



HANDLING SYSTEM

EN



Since 1952 building the Future

REV. 00_2020

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HISTORY

Founded in Italy in 1952, **Giovenzana** has gradually consolidated its experience in the field of **safety components** for industrial technologies. In the 1970s, Giovenzana began its path of **internazionalization** by opening up to new European and International markets. The gradual expansion around the world has been combined with a growing diversification of its product range linked to the research for new business sectors. With **68 years of experience**, Giovenzana focused its strategy on creating innovative and reliable products that can anticipate the market needs.

MISSION

Quality, competence and safety solutions have driven Giovenzana daily work, to develop the best products for all market requirements. Today its **high quality products** are recognizable all over the world. Giovenzana aims at environmental sustainability and energy efficiency. **Giovenzana mission is safety** above all by offering experience and expertise in designing reliable, ergonomic and intuitive safety devices. Its mission is to anticipate the different markets' needs to become a reference point for its customers. The intention is to create an ongoing link between the market and the company.

MARKETING

Giovenzana sells to 75 countries and develops components in compliance with **European and International standards**. Giovenzana exports all over the world and manages its customers through a competent and available **global sales network**. The business relationship with customers is facilitated by a **structured back office** and the presence of a **renewed website** that guides the customer in the conscious choice of the right product.

INNOVATION

Development, design and production are combined to achieve a common goal. **Giovenzana products are the result of innovation, experience and the daily application of own technological knowledge**. Over the years the company has constantly design new solutions by developing new skills and increasing the safety of its products.

QUALITY & ENVIRONMENTAL POLICY

Attention for products quality, innovation researches and continuous development of new projects by our R&D department, represent our daily commitment. The commercial success of a product is the end result of the combined efforts of all human resources operating within an organizational structure that is devoted to quality. Today Giovenzana Quality Management System is based on processes according to **UNI ISO 9001:2015**, ensuring the coordination of all business activities, from design to production organisation, from purchases to sales, from after-sales assistance to dimensional and functional controls of samples and products. With the standard **UNI EN ISO 14001:2015** 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.

R&D DEPARTMENT

The R&D department shall consist of specialized technicians, highly trained 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.

Use of advanced design software, prototyping machines 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.

PRODUCTION

The solutions offered by Giovenzana derive from the company's extensive knowledge of the requirements of industrial electrical devices and are in line with all relevant International standards.

Since 1952 Giovenzana creates, designs and produces safety solutions able to satisfy the needs of its customers within its business areas:

- **Handling system;**
- **Industrial Automation;**
- **Elevator and Escalator technology;**
- **Atex and IECEx equipment.**

MANUFACTURING UNITS

Giovenzana International B.V. has **four manufacturing units**. The historical one in Italy, two others in Hungary and the new one in Brasil.

LOGISTICS

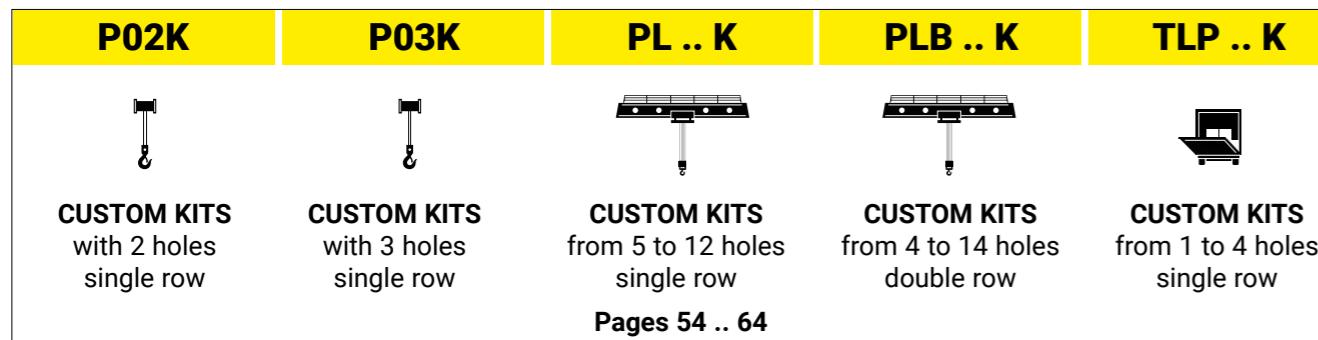
Giovenzana, in order to support the market and its different necessities, has created a global organization that is always in process to cover territory in different hubs.



PENDANT AND WALL-MOUNTED CONTROL STATIONS

Pages 6 .. 65

Ergonomic, resistant and flexible solutions for applications on cranes, hoists and other industrial lifting machinery. Available complete devices, custom kits, spare parts and accessories.



SPARE PARTS AND ACCESSORIES

Page 65

ROTARY GEAR LIMIT SWITCHES

Pages 66 .. 89

Rotary gear limit switches represent a reliable solution as response to different exigencies of precision and durability, they are used to control specific motions in various industrial lifting machinery.



SPARE PARTS AND ACCESSORIES

Pages 86 .. 89

POSITION LIMIT SWITCHES

Pages 90 .. 101

Position limit switches are used particularly in industrial and construction lifting plants, in the automation industry, in stage technology, in particular to control hoists, winches and machine tools.



SLIP RINGS

Pages 102 .. 103

Slip rings are used in electromechanical devices including rotating tables, surveillance systems like radars, medical machines, renewable energy sources and automation equipment.



Audible signalling devices.



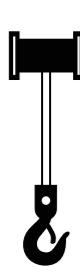


PENDANT CONTROL STATIONS

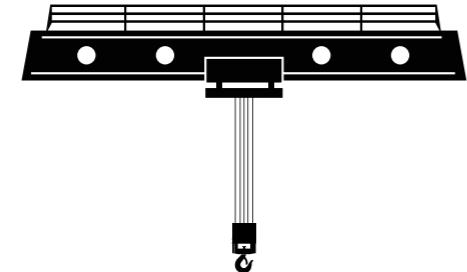
Giovenzana International B.V. has over 65 years of experience in designing and manufacturing pendant control stations and wall-mounted control stations for auxiliary and direct control, used to command and control industrial machinery. They are characterized by an ergonomic user-friendly design, an high protection class degree and high operating reliability and switching capacity. They are suitable in different sizes with a wide range of operating and switching components for various applications.

APPLICATIONS

- **Industrial and construction lifting plants** to control gantry cranes, track cranes, jib cranes, wall-mounted jib cranes, tower cranes and winches for construction sites;
- **Automation industry** to command and control systems to manage machines and processes;
- **Waste disposal industry** to control the movement of machines and equipment.



HOIST



CRANE



TRUCK TAIL LIFT

Safety operating control for handling system

Giovenzana International B.V. pendant control stations and wall-mounted control stations - for universal operation of cranes, hoists and machinery - are available as **complete devices** or in **kit versions** that allows to design a tailor made product, totally customizable for every customers' needs and requirements.

The range includes different sizes (from 2 to 14 buttons) and several accessories and options, like emergency push buttons, key and lever selectors, laser engraved push buttons, led pilot lights and connection bridges for easier cabling.

The components are available with a high degree of protection against weather effects, high mechanical and electrical durability and resistance. All components have to be reliable and safe to ensure good handling control, guarantee maximum operating safety, prevent personal injuries and damage to objects.

The complete range of pendant stations is CE marked. On request our pendant stations - complete devices - could be UL certified for the American market, EAC certified for the Eurasian markets, CCC certified suitable for the Chinese market, to the quality levels required in different countries. All our electrical parts are manufactured in compliance with the Directives and Standards in conformity to global markets' needs.

FEATURES

- Available complete devices (A) or custom kits (B) to be assembled using separated components and common accessories;



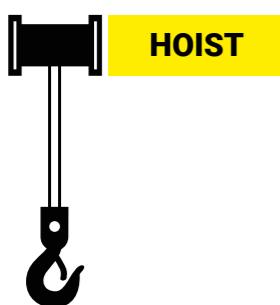
- Functions: 1 or 2 speed up, 6 movements, start/alarm push button, emergency stop option available;
- Compliace with IEC standards;
- CE, CCC, EAC marked;
- Available with UL/CSA requirements, upon request also in V0 material, UL approved;
- Spring loaded or screw clamp connection.

BENEFITS

- › **High protection**
IP65 Protection class degree
- › **Standard and customized configuration**
Different sizes with wide range of operating and switching components
Tailor made configuration and combination
- › **Easy use, resistance and durability**
Ergonomic user-friendly design in various configurations from 2 to 14 operating elements
- › **Guaranteed safety**
Switching elements for auxiliary and direct control
High operating reliability and switching capacity

SERIES





P02

Pendant control station

Single row pendant control station with two holes for small hoist

Features

- Bi-directionality is mechanically interlocked;
- IP65 Double insulation (IEC / EN 60529);
- Laser engraved symbols according to EN 60204-1, FEM 9.941;
- Shock proof and heat resistant;
- Available versions: for single or double speed engines and direct control 1 kW - 1 speed;
- Available with UL/CSA requirements;
- Available upon request also in V0 material, UL approved;
- Available in kit version.

Available codes

P02.RM Single speed						
P02.1 Single speed						
P02.2 Single speed						
P02.4 Single speed						
P02.CD Direct control / Single speed						
P02.D2 Double speed						

Compliance and certifications

- 2014/35/UE
- 2011/65/UE RoHS
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005 EN ISO 13850 2015)
- EN 60204-1 (2006/A1 : 2009)
- EN-ISO 13849-1 (2015)
- EN ISO 13849-2 (2012)
- EN 60529 (1991/A1 : 2000/A2 : 2013)

Technical data

General characteristics		
Compliant to standards		IEC / EN60947-5-1
Material		PP
Material Group		II
Pollution class		3
Temperature	operating storage	-25°C ... +70°C -30°C ... +70°C
Climate resistance	IEC68 part 2-3 IEC68 part 2-30	hot dump unsettled hot damp
Cable entry		rubber cable sleeve Ø 7 ... 18 mm

Electrical characteristics - Contact blocks

Marking						
Rated insulation voltage [Ui]						690 V *
Rated impulse withstand voltage [Uimp]						4 kV *
Frequency						50/60 Hz *
Rated thermal current [Ith]						16 A *
Rated thermal current in enclosure [Ithe]						10 A
Rated operational current [le]						
AC-15 alternate current		type: PL0040..		24 V 60 V 120 V 240 V 400 V 440 V 500 V 690 V	16 A *	16 A 12 A 8 A 6 A 4.5 A 3.5 A 3 A * 1 A
DC-13 direct current		type: PL0040..		24 V 48 V 60 V 110 V 220 V	2 A * 1.2 A 0.85 A 0.4 A 0.25 A *	2 A * 1.2 A 0.85 A 0.4 A 0.25 A *
Conditional short circuit withstand current						1000 A *
Fuses rating gC						10 A * - 500 V
Contact insulation resistance						≤ 25 mΩ
Switching mechanism		type: PL0040..				slow break double gap contacts
Positive operation						NC contact blocks - positive opening
Operating force						4 N
Electric durability AC-15						1 A 1.5 millions of cycles 2 A 0.5 millions of cycles 3 A 0.25 millions of cycles
Terminal type		type: PL0040..				M3.5 screw terminals
Terminal capacity		type: PL0040..				N° 1 or 2 flexible and solid conductor 1 ... 2.5 mm²

UL508 characteristics

Rated insulation voltage [Ui]		10 A - 600 V ac / 2.5 A - 125 V dc
Rated impulse withstand voltage [Uimp]		A600-Q600

* IMQ approved values



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P02

Pendant control station

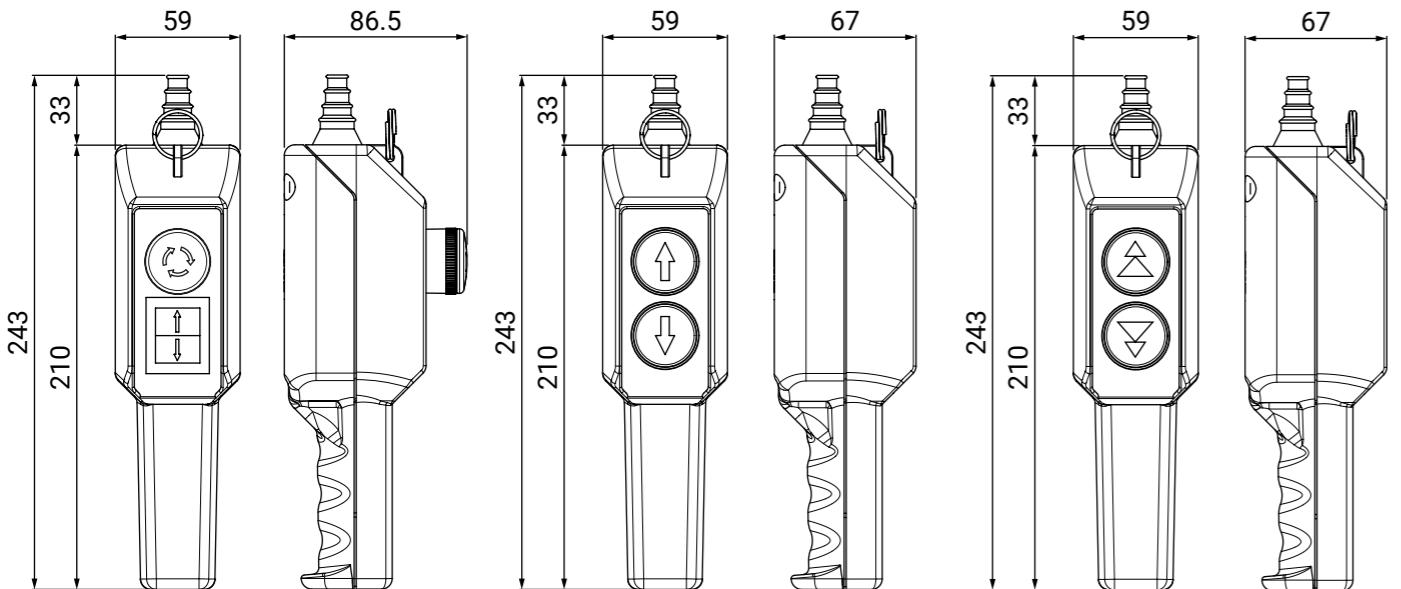
Available codes



P02.RM

**P02.1
P02.2
P02.4
P02.CD**

P02.D2



Standard versions

PRODUCT CODE	FUNCTION	LAYOUT	PUSH BUTTON	CONTACT CONFIGURATION
P02.RM	Single speed		 	 1 NC ON - OFF - ON
P02.1	Single speed		 	 1 NO 1 NO
P02.2	Single speed		 	 2 NO 2 NO
P02.4	Single speed		 	 1 NC + 1 NO 1 NC + 1 NO
P02.CD	Direct control Single speed			 1 NC + 2 NO 1 NC + 2 NO
P02.D2	Double speed		 	 NO + NO NO + NO

CONTACT CODE

Single speed



1 NC

PL004001



1 NO

PL004002



ON
OFF
ON

11708237

Single speed Direct control



1 NC

PL004001CD



1 NO

PL004002CD



NO + NO

PL004010.S



P03

Pendant control station

Single row pendant control station with three holes for small hoist

Features

- Bi-directionality is mechanically interlocked;
- IP65 Double insulation (IEC / EN 60529);
- Laser engraved symbols according to EN 60204-1, FEM 9.941;
- Shock proof and heat resistant;
- Available versions: for single or double speed motors and direct control 1 kW - 1 speed;
- Available with UL/CSA requirements;
- Available upon request also in V0 material, UL approved;
- Available in kit version.

Available codes

P03.1 Single speed						
P03.2 Single speed						
P03.3 Single speed						
P03CD Direct control / Single speed						
P03D2 Double speed						

Compliance and certifications

- 2014/35/UE
- 2011/65/UE RoHS
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005 EN ISO 13850 2015)
- EN 60204-1 (2006/A1 : 2009)
- EN-ISO 13849-1 (2015)
- EN ISO 13849-2 (2012)
- EN 60529 (1991/A1 : 2000/A2 : 2013)

Technical data

General characteristics					
Compliant to standards		IEC / EN60947-5-1			
Material		ABS			
Material Group		II			
Pollution class		3			
Temperature		operating	-25°C ... +70°C		
		storage	-30°C ... +70°C		
Climate resistance		IEC68 part 2-3 IEC68 part 2-30	hot dump unsettled hot damp		
Cable entry		rubber cable sleeve Ø 7 ... 18 mm			
Electrical characteristics - Contact blocks					
Marking					
Rated insulation voltage [Ui]					
Rated impulse withstand voltage [Uimp]					
Frequency					
Rated thermal current [Ith]					
Rated thermal current in enclosure [Ithe]					
Rated operational current [le]					
AC-15 alternate current		type: PL0040..	24 V 16 A * 60 V 12 A 120 V 8 A 240 V 6 A 400 V 4.5 A 440 V 3.5 A 500 V 3 A * 690 V 1 A		
DC-13 direct current		type: PL0040..	24 V 2 A * 48 V 1.2 A 60 V 0.85 A 110 V 0.4 A 220 V 0.25 A *		
Conditional short circuit withstand current					
Fuses rating gC					
Contact insulation resistance					
Switching mechanism					
Positive operation					
Operating force					
Electric durability AC-15					
Terminal type		type: PL0040..	M3.5 screw terminals		
Terminal capacity		type: PL0040..	N° 1 or 2 flexible and solid conductor 1 ... 2.5 mm²		
UL508 characteristics					
Rated insulation voltage [Ui]					
Rated impulse withstand voltage [Uimp]					

* IMQ approved values



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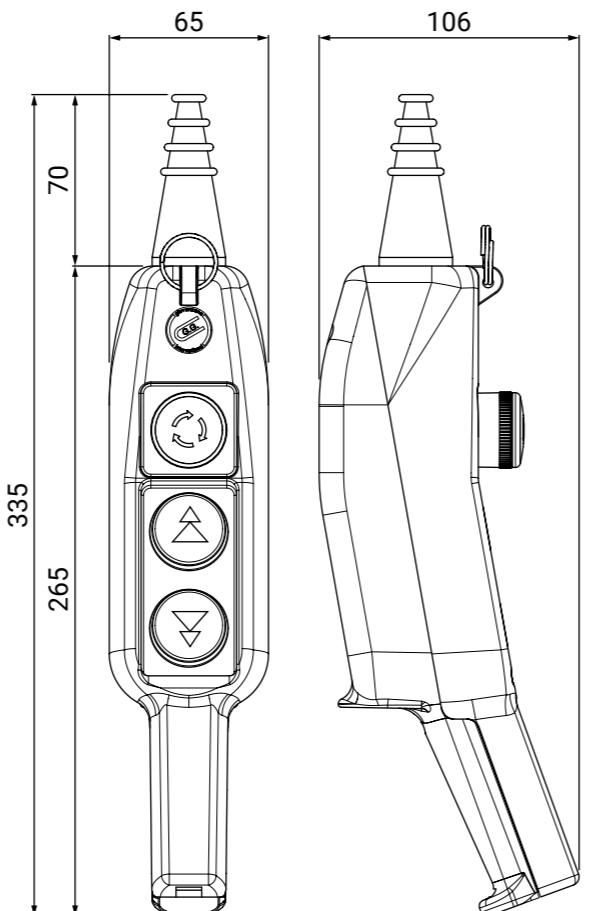
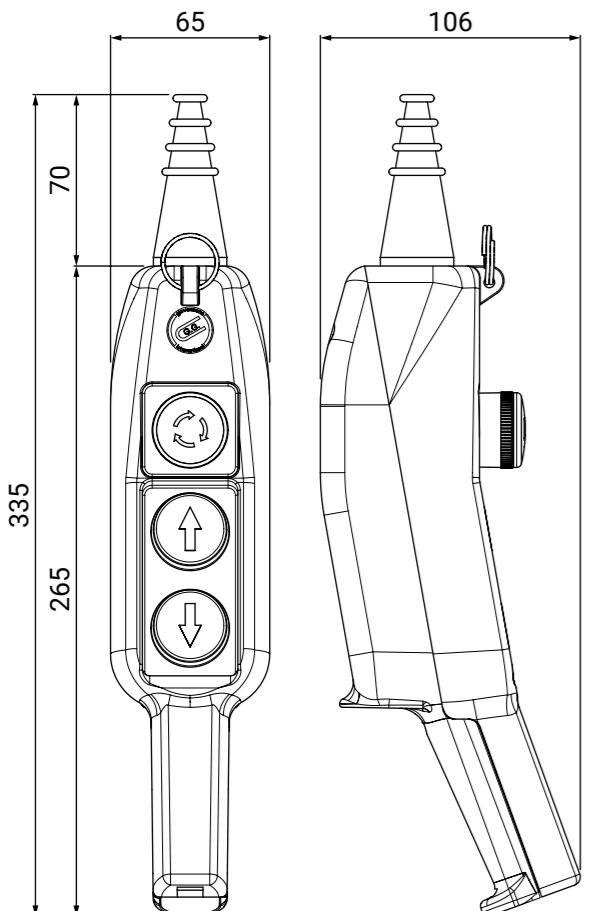
Available codes



P03.1 (P03.1N - black version)
P03.2
P03.3
P03CD

P03

Pendant control station



Standard versions

PRODUCT CODE	FUNCTION	LAYOUT	PUSH BUTTON	CONTACT CONFIGURATION
P03.1 P03.1N	Single speed		 	 1 NC
P03.2	Single speed		 	 1 NO
P03.3	Single speed		 	 1 NC
P03CD	Direct control Single speed		 	 2 NC + 1 NO
P03D2	Double speed		 	 1 NC + 2 NO

CONTACT CODE

Single speed



1 NC

PL004001



1 NO

PL004002

Single speed Direct control



1 NC

PL004001CD



1 NO

PL004002CD

Double speed



NO + NO

PL004010.S



Pendant control station



Ergonomic pendant control station with three holes for hoist

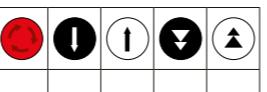


HOIST

Features

- Bi-directionality is mechanically interlocked;
- IP65 Double insulation (IEC / EN 60529);
- Laser engraved symbols according to EN 60204-1, FEM 9.941;
- Shock proof and heat resistant;
- Available versions: for single or double speed motors;
- Available with UL/CSA requirements;
- Available upon request also in V0 material, UL approved.

Available codes



HP03 Single speed



HP03.D2 Double speed



Compliance and certifications

- 2014/35/UE
- 2011/65/UE RoHS
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005 EN ISO 13850 2015)
- EN 60204-1 (2006/A1 : 2009)
- EN-ISO 13849-1 (2015)
- EN ISO 13849-2 (2012)
- EN 60529 (1991/A1 : 2000/A2 : 2013)

Technical data

General characteristics

Compliant to standards		IEC / EN60947-5-1
Material		ABS
Material Group		II
Pollution class		3
Temperature	operating storage	-25°C ... +70°C -30°C ... +70°C
Climate resistance	IEC68 part 2-3 IEC68 part 2-30	hot dump unsettled hot damp
Cable entry		Spiral cable gland M20

Electrical characteristics - Contact blocks

Marking		
Rated insulation voltage [Ui]		690 V *
Rated impulse withstand voltage [Uimp]		4 kV *
Frequency		50/60 Hz *
Rated thermal current [Ith]		16 A *
Rated thermal current in enclosure [Ithe]		10 A
Rated operational current [le]		
AC-15 alternate current	type: PCW..	24 V 16 A * 60 V 12 A 110 V 5 A 240 V 5 A * 400 V 4 A 440 V 4 A 500 V 4 A * 690 V 2 A
DC-13 direct current	type: PCW..	24 V 2 A 48 V 2 A * 60 V 1 A * 110 V 0.4 A 250 V 0.4 A *
Minimum constant current		1 mA@5Vdc, 1 mA@24Vdc
Conditional short circuit withstand current		1000 A *
Fuses rating gC		10 A * - 500 V
Contact insulation resistance		≤ 25 mΩ
Switching mechanism	type: PCW..	slow break double gap contacts
Positive operation		NC contact blocks - positive opening
Operating force		4 N
Electric durability AC-15		1 A 1.5 millions of cycles 2 A 0.5 millions of cycles 3 A 0.25 millions of cycles
Terminal type	type: PCW..	M3.5 screw terminals
Terminal capacity	type: PCW..	N° 1 or 2 flexible and solid conductor 1 ... 2.5 mm²

UL508 characteristics

Rated insulation voltage [Ui]		10 A - 600 V ac / 2.5 A - 125 V dc
Rated impulse withstand voltage [Uimp]		A600-Q600

* IMQ approved values



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HP03

Pendant control station

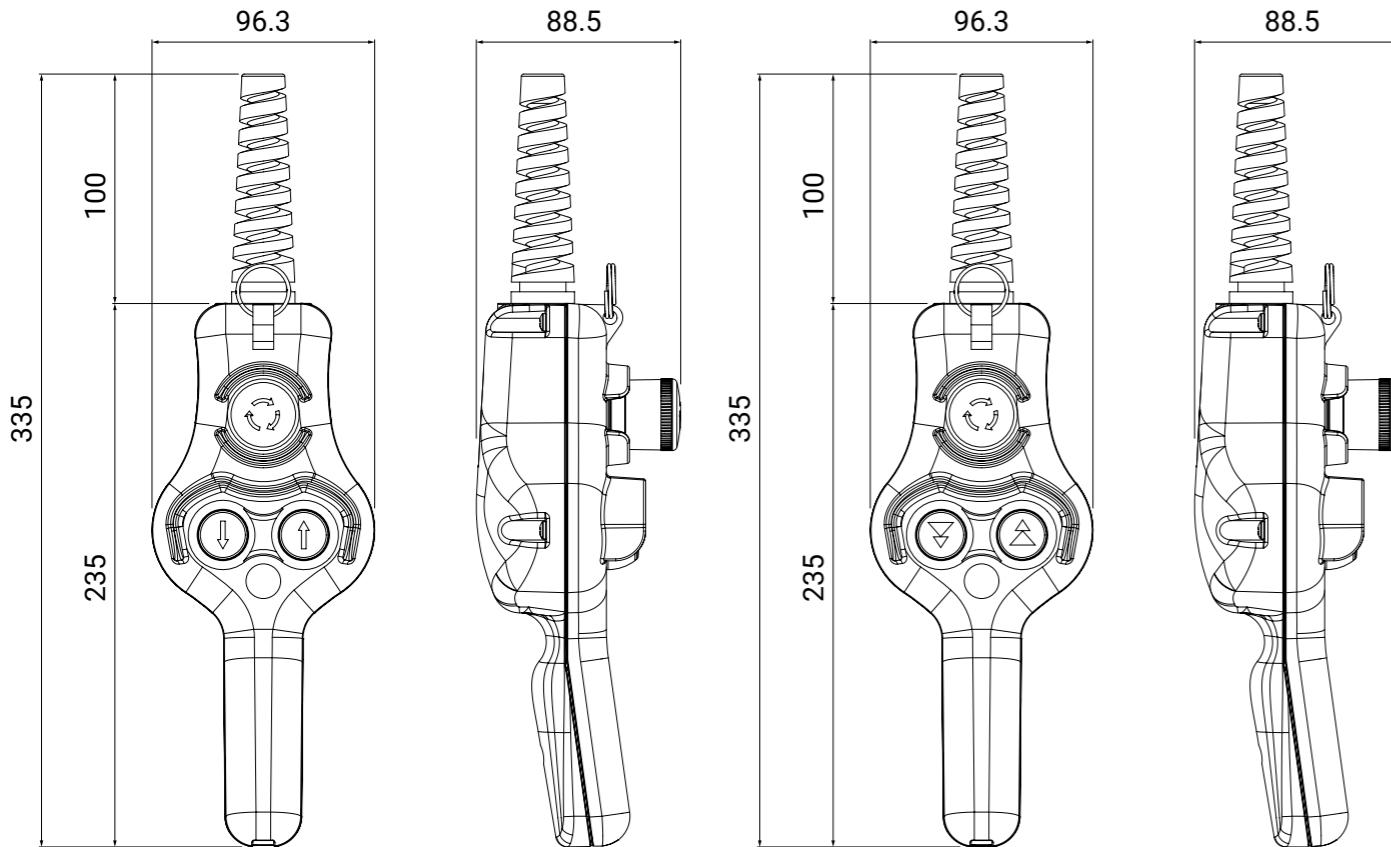
Available codes



HP03



HP03.D2



Standard versions

PRODUCT CODE	FUNCTION	AYOUT	PUSH BUTTON	CONTACT CONFIGURATION
HP03	Single speed			1 NC
				1 NO
				1 NO
HP03.D2	Double speed			1 NC
				NO + NO
				NO + NO

CONTACT CODE

Single speed



1 NC

PCW01



1 NO

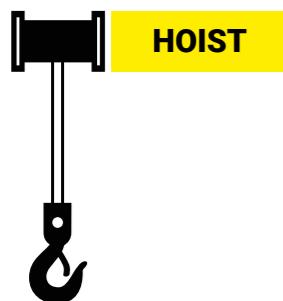
PCW10

Double speed



NO + NO

PCWDS



HP05

Pendant control station



**Ergonomic pendant control station
with five holes for hoist**

Features

- Bi-directionality is mechanically interlocked;
- IP65 Double insulation (IEC / EN 60529);
- Laser engraved symbols according to EN 60204-1, FEM 9.941;
- Shock proof and heat resistant;
- Available versions: for single or double speed motors;
- Available with UL/CSA requirements;
- Available upon request also in V0 material, UL approved.

