70

1952 · 2022

giovenzana
G.G.
International

BUILDING
THE FUTURE

UNI EN 81-20
UNI EN 81-50
ELEVATOR
Safety Solutions

www.giovenzana.com

Giovenzana International B.V.®

Leader in the design and implementation of Safety Solutions for Elevators and Escalators, celebrates its **70 years** on the market.

Competence, reliability and customer care are our uniqueness.
Our mission is **«Safety First!»**

We offer both a wide range of **standard and customized products** for all types of installation with specifications that are up to date with the major European and international safety guidelines.

Our growing portfolio of high-quality, innovative and competitive **Elevator products** includes:

- Cabin roof inspection boxes;
- Alarm stations and emergency controls;
- Under car signalling and audible devices;
- Limit switches and micro switches for doors;
- Multi-beam optic barriers;
- Panel board components like bypass devices, rear fixing bypass devices, switch disconnectors and auxiliary controls;
- Led lighting for elevator shaft;
- Pit control devices;

... and much more!!!

Discover them on **www.giovenzana.com**

Attentive to the main European and international standards, our products are fully compliant:

UNI EN 81-20:2020

Safety rules for the construction and installation of lifts - Lifts for the transport of persons and goods - Part 20: Passenger and goods passenger lifts.

The standard provides the safety rules for new lifts for persons and goods accompanied by persons, in permanent installation, with friction, coupled winch or hydraulic, serving defined levels, whose car is intended for the transport of persons or goods accompanied by persons, suspended by means of ropes or chains or by cylinder-piston assemblies and moving between guides inclined at not more than 15° to the vertical.

UNI EN 81-50:2020

Safety rules for the construction and installation of lifts - Examinations and tests - Part 50: Design rules, calculations, examinations and tests of lift components.

The standard provides rules for the design, calculation, verification and testing of lift components, the requirements of which are specified in other standards used for the design of passenger lifts, passenger and goods lifts, goods-only lifts and other similar types of lifting equipment.

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STANDARD-COMPLIANT PRODUCTS
EN 81-20 / EN 81-50

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

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

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GM SERIES
MAINTENANCE CONTROL STATIONS

Our wide range of **GM SERIES** maintenance control stations are fully compliant with the major European and international Elevator Standards all around the world.

Its design incorporates the major rules:

- Mushroom emergency device in accordance with IEC/EN 60947-5-5;
- Mandatory run button;
- Protected operators against accidental impacts;
- Cam switch (not selector) binding to the norm for inspection operation with solid drive and without margin of error in the switching;
- Contact blocks with spring clamp conform to EN 60068-2-6 and EN 60068-2-27 and vibration resistant with IP20 degree of protection;
- AC-15 and DC-13 contact blocks in accordance with EN 60947-5-1:2005 (1M cycles);
- Resistant to vibrations and shocks according to EN 60068-2-26, EN 60068-2-27 and EN 60068-2-29;
- The components are manufactured in accordance with the IEC 947-3, IEC 947-5-1, EN 60947-3, EN 60947-5-1, UL 508, IEC 204-1, EN 60204-1, EN ISO 13850 and to the RoHS, PFOS, RAEE, REACH directives.
- IMQ, CCC, EAC and UL approved.

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The **GM SERIES** includes pit bottom stations, recall drive control units, inspection and maintenance stations.

Compliance:
EN81-20 / EN81-50, CSA-B44.1 / ASME-A17.5, GOST33984.1-2016, ABNT NBR 16858, EN ISO 13850.

Functional Safety (IEC 61508):
SIL[1], SIL[2], SIL[3].

Enclosure:
made of self-extinguishing thermoplastic material.

Protection class (EN 60529):
NEMA 4X, IP65 without socket, IP54.

Terminal connections:
with socket IP20.

Vibration resistance:
EN 60068-2-26, EN 60069-2-27.

Shock resistance:
EN 600068-2-29.

Connections:
spring clamp contacts for push buttons, mushrooms, screws terminals for cam switches, buzzers and socket outlets.

Ambient temperature:
- operating -25°..+70°C,
- storage -30°..+70°C.

