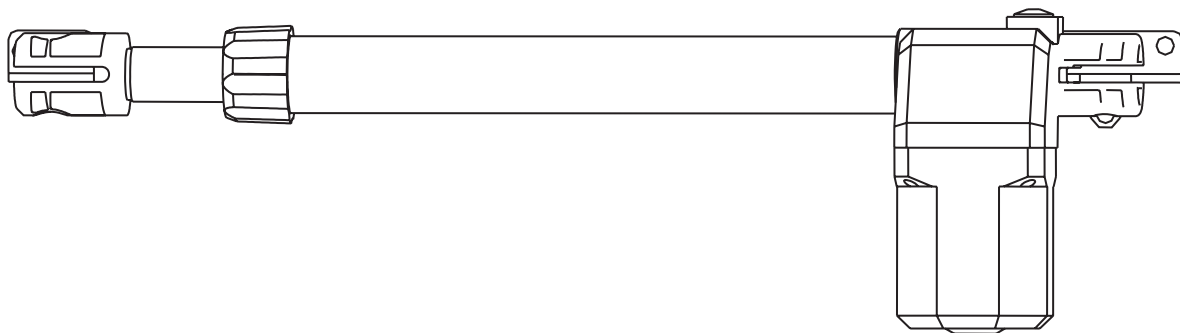




PS141 PS151

230 Vac linear gear motor for swing gates

Motoriduttore lineare per cancelli a battente 230 Vac

Motoréducteur linéaire pour portails à battants 230 Vac

Motorreductor lineal para cancelas batientes 230 Vac

Lineargetriebemotor für Drehtore 230 Vac

Motorreductor linear para portões de batente 230 Vac

Liniowy motoreduktor do bram skrzydłowych



1 - SAFETY WARNINGS

ATTENTION !

ORIGINAL INSTRUCTIONS - important safety instructions. Follow the instructions since incorrect installation can lead to severe inquiry! Save these instructions.

Read the instructions carefully before proceeding with installation.

The design and manufacture of the devices making up the product and the information in this manual are compliant with current safety standards. However, incorrect installation or programming may cause serious injury to those working on or using the system. Compliance with the instructions provided here when installing the product is therefore extremely important.

If in any doubt regarding installation, do not proceed and contact the Key Automation Technical Service for clarifications.

Under European legislation, an automatic door or gate system must comply with the standards envisaged in the Directive 2006/42/EC (Machinery Directive) and in particular standards EN 12453; EN 12635 and EN 13241-1, which enable declaration of presumed conformity of the automation system.

Therefore, final connection of the automation system to the electrical mains, system testing, commissioning and routine maintenance must be performed by skilled, qualified personnel, in observance of the instructions in the "Testing and commissioning the automation system" section. The aforesaid personnel are also responsible for the tests required to verify the solutions adopted according to the risks present, and for ensuring observance of all legal provisions, standards and regulations, with particular reference to all requirements of the EN 12453 standard which establishes the test methods for testing door and gate automation systems.

ATTENTION !

Before starting installation, perform the following checks and assessments: ensure that every device used to set up the automation system is suited to the intended system overall.

For this purpose, pay special attention to the data provided in the "Technical specifications" section.

Do not proceed with installation if any one of these devices is not suitable for its intended purpose;

check that the devices purchased are sufficient to guarantee system safety and functionality;

perform a risk assessment, including a list of the essential safety requirements as envisaged in Annex I of the Machinery Directive, specifying the solutions adopted. The risk assessment is one of the documents included in the automation system's technical file. This must be compiled by a professional installer.

Considering the risk situations that may arise during installation phases and use of the product, the automation system must be installed in compliance with the following safety precautions:

never make modifications to any part of the automation system other than those specified in this manual. Operations of this type can only lead to malfunctions. The manufacturer declines all liability for damage caused by unauthorised modifications to products;

if the power cable is damaged, it must be replaced by the manufacturer or its after-sales service, or in all cases by a person with similar qualifications, to prevent all risks;

do not allow parts of the automation system to be immersed in water or other liquids. During installation ensure that no liquids are able to enter the various devices;

should this occur, disconnect the power supply immediately and contact a Key Automation Service Centre. Use of the automation system in these conditions may cause hazards;

never place automation system components near to sources of heat or expose them to naked lights. This may damage system components and cause malfunctions, fire or hazards;

ATTENTION !