Available codes

	●	■	↑	▬	▬	▼	▲	◀	▶
HP05 Single speed	NC	NO	NO	NO	NO				
HP05.D2 Double speed	NC			NO	NO	NO+NO	NO+NO		
HP05.D4 Double speed	NC				NO+NO	NO+NO	NO+NO	NO+NO	



Compliance and certifications

- 2014/35/UE
- 2011/65/UE RoHS
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005 EN ISO 13850 2015)
- EN 60204-1 (2006/A1 : 2009)
- EN-ISO 13849-1 (2015)
- EN ISO 13849-2 (2012)
- EN 60529 (1991/A1 : 2000/A2 : 2013)

Technical data

General characteristics

Compliant to standards		IEC / EN60947-5-1
Material		ABS
Material Group		II
Pollution class		3
Temperature	operating storage	-25°C ... +70°C -30°C ... +70°C
Climate resistance	IEC68 part 2-3 IEC68 part 2-30	hot dump unsettled hot damp
Cable entry		Cable gland M25

Electrical characteristics - Contact blocks

Marking		
Rated insulation voltage [Ui]		690 V *
Rated impulse withstand voltage [Uimp]		4 kV *
Frequency		50/60 Hz *
Rated thermal current [Ith]		16 A *
Rated thermal current in enclosure [Ithe]		10 A
Rated operational current [le]		
AC-15 alternate current	type: PCW..	24 V 16 A * 60 V 12 A 110 V 5 A 240 V 5 A * 400 V 4 A 440 V 4 A 500 V 4 A * 690 V 2 A
DC-13 direct current	type: PCW..	24 V 2 A 48 V 2 A * 60 V 1 A * 110 V 0.4 A 250 V 0.4 A *
Minimum constant current		1 mA@5Vdc, 1 mA@24Vdc
Conditional short circuit withstand current		1000 A *
Fuses rating gC		10 A * - 500 V
Contact insulation resistance		≤ 25 mΩ
Switching mechanism	type: PCW..	slow break double gap contacts
Positive operation		NC contact blocks - positive opening
Operating force		4 N
Electric durability AC-15		1 A 1.5 millions of cycles 2 A 0.5 millions of cycles 3 A 0.25 millions of cycles
Terminal type	type: PCW..	M3.5 screw terminals
Terminal capacity	type: PCW..	N° 1 or 2 flexible and solid conductor 1 ... 2.5 mm²

UL508 characteristics

Rated insulation voltage [Ui]		10 A - 600 V ac / 2.5 A - 125 V dc
Rated impulse withstand voltage [Uimp]		A600-Q600

* IMQ approved values



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HP05

Pendant control station

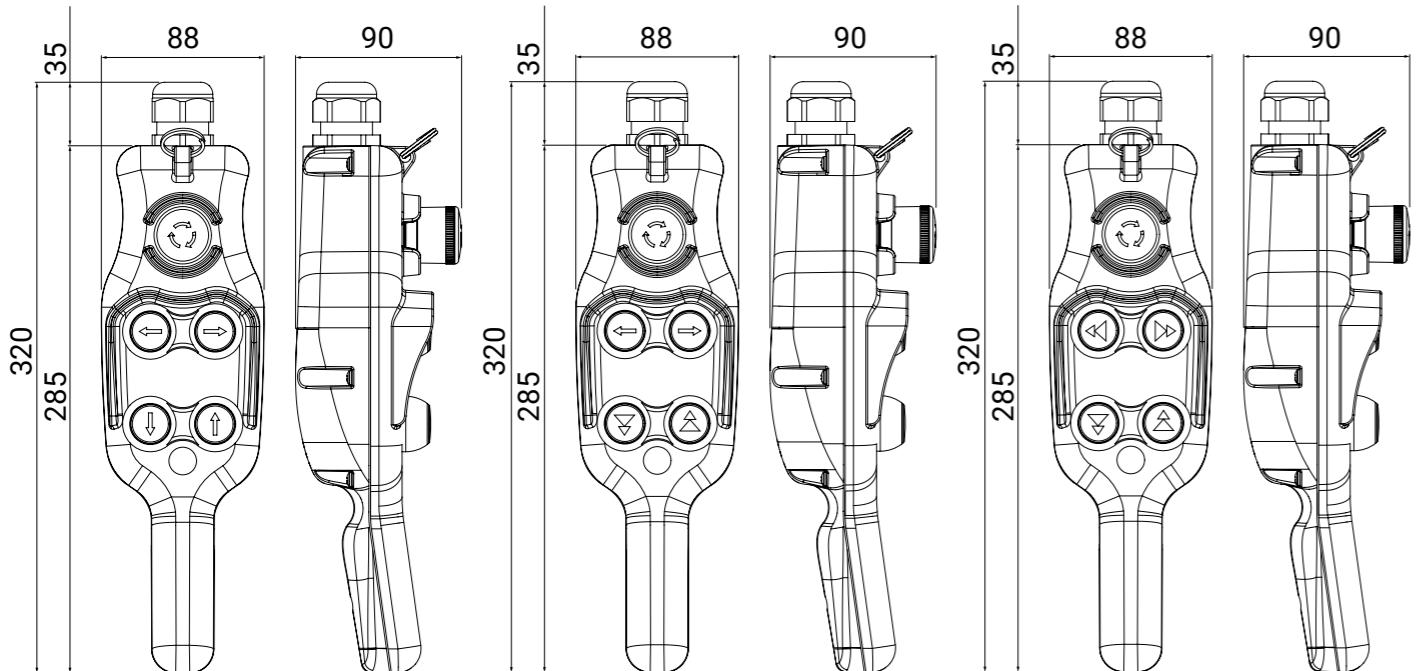
Available codes



HP05

HP05.D2

HP05.D4



Standard versions

PRODUCT CODE	FUNCTION	AYOUT	PUSH BUTTON	CONTACT CONFIGURATION
HP05	Single speed			 1 NC
HP05.D2	Single/Double speed			 1 NC
HP05.D4	Double speed			 NO + NO

CONTACT CODE

Single speed



1 NC



1 NO

Double speed



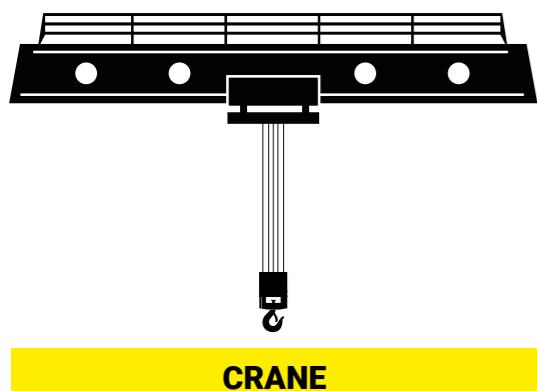
NO + NO



NO + NO



GIOVENZANA
INTERNATIONAL B.V.



HP07

Pendant control station

NEW

Ergonomic pendant control station with seven holes for crane

Features

- Bi-directionality is mechanically interlocked;
- IP65 Double insulation (IEC / EN 60529);
- Laser engraved symbols according to EN 60204-1, FEM 9.941;
- Shock proof and heat resistant;
- Available versions: for single or double speed motors;
- Available with UL/CSA requirements;
- Available upon request also in V0 material, UL approved.

Available codes

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
HP07 Single speed	NC	NO	NO	NO	NO	NO	NO								
HP07.D2 Single/ double speed	NC	NO	NO		NO	NO		NO+NO	NO+NO						
HP07.D4 Single/ double speed	NC	NO	NO					NO+NO	NO+NO	NO+NO	NO+NO				
HP07.D6 Double speed	NC				NO+NO										

Compliance and certifications

- 2014/35/UE
- 2011/65/UE RoHS
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005 EN ISO 13850 2015)
- EN 60204-1 (2006/A1 : 2009)
- EN-ISO 13849-1 (2015)
- EN ISO 13849-2 (2012)
- EN 60529 (1991/A1 : 2000/A2 : 2013)

Technical data

General characteristics

Compliant to standards		IEC / EN60947-5-1
Material		ABS
Material Group		II
Pollution class		3
Temperature	operating storage	-25°C ... +70°C -30°C ... +70°C
Climate resistance	IEC68 part 2-3 IEC68 part 2-30	hot dump unsettled hot damp
Cable entry		Cable gland M25

Electrical characteristics - Contact blocks

Marking		
Rated insulation voltage [Ui]		690 V *
Rated impulse withstand voltage [Uimp]		4 kV *
Frequency		50/60 Hz *
Rated thermal current [Ith]		16 A *
Rated thermal current in enclosure [Ithe]		10 A
Rated operational current [le]		
AC-15 alternate current	type: PCW..	24 V 16 A * 60 V 12 A 110 V 5 A 240 V 5 A * 400 V 4 A 440 V 4 A 500 V 4 A * 690 V 2 A
DC-13 direct current	type: PCW..	24 V 2 A 48 V 2 A * 60 V 1 A * 110 V 0.4 A 250 V 0.4 A *
Minimum constant current		1 mA@5Vdc, 1 mA@24Vdc
Conditional short circuit withstand current		1000 A *
Fuses rating gC		10 A * - 500 V
Contact insulation resistance		≤ 25 mΩ
Switching mechanism	type: PCW..	slow break double gap contacts
Positive operation		NC contact blocks - positive opening
Operating force		4 N
Electric durability AC-15		1 A 1.5 millions of cycles 2 A 0.5 millions of cycles 3 A 0.25 millions of cycles
Terminal type	type: PCW..	M3.5 screw terminals
Terminal capacity	type: PCW..	N° 1 or 2 flexible and solid conductor 1 ... 2.5 mm²

UL508 characteristics

Rated insulation voltage [Ui]		10 A - 600 V ac / 2.5 A - 125 V dc
Rated impulse withstand voltage [Uimp]		A600-Q600

* IMQ approved values

PENDANT
STATIONS

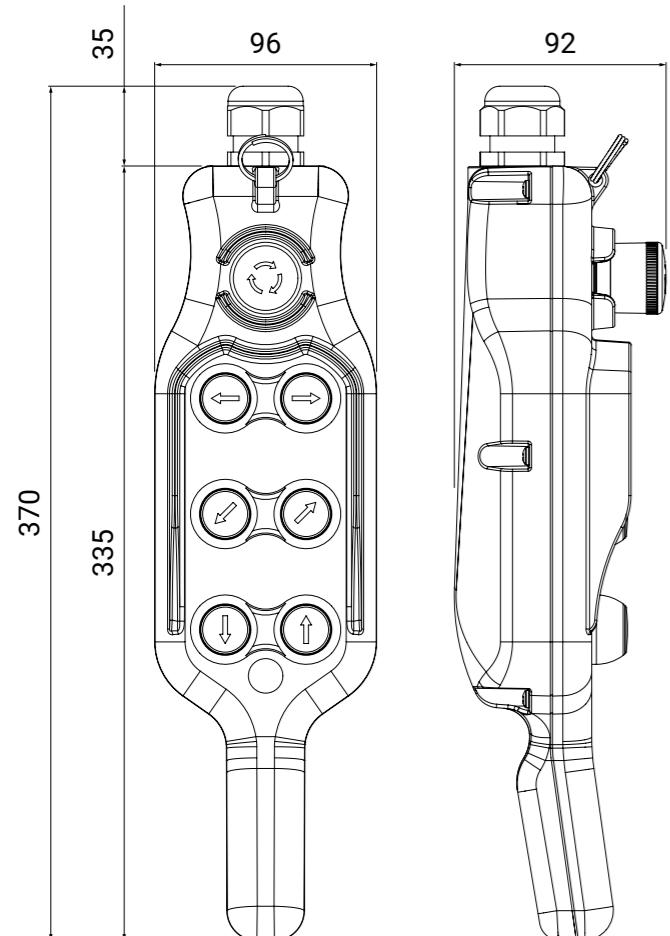


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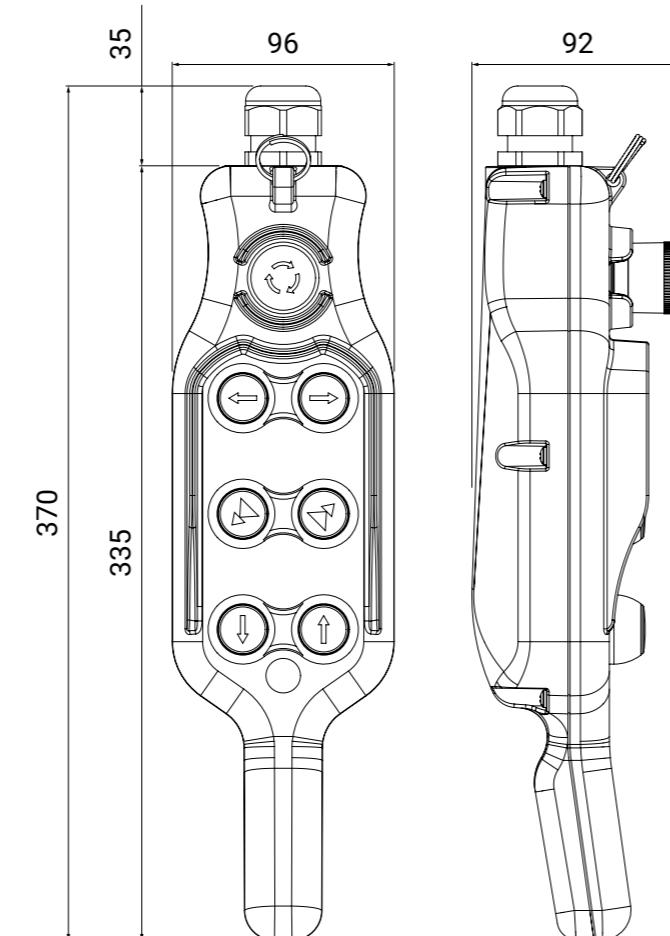
Available codes



HP07



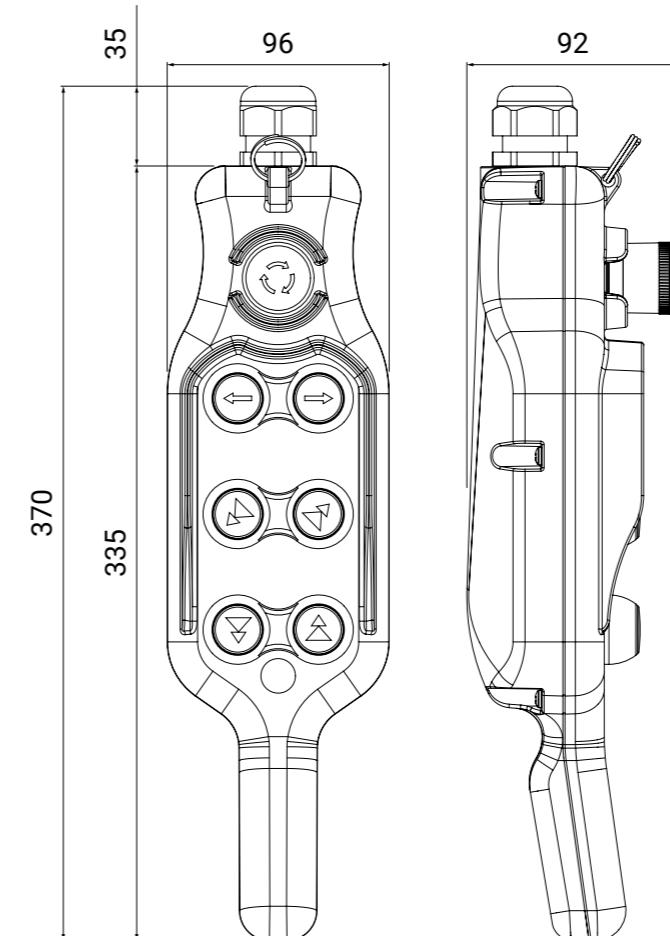
HP07.D2



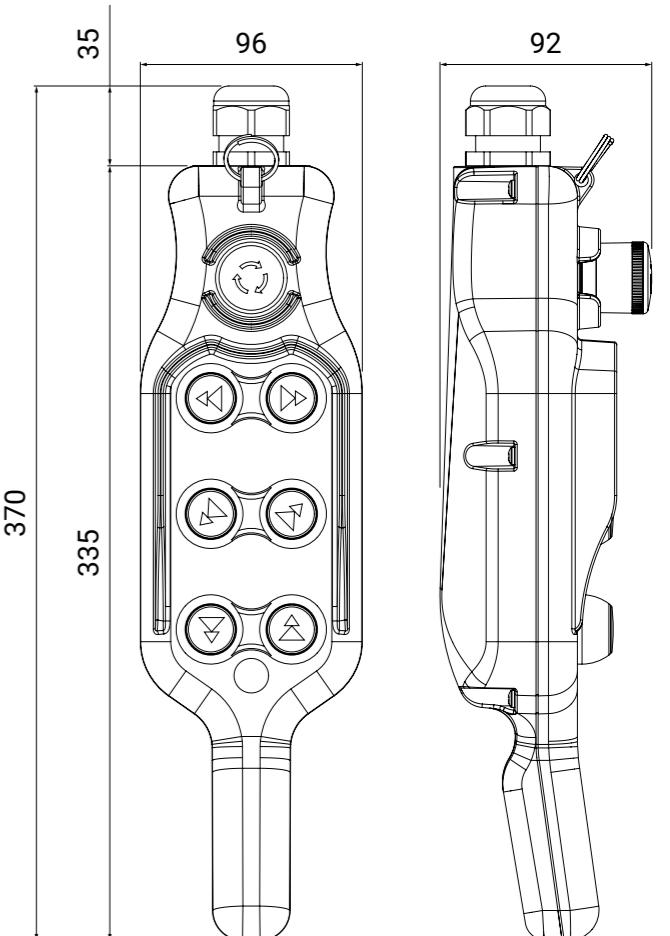
Available codes



HP07.D4



HP07.D6



HP07

Pendant control station

PENDANT
STATIONS



Standard versions

PRODUCT CODE	FUNCTION	LAYOUT	PUSH BUTTON	CONTACT CONFIGURATION
HP07	Single speed		 	1 NC 1 NO 1 NO 1 NO 1 NO 1 NO
HP07.D2	Single/Double speed		 	1 NC 1 NO 1 NO NO + NO NO + NO 1 NO 1 NO

CONTACT CODE
Single speed
1 NC
PCW01
1 NO
PCW10
Double speed
NO + NO
PCWDS

Standard versions

PRODUCT CODE	FUNCTION	LAYOUT	PUSH BUTTON	CONTACT CONFIGURATION
HP07.D4	Single/Double speed		 	1 NC 1 NO 1 NO NO + NO NO + NO 1 NO 1 NO
HP07.D6	Double speed		 	1 NC NO + NO NO + NO NO + NO NO + NO NO + NO

CONTACT CODE
Single speed
1 NC
PCW01
1 NO
PCW10
Double speed
NO + NO
PCWDS

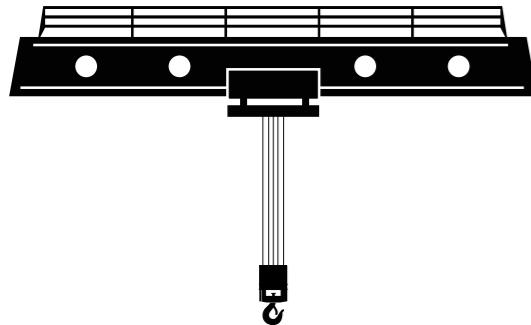


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HP08

Pendant control station



CRANE



Ergonomic pendant control station with eight holes for crane



Features

- Bi-directionality is mechanically interlocked;
 - IP65 Double insulation (IEC / EN 60529);
 - Laser engraved symbols according to EN 60204-1, FEM 9.941;
 - Shock proof and heat resistant;
 - Available versions: for single or double speed engines;
 - Available with UL/CSA requirements;
 - Available upon request also in V0 material, UL approved.

Available codes

HP08 Single speed														
HP08.D2 Single/ double speed														
HP08.D4 Single/ double speed														
HP08.D6 Double speed														

Compliance and certifications

- 2014/35/UE
 - 2011/65/UE RoHS
 - EN 60947-1 (2007/A1 : 2011/A2 : 2014)
 - EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005 EN ISO 13850 2015)
 - EN 60204-1 (2006/A1 : 2009)
 - EN-ISO 13849-1 (2015)
 - EN ISO 13849-2 (2012)
 - EN 60529 (1991/A1 : 2000/A2 : 2013)

Technical data

General characteristics

Compliant to standards		IEC / EN60947-5-1
Material		ABS
Material Group		II
Pollution class		3
Temperature	operating storage	-25°C ... +70°C -30°C ... +70°C
Climate resistance	IEC68 part 2-3 IEC68 part 2-30	hot dump unsettled hot damp
Cable entry		Cable gland M32

Electrical characteristics - Contact blocks

Marking		     
Rated insulation voltage [Ui]		690 V *
Rated impulse withstand voltage [Uimp]		4 kV *
Frequency		50/60 Hz *
Rated thermal current [Ith]		16 A *
Rated thermal current in enclosure [Ithe]		10 A
Rated operational current [Ie]		
AC-15 alternate current	type: PCW..	24 V 16 A * 60 V 12 A 110 V 5 A 240 V 5 A * 400 V 4 A 440 V 4 A 500 V 4 A * 690 V 2 A
DC-13 direct current	type: PCW..	24 V 2 A 48 V 2 A * 60 V 1 A * 110 V 0.4 A 250 V 0.4 A *
Minimum constant current		1 mA@5Vdc, 1 mA@24Vdc
Conditional short circuit withstand current		1000 A *
Fuses rating gC		10 A * - 500 V
Contact insulation resistance		≤ 25 mΩ
Switching mechanism	type: PCW..	slow break double gap contacts
Positive operation		NC contact blocks - positive opening
Operating force		4 N
Electric durability AC-15		1 A 1.5 millions of cycles 2 A 0.5 millions of cycles 3 A 0.25 millions of cycles
Terminal type	type: PCW..	M3.5 screw terminals
Terminal capacity	type: PCW..	N° 1 or 2 flexible and solid conductor 1 ... 2.5 mm ²
UL508 characteristics		
Rated insulation voltage [Ui]		10 A - 600 V ac / 2.5 A - 125 V dc
Rated impulse withstand voltage [Uimp]		A600-Q600

* IMQ approved values

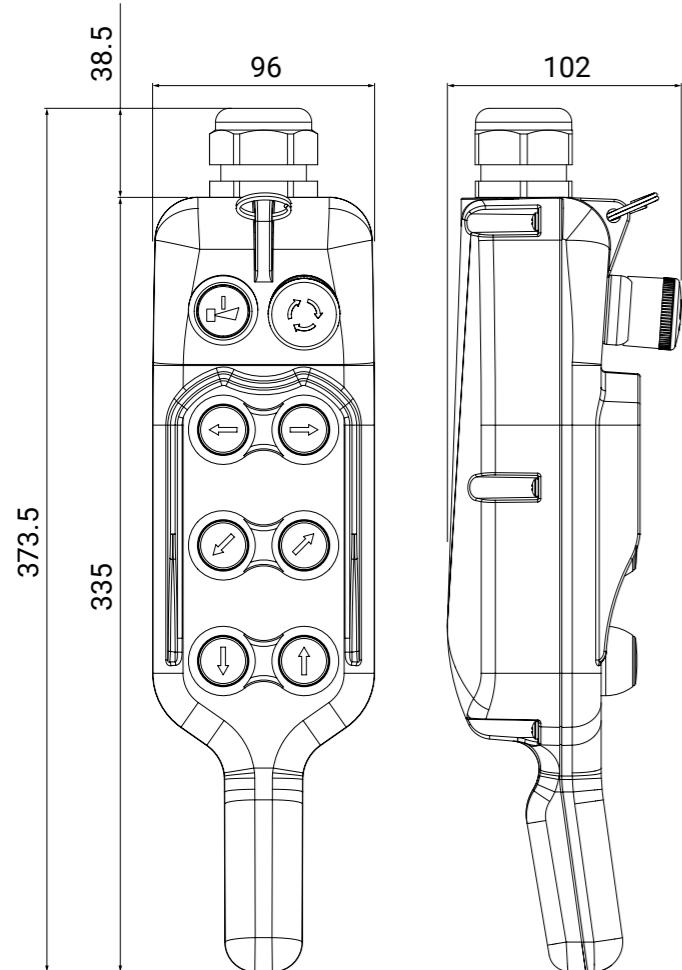


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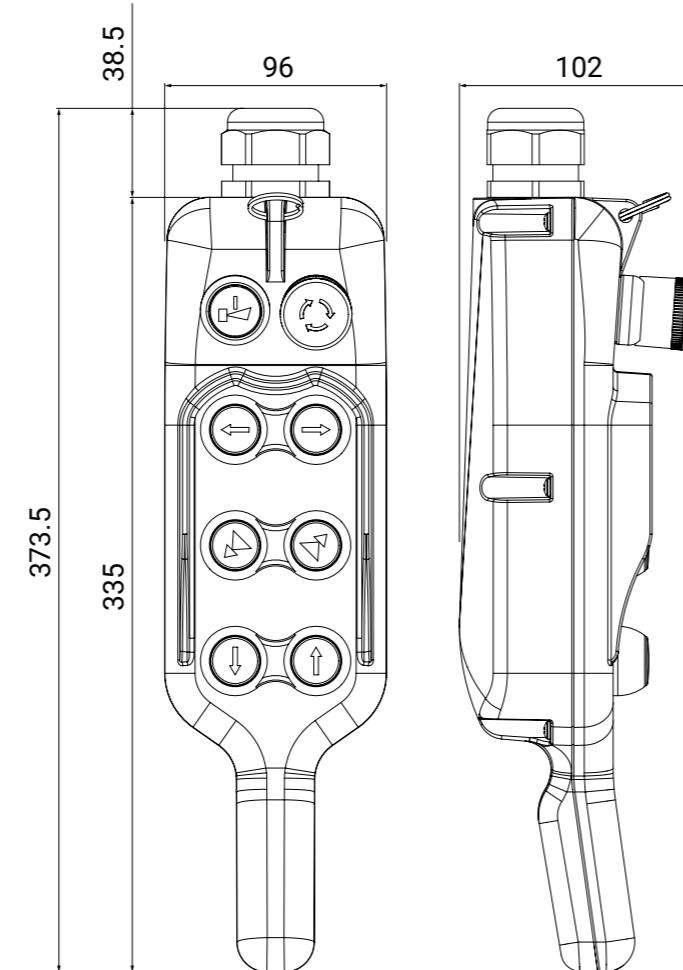
Available codes