ELECTRICAL CHARACTERISTICS			CONTACT BLOCKS	CAM SWITCHES
Conformity			IEC/EN 60947-5-1, UL508	IEC/EN 60947-3, UL508
Approvals			IMQ, CCC, EAC, uL, RINA	
Rated insulation voltage	Ui	V	690	690
Rated impulse withstand voltage	Uimp	kV	4	4
Rated thermal current	It/Ithe	A	16	20/16
Frequency		Hz	50/60	50/60
Rated operating current	Ie			
AC15: Alternate current		V	24 / 60 / 110 / 240 / 400 / 440 / 500 / 690	-
		A	16* / 12 / 5 / 5* / 4 / 4 / 4* / 2*	-
DC13: Direct current		V	24 / 48 / 60 / 110 / 250	-
		A	2 / 2* / 1* / 0.4 / 0.4*	-
Conditional short circuit withstand current		A	-	16A - 690V
Fuse Rating gG		A	1000	5000
Switching mechanism		A	10A - 500V	20A - 690V
Contact blocks			slow break double gap contacts	
Positive open			NC positive open suitable for use as switch disconnector 0-1 90° 2-3-4 poles	
Screw and clamps			spring clamp connections	M3.5
Connections				
Flex cable and solid cable				
n. 1 min/max mm²			0.5/2.5	0.75/4
n. 2 min/max mm²			0.5/2.5	0.75/4
AWG			20-12	16-12
UL508 characteristics: general use			10 A 600 VAC - 2.5 A 125 VDC	16 A 600 VAC
Standard motors load				
1 phase - 2 poles			-	1 HP (16FLA) 120 VAC
3 phases - 3 poles			-	1.5 HP (10FLA) 240 VAC
			-	3 HP (14.4FLA) 200 VAC
			-	5 HP (15.2FLA) 240 VAC
			-	7.5 HP (11FLA) 480 VAC
			-	7.5 HP (9FLA) 600 VAC
Heavy Duty (HD) category			A600 - Q600	-

*IMQ values

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5. SAFETY REQUIREMENTS AND/OR PROTECTIVE MEASURES

5.2.1.5 Electric equipment in the pit and in machinery spaces and pulley rooms

5.2.1.5.1
There shall be in the pit:

1 **Stopping device(s)** visible and accessible on opening the door(s) to the pit, and from the pit floor, in conformity with the requirements of 5.12.1.11;

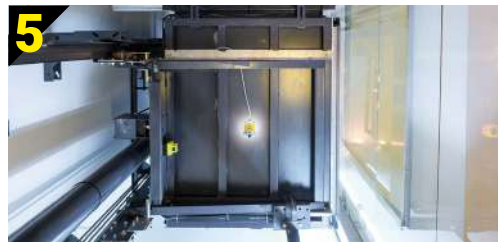
2 a permanently installed **inspection control station** according to 5.12.1.5 operable within 0,30 m of a refuge space;

3 a **socket outlet** (5.10.7.2);

4 **means to switch the well lighting** (5.2.1.4.1), positioned within a maximum horizontal distance of 0,75 m from the pit access door frame inner edge and at a minimum height of 1,0 m above the access floor level.

5.2.1.6 Emergency release

5 If no means to escape are provided for person(s) trapped in the well, **alarm initiation devices** to the alarm system according to EN 81-28:2003 shall be installed at places where the risk of trapping exists (see 5.2.1.5.1, 5.2.6.4 and 5.4.7), operable from the refuge space(s).



5.12.1.5 Control of inspection operation

5.12.1.5.1
Design requirements

5.12.1.5.1.1
To facilitate inspection and maintenance, a readily operable inspection control station shall be permanently installed:

a) on the car roof;
b) in the pit;
c) in the car (if there are areas of work in the car);
d) on a platform (if there are areas of work on the platform).

5.12.1.5.1.2
The inspection control station shall consist of:

a) a switch (inspection operation switch) which shall satisfy the requirements for electric safety devices (5.11.2).
This switch, which shall be bi-stable, shall be protected against involuntary operation;

b) direction push buttons “UP” and “DOWN” protected against accidental operation with the direction of movement clearly indicated;

c) a push button “RUN” protected against accidental operation;

d) a stopping device in conformity with 5.12.1.11.

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

5.12.1.5.2
Functional requirements

5.12.1.5.2.2
Return to normal operation of the lift
The return to normal operation of the lift shall only be effected by switching the inspection operation switch(es) back to normal.

