



POWERFUL
AND FAST



INVERTER
CONTROL



RELIABLE
AND STURDY

Automation
system for
sliding gates
up to **3500 Kg**

Ditec **CROSS**

Ditec CROSS

Ditec CROSS is the range of automation for sliding gates up to 3500 kg designed for commercial, industrial and condominium installations, guaranteeing maximum safety and reliability.
The automation is available in different solutions equipped either with a brand new 230 Vac control panel or an innovative inverter technology based control unit

Ditec CROSS 18

For sliding gates **up to 1800 Kg.**

For **intensive use.**

Available with mechanical or magnetic limit switches. LCA85 control panel (included)

gear motor
in die-cast aluminium alloy

vertical levelling screws and horizontal adjustment slots
to adjust the automation system to the surface below and the gate rack



electric brake/ electronic braking

control panel
integrated in the operating device and easy to configure

key-protected handle release system
for manual opening and closing of the gate in case of blackout

Ditec CROSS 35

For sliding gates **up to 3500 Kg.**

For **very intensive use.**

Inverter and magnetic limit switches control. LCU43B control panel (included)

control panel
pre-installed in IP55 casing and easy to configure

vertical levelling screws
additional adjustment spacers included in the package

base plate
in galvanized steel (included)



self-ventilated gear motor
with steel and bronze components

inspection window
ensuring only qualified personnel access

sturdy **lever-release device**,
easy to access when inspection door is open

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)
- **2011/65/EU - RoHS 2** - Restriction of hazardous substances
- **2015/863/EU - RoHS 2 Amendment** - Restriction of hazardous substances



LCA85 control panel

for a perfect motion control

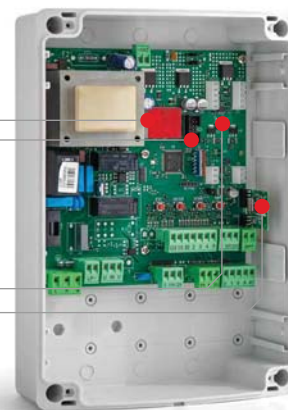
The advanced digital control panel **LCA85**, equipping **CROSS18EP** and **CROSS18VEP**, allows to manage perfectly the stroke of the gate in all its phases. Thanks to an innovative proprietary system of constant position control (Ditec Virtual Encoder), you can perfectly manage the position with precision and safety.

two-digit display and navigation buttons
for easy configuration and diagnostics

removable memory to save operating settings
for duplication on another control unit,
and for programming up to 200 remote controls

2 plug-in slots for control and radio **safety cards**
(self-testing safety edges, magnetic loop motion detector,
RFID decoder proximity selector)

433 or 868 MHz radio receiver module
removable and swappable



ALL YOU NEED... and more!

- ✦ **Wizard menu (Wizard WZ)**, to configure the control panel quickly and simply during initial setup: just choose the operating logic (with or without slowdown), the opening direction, select the option of automatic closing, memorize up to 200 remote controls, and you're ready to go!
- ✦ installers can adjust **more than 100 parameters**, using the easy-to-use menu, the display and the navigation buttons
- ✦ **energy saving**: reduced consumption by limiting the power consumption by the accessories in standby mode
- ✦ **integrated diagnostics** with counters and recent alarms log
- ✦ **advanced maneuver management**: increased starting torque, acceleration at start of opening and closing movements, obstacle detection, movement reversal or obstacle disengagement
- ✦ **force adjustment**

- ✦ **adjustable obstacle thrust force sensitivity** for both normal operation and for final approach during opening and closing maneuvers
- ✦ **automatic ramp adjustment**: in low temperature conditions, the control unit increases the initial torque whilst reducing the acceleration time
- ✦ **safety device test**
- ✦ **2 dedicated inputs** for open and closed positions for selftesting resistive active safety edges (8.2kΩ)
- ✦ **separate power outputs** for 24 Vac and 24 Vdc accessories
- ✦ **2 configurable 24 Vdc outputs** for accessories such as a courtesy light, flashing light and gate, open indicator lamp, and active output according to the status of the gate and the type of use
- ✦ **heavy traffic function**: automatically increases the automatic re-closing in case of consecutive opening requests (e.g. during peak hours in a condominium context), to reduce user waiting times and limit the overheating and wear and tear motors

