ROGER TECHNOLOGY

100% Made in Italy

SLED SERIES

TODAY'S DIGITAL INTELLIGENCE
MOVES YOUR GATE

ROGER BRUSHLESS

IPU

WHAT WE DO

INNOVATION, TOP NOTCH MECHANICS AND NEVER-ENDING TECHNOLOGICAL RESEARCH ARE THE ELEMENTS THAT MAKE ROGER TECHNOLOGY A UNIQUE AND DIFFERENT COMPANY

Starting from our first day of work we immediately gave priority to the development and production of excellent, completely Italian mechanics, based only on top quality ferrous and non ferrous raw materials and guaranteed by impeccable production and surface treatment processes. It was just a few years later, in the 1990s, that we created the first major step in our history, by implementing a mass production line for completely robotised motors, thus becoming a reference outsourcer for major brands of the gate automation market.

PEOPLE, IDEAS AND PRODUCT EXPERIENCE

From the very beginning **Roger Technology** has evolved and grown because it's people believe that any bright idea can lead to great change in the future. Our people are passionate and innovative in their approach to every challenge, always pushing the boundaries to develop extraordinary products.

In our language we translate the word "**experience**" as passion. It is this passion that drives us in the development of revolutionary **new products** that serve the real needs of our customers. We understand that our customers want a product designed around the way that they work.

OUR PLUSES

EXCELLENT RAW MATERIALS

Steel, ductile cast iron, aluminium, bronze, copper and titanium have always been the main and exclusive raw materials used in the advanced engineering processes of our company.

PRODUCTION TECHNOLOGY

At Roger Technology all internal manufacturing is carried out on optimised production lines making use of very advanced technology. We have invested heavily in robotics and automated all product manufacturing phases. This ensures that all components and semi-finished products are highly reliable and are fully complient with our exceptionally high quality standards.

INTERNAL ASSEMBLY

Our highly qualified and dedicated staff oversee the fitting and assembly stages. Every piece of equipment is checked by our all italian personnel to ensure that we deliver reliable products to our customers.

MADE IN ITALY

All solutions, products, design and the complete production process of Roger Technology is developed in Italy with the use of materials of primary quality always found in the market trough partner suppliers that share the same passion and professionality of our company in developing products technologically reliable, efficient and simple in the way that they have been made for being installed and used.

BRUSHLESS MOTOR

A DIGITAL BRUSHLESS MOTOR WITH PERMANENT MAGNETIC FIELD, DIGITAL ELECTRONICS FOR THE COMPLETE MANAGEMENT OF THE AUTOMATION SYSTEM CONTROL. DESIGNED FOR SUPER INTENSIVE USE WITH THE ADDED BENEFIT OF A SUPER LOW POWER CONSUMPTION: **THIS IS ROGER BRUSHLESS**

We are the creators at the heart of the product!
All of our digital brushless motors are designed and manufactured in our own factories. Using dedicated automated machines the motors are wound with ultimate precision.

DIGITAL BRUSHLESS MOTOR

Revolutionary and innovative digital Brushless motor with permanent magnetic field, three-phase sinusoidal power supply with native encoder that allows super-intensive use of the automation system with extremely low power consumption, not only providing 100% compliance with all the automation system management and safety rules, but setting new standards in gate safety.

