

Underground  
operator for  
swing gates of up  
to 3.5 m / 11.5 ft  
per gate leaves



Gate operators tested  
in compliance with  
European  
Standards on the  
subject of impact  
force.

# Frog

**The totally hidden  
operator that emphasises  
your entrance**

Frog represents the synthesis of Came's design philosophy and creativity applied to swing gates. An extremely sturdy and "practically invisible" product which in no way detracts from the aesthetics of your entrance way.



**CAME**  
AUTOMATIC GATES

# Frog 230V 24V

The operator that makes the difference

Frog is Came's highly efficient operator that defies time thanks to the materials used in the foundation case and the gearmotor. A smooth, safe movement guaranteed in all working conditions, even the harshest.



#### Total water-tightness.

Frog's high quality standards and its IP67 protection standards from external agents keeps it always in perfect working order.



#### Better before.

Installing Frog is easy and setting up the foundation case enables the gate to be automated at a later date.



#### The new underground casing.

Cataphoresis is a surface painting treatment that gives excellent corrosion resistance. It is formed of an even layer of black acrylic resin and gives long-lasting protection against chemical attack.

#### Special apertures.

Special operation levers are available and enable gate-leaf rotations of up to 180° providing better management of the space available.

#### EN12445 - EN12453 compliant.

The ZL19N and ZL170N control panels constantly control the gate leaves' movement allowing for safe thrust, and is EU standard compliant.



#### Durability without any compromises.

The solid foundation case is made of rustproof steel. A special stainless steel version is also available, to be installed in severe climates.

#### Top comfort.

Frog is also available in the 24V motor version, so that the gate can always be opened during power outages.

#### Designed to withstand anything.

In designing Frog, we have chosen the best materials available, carefully studying each detail so as to obtain a no-compromise result.



# The 230V electronics

Frog's new 230V electronics provides specific control and safety functions, which are standard even in the basic version. There are, however, other control boards available, for cutting-edge performance features, in terms of service and safety.

- > **Test of the active safety features**  
activated before each gate operation, whether in opening or closing.
- > **Pedestrian or partial opening**  
to allow opening of one gate leaf or limited opening for pedestrian access.
- > **Total control of the gate from the transmitter**  
including the possibility of immediately stopping movement of the gate leaves.

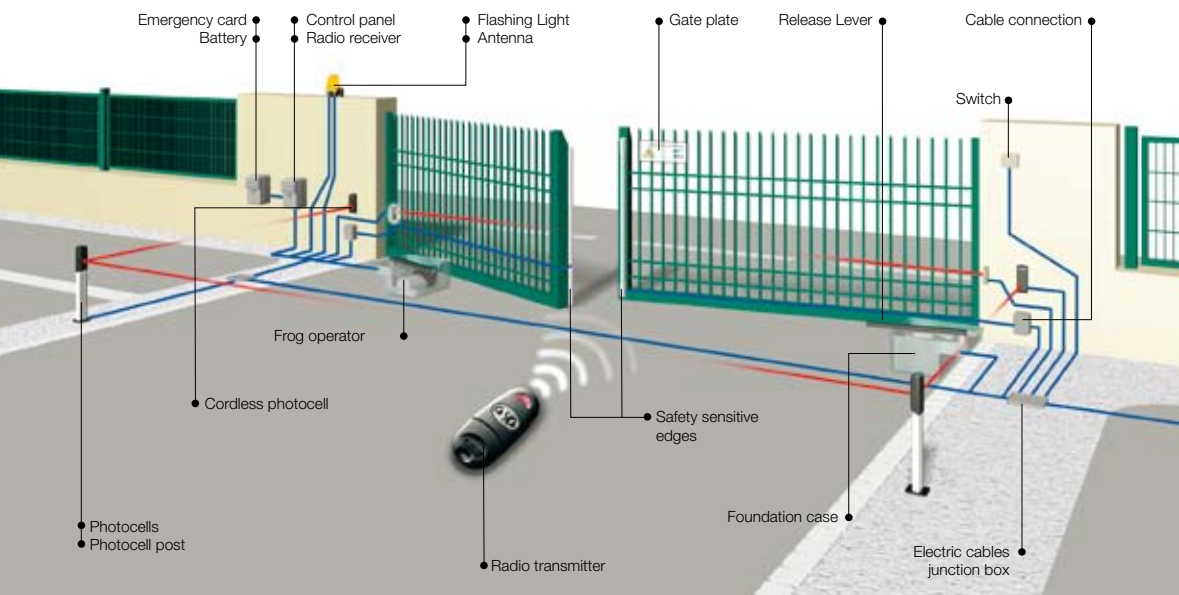
## Frog is EN TESTED

When top comfort, performance and safety are required, the Frog technology enables the potential of the operator to reach the highest levels, particularly:

- > **Controlled impact forces**  
Thanks to laboratory testing carried out on a gate sample, Frog is European standard EN12445 and EN12453 compliant, in terms of impact forces.  
(FROG-AE, FROG-A24 and FROG-AE24)
- > **No more blackouts**  
The Frog 24V electronics immediately act in the event of a power outage by activating the emergency function through the auxiliary batteries, to always open and close the gate (optional).
- > **Frequent passing**  
The low voltage gearmotor guarantees functioning even under the most severe working conditions such as apartment blocks or industrial applications.
- > **Obstacle detection**  
A special electronic circuit constantly analyses the proper functioning of the gate leaves, allowing for their total stop, or inversion of movement, when coming into contact with any obstacles.