Additionally return to normal operation of the lift from pit inspection station shall only be made under following conditions:

a) landing doors giving access to the pit are closed and locked;
b) all stopping devices in pit are inactive;
c) the electrical reset device outside the well is operated:
1) in conjunction with emergency unlocking means of the door giving access to the pit; or
2) accessible to authorized persons only, e.g. inside a locked cabinet located in dose proximity of the door giving access to the pit.

Precautions shall be taken to prevent all involuntary movement of the car in the event of inspection operation.

5.12.1.5.2.3
Push buttons
The movement of the car in inspection operation shall solely depend on constant pressure on a direction and the “RUN” push button. It shall be possible to operate the “RUN” button and a direction button with one hand simultaneously.
The inspection operation electric safety device shall be bypassed by one of the following solutions:

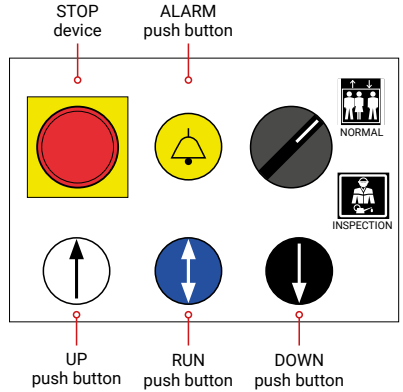
a) a series connection of a direction and the “RUN” push button.
These push buttons shall belong to the following categories as defined in EN 60947-5-1:2004:
- AC-15 for safety contacts in AC circuits;
- DC-13 for safety contacts in DC circuits;
The durability shall be at least 1.000.000 operating cycles mechanical and electrical related to the applied load.

b) an electric safety device in accordance with 5.11.2 which is monitoring correct operation of direction and “RUN” push buttons.

5.12.1.5.2.4 Inspection control station(s)
On the inspection control station(s) the following information shall be given:
a) the words "NORMAL" and "INSPECTION" on or near the inspection operation switch;
b) the direction of motion identified by colours as the table below:

CONTROL	BUTTON	SYMBOL	SYMBOL REFERENCE	SYMBOL
UP	white	black	IEC 60417:2002, 5022	↑
DOWN	black	white	IEC 60417:2002, 5022	↓
RUN	blue	white	IEC 60417:2002, 5023	↕

Inspection control station(s) - Controls and pictograms



5.4.8 EQUIPMENT ON TOP OF THE CAR

The following shall be installed on top of the car:

a) control device in conformity with 5.12.1.5 (inspection operation) operable within 0,30 m horizontally from a refuge space (5.2.5.7.1);

b) stopping device in conformity with 5.12.1.11, in an easily accessible position and no more than 1 m from the entry point for inspection or maintenance personnel.

This device may be the one located next to the inspection operation contro! if this is not placed more than 1 m from the access point;

c) socket outlet in conformity with 5.10.7.2.

GM261

IP65
Compact vertical inspection box

GM262

IP65
Compact horizontal inspection box

GMS309/EU

IP54
Maintenance control station with double cam switch and socket

GM750/EU

IP54
Maintenance control station with socket

GM751

IP65
Maintenance control station without socket

GM822/EU

IP54
"TOCI" Inspection box

5.4 CAR, COUNTERWEIGHT AND BALANCING WEIGHT

5.4.10 LIGHTING
5.4.10.4

There shall be emergency lights with an automatically rechargeable emergency supply, which is capable of ensuring a lighting intensity of at least 5 LUX for 1 h:

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

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

GM034

Maintenance station with 5 LUX white light and hole plug

GMS169

Maintenance station with 5 LUX white light and alarm button

GM033

Maintenance station with 5 LUX white light, alarm button and socket

5.2 WELL, MACHINERY SPACES AND PULLEY ROOMS

5.2.1.4 LIGHTING
5.2.1.4.1

The well shall be provided with permanently installed electric lighting, giving the following intensity of illumination, even when all doors are closed, at any position of the car throughout its travel in the well:

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

To achieve this, sufficient number of lamps shall be fixed throughout the well and where necessary additional lamp(s) may be fixed on the car roof as a part of the well lighting system.
Lighting elements shall be protected against mechanical damage.
The supply for this lighting shall be in conformity with 5.10.7.1.

NOTE: For specific tasks additional temporary lighting may be necessary, e.g. by hand lamp.

The light meter should be oriented towards the strongest light source when taking lux level readings.

