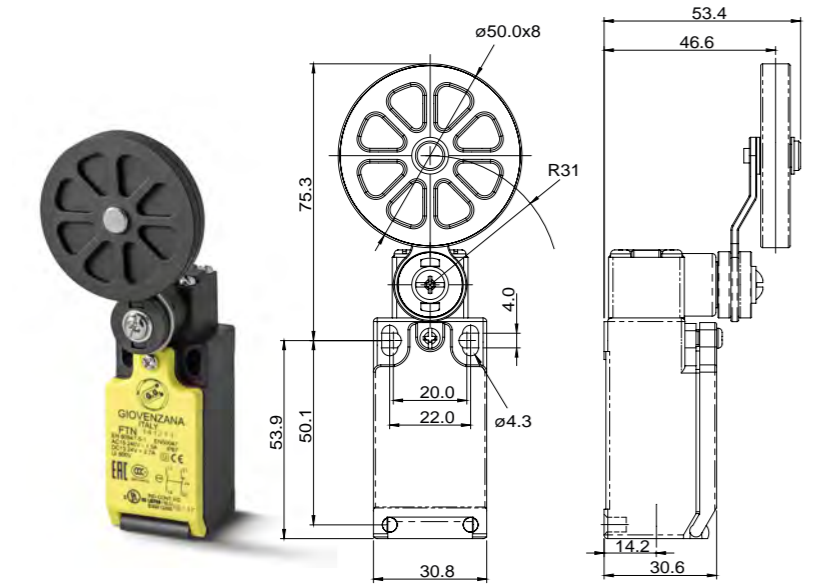
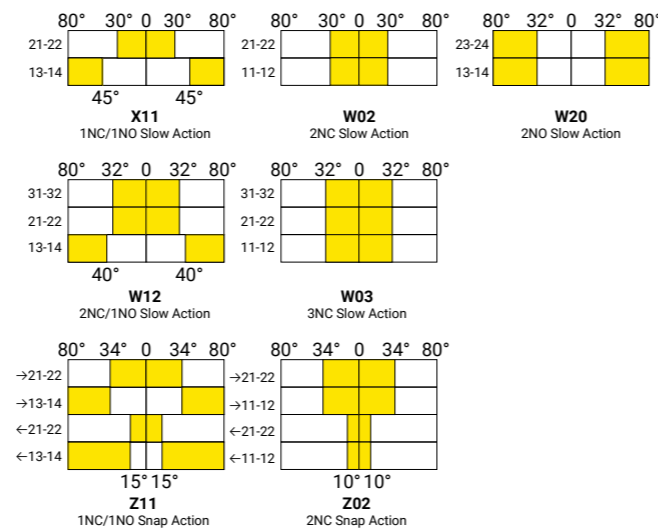
**41** - ø50 Rubber roller lever

**X11** -1NC/1NO Slow Action  
**W02** - 2NC Slow Action  
**W20** - 2NO Slow Action  
**W12** - 2NC/1NO Slow Action  
**W03** - 3NC Slow Action  
**Z11** - 1NC/1NO Snap Action  
**Z02** - 2NC Snap Action

Standard: **BLANK** - M16  
On request:  
**M** - M20  
**N** - 1/2NPT  
**G1** - PG11  
**G3** - PG13.5  
**C** - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



**FTN144: Variable length roller lever ø18**

FTN	1	44	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit

1 - Without Reset Function

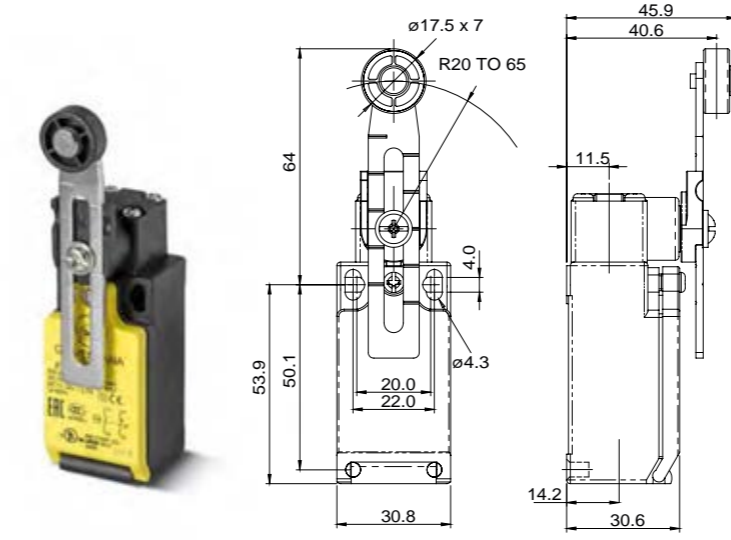
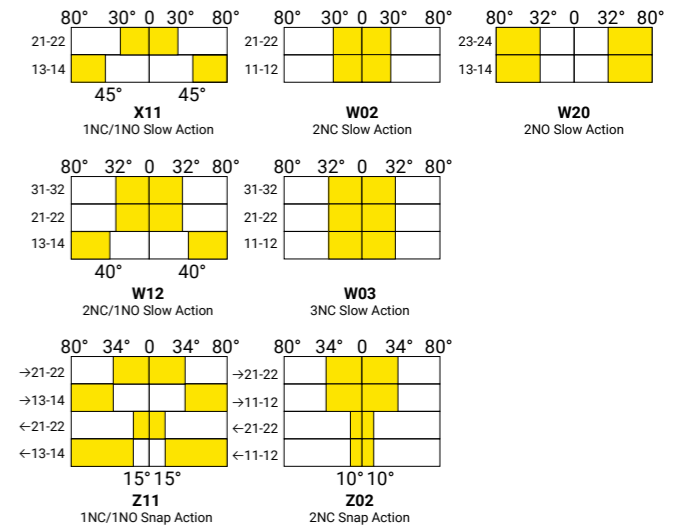
**44** - Variable length roller lever ø18

**X11** -1NC/1NO Slow Action  
**W02** - 2NC Slow Action  
**W20** - 2NO Slow Action  
**W12** - 2NC/1NO Slow Action  
**W03** - 3NC Slow Action  
**Z11** - 1NC/1NO Snap Action  
**Z02** - 2NC Snap Action

Standard: **BLANK** - M16  
On request:  
**M** - M20  
**N** - 1/2NPT  
**G1** - PG11  
**G3** - PG13.5  
**C** - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



**FTN144S: Variable sawtooth length roller lever ø18**

FTN	1	44S	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit

1 - Without Reset Function

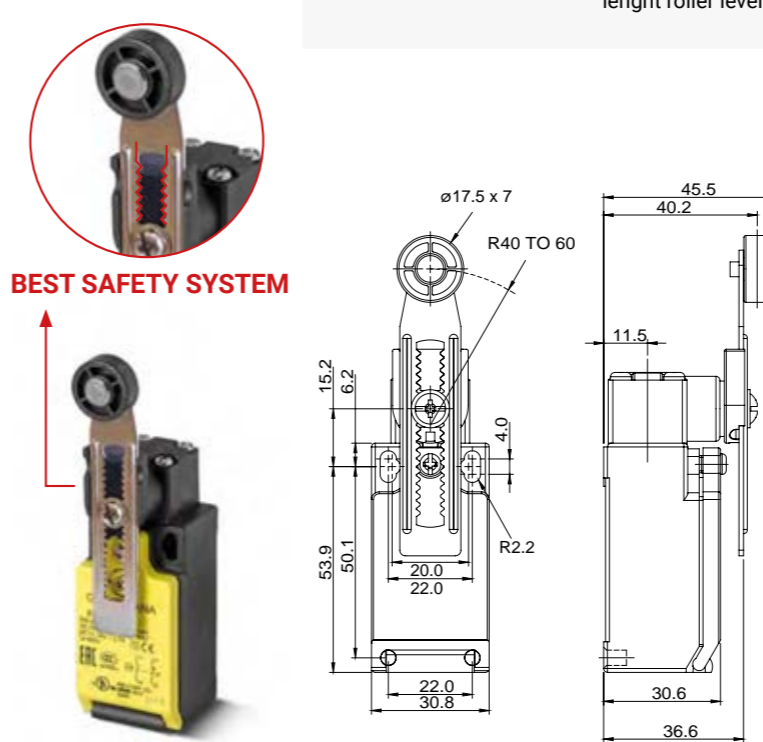
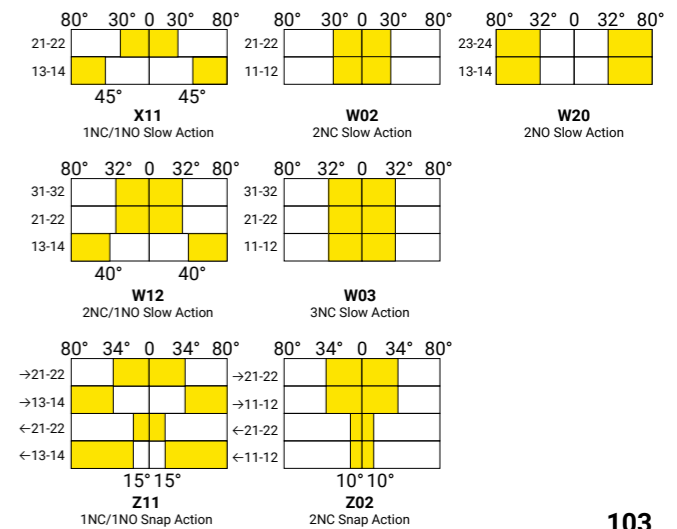
**44S** - Variable sawtooth length roller lever ø18

**X11** -1NC/1NO Slow Action  
**W02** - 2NC Slow Action  
**W20** - 2NO Slow Action  
**W12** - 2NC/1NO Slow Action  
**W03** - 3NC Slow Action  
**Z11** - 1NC/1NO Snap Action  
**Z02** - 2NC Snap Action

Standard: **BLANK** - M16  
On request:  
**M** - M20  
**N** - 1/2NPT  
**G1** - PG11  
**G3** - PG13.5  
**C** - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



**BEST SAFETY SYSTEM**



**FTN1R SERIES - GENERAL CHARACTERISTICS**

<b>FTN1R Series one threaded conduit entry</b>	Standard: M16; On request: M20, 1/2NPT, PG11, PG13.5, Connector			
<b>Protection degree</b>	IP67 according to EN60529 with cable gland having equal or higher protection degree			
<b>Positive opening operation</b>	NC contact $\ominus$			
<b>Utilization category</b>	<b>Contact type</b>	<b>Categories/Ratings</b>		
	<b>X11 - W02 - W20</b>	A600 Q600	AC15 400V 4A	DC13 24V 6A
	<b>Z11 - Z02</b>	B600 Q600		
	<b>W12 - W03</b>	A300 Q300		
<b>Minimum admissible current</b>	5V, 5mA, DC			
<b>Insulation resistance</b>	100M $\Omega$ min (DC 500V)			
<b>Contact resistance</b>	25m $\Omega$ max (Initial)			
<b>Max Switching speed</b>	250 mm/s			
<b>Max Switching frequency</b>	6.000 operations per hour			
<b>Enclosure material</b>	UL approved glass-filled polybutylene terephthalate			
<b>Operating temperature</b>	Min -25°C (-18°F) / Max 80°C (+176°F)			
<b>Mechanical life expectancy</b>	1x10 <sup>6</sup> cycles min			
<b>Electrically life expectancy</b>	150.000 cycles min			
<b>Vibration resistance</b>	IEC 68-2-6, 10-55Hz $\pm$ 1Hz, Excursion: 0.35mm, 1 octave/min			
<b>Fixing</b>	2xM4			

**FTN1R SERIES - ELECTRICAL CHARACTERISTICS**

<b>Rated thermal current (I<sub>th</sub>)</b>	10A
<b>Rated insulation voltage (U<sub>i</sub>)</b>	500V AC
<b>Rated impulse withstand voltage (U<sub>imp</sub>)</b>	2500V AC
<b>Pollution degree</b>	3
<b>Protection against electric shock</b>	Class II (Double insulation)

**FTN1R SERIES - STANDARDS & APPROVALS**

<b>Standards</b>	EN60947-5-1, UL508, EN50047
<b>Approvals</b>	cULus, EAC and CCC marked for all applicable directives



**Operating force - FTN1R SERIES**

TYPE	CONTACT BLOCK		OPERATING TRAVEL		OPERATING FORCE	TOTAL TRAVEL
			PT	PT2nd	OF	
FTN1R31	X11	1NC/1NO Slow Action	2.4 mm	3.4mm	7.5 N	6.0 mm
	W02	2NC Slow Action	2.4 mm	-	7.5 N	
	W20	2NO Slow Action	2.4 mm	-	9.5 N	
	W12	2NC/1NO Slow Action	2.3 mm	3.0mm	7.5 N	
	W03	3NC Slow Action	2.3 mm	-	7.5 N	
	Z11	1NC/1NO Snap Action	2.7 mm	-	6.8 N	
	Z02	2NC Snap Action	2.7 mm	-	6.8 N	



TYPE	CONTACT BLOCK		OPERATING TRAVEL		OPERATING FORCE	TOTAL TRAVEL
			PT	PT2nd	OF	
FTN1R34	X11	1NC/1NO Slow Action	2.4 mm	3.3 mm	7.5 N	6.0 mm
	W02	2NC Slow Action	2.4 mm	-	7.5 N	
	W20	2NO Slow Action	2.4 mm	-	9.5 N	
	W12	2NC/1NO Slow Action	2.3 mm	3.0 mm	7.5 N	
	W03	3NC Slow Action	2.3 mm	-	7.5 N	
	Z11	1NC/1NO Snap Action	2.6 mm	-	6.8 N	
	Z02	2NC Snap Action	2.6 mm	-	6.8 N	
FTN1R37	X11	1NC/1NO Slow Action	35°	50°	1.8 N	80°
	W02	2NC Slow Action	35°	-	1.8 N	
	W20	2NO Slow Action	35°	-	1.8 N	
	W12	2NC/1NO Slow Action	32°	40°	1.8 N	
	W03	3NC Slow Action	32°	-	1.8 N	
	Z11	1NC/1NO Snap Action	40°	-	1.9 N	
	Z02	2NC Snap Action	40°	-	1.9 N	
FTN1R38	X11	1NC/1NO Slow Action	35°	50°	6.5 N	80°
	W02	2NC Slow Action	35°	-	6.5 N	
	W20	2NO Slow Action	32°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	40°	-	5.3 N	
	Z02	2NC Snap Action	40°	-	5.3 N	
FTN1R39	X11	1NC/1NO Slow Action	35°	50°	6.5 N	80°
	W02	2NC Slow Action	35°	-	6.5 N	
	W20	2NO Slow Action	35°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	40°	-	5.3 N	
	Z02	2NC Snap Action	40°	-	5.3 N	
FTN1R40	X11	1NC/1NO Slow Action	35°	50°	6.5 N	80°
	W02	2NC Slow Action	35°	-	6.5 N	
	W20	2NO Slow Action	35°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	40°	-	5.3 N	
	Z02	2NC Snap Action	40°	-	5.3 N	
FTN1R40R	X11	1NC/1NO Slow Action	35°	50°	6.5 N	80°
	W02	2NC Slow Action	35°	-	6.5 N	
	W20	2NO Slow Action	35°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	40°	-	5.3 N	
	Z02	2NC Snap Action	40°	-	5.3 N	
FTN1R41	X11	1NC/1NO Slow Action	35°	50°	6.5 N	80°
	W02	2NC Slow Action	35°	-	6.5 N	
	W20	2NO Slow Action	35°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	40°	-	5.3 N	
	Z02	2NC Snap Action	40°	-	5.3 N	
FTN1R44	X11	1NC/1NO Slow Action	35°	50°	6.5 N	80°
	W02	2NC Slow Action	35°	-	6.5 N	
	W20	2NO Slow Action	35°	-	6.5 N	
	W12	2NC/1NO Slow Action	32°	40°	6.5 N	
	W03	3NC Slow Action	32°	-	6.5 N	
	Z11	1NC/1NO Snap Action	40°	-	5.3 N	
	Z02	2NC Snap Action	40°	-	5.3 N	