TECHNICAL FEATURES

| Description | LCA85 |
|--|--|
| Radio frequency | 433.92 MHz with ZENRS (already included in the CROSS range) or BIXR2 868,35 MHz with ZENPRS or with BIXPR2 |
| Interchangeable receiver module 433.92 MHz -> 868.35 MHz | ■ |
| Mains power supply | 230 Vac - 50/60 Hz |
| Motor power supply | 3 A |
| Accessory power supply 24 Vdc and 24 Vac | 0.5 A max |
| Stroke management | virtual encoder and limit switches |
| Limit switch management | ■ |
| Energy saving (GREEN mode) | reduced consumption in standby* |
| Operating temperature | -20°C ÷ +55°C in standard conditions (-35°C ÷ +55°C with NIO system active) |
| Protection rating of electrical panel | IP55 |
| Opening control | ■ |
| Partial opening control | ■ |
| Closing control | ■ |
| Stop control | ■ |
| Inching control | ■ |
| Hold-to-run control selectable from display | ■ |
| Hold-to-run control only in closing. | ■ |
| Automatic opening | ■ |
| Automatic closing contact management | ■ |
| Safety edge with 8.2kΩ resistance | ■ in open and closed positions |
| Flashing light | 230 Vac max 25 W |

* Limitation of current absorbed by accessories on standby

| Description | LCA85 |
|--|--------------------------------|
| Number of configurable 24 Vdc outputs | 2 |
| - gate open warning light (ON/OFF) | ■ |
| - gate open warning light with proportional flash mode | ■ |
| - courtesy light | ■ |
| - 24 Vdc LED flashing light | ■ |
| - status indicator light for stop, safety, maintenance alarm | ■ |
| Configuration of programmable functions | display and navigation buttons |
| Force adjustment | ■ (electronics) |
| Thrust on obstructions | adjustable |
| Braking/deceleration | ■ |
| Approach space before the limit switches | adjustable |
| Automatic closing time | adjustable |
| High traffic management | ■ |
| Integrated datalogging (counters and recent alarm log) | viewable on display |
| FW update | using Amigo SW or USBPROG |
| Safety stop (emergency stop) | ■ |
| Closure safety (reversal) | ■ |
| Safety test function (for self-testing safety devices) | ■ |
| ODS - Obstruction Detection System (causes the gate to stop or reverses movement when an obstacle is detected) | ■ |
| NIO - Antifreeze system | ■ |
| Magnetic loop detector | ■ with accessory LAB9 |

Inverter **LCU43** control panel

powerful and fast automation

CROSS20VEI and **CROSS35VEI** are equipped with 230 Vac 50/60 Hz inverter technology control panel in IP55 box

- the use of the inverter guarantees more power and torque to the motor in all the stroke phases
- the hardware of the gate is preserved thanks to the possibility of managing acceleration and deceleration ramps, opening and closing speed, easily configurable from the display



2 plug-in slots for control and radio safety cards
(self-testing safety edges, magnetic loop motion detector, RFID decoder proximity selector)

433 or 868 MHz radio receiver module
removable and swappable

two-digit display and navigation buttons
for easy configuration and diagnostics

removable memory to save operating settings for
duplication on another control unit, and for
programming up to 200 remote controls

MicroSD card for advanced diagnostics
with registration of all events

DITEC ELECTRONICS.... what else?!

- thanks to the **Ditec Virtual Encoder**, the position of the gate is constantly tracked
- high speed**: 30 cm/s for gates up to 2000 Kg and 25 cm/s for gates up to 3500 Kg, in compliance with all the current standards
- over-temperature protection** for board and motor
- energy saving**: reduced consumption by limiting the power consumption by the accessories in standby mode
- 2 dedicated inputs for open and closed positions** for selftesting resistive active safety edges (8.2k Ω)

- Power Boost function**: if needed, the control panel automatically adjusts to provide more thrust
- dedicated terminal** for simple and fast connection of pairs of Ditec CROSS 20 or Ditec CROSS 35 operators in master/slave configuration for synchronized control of double or interlocked automation
- integrated diagnostics** with counters and recent alarms log shown on the control panel display
- advanced diagnostics**: events log can be stored on a MicroSD card (not included) and then analysed via Ditec Amigo software (free) for accurate trouble-shooting

| Description | LCU43A - LCU43B |
|--|--|
| Radio frequency | 433.92 MHz in standard configuration 868.35 MHz with ZENPRS or with BIXPR2 |
| Interchangeable receiver module 433.92 MHz --> 868.35 MHz | ■ |
| Mains power supply | 230 Vac - 50/60 Hz |
| Motor power supply | 3.5 A (LCU43A) - 4 A (LCU43B) |
| Accessory power supply 24 Vdc and 24 Vac | max 0.5 A |
| Stroke management | virtual encoder and limit switches |
| Energy saving (GREEN mode) | reduced consumption in standby* |
| Operating temperature | -20°C ÷ +55°C in standard conditions (-35°C ÷ +55°C with NIO system active) |
| Protection rating of electrical panel | IP55 |
| Opening control | ■ |
| Partial opening control | ■ |
| Closing control | ■ |
| Stop control | ■ |
| Inching control | ■ |
| Hold-to-run control selectable from display | ■ |
| Hold-to-run control only in closing. | ■ |
| Automatic opening | ■ |
| Automatic closing contact management | ■ |
| Safety edge with 8.2k Ω resistance | ■ in open and closed positions |
| Flashing light | 24 Vcc |
| * Limitation of current absorbed by accessories on standby | |