HP08



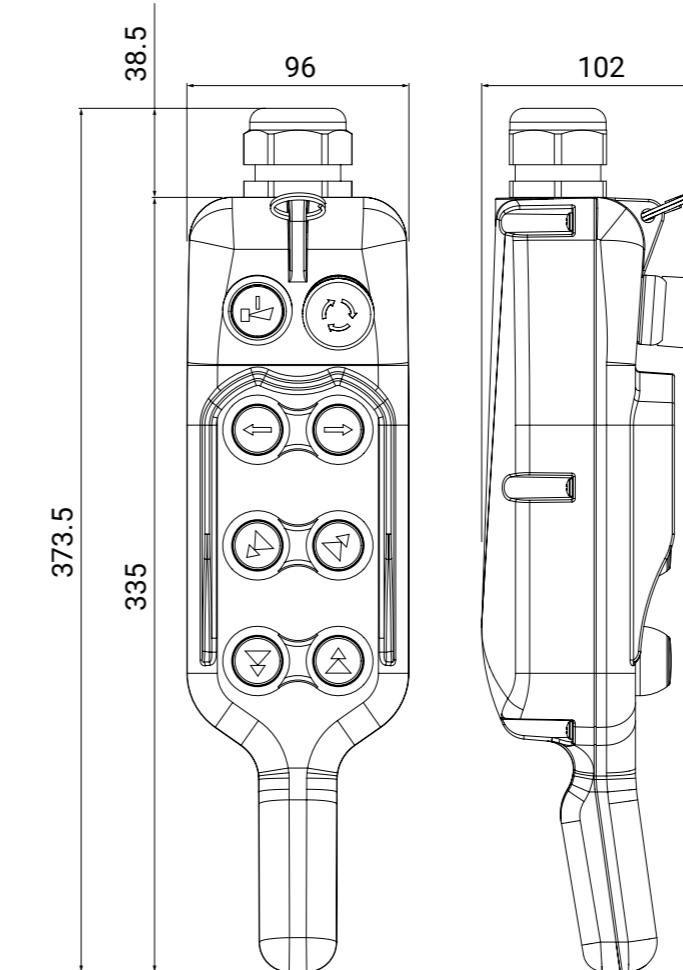
HP08.D2



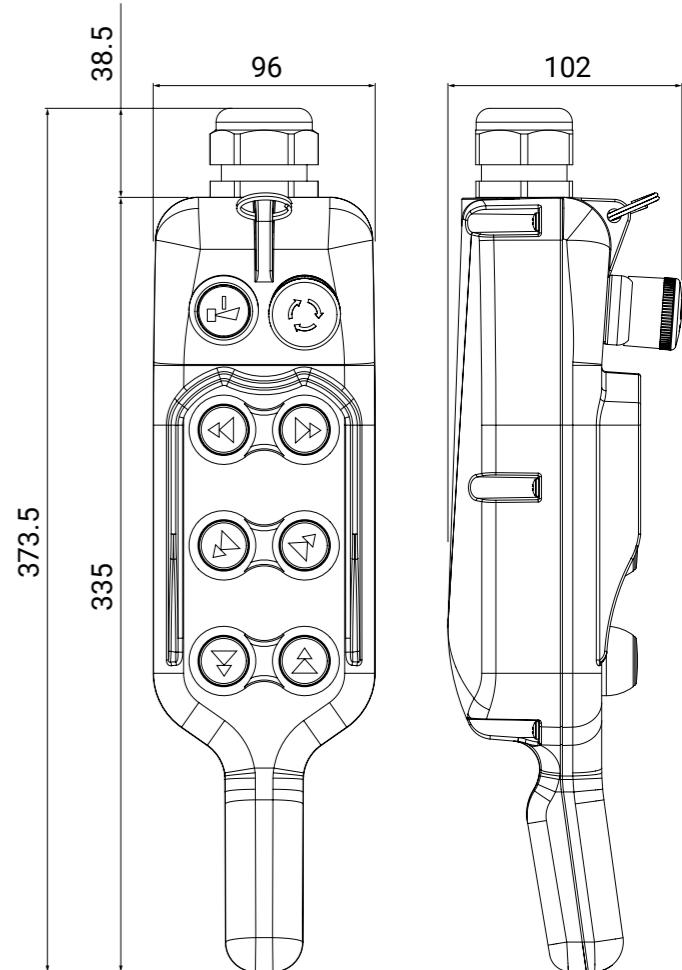
Available codes



HP08.D4



HP08.D6



HP08

Pendant control station

PENDANT
STATIONS

Standard versions

PRODUCT CODE	FUNCTION	LAYOUT	PUSH BUTTON	CONTACT CONFIGURATION
HP08	Single speed			1 NO 1 NC 1 NO 1 NO 1 NO 1 NO 1 NO
HP08.D2	Single/Double speed			1 NO 1 NC 1 NO 1 NO NO + NO NO + NO 1 NO 1 NO

CONTACT CODE
Single speed
1 NC PCW01
1 NO PCW10
Double speed
NO + NO PCWDS

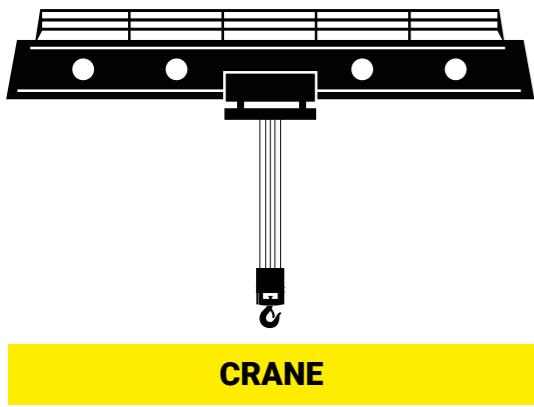
Standard versions

PRODUCT CODE	FUNCTION	LAYOUT	PUSH BUTTON	CONTACT CONFIGURATION
HP08.D4	Single/Double speed			1 NO 1 NC 1 NO 1 NO NO + NO NO + NO 1 NO 1 NO
HP08.D6	Double speed			1 NO 1 NC NO + NO NO + NO NO + NO NO + NO 1 NO 1 NO

CONTACT CODE
Single speed
1 NC PCW01
1 NO PCW10
Double speed
NO + NO PCWDS



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PLN Pendant control station

Single row pendant control station
from 5 to 12 holes for crane



5 HOLES

7 HOLES

8 HOLES

10 HOLES

12 HOLES

Features

- Bi-directionality is mechanically interlocked;
- IP65 Double insulation (IEC / EN 60529);
- Laser engraved symbols with laser marking according to EN 60204-1, FEM 9.941;
- Shock proof and heat resistant;
- Available versions: for single or double speed motors;
- Available with UL/CSA requirements, upon request also in V0 material, UL approved;
- Available in kit version (with PL laser engraved push buttons).

Available codes

	NC	NO	↑	↓	←	→	↔	↑↓	↓↑	↔↑	↔↓	↑↔	↓↔	↑↓↔	↔↑↓	↔↓↑	↑↔↓↑	↓↔↑↓	↑↓↔↓↑
PLN05 Single speed	NC	NO	NO	NO	NO	NO													
PLN05.D2 Single/double speed	NC				NO	NO											NO+NO	NO+NO	
PLN05.D4 Double speed	NC															NO+NO	NO+NO	NO+NO	
PLN07 Single speed	NC	NO	NO	NO	NO	NO													
PLN07.D2 Single/double speed	NC	NO	NO	NO+NO	NO+NO														
PLN07.D4 Single/double speed	NC				NO	NO										NO+NO	NO+NO	NO+NO	
PLN07.D6 Double speed	NC															NO+NO	NO+NO	NO+NO	
PLN08 Single speed	NC	NO	NO	NO	NO	NO													
PLN08.D2 Single/double speed	NC	NO	NO	NO+NO	NO+NO														
PLN08.D4 Single/double speed	NC	NO				NO	NO									NO+NO	NO+NO	NO+NO	
PLN08.D6 Double speed	NC	NO														NO+NO	NO+NO	NO+NO	
PLN10 Single/double speed	NC	NO	NO	NO	NO	NO													
PLN12 Single/double speed	NC	NO	NO	NO	NO	NO													

Compliance and certifications

- 2014/35/UE
- 2011/65/UE RoHS
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005 EN ISO 13850 2015)
- EN 60204-1 (2006/A1 : 2009)
- EN-ISO 13849-1 (2015)
- EN ISO 13849-2 (2012)
- EN 60529 (1991/A1 : 2000/A2 : 2013)



Technical data

General characteristics

Compliant to standards		IEC / EN60947-5-1
Material		ABS
Material Group		II
Pollution class		3
Temperature	operating storage	-25°C ... +70°C -30°C ... +70°C
Climate resistance	IEC68 part 2-3 IEC68 part 2-30	hot dump unsettled hot damp
Cable entry		rubber cable sleeve Ø 9 ... 24 mm

Electrical characteristics - Contact blocks

Marking		CE CCC c c
Rated insulation voltage [Ui]		690 V *
Rated impulse withstand voltage [Uimp]		4 kV *
Frequency		50/60 Hz *
Rated thermal current [Ith]		16 A *
Rated thermal current in enclosure [Ithe]		10 A
Rated operational current [Ie]		
AC-15 alternate current	type: PL0040..	24 V 16 A * 60 V 12 A 120 V 8 A 240 V 6 A 400 V 4.5 A 440 V 3.5 A 500 V 3 A * 690 V 1 A
DC-13 direct current	type: PL0040..	24 V 2 A * 48 V 1.2 A 60 V 0.85 A 110 V 0.4 A 220 V 0.25 A *
Conditional short circuit withstand current		1000 A *
Fuses rating gC		10 A * - 500 V
Contact insulation resistance		≤ 25 mΩ
Switching mechanism	type: PL0040..	slow break double gap contacts NC contact blocks - positive opening
Positive operation		
Operating force		4 N
Electric durability AC-15		1 A 1.5 millions of cycles 2 A 0.5 millions of cycles 3 A 0.25 millions of cycles
Terminal type	type: PL0040..	M3.5 screw terminals
Terminal capacity	type: PL0040..	N° 1 or 2 flexible and solid conductor 1 ... 2.5 mm²

UL508 characteristics

Rated insulation voltage [Ui]		10 A - 600 V ac / 2.5 A - 125 V dc
Rated impulse withstand voltage [Uimp]		A600-Q600

* IMQ approved values

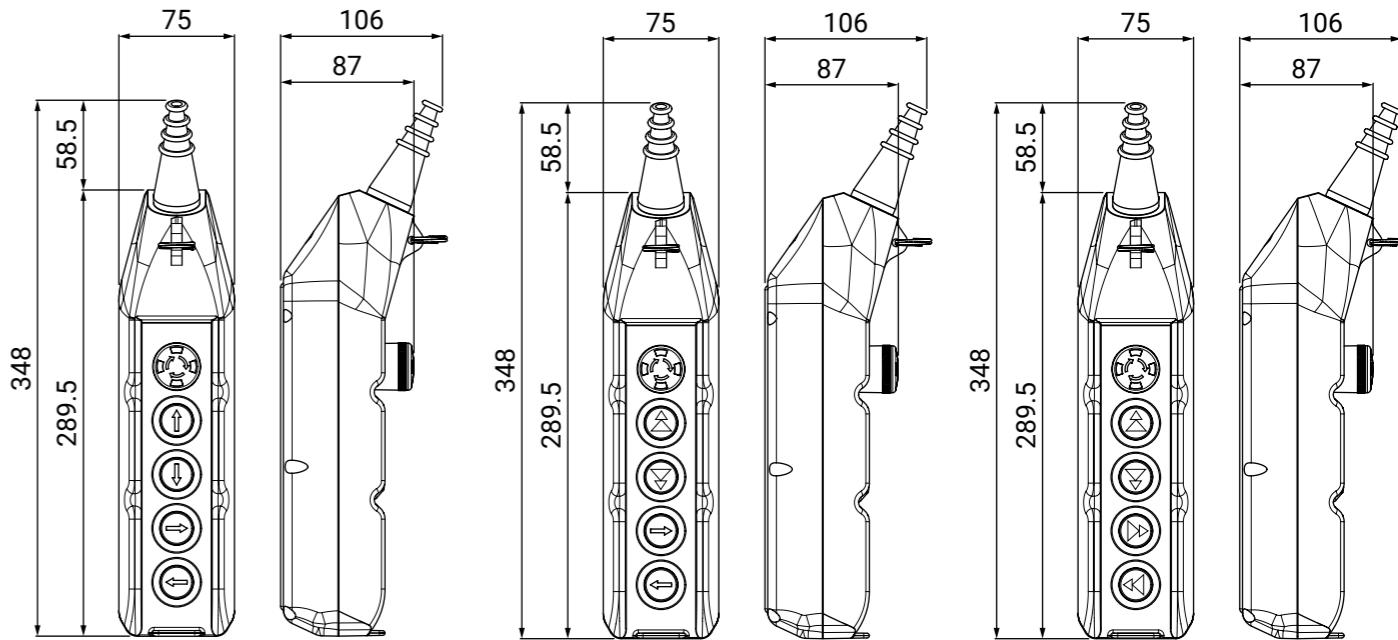
Available codes



PLN05

PLN05.D2

PLN05.D4



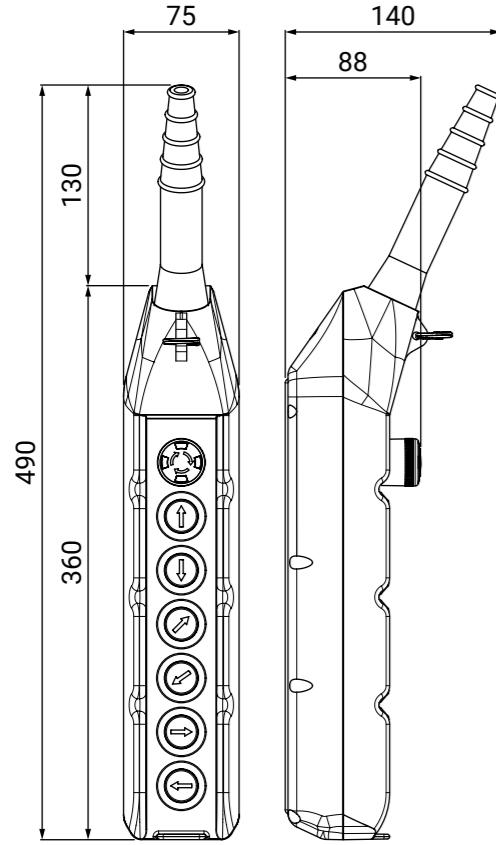


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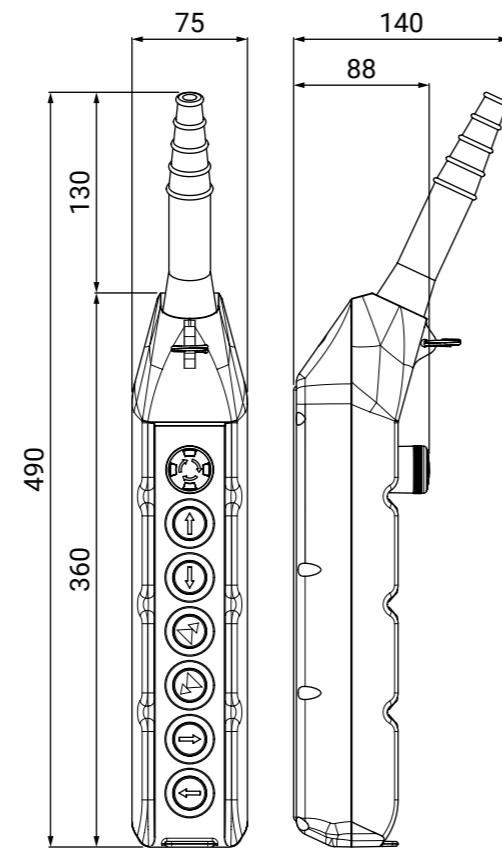
Available codes



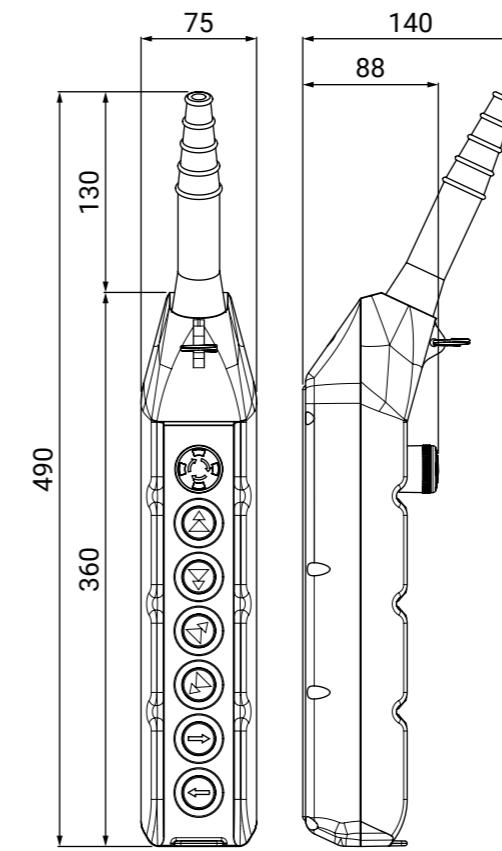
PLN07



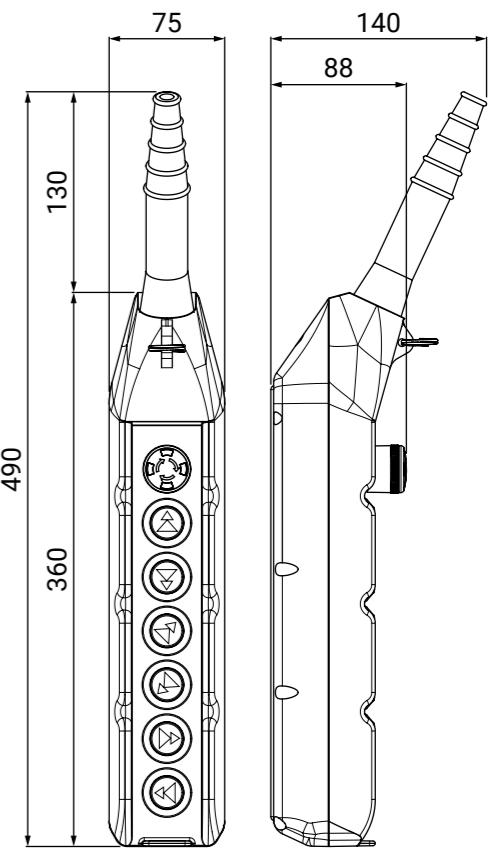
PLN07.D2



PLN07.D4



PLN07.D6



Available codes

PLN07
Pendant control station

PENDANT
STATIONS

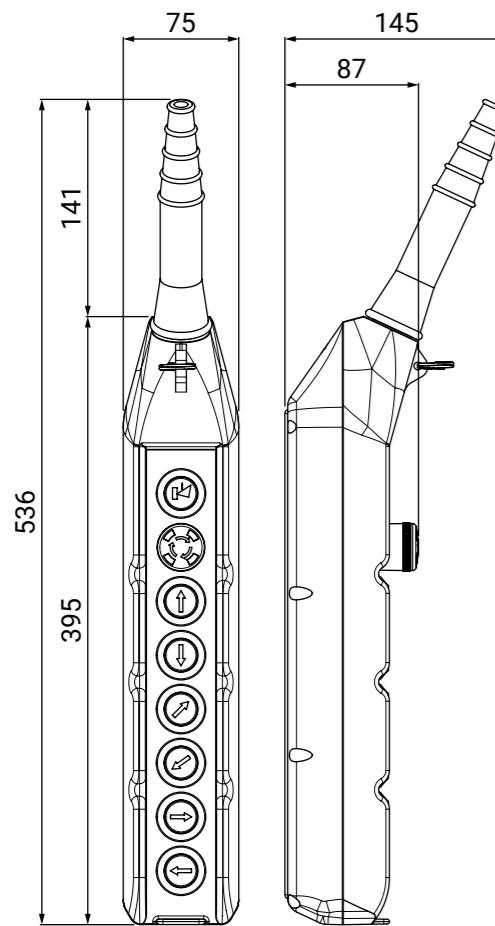


GIOVENZANA
INTERNATIONAL B.V.

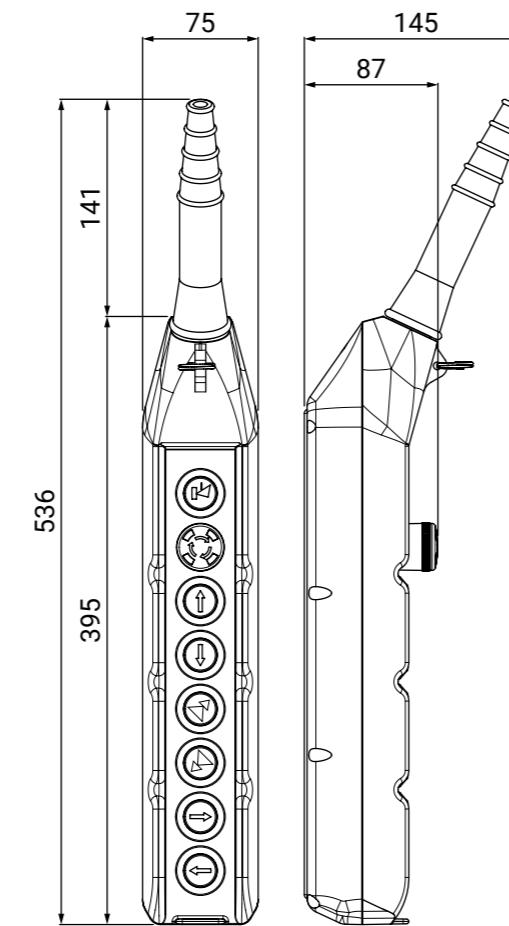
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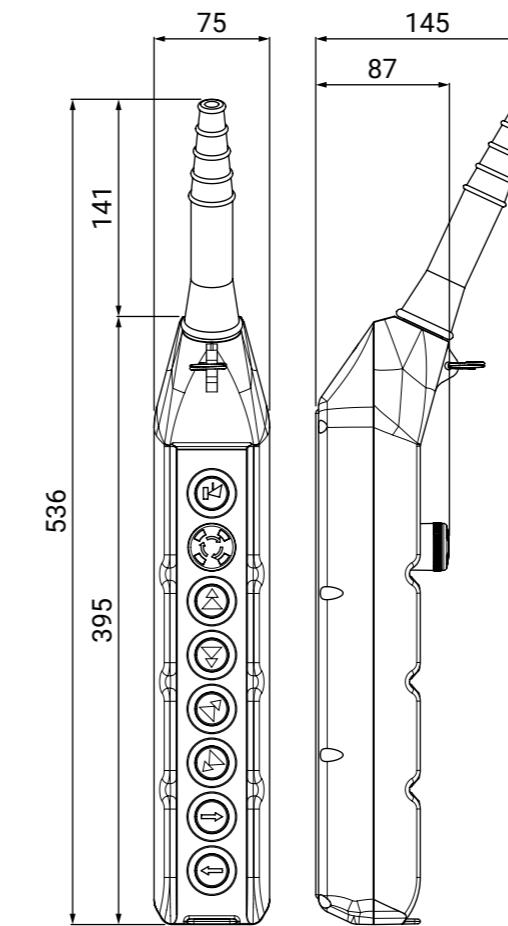
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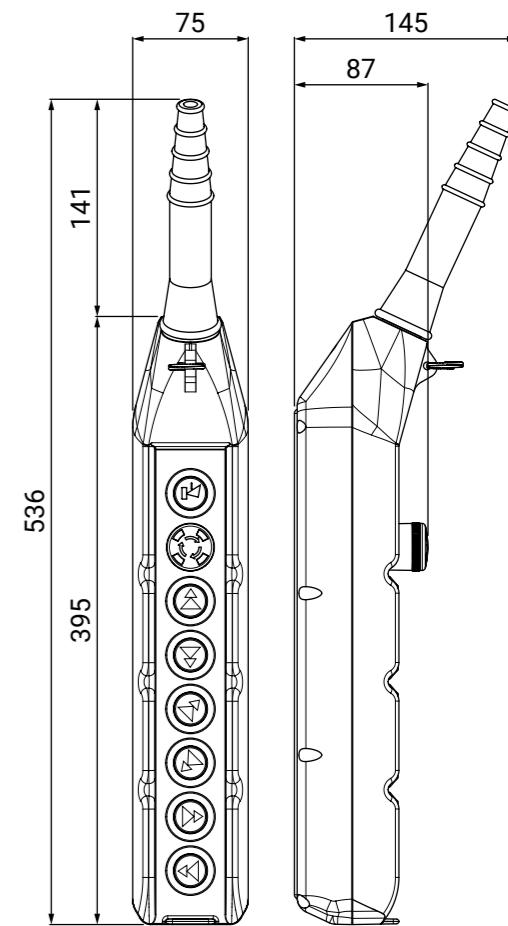
PLN08.D2



PLN08.D4



PLN08.D6



Available codes

PLN08
Pendant control station

PENDANT
STATIONS



GIOVENZANA
INTERNATIONAL B.V.