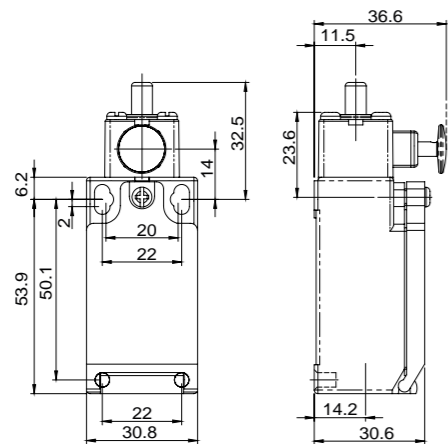
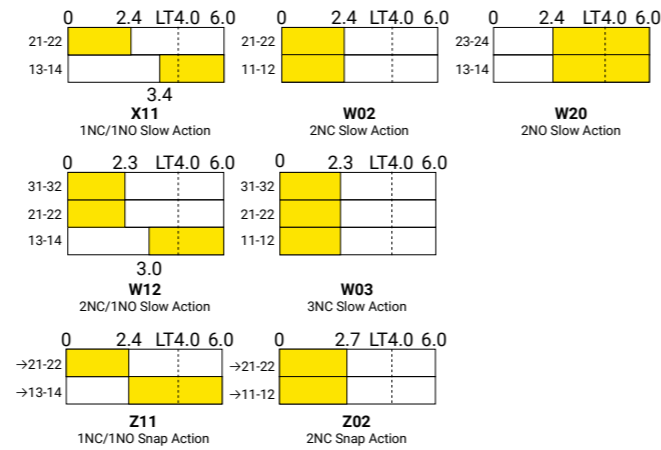


**FTN1R31: Push plunger type**

FTN	1R	31	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit
	1 - With Reset Function	31 - Push plunger type	<b>X11</b> -1NC/1NO Slow Action <b>W02</b> -2NC Slow Action <b>W20</b> -2NO Slow Action <b>W12</b> -2NC/1NO Slow Action <b>W03</b> -3NC Slow Action <b>Z11</b> -1NC/1NO Snap Action <b>Z02</b> -2NC Snap Action	Standard: <b>BLANK</b> - M16 On request: <b>M</b> - M20 <b>N</b> - 1/2NPT <b>G1</b> - PG11 <b>G3</b> - PG13.5 <b>C</b> - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**

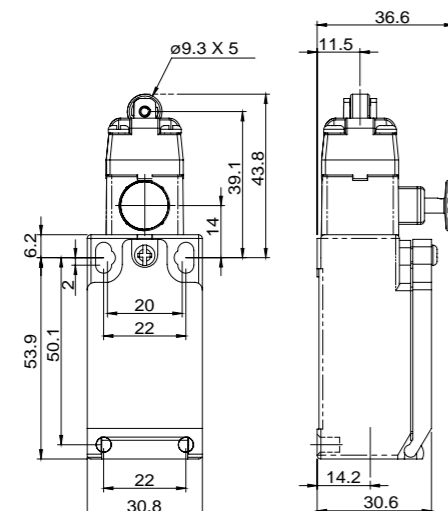
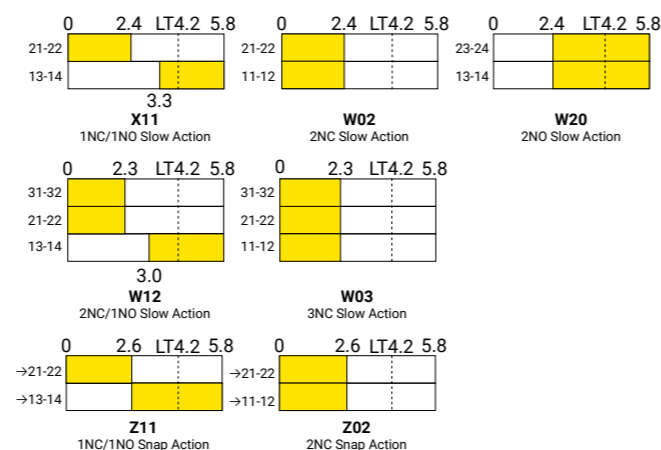


**FTN1R34: Roller plunger type**

FTN	1R	34	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit
	1 - With Reset Function	34 - Roller plunger type	<b>X11</b> -1NC/1NO Slow Action <b>W02</b> -2NC Slow Action <b>W20</b> -2NO Slow Action <b>W12</b> -2NC/1NO Slow Action <b>W03</b> -3NC Slow Action <b>Z11</b> -1NC/1NO Snap Action <b>Z02</b> -2NC Snap Action	Standard: <b>BLANK</b> - M16 On request: <b>M</b> - M20 <b>N</b> - 1/2NPT <b>G1</b> - PG11 <b>G3</b> - PG13.5 <b>C</b> - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**

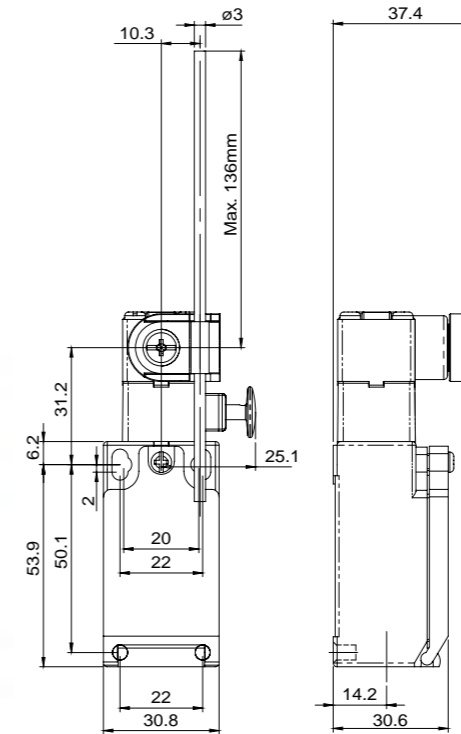
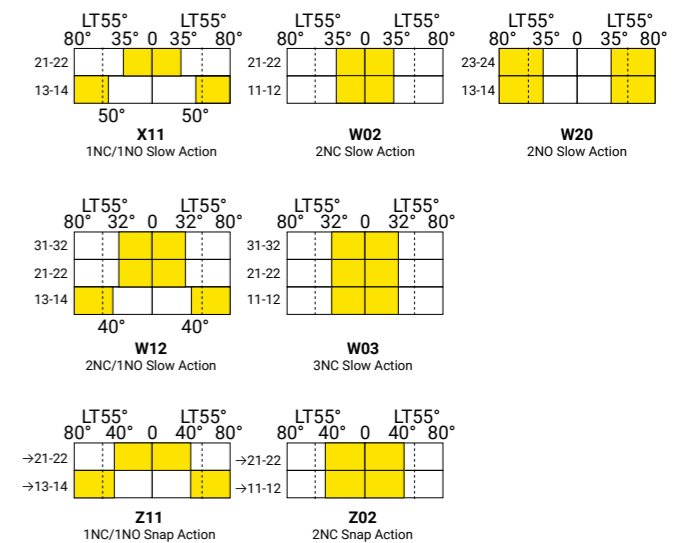


**FTN1R37: Rod lever type**

FTN	1R	37	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit
	1 - With Reset Function	37 - Rod lever type	<b>X11</b> -1NC/1NO Slow Action <b>W02</b> -2NC Slow Action <b>W20</b> -2NO Slow Action <b>W12</b> -2NC/1NO Slow Action <b>W03</b> -3NC Slow Action <b>Z11</b> -1NC/1NO Snap Action <b>Z02</b> -2NC Snap Action	Standard: <b>BLANK</b> - M16 On request: <b>M</b> - M20 <b>N</b> - 1/2NPT <b>G1</b> - PG11 <b>G3</b> - PG13.5 <b>C</b> - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**

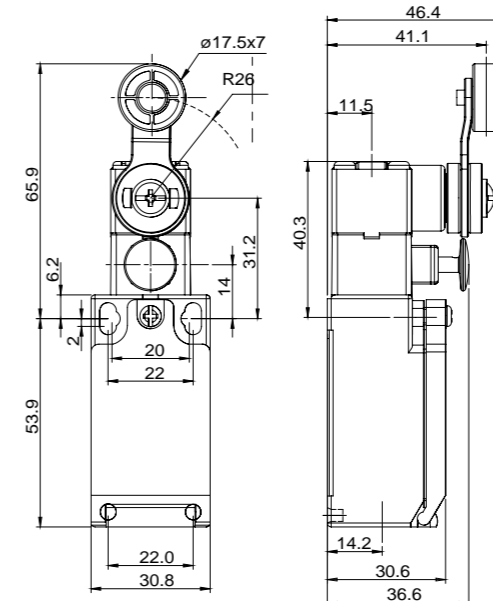
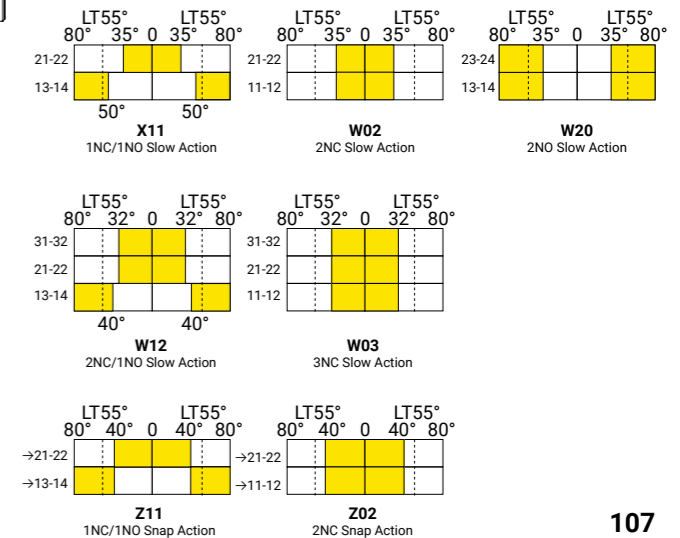


**FTN1R38: Roller arm type**

FTN	1R	38	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit
	1 - With Reset Function	38 - Roller arm type	<b>X11</b> -1NC/1NO Slow Action <b>W02</b> -2NC Slow Action <b>W20</b> -2NO Slow Action <b>W12</b> -2NC/1NO Slow Action <b>W03</b> -3NC Slow Action <b>Z11</b> -1NC/1NO Snap Action <b>Z02</b> -2NC Snap Action	Standard: <b>BLANK</b> - M16 On request: <b>M</b> - M20 <b>N</b> - 1/2NPT <b>G1</b> - PG11 <b>G3</b> - PG13.5 <b>C</b> - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**





**FTN1R39: Adjustable roller arm type (Long Arm)**

FTN	1R	39	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit

1 - With Reset Function

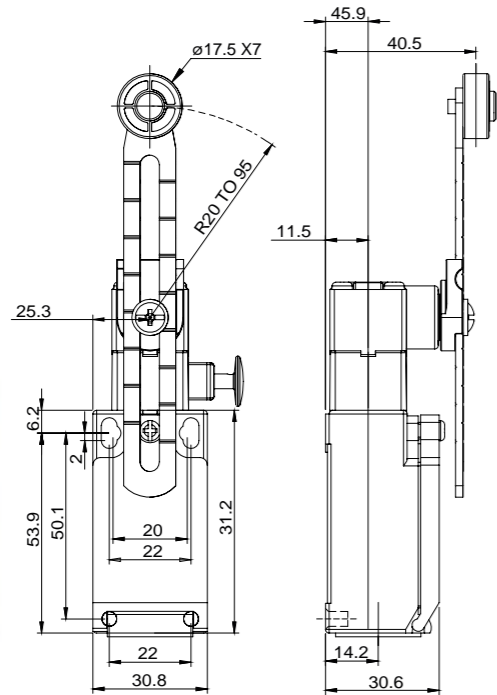
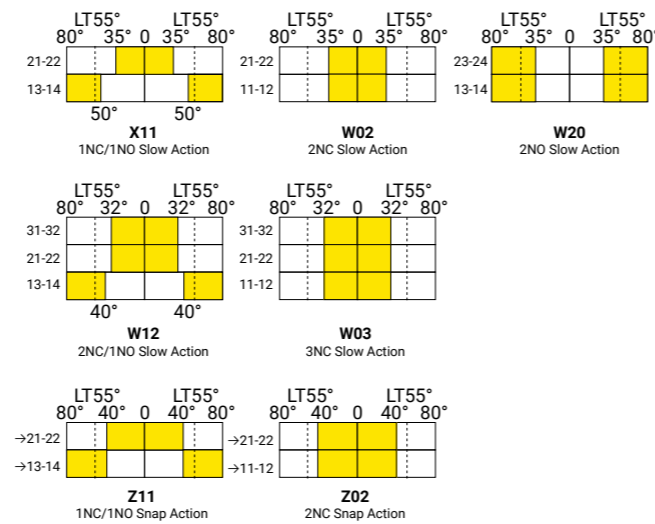
39 - Adjustable roller arm type (Long Arm)

X11 - 1NC/1NO Slow Action  
W02 - 2NC Slow Action  
W20 - 2NO Slow Action  
W12 - 2NC/1NO Slow Action  
W03 - 3NC Slow Action  
Z11 - 1NC/1NO Snap Action  
Z02 - 2NC Snap Action

Standard: **BLANK** - M16  
On request:  
**M** - M20  
**N** - 1/2NPT  
**G1** - PG11  
**G3** - PG13.5  
**C** - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