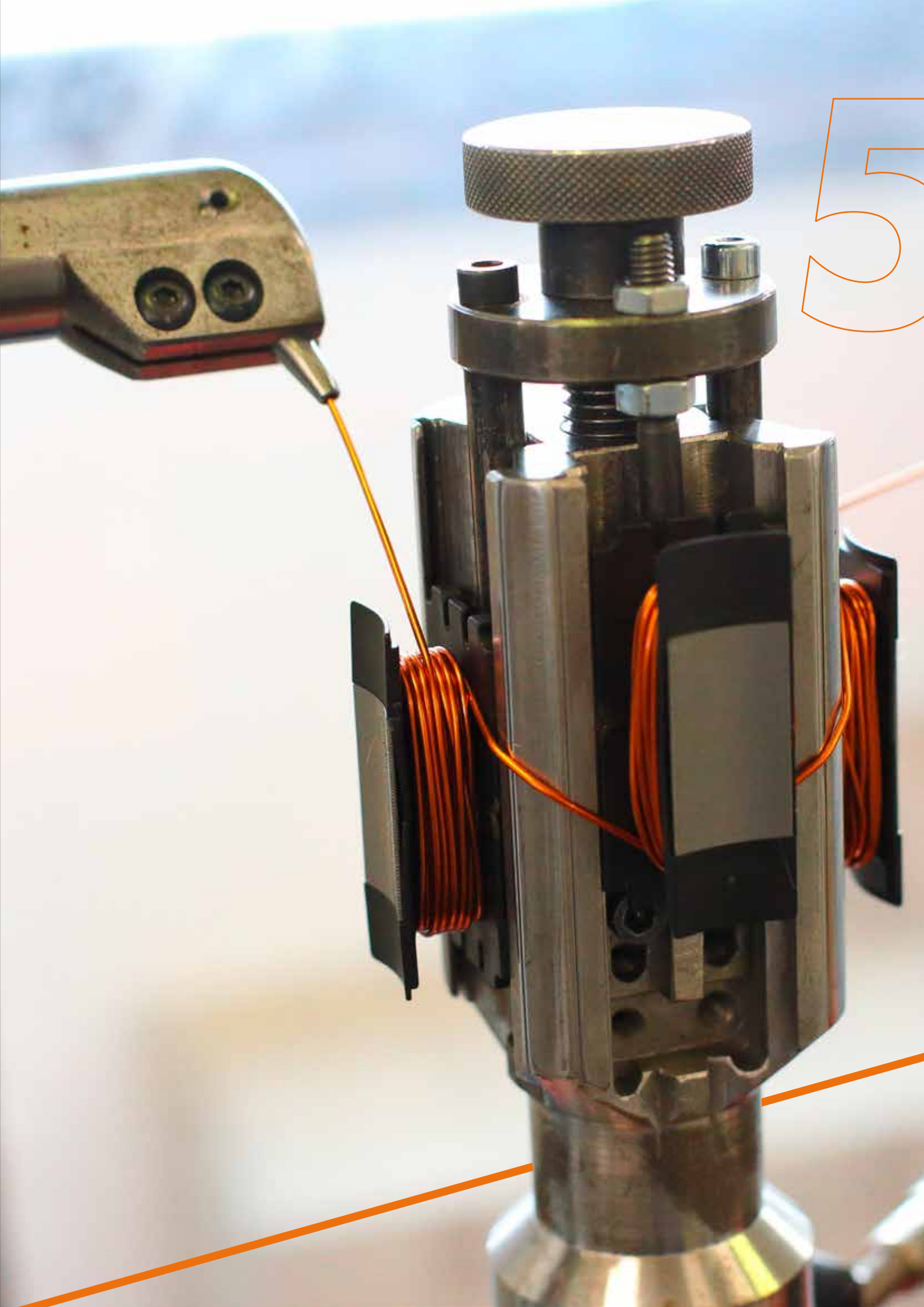
NEW GENERATION OF ELECTRONICS

The new control unit with onboard digital Brushless controller. Without traditional relays and due to the revolutionary MOSFET quadrant system and its control technology entirely based on a DSP (Digital Signal Processor) microcontroller, it represents a new generation of electronic cards created to safely handle all movement phases of the automation system.

ENGINEERING PASSION

All the mechanical components and gears are manufactured in steel, cast iron and bronze. The automation system casings are made from titanium-reinforced die-cast aluminium. All the gears are inspected and assembled on high-quality bearings and inserted on precise seats machined to provide absolute precision between the axes.