| Description | LCU43A - LCU43B |
|--|---|
| Number of configurable 24 Vdc outputs | 2 |
| - gate open warning light (ON/OFF) | ■ |
| - gate open warning light with proportional flash mode | ■ |
| - courtesy light | ■ |
| - 24 Vdc LED flashing light | ■ |
| - status indicator light for stop, safety, maintenance alarm | ■ |
| Configuration of programmable functions | display and navigation buttons |
| Force adjustment | ■ (electronics) |
| Thrust on obstructions | adjustable |
| Speed | adjustable |
| Braking/deceleration | ■ |
| Approach space before the limit switches | adjustable |
| Automatic closing time | adjustable |
| High traffic management | ■ |
| Integrated datalogging (counters and recent alarm log) | viewable on display |
| Extended datalogging on Micro SD (in-depth recording of each event) | ■ |
| FW update | using MicroSD or using Amigo SW and USBPROG |
| Safety stop (emergency stop) | ■ |
| Closure safety (reversal) | ■ |
| Safety test function (for self-testing safety devices) | ■ |
| ODS - Obstruction Detection System (causes the gate to stop or reverses movement when an obstacle is detected) | ■ |
| NIO - Antifreeze system | ■ |
| Magnetic loop detector | ■ with accessory LAB9 |



POWERFUL AND FAST

- 230 Vac electronics guarantees maximum performances even under adverse conditions, thanks to a stronger dynamic thrust during the initial phase of operation
- the 230 Vac inverter control panel allows to manage the three-phase motor ensuring a stronger thrust along the whole stroke



COMPLETE RANGE

Four versions available:

- two 1800 Kg versions with integrated control panel, single-phase and mechanical or magnetic limit switches
- one 2000 kg version with integrated inverter control panel with magnetic limit switches
- one 3500 Kg version with inverter control panel and magnetic limit switches

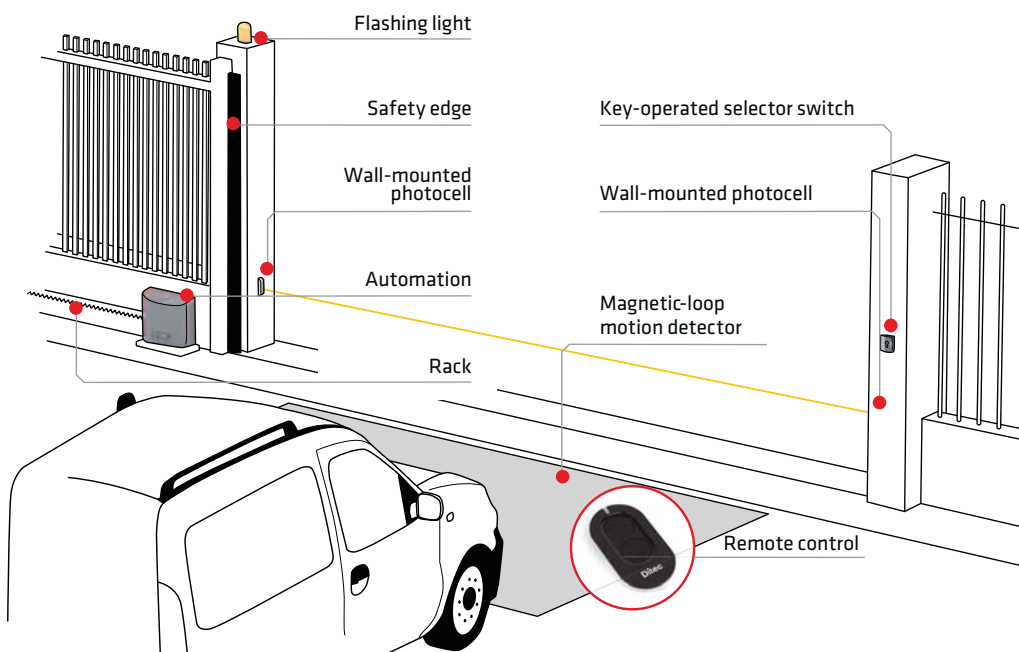


RELIABLE AND STURDY long life to your installations

- steel **worm screw** for CROSS 20; cemented, tempered and adjusted screw with a bronze crown for the CROSS 35 model
- lubricating grease** suitable for temperatures ranging from -35°C to +55°C for CROSS 18 and CROSS 20 and oil bath for CROSS 35
- irreversible gear motor** to avoid the need for electro-mechanical locks
- electric brake and electronic clutch** to guarantee irreversibility and precise stopping points for CROSS 18 and CROSS 20