**FTN1R40R: Two ways adjustable roller arm type**

FTN	1R	40R	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit

1 - With Reset Function

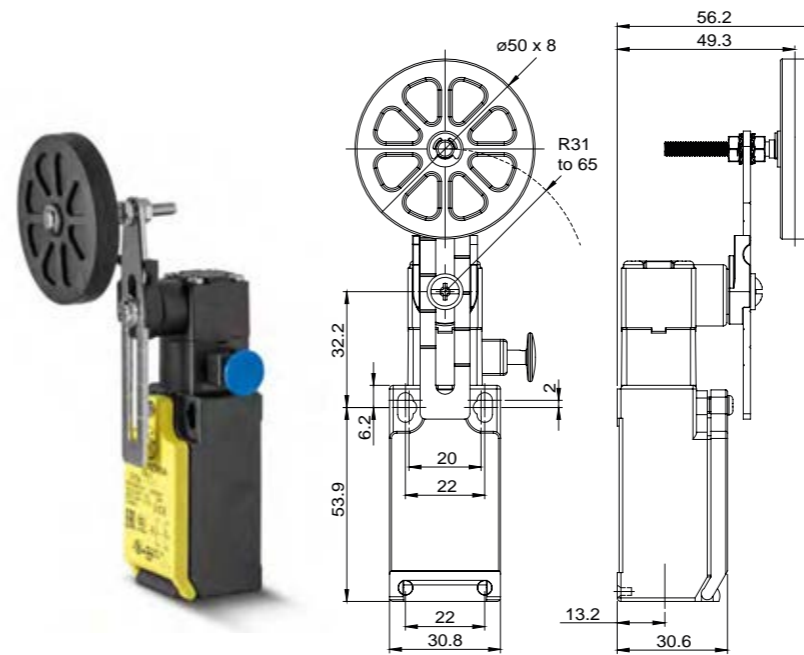
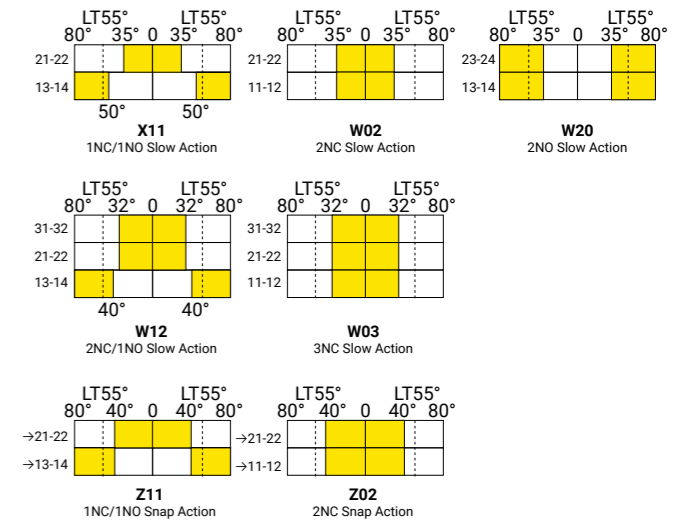
40R - Two ways adjustable roller arm type

X11 - 1NC/1NO Slow Action  
W02 - 2NC Slow Action  
W20 - 2NO Slow Action  
W12 - 2NC/1NO Slow Action  
W03 - 3NC Slow Action  
Z11 - 1NC/1NO Snap Action  
Z02 - 2NC Snap Action

Standard: **BLANK** - M16  
On request:  
**M** - M20  
**N** - 1/2NPT  
**G1** - PG11  
**G3** - PG13.5  
**C** - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



**FTN1R40: Adjustable roller arm type (Big Arm)**

FTN	1R	40	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit

1 - With Reset Function

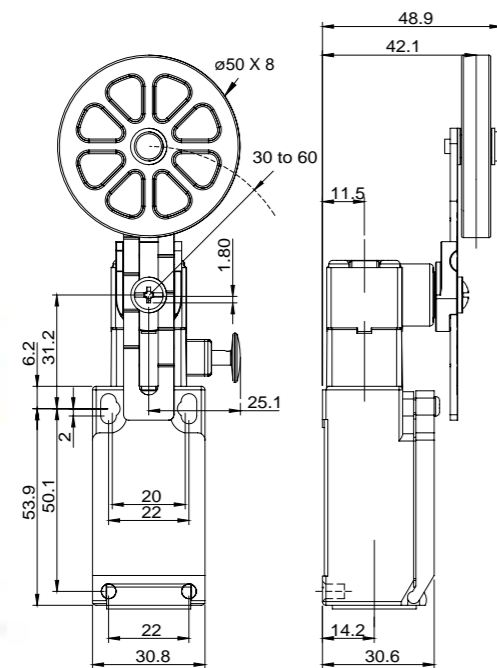
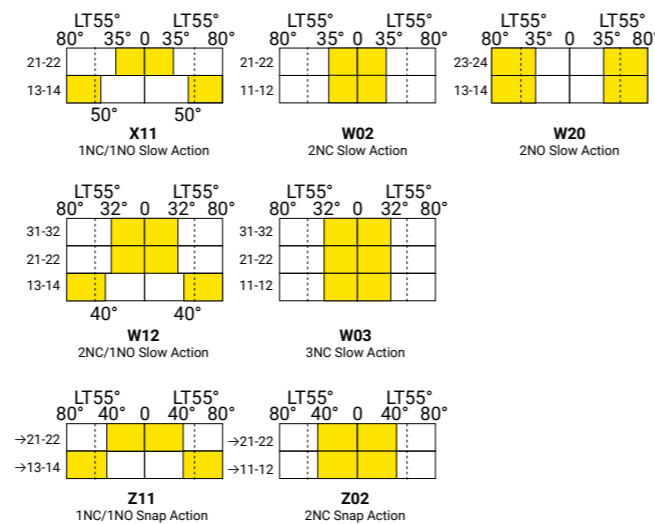
40 - Adjustable roller arm type (Big Arm)

X11 - 1NC/1NO Slow Action  
W02 - 2NC Slow Action  
W20 - 2NO Slow Action  
W12 - 2NC/1NO Slow Action  
W03 - 3NC Slow Action  
Z11 - 1NC/1NO Snap Action  
Z02 - 2NC Snap Action

Standard: **BLANK** - M16  
On request:  
**M** - M20  
**N** - 1/2NPT  
**G1** - PG11  
**G3** - PG13.5  
**C** - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



**FTN1R41: Big roller arm type**

FTN	1R	41	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit

1 - With Reset Function

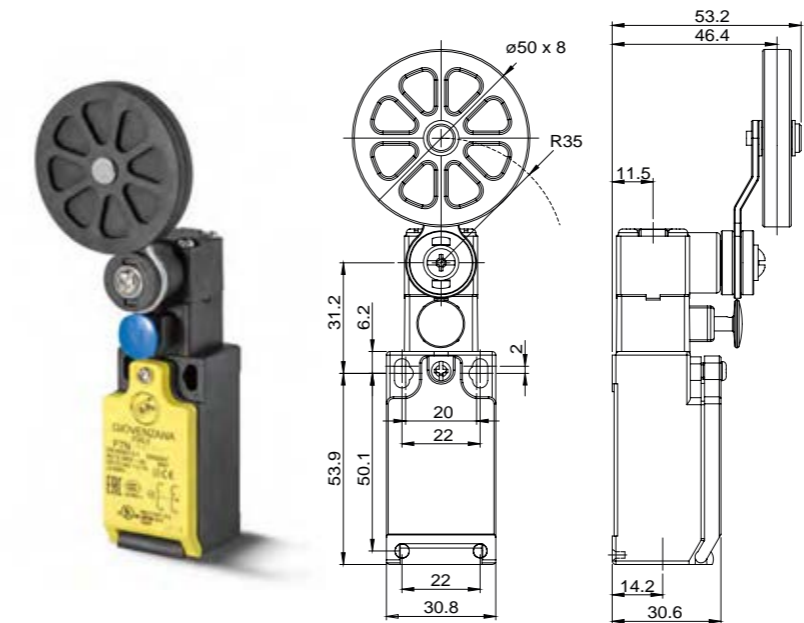
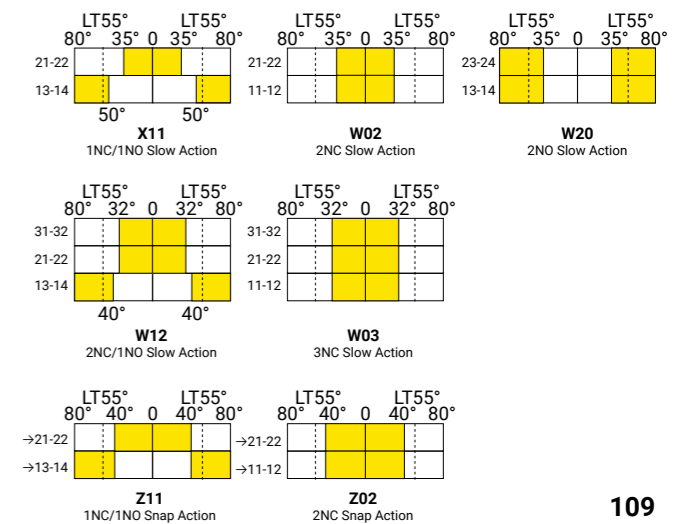
41 - Big roller arm type

X11 - 1NC/1NO Slow Action  
W02 - 2NC Slow Action  
W20 - 2NO Slow Action  
W12 - 2NC/1NO Slow Action  
W03 - 3NC Slow Action  
Z11 - 1NC/1NO Snap Action  
Z02 - 2NC Snap Action

Standard: **BLANK** - M16  
On request:  
**M** - M20  
**N** - 1/2NPT  
**G1** - PG11  
**G3** - PG13.5  
**C** - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



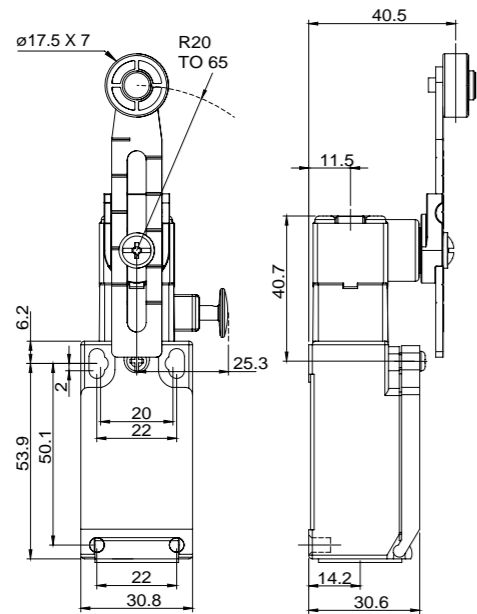
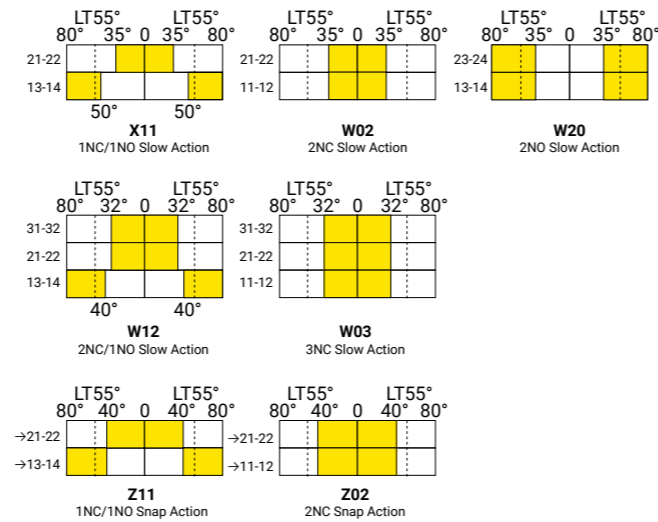


**FTN1R44: Adjustable roller arm type (Standard Arm)**

FTN	1R	44	X11	-
Series	Function	Head and actuators	Contact Types	Thread dimension of lead exit
	1 - With Reset Function	44 - Adjustable roller arm type (Standard Arm)	<b>X11</b> - 1NC/1NO Slow Action <b>W02</b> - 2NC Slow Action <b>W20</b> - 2NO Slow Action <b>W12</b> - 2NC/1NO Slow Action <b>W03</b> - 3NC Slow Action <b>Z11</b> - 1NC/1NO Snap Action <b>Z02</b> - 2NC Snap Action	Standard: <b>BLANK</b> - M16 On request: <b>M</b> - M20 <b>N</b> - 1/2NPT <b>G1</b> - PG11 <b>G3</b> - PG13.5 <b>C</b> - Connector

Slow Action and Snap Action: **Type "Zb"**

**OPERATION DIAGRAMS**



**ASTRA SERIES - GENERAL CHARACTERISTICS**

<b>Air temperature</b> near the device	During operation: -25 ... +70 For storage: -30 ... +80
<b>Mounting positions</b>	All positions are authorised
<b>Protection against electrical shocks</b> according to IEC 61140	Class II
<b>Degree of protection</b> according to IEC 60529 and EN 60529	IP65

**ASTRA SERIES - ELECTRICAL CHARACTERISTICS**

<b>Rated insulation voltage (Ui)</b> - according to IEC 60947-1 and EN 60947-1 - according to UL 508 and CSA C22-2 n°14	500V (degree of pollution 3) A600, Q600	
<b>Rated impulse withstand voltage (Uimp)</b> according to IEC 60947-1 and EN 60947-1	6kV	
<b>Conventional free air thermal current (Ith)</b> according to IEC 60947-1 $\theta < 40^\circ\text{C}$	10A	
<b>Short-circuit protection</b> Ue < 500V AC - gG (gl)	10A	
<b>Rated operational current</b> Ie / AC-15 (according to IEC 60947-5-1)	24V-50/60Hz 120V-50/60Hz 400V-50/60Hz	10A 6A 4A
Ie / DC-13 (according to IEC 60947-5-1)	24V DC 125V DC 250V DC	6A 0.55A 0.4A
<b>Switching frequency</b>	3600 cycles/h	
<b>Load factor</b>	0.5	
<b>Resistance between contacts</b>	25m $\Omega$	
<b>Connecting terminals</b>	M3.5 (+, -) pozidriv 2 screws with cable clamp	
<b>Terminal for protective conductor</b>	-	
<b>Connecting capacity</b>	0.75 ... 2.5 (1 or 2 x mm <sup>2</sup> )	
<b>Terminal marking</b>	According to IEC 60947-5-1	
<b>Mechanical durability</b>	15 millions of operations T38 > 5 millions of operations T16	

**ASTRA SERIES - STANDARDS & APPROVALS**

<b>Standards</b>	IEC 60947-5-1, EN 60947-5-1
<b>Approvals</b>	cULus, CSA, IMQ marked for all applicable directives





**AFT2T16Y11: Nylon ø20 mm roller plunger**



DESCRIPTION	OPERATION DIAGRAMS
Overlapping slow action contacts <b>1NO+1NC</b> Positive opening operation according to IEC 947-5-1 IP65 Protection degree, <b>Double insulation</b>	

**AFT2T16X11: Nylon ø20 mm roller plunger**



DESCRIPTION	OPERATION DIAGRAMS
Non Overlapping slow action contacts <b>1NO+1NC</b> Positive opening operation according to IEC 947-5-1 IP65 Protection degree, <b>Double insulation</b>	

