Dítec

OPEN YOUR WORLD


24 V VIRTUAL ENCODER
SAFE

EASY TO INSTALL

COMPLETE RANGE

# Ditec PWR

## Automation system for swing gates with wings up to **5 m**

EN

# Ditec **PWR** a complete range

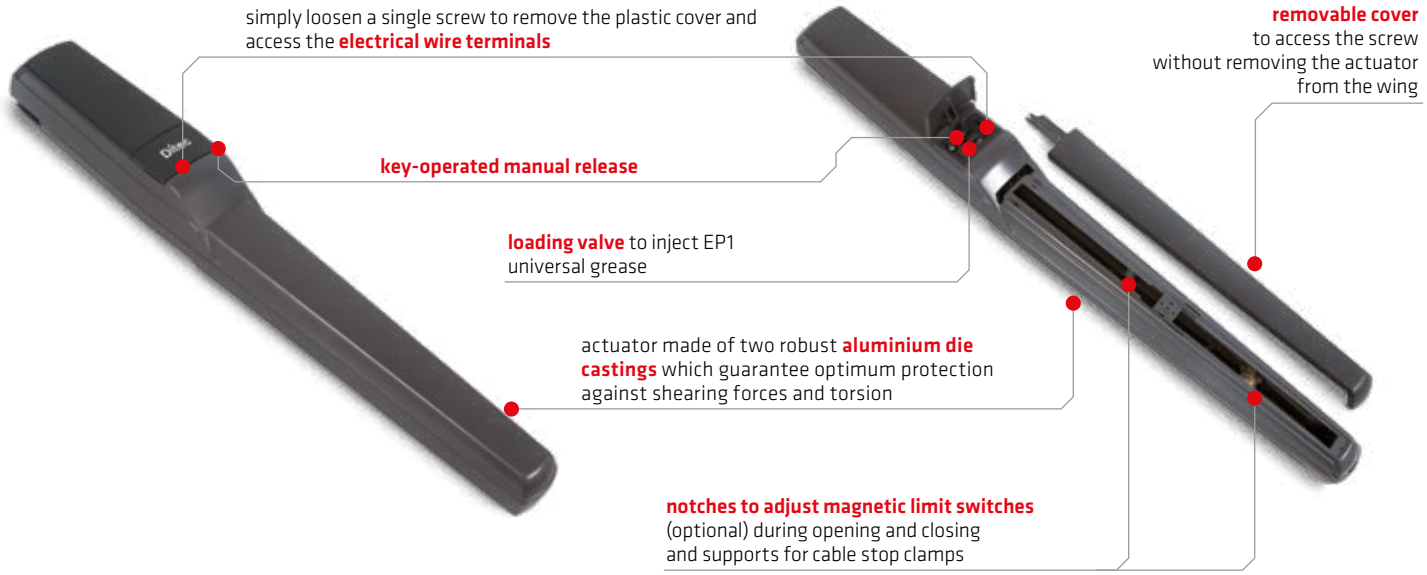
**Ditec PWR** is the range of automations for swing gates in residential, condominium and industrial applications. All the motors are designed and developed to ensure quality and strength, while making installation and maintenance easy.
A complete series made up of: a motor for wings up to 2.5 m (Ditec PWR 25), a motor for wings up to 3.5 m (Ditec PWR 35) and four motors for wings up to 5 m (Ditec PWR 50 series), three at 24 Vdc and one at 230 Vac.

## Ditec PWR 25

For wings **up to 2.5 m**

## Ditec PWR 35

For wings **up to 3.5 m**



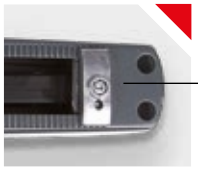

## SIMPLIFIED installation

- **automation system includes asymmetric mechanical opening and closing stops,** for precise stop adjustment
- **one-handed installation:** the hexagonal bolt mark avoids the usage of a second tool and makes the fixing of the actuator on the column easier
- **pre-drilled brackets** for fast installation, with **robust bushings** for a better distribution of the forces on the front connection pin

## THE RIGHT AUTOMATION SYSTEM for all applications

- set-up for **remote manual release**, useful when the automation system cannot be reached during an emergency (e.g. Automation system on single full wing, stuck opening against the wall)
- set up for magnetic **limit switch** (only on PWR35H) for accurate speed adjustment during opening and closing
- ideal solution for applications requiring **fast opening and closing**: 10 s at 90° for Ditec PWR 25 and 14 s at 90° for Ditec PWR 35