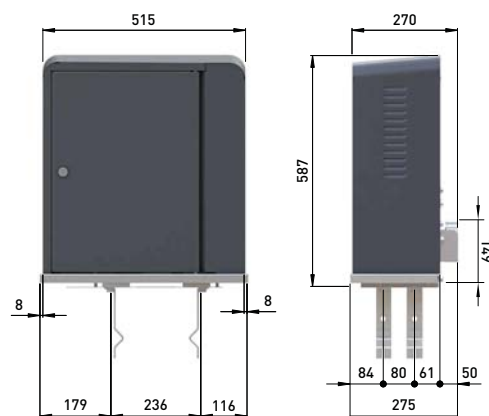
Example of installation

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





Ditec Cross 18 - Ditec Cross 20



Ditec Cross 35

TECHNICAL SPECIFICATIONS

| DESCRIZIONE | CROSS 18EP | CROSS 18VEP | CROSS 20VEI | CROSS 35VEI |
|-----------------------------------|---|---|---|---|
| Electromechanical actuator | for sliding gates up to 1800 kg | for sliding gates up to 1800 kg | for sliding gates up to 2000 kg | for sliding gates up to 3500 kg |
| Stroke control | lever-operated mechanical stop | magnetic limit switch | magnetic limit switch | magnetic limit switch |
| Capacity | 1800 kg | 1800 kg | 2000 kg | 3500 kg |
| Service index | intensive up to 350,000 cycles | intensive up to 350,000 cycles | very intensive up to 450,000 cycles | very intensive up to 1,000,000 cycles |
| Intermittent operation | S2 = 60 min S3 = 55% | S2 = 60 min S3 = 55% | S2 = 90 min S3 = 90% | S1 = 100% continuous use |
| Cycles / hour * | 19 | 19 | 27 | 32 |
| Consecutive cycles * | 33 | 33 | 44 | continuous |
| Power absorption | 230 Vac - 50 Hz (60 Hz version on request) | 230 Vac - 50 Hz (60 Hz version on request) | 230 Vac - 50/60 Hz | 230 Vac - 50/60 Hz |
| Power input | 3 A | 3 A | 3.5 A | 4 A |
| Thrust | 1800 N | 1800 N | 2000 N | 3500 N |
| Opening speed | 0.2 m/s | 0.2 m/s | 0.1 - 0.3 m/s | 0.1 - 0.25 m/s |
| Closing speed | 0.2 m/s | 0.2 m/s | 0.1 - 0.3 m/s | 0.1 - 0.25 m/s |
| Max stroke ** | 36 m | 36 m | 60 m | 60 m |
| Release system for manual opening | key operated | key operated | key operated | lever |
| Operating temperature | -20°C ÷ +55°C (-35°C ÷ +55°C with NIO enabled) | -20°C ÷ +55°C (-35°C ÷ +55°C with NIO enabled) | -20°C ÷ +55°C (-35°C ÷ +55°C with NIO enabled) | -20°C ÷ +55°C (-35°C ÷ +55°C with NIO enabled) |
| Protection level | IP X4 | IP X4 | IP X4 | IP 55 |
| Product dimensions (mm) | 440x205x375 | 440x205x375 | 440x205x375 | 531x275x587 |
| Control panel | LCA85 | LCA85 | LCU43A | LCU43B |

* Cycles are indicative considering a gate with a length of 10 m, T=25°C and factory settings (a default speed of 20 cm/s - for a different wing length than indicated, please refer to the technical manual). CROSS20VEI allows a speed of 30 cm/s, CROSS35VEI of 25 cm/s (adjustable). Each cycle is considered an opening maneuver followed by a closing maneuver.

** The maximum stroke of the gate has been calculated considering a default speed of 20 cm/s

SPECIFIC ACCESSORIES



▶ 24 Vdc / 24 Vac photocells

- ▲ aesthetically integrated with others control devices
- ▲ compact size with -90°/+90° orientable card
- ▲ IP55 industrial level protection rating
- ▲ also available in battery-powered version



▶ Command devices

- ▲ Key-operated selector switch wall mounted or semi-recessed, with or without European cylinder
- ▲ four-channel digital radio keypads
- ▲ proximity selector with transponder



▶ Racks

- ▲ for CROSS 18 and 20, in galvanized steel, module 4, complete with supports and screw, 30x12x1000 mm
- ▲ for CROSS 35, in galvanized steel, module 6, 30x30x1000 mm

▶ Active radio safety edges

868 MHz radio transmission system of safety signals for active safety edges

▶ Magnetic-loop inductive detector

plug-in for entrance control

▶ Chain traction kit for CROSS18-20 motors



Cert. n. 0957/6

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