The drive shall be disconnected from its power source during cleaning, maintenance and when replacing parts. If the disconnect device is not in a visible location, affix a notice stating: "MAINTENANCE IN PROGRESS":

connect all devices to an electric power line equipped with an earthing system;

the product cannot be considered to provide effective protection against intrusion. If effective protection is required, the automation system must be combined with other devices;

the product may not be used until the automation system "commissioning" procedure has been performed as specified in the "Automation system testing and commissioning" section;

the system power supply line must include a circuit breaker device with a contact gap allowing complete disconnection in the conditions specified by class III overvoltage;

use unions with IP55 or higher protection when connecting hoses, pipes or cable glands;

the electrical system upstream of the automation system must comply with the relevant regulations and be constructed to good workmanship standards;

this appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved;

before starting the automation system, ensure that there is no-one in the immediate vicinity;

before proceeding with any cleaning or maintenance work on the automation system, disconnect it from the electrical mains;

special care must be taken to avoid crushing between the part operated by the automation system and any fixed parts around it;

children must be supervised to ensure that they do not play with the equipment.

that the drive cannot be used with a driven part incorporating a wicket door unless the drive can only be operated with the wicket door in the safe position;

appropriate bins. Device components such as electronic boards, metal parts, batteries, etc. must be separated and differentiated. For the methods of disposal, the rules in force in the place of installation must be applied. DO NOT DISPOSE IN THE ENVIRONMENT!



KEY AUTOMATION S.r.l. reserves the right to amend these instructions if necessary; they and/or any more recent versions are available at www.keyautomation.com

⚠ ATTENTION !

Frequently examine the installation for imbalance where applicable and signs of wear or damage to cables, springs and mounting. Do not use if repair or adjustment is necessary.

⚠ ATTENTION !

Packaging components (cardboard, plastic, etc.), duly separated, must be placed in the

2 - INTRODUCTION TO THE PRODUCT

2.1 - Product description

The PS141 and PS151 gear motors are destined to be installed in systems for the automation of gates with hinged doors. The PS141 and PS151 gear motors have been designed and con-

structed to be fitted onto hinged doors within the weight limits indicated in the technical specifications table.

2.2 - Models and technical characteristics

TECHNICAL DATA	PS141	PS151
Maximum length of the gate	4,0 m	5,0 m
Maximum weight of the gate	250 kg	250 kg
Stroke	40 cm	60 cm
Peak Power	350 W	350 W
Power supply	230 Vac $\pm$ 10% 50/60 Hz	230 Vac $\pm$ 10% 50/60 Hz
Max Absorption	1,5 A	1,5 A
Thrust	2200 N	2200 N
Operating temperature	-20 - +55 °C	-20 - +55 °C
Opening time	22 s	33 s
Thermal protection	150°C	150°C
Cycles/hour *	20	20
Protection grade	IP43	IP43
Lubrication	GREASE	

* with non-panelled door at a temperature of 20°C

3 - PRELIMINARY CHECKS

Before installing this product, verify and check the following steps:

- Check that the gate or door are suitable for automation
- The weight and size of the gate or door must be within the maximum permissible operating limits specified in Fig. 2
- Check the presence and strength of the security mechanical stops of the gate or door
- Check that the mounting area of the product is not subject to flooding
- Conditions of high acidity or salinity or proximity to heat sources could cause malfunction of the product
- Extreme weather conditions (for example the presence of snow, ice, high temperature range, high temperatures) may increase the friction and therefore the force required for the handling and initial starting