Hexagonal bolt mark



Asymmetric mechanical stop for accurate adjustment

Magnetic limit switch for PWR35H

## FULL COMPLIANCE WITH EUROPEAN DIRECTIVES AND STANDARDS

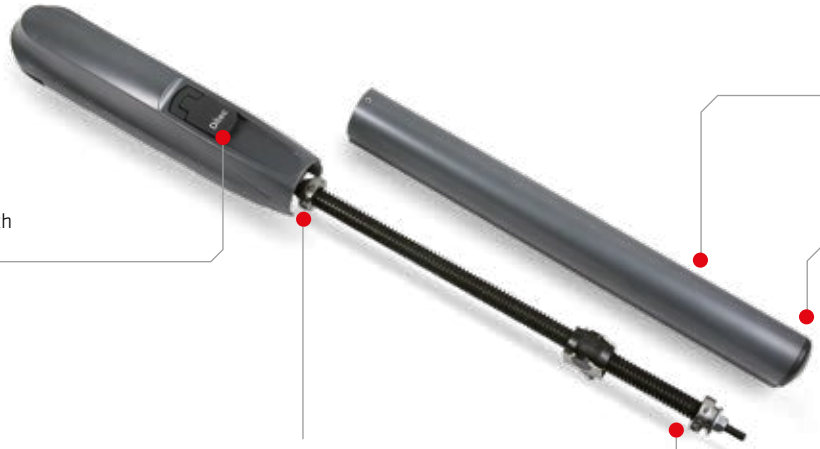
- **2014/30/EU - EMCD** - Electromagnetic Compatibility Directive
- **2014/53/EU - RED** - Radio Equipment Directive
- **2006/42/EC** - Machines Directive - (Annex II-B; Annex II-A; Annex I-Chapter 1)

**N.B.: TÜV certified with LCU40H**

# Ditec **PWR** a synonym of safety

## Ditec PWR 50

For wings **up to 5 m**



**removable cover**
for easy access to the screw
for adjustment and maintenance

**manual release**
designed to guarantee opening with
minimal effort

**dustproof brushes**
to protect the screw

**mechanical limit stops already assembled** both in opening and closing (magnetic limit switches on PWR50HV)

### PWR50H

UP TO 450,000 CYCLES

**24 Vdc**
**IRREVERSIBLE**
with limit stops
in opening and
closing

### PWR50HV

UP TO 450,000 CYCLES

**24 Vdc**
**IRREVERSIBLE**
with magnetic
limit switches

### PWR50HR

UP TO 600,000 CYCLES

**24 Vdc**
**REVERSIBLE**
with limit stops
in opening and
closing

### PWR50AC

UP TO 450,000 CYCLES

**230 Vac**
**REVERSIBLE /**
**IRREVERSIBLE**
with limit stop in
opening

## STURDY AND RELIABLE

A long lasting automation system in every weather condition: **aluminium die castings, durable fixing brackets and plates** designed to overcome the torsion and shearing forces whilst in operation. And that's not all! **Screws with a cataphoresis treatment** for rust protection as well as plastic **screw protection** (PWR25H and PWR35H) or dustproof brushes (PWR50H-HV-HR). Additionally, the PWR range has successfully passed the corrosion resistance (ISO 9227) and UV ray damage resistance (ISO 489-2) tests.

# Simple adjustment,
fast installation

- **precise adjustment of mechanical limit stops** directly on the screw (PWR50H, PWR50HR and PWR50AC). Magnetic limit switches already assembled and wired (PWR50HV)
- **slotted mounting plate** to quickly and easily weld the bracket

# An automation system with countless advantages

## YOUR TIME IS WORTH, don't waste it!

We know how precious your time is! That's why we've patented two features that help to make the installation and maintenance operations even faster.

### INSTALLATION MOUNTING TOOL

**Reduces the time needed to install PWR motors by 60%!** The installation mounting tool includes a spirit level to perfectly calibrate heights in a single step, without the need for additional measurements.

PATENTED

### GREASE INJECTION VALVE

Thanks to the protected loading valve inside the manual release area, **universal lubricant (type EP1) can be added simply using a manual lubricator**, without disassembling the actuator.