Available codes

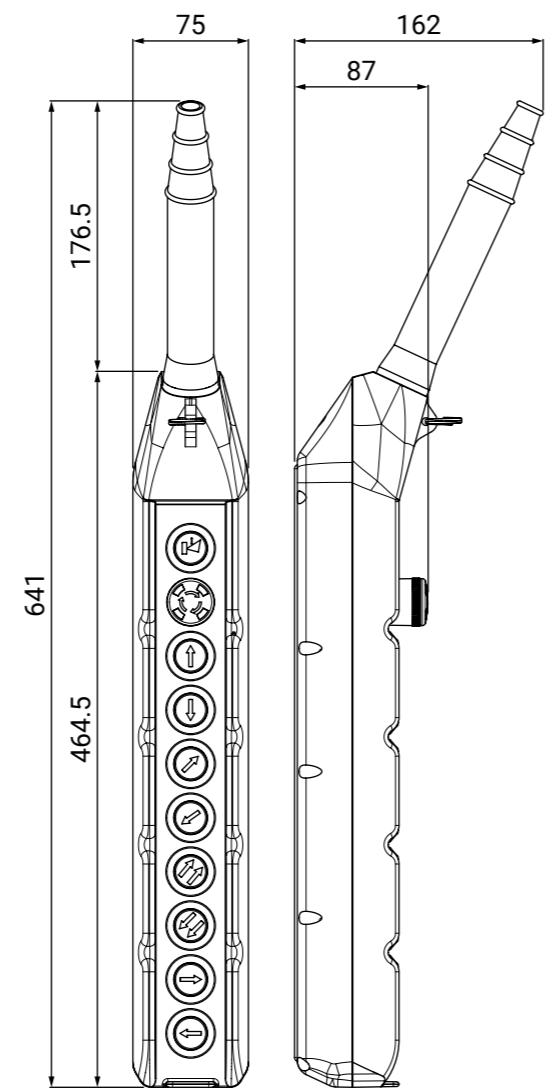


PLN10

Pendant control station

Available codes

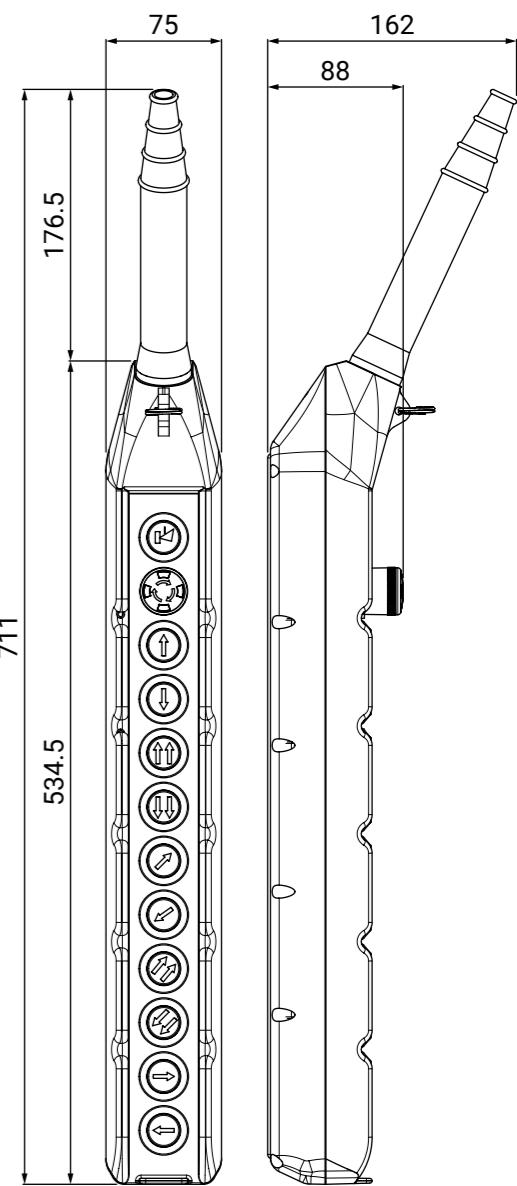
PLN10



PLN12

Pendant control station

PLN12



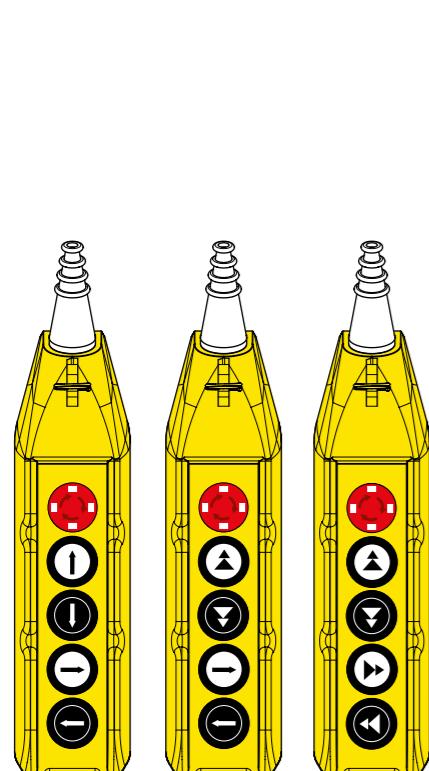


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PLN SERIES

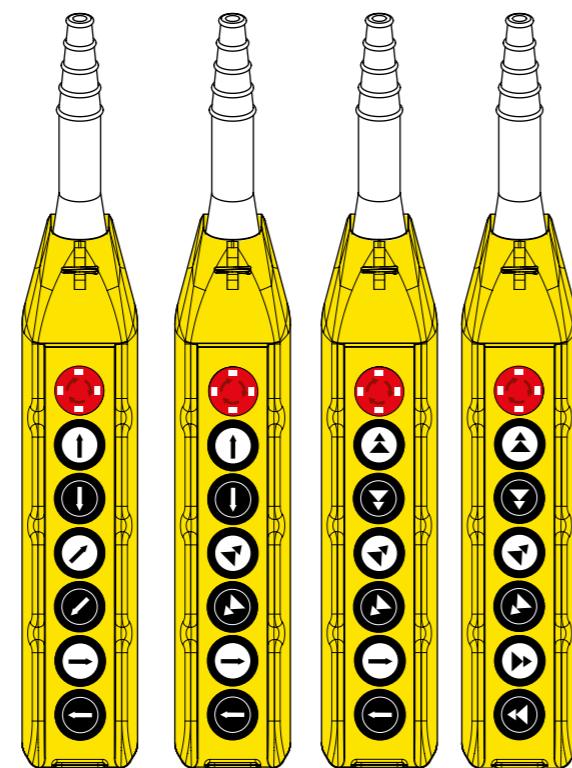
Pendant control stations

PENDANT STATIONS



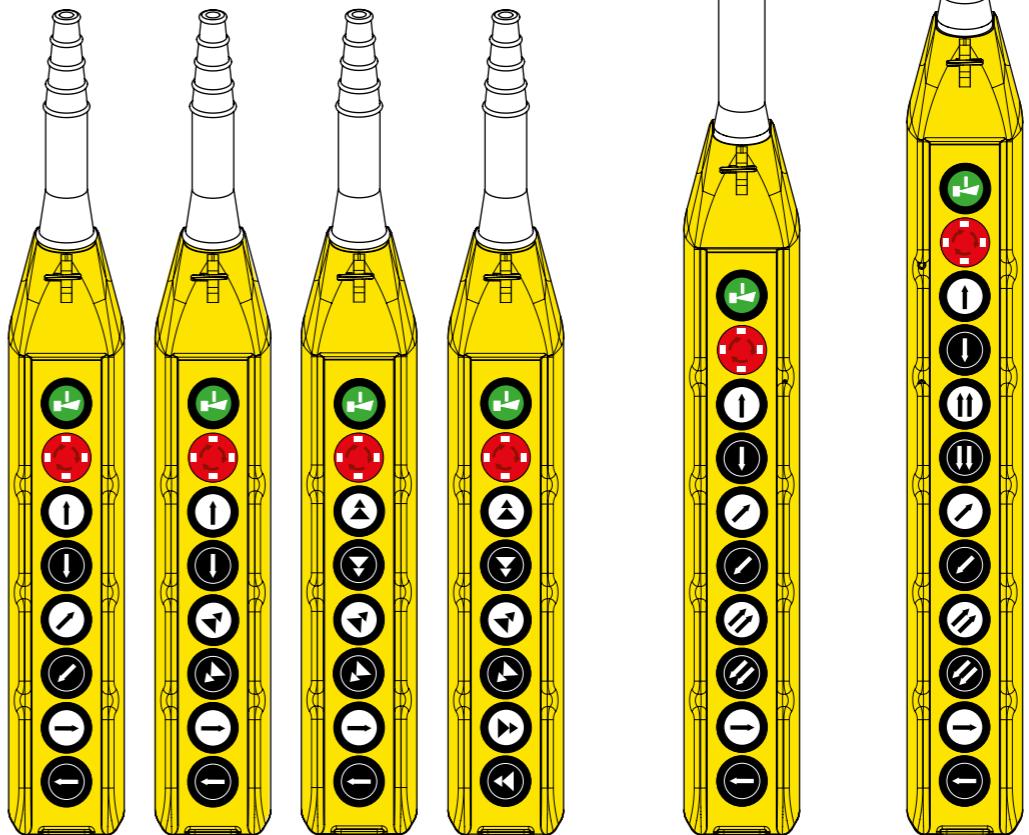
PLN05 PLN05.D2 PLN05.D4

5



PLN07 PLN07.D2 PLN07.D4

7



PLN08 PLN08.D2 PLN08.D4 PLN08.D6

8

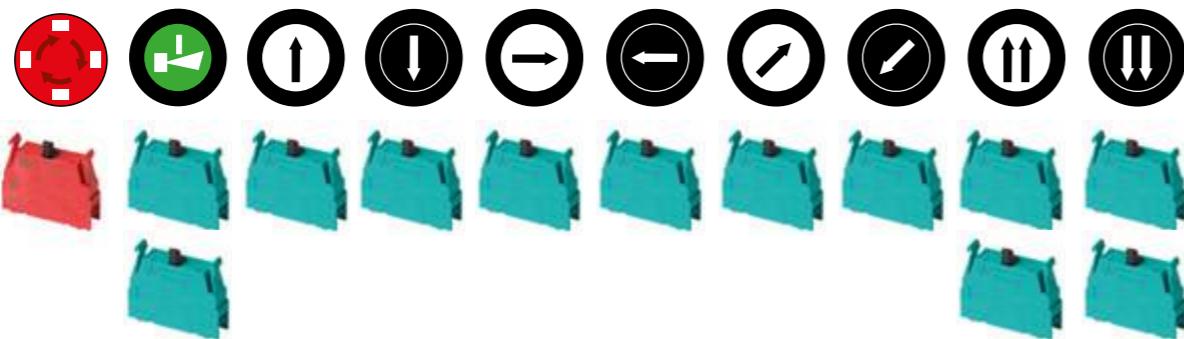
PLN10 PLN12

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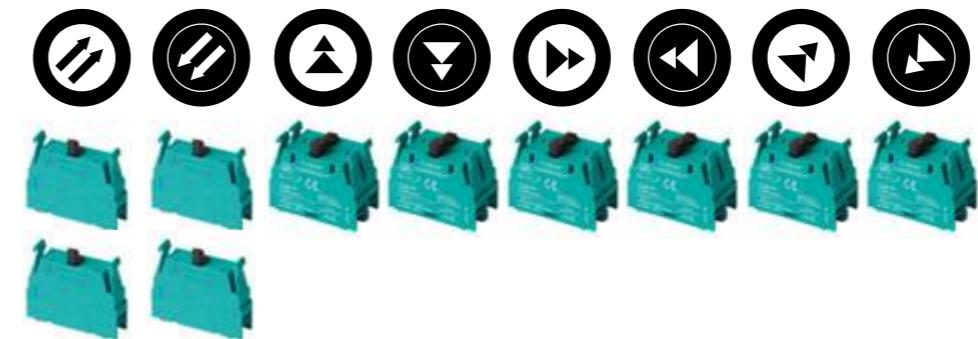
12

CONTACT CONFIGURATION

CONTACT CONFIGURATION



1 NC 2 NO 1 NO 1 NO 1 NO 1 NO 1 NO 2 NO 2 NO



2 NO 2 NO NO+NO NO+NO NO+NO NO+NO NO+NO NO+NO

CONTACT CODE

Single speed



1 NC



PL004001



1 NO



PL004002

Double speed



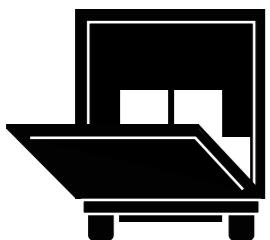
NO + NO



PL004010.S



GIOVENZANA
INTERNATIONAL B.V.



TRUCK TAIL LIFT



TLP

Wall-mounted control station

Single row wall-mounted control station from 1 to 4 holes for truck tail lift

Features

- Bi-directionality is mechanically interlocked;
- IP65 Double insulation (IEC / EN 60529);
- Laser engraved symbols according to EN 60204-1, FEM 9.941;
- Shock proof and heat resistant;
- Available versions: from 1 to 5 holes;
- Available with UL/CSA requirements;
- Available upon request also in V0 material, UL approved.
- Available in kit version.

Available codes

TLP1.EPP							
TLP1.ESR							
TLP2							
TLP3.B							
TLP3.D							
TLP4.C							
TLP4.E							

Compliance and certifications

- 2014/35/UE
- 2011/65/UE RoHS
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005 EN ISO 13850 2015)
- EN 60204-1 (2006/A1 : 2009)
- EN-ISO 13849-1 (2015)
- EN ISO 13849-2 (2012)
- EN 60529 (1991/A1 : 2000/A2 : 2013)

Technical data

General characteristics

Compliant to standards		IEC / EN60947-5-1
Material		PP
Material Group		II
Pollution class		3
Temperature	operating storage	-25°C ... +70°C -30°C ... +70°C
Climate resistance	IEC68 part 2-3 IEC68 part 2-30	hot dump unsettled hot damp
Cable entry		Cable gland M20

Electrical characteristics - Contact blocks

Marking								
Rated insulation voltage [Ui]						690 V *		
Rated impulse withstand voltage [Uimp]						4 kV *		
Frequency						50/60 Hz *		
Rated thermal current [ith]						16 A *		
Rated thermal current in enclosure [ithe]						10 A		
Rated operational current [le]								
AC-15 alternate current		type: PCW..				24 V 16 A * 60 V 12 A 110 V 5 A 240 V 5 A * 400 V 4 A 440 V 4 A 500 V 4 A * 690 V 2 A		
DC-13 direct current		type: PCW..				24 V 2 A 48 V 2 A * 60 V 1 A * 110 V 0.4 A 250 V 0.4 A *		
Conditional short circuit withstand current						1000 A *		
Fuses rating gC						10 A * - 500 V		
Contact insulation resistance						≤ 25 mΩ		
Switching mechanism		type: PCW..				slow break double gap contacts		
Positive operation						NC contact blocks - positive opening		
Operating force						4 N		
Electric durability AC-15						1 A 1.5 millions of cycles 2 A 0.5 millions of cycles 3 A 0.25 millions of cycles		
Terminal type		type: PCW..				M3.5 screw terminals		
Terminal capacity		type: PCW..				N° 1 or 2 flexible and solid conductor 1 ... 2.5 mm²		

UL508 characteristics

Rated insulation voltage [Ui]		10 A - 600 V ac / 2.5 A - 125 V dc
Rated impulse withstand voltage [Uimp]		A600-Q600

* IMQ approved values



GIOVENZANA
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Available codes



TLP1.EPP



TLP1.ESR



TLP2

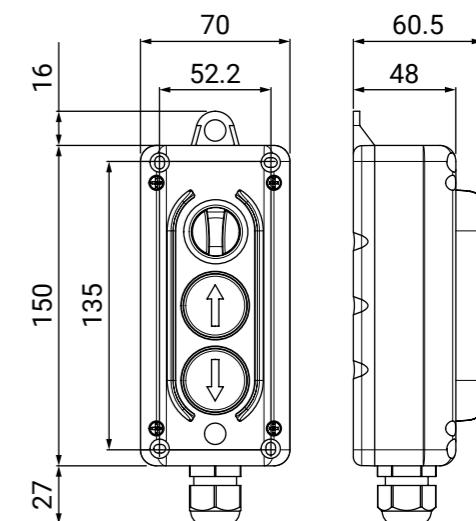
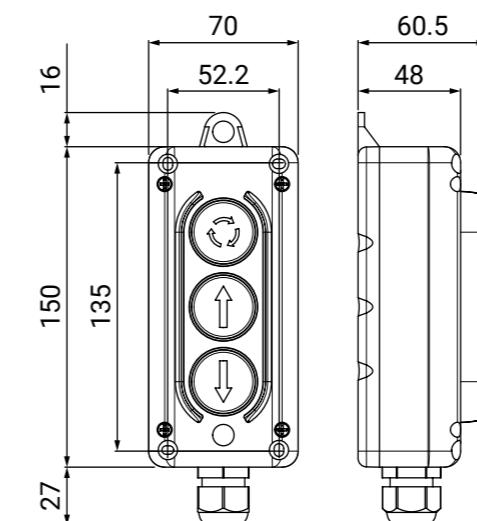
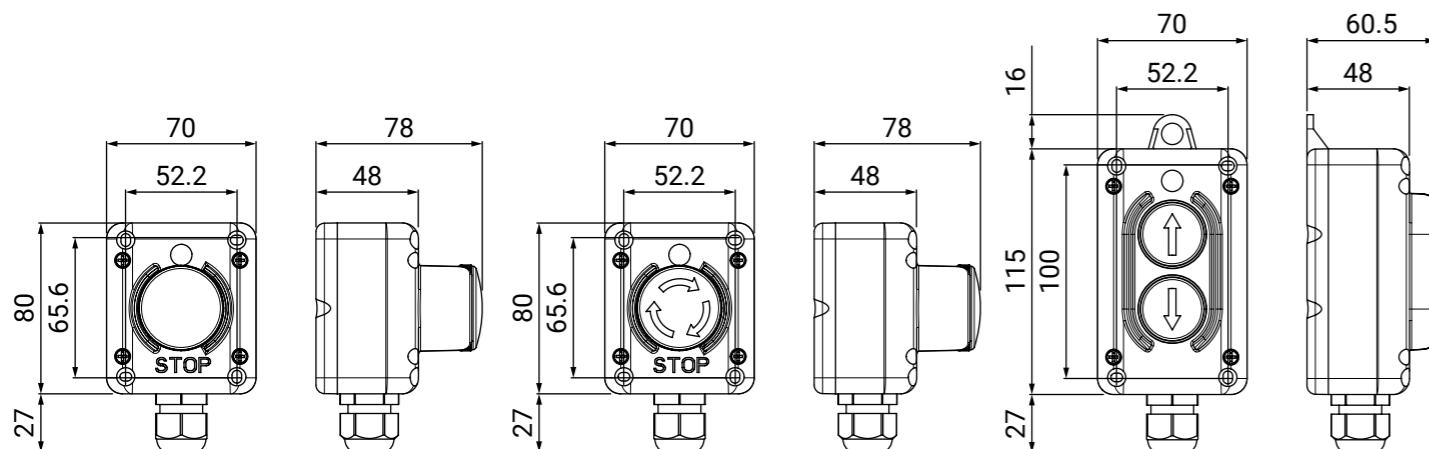
Available codes



TLP3.B



TLP3.D





GIOVENZANA
INTERNATIONAL B.V.

TLP

Wall-mounted control station

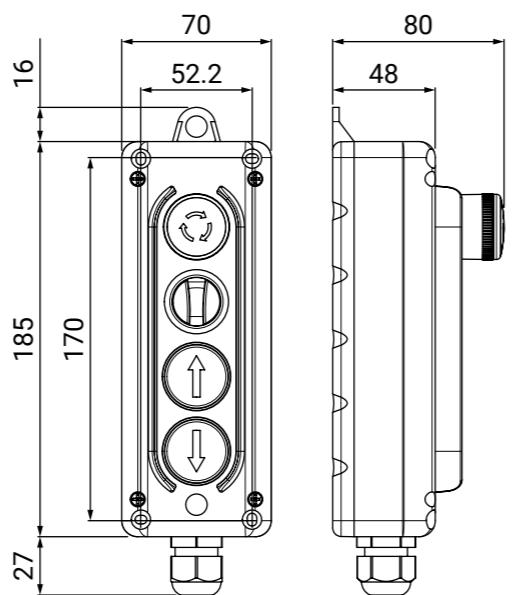
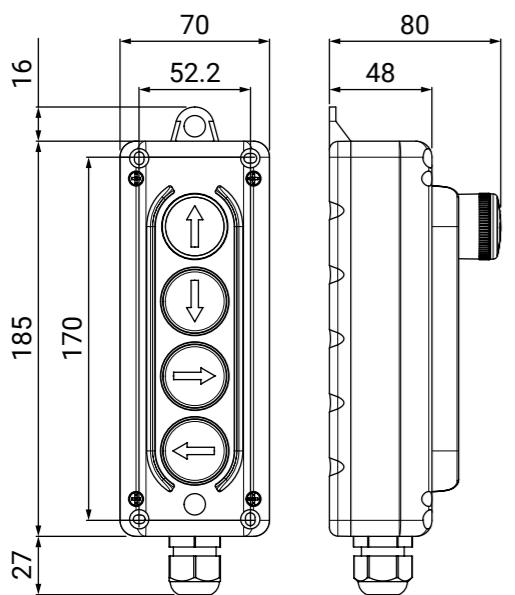
Available codes



TLP4.C



TLP4.E



Standard versions

PRODUCT CODE	LAYOUT	PUSH BUTTON	CONTACT CONFIGURATION
TLP1.EPP			 1 NC
TLP1.ESR			 1 NC
TLP2		 	 1 NO 1 NO
TLP3.B		 	 1 NC 1 NO 1 NO
TLP3.D		 	 1 NO 1 NO 1 NO
TLP4.C		 	 1 NO 1 NO 1 NO
TLP4.E		 	 1 NC 1 NO 1 NO

CONTACT CODE
Single speed
1 NC
PCW01
1 NO
PCW10



GIOVENZANA
INTERNATIONAL B.V.

CUSTOM KITS

Pendant station and wall-mounted control stations

Giovenzana International B.V., leader in the field of handling system, produces a wide range of pendant control stations able to satisfy the most varied requirements. This range of products is also available in **fully custom kits**.

COMPOSE YOUR OWN CISTOM KIT IN 3 EASY STEPS:

STEP 01

Choose the **pendant station type** as to page 56.

01



P02K - Single row pendant station with two holes for small hoist + assembly components

P03K - Single row pendant station with three holes for small hoist + assembly components

PL .. 05K - Single row pendant station with five holes for crane + assembly components

PL .. 07K - Single row pendant station with seven holes for crane + assembly components

PL .. 08K - Single row pendant station with eight holes for crane + assembly components

PL .. 10K - Single row pendant station with ten holes for crane + assembly components

PL .. 12K - Single row pendant station with twelve holes for crane + assembly components

PLB .. 04K - Double row pendant station with four holes for crane + assembly components

PLB .. 06K - Double row pendant station with six holes for crane + assembly components

PLB .. 08K - Double row pendant station with eight holes for crane + assembly components

PLB .. 10K - Double row pendant station with ten holes for crane + assembly components

PLB .. 12K - Double row pendant station with twelve holes for crane + assembly components

PLB .. 14K - Double row pendant station with twelve holes for crane + assembly components

TLP01K - Single row wall-mounted control station with one hole for truck tail lift + assembly components

TLP02K - Single row wall-mounted control station with two holes for truck tail lift + assembly components

TLP03K - Single row wall-mounted control station with three holes for truck tail lift + assembly components

TLP04K - Single row wall-mounted control station with four holes for truck tail lift + assembly components

TLP05K - Single row wall-mounted control station with five holes for truck tail lift + assembly components

STEP 02

Choose the **laser engraved push buttons** between our three series and **additional components** as to page 58.

02



PLN SERIES

PL SERIES

PL SERIES - ITALIAN LASER ENGRAVED



ADDITIONAL COMPONENTS

STEP 03

Choose the **contact blocks** as to page 63.

03



CONTACT BLOCKS



LAMPHOLDERS



DOUBLE SPEED CONTACT BLOCKS

THREE EASY STEPS TO COMPOSE YOUR OWN CUSTOMIZED COMPLETE DEVICE!

01



PENDANT STATION TYPE

02



LASER ENGRAVED
PUSH BUTTONS +
ADDITIONAL COMPONENTS

03



CONTACT BLOCKS



GIOVENZANA
INTERNATIONAL B.V.

CUSTOM KIT

Pendant and wall-mounted

STEP 01

CHOOSE THE PENDANT STATION TYPE

The enclosure kit includes: pendant station base and cover, screws, gasket, cable sleeve and cable clamp, suspension ring, push button interlocks and coupling plates.

The list of detailed components for each type of control station is shown in our instruction manuals downloadable on our website www.giovenzana.com in the dedicated section of the technical documentation.



<https://www.giovenzana.com/technical-documentation/>



PLB .. 04K

4 HOLES



PLB .. 06K

6 HOLES



PLB .. 10K

10 HOLES



PLB .. 12K

12 HOLES



PLB .. 14K

14 HOLES



TLP1K

1 HOLE



TLP2K

2 HOLES



TLP3K

3 HOLES



TLP4K

4 HOLES



TLP5K

5 HOLES

PENDANT
STATIONS



GIOVENZANA
INTERNATIONAL B.V.

CUSTOM KIT

Pendant and wall-mounted

STEP 02

CHOOSE THE LASER ENGRAVED PUSH BUTTONS

Giovenzana International B.V. offers 3 different laser engraved push buttons lines: **PLN**, **PL** and **PL** for italian market (as example of the possibility to engrave different languages on request).

FEATURES

- Wide selection of 22 mm or 30 mm operators including push buttons, rotary switches with knob or key command, pilot lights, emergency push buttons and additional components.
- Large variety of colors available.
- Laser engraved symbols are strictly according to FEM 9.941.
- Customized engraving and laser engraved push buttons in other languages are available **on minimum quantity request**.



PLN LINE

New series improved in aesthetic form and ergonomic soft touch



PL LINE

Giovenzana historical laser engraved push buttons series



PL LINE - ITALIAN LASER ENGRAVED

Giovenzana historical italian laser engraved push buttons series (for italian market only).
Available the possibility to engrave different languages on minimum quantity request.

PLN LINE

LASER ENGRAVED PUSH BUTTONS

Pair with the contact block with the matching label **A** to page 63.



PLN003



PLN004



PLN014



PLN013



PLN027



PLN026



PLN023



PLN021



PLN025



PLN019



PLN040



PLN039



PLN024



PLN022



PLN028



PLN020



PLN001



PLN002



PLN009



PLN010



PLN007



PLN008



PLN012



PLN011

DOUBLE SPEED LASER ENGRAVED PUSH BUTTONS

Pair with the contact block with the matching label **C** to page 64.



PLN005



PLN006



PLN018



PLN017



PLN016



PLN015



PL LINE

LASER ENGRAVED PUSH BUTTONS

Pair with the contact block with the matching label **A** to page 63.



PL005019 PL005004 PL005020 PL005005 PL005031 PL005016



PL005027 PL005012 PL005028 PL005013 PL005032 PL005017



PL005023 PL005008 PL005024 PL005009 PL005033 PL005018



PL005001 PL005002 PL005003



PL005034 PL005035 PL005036 PL005037 PL005038 PL005039

DOUBLE SPEED LASER ENGRAVED PUSH BUTTONS

Pair with the contact block with the matching label **C** to page 64.



PL005021 PL005006 PL005025 PL005010 PL005029 PL005014

PL LINE - ITALIAN LASER ENGRAVED

LASER ENGRAVED PUSH BUTTONS

Pair with the contact block with the matching label **A** to page 63.



PL005054 PL005040 PL005055 PL005041 PL005057 PL005043
Discesa Sollevamento Salita Sollevamento Discesa Sollev. Vel. Salita Sollev. Vel. Sinistra Rotazione Destra Rotazione



PL005060 PL005046 PL005061 PL005047 PL005064 PL005050
Indietro Traslaz. Avanti Traslaz. Indietro Ponte Avanti Ponte Indietro Ponte Vel. Avanti Ponte Vel.



PL005058 PL005045 PL005059 PL005044 PL005063 PL005049
Sinistra Carrello Destra Carrello Avanti Carrello Indietro Carrello Sinistra Carr. Vel. Destra Carr. Vel.



PL005062 PL005048 PL005068 PL005069
Avanti Carr. Vel. Indietro Carr. Vel. Chiude Carrello Apre Carrello

DOUBLE SPEED LASER ENGRAVED PUSH BUTTONS

Pair with the contact block with the matching label **C** to page 64.



PL005056 PL005042 PL005066 PL005052 PL005067 PL005053
Discesa Sollev. 1-2 Vel. Salita Sollev. 1-2 Vel. Sinistra Carr. 1-2 Vel. Destra Carr. 1-2 Vel. Avanti Carr. 1-2 Vel. Indietro Carr. 1-2 Vel.



PL005065 PL005051
Indietro Ponte 1-2 Vel. Avanti Ponte 1-2 Vel.



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PILOT LIGHTS

Pair with the contact block with the matching label **B** to page 64



PLSL1NL PLSL2NL PLSL3NL PLSL4NL PLSL5NL

EMERGENCY PUSH BUTTONS

Pair with the contact block with the matching label **A** to page 63



PL013003BL	PPFN1C4NX	PL013001	PL013002
Mushroom ø40 push-pull momentary	Mushroom ø40 with key release	Mushroom ø30 twist to release with vision	Mushroom ø30 twist to release

ROTARY SWITCHES Ø22

Pair with the contact block with the matching label **A** to page 63



PL007001BL	PL007002BL	PL007003BL	PL006001BL	PL006002BL	PL006004BL
Rotary switch with operator ø22 0-1 / 90°	Rotary switch with operator ø22 1-0-2 / 45°	Rotary switch with operator ø22 1>0<2 / 45°	Rotary switch with removable key ø22, 0-1 / 90°	Rotary switch with removable key ø22, 1-0-2 / 45°	Rotary switch with removable key ø22, 1>0<2 / 45°

ADDITIONAL COMPONENTS



PL015001
Hole plug

PCF Fixing key

STEP 03

PAIR THE RIGHT CONTACT BLOCKS

CONTACT BLOCKS

- Giovenzana contact blocks offer the flexibility to operate multiple control circuits from a single pilot device.
 - Most operators can be stacked 3 deep and up to 3 across, providing a total of maximum 9 circuits per operator in any combination.
 - They are color coded for instant circuit identification to minimize wiring errors and to expedite the wiring process.
 - The customers can combine contact block types to achieve his nedeed function.

The last step to complete your custom kit is to choose the right contact block. Pair the contact after choosing the operators and follow the directions on the right coupling.

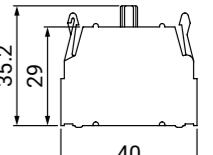
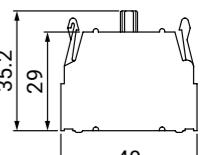
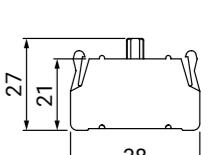
SINGLE SPEED CONTACT BLOCKS

Pair with the laser engraved push buttons with the matching label **A** from page 59 to 61.



PL004001 **PL004002** **PL004001CD** **PL004002CD** **PCW01** **PCW10**

For P02 / P03 / PL.. / PLB.. series For HP.. / TLP.. series

CODE	DESCRIPTION	DESIGNATION	FUNCTION	SIZES
PL004001	NC contact block Screw terminals Single speed	1 NC 2	0 1,5 6 mm	
PL004002	NO contact block Screw terminals Single speed	3 NO 4	0 3,5 6 mm	
PL004001CD	NC - Screw terminals Single speed Direct Control	1 NC 2	0 1,5 6 mm	
PL004002CD	NO - Screw terminals Single speed Direct Control	3 NO 4	0 3,5 6 mm	
PCW01	NC contact block Screw terminals Single speed	1 NC 2	0 1,5 6 mm	
PCW10	NO - Spring loaded terminals Single speed	3 NO 4	0 3,5 6 mm	



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DOUBLE SPEED CONTACT BLOCKS

Pair with the laser engraved push buttons with the matching label **C** from page 59 to 61.



PL004010.S
Double step
contact block
NO + NO

For P02 / P03 / PL / PLB / PLN / PLBN series



PCWDS
Double step
contact block
NO + NO

For HP03 / TLP series

SPARE PARTS & ACCESSORIES

Pendant and wall-mounted control stations

PENDANT
STATIONS



PL003011
Coupling plate 2 holes
for 6 contact blocks



PL003012
Coupling plate 3 holes
for 9 contact blocks



20100242
Locking support 2 holes
for 6 contact blocks



20100243
Locking support 3 holes
for 9 contact blocks

CODE	DESCRIPTION	DESIGNATION	SIZES
PL004010.S	NO contact block Screw terminals High plunger	1 st speed 3 NO → 4	
	NO contact block Screw terminals Low plunger	2 nd speed 3 NO → 4	
PCWDS	NO contact block Spring loaded terminals High plunger	1 st speed 3 NO → 4	
	NO contact block Spring loaded terminals Low plunger	2 nd speed 3 NO → 4	

LAMPHOLDER WITH BUILT-IN LED

Pair with the pilot lights with the matching label **B** to page 62.

For P02 / P03 / PL.. / PLB.. series	For HP.. / TLP.. series
 PL0045L12 AC/DC 12 V	 PCW5L12 AC/DC 12 V
 PL0045L24 AC/DC 24 V	 PCW5L24 AC/DC 24 V

DESIGNATION	DESIGNATION
X1 — ⊗ — X2	X1 — ⊗ — X2



12906011
P02 series
cable gland Ø 7 .. 14

12906006
P03 / PL .. 05 series
cable gland Ø 7 .. 18

12906004
PL .. 07 > PL .. 12 series
PLB .. 04 > PLB .. 06 series
cable gland Ø 9 .. 21

12906005
PLB .. 08 > PLB .. 14 series
cable gland Ø 12 .. 24



12901054
HP03 / TLP.. series
spiral cable gland M20 x 1.5

PL012001
Cable clamp
lever



16000061

Wall bracket
1 .. 3 holes

16000062

Wall bracket
4 .. 5 holes



ROTARY GEAR LIMIT SWITCHES

For more than 65 years, **Giovenzana International B.V.** has been designing and producing rotary gear limit switches, offering now four different series.