**AFT2T38Y11: Metal plunger with adjustable nylon roller plunger ø22 mm**



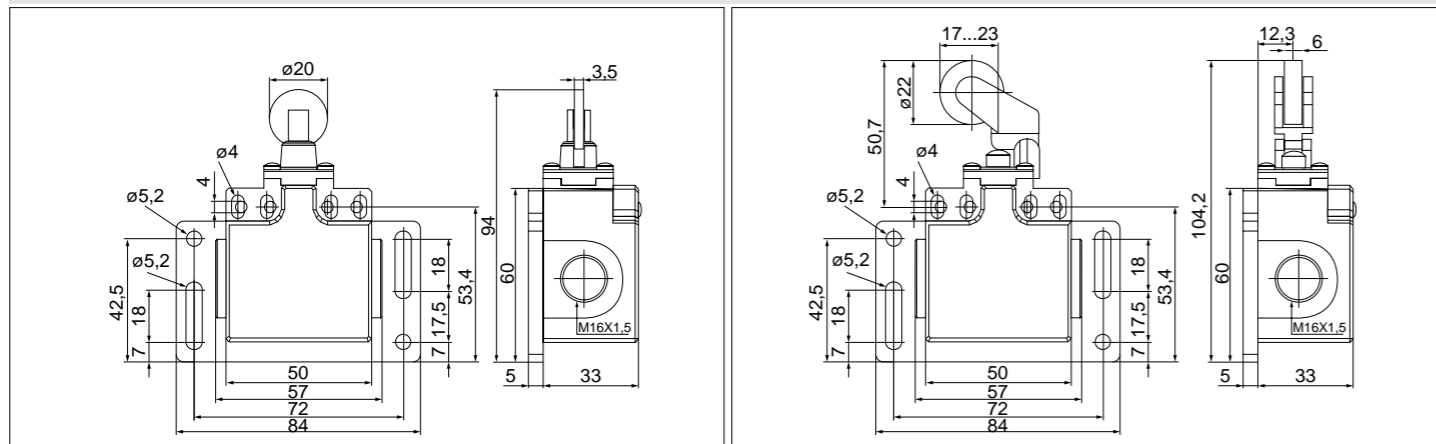
DESCRIPTION	OPERATION DIAGRAMS
Overlapping slow action contacts <b>1NO+1NC</b> Positive opening operation according to IEC 947-5-1 IP65 Protection degree, <b>Double insulation</b>	

**AFT2T38X11: Metal plunger with adjustable nylon roller plunger ø22 mm**

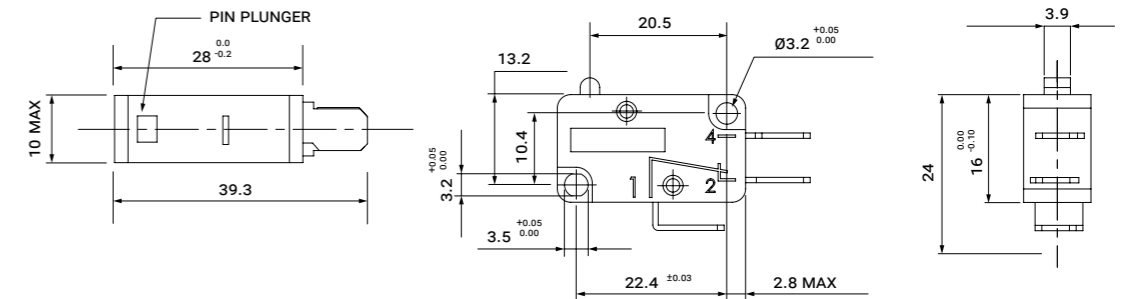


DESCRIPTION	OPERATION DIAGRAMS
Non Overlapping slow action contacts <b>1NO+1NC</b> Positive opening operation according to IEC 947-5-1 IP65 Protection degree, <b>Double insulation</b>	

**TECHNICAL DRAWING**



**MFI SERIES - Faston terminal 6.3 x 0.8 Micro Switches**



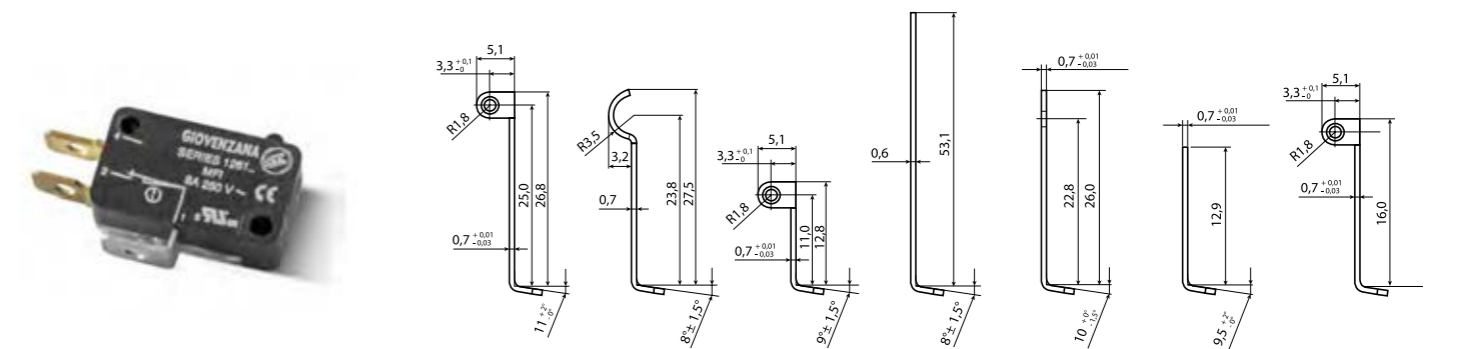
**GENERAL DATA**

Operating temperature	Min -25°C (-18°F) / Max 85°C (+185°F)
Mechanical life expectancy	1x10 <sup>6</sup> cycles min
Electrically life expectancy	5x10 <sup>5</sup> cycles min
Termination type	6.3 x 0.8 faston terminal

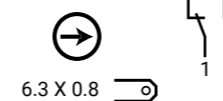
**GENERAL DATA**

Rated Thermal current (I <sub>th</sub> )	8A
Rated insulation voltage (U <sub>i</sub> )	250V
Rated impulse withstand voltage (U <sub>imp</sub> )	1500V
Rated operating current (I <sub>e</sub> )	8A - 250V resistive load, 3A - 250V inductive load
Pollution degree	2
Protection against electric shock	Class II

**LEVER TYPES**



1NC-1NO  
SNAP ACTION



	PIN PLUNGER	LONG ROLLER LEVER	SIMULATED ROLLER LEVER	ROLLER LEVER	LONG LEVER	LEVER	SHORT LEVER	ROLLER LEVER L=16 mm
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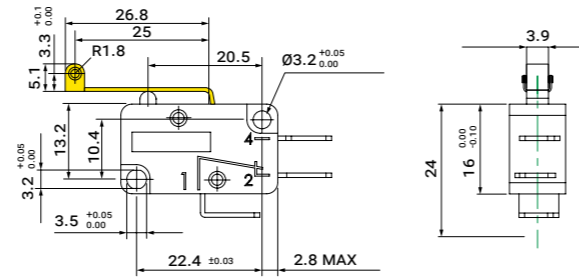
	MFI	MFI.1	MFI.2	MFI.3	MFI.4	MFI.5	MFI.6	MFI.7
Operating force - OF max N	5,1	3,2	3,2	5,1	1,3	3,2	5,1	4,5
Resetting force - RF min N	1,9	1,0	1,0	1,9	0,15	1,2	1,9	1,9
Max Pre travel - PT max mm	1,4	3,3	3,3	1,4	7,6	3,3	1,6	1,8
Min Over travel - OT min mm	0,8	0,8	0,8	0,6	2,2	0,8	0,6	0,8
Tripping position - OP mm	14,4 ± 0,5	20,3 ± 1,2	18,4 ± 1,2	20,3 ± 0,8	15,1 ± 2,6	15,1 ± 1,2	15,1 ± 0,6	21,1 ± 0,6

**MFI.1: Long roller lever**

1NC-1NO  
SNAP ACTION



6.3 X 0.8



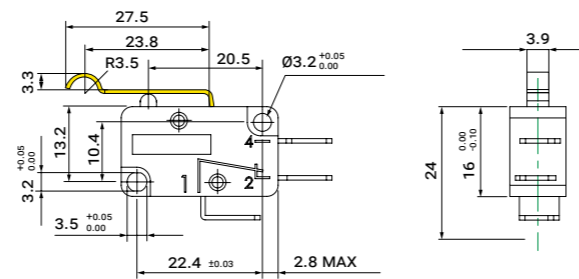
TYPE	OF max	RF min	PT max	OT min	OP ± 1 mm
MFI.1	3.2 N	1.0 N	3.3 mm	0.8 mm	20.3 ± 1.2 mm

**MFI.2: Simulated roller lever**

1NC-1NO  
SNAP ACTION



6.3 X 0.8



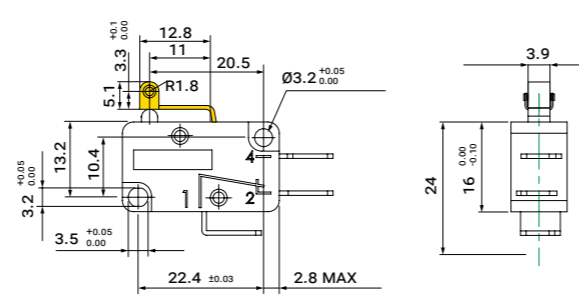
TYPE	OF max	RF min	PT max	OT min	OP ± 1 mm
MFI.2	3.2 N	1.0 N	3.3 mm	0.8 mm	18.4 ± 1.2 mm

**MFI.3: Roller lever**

1NC-1NO  
SNAP ACTION



6.3 X 0.8



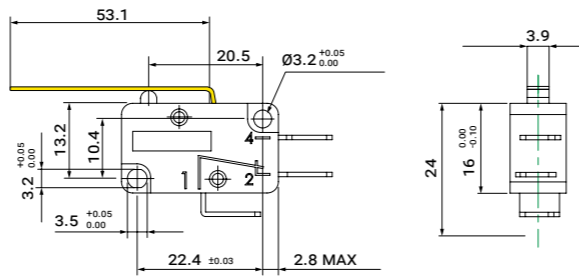
TYPE	OF max	RF min	PT max	OT min	OP ± 1 mm
MFI.3	5.1 N	1.9 N	1.4 mm	0.6 mm	20.3 ± 0.8 mm

**MFI.4: Long lever**

1NC-1NO  
SNAP ACTION



6.3 X 0.8



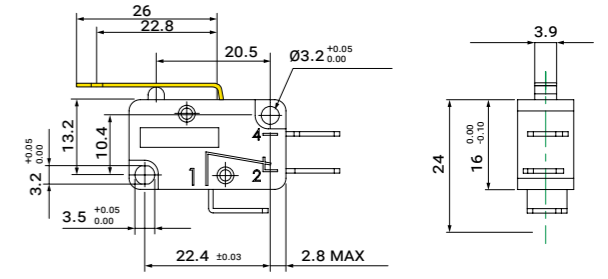
TYPE	OF max	RF min	PT max	OT min	OP ± 1 mm
MFI.4	1.3 N	0.15 N	7.6 mm	2.2 mm	15.1 ± 2.6 mm

**MFI.5: Lever**

1NC-1NO  
SNAP ACTION



6.3 X 0.8



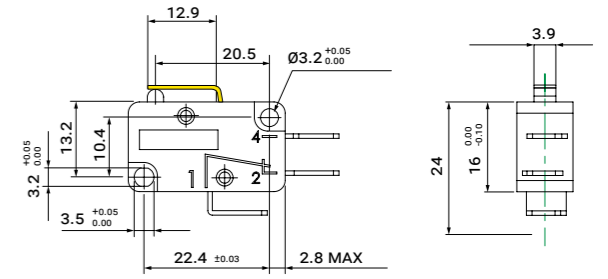
TYPE	OF max	RF min	PT max	OT min	OP ± 1 mm
MFI.5	3.2 N	1.2 N	3.3 mm	0.8 mm	15.1 ± 1.2 mm

**MFI.6: Short Lever**

1NC-1NO  
SNAP ACTION



6.3 X 0.8



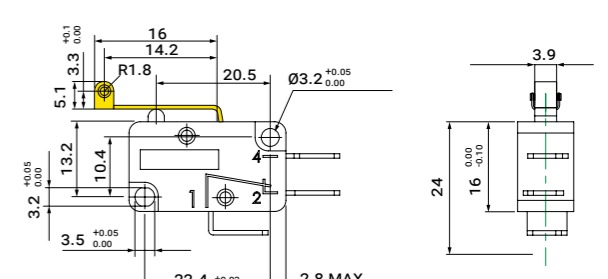
TYPE	OF max	RF min	PT max	OT min	OP ± 1 mm
MFI.6	5.1 N	1.9 N	1.6 mm	0.6 mm	15.1 ± 0.6 mm

**MFI.7: Roller lever L=16mm**

1NC-1NO  
SNAP ACTION



6.3 X 0.8



TYPE	OF max	RF min	PT max	OT min	OP ± 1 mm
MFI.7	4.5 N	1.9 N	1.8 mm	0.8 mm	21.1 ± 0.6 mm

**MFI.T - MICRO SWITCH WITH TOWER ACTUATOR AND THREADED FLANGE**

**GENERAL DATA**

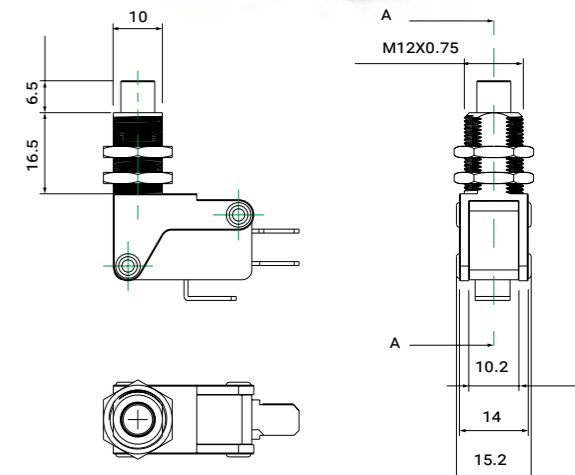
Operating temperature	Min -25°C (-18°F) / Max 85°C (+185°F)
Mechanical life expectancy	1x10 <sup>6</sup> cycles min
Electrically life expectancy	5x10 <sup>5</sup> cycles min
Termination type	Tower actuator - Faston Terminals

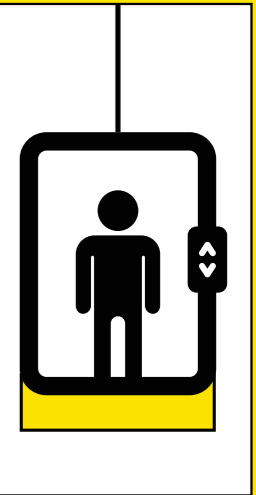
**ELECTRICAL DATA**

Rated Thermal current (I <sub>th</sub> )	8A
Rated insulation voltage (U <sub>i</sub> )	250V
Rated impulse withstand voltage (U <sub>imp</sub> )	1500V
Rated operating current (I <sub>e</sub> )	8A - 250V resistive load, 3A 250V inductive load
Pollution degree	2
Protection against electric shock	Class II

**APPLICATIONS**

Accessibility solutions for wheelchairs users, lift platforms and stair lift.