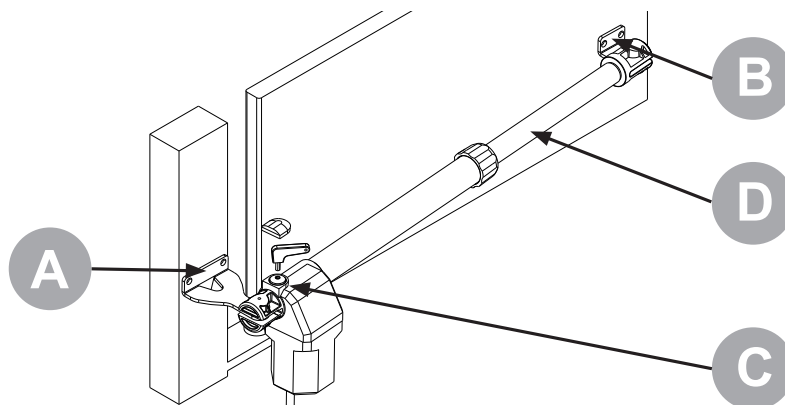
point may be higher than under normal conditions.

- Check that the manual operation of gate or door is smooth and friction-free and there is no risk of derailment of the same
- Check that the gate or door are in equilibrium and stationary if left in any position
- Check that the power line to supply the product is equipped with proper grounding safety and protected by a magnetothermal and differential security device
- Provide the power system with a disconnecting device with a gap of contacts enabling full disconnection under the conditions dictated by the overvoltage category III.
- Ensure that all materials used for the installation comply with current regulations

4 - PRODUCT INSTALLATION

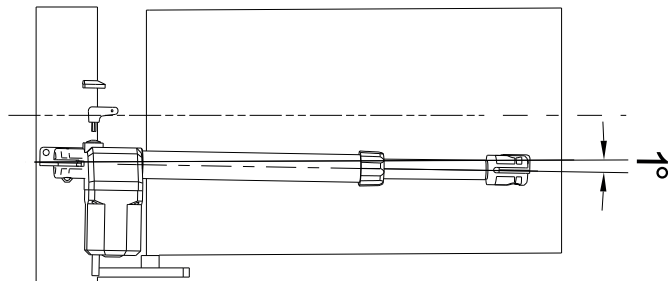
4.1 - Product Installation

- A – Pillar bracket
- B – Gate bracket
- D – Piston rod
- C – Release



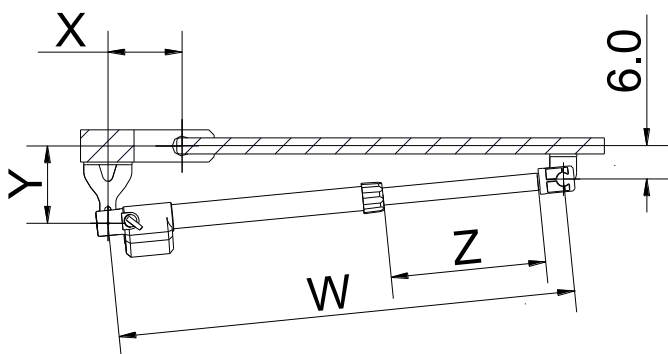
To operate a good installation of the gear motors PS141-PS151, follow these instructions:

- 1 - Open the box and take out gear motor. Make sure that it has not been damaged during the transport.
- 2 - Make sure that the leaf of the gate is perfectly horizontal.
- 3 - Place the gear motor inclined approximately 1° below the horizontal line.



- 4 - Fix the support plate A on the pillar beside the leaf, taking in account the measures shown in the table below. Do not forget inclination.