### PROTECTIVE TREATMENT OF CATAPHORESIS

Endless screws with **protective cataphoresis treatment** to ensure a longer life cycle and less maintenance

- maximum resistance to atmospheric agents
- maximum resistance to corrosion and oxidation (rust)
- treatment used in the automotive industry to ensure high standards over time

Screws with cataphoresis treatment

## The KITs that make the difference

Discover the advanced functions available when using Ditec PWR and Ditec LCU control panels together with Ditec control and security accessories:

- **Ditec LIN2 compact photocells** adjustable beam direction
- **Ditec ZEN remote controls** with rolling code or AES-128 Encrypted protocol, with literally billions of billions of possible combinations to make cloning impossible
- **24 Vdc Ditec FLM flashing light** with a choice of white, blue, green, yellow or orange signal light colours (only included in complete kit versions)

## SPECIFIC ACCESSORIES

- **Installation mounting tool** for fast installation of the actuators

- **Magnetic limit switches**
  - for PWR35H
  - for PWR50H and PWR50HR

- **Limit switch** in opening and closing for PWR50AC motor

- **Internal mechanical limit stop** for PWR50 series

- **Remote manual release** for PWR25H and PWR35H

24 V VIRTUAL ENCODER

## 24 V SAFE

**The 24 Vdc virtual-encoder technology enables constant electronic control** of the impact forces and immediate obstacle detection, ensuring that the operating device stops or motion is reversed (if configured) when obstacles are detected. If this is not enough, you can add magnetic limit switches (optional on PWR 35, standard on PWR 50). Additionally, in the event of a power outage, the electronic control panel activates the batteries avoiding the interruption of the operation.

## EASY TO INSTALL

Simple and fast installation procedure, thanks to the special design: **installation level** for fast installation, pre-drilled **fixing plates** and **mechanical stops** for adjustment only, are just some of the features available in the PWR range.