GM036/EU

Maintenance station with led light 50 LUX (@230 VAC) / 5 LUX (@12 VACDC) with schuko socket and selector

GM036/UK

Maintenance station with LED LIGHT 50 LUX (@230 VAC) / 5 LUX (@12 VACDC) with UK socket and selector

On request available with other tipologies of sockets.

GM264

Compact control station with integrated molded LED lights - totally customizable

5.2 WELL, MACHINERY SPACES AND PULLEY ROOMS

5.2.1.4 LIGHTING
5.2.1.4.2

Machinery spaces and pulley rooms shall be provided with permanently installed electric lighting with an intensity of at least 200 LUX at floor level everywhere a person needs to work and 50 LUX at floor level to move between working areas. The supply for this lighting shall be in conformity with 5.10.7.1.

1. STRIP LED COIL
Strip LED coin is available in different lengths as the table below.
Available in two different versions: **GSL30** and **GSL60**.

2. POWER SUPPLY CABLE
The power cable is to be connected to the Strip LED.
The standard length mounted is 10 m composed of two double insulation cables (2 × 0.75 mm). ⧈

3. N° 2 TENSIONERS
Components that tension the LED strip in plastic material.

	GSL30	GSL60
Power(W/m)	3.2	6.4
Flux (lm/m)	300	600
Shaft area (m²)	3.5	9.2

LENGHT	GSL30 CODES	GSL60 CODES	KIT COMPOSITION	PROTECTION CLASS
12 m	GSL30012	GSL60012	Strip LED coin of the chosen lenght + Power supply cable + N° 2 tensioners	IP65
15 m	GSL30015	GSL60015		
18 m	GSL30018	GSL60018		
21 m	GSL30021	GSL60021		
24 m	GSL30024	GSL60024		
29 m	GSL30029	GSL60029		
40 m	GSL30040	GSL60040		
60 m	GSL30060	GSL60060		

NOTE: Available also as kits with components to be assembled.

5.12.1.5 Control of inspection operation

5.12.1.5.1 Design requirements
5.12.1.5.1.2

The inspection control station shall consist of:

a) a switch (inspection operation switch) which shall satisfy the requirements for electric safety devices (5.11.2). This switch, which shall be bi-stable, shall be protected against involuntary operation;
b) direction push buttons “UP” and “DOWN” protected against accidental operation with the direction of movement clearly indicated;
c) a push button “RUN” protected against accidental operation;
d) a stopping device in conformity with 5.12.1.11.

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

TLP5

Maintenance pit station

TLP5 + 16000062

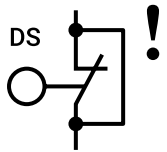
Maintenance pit station with holder

5.12.1.8 Landing and car door bypass devices

5.12.1.8.1
For maintenance of contacts of the landing door, car door, and door locking a bypass device shall be provided in the control panel or emergency and test panel.

5.12.1.8.2
The device(s) shall be a switch protected against unintended use by mechanically movable means (e.g. cover, security cap) permanently installed, or a plug socket combination which shall satisfy the requirements for electric safety devices according 5.11.2.

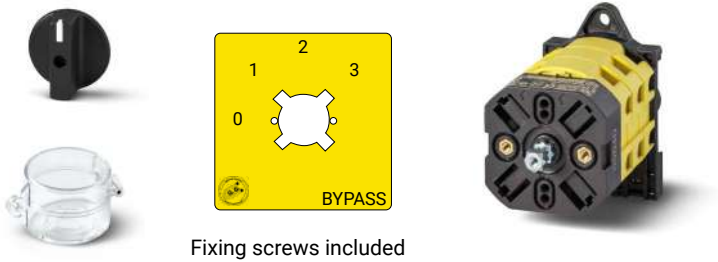
5.12.1.8.3
The landing and car door bypass devices shall be identifiable by the word "BYPASS" written on or near to them. In addition, the contacts to be bypassed shall be indicated with the identifiers according to the electrical diagrams.
Alternatively the symbol shown in Figure 23 below together with identifier according to electric diagrams can be used.



NOTE:
Many solutions are avalilable according to electric scheme.
The two solutions outlined on the right are examples to give Indication of the available Bypass type.