A TECHNOLOGY THAT OFFERS MAXIMUM PERFORMANCE BUT CONSUMES LESS POWER THAN OTHER MOTORS



COMPLETELY BRUSHLESS

THE REVOLUTIONARY DIGITAL MOTOR WITH 12 UNIQUE FEATURES

3-PHASE DIGITAL BRUSHLESS MOTOR

A very powerful motor with substantial torque. The motor is compact and neat due to the special concentrated coil windings, it is powered by a **three phase sinusoidal system**.

NO PROBLEM IN THE EVENT OF POWER FAILURE

With the help of internal or external batteries and the associated battery charging card, your automation system continues to operate for a considerable time **even during prolonged power cuts**, ensuring many more operations than traditional technologies.

SPEED, ACCELERATION AND DECELERATION WITH EXTREME ELEGANCE

The automation system with brushless digital technology creates perfect and elegant movements. With a constant **force and torque** at every point and with the option of varying the speed on deceleration and acceleration the system can be managed with maximum safety.

EXTREMELY LOW ENERGY CONSUMPTION

A motor that can operate at low voltage in super-intensive use and which can operate in environments with extremely demanding weather conditions while maintaining **very low energy consumption and absorption levels**.

DIGITAL AND VECTORIAL AUTOMATION CONTROLLER

The BRUSHLESS digital controller, which operates at low voltage **24V/36V DC**, allows 100% control of the automation system in digital mode. Due to its operation entirely based on a DSP microcontroller the travel and all the movements of your automation system can therefore be programmed and customised easily, precisely and elegantly.

MOTOR AT AMBIENT TEMPERATURE

The BRUSHLESS motor was created with the main goal of being a motor for super intensive use and **with a 99% efficiency**. Regardless of how many operations the engine performs in a day, it always remains cold or at the most reaches the outside ambient temperature.

THE DIGITAL SILENCE OF THE MOTOR

One great impact is the **silence** or the near absence of noise, generated by the BRUSHLESS motor during all its movements.

MOTOR FOR SUPER-INTENSIVE USE

We wanted to surprise our customers with a product that was fundamentaly different to any other product on the market.
Fact: our motor remains **permanently cold** even after many days of super intensive use.

IMPACT, OBSTACLE DETECTION AND REVERSAL IN TOTAL SAFETY

Thanks to digital technology we are able to **detect an obstacle** and reverse the motor instantly, by simply specifying the torque of the motor, the sensitivity, the time and the travel of the reversal. All in full compliance with safety requirements.

ONBOARD NATIVE DIGITAL ENCODER

The BRUSHLESS motor has a highly advanced **native digital encoder** that controls management of automation systems in a safe, precise and extremely elegant manner.

SIMPLE INSTALLATION WITH A SINGLE 3-WIRE CABLE

The BRUSHLESS motor can be installed by simply connecting it using three wires! What could be easier? This will provide full digital management of your automation system thanks to the **SENSORELESS** and **SENSORED** (absolute encoder) technology incorporated in the BRUSHLESS sliding gate motors.

ADVANCED PRECISION ENGINEERING TO OBTAIN OPTIMAL MOTOR PERFORMANCE

We have created a mechanism that gives you the opportunity to get **the maximum performance out of the motor**. A product which combines the quality of the internal production processes, the mechanical processing and the use of high quality ferrous and non-ferrous materials.

WHY BRUSHLESS?

DIGITAL, SMART, POWERFUL, ELEGANT, ROBUST AND ALL-ITALIAN

TECHNOLOGY

IPU

1 EPICYCLOIDAL GEARBOX (REVERSIBLE)

Reversible gearbox that allows opening and closing the gate manually at any time.

2 GEARS AND BEARINGS

The gearbox comprises satellites located on special satellite-holders with ball bearings. The third and final gearbox level comprises four satellites that increase the reliability of the entire gearbox.

3 DIGITAL BRUSHLESS MOTOR

Digital Brushless motor with low voltage 36V permanent magnetic field. Extremely compact and powerful, it operates at ambient temperature, making it suitable for extremely intense use with low energy consumption.

4 MAIN OUTPUT SHAFT

The slow shaft is obtained through a billet rolling process, making it suitable for extra intensive use at high speed, for any kind of opening, for leaves up to 1.8m and 200kg of weight.

