



FENROLL

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1 – DESCRIPTION

The **steel roll-up door** is a **vertical opening fast door**.

The door comprises two side profiles that serve as guide for the **flexible fabric**. This fabric opens vertically, rolling up at the top of the door, over a drum which turns driven by a **gear motor**. This motor drives a shaft which can modify instantly the direction of operation.

When closing is activated, the door descends through a combination of the lower fabric weight and the action of the gear motor, ensuring the door's seal by brushes.

The door allows for the **motor** to be configured in frontal or lateral position.

Thanks to the **safety photocell** located on the door's guide, it reverses the manoeuvre when it detects an obstacle.

The lower part of the fabric has a **safety band** which, at the slightest touch, reverses the direction of the manoeuvre and reopens the door.

The **control panel** for operating the door has been specially designed with industrial applications and contexts in mind.

2 – TECHNICAL SPECIFICATIONS

MOTOR GROUP TECHNICAL SPECIFICATIONS	ELECTROMATEN	MTRX
Standard power supply	400 V/230V III ±10% 50Hz.	
Type of motor	Three-phase self-braking	
Nominal power	0.5 CV / 0.37 kW	0.75 CV / 0.55 kW
Brake	DC with half-wave rectifier	Separated DC 230 Vac-103 Vdc with half-wave rectifier
Motor protection	GFA panel	Motor guard up to 4 A
Level of protection	IP54	
Operating temperature	-20°C to 40°C	
Unlock	Lever and crank	Lever and lower screw
Clearance stop	Digital by built-in encoder	Mechanic with rotation system
GR KINEMATIC CHARACTERISTICS MOTOR		
Opening speed	0.7 m/s	0.9 m/s
Closing speed	0.7 m/s	0.9 m/s
Operation inversion time	As per European standard UNE-EN 13241-1:2004 + A1:2011	
Adjustable opening and closing speed	Up to 2 m/s(Optional)	

ELECTRIC PANEL SPECIFICATIONS		ELECTROMATEN TS970	MTRX
Dimensions		155X386x126 mm	220x305x140 mm
Assembly		Vertical	
Panel power supply		· 400V/230V III AC±5% 50/60Hz · Single-phase 1x230V ±5% 50/60Hz only with shifter and/or UPS	
Absorbed power		3 x 400 V AC, max. 3Kw	
Protection at power input		0.5 A slow response	
Protection at manoeuvre output		1A slow response	
Control unit consumption		±15 VA (without transmission or 230 V external consumer)	
External power 1		230V via L1 y N - Protection by low-intensity fuse	
External power 2		24 V DC Irregular. Max. 150 mA resistant. Protection by fuse	24 V DC Irregular. Max. 700 mA resistant. Protection by fuse
Control inputs		24 V DC / type 10 mA Minimum signal duration > 100 ms	
Relay contact		In the case of inductive loads, it would be counterbalanced with independent diodes and with the appropriate suppression measures. Contact load at 230 V max. 200 mA	
Operating temperature		0 to 40°C	
Storage temperature		0 to 50°C	
Air humidity		< 93%, without condensations	
Vibration		Assembly in rigid works, not exposed to vibration.	
Level of protection		IP 54 (-CEE connector) IP 65 in distribution	IP 56

STRUCTURAL SPECIFICATIONS			
Opening direction		Vertical	
Location		Indoors and Outdoors	
Head dimensions (height x depth) [mm]		240 x 240	
Maximum head expansion [mm]		4,260	4,560 (with side motor)
Side guide dimensions (width x depth) [mm]		150 x 110	
Side guides		Steel	
Minimum/maximum clear width [mm]		1,000 / 4,200	
Recommended maximum clear height [mm]		4,200*	

*Following a technical study, it may be manufactured in bigger sizes.

FABRIC SPECIFICATIONS			
Material		AT 1100 dtex polyester	
Cover		2-side PVC	
Weight		900 g/m ²	
Finish		2-side lacquered	
Tensile strength		4000N/5cm UNE EN ISO 1421	
Tear resistance		800N/5cm EN ISO 13937-2	
Grip		100 N/5 cm	
Heat resistance		-30° + 70°	
Flame-retardant		M2 UNE 23727/90	
Light fastness		6 – 8	
Surface electrical resistance		<5x10e90 OHMs	
Noise reduction		12%	

3 – APPLICABLE REGULATIONS

Low Voltage Directive	2006/95/CE
Electromagnetic Compatibility Directive	2004/108/CE
Construction Products Regulation	305/2011/CE
Machinery Directive	2006/42/CE
Detection Devices	EN 12978

4 – PERFORMANCE DECLARATION

Assessment and verification system of constancy of performance: System 3, according to EN 13241-1.

Declared performance:

Release of hazardous substances	Pass
Wind load resistance	Class 2
Safe opening	Pass
Mechanical resistance	Pass
Task force	Pass
Durability	100,000 cycles

5 – FINISHES

The product's chassis is made of steel, which allows for all the finishes available for this material:

Hot-dip galvanising:

Covers obtained from hot-dip galvanising are made up of several layers of zinc-iron alloys. The minimum galvanised thickness is 25 microns. All the RAL colour range is available.

Stainless:

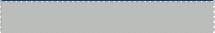
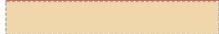
304 stainless alloy with an approximate percentage of 18% chrome and 8% nickel. Steel which is easy to weld and manufacture, and with high corrosion resistance.