Rotary gear limit switches are used to control the movement of industrial machinery when it's necessary to measure movement based on the rotation angle and/or the number of shaft revolutions, providing upper, lower and/or intermediate limits for moving machinery and mechanisms.

Usually connected to the motor shaft, the rotary gear limit switch uses a series of gears and cams to activate a microswitch when the appropriate number of rotations is reached. This is generally used to stop the motor when a moving load has reached the desired position or final positions.

The device, through a gear transmission, controls a cam system operating on 2, 4 or more microswitches that after a certain number of revolutions predispose the motor or the equipment to the start or stop.

Each cam is equipped with a "micrometric" adjustable register screw that operates in an independent way, so it is possible to calibrate the opening and closing of each microswitch according to the necessary requirements.

The gear transmission system allows to choose different ratios and can be supplied in a bi-protruding shaft version or with linear control (potentiometer or encoder).

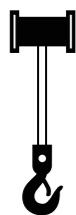
Each series of rotary limit switch has specific features which reduce time and costs for installation and maintenance.

Giovenzana International B.V. offers rotary gear limit switches with standard input ratios from 1:12 to 1:400 (custom input ratios are available on request up to 1:1482). They can be configured with maximum 6 contacts and combined with encoders and potentiometers to reach your own needs. We can offer snap action switches and different cam type to meet customers requirements.

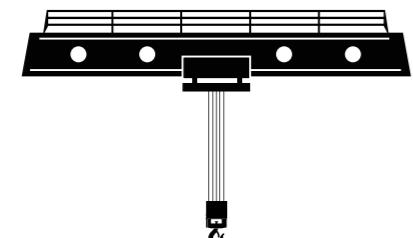
The wide range of the input ratios (standards and customized) available in our series, make every customers and applications needs satisfied.

APPLICATIONS

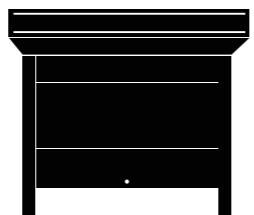
Giovenzana rotary limit switches are suitable for several applications: from lifting machinery to industrial overhead doors and boat lifts, from theatre lighting hoists to renewable energy systems, like wind turbines.



HOIST



CRANE



INDUSTRIAL DOORS



WIND TURBINES

SERIES



FGR0



FGR1



FGR2



FGR3

FEATURES

- The revolutions of the shaft are transmitted to a cam switch mechanism, through which mechanical switching contacts are actuated.
- Different ratios (also direct ratios) are available for the rotary gear limit switches of the FGR series.
- The switch can be equipped with a maximum of 8 switching contacts.
- Positive opening NC contacts for safety functions.
- Each cam can be individually adjusted to the desired position and thus enables flexible definition of end positions and reference points. More accurate adjustment of cams by means of screws.
- To reduce abrasion and rust, the transmission and guide shafts of the gears are made of stainless steel.
- The circumferential rubber gasket provides great protection against dust and water, allowing IP66 protection to be easily achieved for the entire products range.
- The optimised interior allows quick and easy cabling.

BENEFITS

- High protection class degree
- Extreme temperature resistance: -30°C to +70°C
- Easy use, resistance and durability
- Guaranteed safety



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FGR0

FGR1

GENERAL CHARACTERISTICS

CASE	Self-extinguishing thermoplastic material	Thermoplastic glass fiber reinforced material
PROTECTION CLASS	IP67 - IEC / EN 60529	IP65 - IEC / EN 60529
RATIO	1:12, 1:25, 1:33, 1:50, 1:75, 1:100, 1:150, 1:200, 1:400	1:12, 1:33, 1:50, 1:75, 1:100, 1:150, 1:200, 1:400
DIRECT RATIO	1:25, 1:50	1:50, 1:75, 1:100
SHAFT TYPE	Stainless steel mounted on self-lubricating bush protected by sealing rings on both sides Double overhang shaft version available on request	Stainless steel Double overhang shaft version available on request
FIXING TYPE	Base fixing Front fixing (flanged)	Base fixing Front fixing (flanged)
MICRO SWITCHES	Nr 4 max - micrometric adjustment of roller lever (long life)	Nr 4 max - micrometric adjustment of roller lever (long life)
CAM BLOCK	Self-lubricating with transparent support for easier cam viewing	Self-lubricating with transparent support for easier cam viewing
CABLE ENTRY	M16 (max 2)	M16 or M20 (max 4)
AMBIENTAL TEMPERATURE	Operating: -25°C ... +70°C Storage: -30°C ... +70°C	Operating: -25°C ... +70°C Storage: -30°C ... +70°C



FGR2

FGR3

GENERAL CHARACTERISTICS

CASE	Aluminium housing / self-extinguishing cover V0 UL94	Thermoplastic glass fiber reinforced material
PROTECTION CLASS	IP65 - IEC / EN 60529	IP66
RATIO	-	From 1:8 to 1:3572 (according to the configuration)
DIRECT RATIO	1:12, 1:33, 1:50, 1:100, 1:200	-
SHAFT TYPE	Steel mounted on ball bearings Double overhang shaft version available on request	AISI 304 Stainless steel mounted on ball bearings Double overhang shaft version available on request
FIXING TYPE	Base fixing Front fixing (flanged)	Base fixing
MICRO SWITCHES	Nr 6 max - micrometric adjustment	Nr 8 max - micrometric adjustment of roller lever (long life)
CAM BLOCK	Self-lubricating	Self-lubricating with transparent support for easier cam viewing
CABLE ENTRY	M20 (max 2)	M20 (max 3)
AMBIENTAL TEMPERATURE	Operating: -25°C ... +70°C Storage: -30°C ... +70°C	Operating: -40°C ... +90°C Storage: -40°C ... +90°C

ELECTRICAL CHARACTERISTICS		
MICRO SWITCHES CONNECTIONS	MFI.3 - 6.3 x 0.8 faston terminal MFI.3STP - Screws M3 for wire 1.5 mm ² with plate protection	MFI.7 - 6.3 x 0.8 faston terminal
STANDARD CONFORMITY	IEC / EN 61058-1, UL 1054, EN 60204-1, EN 60947-1, EN 60947-5-1	IEC / EN 61058-1, UL 1054, EN 60204-1, EN 60947-1, EN 60947-5-1
MARKING	CE, cRUus, CCC, EAC	CE, cRUus, CCC, EAC
RATED INSULATION VOLTAGE - Ui	250V	250V
RATED THERMAL CURRENT - Ith	8A	8A
RATED OPERATING CURRENT	Resistive Load Inductive Load	8A - 250 V AC 3A - 250 V AC
RATED IMPULSE WITH-STAND VOLTAGE - Uimp	1500 V	1500 V
POSITIVE OPENING	NC positive opening ⊖	NC positive opening ⊖
CONTACT BLOCKS	1NC - 1 NO changeover snap action / silver plated - self cleaning	1NC - 1 NO changeover snap action / silver plated - self cleaning
PROTECTION CLASS	IP40 (IP00 terminals) in according to EN 60529	IP40 (IP00 terminals) in according to EN 60529

ELECTRICAL CHARACTERISTICS		
MICRO SWITCHES CONNECTIONS	MFI.7 - 6.3 x 0.8 faston terminal	MFI.7 - 6.3 x 0.8 faston terminal
STANDARD CONFORMITY	IEC / EN 61058-1, UL 1054, EN 60204-1, EN 60947-1, EN 60947-5-1	IEC / EN 61058-1, UL 1054, EN 60204-1, EN 60947-1, EN 60947-5-1
MARKING	CE, cRUus, CCC, EAC	CE, cRUus, CCC, EAC
RATED INSULATION VOLTAGE - Ui	250V	250V
RATED THERMAL CURRENT - Ith	8A	8A
RATED OPERATING CURRENT	Resistive Load Inductive Load	8A - 250 V AC 3A - 250 V AC
RATED IMPULSE WITH-STAND VOLTAGE - Uimp	1500 V	1500 V
POSITIVE OPENING	NC positive opening ⊖	NC positive opening ⊖
CONTACT BLOCKS	1NC - 1 NO changeover snap action / silver plated - self cleaning	1NC - 1 NO changeover snap action / silver plated - self cleaning
PROTECTION CLASS	IP40 (IP00 terminals) in according to EN 60529	IP40 (IP00 terminals) in according to EN 60529

OPTIONS		
DOUBLE OVERHANG SHAFT	Available	Available
POTENIOMETER	According to customer request	-
ENCODER	-	-
CAM SHAPES	5 different cam shapes	5 different cam shapes
PINIONS	On request	20 different pinion shapes

OPTIONS		
DOUBLE OVERHANG SHAFT	Available	Available
POTENIOMETER	-	According to customer request
ENCODER	-	According to customer request
CAM SHAPES	3 different cam shapes	5 different cam shapes
PINIONS	20 different pinion shapes	20 different pinion shapes



GIOVENZANA
INTERNATIONAL B.V.

FGRO

Rotary gear limit switch



Rotary gear limit switch with overall reduced sizes

The FGRO is a device for controlling revolutions of rotating components or the angular position of industrial or construction machinery. A typical application is for small cranes. Also suitable for different applications such as automatic doors or automatic roofs in greenhouses. The unit, through a system of gears and cams transmission, controls 2 or 4 microswitches so, after a certain number of revolutions, predispose the motor or the equipment to the start or stop operation.

The microswitches have a calibration screw that works independently on each cam; so you can calibrate the opening and closing of each micro according to the necessary functional requirements.

The system change allows you to choose different ratios from 1:12 to 1:1480.

General features

- Different versions available:
 - base fixing;
 - front fixing (with standard flange and flange with increased lead);
 - with double overhang shaft (on request).
- Overall size is reduced.
- Two different cover heights depending on whether the device is equipped with 2 or 4 microswitches.
- IP67 protection class (IEC / EN 60529).
- Available in different ratios: 1:12, 1:25, 1:33, 1:50, 1:75, 1:100, 1:150, 1:200, 1:400 (optional on request).
- Available in direct ratio: 1:25, 1:50 (others direct ratio on request).
- Micro switches:
 - device available with 2 or 4 microswitches;
 - the working point is adjustable with a calibration screw;
 - each switch has 1NO + 1NC inside;
 - positive opening for NC contacts.

Compliance and certifications

- 2014/35/UE - 2014/33/UE - 2011/65/UE - 2015/863/UE
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005)
- EN 60204-1 (2006/A1 : 2009)
- EN 60529 (1991/A1 : 2000/A2 : 2013)
- EN 50581 (2012)
- IEC 63000 (2016)



Base Fixing versions

X-ray view



2 microswitches



4 microswitches

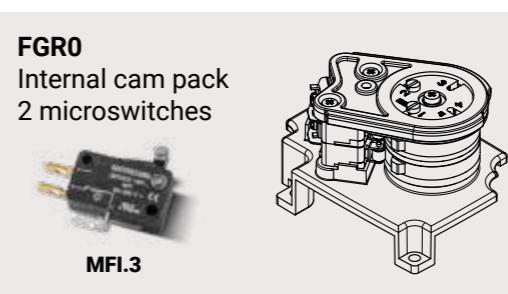


2 microswitches
Direct Ratio



4 microswitches
Direct Ratio

Available codes



FGRO
Internal cam pack
2 microswitches



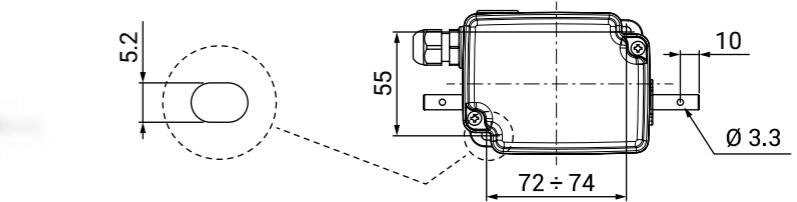
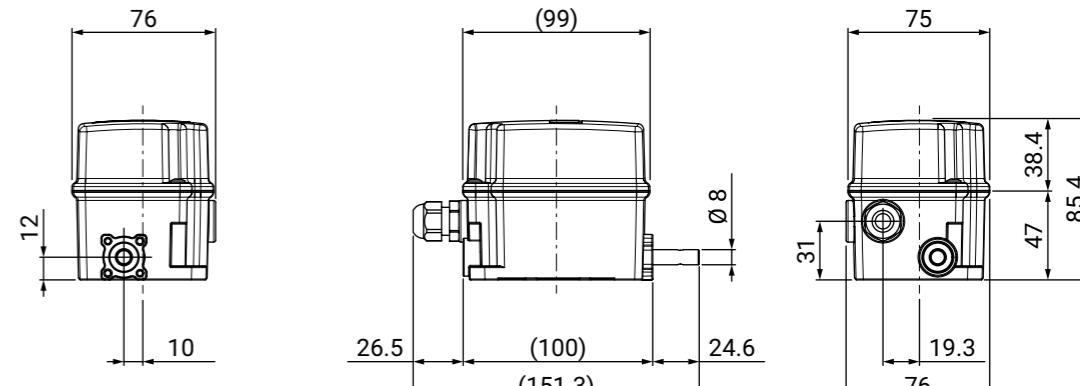
MFI.3



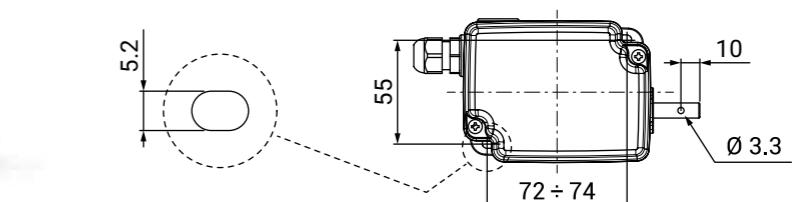
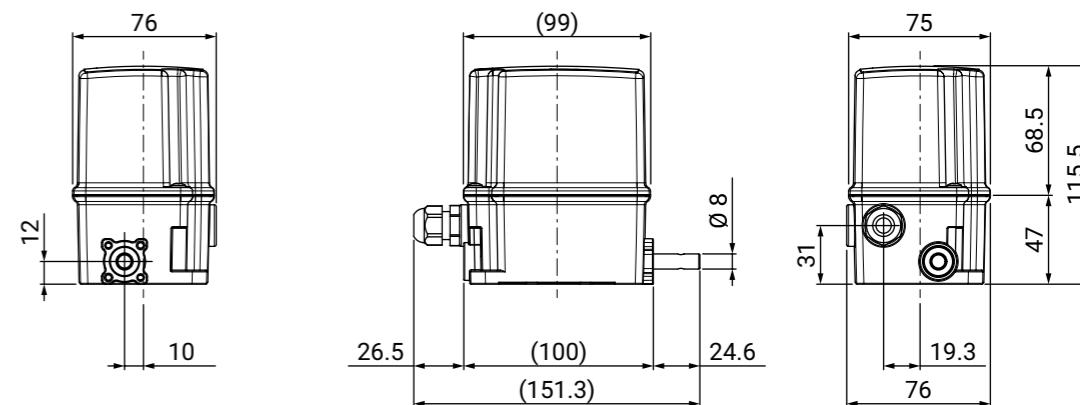
FGRO
Internal cam pack
4 microswitches



MFI.3



Base fixing
2 microswitches



Base fixing
4 microswitches

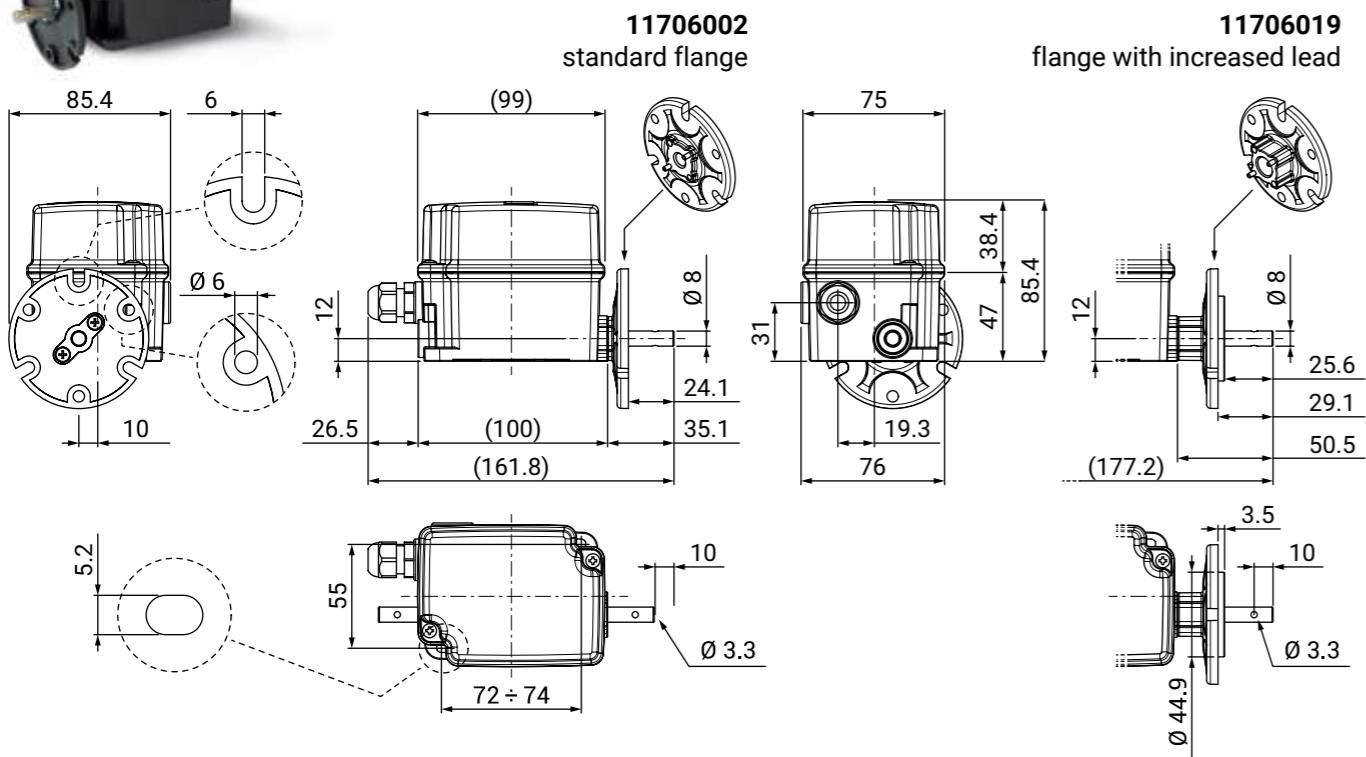


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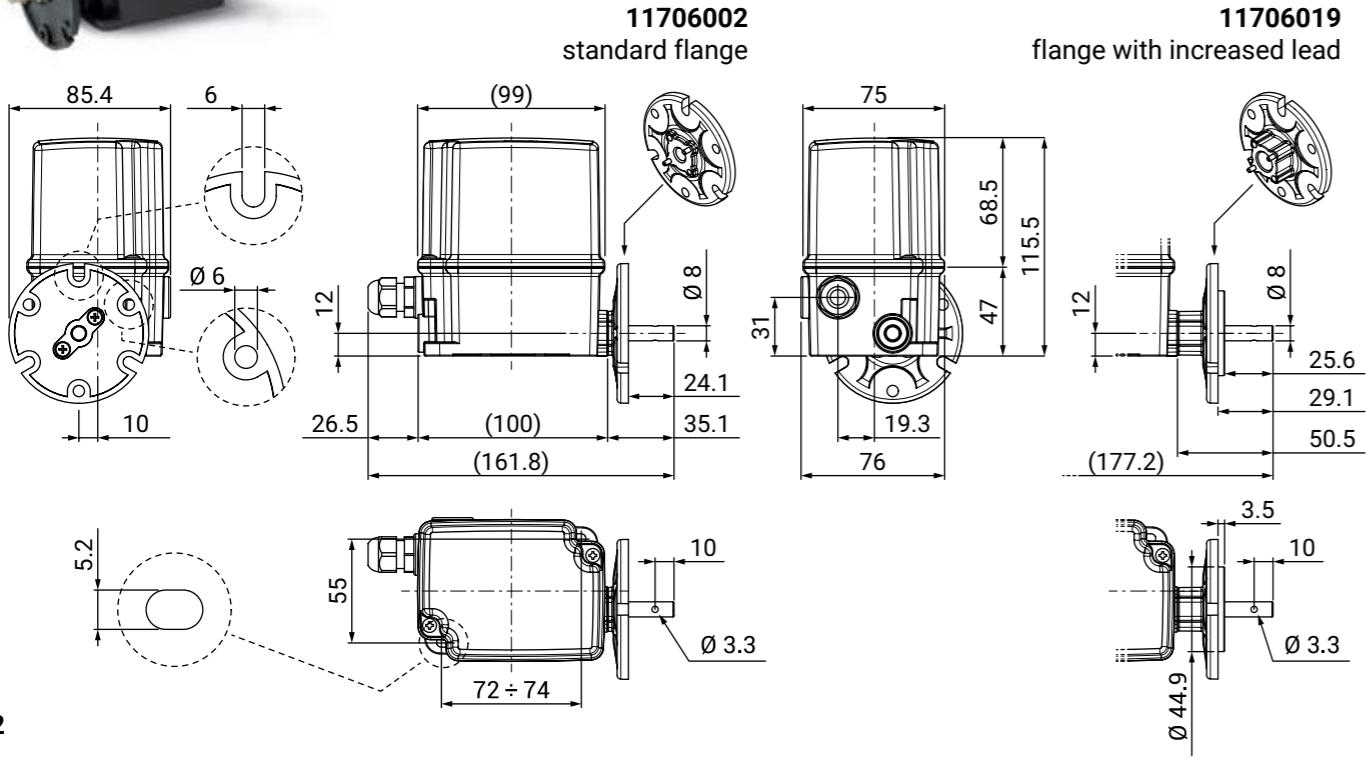
Available codes



Front fixing
2 microswitches



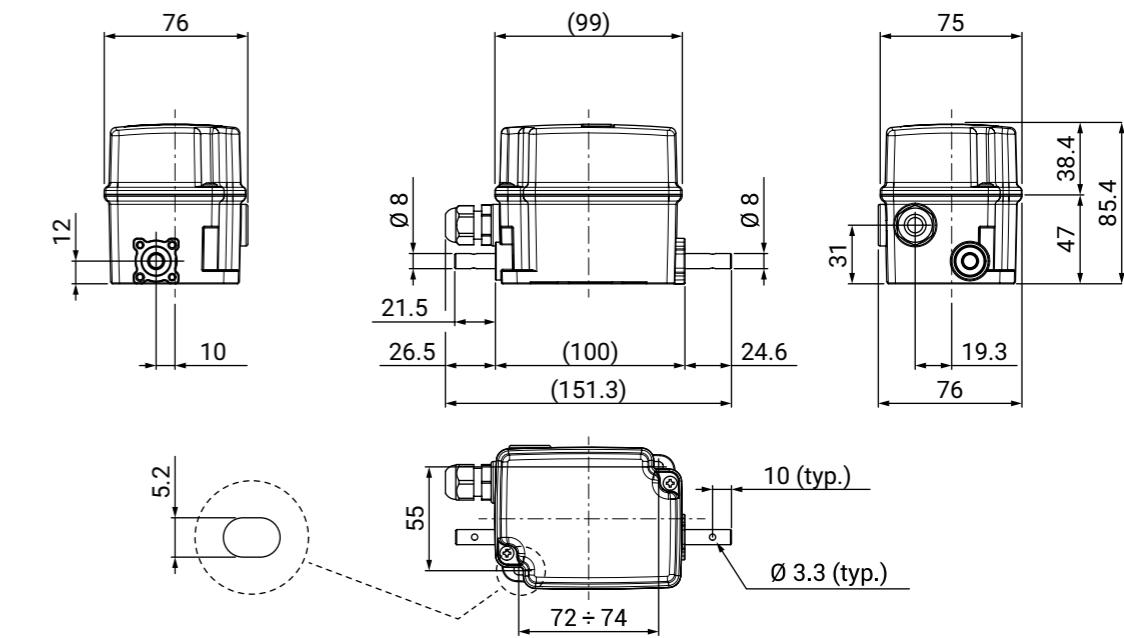
Front fixing
4 microswitches



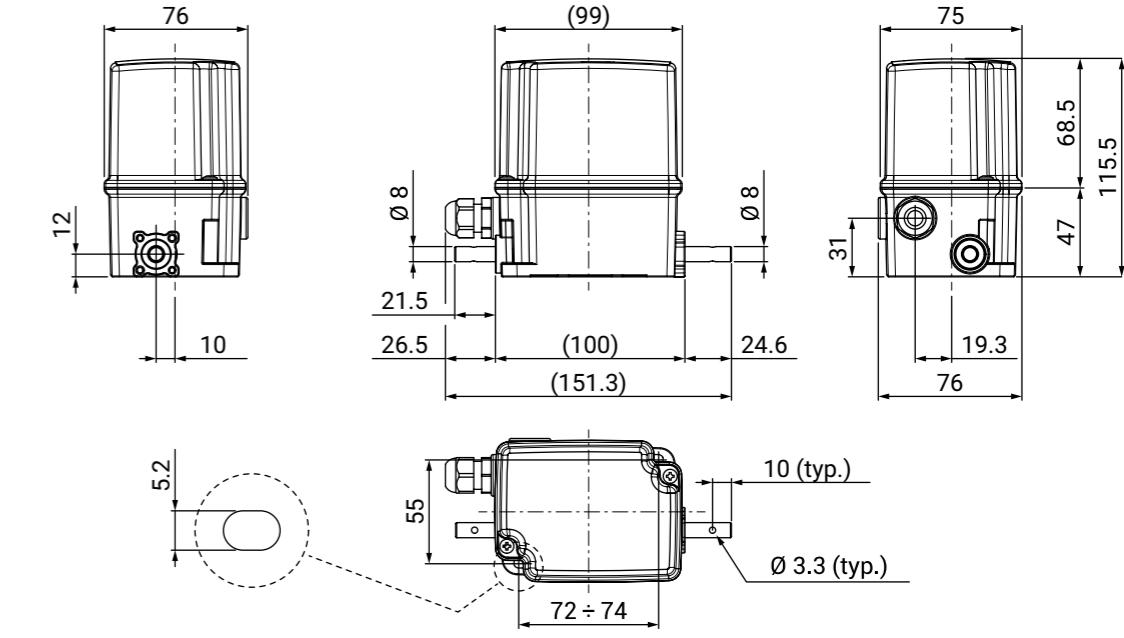
Available codes



Double overhang shaft
2 microswitches



Double overhang shaft
4 microswitches





Coding system

The FGR0 coding system is very clear: each block of digits identifies a specific function. The code provides all the informations that can be used to specify each customization.

FGR0	-	0012	M	-	4	A	-	E1	-	01
Series	-	Nr. gear ratio	Shaft type	-	Nr. contacts	Contacts type	-	Options	-	Progressive versions
			M = single shaft B = double overhang shaft			A = MFI.3 (standard) B = MFI.3STP (on request)		E = Encoder P = Potentiometer		Not standard shaft, cams, pinions, colors, logos, extra accessories, etc...