5 SLIDE ARM

Slide arm with sliding-intensive roller, and adjustable double mechanical stop to manage the opening/closing limit switches.

6 ARTICULATED ARM

Standard articulated arms are available for SLED automation systems, to ensure full adaptability to any installation condition.

7 ALUMINIUM PROFILE WITH LED SET-UP

Elegant anodised aluminium profile, designed to house an RGB LED strip with traffic light, flashing and multicolour function, managed through B73/RGB module.

8 IPU (POWER MOTOR CONTROL) TECHNOLOGY INVERTER BOARD

The innovative PMC inverter board with IPU TECHNOLOGY is installed on board, and it includes the high-resolution 4096 PPR digital encoder. The inverter board is housed inside the automation system, near the Brushless motor, and it controls the motor power section. Its position near the motor and the built-in encoder ensure excellent performances, smooth movements, and instant obstacle detection. The automation system and the IPU control unit are connected via 4-wire ModBus RS485 protocol, creating a robust communication system between the two units. This simple and efficient connection is achieved through 2 power cables and 2 communication cables.

TECHNICAL SPECIFICATIONS

	SL/180/R
DESCRIPTION	BRUSHLESS IPU TECHNOLOGY low voltage electromechanical gear motor for intensive use, reversible, on-board power inverter with integrated digital encoder, ideal for leaves up to 1.8 m, without arms.
POWER LINE SUPPLY	230V AC - 50Hz
MOTOR POWER SUPPLY	36V DC
POWER RATING	200W
FREQUENCY OF USE	Intensive use
TORQUE	105 N m
OPERATING TEMPERATURE	-20 C° +55 C°
PROTECTION LEVEL	IP44
REDUCTOR TYPE	Reversible
MANOEUVRE SPEED	0,6 - 6,6 Rpm
OPENING TIME	6-30 s
LIMIT SWITCH	Mechanical stop on opening and closing only with LT341 accessory
RECOMMENDED DIGITAL CONTROLLERS	F70/IPU36/BOX - F70/IPU36/BOX/SL
ENCODER	Digital magnetic encoder SENSORED 4096 PPR
OPERATING CYCLES PER DAY (OPENING/CLOSING - 24 HOURS NO STOP)	400000
BATTERIES RECOVERY	3 external batteries 12V DC 4,5 Amp/h (on external box) - optional
MAXIMUM DIMENSION PRODUCT IN MM (L X W X H)	492 x 102 x 144,5
PRODUCT WEIGHT PACKED (KG)	13,7
NUMBER ITEMS PER PALLET	50

Brushless Motor · Intensive Use · High Speed Motor · Reversible Motor · IPU Technology