OPTION 1
Bypass device with housing

OPTION 2
Rear fixing Bypass device



Fixing screws included

5.12.1.8 Landing and car door bypass devices

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

GMS131

Signalling device with yellow flashing light (without 5 LUX) and continuous buzzer

GMS167

Signalling device with yellow flashing light (without 5 LUX) and continuous buzzer and alarm button

5.3.6.2.2 Horizontally sliding doors
5.3.6.2.2.1 Automatic power operated doors

The following applies:

a) the kinetic energy of the landing and/or car door and the mechanical elements which are rigidly connected to it, calculated or measured at the average closing speed shall not exceed 10 J. The average closing speed of a sliding door is calculated aver its whole travel, less:

1) 25 mm at each end of the travel in the case of centrally closing doors;
2) 50 mm at each end of the travel in the case of side closing doors;

b) a protective device shall automatically initiate re-opening of the door(s) in the event of a person crossing the entrance during the closing movement. The protective device may be rendered inoperative in the last 20 mm of door closing gap;

1) the protective device (e.g. light curtain) shall cover the opening aver the distance between at least 25 mm and 1600 mm above the car door sill;
2) the protective device shall be capable of detecting obstacles minimum of 50 mm diameter;
3) to counteract persistent obstructions when closing the door, the protective device may be deactivated after a predetermined time;
4) in case of failure, or deactivation of the protective device, the kinetic energy of the doors shall be limited to 4J, if the lift is kept in operation, and an acoustic signal shall operate at any time the door(s) is (are) closing.

NOTE Protective device ofthe car door and the landing doors could be common.

MAIN FEATURES

- Black aluminum profile with IP44 protection.
- Different types of light beams' number.
- Easy installation in new or existing elevators.
- Possibility of installation in the doors or directly in the cabin.
- Supplied with four different types of automatic power supply, also dual-voltage 12/24V and 220V, with diagnostics, depending on light curtain model.
- High immunity to electromagnetic and light interference (EMC tested).

PRODUCT COMPOSITION

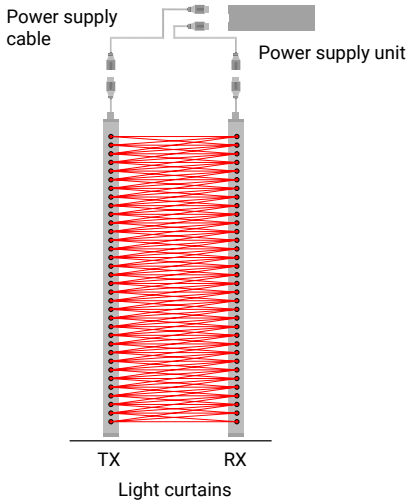
1 **Light curtains - transmitter and receiver components**
2 m height and different light beam numbers

2 **Power supply**
depending on the light curtain model
12/24V **or** 220 V, with diagnostics