STANDARD ENCODING

OPTIONAL ENCODING

Available codes

- | | | | |
|---------------------------------------|---------------------------------------|---|---|
| Base fixing
2 microswitches | Base fixing
4 microswitches | Double overhang shaft
2 microswitches | Double overhang shaft
4 microswitches |
|---------------------------------------|---------------------------------------|---|---|



FGR0-0012M-2A	FGR0-0012M-4A	FGR0-0012B-2A	FGR0-0012B-4A
FGR0-0025M-2A	FGR0-0025M-4A	FGR0-0025B-2A	FGR0-0025B-4A
FGR0-0033M-2A	FGR0-0033M-4A	FGR0-0033B-2A	FGR0-0033B-4A
FGR0-0050M-2A	FGR0-0050M-4A	FGR0-0050B-2A	FGR0-0050B-4A
FGR0-0075M-2A	FGR0-0075M-4A	FGR0-0075B-2A	FGR0-0075B-4A
FGR0-0100M-2A	FGR0-0100M-4A	FGR0-0100B-2A	FGR0-0100B-4A
FGR0-0150M-2A	FGR0-0150M-4A	FGR0-0150B-2A	FGR0-0150B-4A
FGR0-0200M-2A	FGR0-0200M-4A	FGR0-0200B-2A	FGR0-0200B-4A
FGR0-0400M-2A	FGR0-0400M-4A	FGR0-0400B-2A	FGR0-0400B-4A

- | |
|---|
| Front fixing
2 or 4 microswitches |
|---|



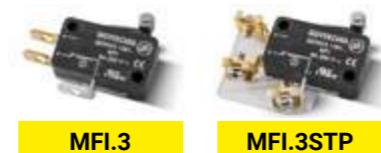
FGR0 Body with long shaft (see technical drawings to page 72)

+ **11706002**
standard flange

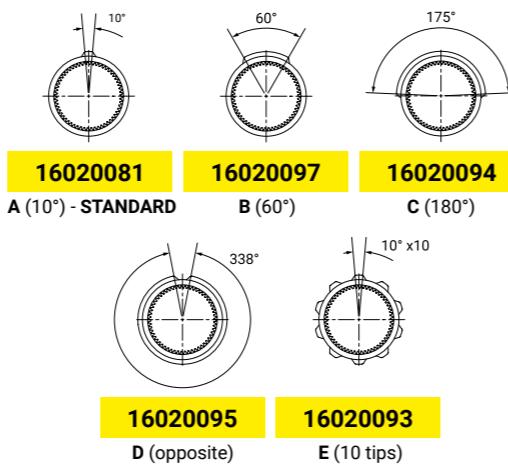


11706019
flange with increased lead

AVAILABLE CONTACT TYPES



AVAILABLE CAM SHAPES



Rotary gear limit switch

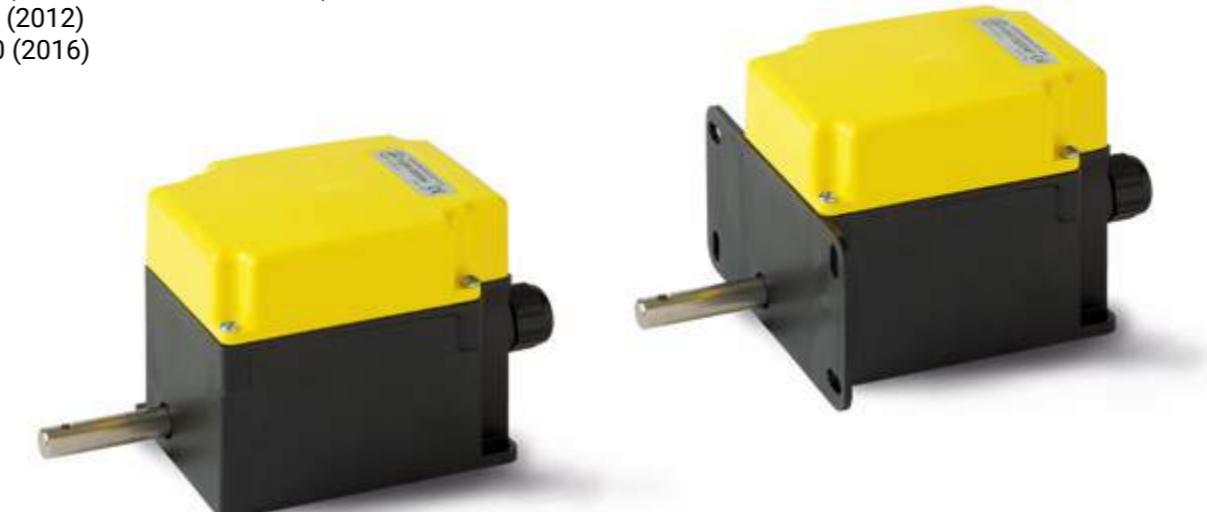
The **FGR1** is a device used to control and measure the movement of industrial machines by measuring the rotation angle and/or counting the number of revolutions of a shaft.

General features

- Different versions available:
 - base fixing;
 - front fixing;
 - with double overhang shaft.
- IP65 Protection class.
- Available in different ratios: 1:12, 1:33, 1:50, 1:75, 1:100, 1:150, 1:200, 1:400 (optional on request).
- Available in direct ratio: 1:50, 1:75, 1:100 (others direct ratio on request).
- Micro switches:
 - device available with 4 microswitches;
 - the working point is adjustable with a calibration screw;
 - each switch has 1NO + 1NC inside;
 - positive opening for NC contacts.

Compliance and certifications

- 2014/35/UE - 2014/33/UE - 2011/65/UE - 2015/863/UE
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005)
- EN 60204-1 (2006/A1 : 2009)
- EN 60529 (1991/A1 : 2000/A2 : 2013)
- EN 50581 (2012)
- IEC 63000 (2016)



Base Fixing versions

X-ray view



4 microswitches



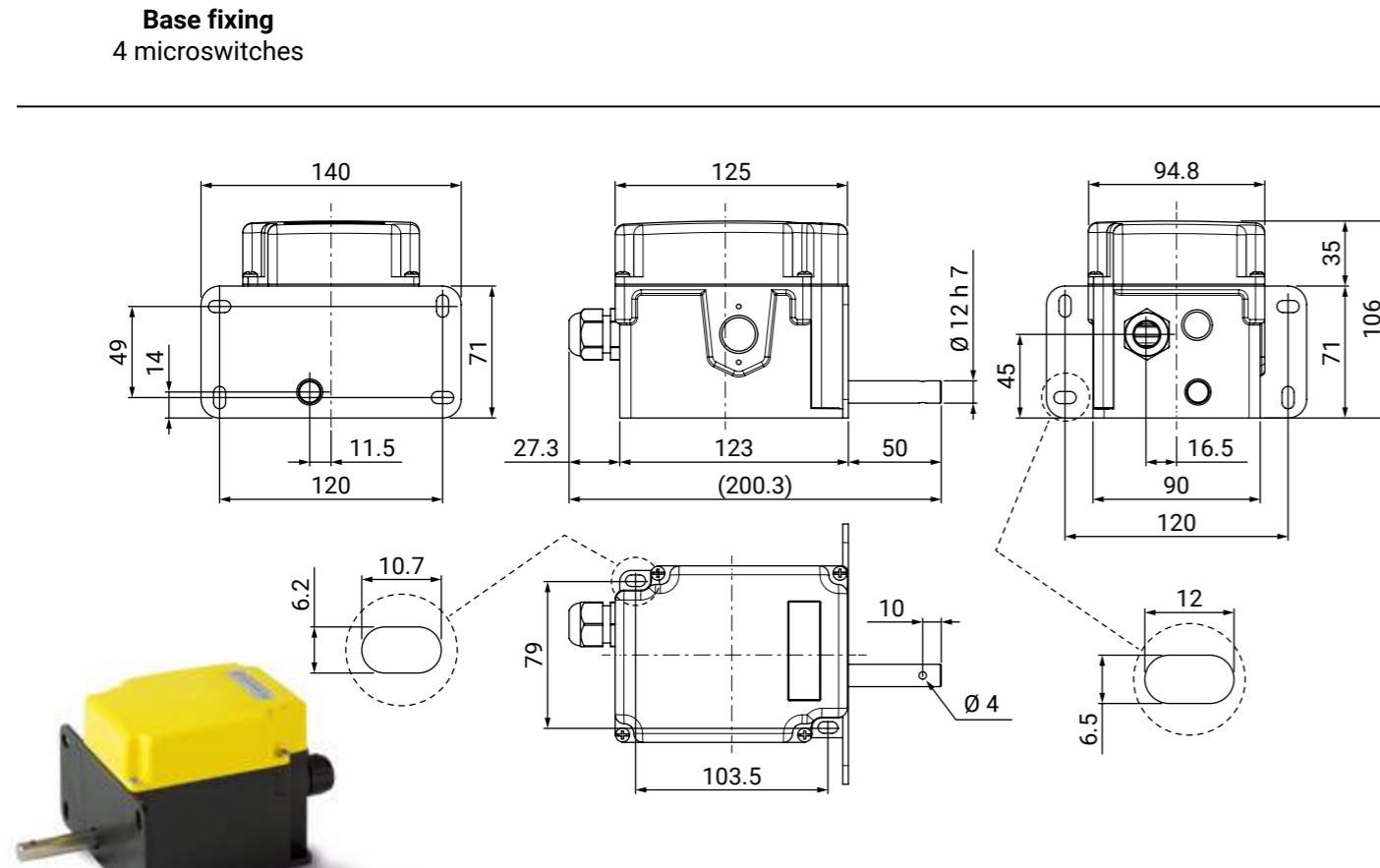
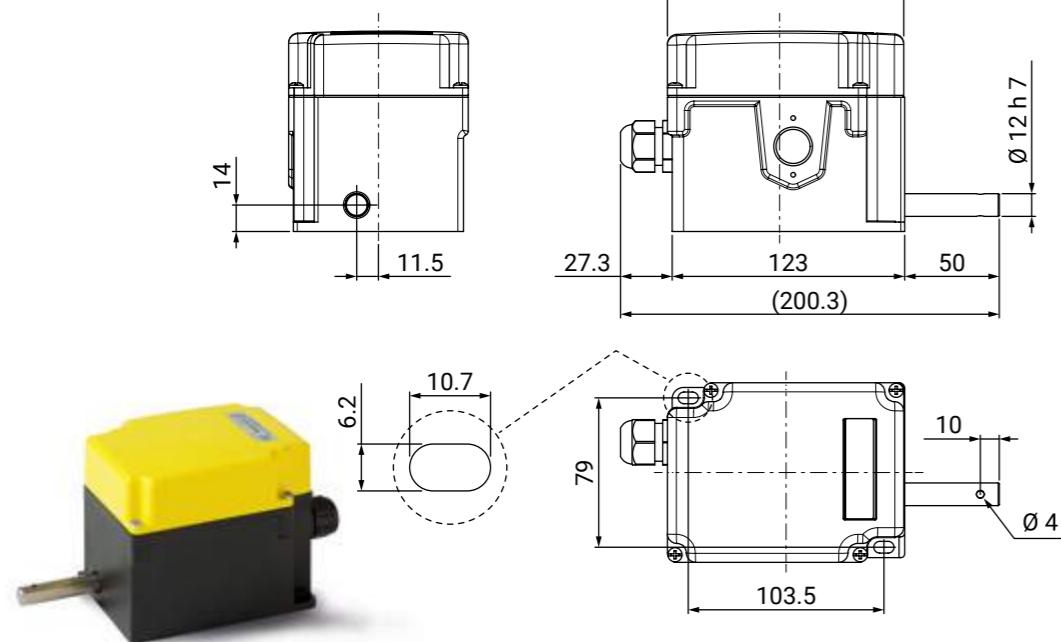
4 microswitches
Direct Ratio

Request your optional encoding!

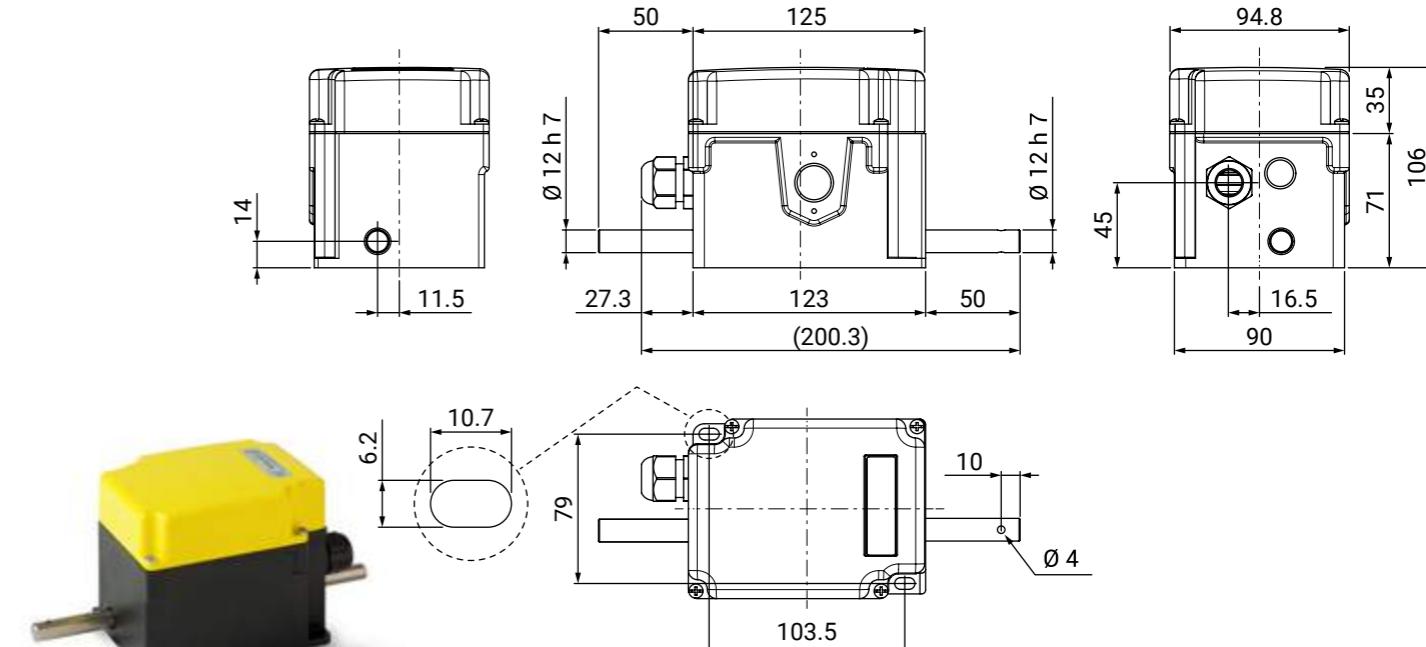


GIOVENZANA
INTERNATIONAL B.V.

Available codes



Available codes



**ROTARY LIMIT
SWITCHES**



Coding system

The FGR1 coding system is very clear: each block of digits identifies a specific function. The code provides all the informations that can be used to specify each customization.

FGR1	0012/0400	0-2-3-4	B	51-73	F	-	01
Series	Nr. gear ratio	Micro/cams	Shaft type	Pinion type	Flange	-	Options
	Between shaft and cam pack output. 0 = None 2 = Nr. 2 3 = Nr. 3 4 = Nr. 4	0 = None 2 = Nr. 2 3 = Nr. 3 4 = Nr. 4	Blank = Single shaft B = Double overhang shaft	Last two numbers of the pinion code. (refers to pages 86-87).	Blank = Without F = With flange	-	Progressive versions
STANDARD ENCODING						OPTIONAL ENCODING	

Available codes

Base fixing
4 microswitches



Front fixing
4 microswitches



Double overhang shaft
4 microswitches



FGR100124
FGR100334
FGR100504
FGR100754
FGR101004
FGR101504
FGR102004
FGR104004

FGR100124F
FGR100334F
FGR100504F
FGR100754F
FGR101004F
FGR101504F
FGR102004F
FFGR104004F

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FGR100504B
FGR100754B
FGR101004B
FGR101504B
FGR102004B
FGR104004B

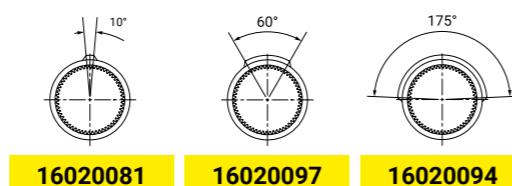
AVAILABLE CONTACT TYPES



MFI.7

MFI.7STP

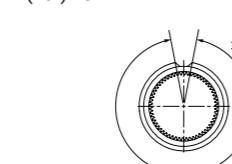
On request



16020081

16020097

16020094



16020095

16020093

D (opposite)

E (10 tips)

Rotary gear limit switch

The FGR2 is directed towards control of turns of the rotating drums which wrap cables, machinery, etc... Equipped with adjustable micrometric screw, lives on each one of the cam. Operating microswitches permits, using a screwdriver, calibration of the race and then opening or closing of contacts according to the functional needs.

General features

- Different versions available:
 - base fixing;
 - with double overhang shaft;
 - front fixing (base fixing + FLG accessory). On request.
- IP65 Protection class.
- Available in direct ratios: 1:12, 1:33, 1:50, 1:75, 1:100, 1:200 (optional on request).
- Micro switches:
 - device available with 4 or 6 microswitches;
 - the working point is adjustable with a calibration screw;
 - each switch has 1NO + 1NC inside;
 - positive opening for NC contacts.

Compliance and certifications

- 2014/35/UE - 2014/33/UE - 2011/65/UE - 2015/863/UE
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005)
- EN 60204-1 (2006/A1 : 2009)
- EN 60529 (1991/A1 : 2000/A2 : 2013)
- EN 50581 (2012)
- IEC 63000 (2016)

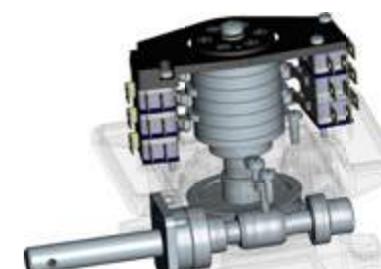


Base Fixing versions

X-ray view



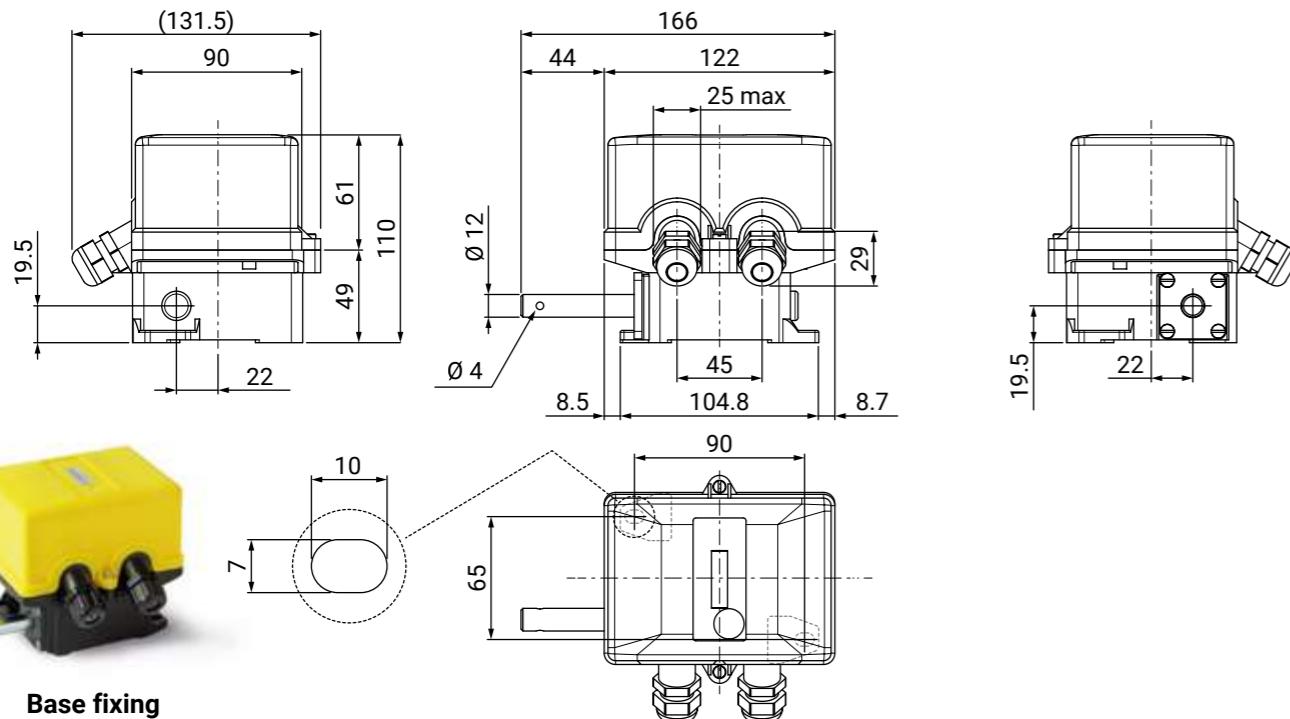
4 microswitches
Direct Ratio



6 microswitches
Direct Ratio

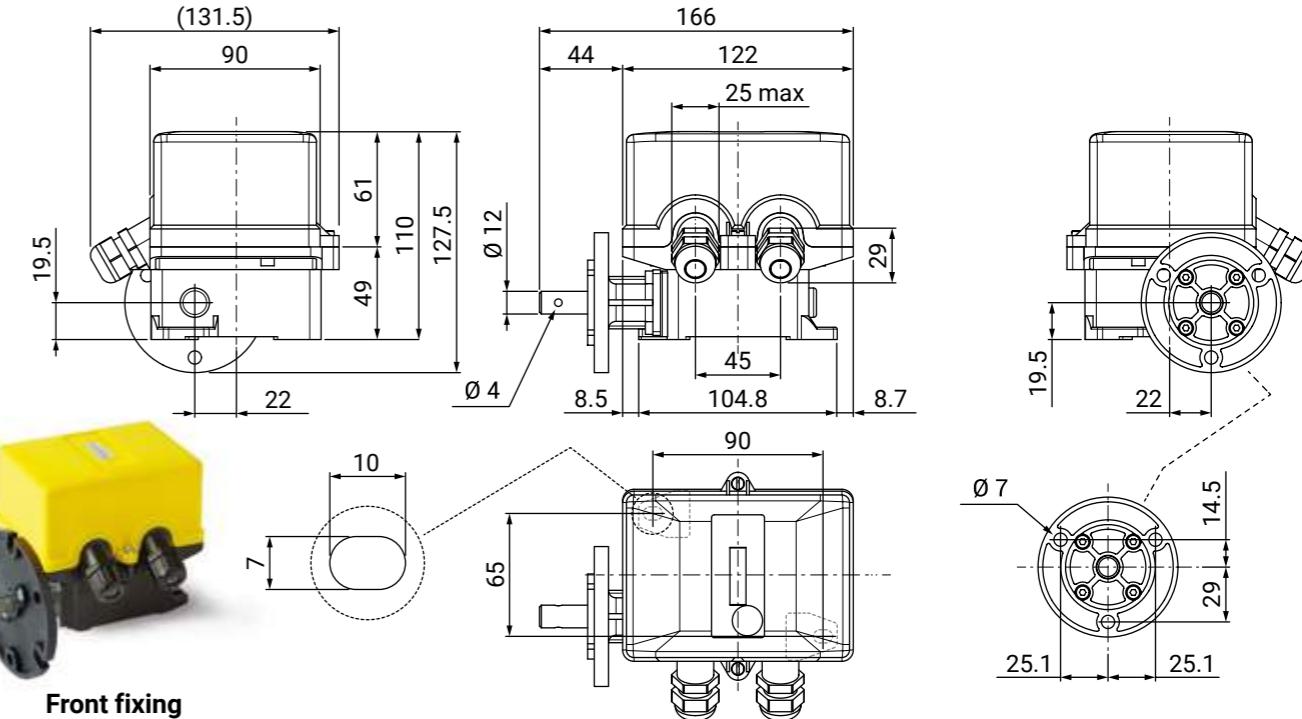


Available codes

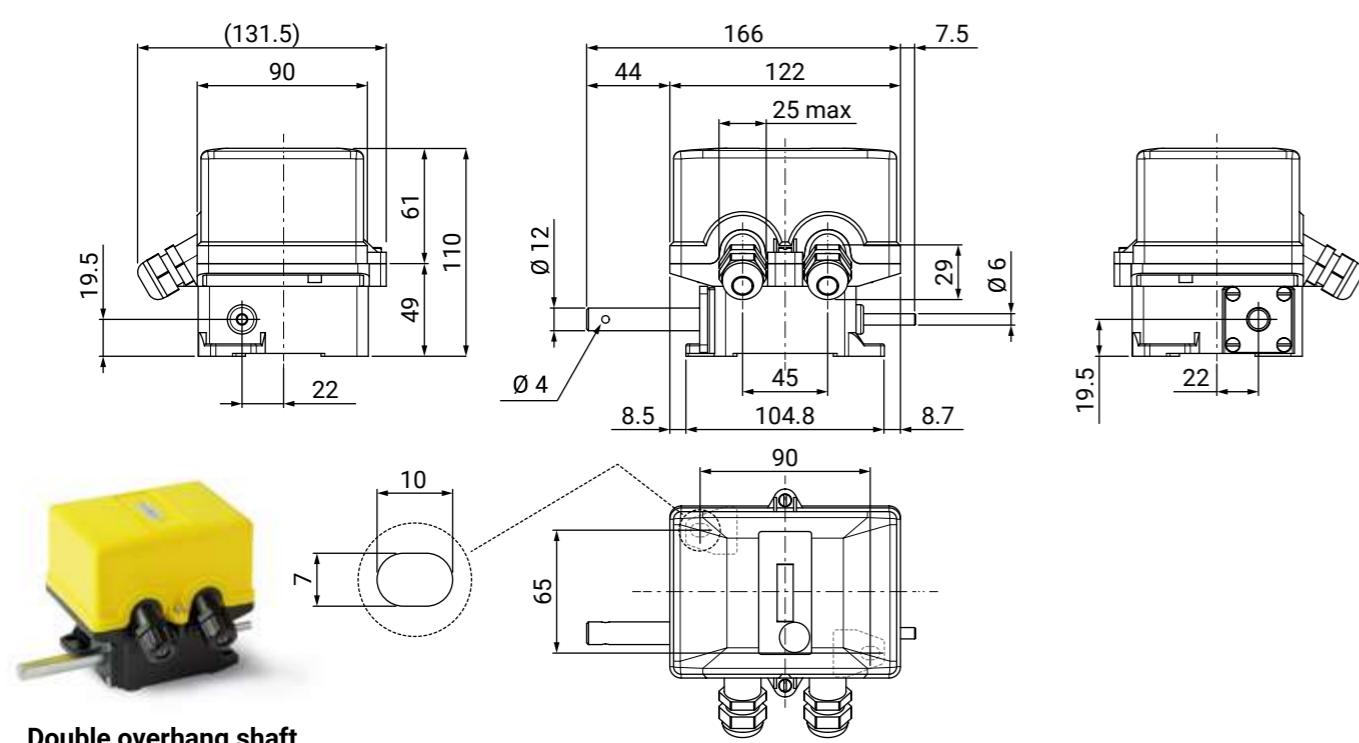


Base fixing
4 or 6 microswitches

Available codes



Front fixing
4 or 6 microswitches



Double overhang shaft
4 or 6 microswitches



Coding system

The FGR2 coding system is very clear: each block of digits identifies a specific function. The code provides all the informations that can be used to specify each customization.

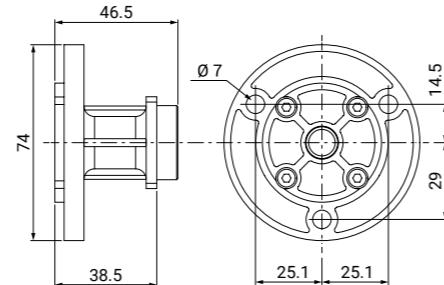
FGR2	F	N	006/007/008/009/010	B	6
Series	Flange	Contact type	Identifying number	Shaft type	Micro/cams
	Blank = Without F = With flange	MFI.7		Blank = Single shaft B = Double overhang shaft	Blank = Nr. 4 6 = Nr. 6
STANDARD ENCODING					

Available codes

Ratio	Base fixing 4 microswitches	Base fixing 6 microswitches	Double overhang shaft 4 microswitches	Double overhang shaft 6 microswitches
Front fixing + FLG 4 or 6 microswitches				



FGR2 Base fixing + FLG



Rotary gear limit switch

The **FGR3** is a device used to control and measure the movement of industrial machines by measuring the rotation angle and/or counting the number of revolutions of a shaft. It is suitable for several applications like cranes and wind turbines.

General features

- Different versions available:
 - base fixing;
 - with double overhang shaft;
 - front fixing (on request).
- IP66 protection class.
- Available in different ratios: from 1:8 to 1:3572 (according to the configuration).
- Microswitches:
 - device available potentially until 8 microswitches;
 - the working point is adjustable with a calibration screw;
 - each switch has 1NO + 1NC inside;
 - positive opening for NC contacts.