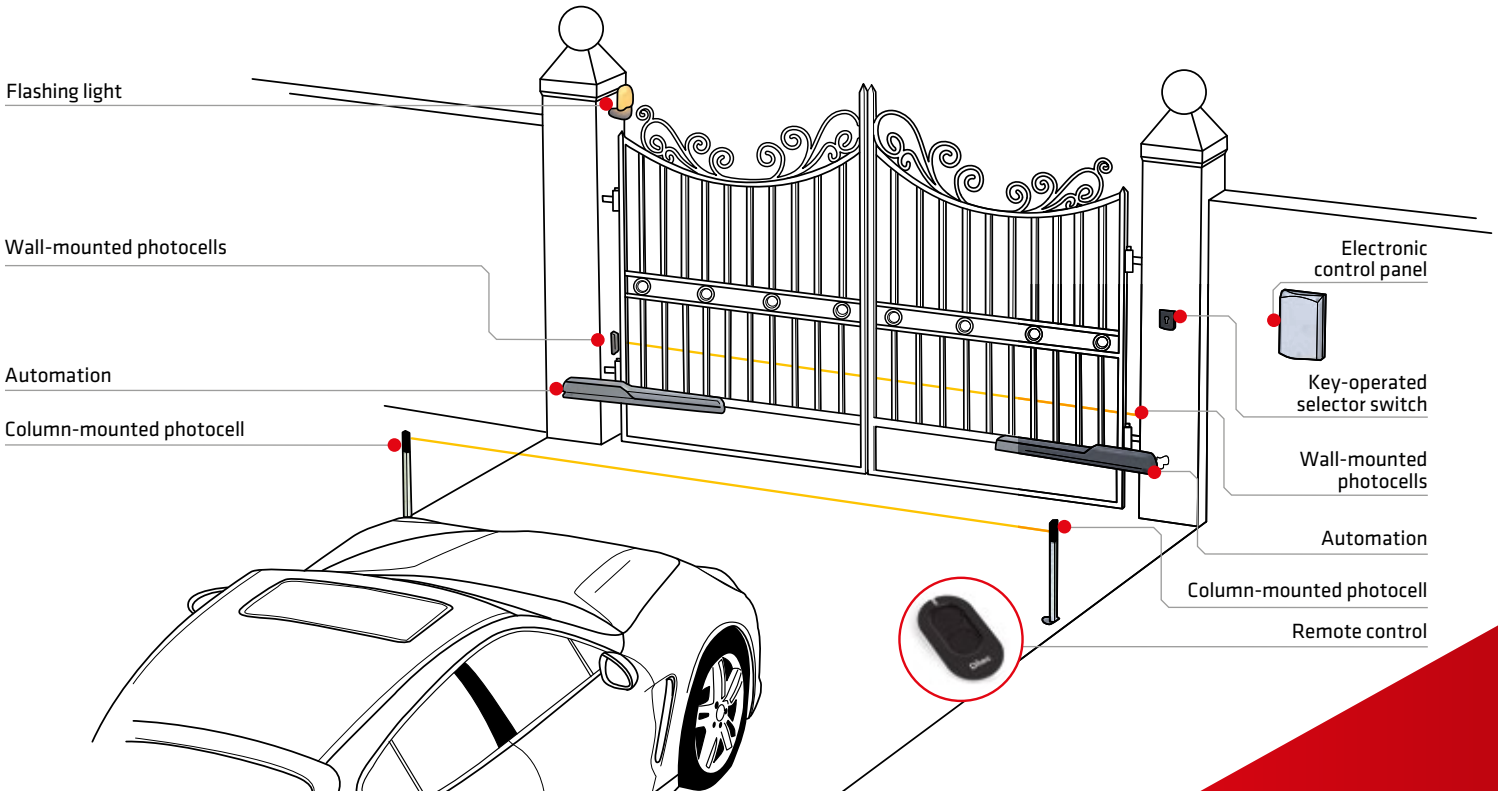
## COMPLETE RANGE

**Choose Ditec PWR based on your needs!**
Irreversible or reversible version.
By wing length:
- version for wings up to 2.5 m (PWR 25), for wings up to 3.5 m (PWR 35) and for wings up to 5 m (PWR 50)

By number of cycles:
- version for frequent use (PWR 25), intensive use (PWR 35) and very intensive use (PWR 50)

Discover the entire range of Ditec brand products at **www.ditecautomations.com**

# Example of installation

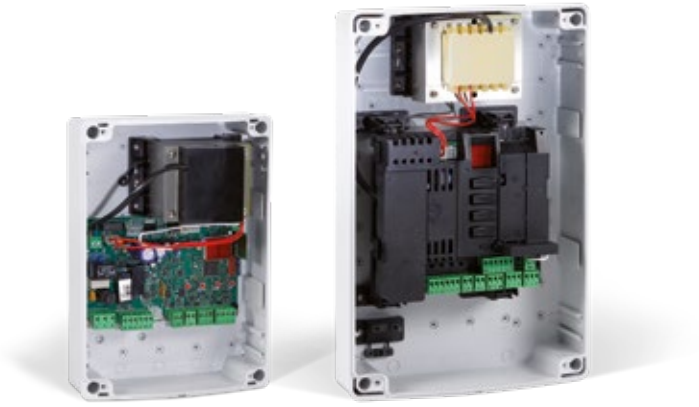


# Ditec LCU

## maximum performance for 24 Vdc motors

- **self-learning procedure** made easier by the display and navigation buttons, the automation system can be configured in a few steps
- **complete adjustment** of speed, acceleration and start time
- **plastic protection** covers the electronic board
- **Green Mode** guarantees energy savings when in standby
- **diagnostics** with data-logging and data analysis software

These are just a few of the functions available with the **LCU30H** and **LCU40H** control units