Lacquered:

The lacquered finish is a protective covering made from plastic paint polymerised in an oven. The minimum lacquered thickness is 60 microns. Complete RAL range available.

Fabric:

The polyester canvas is covered over a layer of dyed PVC, available in the following colours:

RAL RANGE			
	WHITE RAL 9016		BLUE RAL 5005
	YELLOW RAL 1003		BLUE RAL 5010
	ORANGE RAL 2008		GREY RAL 7038
	CREAM RAL 1014		GREY RAL 7037
	RED RAL 3020		LIGHT BROWN RAL 1019
	GREEN RAL 6026		BROWN RAL 8014
	BLUE RAL 5002		BLACK RAL 9005

6 – ACCESSORIES



Fotocelula
Photocell
Photocellule



Tirador
Door handle
Tireur



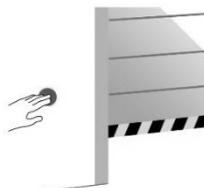
Radar microondas
Microwave radar
Radar à micro-ondes



Mando a distancia
Remote control
Télécommande



Campo magnético
Magnetic Field
Champ magnétique



Pulsador externo
External button
Bouton externe

DETECTION
Movement sensor (Optional) Microwave movement sensor, adjustable detection area and direction identification.
Presence and movement sensor (Optional) Microwave movement detector for industrial doors, with person / vehicle differentiation and direction identification; usable up to a height of 7 metres and from -30°C to +60°C.
Magnetic field (Optional) Loop detector for vehicle detection. Two relay outputs: presence of vehicles and pulse output to know whether the vehicle is going in or out (configurable). Manual fine tuning to ignore irrelevant objects such as bicycles, prams, etc.
OPENING CONTROL
Double-height stop selector (Optional) 2-position selector switch; threaded clamp terminal connections.
Additional control box (Optional) External control box with up, down and emergency stop push buttons, Ø40 mm interlocking.
Ceiling handle (Optional) Safety switch with cable, without simple stop reset for heavy-duty applications.
Remote control (Optional) Changing code transmitters at 433/868 MHz, 5-channel functionality through a combination of push buttons. The programming is made by contact.
External push button (Serial) External control box with alternative push buttons.
SAFETY
Radioband This kit consists of a transmitter and a receiver for the communication process of resistive or mechanical strips with the operating unit via radio.
Photocell Polarised retro-reflective mirror photocell. This photocell has been designed to withstand adverse industrial environments. This photocell's 12 m detection distance makes it very useful for application where dust and climate conditions affect detection. Located in a reinforced PC/ABS box with two glands for easy connection.
Photocell barrier (Optional) Safety device to control automation processes; using transmitter-receiver infrared beams located on 2 columns, with a maximum range of 10 m. It consists of a maximum of 50 detection elements and a minimum resolution of 50 mm.
Sensor rubber / Contact strip Resistive rubber safety profile, sensitive to the touch, specially designed for damp areas or heavy mechanical loads
CONTROL AND COMMUNICATIONS
Clearance stop Mechanical device with 3 microprocessors connected through the shaft to the motor in a way that, after a specific number of turns, sends a signal, modifies the status of the electric circuit and stops the operation.
Encoder It converts the mechanical movement (shaft turns) into digital pulses interpreted by the controller to stop the movement manoeuvre; it acts as a clearance stop for <i>GFA Elektromaten</i> motors.
Uninterrupted power Supply System – UPS (Optional) It provides electricity to the automatic door for a limited time and in the event of a power outage. The charge is directly fed from the grid through an automatic voltage regulator (AVR); it is also filtered, by means of EMI filters, for the transient peaks that may occur in the electricity grid. Rated power 1,000 VA.
Inverter board Electronic reversal device of the motor's rotating movement for situations in which it detects physical resistance to the contact strip.
Frequency converter (Optional) System for controlling the rotation speed of the AC motor by controlling the power frequency supplied to the motor. It is ideal for controlling the opening and descent speed of the door.
MISCELLANEOUS
Viewing panel options: <ul style="list-style-type: none"> - Standard viewing panel. - Transparent, high visibility (up to 1,500 mm high). - Microperforated. - Transparent panel.
Light indicators: <ul style="list-style-type: none"> - Light or light and sound, with flashing LED light 230/24 V, amber colour. - Traffic light, modular beacon.
Optional customisation using logos and images

7 – GENERAL CONSIDERATIONS

SUPPLY

The door is delivered inside a wooden crate of 45 cm x 45 cm x (Longest useful length for the door + 100 cm).

INSTALLATION

At the **door's useful height**:

- Add 500 mm from the lintel to place the drum, motor, screws, canvas, etc.

However:

- The lintel can be slightly reduced adjusting the clearance stops.

At the **useful width**:

- Add 300 mm for the width of the guides.

Also:

- Take into account the length necessary to be able to place the motor if lateral, and to change it if necessary; approximately, 350 mm.



IMPORTANT: For doors with a 'tunnel' installation or in those cases in which the total manufacturing measurements are known, deduct 30 mm from the width and 30 mm from the height as the margin for assembly. When the order is passed on for manufacturing, it must be clearly specified whether or not these have been deducted.

By default and if not specified otherwise, the margin will be deducted in the factory before manufacturing.