

SQUARE 800 Control System

Microprocessor Control System for DC Fire Door Operators

The control system SQUARE 800 has been developed **for DC fire door operators**.

It has a very user friendly structure.

The **programming and all adjustments** are carried out by means of membrane keys on the lid of the **closed casing**. This assures a high safety standard.

Thanks to the 2 lines of the display showing in full text exactly the actual step of programming, adjusting becomes very easy. The display with membrane keys also can be used to recall diagnose information.

The desired operating functions can easily be programmed on site by means of the membrane keyboard.

The menu-guided adjustment program (5 **different languages** available) in a LCD-display with 2 lines makes programming very simple. The adjusted values are protected by an individually chosen **password**.



Summary

Types of control systems	Fire protection with DC-motor: SQUARE 800
Motors to be connected	24/48 VDC, max. 300 W
Certified with the operators	DICTAMAT 8000-21, DICTAMAT 7000-21, DICTAMAT 3700-21
Approval	Z-6.5-1707 with the above mentioned door operators



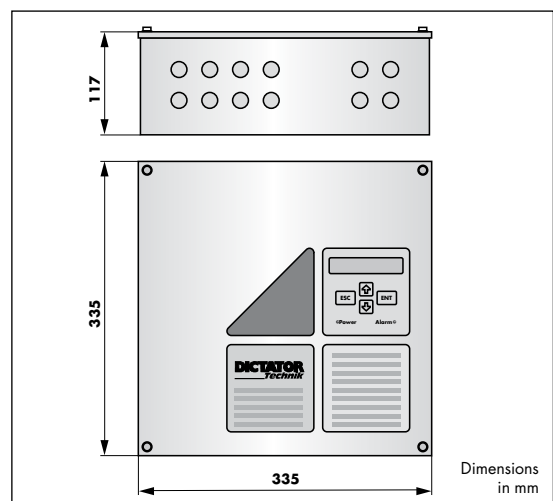


Dimensions, Installation

The casing of the Square control systems has been designed to meet two important requirements: the **exterior dimensions** have to be as **small** as possible, so that the control system can be installed without problems even when there is limited space available. The **interior** of the casing however has to offer **sufficient space** to house - if necessary - additional devices such as batteries or control systems for contact switches. This **saves** the cost of additional casings, their installation and connection.

Dimensions SQUARE

On one side of the casing there are marked holes for 6 Pg 11 and 6 Pg 13 screw cable inlets. The wiring is further simplified by the square casing, as the cable inlets can be positioned towards the side that is best for the connection. The **lid of the casing can be placed on the casing in all directions**. This way the cables can be introduced into the casing either from the right, the left, from the top or the bottom.



Installation Electrical Connection of the Door Operators

The installation of the control system is very easy, as the **electronics are fixed on a board that can be removed** completely from the casing. Also the lid of the casing can be taken off completely, as the flat cable connection to the display in the lid just has to be unplugged. The now very light casing can be fixed to the wall without the danger of damaging the electronics by chance with e.g. the screw driver.

The control system should be placed not farther than 30 m from the door operator. Normally a maximum distance of 2.5 meters is recommended as all DC-21 operators are supplied with a 2.5 m connection cable to the control system.

Operator, operating elements, smoke detectors and safety equipment are connected to the **removable binders**. The **assignment** of the binders of the SQUARE 800 and the other SQUAREs is almost **identical**. The blocks of binders are coded and therefore cannot be plugged into a wrong position.





Programming and Adjusting

All **programming and adjusting** of the SQUARE 800 is carried out via the membrane keys with display.

The menu navigation with full text display indicates all necessary steps in a way easily to be understood. Thereby the SQUARE 800 contributes to a fast and trouble-free mounting.

Basic Adjustments

The menu-guided adjustment facility renders the programming and adjustment to the requirements of each door very easy. The two-line LCD display always shows which parameter is presently adjusted and what value has been chosen. When starting the control system for the first time the display asks which **language** is requested for the programming. You can choose between German, English, French, Italian and Spanish. In case several errors have occurred during programming the **default configuration** of the control system can be **restored**. After having finished the programming the adjusted values can be protected from unauthorised interference with an individually chosen **password**.

Operating Options Safety Features Relay Contact

- *Deadman or Impulse Function (full travel)* for the push buttons OPEN and CLOSE (separately adjustable)
- *Alternating Impulse OPEN/CLOSE*
- *Partial Opening*: The door opens only partially after pressing a separate push button (additional OPEN-position; important feature to **save energy** when the door e.g. shuts off warehouses from heated rooms).
- *STOP*
- *Automatic Closing*: As soon as the position OPEN has been reached the door closes automatically after a pre-set time adjusted in the control system (1 to 999 secs.).
- *Safety Equipment*: In response to a safety device different functions can be chosen: temporary STOP or a permanent STOP in closing direction, door opening for 2 secs, complete Opening; in case of a defective safety device this can be bypassed by choosing an emergency operation mode (deadman operation).
In the event of a *smoke alarm* the closing has *priority* over safety devices (according to the regulations of the German Institut für Bautechnik).
- *Relay Contact*: to actuate e.g. a siren or a warning flash light

Motor Parameters

In order to optimally adjust the door operator to the requirements of the door, the parameters of the motor can be set in the control system. Amongst them are:

- *Motor Rating* (adjustment to the connected motor)
- *Opening Speed* (Closing speed adjusted directly at the operator)
- *Crawling Speed* before the final position OPEN (Speed is reduced before reaching the final position rendering separate final dampers superfluous.)
- *Soft Start*: Depending on the weight and the more or less smooth running of the door you can adjust, whether the door accelerates slower or faster.
- *Quick Stop*: upon actuation of the safety device

Encoder

If the SQUARE control system is connected to a door operator with integrated position control, all final positions are adjusted in the control system. When the control system is put into operation for the first time, the control system will ask **automatically to move the door to the final positions and to memorise these positions**.

Diagnostic Function

All SQUARE control systems are provided with a **diagnostic function** and also can display the statistical values (e.g. operating hours, total cycles...), that will help the DICTATOR service team to solve problems - even by telephone.



Technical Data, Order Information

Dictator provides the SQUARE 800 control systems for the fire protection door operators with direct current (DC) motors.

Technical Data

Voltage	230 VAC, 50 Hz
Power consumption	max. 1.5 A
Output voltage (secondary)	24 VDC
Power supply (secondary)	max. 1020 mA
Output voltage to motor	48 VDC
Motor rating	max. 300 W
Dimensions	H x W x D = 335 x 335 x 117 mm
IP rating	IP 54

Order Information

SQUARE 800 control system	part no. 706080
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Components Included

Control system in casing IP 54 with membrane keys and LCD display

Application Range SQUARE 800

The SQUARE 800 control system is provided for **fire protection sliding door operators** with a **direct current (DC) motor**. Apart from the door drives of the modular system DC-21 other 24 or 48 VDC motors can also be operated with this control system as the motor parameters are adjusted in the control system.

DICTAMAT 8000-21	from page 05.010.00
DICTAMAT 7000-21	from page 05.011.00
DICTAMAT 3700-21	from page 05.012.00
Customized door operators 24 VDC, 48 VDC	on demand