### TECHNICAL FEATURES

| | LCU30H - LCU30HJ | LCU40H - LCU40HJ |
|---|---|---|
| Control panel | for 1 or 2 24 Vdc motors with built-in radio | for 1 or 2 24 Vdc motors with built-in radio |
| Compatible PWR automations | PWR25H - 35H | PWR25H - 35H - 50H - 50HV - 50HR |
| Radio frequency | 433.92 MHz as standard<br>868.35 MHz with ZENPRS or with BIXPR2 | 433.92 MHz as standard<br>868.35 MHz with ZENPRS or with BIXPR2 |
| 433MHz/868MHz interchangeable receiver module | ■ | ■ |
| Mains power supply | 230 Vac or 120 Vac - 50/60 Hz | 230 Vac or 120 Vac - 50/60 Hz |
| Motor power supply | 24 Vdc / 2 x 6 A | 24 Vdc / 2 x 12 A |
| Accessories power supply | 24 Vdc / 0.3 A (0.5 A max.) | 24 Vdc / 0.5 A |
| Stroke control | virtual encoder | virtual encoder |
| Limit switch provision | ■ | ■ |
| Energy saving | | <1 W on standby |
| Operating temperature | -20°C ÷ +55°C in standard conditions<br>-35°C ÷ +55°C with NIO enabled | -20°C ÷ +55°C in standard conditions<br>-35°C ÷ +55°C with NIO enabled |
| Control panel protection level | IP55 | IP55 |
| Control panel dimensions | 187x261x105 mm | 238x357x120 mm |
| **INPUTS** | | |
| Opening control | shared with step-by-step control, selected via display | ■ |
| Partial opening control | ■ | ■ |
| Close control | shared with emergency stop, which can be selected from the display | ■ |
| Stop control | ■ via radio or shared with partial opening control, which can be selected from the display | ■ |
| Step-by-step control | ■ | ■ |
| Hold-to-run control | ■ selected via display | ■ |
| Automatic closing contact management | shared with partial opening control, selected via display | ■ |
| **OUTPUTS** | | |
| Flashing light | 24 Vdc | 24 Vdc |
| Electrically operated lock | 12 Vdc / 15 W | 12 Vdc / 15 W |
| Gate-open warning light (ON/OFF) | ■ shared with electrically operated lock or flashing light | ■ |
| Gate-open warning light with proportional blink rate | ■ shared with electrically operated lock or flashing light | ■ |
| Courtesy light | ■ shared with electrically operated lock or flashing light | ■ shared with electrically operated lock or flashing light |
| **PROGRAMMABLE FUNCTIONS** | | |
| Configuration of programmable functions | display and navigation keys | display and navigation keys |
| Force adjustment | electronic | electronic |
| Speed | adjustable | adjustable |
| Soft Start/Soft Stop | adjustable | adjustable |
| Braking/Slowing down | adjustable | adjustable |
| Stop approach | adjustable | adjustable |
| Operation time | adjustable | adjustable |
| Automatic re-closing time | adjustable | adjustable |
| Integrated datalogging (counters and recent alarm history) | ■ can be viewed on display | ■ can be viewed on display and on a PC with Amigo SW |
| Extended datalogging with micro SD (in-depth records for every event) | | ■ can be viewed on a PC with Amigo SW |
| FW update | ■ using Amigo SW and USBPROG | ■ using MicroSD or using Amigo SW and USBPROG |
| **SAFETY AND PROTECTION FUNCTIONS** | | |
| Emergency stop | ■ | ■ |
| Safe closing (inversion) | ■ | ■ |
| Safety Test Facility (for automatic safety devices) | ■ | ■ |
| ODS – Obstacle Detection System (causes the gate to stop or to reverse movement when an obstacle is detected) | ■ | ■ |
| NIO - Antifreeze system | ■ | ■ |
| **OPTIONAL ACCESSORIES** | | |
| Batteries | ■ with SBU | ■ with SBU |
| Possibility of integrated batteries in the control panel | | ■ |
| Stand-alone solar-powered installation | ■ with SBU | ■ with SBU |
| Hybrid solar-powered installation | | ■ with SBU |
| 8.2 KΩ-resistance safety edge | ■ with accessory | ■ with accessory |
| Magnetic loop detector | ■ with LAB9 | ■ with LAB9 |

**See the dedicated documentation for complete information on control panels**

# Ditec LCA

## new universal control panels for 230 Vac motors

- **menu with configuration wizard (Wizard WZ)** to configure the control panel quickly and simply during initial setup: just choose the operating logic, the number of gate wings and whether or not to enable automatic closing, memorize the remote controls, and you're ready to go!
- **pre-configured operating logics:** automatic operation with or without deceleration, timer-controlled operation with or without deceleration, and timer-controlled operation with force limitation
- **more than 100 parameters,** to fine-tune by using the easy-to-use menu, the display and the navigation buttons
- **reduced consumption in standby**: limitation of current absorbed by accessories in standby
- **integrated diagnostics** with counters and latest alarms log (shown on the control panel display)