**UNDER CAR DEVICES**

DESCRIPTION	SCHEME	CODE	
<b>PULSED BUZZER</b> 24V		<b>GM029</b>	
<b>FLASHING YELLOW LED LIGHT PCB</b> NO 5 LUX			



IP65

**TECHNICAL DRAWING - GM029**

**BOARD POWER SUPPLY**

- 24V - Yellow
- GND - Black

Operating voltage VDC	24
Max current consumption [mA]	100
Max power [W]	2,4
Operating temperature	-25°C ÷ +70°C
Dimensions	75x75x66,4mm
Light color	Yellow
Light diffusion angle	120°
Sound pressure Min. [dBA/1m]	75
Flame retardant	V0 UL94
IP rating	IP65
Printed circuits certification	UL

Equipped with M16x1,5 cable gland.

Arranged for nr. 1 cable gland.

DESCRIPTION	SCHEME	CODE	
<b>CONTINUOUS BUZZER</b> 12/24V		<b>GMS131</b>	
<b>FLASHING YELLOW LED LIGHT PCB</b> NO 5 LUX			



IP65

**TECHNICAL DRAWING - GMS131**

**BOARD POWER SUPPLY**

- 12V - Red
- 24V - Yellow
- GND - Black

Use 12V or 24V only  
NOT TOGETHER!

**BUZZER POWER SUPPLY**

- 12÷24V - Red
- GND - Black

Operating voltage VDC	12	24
Max current consumption [mA]	100	100
Max power [W]	1,2	2,4
Operating temperature	-25°C ÷ +70°C	
Dimensions	75x75x66,4mm	
Light color	Yellow	
Light diffusion angle	120°	
Sound pressure Min. [dBA/1m]	75	
Flame retardant	V0 UL94	
IP rating	IP65	
Printed circuits certification	UL	

Equipped with M16x1,5 cable gland.

Arranged for nr. 1 cable gland.

DESCRIPTION	SCHEME	CODE	
<b>CONTINUOUS BUZZER</b> 12/24V		<b>GMS056</b>	
<b>FIXED YELLOW LED LIGHT PCB</b> NO 5 LUX			



IP65

**TECHNICAL DRAWING - GMS056**

**BOARD POWER SUPPLY**

- 12V - Red
- 24V - Yellow
- GND - Black

Use 12V or 24V only  
NOT TOGETHER!

**BUZZER POWER SUPPLY**

- 12÷24V - Red
- GND - Black

Operating voltage VDC	12	24
Max current consumption [mA]	100	100
Max power [W]	1,2	2,4
Operating temperature	-25°C ÷ +70°C	
Dimensions	75x75x66,4mm	
Light color	Yellow	
Light diffusion angle	120°	
Sound pressure Min. [dBA/1m]	75	
Flame retardant	V0 UL94	
IP rating	IP65	
Printed circuits certification	UL	

Equipped with M16x1,5 cable gland.

Arranged for nr. 1 cable gland.



DESCRIPTION	SCHEME	CONTACTS	CODE	IP65
<b>ALARM Mushroom Button</b> ø40, flush, momentary, yellow colour		1NO	<b>GMS057</b>	
<b>CONTINUOUS BUZZER</b> 12/24V				
<b>FIXED YELLOW LED LIGHT PCB</b> NO 5 LUX				



**TECHNICAL DRAWING - GMS057**

**BOARD POWER SUPPLY**

- 12V - Red
- 24V - Yellow
- GND - Black

**BUZZER POWER SUPPLY**

- 12÷24V - Red
- GND - Black

Operating voltage VDC	12	24
Max current consumption [mA]	100	100
Max power [W]	1,2	2,4
Operating temperature	-25°C ÷ +70°C	
Dimensions	75x75x77mm	
Light color	Yellow	
Light diffusion angle	120°	
Sound pressure Min. [dBA/1m]	75	
Flame retardant	V0 UL94	
IP rating	IP65	
Printed circuits certification	UL	
Alarm button contact	NO	

Equipped with M16x1,5 cable gland.  
Arranged for nr. 1 cable gland.

Use 12V or 24V only  
NOT TOGETHER!

DESCRIPTION	SCHEME	CONTACTS	CODE	IP65
<b>ALARM Mushroom Button</b> ø40, flush, momentary, yellow colour		1NO	<b>GMS167</b>	
<b>CONTINUOUS BUZZER</b> 12/24V				
<b>FLASHING YELLOW LED LIGHT PCB</b> NO 5 LUX				



**TECHNICAL DRAWING - GMS167**

**BOARD POWER SUPPLY**

- 12V - Red
- 24V - Yellow
- GND - Black

**BUZZER POWER SUPPLY**

- 12÷24V - Red
- GND - Black

Operating voltage VDC	12	24
Max current consumption [mA]	100	100
Max power [W]	1,2	2,4
Operating temperature	-25°C ÷ +70°C	
Dimensions	75x75x77mm	
Light color	Yellow	
Light diffusion angle	120°	
Sound pressure Min. [dBA/1m]	75	
Flame retardant	V0 UL94	
IP rating	IP65	
Printed circuits certification	UL	
Alarm button contact	NO	

Equipped with M16x1,5 cable gland.  
Arranged for nr. 1 cable gland.

Use 12V or 24V only  
NOT TOGETHER!

DESCRIPTION	SCHEME	CONTACTS	CODE	IP65
<b>ALARM Mushroom Button</b> ø40, flush, momentary, yellow colour		1NO	<b>GMS168</b>	
<b>PULSED BUZZER</b> 12/24V				
<b>FLASHING YELLOW LED LIGHT PCB</b> NO 5 LUX				



**TECHNICAL DRAWING - GMS168**

**BOARD POWER SUPPLY**

- 12V - Red
- 24V - Yellow
- GND - Black

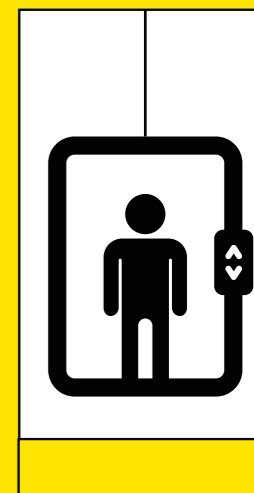
Operating voltage VDC	12	24
Max current consumption [mA]	100	100
Max power [W]	1,2	2,4
Operating temperature	-25°C ÷ +70°C	
Dimensions	75x75x77mm	
Light color	Yellow	
Light diffusion angle	120°	
Sound pressure Min. [dBA/1m]	75	
Flame retardant	V0 UL94	
IP rating	IP65	
Printed circuits certification	UL	
Alarm button contact	NO	

Equipped with M16x1,5 cable gland.  
Arranged for nr. 1 cable gland.

Use 12V or 24V only  
NOT TOGETHER!



**PIT BOTTOM CONTROLS**



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>ALARM Mushroom Button</b> ø40, flush, momentary, yellow colour		1NO	<b>GM01FN3</b>



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>ALARM Button</b> ø30, flush, momentary, yellow colour		1NC	<b>GM01RN3A</b>



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>ALARM Button</b> ø30, flush, momentary, yellow colour		1NO	<b>GM01RN3A.1A</b>



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Cam Switch 1-0-2 + Black knob</b> ø35 45° switching Spring return to the center		1NO + 1NO	<b>GM092</b>



TECHNICAL DRAWING - GM01FN3	GM01RN3A / GM01RN3A.1.A	GM092

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull		1NC + 1NO	<b>GM01P4NP</b>



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		1NC + 1NO	<b>GM01P4SP</b>



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 twist to release		1NC	<b>GM01R4NP</b>



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 twist to release		1NC	<b>GM01R4N</b>



GM01P4NP	GM01P4SP	GM01R4NP	GM01R4N

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Cam Switch 0-1 + Red knob <math>\varnothing 35</math></b> 90° switching		1NO	<b>GM353</b>

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Cam Switch 0-1 + Red knob <math>\varnothing 35</math></b> 90° switching		2NO	<b>GM355</b>

IP65



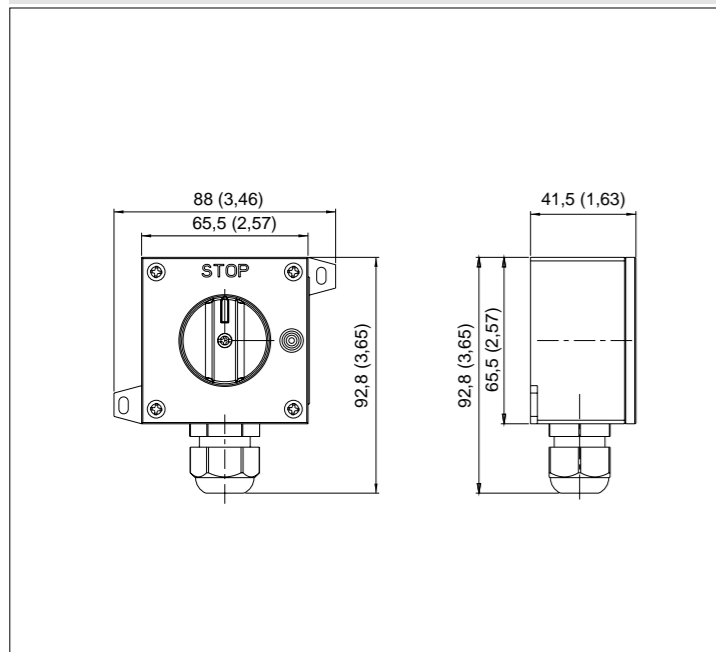
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>With handle locked in stop position</b> 90° switching		1NO	<b>GM354</b>

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>With handle locked in stop position</b> 90° switching		2NO	<b>GM356</b>

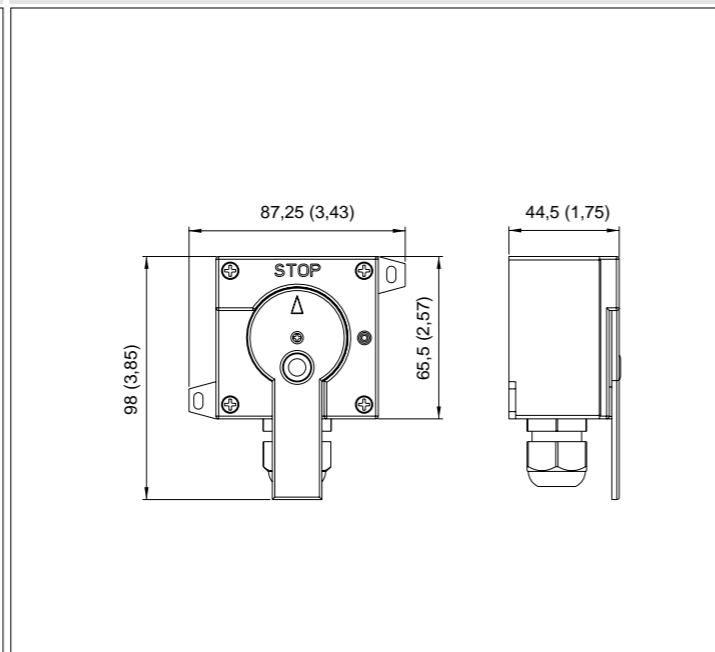
IP65



TECHNICAL DRAWING - GM353 / GM355



TECHNICAL DRAWING - GM354 / GM356



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> $\varnothing 40$ push-pull with vision		1NC	
Schuko socket outlet 16A			<b>GM406/EU</b>
Cenelec socket outlet			<b>GM406/FR</b>
USA socket outlet			<b>GM406/US</b>
Swiss socket outlet			<b>GM406/SW</b>
UK standard socket outlet			<b>GM406/UK</b>
Australia & China standard socket outlet			<b>GM406/CH</b>

IP54

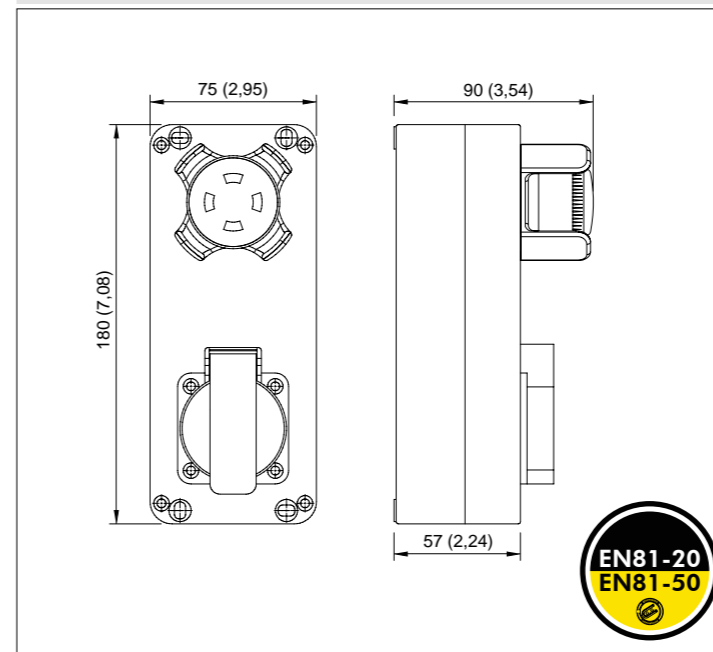


DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> $\varnothing 40$ push-pull with vision		1NC	
<b>ALARM Button</b> $\varnothing 30$ , flush, momentary, yellow colour		1NC	
Schuko socket outlet 16A			<b>GM401/EU</b>
Cenelec socket outlet			<b>GM401/FR</b>
USA socket outlet			<b>GM401/US</b>
Swiss socket outlet			<b>GM401/SW</b>
UK standard socket outlet			<b>GM401/UK</b>
Australia & China standard socket outlet			<b>GM401/CH</b>

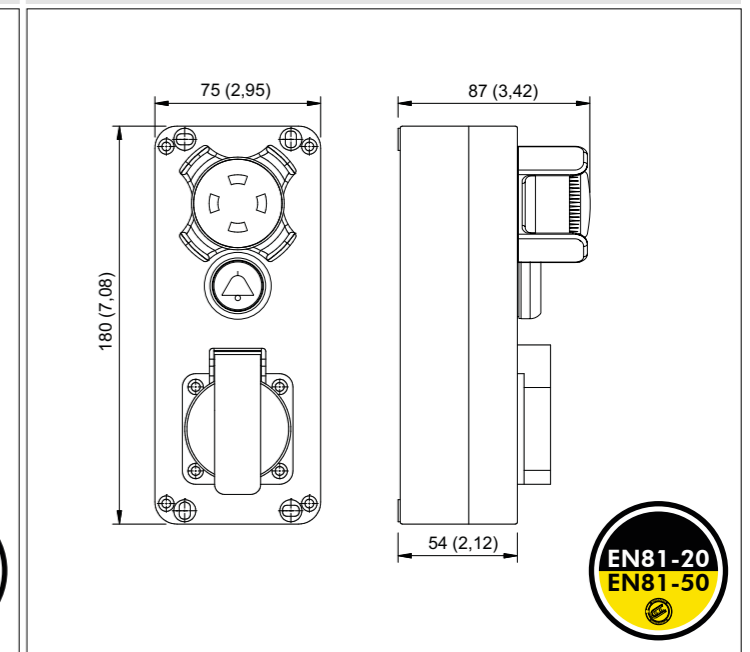
IP54



TECHNICAL DRAWING - GM406/..