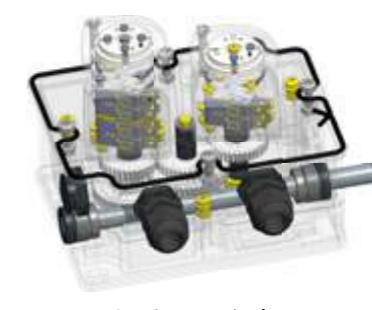
Compliance and certifications

- 2014/35/UE - 2014/33/UE - 2011/65/UE - 2015/863/UE
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005)
- EN 60204-1 (2006/A1 : 2009)
- EN 60529 (1991/A1 : 2000/A2 : 2013)
- EN 50581 (2012)
- IEC 63000 (2016)



Base Fixing versions

X-ray view



6 microswitches



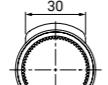
4 microswitches
with potentiometer

AVAILABLE CONTACT TYPES

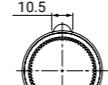


MFI.7

AVAILABLE CAM SHAPES



11703015
A (30°) - STANDARD



11703019
B (15°)



1173013
C (90°)

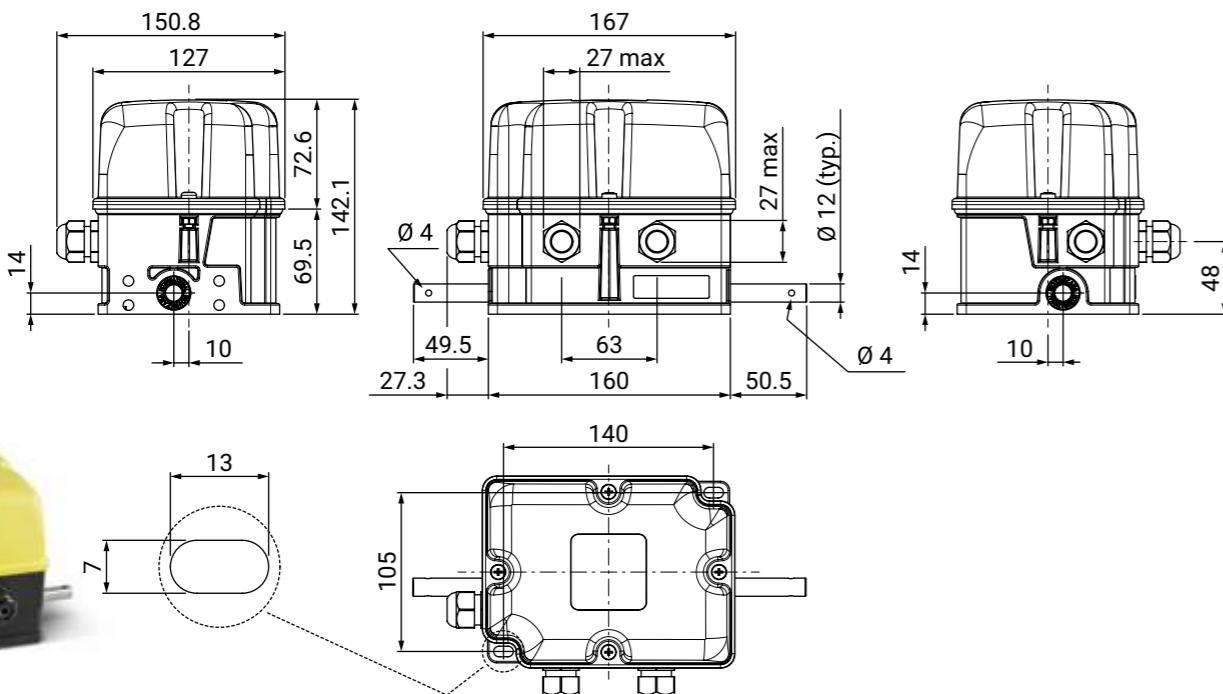


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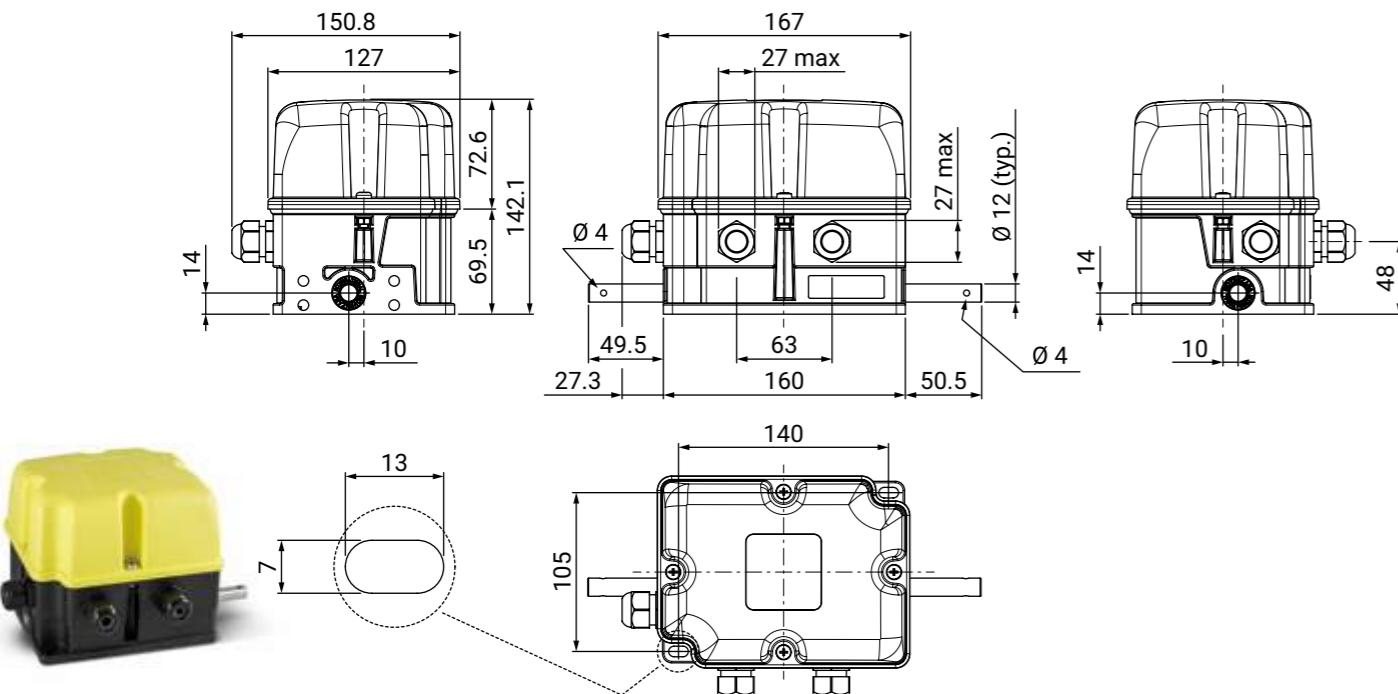
Available codes



Base fixing



Double overhang shaft



Coding system

The **FGR3** coding system is very clear: each block of digits identifies a specific function. The code provides all the informations that can be used to specify each customization.

FGR3	0-8	001-999	0-2-3-4	1-2-3-4	51-73	-	00-99
Series	Encoder / Potentiometer	Nr. gear ratio	Micro/cams	Shaft type	Pinion type	-	Options
	0 = No sensors 1 = Incremental Encoder D22 2 = Potentiometer 2.5 KΩ 3 = Potentiometer 5 KΩ 4 = Potentiometer 10 KΩ 5 = Absolut Encoder D36 6 = Incremental Encoder P/P 5000 imp. 7 = Absolut/Incremental Encoder D36 8 = Absolut Encoder D58 A ... Z = Custom on request	Between: - shaft and cam pack output; - shaft and sensor output; - both.	0 = None 1 = Single shaft and reduction in cam output. 2 = Nr. 2 3 = Nr. 3 4 = Nr. 4 5 = Nr. 5	1 = Single shaft and reduction in cam output. 2 = Double overhang shaft and reduction in cam output. 3 = Single shaft and reduction in both cam and sensor output. 4 = Double overhang shaft and reduction both in cam output and in sensor output.	Last two numbers of the pinion code. (refers to pages 86-87).	-	Progressive versions

Available codes

Base fixing

Double overhang shaft

With encoder



Available options

- Can be supplied with front fixing. Available different typologies of flanged accessories, on request.
- Can be equipped with MFI.7 microswitches (standard version) or with MFI.7G micro switches (gold contact blocks - offshore use).
- Can be equipped with incremental or absolut encoder, available also with external encoder mounted.

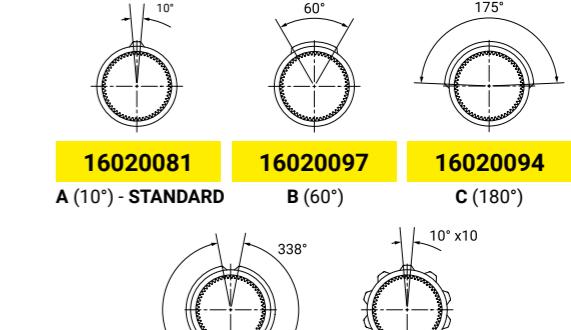
The **FGR3** series is a totally customizable products.

Create your own devices using the FGR3 coding system!

AVAILABLE CONTACT TYPES



AVAILABLE CAM SHAPES





GIOVENZANA
INTERNATIONAL B.V.

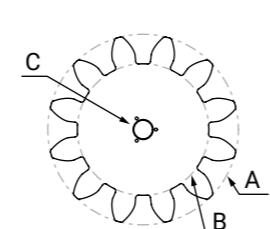
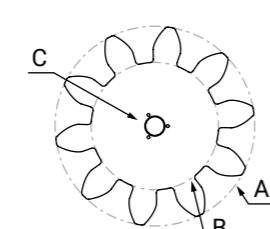
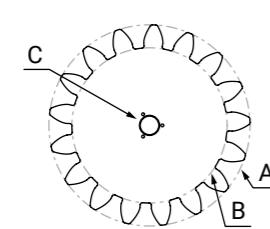
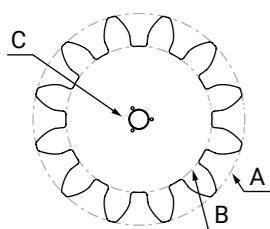
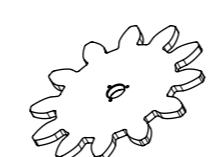
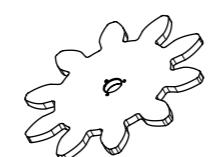
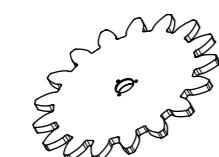
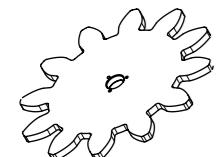
SPARE PARTS & ACCESSORIES

Rotary gear limit switch

Water jet cut pinions

Our measuring pinions are specially manufactured for use with encoders and geared limit switches.

Pinions thickness = 10 mm.



16020051

M20 - Z12
 $A = \emptyset 280 / B = \emptyset 193.2$

16020052

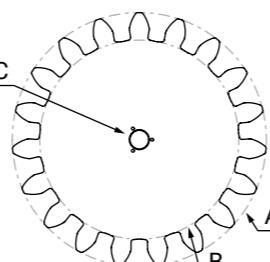
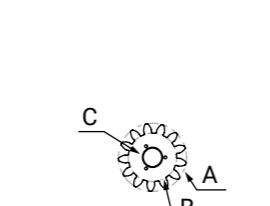
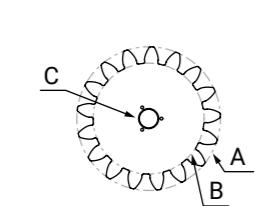
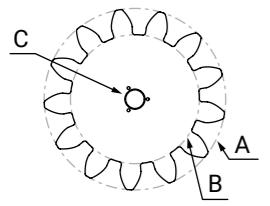
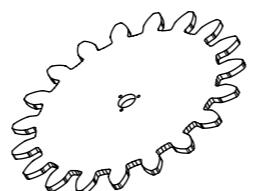
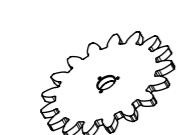
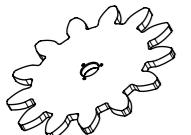
M14 - Z17
 $A = \emptyset 266 / B = \emptyset 205.24$

16020053

M22 - Z10
 $A = \emptyset 264 / B = \emptyset 168.52$

16020054

M18 - Z12
 $A = \emptyset 252 / B = \emptyset 173.88$



16020055

M16 - Z13
 $A = \emptyset 240 / B = \emptyset 170.56$

16020056

M10 - Z17
 $A = \emptyset 190 / B = \emptyset 146.6$

16020057

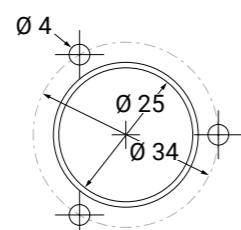
M6 - Z13
 $A = \emptyset 90 / B = \emptyset 63.96$

16020070

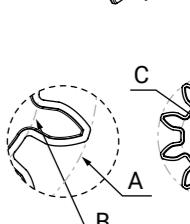
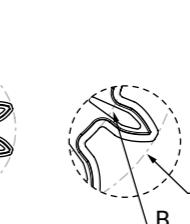
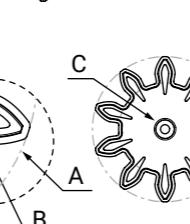
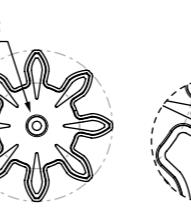
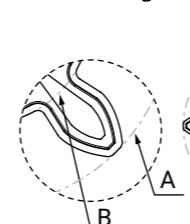
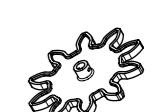
M16 - Z19
 $A = \emptyset 336 / B = \emptyset 263.2$

Detail C

For all previous pinions.
Finished product measurements.



Injection moulded pinions



16020058

M20 - Z8
 $A = \emptyset 200 / B = \emptyset 113.2$

16020059

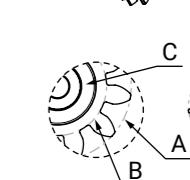
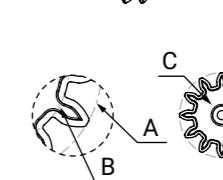
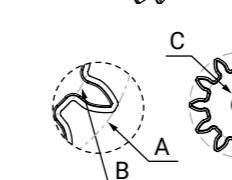
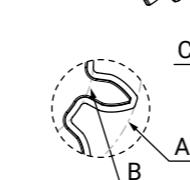
M13 - Z10
 $A = \emptyset 192 / B = \emptyset 122.56$

16020060

M12 - Z12
 $A = \emptyset 176.4 / B = \emptyset 121.716$

16020061

M14 - Z10
 $A = \emptyset 168 / B = \emptyset 107.24$



16020062

M12 - Z10
 $A = \emptyset 144 / B = \emptyset 91.92$

16020063

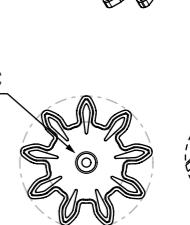
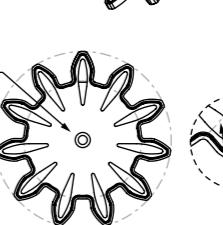
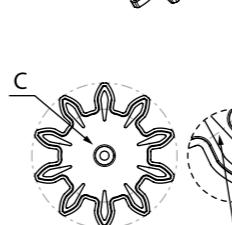
M10 - Z12
 $A = \emptyset 140 / B = \emptyset 96.6$

16020064

M8 - Z12
 $A = \emptyset 112 / B = \emptyset 77.28$

16020065

M6 - Z11
 $A = \emptyset 78 / B = \emptyset 51.96$



16020066

M5 - Z12
 $A = \emptyset 70 / B = \emptyset 48.3$

16020068

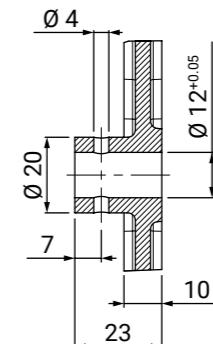
M16 - Z20
 $A = \emptyset 192 / B = \emptyset 122.56$

16020069

M18 - Z11
 $A = \emptyset 234 / B = \emptyset 155.81$

16020071

M16 - Z19
 $A = \emptyset 176 / B = \emptyset 107.285$



**ROTARY LIMIT
SWITCHES**

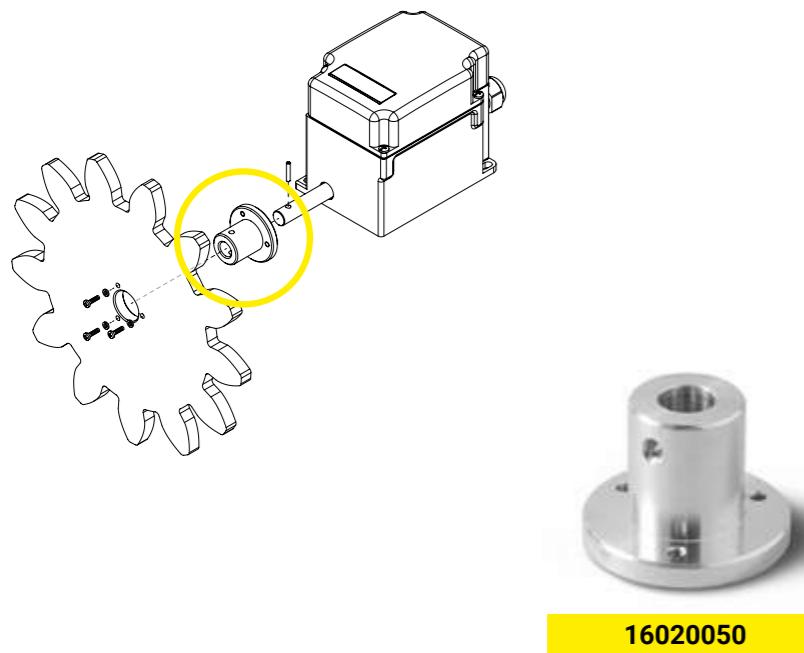


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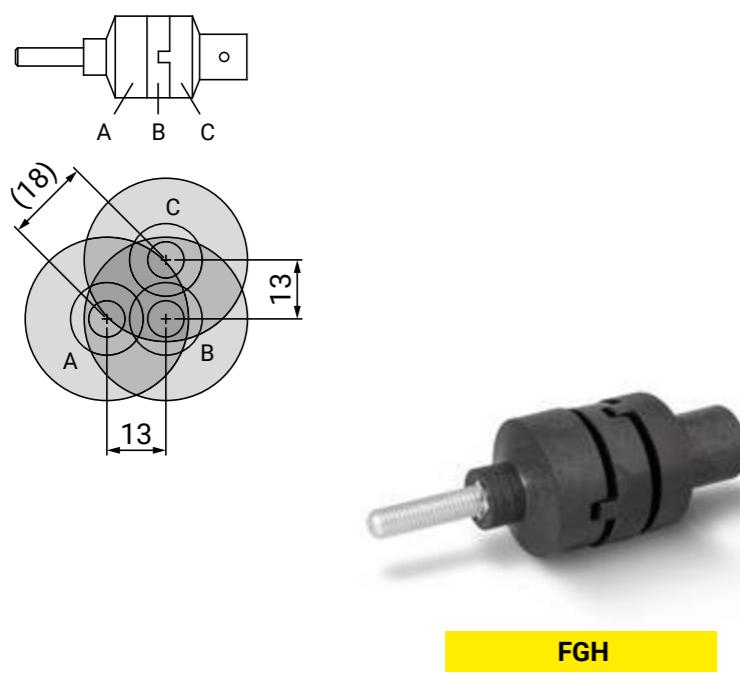
SPARE PARTS & ACCESSORIES

Rotary gear limit switch

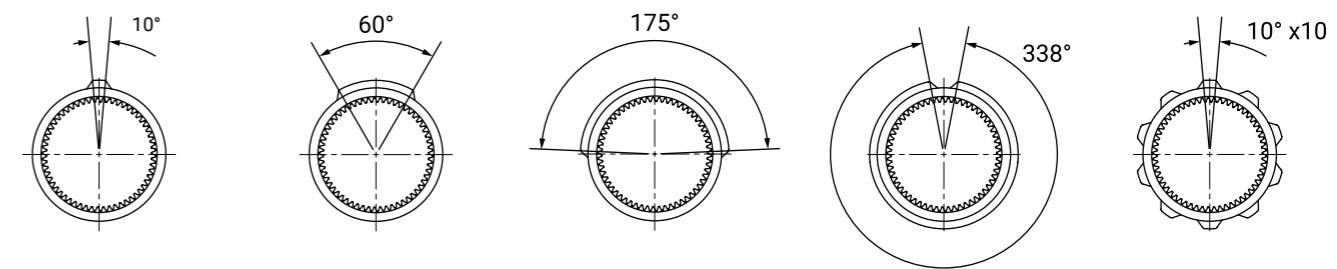
Metal sleeve for water jet cut pinions



Oldham coupling

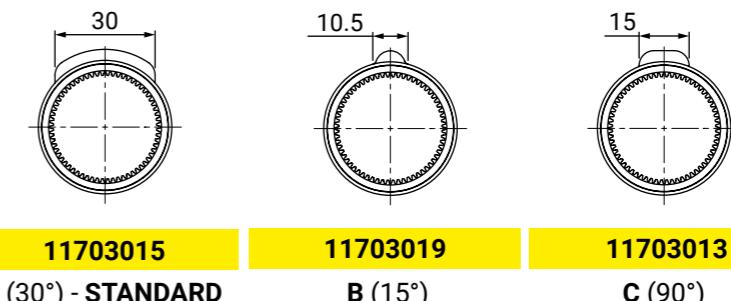


Cam shapes for FGR0, FGR1, FGR3



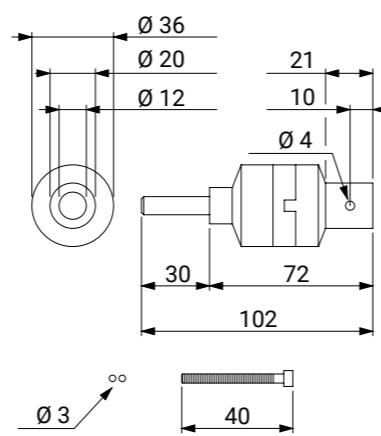
16020081 A (10°) - STANDARD	16020097 B (60°)	16020094 C (180°)	16020095 D (opposite)	16020093 E (10 tips)
--------------------------------	---------------------	----------------------	--------------------------	-------------------------

Cam shapes for FGR2



11703015 A (30°) - STANDARD	11703019 B (15°)	11703013 C (90°)
--------------------------------	---------------------	---------------------

Available customised versions on request.





POSITION LIMIT SWITCHES

Giovenzana offers four different typologies of **position limit switches**, used in particular in industrial and construction lifting plants, in the automation industry, in stage technology, in particular to control hoists, winches and machine tools.

The range of position limit switches includes aluminum or thermoplastic material limit switches allowing for diversified switch activation types:

- with cross rods;
- with single rod with roller;
- with lever.

Each position limit switches has specific features allowing to choose the limit switch that best suit the specific customers' needs.

All position limit switches are CE marked and they are manufactured in compliance with the directives and standards actually in force.

Furthermore, position limit switches are also EAC and CCC certified, for the Eurasian and Chinese markets, as proof of the importance given to the quality levels required in different countries.

APPLICATIONS

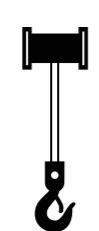
Our **position limit** switches are used to control several handling system:

SOPHISTICATED CRANE SYSTEM

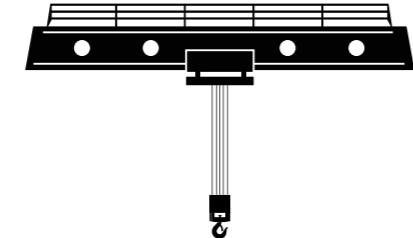
The unit controls power operating system (ex. PLC) and allows the crane to slow-down and/or to stop running.

HOIST

The unit is used to stop the hoist running whenever it reaches a "limit" position.



HOIST



CRANE

FEATURES

- Different versions are available for all standard system.
- Every customization is available upon request.

SERIES



FFH



FFH2C-1



FCR



FCP245

BENEFITS

- › Precise, reliable and safe devices
- › Good handling control ensured
- › Guaranteed maximum operating safety
- › Prevention of personal injury and damage to objects



FFH **FCR**

GENERAL CHARACTERISTICS		
STANDARDS	IEC /EN 60497/3	IEC /EN 60497/3
CASE	Self extinguishing housing V0 UL94	Self extinguishing housing V0 UL94
PROTECTION CLASS	IP65 - Double insulation (IEC / EN 60529)	IP65 - Double insulation (IEC / EN 60529)
CABLE ENTRY	M16 / M20	Nr 1 Ø 22.5 mm
VERSIONS	Single or double speed motor configuration. 3, 4 or 4 with mechanical stop positions.	Single or double speed motor configuration. 3, 4 or 4 with mechanical stop positions.
NOTES	Fully adjustable aluminium rods □ 2x200 mm with "0" indicator. Reinforced mechanical stop.	Fully adjustable aluminium rods □ 6x300 mm with "0" indicator. Reinforced mechanical stop.
AMBIENTAL TEMPERATURE	Operating: -25°C ... +55°C Storage: -30°C ... +70°C	Operating: -25°C ... +55°C Storage: -30°C ... +70°C



FFH2C-1 **FCP245**

GENERAL CHARACTERISTICS		
STANDARDS	IEC /EN 60497/3	IEC /EN 60497/3, EN 81-1
CASE	Self extinguishing housing V0 UL94	Self extinguishing housing V0 UL94
PROTECTION CLASS	IP65 - Double insulation (IEC / EN 60529)	IP65 - Double insulation (IEC / EN 60529)
CABLE ENTRY	1 x M16 + 1 x M20	M20 (max 8)
VERSIONS	Single speed motor configuration. Other configurations on request.	Two pole on-off switch. Other configurations on request.
NOTES	Fully adjustable aluminium rods □ 6x120 mm with "0" indicator. Reinforced mechanical stop. Rubber covering wheel.	Reinforced mechanical stop.
AMBIENTAL TEMPERATURE	Operating: -25°C ... +55°C Storage: -30°C ... +70°C	Operating: -25°C ... +55°C Storage: -30°C ... +70°C

ELECTRICAL CHARACTERISTICS			
PRODUCT ID	P016 Giovenzana Cam switch line	P016 Giovenzana Cam switch line	
STANDARDS	IEC/EN 60947/3 – UL508	IEC/EN 60947/3 – UL508	
MARKING	CE, IMQ, RINA, EAC, CCC, cULus, cCSAus	CE, IMQ, RINA, EAC, CCC, cULus, cCSAus	
RATED OPERATING VOLTAGE - Ue	690V	690V	
RATED INSULATION VOLTAGE - Ui	690V	690V	
RATED IMPULSE WITH-STAND VOLTAGE - Uimp	4kV	4kV	
RATED THERMAL CURRENT - Ith	16A	16A	
ENCLOSED THERMAL CURRENT - Ithe	16A	16A	
RATED OPERATING CURRENT	AC21A AC22A AC23A 3ph 230V AC23A 3ph 400V	16A - 690 V AC 13A - 4 kW 13A - 7.5 kW	16A - 690 V AC 13A - 4 kW 13A - 7.5 kW
FREQUENCY	50 / 60 Hz	50 / 60 Hz	
CONTACTS	Double gap positive opening ⊖	Double gap positive opening ⊖	
BLOCK CALIBER	A3 (EN 60947-1)	A3 (EN 60947-1)	
TERMINAL SCREW	M3.5	M3.5	
TIGHTENING TORQUE	0.8 Nm / 7.2 lbin (EN60947-1) 7.5 lbin / 0.85 Nm (UL508)	0.8 Nm / 7.2 lbin (EN60947-1) 7.5 lbin / 0.85 Nm (UL508)	
CONNECTABLE SECTION	Flexible conductors 10 ... 18 AWG Solid conductors 10 ... 18 AWG	1 x 0.75 / 4 ... 2 x 0.75 / 2.5 mm ² 10 ... 18 AWG 1 x 0.75 / 4 ... 2 x 0.75 / 2.5 mm ² 10 ... 18 AWG	

ELECTRICAL CHARACTERISTICS			
PRODUCT ID	PX20 Giovenzana Cam switch line	CX40 Giovenzana Cam switch line	
STANDARDS	IEC/EN 60947/3 – UL508	IEC/EN 60947/3 – UL508	
MARKING	CE, IMQ, RINA, EAC, CCC, cULus, cCSAus	CE, IMQ, RINA, EAC, CCC, cULus, cCSAus	
RATED INSULATION VOLTAGE - Ui	690V	690V	
RATED INSULATION VOLTAGE - Ui	690V	690V	
RATED IMPULSE WITH-STAND VOLTAGE - Uimp	5kV	10kV	
RATED THERMAL CURRENT - Ith	20A	40A	
ENCLOSED THERMAL CURRENT - Ith	20A	40A	
RATED OPERATING CURRENT	AC21A AC22A AC23A 3ph 230V AC23A 3ph 400V	20A - 690 V AC 16A - 5 kW 16A - 9 kW	40A - 690 V AC 35A - 11 kW 32A - 18.5 kW
FREQUENCY	50 / 60 Hz	50 / 60 Hz	
CONTACTS	Double gap positive opening ⊖	Double gap positive opening ⊖	
BLOCK CALIBER	A3 (EN 60947-1)	A5 (EN 60947-1)	
TERMINAL SCREW	M3.5	M4	
TIGHTENING TORQUE	0.8 Nm / 7.2 lbin (EN60947-1) 7.5 lbin / 0.85 Nm (UL508)	1.2 Nm (EN60947-1) 10.6 lbin (UL508)	
CONNECTABLE SECTION	Flexible conductors 10 ... 18 AWG Solid conductors 10 ... 18 AWG	1 x 0.75 / 4 ... 2 x 0.75 / 2.5 mm ² 10 ... 18 AWG 1 x 0.75 / 4 ... 2 x 0.75 / 2.5 mm ² 10 ... 18 AWG	2 x 2.5 / 10 mm ² 14 ... 6 AWG 2 x 2.5 / 10 mm ² 14 ... 6 AWG



GIOVENZANA
INTERNATIONAL B.V.