### TECHNICAL FEATURES

| | LCA70 | LCA80 |
|---|---|---|
| Control panel | for 1 or 2 230 Vac motors with built-in radio | for 1 or 2 230 Vac |
| Compatible PWR automations | PWR50AC | PWR50AC |
| Radio frequency | 433.92 MHz as standard<br>868.35 MHz with ZENPRS or with BIXPR2 | 433,92 MHz with ZENRS or with BIXR2<br>868,35 MHz with ZENPRS or with BIXPR2 |
| 433MHz/868MHz interchangeable receiver module | ■ | ■ |
| Mains power supply | 230 Vac - 50 Hz | 230 Vac - 50 Hz |
| Motor power supply | 230 Vac - 50 Hz; 2 x 2 A max; 1 x 4 A max | 230 Vac - 50 Hz; 2 x 2 A max; 1 x 4 A max |
| 24 Vdc and 24 Vac accessories power supply | 0.3 A | 0.5 A |
| Stroke control | end stop detection and time calculation | end stop detection and time calculation |
| Limit switch provision | | ■ |
| Energy saving | | ■ reduced consumption on standby |
| Operating temperature | -20°C ÷ +55°C in standard conditions<br>-35°C ÷ +55°C with NIO enabled | -20°C ÷ +55°C in standard conditions<br>-35°C ÷ +55°C with NIO enabled |
| Control panel protection level | IP55 | IP55 |
| Control panel dimensions | 187x261x105 mm | 187x261x105 mm |
| **INPUTS** | | |
| Opening control | shared with step-by-step control, which can be selected via display | ■ |
| Partial opening control | ■ | ■ |
| Close control | shared with emergency stop, which can be selected from the display | ■ |
| Stop control | via radio or shared with partial opening control, which can be selected from the display | ■ |
| Step-by-step control | ■ | ■ |
| Hold-to-run control | ■ | ■ |
| Automatic closing contact management | shared with partial opening control, selected via display | ■ |
| **OUTPUTS** | | |
| Flashing light | 230 Vac / 25 W max | 230 Vac / 25 W max |
| Electrically operated lock | 12 Vac / 15 W max | 12 Vac / 15 W max |
| 8.2 KΩ-resistance safety edge | ■ with accessory | ■ during opening and closing (terminal connectors already integrated in the control panel) |
| 24 Vdc number of configurable outputs | 1 | 2 |
| - gate-open warning light (ON/OFF) | ■ | ■ |
| - gate-open warning light with proportional blink rate | ■ | ■ |
| - courtesy light | ■ | ■ |
| - 24 Vdc led flashing light | ■ | ■ |
| **PROGRAMMABLE FUNCTIONS** | | |
| Configuration of programmable functions | display and navigation keys | display and navigation keys |
| Force adjustment | ■ | ■ |
| Approach speed | adjustable | adjustable |
| Thrust on obstructions | adjustable | adjustable |
| Braking/Slowing down | adjustable | adjustable |
| Stop approach | adjustable | adjustable |
| Operation time | adjustable | adjustable |
| Automatic re-closing time | adjustable | adjustable |
| Compatibility with hydraulic motors | ■ | ■ |
| Heavy traffic management | ■ | ■ |
| Integrated datalogging (counters and recent alarm history) | ■ can be viewed on display | ■ can be viewed on display |
| FW update | ■ using Amigo SW and USBPROG | ■ using Amigo SW and USBPROG |
| **SAFETY AND PROTECTION FUNCTIONS** | | |
| Emergency stop | ■ | ■ |
| Safe closing (inversion) | ■ | ■ |
| Safety Test Facility (for automatic safety devices) | ■ | ■ |
| ODS – Obstacle Detection System (causes the gate to stop or to reverse movement when an obstacle is detected) | ■ | ■ |
| NIO - Antifreeze system | ■ | ■ |
| **OPTIONAL ACCESSORIES** | | |
| Magnetic loop detector | ■ with LAB9 | ■ with LAB9 |

**See the dedicated documentation for complete information on control panels**

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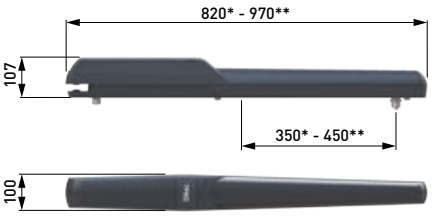
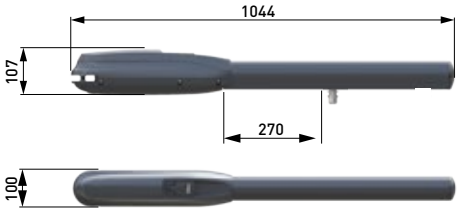