3 **Power supply cable**
3.5 m length

4 **Mounting accessories**

1

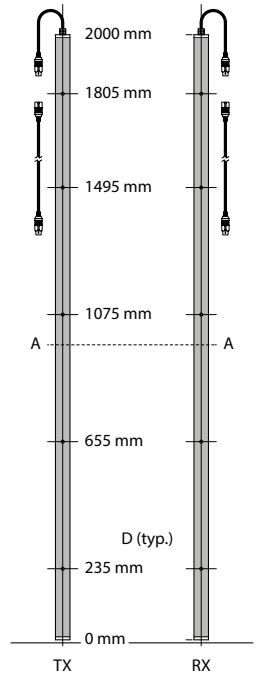


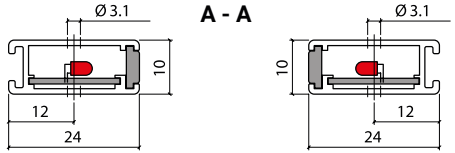
2

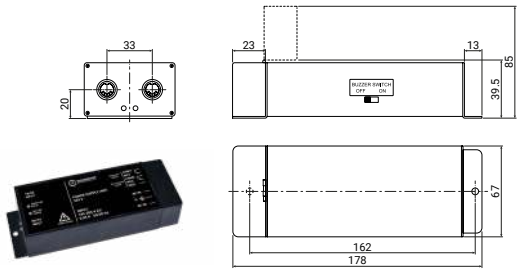
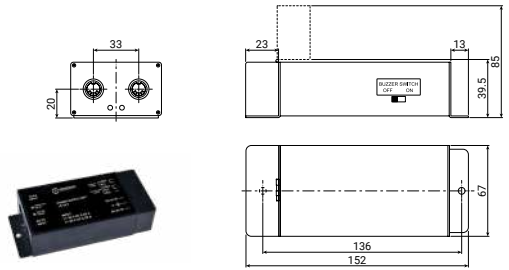
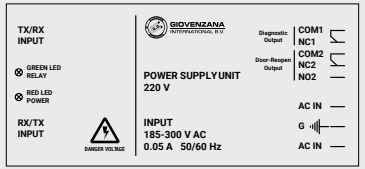
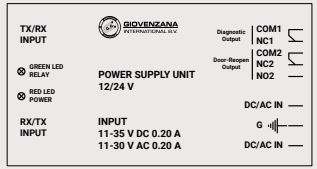
3

4

LIGHT BARRIERS ITEM CODE	GBL002	GBL006	GBL003	GBL007
Item description	174 beams light curtains	174 beams light curtains	194 beams light curtains	194 beams light curtains
Power supply unit included	220V with diagnostic	12/24V with diagnostic	220V with diagnostic	12/24V with diagnostic
Standards compliance	**EN 81-20 / EN 81-50**		**EN 81-20 / EN 81-50**	
Beams quantity	36 pairs		40 pairs	
Beams - maximum / minimum	174 max / 108 min		194 max / 118 min	
IP rating	IP44		IP44	
Sizes (width × depth × height)	10 × 24 × 2000 mm		10 × 24 × 2000 mm	
Power rating	≤ 4 W		≤ 4 W	
Beams distance	45.7 mm		45.7 mm	
Response time (relay)	< 65 ms		< 70 ms	
Highest beam	≥ 1610 mm		≥ 1810 mm	
Lowest beam	≤ 20 mm		≤ 20 mm	
Detecting distance	0 ... 3.5 m		0 ... 3.5 m	
Vertical displacement at 0 mm	± 20 mm		± 20 mm	
Horizontal displacement at 0 mm	± 3 mm		± 3 mm	
Angular displacement at 50 mm	± 10°		± 10°	
Cable reliability (door movements)	20 million		20 million	
Light immunity	≥ 100.000 LUX		≥ 100.000 LUX	
EMC compliance - emissions / immunity	EN 12015 / EN 12016		EN 12015 / EN 12016	
Operating temperature range	-20 ... +65°C		-20 ... +65	
Vibration test	according EN81-50:2020		according EN81-50:2020	





POWER SUPPLY UNIT	220V WITH DIAGNOSTIC included into GBL002 and GBL003	12/24V WITH DIAGNOSTIC included into GBL006 and GBL007
Sizes (width × depth × height)	178 × 67 × 39.5 mm	152 × 67 × 39.5 mm
Voltagens input	185-300V AC, 0.05 A, 50/60 Hz	11-35V DC, 0.02 A 10-30V AC, 0.02 A
Power consumption	4 VA	4 VA
Case material	steel and aluminum	steel and aluminum
Diagnostic output relays	COM1, NO1	COM1, NO1
Door-reopen output relays	COM2, NC2, NO2	COM2, NC2, NO2
Relay contact rating	125V AC, 1 A or 30V DC, 2 A	125V AC, 1 A or 30V DC, 2 A
EMC compliance	EN 12015, EN 12016	EN 12015, EN 12016
LED Indication	**red LED:** power status **green LED:** light curtains output status or diagnostic status (flashing in case of faulty test)	**red LED:** power status **green LED:** light curtains output status or diagnostic status (flashing in case of faulty test)
Audible Indication	When the switch is in the ON position, the buzzer sounds if the photoelectric beams are interrupted for more than 15 seconds.	When the switch is in the ON position, the buzzer sounds if the photoelectric beams are interrupted for more than 15 seconds.
Technical drawings		
Power supply unit label		

LOGISTICS

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 OFFICE

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 LTDA
Guaíba, Brasil - 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

Headquarter

GIOVENZANA INTERNATIONAL B.V.
Amsterdam, The Netherlands - Industrial and Commercial

Manufacturers units

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

G.G.Space Kft
Budapest, Hungary

Engineering

Electra Engineering Srl
Milan, Italy

Logistic warehouses

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

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