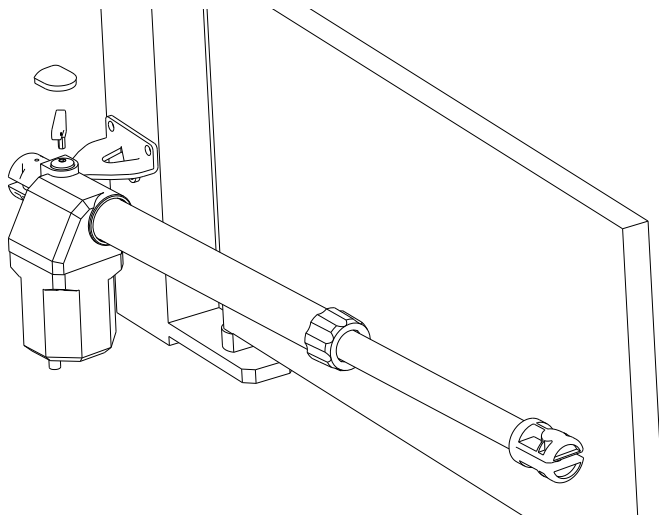
MOTOR	ROTATION 95°			
	W	X	Y	Z
	1122	145	145	478
	1532	280	280	678
MOTOR	ROTATION 120°			
	W	X	Y	Z
PS141	1122	170	110	478
PS151	1532	310	120	678



- 5 - Install the gear motor on to the support plate A and fix it with the bolt.

- 6 - With gate's leaf closed, turn and slide the screw of gear motor's D shaft, until the end of the stroke.

- 7 - Screw D shaft back on 1 complete turn of 360°



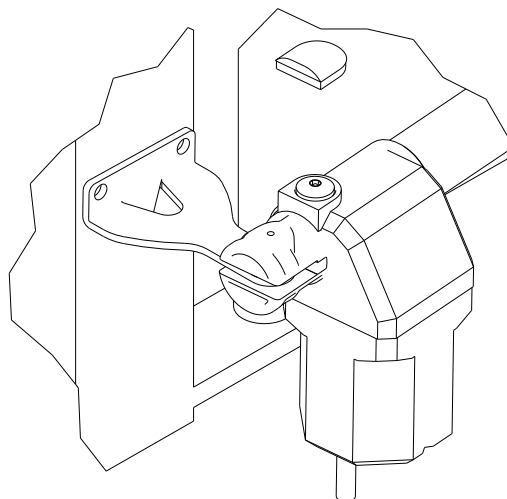
- 8 - Place B support plate in the hole of D shaft and position it against the gate leaf. Fix it to the gate leaf taking in account the inclination.

- 9 - Proceed in the same way with the other gate leaf.