KIT PACKAGING

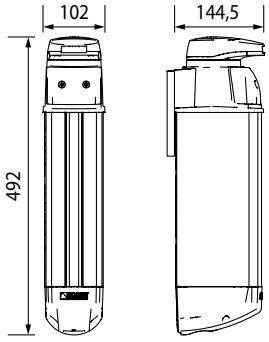
L.: 53,5 cm
P.: 19,5 cm
H. 39,5 cm

FUNCTIONS
OF AUTOMATED SWING GATE MOTOR

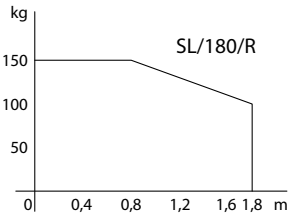
DESCRIPTION	SL/180/R
MAXIMUM LENGTH OF DOUBLE GATE LEAF	**1,8 M**
MAXIMUM WEIGHT OF DOUBLE GATE LEAF	150 kg
MAXIMUM LENGTH OF SINGLE GATE LEAF	1,8 m
MAXIMUM WEIGHT OF SINGLE GATE LEAF	200 kg
DIGITAL CONTROLLER IPU TECHNOLOGY	F70/IPU36/BOX - F70/IPU36/BOX/SL
RADIO RECEIVER TYPE	H93/RX20/I with fixed code connection H93/RX22A/I with fixed code connection H93/RX2RC/I with rolling code connection
MOTOR POWER SUPPLY	36V
MOTOR POWER CONTROL TECHNOLOGY (ETPC)	(POWER MOTOR CONTROL) TECHNOLOGY INVERTER BOARD
ENCODER TYPE	SENSORED a 4096 PPR
MAINS POWER SUPPLY	230V 50 Hz
ENERGY CONSUMPTION	Very low consumption
NUMBER OF MOTORS	2
POWER SUPPLY FOR ACCESSORIES	24V DC
FLASHING LIGHT TYPE	24V DC LED
OUTPUT FOR GATE OPENING INDICATOR AND AUTOMATION SYSTEM ON WARNING LIGHT	√
OUTPUT FOR COURTESY LIGHT	40W
TIMED AND GUARANTEED AUTOMATIC CLOSING	√
GATE EDGE SAFETY MANAGEMENT, 8.2KΩ OR STANDARD	√
LIMIT SWITCH TYPE	Mechanical stop on opening and closing only with LT341 accessory
SEPARATE MANAGEMENT FOR MOTOR 1 - 2	√
FORCE ADJUSTMENT IN NOMINAL MOVEMENT	√
FORCE ADJUSTMENT IN START-UP AND DECELERATION	√
OBSTACLE DETECTION - MOTOR REVERSAL	√
ADJUSTEMENT IMPACT FORCE SEPARATE MOTOR 2	√
SPEED ADJUSTMENT	√
DECELERATION	√
STARTING ACCELERATION (SOFT-START)	√
GUARANTEED CLOSING	√
WIND PROTECTION FUNCTION WITH GATE CLOSED	√
MOTOR STOPPING DISTANCE AND BRAKING DISTANCE	√
PARTIAL OPENING CONTROL	Pedestrian entry
HUMAN PRESENCE CONTROL	√
LOCK MANAGEMENT	√
CONDOMINIUM FUNCTION	√
SAFETY DEVICE CONFIGURATION	√
INSTALLATION TEST FUNCTION	(prog button)
OPERATING TEMPERATURE	-20°C/+55°C
INVERTER THERMAL PROTECTION	√
CURRENT ABSORPTION MAPPING SYSTEM	(MCA)
RESTORE FACTORY DEFAULT VALUES	√
INFORMATION ON USE OF MOTOR	√
B-CONNECT UNIT INPUT ON-BOARD	√
SECURITY PASSWORD MANAGEMENT	√