*Ditec PWR25H - **Ditec PWR35H




Ditec PWR50H - Ditec PWR50HV
Ditec PWR50HR - Ditec PWR50AC

## TECHNICAL FEATURES

| DESCRIPTION | PWR25H | PWR35H |
|---|---|---|
| Electromechanical actuator | irreversible<br>for up to 2.5 m wide wing | irreversible<br>for up to 3.5 m wide wing |
| Stroke control | mechanical stop | mechanical stop<br>(magnetic limit switch optional) |
| Maximum capacity | 400 kg x 1.5 m<br>200 kg x 2.5 m | 600 kg x 1.75 m<br>250 kg x 3.5 m |
| Power absorption | 24 Vdc | 24 Vdc |
| Maximum power | 5 A | 5.5 A |
| Power input | 55 W nom. / 120 W max | 65 W nom. / 132 W max |
| Thrust | 2000 N | 3000 N |
| Opening time | 10÷60 s / 90° | 14÷80 s / 90° |
| Max travel | 350 mm | 450 mm |
| Actuator maximum opening | 110° | 110° |
| Intermittent operation | 30 consecutive cycles at 20°C | 50 consecutive cycles at 20°C |
| Service index | frequent<br>tested up to 150,000 cycles | intensive<br>tested up to 300,000 cycles |
| Release system for manual opening | key-operated | key-operated |
| Operating temperature | -20°C ÷ +55°C (-35°C ÷ +55°C with NIO enabled) | -20°C ÷ +55°C (-35°C ÷ +55°C with NIO enabled) |
| Protection level | IP44 | IP44 |
| Weight (kg) | 7.8 | 9 |
| Control panel | LCU30H - LCU30HJ<br>LCU40H - LCU40HJ* | LCU30H - LCU30HJ<br>LCU40H - LCU40HJ* |

*J version for 120 Vac power supply

| DESCRIPTION | PWR50H | PWR50HV | PWR50HR | PWR50AC |
|---|---|---|---|---|
| Electromechanical actuator | irreversible<br>for up to 5 m wide wing | irreversible<br>for up to 5 m wide wing | reversible<br>for up to 5 m wide wing | non reversible / reversible for up to 5 m wide wing |
| Stroke control | mechanical stops<br>(magnetic limit switch optional) | magnetic limit switch (mechanical stops optional) | mechanical stop<br>(magnetic limit switch optional) | mechanical stop in opening<br>(limit switch microswitch optional) |
| Maximum capacity | 800 kg x 1.75 m<br>280 kg x 5 m | 800 kg x 1.75 m<br>280 kg x 5 m | 800 kg x 1.75 m<br>280 kg x 5 m | 800 Kg x 1,75 m<br>280 Kg x 5 m |
| Power absorption | 24 Vdc | 24 Vdc | 24 Vdc | 230 Vac - 50 Hz |
| Maximum power | 12 A | 12 A | 12 A | 1,1 A |
| Power input | 65 W nom. / 288 W max | 65 W nom. / 288 W max | 65 W nom. / 288 W max | 250 W |
| Thrust | 6000 N | 6000 N | 6000 N | 6000 N |
| Opening time | 14÷80 s / 90° | 14÷80 s / 90° | 14÷80 s / 90° | 32 s / 90° |
| Max travel | 500 mm | 500 mm | 500 mm | 500 mm |
| Actuator maximum opening | 120° | 120° | 120° | 120° |
| Intermittent operation | 60 consecutive cycles at 20°C | 60 consecutive cycles at 20°C | 60 consecutive cycles at 20°C | 30 consecutive cycles at 20°C |
| Service index | very Intensive<br>tested up to 450,000 cycles | very Intensive<br>tested up to 450,000 cycles | super Intensive<br>tested up to 600,000 cycles | very Intensive<br>tested up to 450,000 cycles |
| Release system for manual opening | key-operated | key-operated | key-operated | key-operated |
| Operating temperature | -20°C ÷ +55°C<br>(-35°C ÷ +55°C with NIO enabled) | -20°C ÷ +55°C<br>(-35°C ÷ +55°C with NIO enabled) | -20°C ÷ +55°C<br>(-35°C ÷ +55°C with NIO enabled) | -20°C ÷ +55°C<br>(-35°C ÷ +55°C with NIO enabled) |
| Protection level | IP44 | IP44 | IP44 | IP44 |
| Weight (kg) | 10.5 | 10.5 | 10.5 | 10.5 |
| Control panel | LCU40H - LCU40HJ* | LCU40H - LCU40HJ* | LCU40H - LCU40HJ* | LCA70 or LCA80 |

*J version for 120 Vac power supply

ICIM UNI EN ISO 9001:2015 SISTEMA DI GESTIONE CERTIFICATO
Cert. n. 0957/6

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