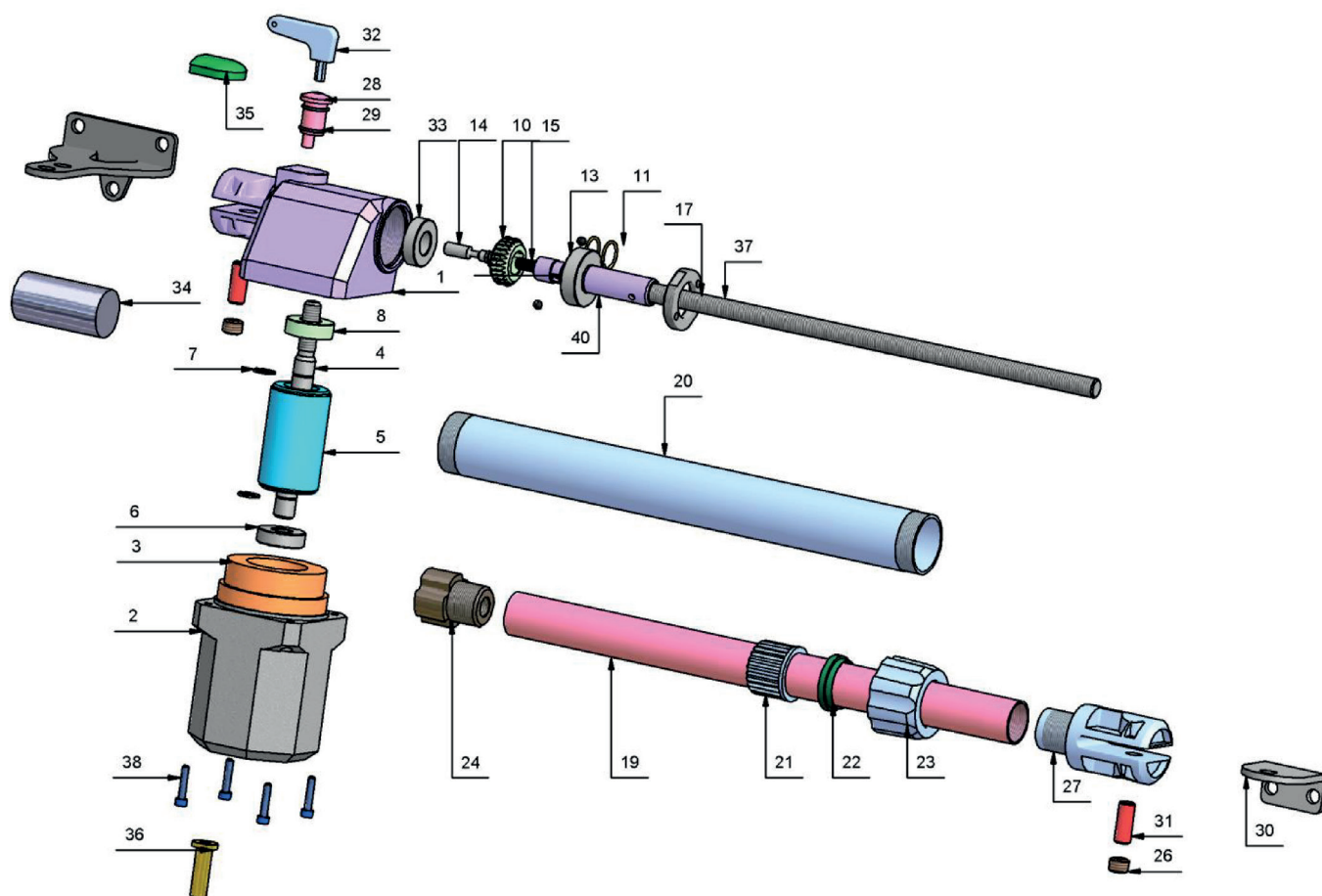
- 10 - Connect the electrical wires according to the following table; place the mechanical limit stops and install any required safety devices.

- 11 - Place the cover on the unblocking screw (C)

YELLOW/GREEN	EARTH
GREY	COMMON
BROWN	OPEN
BLACK	CLOSE



5 - SPARE PARTS



1	1	100645	REDUCTION GEAR COVER LF. BLACK	20	1	100739	BLACK ALUMINIUM TUBE 600mm STROKE
1	1	100644	REDUCTION GEAR COVER RG. BLACK	20	1	100764	GREY ALUMINIUM TUBE 600mm STROKE
1	1	100759	REDUCTION GEAR COVER LF. GREY	21	1	100829	PISTON ROD GUIDE
1	1	100758	REDUCTION GEAR COVER RG. GREY	22	1	100625	SCRAPER RING
2	1	100647	MOTOR CASING RG. BLACK	23	1	100827	PISTON ROD LOCK NUT
2	1	100761	MOTOR CASING RG. GREY	24	1	100828	FEMALE SCREW
3	1	100840	STATOR 220V 4 POLES 45mm 1400rpm	26	1	100823	WALL BRACKET
4	1	100651	IRREVERSIBLE MOTOR SHAFT	26	2	100705	GRUB SCREW M14X10
5	1	100841	ROTOR 45mm	27	1	100646	ALUMINIUM PISTON ROD TERMINAL BLACK
6	1	100278	BEARING 6202 ZZ	27	1	100906	ALUMINIUM PISTON ROD TERMINAL GREY
7	2	100706	HELASTIC RING E15	28	1	100624	ALUMINIUM UNCLAMPING
8	1	100291	BEARING 6202 2RS	29	2	100657	O-RING
10	1	100650	IRREVERSIBLE TOOTH WHEEL	30	1	100825	GATE BRACKET
11	2	100789	HELASTIC RING E20	31	2	100654	PIN
12	1	100709	BEARING 6004 ZZ	32	1	100218	UNCLAMPING KEY
13	2	100658	TOWING BALL	33	1	100707	BEARING 6003 ZZ
14	1	100655	UNCLAMPING PIN	34	1	100184	CAPACITOR 8μF
15	1	100641	UNCLAMPING SPRING	35	1	100755	UNCLAMPING CAP
17	1	100661	ALUMINIUM LOCK NUT	36	1	100748	CABLE PRESS
17		100909	FIBRE LOCK NUT	37	1	100717 + 100998	ENDLESS SCREW 50 + release shaft
19	1	100713	STAINLESS STEEL TUBE 400mm STROKE	37	1	100740 + 100998	ENDLESS SCREW 70 + release shaft
19	1	100738	STAINLESS STEEL TUBE 600mm STROKE	38	4	100313	CAP SCREW M5X16
20	1	100715	BLACK ALUMINIUM TUBE 400mm STROKE	38	4	100313	CAP SCREW M5X16
20	1	100763	GREY ALUMINIUM TUBE 400mm STROKE				