FFH

Position limit switch



Position limit switch with reduced overall dimensions

The **FFH position limit switch** is used to control several handling systems:

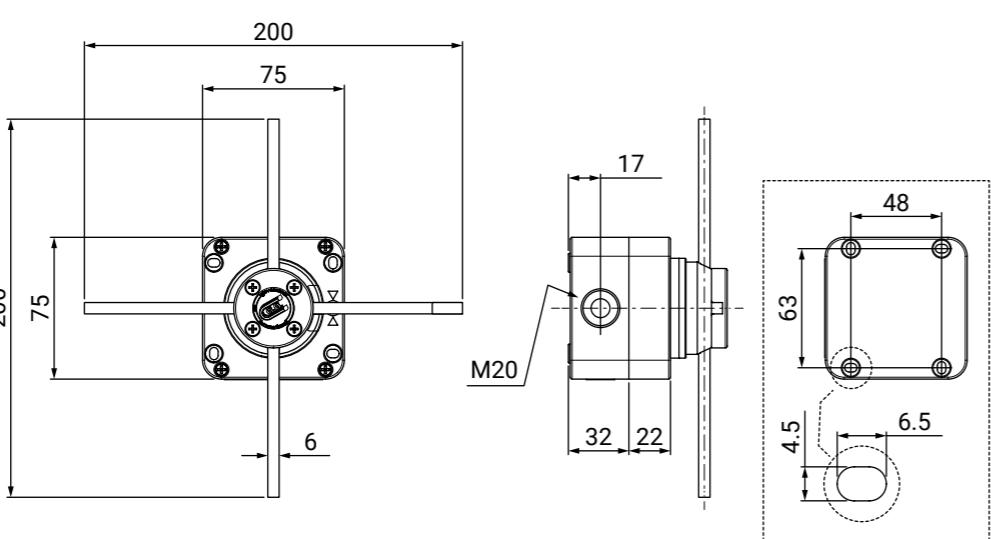
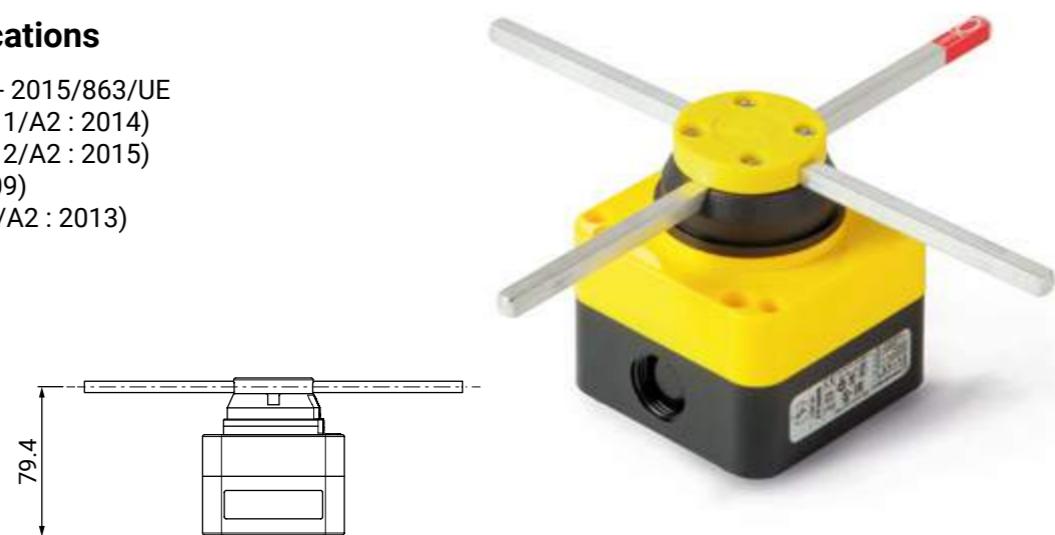
- **Bridge cranes:** the limit switch controls the operating system, for example a PLC, and allows the bridge crane to slow down or stop.
- **Hoists:** the limit switch is used to stop the hoist whenever it reaches a limit position.

Features

- Designed to ensure excellent performances in the most challenging operating conditions.
- Compact design to be adapted in any application need.
- Reduced overall dimensions compared to the historical FCR series.
- Arranged with 4 fixing holes.
- Positive opening NC contacts for safety functions.
- IP65 Protection degree.
- Aluminium rods with 6x6 mm section and enclosure in thermoplastic material.
- Cross rods with 4 maintained positions every 90°.
- Arranged with 2 outputs for cable clamps to reduce installation time and make wiring easier.
- Available different versions, also customizable on request.

Compliance and certifications

- 2014/35/UE - 2011/65/UE - 2015/863/UE
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-3 (2009/A1 : 2012/A2 : 2015)
- EN 60204-1 (2006/A1 : 2009)
- EN 60529 (1991/A1 : 2000/A2 : 2013)
- EN 50581 (2012)
- IEC 63000 (2016)



Available codes



FFH
Internal
cam switch
P016 line



contact open contact close

	0	90°	90°	+	-	FFH001	Single speed	With mechanical interlock	
							3 positions		
	0	90°	90°	+	-	FFH002	Single speed	With mechanical interlock	
							3 positions		
	0	90°	90°	+	-	FFH003	Single speed	Without mechanical interlock	
							4 positions		
	0	90°	90°	+	-	FFH004	Single speed	Without mechanical interlock	
							4 positions		
	0	90°	90°	+	-	FFH005	Single speed	Without mechanical interlock	
							4 positions		
	0	90°	90°	+	-	FFH006	Double speed	With mechanical interlock	
							4 positions		

POSITION LIMIT SWITCHES



GIOVENZANA
INTERNATIONAL B.V.

FCR

Position limit switch

Position limit switch

The **FCR position limit switch** is used to control several handling systems:

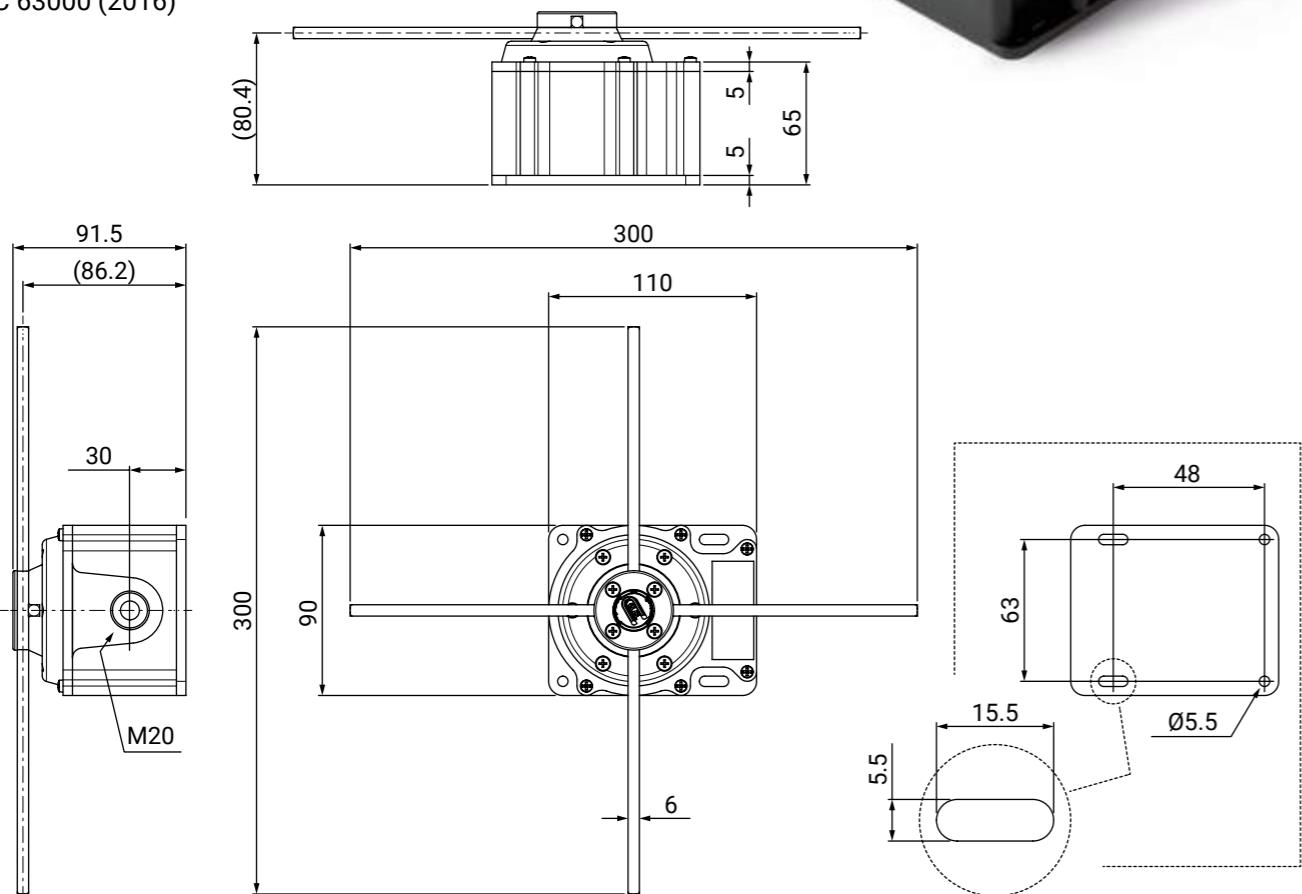
- **Bridge cranes:** the limit switch controls the operating system, for example a PLC, and allows the bridge crane to slow down or stop.
- **Hoists:** the limit switch is used to stop the hoist whenever it reaches a limit position.

Features

- Designed to guarantee excellent performance in the most challenging operating conditions.
- Arranged with 4 fixing holes.
- Positive opening NC contacts for safety functions.
- IP65 protection degree.
- Aluminium rods with 6x6 mm section and enclosure in thermoplastic material.
- Cross rods with 4 maintained positions every 90°.
- Arranged with 1 output for cable clamps to reduce installation time and make wiring easier.
- Available different versions, also customizable on request.

Compliance and certifications

- 2014/35/UE - 2011/65/UE - 2015/863/UE
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-3 (2009/A1 : 2012/A2 : 2015)
- EN 60204-1 (2006/A1 : 2009)
- EN 60529 (1991/A1 : 2000/A2 : 2013)
- EN 50581 (2012)
- IEC 63000 (2016)



Available codes

FCR
Internal
cam switch
P016 line



		contact open	contact close
FCR001	Single speed 3 positions With mechanical interlock	3 - 4 1 - 2 - 90° 0 + 90° positions	7 - 8 5 - 6 3 - 4 1 - 2 - 90° 0 + 90° positions
FCR002	Single speed 3 positions With mechanical interlock	7 - 8 5 - 6 3 - 4 1 - 2 - 90° 0 + 90° positions	3 - 4 1 - 2 0 90° 180° 270° positions
FCR003	Single speed 4 positions Without mechanical interlock	3 - 4 1 - 2 0 90° 180° 270° positions	empty empty empty empty
FCR004	Single speed 4 positions Without mechanical interlock	3 - 4 1 - 2 0 90° 180° 270° positions	empty empty empty empty
FCR005	Single speed 4 positions Without mechanical interlock	3 - 4 1 - 2 0 90° 180° 270° positions	empty empty empty empty
FCR006	Double speed 4 positions With mechanical interlock	7 - 8 5 - 6 3 - 4 1 - 2 - 180° - 90° 0 + 90° + 180° positions	empty empty empty empty

POSITION LIMIT SWITCHES



GIOVENZANA
INTERNATIONAL B.V.

FFH2C-1

Position limit switch

Position limit switch

The FFH2C-1 position limit switch is used to control several handling systems:

- **Bridge cranes:** the limit switch controls the operating system, for example a PLC, and allows the bridge crane to slow down or stop.
- **Hoists:** the limit switch is used to stop the hoist whenever it reaches a limit position.

Features

- Designed to guarantee excellent performance in the most challenging operating conditions.
- Arranged with 4 fixing holes.
- Positive opening NC contacts for safety functions.
- IP65 protection degree.
- Aluminium rod with 6x6 mm section and enclosure in thermoplastic material.
- Equipped with rod with roller with 65° movements and spring return.
- Arranged for 2 outputs for cable clamps to reduce installation time and make wiring easier.

Compliance and certifications

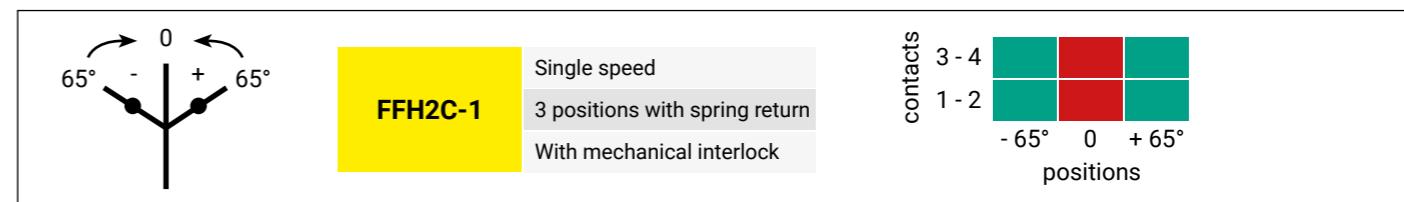
- 2014/35/UE - 2011/65/UE - 2015/863/UE
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-3 (2009/A1 : 2012/A2 : 2015)
- EN 60204-1 (2006/A1 : 2009)
- EN 60529 (1991/A1 : 2000/A2 : 2013)
- EN 50581 (2012)
- IEC 63000 (2016)



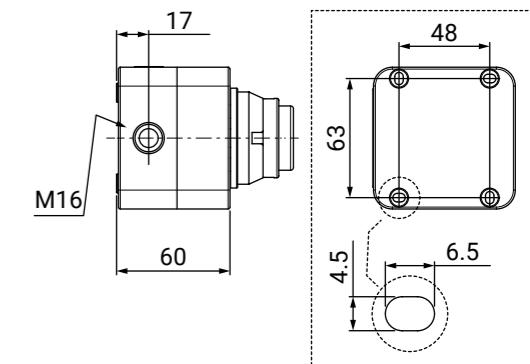
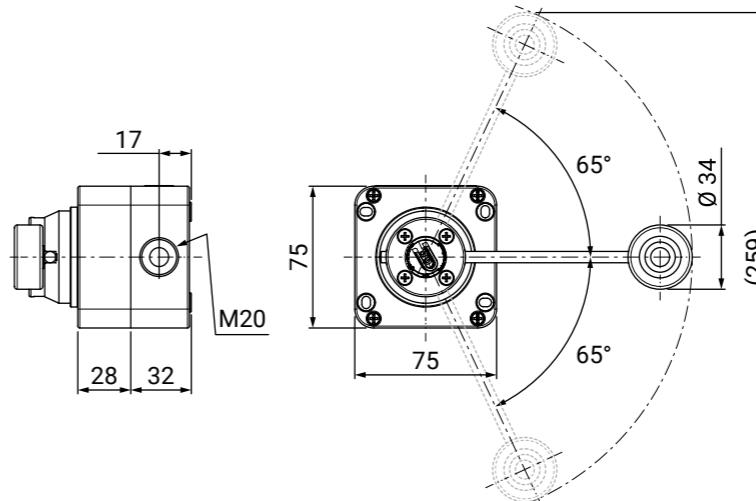
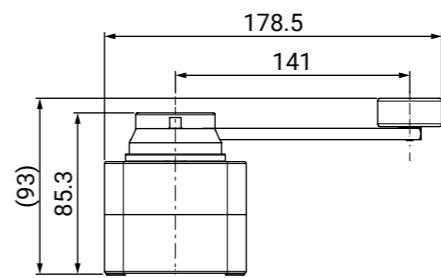
Available codes



FFH2C-1
Internal
cam switch
PX20 line



Other configurations on request.





GIOVENZANA
INTERNATIONAL B.V.

FCP245

Position limit switch

Position limit switch

The FCP245 position limit switch is used to control several handling systems:

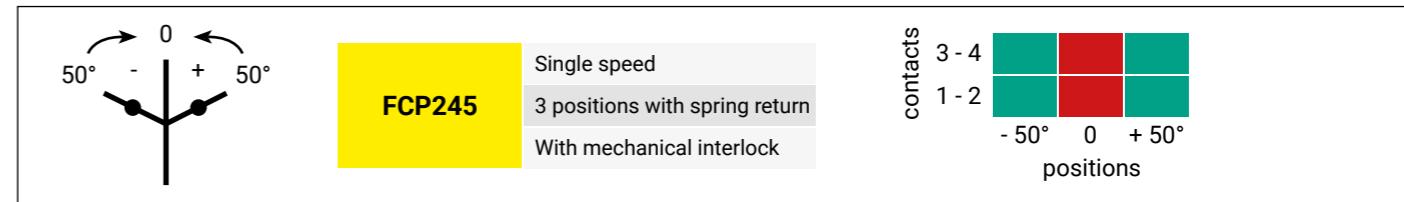
- **Bridge cranes:** the limit switch controls the operating system, for example a PLC, and allows the bridge crane to slow down or stop.
- **Hoists:** the limit switch is used to stop the hoist whenever it reaches a limit position.

Features

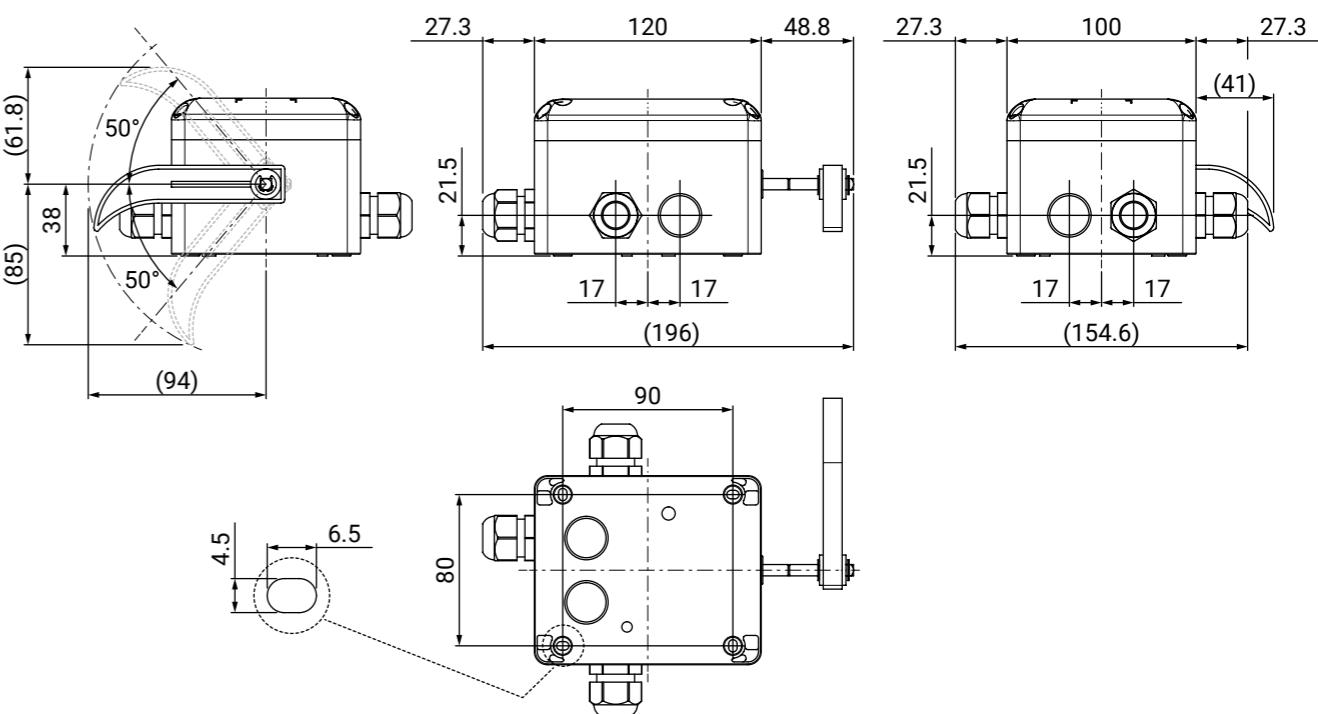
- Designed to guarantee excellent performance in the most challenging operating conditions.
- Arranged with 4 fixing holes.
- Positive opening NC contacts for safety functions.
- IP65 protection degree.
- Aluminium rod and lever, enclosure in thermoplastic material.
- Equipped with lever with 50° movements and spring return.
- Arranged for 2 outputs for cable clamps to reduce installation time and make wiring easier.



Available codes



Other configurations on request.





SLIP RINGS

A **slip ring** is an electromechanical device that facilitates the transmission of electrical power and signals from a static to a moving part.

Slip ring is very important component that can solve the 360° continuous rotating and get electricity to a continuously rotating part of assembly, rotate without limits.

Slip rings can enhance the mechanical performance of a machine, streamline system functionality, and eradicate damage-prone wires hanging from rotating joints.

They function by making continuous electrical connections from stationary systems to rotating systems.
A slip ring assembly comprises of brush blocks, which are accurately harmonized and usually available as a set of a ring and a brush.

Our products guarantee a reliable operation of the whole equipment system.

APPLICATIONS

Slip rings are used in electromechanical device including rotating table, surveillance systems like radars, medical machines like microscope and support arm lamps, renewable energy sources like wind turbines, automation equipment.

They are used in almost all electromechanical machines which call for unrestricted, discontinuous or continuous spinning while conducting power and signals.



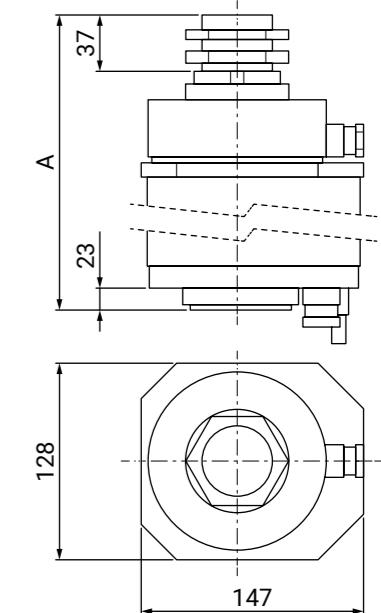
FEATURES

Slip rings are used to transfer electrical signal and power energy between stator and a rotor or vice versa.

They are comprised of 3 or more metal contacts, mounted on the steel shaft.
The contact brushes are all replaceable and are in copper.

- **OPERATING TIME:** The operating life of a slip ring depends on the rotation speed and the dynamic stability.
- **CURRENT RATING:** Capacity can be increasing by connecting in series or parallel two or more slip rings.
- **SPEED OPERATION:** Max rotation speed 20 turns 1'.

RINGS NR.	CODE	A (HEIGHT)
3	30402091	180
4	30402092	195
5	30402093	210
6	30402094	225
7	30402095	240
8	30402096	255
9	30402097	270
10	30402098	285
11	30402099	300
12	30402100	315
13	30402101	330
14	30402102	345
15	30402103	360



TECHNICAL DATA

- Rated insulation voltage Ui 690V.
- Rated operating voltage Ue 500Vac.
- Rated operating current 20A.
- Intermittent working 30A.
- IP51 close frame version with protection rated IEC/EN60529.
- Modularity: from 3 up to 15 - Rings: Ø80 mm.
- Copper brushes.
- Shaft: Ø42 mm.
- PVC Ø147 mm housing and terminals cover.
- Ambient temperature: +60°C/-30°C.

ALARM HORNS

TECHNICAL DATA

- Continuos operation.
 - Frequency: **G75**: 50 Hz - **G100**: 300÷350 Hz.
 - Pressure (at 1 meter): **G75**: 88 dB (A) - **G100**: 93.5 dB (A).
 - Wall mounted.
 - Protection class (IEC/EN 60529): G75: IP30 - G100: IP65 double insulated.
 - Terminal type: **G75**: 3 way terminal (2+T) - **G100**: 2 way terminal.



G75 LINE (Ø 75)

SUPPLY	CONSUMPTION	CODE
24 AC	190 mA	G75.24
48 AC	80 mA	G75.48
110 AC	28 mA	G75.110
230 AC	20 mA	G75.230
24 DC	40 mA	G75.24DC
48 DC	-	G75.48DC

G100 LINE (Ø 100)

SUPPLY	CONSUMPTION	CODE
24 AC	415 mA	G100.24
48 AC	210 mA	G100.48
110 AC	90 mA	G100.110
230 AC	42 mA	G100.230



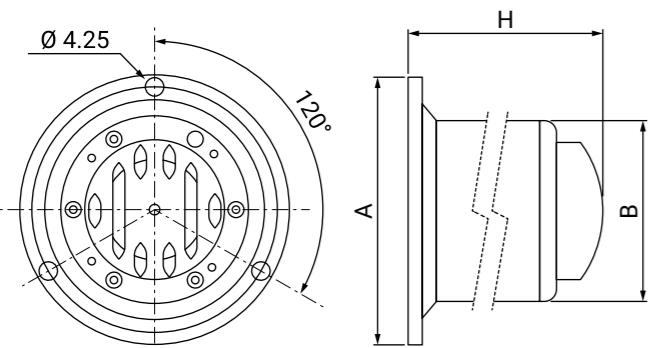
BOX - G75 LINE

11710009



BOX - G100 LINE

11710010



G75 LINE **G100 LINE**

A = Ø 95.5	A = Ø 120
B = Ø 76.5	B = Ø 95.5
H = 56	H = 58





GIOVENZANA

INTERNATIONAL B.V.

LOGISTIC

Giovenzana International B.V. to support the market and his different necessity has created this organization that is always in process to cover territory in five different hubs.

SALES OFFICES

GIOVENZANA INTERNATIONAL B.V.
Budapest, Hungary - Office and Delivery

G.T.R. LLC
Moscow, Russian Federation - Office and Logistic Hub

GIOVENZANA CONTROLS INDIA Pvt. Ltd.
Mumbai, India - Office

GIOVENZANA DEUTSCHLAND
Hannover, Germany - Office

GIOVENZANA CONNECTING BRASIL
São Paulo, Brazil - Office and Logistic Hub

Branch

GIOVENZANA INTERNATIONAL B.V.
Dubai U.A.E. - Office and Logistic Hub for ME and FE included China, India, Oceania, Africa

The image is a world map where the names of countries are written in large, bold, white or yellow letters. The size of the text varies by country, with larger names like Russia, China, India, and Australia being most prominent. Many smaller countries have their names repeated multiple times across the map. The background is a dark, textured gray. In the top left corner, there is a vertical stack of text: 'GREENLAND' at the top, followed by 'ICELAND', 'SWEDEN', 'NORWAY', 'POLAND', 'GERMANY', 'NETHERLANDS', 'FRANCE', 'ITALY', 'SPAIN', 'TUNISIA', 'ALGERIA', 'MOROCCO', 'MAURITANIA', 'SENEGAL', 'GAMBIA', 'GUINEA', 'SIERRA LEONE', 'LIBERIA', 'BURIKINA FASO', 'MALI', 'NIGER', 'NIGERIA', 'CAMEROON', 'CENTRAL AFRICAN REPUBLIC', 'GABON', 'CONGO', 'ANGOLA', 'NAMIBIA', 'SOUTH AFRICA', 'RUSSIA', 'KAZAKHSTAN', 'MONGOLIA', 'CHINA', 'INDIA', 'JAPAN', 'VIETNAM', 'LAOS', 'THAILAND', 'BURMA', 'PHILIPPINES', 'MALAYSIA', 'INDONESIA', 'PAPUA NEW GUINEA', 'AUSTRALIA', 'AUSTRALIA', 'NEW ZEALAND', and 'MADAGASCAR'. The word 'GREENLAND' is also repeated vertically on the far left.

HEADQUARTER

GIOVENZANA INTERNATIONAL B.V.

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G.G.T. Srl
Milan, Italy - Historical Unit

G.G.Space Kft
Budapest, Hungary

GIOVENZANA DO BRASIL
Guaíba, RS - Brazil

LOGISTIC WAREHOUSES

ITALY
HUNGARY
RUSSIAN FEDERATION
DUBAI - U.A.E.
BRAZIL

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