INSTALLATION

DIMENSIONS

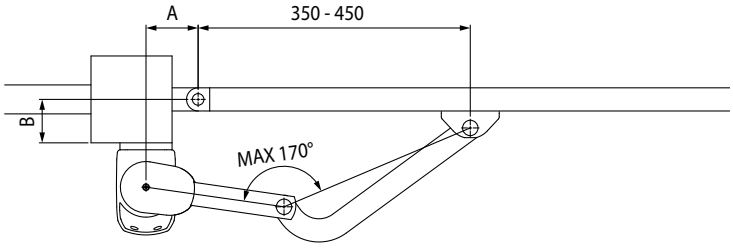


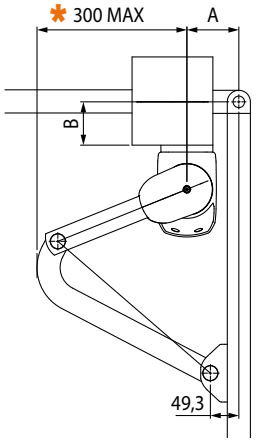
OPERATING LIMITS



Note: all measurements in the drawings are in millimetres

PREPARATIONS FOR STANDARD INSTALLATION WITH LT340



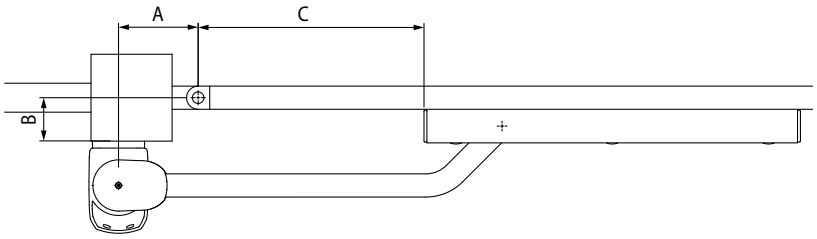


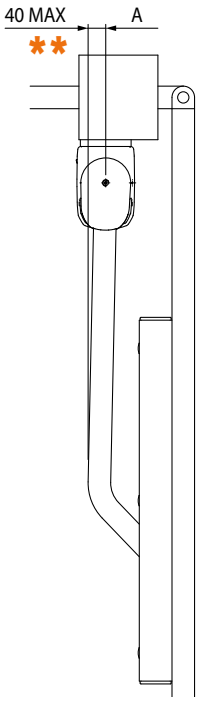
SLED - ARTICULATED ARM LT340

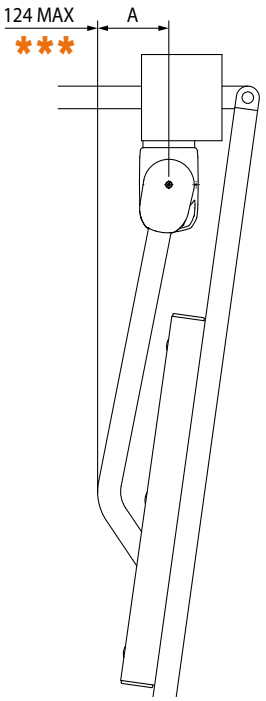
A	B	α°
90	50	90°
120	60	95°
150	100	95°
180	100	95°
200	120	95°

✱ 300 max. with 90° opening

PREPARATION FOR SLIDE ARM INSTALLATION WITH LT341







SLED - SLIDE ARM LT341

A	B	C	α°
120	50	400	90°
150	100	400	100°
200	50	350	105°
200	100	300	105°
250	100	300	100°

✱✱ 40 max. with 90° opening

✱✱✱ 124 max. with opening over 90°

OPTIONAL ACCESSORIES

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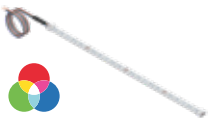
SLED: EVERYTHING YOU NEED FOR A COMPLETE, PROFESSIONAL INSTALLATION

	**B71/BCIPU**	Batteries charger for Brushless digital controller IPU36
	**BT12V45**	Battery 12V 4.5 Ah (1 pc)
	**LT340**	Arms short for articulated SLED series
	**LT341**	Slide arm lever for articulated SLED series
	**KT218**	Gate pull bracket for series articulated