TECHNICAL DRAWING - GM401/..





DESCRIPTION	SCHEME	CONTACTS	CODE
Emergency stop EN ISO 13850 ø40 push-pull with vision		1NC	
Knob Selector 0-1 to 90° 2 positions, black + white indicator		1NO	
Schuko socket outlet 16A			<b>GM403/EU</b>
Cenelec socket outlet			<b>GM403/FR</b>
USA socket outlet			<b>GM403/US</b>
Swiss socket outlet			<b>GM403/SW</b>
UK standard socket outlet			<b>GM403/UK</b>
Australia & China standard socket outlet			<b>GM403/CH</b>

IP54



DESCRIPTION	SCHEME	CONTACTS	CODE
Emergency stop EN ISO 13850 ø40 push-pull with vision		1NC	
ALARM/LIGHT Dual Push Button flush, momentary, yellow/blue colour		2NO	
Schuko socket outlet 16A			<b>GM491/EU</b>
Cenelec socket outlet			<b>GM491/FR</b>
USA socket outlet			<b>GM491/US</b>
Swiss socket outlet			<b>GM491/SW</b>
UK standard socket outlet			<b>GM491/UK</b>
Australia & China standard socket outlet			<b>GM491/CH</b>

IP54



DESCRIPTION	SCHEME	CONTACTS	CODE
Emergency stop EN ISO 13850 ø40 push-pull with vision		1NC	
ALARM lighted push button flush, momentary, yellow colour		1NO	
Schuko socket outlet 16A			<b>GM421/EU</b>
Cenelec socket outlet			<b>GM421/FR</b>
USA socket outlet			<b>GM421/US</b>
Swiss socket outlet			<b>GM421/SW</b>
UK standard socket outlet			<b>GM421/UK</b>
Australia & China standard socket outlet			<b>GM421/CH</b>

IP54

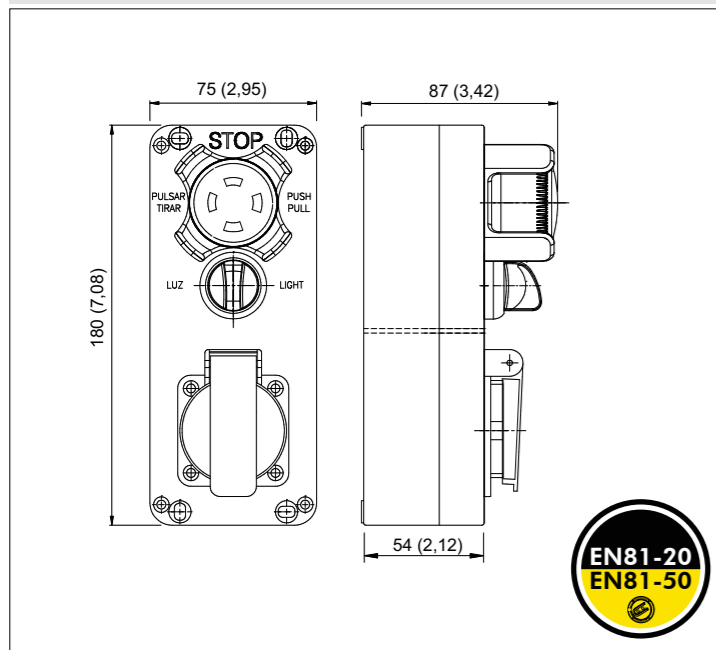


DESCRIPTION	SCHEME	CONTACTS	CODE
Emergency stop EN ISO 13850 ø40 push-pull with vision		1NC	
LIGHT push button flush, momentary, black colour		1NO	
Schuko socket outlet 16A			<b>GM250/EU</b>
Cenelec socket outlet			<b>GM250/FR</b>
USA socket outlet			<b>GM250/US</b>
Swiss socket outlet			<b>GM250/SW</b>
UK standard socket outlet			<b>GM250/UK</b>
Australia & China standard socket outlet			<b>GM250/CH</b>

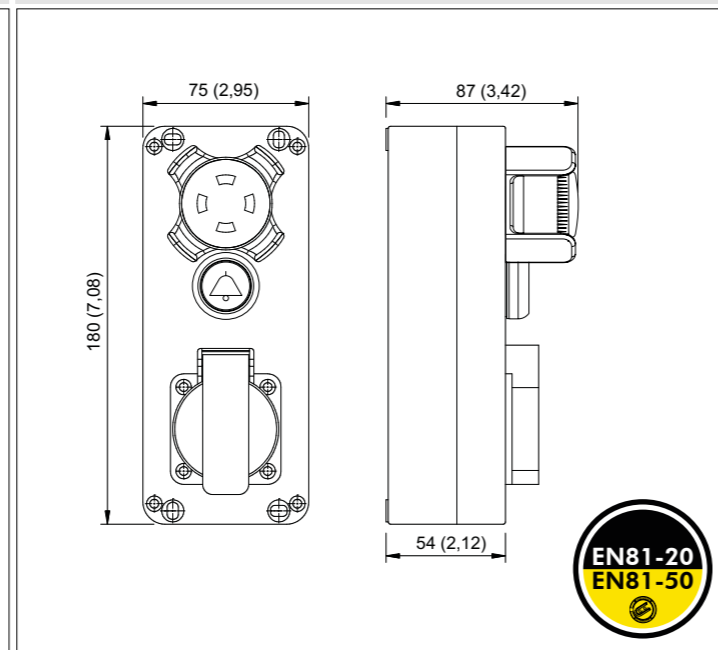
IP54



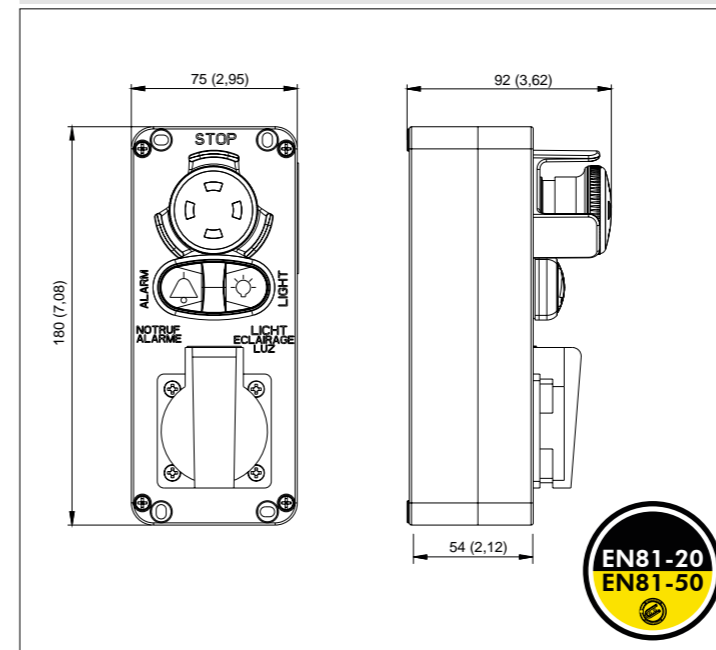
TECHNICAL DRAWING - GM403/..



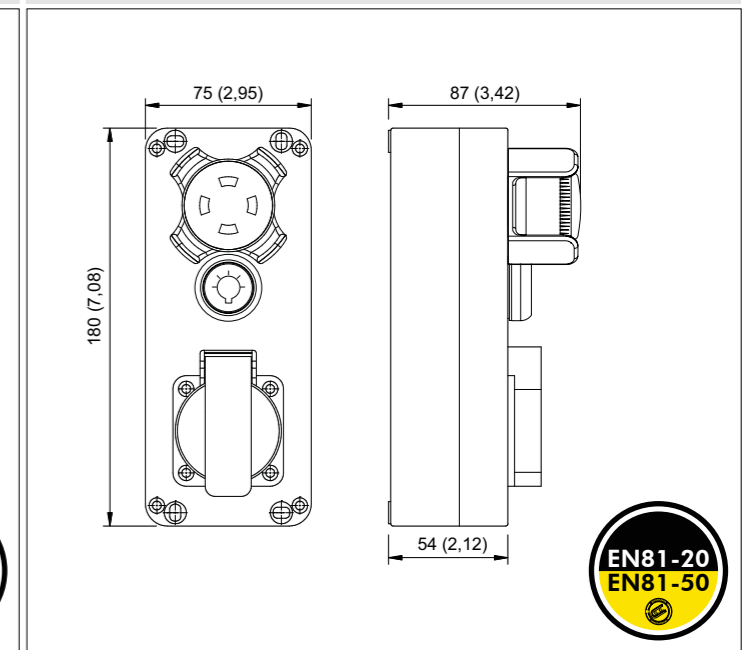
TECHNICAL DRAWING - GM421/..



TECHNICAL DRAWING - GM491/..



TECHNICAL DRAWING - GM250/..



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Cam Switch 1-2</b> 90° switching		1NO+1NC	
<b>Schuko socket outlet 16A</b>			<b>GM243/EU</b>
<b>Cenelec socket outlet</b>			<b>GM243/FR</b>
<b>USA socket outlet</b>			<b>GM243/US</b>
<b>Swiss socket outlet</b>			<b>GM243/SW</b>
<b>UK standard socket outlet</b>			<b>GM243/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM243/CH</b>

IP54



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>LIGHT push button</b> flush, momentary, black colour		1NO	
<b>Schuko socket outlet 16A</b>			<b>GM265/EU</b>
<b>Cenelec socket outlet</b>			<b>GM265/FR</b>
<b>USA socket outlet</b>			<b>GM265/US</b>
<b>Swiss socket outlet</b>			<b>GM265/SW</b>
<b>UK standard socket outlet</b>			<b>GM265/UK</b>
<b>Australia &amp; China standard socket outlet</b>			<b>GM265/CH</b>

IP54



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Red LED PILOT LIGHT</b> red colour		AC/DC 24V	<b>GM419</b>
<b>Green LED PILOT LIGHT</b> green colour		AC/DC 24V	
<b>BUZZER</b> AC/DC 12-24V			

IP65



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Green LED PILOT LIGHT</b> green colour		AC/DC 24V	<b>GM219</b>
<b>Red LED PILOT LIGHT</b> red colour		AC/DC 24V	

IP65

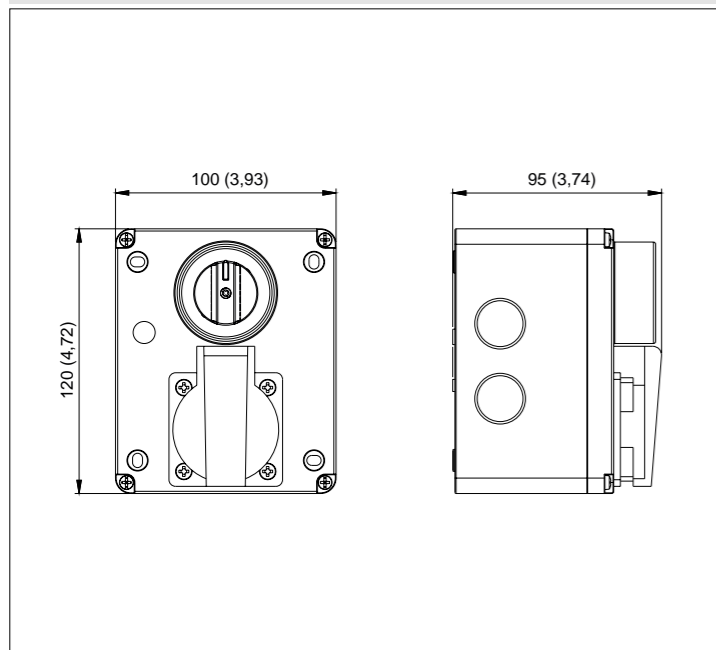


DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull		2NC	<b>GML001P</b>
<b>Transparent box GREEN LED PCB</b> 12 VDC / 24 VDC	<b>FUNCTION:</b> Fixed green light with mushroom released		
<b>Transparent box GREEN LED PCB</b> 12 VDC / 24 VDC	<b>FUNCTION:</b> Flashing red light with mushroom activated		

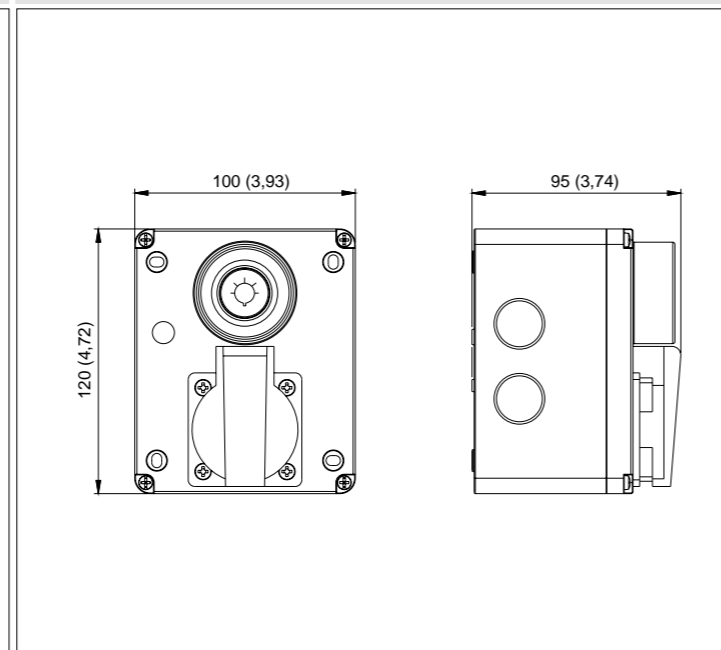
IP65



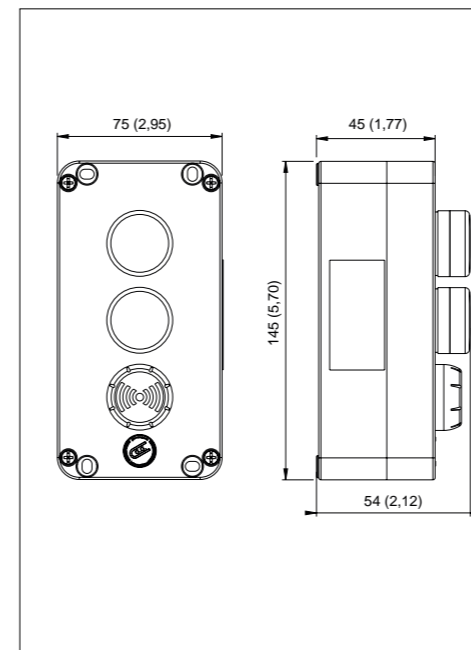
TECHNICAL DRAWING - GM243/..