6 - DECLARATION OF CONFORMITY

DICHIARAZIONE DI INCORPORAZIONE DI QUASI-MACCHINA

DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

Il sottoscritto Nicola Michelin, Amministratore Delegato dell'azienda
The undersigned Nicola Michelin, General Manager of the company

Key Automation srl, Via Meucci 23, San Donà di Piave (VE) – ITALIA

dichiara che il prodotto tipo:
declares that the product type:

VEGA

Motoriduttore elettromeccanico 230Vac a pistone per ante fino a 200Kg
Electromechanical 230Vac piston gear motor for leaves up to 200Kg

Models:
Models:

900PS141L, 900PS141R, 900PS151L, 900PS151R
 900PS141, 900PS151

E' conforme a quanto previsto dalle seguenti direttive comunitarie:
Is in conformity with the following community (EC) regulations:

Direttiva macchine / *Machinery Directive* 2006/42/EC
 Direttiva bassa tensione / *Low voltage Directive* 2014/35/EC
 Direttiva compatibilità elettromagnetica / *EMC Directive* 2014/30/EC

Secondo quanto previsto dalle seguenti norme armonizzate:
In accordance with the following harmonized standards regulations:

EN 55014-1:2006 + EN 55014-2:2015
 EN 61000-3-2:2014 + EN 61000-3-3:2013
 EN 62233:2008
 EN 60335-1:2012 + A1 + A11; EN 60335-2-103:2015

Dichiara che la documentazione tecnica pertinente al prodotto è stata redatta conformemente a quanto previsto dalla direttiva 2006/42/CE Allegato VII parte B e verrà fornita a fronte di una richiesta adeguatamente motivata dalle autorità nazionali.

Declares that the technical documentation is compiled in accordance with the directive 2006/42/EC Annex VII part B and will be transmitted in response to a reasoned request by the national authorities.

Dichiara altresì che non è consentita la messa in servizio del prodotto finché la macchina, in cui il prodotto è incorporato, non sia stata dichiarata conforme alla direttiva 2006/42/CE.

He also declares that is not allowed to use the above mentioned product until the machine, in which this product is incorporated, has been identified and declared in conformity with the regulation 2006/42/EC.

San Donà di Piave (VE), 25/08/18

Amministratore Delegato
 General Manager
 Nicola Michelin



Key Automation S.r.l.
 Via Meucci, 23
 30027 San Donà di Piave (VE)
 P.IVA 03627650264 C.F. 03627650264
info@keyautomation.it

Capitale sociale 154.000,00 i.v.
 Reg. Imprese di Venezia
 03627650264 REA VE 326953
www.keyautomation.it



Organizzazione con sistema di gestione certificato
 ISO 9001:2008

Key Automation S.r.l.

Via Meucci 23 - 30027 San Donà di Piave (VE)

T. +39 0421 307456 - info@keyautomation.it

www.keyautomation.com

Instruction version

580PS141 REV.05