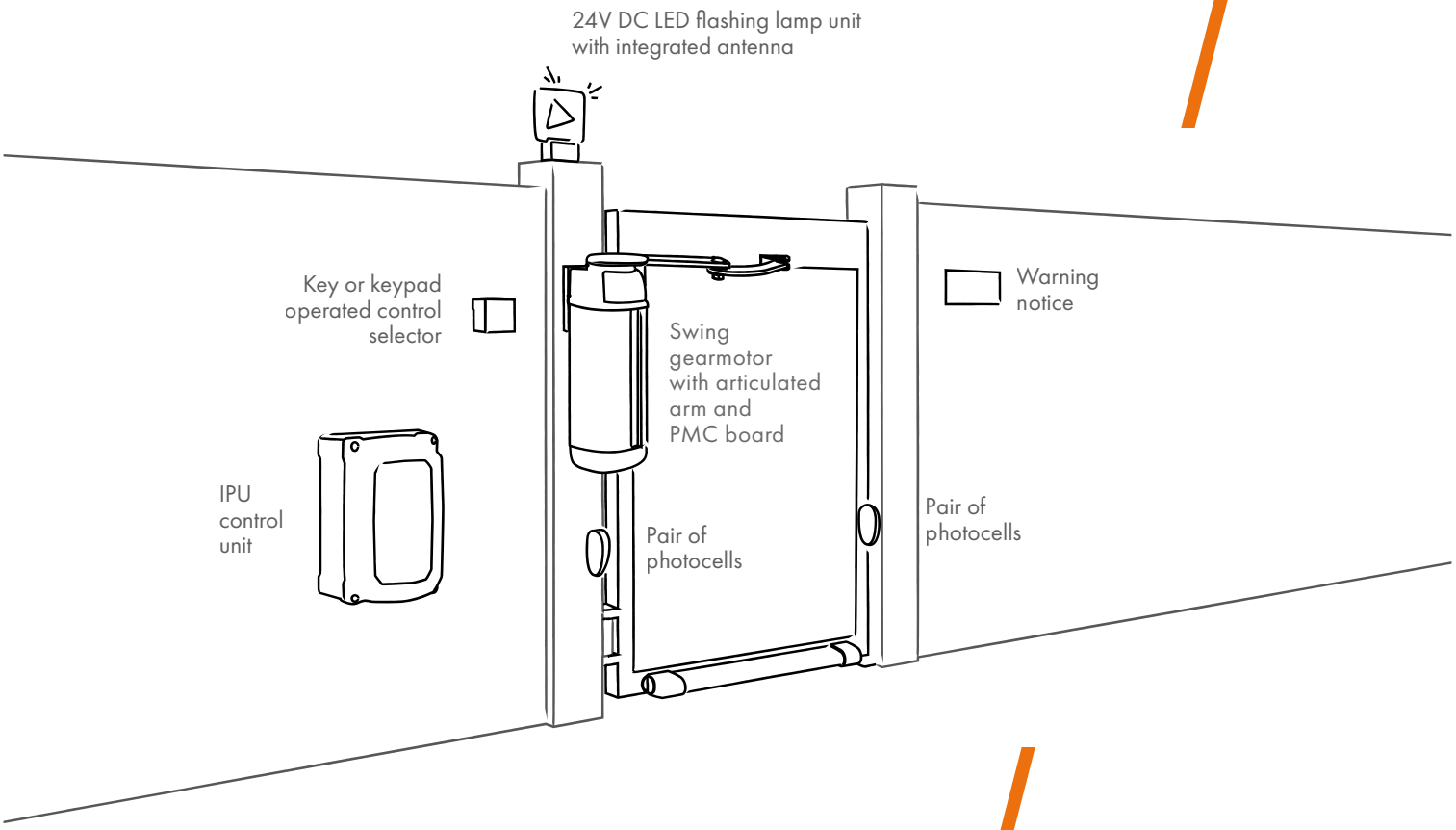
	**B73/RGB**	RGB light control device for F70/INV36/1 modules (for IPU TECHNOLOGY automations)
	**B74/ BCONNECT VERS. HW2**	Module WI-FI B-CONNECT - Remote management and programming system in IP web browser mode via Wi-Fi hot spot P2P connection for Brushless control units (B70/2ML - EDGE1 - CTRL - B70/1DC - B70/1DCHP - B70/1T - B70/1THP - F70/IPU36)
	**SL/LED/RGB**	Multicoloured RGB LED (red, green + other colours) for SLED motors
	**R99/C/001**	"Automatic Opening" warning notice

CONTROL UNIT

	**F70/IPU36/ BOX**	36V IPU controller to manage 2 IPU TECHNOLOGY BRUSHLESS motors with onboard inverter, in a plastic box
	**F70/IPU36/ BOX/SL**	36V IPU controller to manage 2 IPU TECHNOLOGY BRUSHLESS motors with onboard inverter, in a slim plastic box