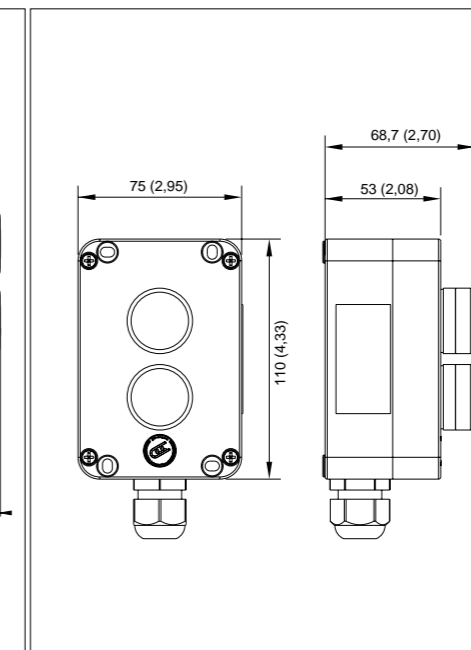
TECHNICAL DRAWING - GM265/..



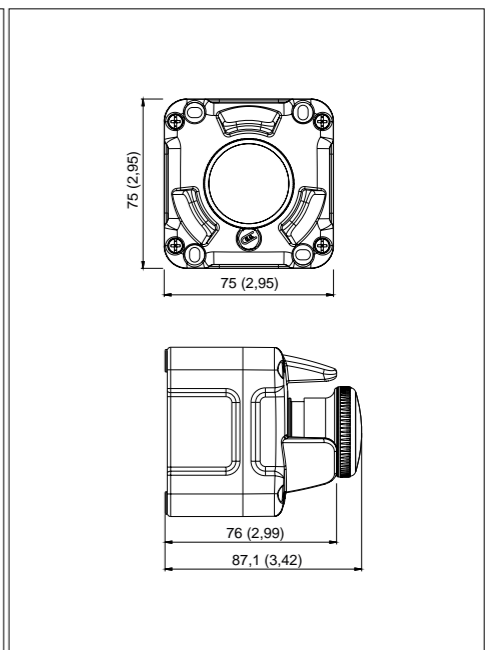
TECHNICAL DRAWING - GM419



TECHNICAL DRAWING - GM219



TECHNICAL DRAWING - GML001P



DESCRIPTION	SCHEME	CONTACTS	CODE
Emergency stop EN ISO 13850 ø40 push-pull		1NC	<b>TLP1.EPP</b>

IP65



DESCRIPTION	SCHEME	CONTACTS	CODE
Emergency stop EN ISO 13850 ø40 push-pull with vision		1NC	<b>TLP1.VPP</b>

IP65



DESCRIPTION	SCHEME	CONTACTS	CODE
Emergency stop EN ISO 13850 ø40 twist to release		1NC	<b>TLP1.ESR</b>

IP65



DESCRIPTION	SCHEME	CONTACTS	CODE
ALARM Mushroom Button ø40, flush, momentary, yellow colour		1NO	<b>TLP1B.AL</b>

IP65



DESCRIPTION	SCHEME	CONTACTS	CODE
Emergency stop EN ISO 13850 ø40 push-pull		1NC	<b>TLP5</b>
Cam Switch 1-2 Normal-Inspection 90° switching		3NO+3NC	
COMMON Push Button flush, momentary, blue colour		1NO	
UP Push Button flush, momentary, white colour		2NO	
DOWN Push Button flush, momentary, black colour		2NO	

IP65

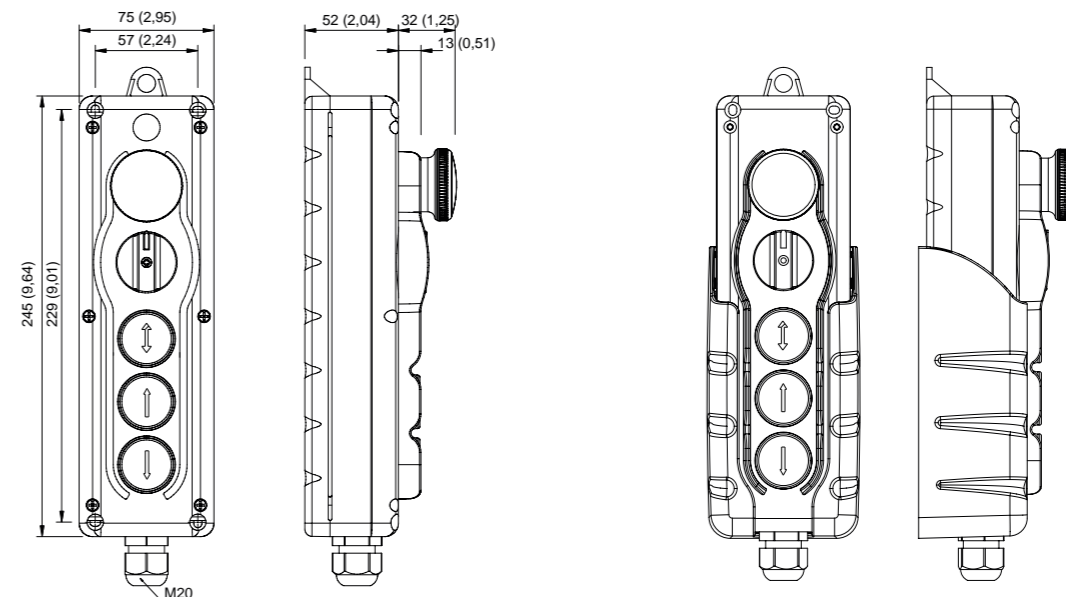


Wall Bracket case NOT INCLUDED Polypropylene material	<b>1600062</b>
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TLP1.EPP	TLP1.VPP	TLP1.ESR	TLP1B.AL

TECHNICAL DRAWING - TLP5 / TLP5 WITH WALL BRACKET CASE

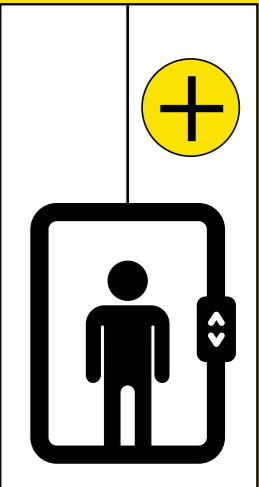




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## ACCESSORIES



**SOCKET OUTLETS IP54**



20401371    20401372    20401369    20401399    20401398    12701045

Schuko socket outlet 16A **UE**    Cenelec socket outlet **FR**    USA socket outlet **US**    Swiss socket outlet **SW**    UK standard socket outlet **UK**    Australia & China standard socket outlet **CH**



20401541

Brasil socket outlet 16A **BR**



1412.D    1412.FR    1412.BS

WITH DIN-EN 50022-35 RAIL SUPPORT

**UE**    **FR**    **UK**

**MUSHROOM GUARDS**



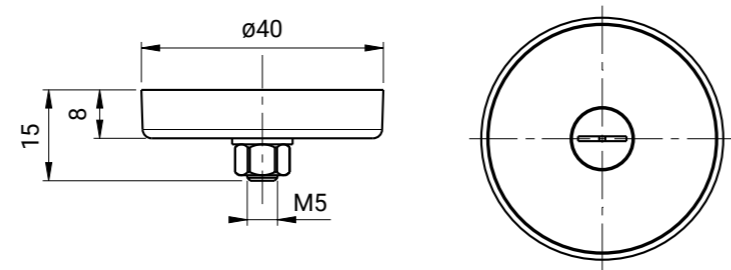
11710139    11706006    11705051    11705075

Guarded mushroom with 3 lobes ø22    Guarded mushroom with 4 lobes ø22    Protection ring ø35    Protection ring ø50

**MAGNET KIT**



**KIT-GM1**  
Ferrite magnet ø40cm for maintenance stations with box code 11711034



**CAM SWITCHES P016**



DESCRIPTION	SCHEME	CONTACTS	CODE
Cam Switch 1-2 Switching angle 90°		2NO+2NC	<b>P0160100S</b>
Cam Switch 1-2 Switching angle 90°		3NO+3NC	<b>P0160101S</b>
Cam Switch 1-0-2 Switching angle 90°		2NO+2NC	<b>P0160112S</b>
Cam Switch 1-0-2 Switching angle 90°		3NO+3NC	<b>P0160138S</b>

**GENERAL CHARACTERISTICS**

Certifications	cUL, IMQ, CCC, EAC, RINA	Protection class terminals	IP20
Comply with rules	IEC 947-3, EN 609473, UL508	Flexible conductors mm <sup>2</sup>	nr. 1 x 0,75/4 nr. 2 x 0,75/2,5
Rated insulated voltage U <sub>i</sub>	690V	Solid conductors mm <sup>2</sup>	nr. 1 x 0,75/4 nr. 2 x 0,75/2,5
Rated thermal current I <sub>th</sub> /I <sub>the</sub>	20A/16A	AWG	Flexible 10-18 Solid 10-18
Rated operating current I <sub>e</sub>	AC-21A / AC-22A	16A - 690V	General use uL 16A - 600VAC
	DC-21A (1 pole)	12A - 50V	
	DC-22A (1 pole)	10A - 30V	

**BUZZERS**



**PPESV812**

Buzzer AC/DC 12-24V  
dBA90 / ø30cm  
Continuous tone  
**IP65**

**PB24C8W54D8G**

Buzzer AC/DC 12-24V  
dBA80 / ø30cm  
Continuous tone with faston  
**IP67**

**PB24C8F67D8G**

Buzzer AC/DC 12-24V  
dBA80 / ø30cm  
Continuous tone  
**IP67**

**WALL BRACKET CASE**



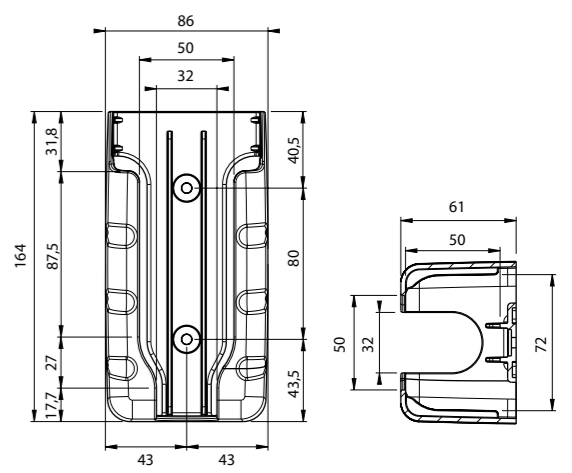
Wall Bracket case  
Polypropylene material, logo mold-printed

From 1 to 3 buttons

**16000061**

From 4 to 5 buttons

**16000062**



**CONTACT BLOCKS: SPRING LOADED TERMINALS**



DESIGNATION	FUNCTION	CODE	SIZES
1 — NC — 2	0 1,5 6 mm	<b>PCW01</b>	
3 — NO — 4	0 3,5 6 mm	<b>PCW10</b>	

**LAMPHOLDER WITH BUILT-IN LED**



DESIGNATION	POWER SUPPLY	CODE	SIZES
X1 — X2	AC/DC 12V	<b>PCW5L12</b>	
	AC/DC 24V	<b>PCW5L24</b>	
	AC/DC 48V	<b>PCW5L48</b>	
	AC/DC 110V	<b>PCW5L110</b>	
	AC 220V	<b>PCW5L220</b>	

**CONTACT BLOCKS: WELDING TERMINALS**



DESIGNATION	FUNCTION	CODE	SIZES
1 — NC — 2	0 1,5 6 mm	<b>PSC01</b>	
3 — NO — 4	0 3,5 6 mm	<b>PSC10</b>	

**LAMPHOLDER WITH BUILT-IN LED**



DESIGNATION	POWER SUPPLY	CODE	SIZES
X1 — X2	AC/DC 12V	<b>PSC5L12</b>	
	AC/DC 24V	<b>PSC5L24</b>	
	AC/DC 48V	<b>PSC5L48</b>	
	AC/DC 110V	<b>PSC5L110</b>	
	AC 220V	<b>PSC5L220</b>	

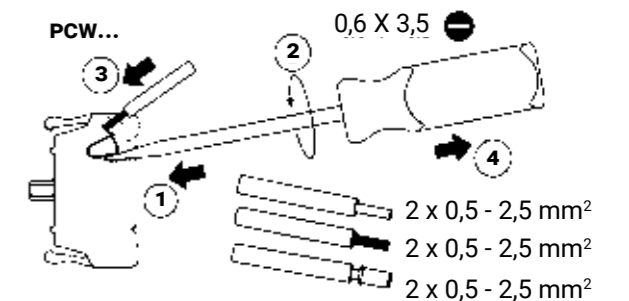
**CONTACT BLOCKS**

CHARACTERISTICS IEC/EN 60947-5-1	PCW01-PCW10 / PSC01-PSC10								
Rated insulation voltage $U_i$	V	690*							
Rated impulse withstand voltage $U_{imp}$	kV	4*							
Frequency	Hz	50/60*							
Rated Thermal Current $I_{th}$	A	16*							
Rated thermal current $I_{the}$	A	10*							
RATED OPERATING CURRENT $I_e$ :	PCW01-PCW10 / PSC01-PSC10								
AC15: alternate current	V	24	60	110	240	400	440	500	690
	A	16*	12	5	5*	4	4	4*	2*
DC13: direct current	V	24	48	60	110	250			
	A	2	2*	1*	0,4	0,4*			
Short circuit characteristics	A	1000*							
Fuse rating gG	500V	10A*							
Contact insulation resistance	mΩ	<25							
Switching mechanism	Slow break double gap contacts								
Contact Duty	NC contact with positive opening								
Minimum tripping force	4N								
Electrical life AC15/mil. cycles	mil. ciclos	1A/1,5 - 2A/0,5 - 3A/0,25							
CHARACTERISTICS UL 508	PCW01-PCW10 / PSC01-PSC10								
General use	10A-600V AC - 2,5A-125V DC								
Heavy Duty Category (HD)	A600-Q600								

**LAMPHOLDER**

CHARACTERISTICS IEC/EN 60947-5-1	LED
PCW.L.-PSC.L.	
Rated insulation voltage $U_i$	V 400
Rated operating voltage $U_e$	V AC/DC 12-24
	V AC/DC 48
	V AC/DC 110
	V AC 220
Max Rated Power	W -
Power Supply	-
Lamp Fixing system	-