### Standard installation



In the event a careful analysis of the automated gate's risks were to require it, the use of sensitive safety infrared or contact edges becomes indispensable.



Made in Italy



For its quality processes management Came Cancelli Automatici is ISO 9001:2000 certified, and for its environmental management it is ISO 14001 certified. Came designs and manufactures entirely in Italy.

# The range

## 230V A.C. underground operators

- FROG-A** Self-locking operator of up to 3.5 m / 11.5 ft per gate leaf.
- FROG-AV** Self-locking operator of up to 1.3 m / 4.2 ft per gate leaf.

## 230V A.C. control panels

- ZA3N** Multifunction control panel with built-in radio decoder.
- ZM3E** Multifunction control panel with signalling display, auto-diagnosis of safety devices and built-in radio decoder.

## 230V A.C. underground operators and control panel

- FROG-AE** Self-locking operator with encoder for gate leaves of up to 3.5 m / 11.5 ft per gate leaf.
- ZM3E** Multifunction control panel with signalling display, auto-diagnosis of safety devices and built-in radio decoder.



## 24V D.C. underground operator and control panels

- FROG-A24** Self-locking operator of up to 3.5 m / 11.5 ft per gate leaf.
- ZL170N** Control panel for one-leaf swing gates with built-in radio decoder.
- ZL19N** Control panel for two-leaf swing gates with built-in radio decoder.



## 24V D.C. underground operator and control panels

- FROG-A24E** Self-locking operator with encoder of up to 3.5 m / 11.5 ft per gate leaf.
- ZLJ24** Control panel for two-leaf swing gates with built-in radio decoder.



## Accessories

- LB18** Casing with emergency card, fitted to house three 12V - 7 Ah batteries (for ZL170N and ZL19N control panels).
- FROG-B** Galvanized steel foundation case.
- FROG-BI** Inox AISI 304 steel foundation case.
- A4364** Lever key release.
- A4365** Triangular key release.
- A4366** Customized key release and EURO-DIN cylinder.
- A4472** Transmission lever with adjustable gate-leaf opening stop.
- A4370** Transmission lever for opening arcs of up to 140° for gate leaves no wider than 2 m / 6.56 ft.
- FL-180** Chain driven transmission lever for opening arcs of up to 180° for gate leaves no wider than 2 m / 6.56 ft (excluding FROG-A24).
- LOCK81** Electric lock with single-cylinder.
- LOCK82** Electric lock with double-cylinder.

## Technical features

Type	FROG-A	FROG-AV	FROG-AE	FROG-A24 - FROG-A24E
Protection rating	IP67	IP67	IP67	IP67
Power supply (V) (50/60Hz)	230 A.C.	230 A.C.	230 A.C.	230 A.C.
Motor power supply (V)	230 A.C. 50/60 Hz	230 A.C. 50/60 Hz	230 A.C. 50/60 Hz	24 D.C.
Current draw (A)	1.9	2.5	1.9	15 Max
Power (W)	200	300	200	180
90° opening time (s)	18	9	18	16 ÷ 45
Duty cycle (%)	30	30	30	INTENSIVE USE
Thrust (N)	320	240	320	320
Operating temperature (°C/°F)	-20 - +55 / -4 - +131			
Motor's thermo-protection (°C/°F)	150 / 302	150 / 302	150 / 302	-

120V A.C. - 60 Hz PRODUCTS, PLEASE CHECK OUR PRICE LIST ● 230V A.C. ● 24V D.C.

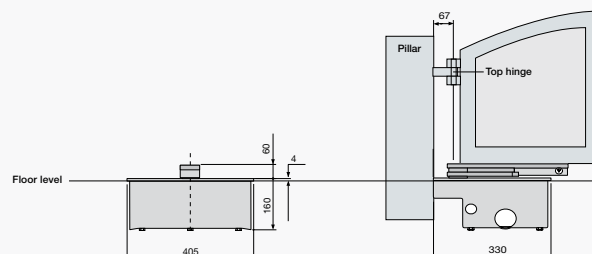
## Limits to use

Model	FROG-AV	FROG-A - FROG-AE	FROG-A24 - FROG-A24E
Max width of gate leaf (m / ft)	1.3 / 4.2	*3.5 / 11.5	*2.5 / 8.2
Max weight of gate leaf (Kg / lb)	300 / 661	400 / 880	600 / 1,320

● 230V A.C. ● 24V D.C.

NOTES: \* We suggest to provide an electric lock to be mounted on the gate/door leaf

## Dimensions



PRODUCTS



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