INSTALLATION TYPE

INSTALLATION WITH STANDARD ARM LT340

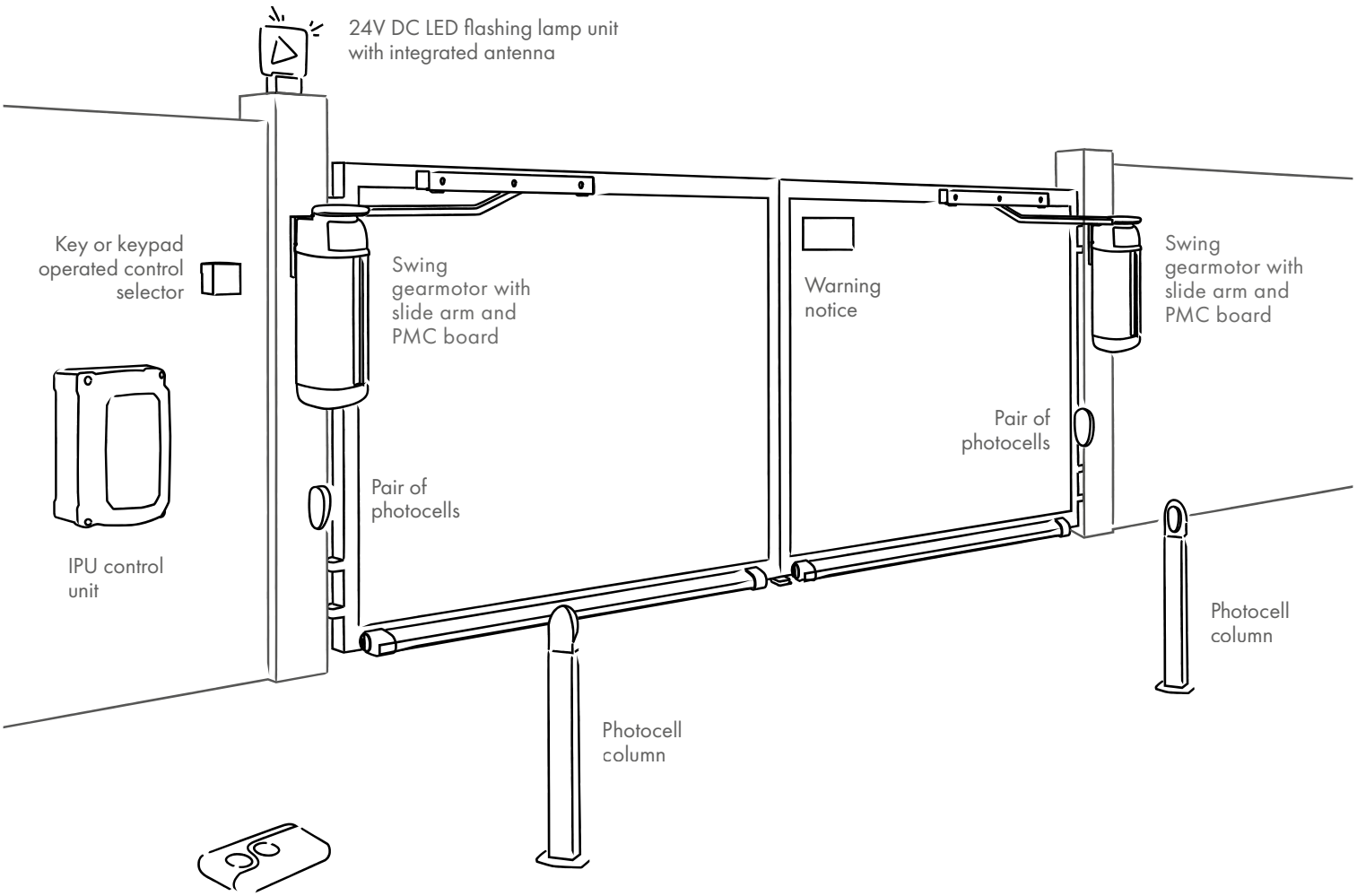


Fixed or rolling
code remote
controls

15

INSTALLATION TYPE

INSTALLATION WITH SLIDE ARM LT341



Fixed or rolling code remote controls

PREMIUM DEALER / PROFESSIONAL DEALER

innmagine ASSOCIATI

R99/B/029EN - 07/2024

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