\* IMQ values

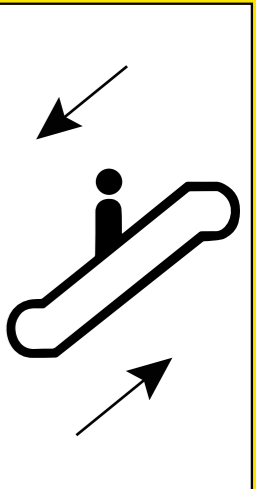




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# ESCALATOR



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		1NC	<b>GM482</b>
<b>UP Push Button</b> flush, momentary, white colour		1NO+1NC	
<b>DOWN Push Button</b> flush, momentary, black colour		1NO+1NC	
<b>START Push Button</b> flush, momentary, green colour		1NO	



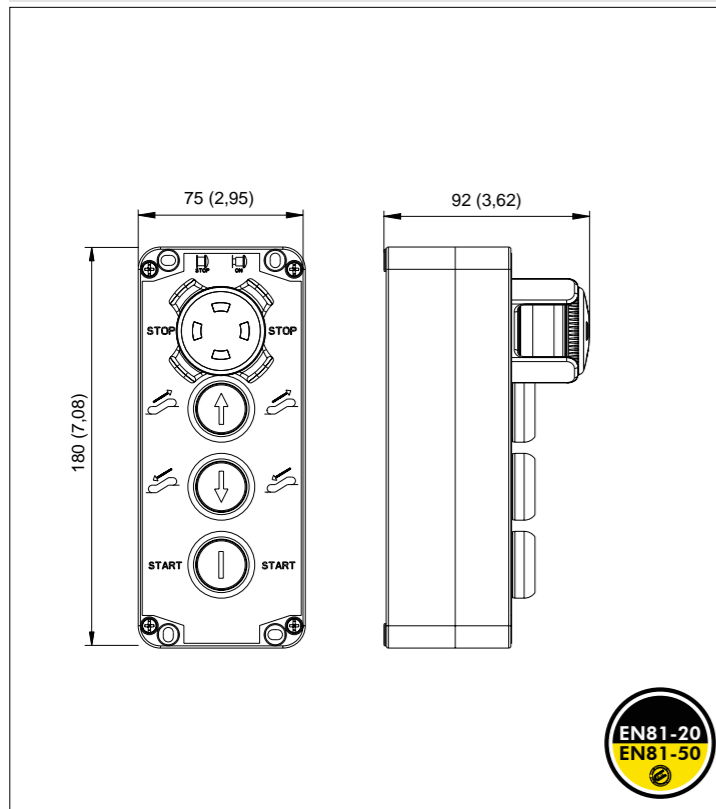
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Cam Switch 0-1</b> 45° switching		2NC	<b>GM245</b>
<b>UP Push Button</b> flush, momentary, white colour		1NO+1NC	
<b>DOWN Push Button</b> flush, momentary, black colour		1NO+1NC	
<b>Emergency stop EN ISO 13850</b> ø40 push-pull with vision		1NC	



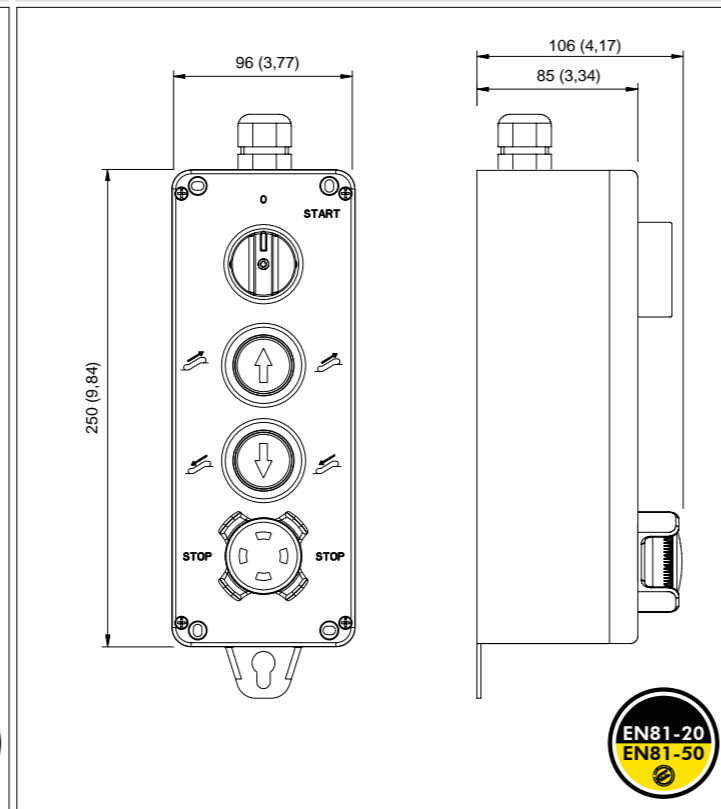
DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Emergency stop EN ISO 13850</b> ø30 twist to release with vision		1NC	<b>TLP4S016</b>
<b>COMMON Push Button</b> blue colour		1NO	
<b>UP Push Button</b> white colour		1NO	
<b>DOWN Push Button</b> black colour		1NO	



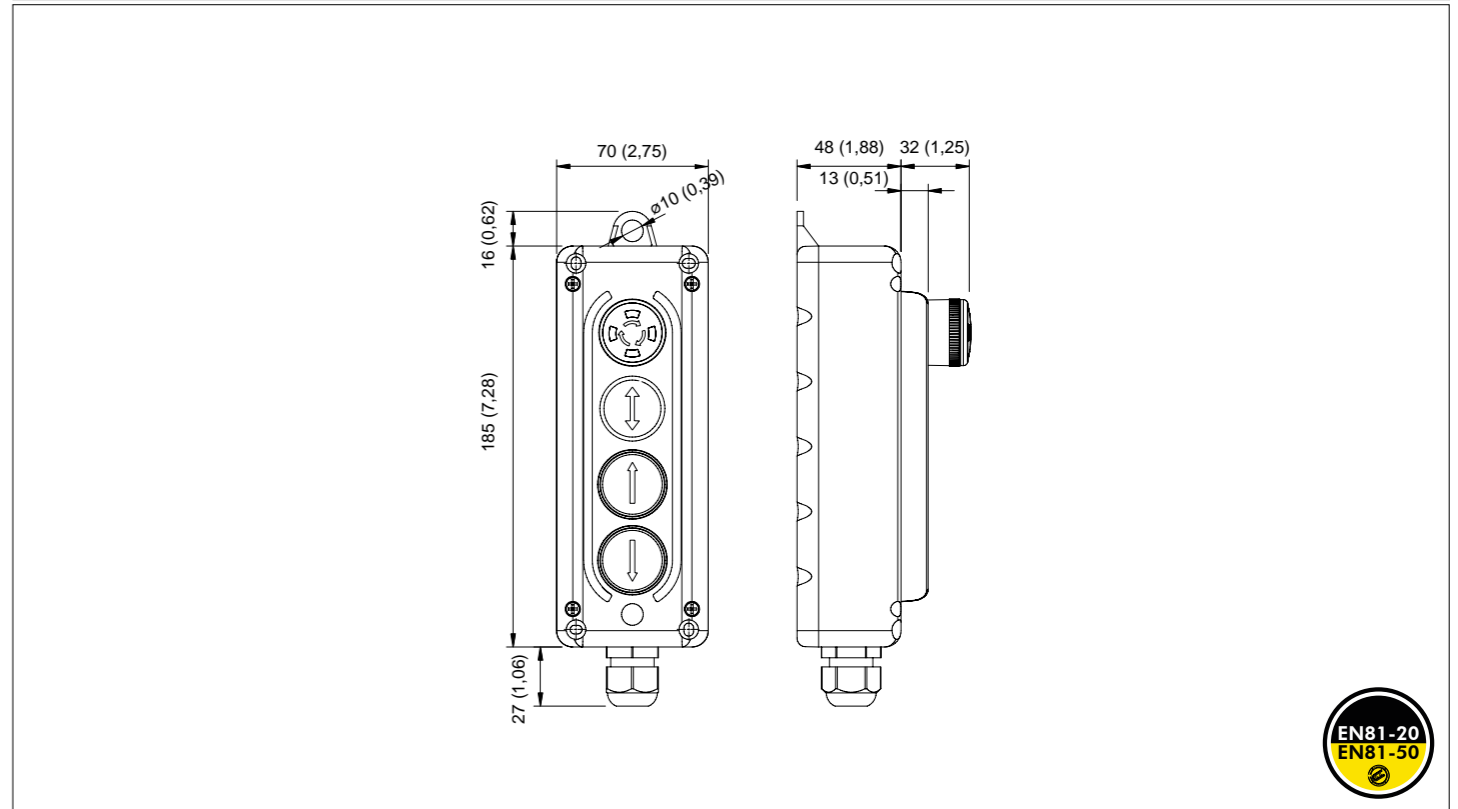
TECHNICAL DRAWING - GM482



TECHNICAL DRAWING - GM245



TECHNICAL DRAWING - TLP4S016





**MUSHROOM Ø90**

DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Mushroom Ø90</b> momentary, red colour		1NC	<b>PG1M9W01</b>

IP66



DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Mushroom Ø90</b> momentary, black colour		1NC	<b>PG8M9W10</b>

IP66

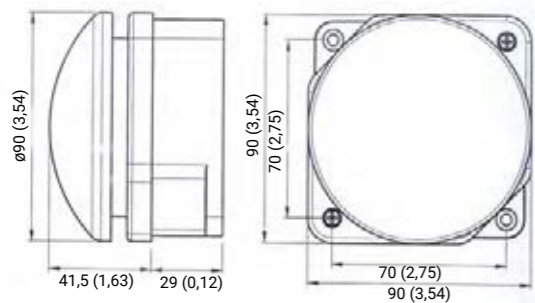


DESCRIPTION	SCHEME	CONTACTS	CODE
<b>Mushroom Ø90</b> momentary, red colour		1NC	<b>PR1M9W01</b>

IP66



**TECHNICAL DRAWING - PG..**



**ELECTRICAL CHARACTERISTICS**

Protection degree	IP66
Comply with rules	EN 60529
Double insulated	
Number contact capacity	Max 3 contact blocks
Cable entry with 3 holes	Pg 13,5 / M20
Ambient temperature	operating: -25°C +70°C storage: -30°C +70°C
Climate protection	IEC 68 2-3, 2-30
Terminal referencing	EN 50013

**MAIN SWITCHES**

DESCRIPTION	SERIES	AC-21A 690V	AC-23A 400V	CODE 3 POLES
<b>COMPLETE DEVICE</b> in thermoplastic enclosure  • Opening in "0" position. • Arranged for nr. 8 Pg16 cable glands of which nr. 2 on the bottom. • With locking facility in "0 - OFF" (Max 3 locks). • Dimensions: 120x100x85 mm.	SQ025	32 A	25 A	<b>SQ025003BC10</b>
	SQ032	40 A	32 A	<b>SQ032003BC10</b>

IP65



For Grey cover and black knob version, replace "10" with "09" in the code.

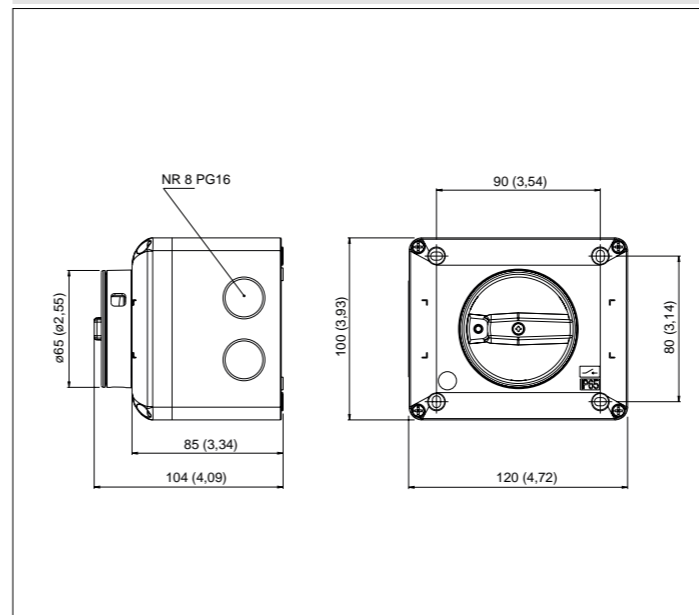
DESCRIPTION	SERIES	AC-21A 690V	AC-23A 400V	CODE 3 POLES
<b>COMPLETE DEVICE</b> in thermoplastic enclosure  • Opening in "0" position. • Arranged with nr. 4 cable glands M25/M32 + nr. 2 closed holes ø22,5 mm on the bottom. • With locking facility in "0 - OFF" (Max 3 locks). • Dimensions: 130x180x106 mm.	SQ040	63 A	50 A	<b>SQ040003BE10</b>
	SQ032	80 A	75 A	<b>SQ063003BE10</b>

IP65

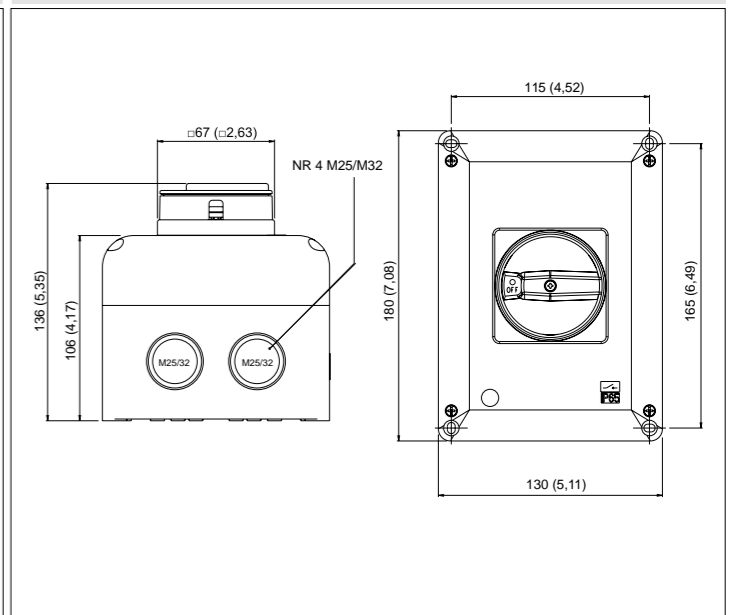


For Grey cover and black knob version, replace "10" with "09" in the code.

**TECHNICAL DRAWING - SQ025 / SQ032**



**TECHNICAL DRAWING - SQ040 / SQ063**





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**NOTES**

Lined area for notes.



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**LIFT TECHNOLOGY**  
**Quality & Safety EXCELLENCE**



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**EN 81-20 / EN 81-50**

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