

RADOS

Automatic Entrance System

Sliding Door Operators

KS200 / KS300

DESCRIPTION

RADOS is proud to present KS90 & KS60, a new automatic system for sliding doors.

Its sophisticated electronic components provide the assembler the necessary tools for many customized solutions or for diagnosis when carrying out maintenance operations.

Interfaced with a computer for the remote control of the automation, this is really a product of the future.

The model has been completely redesigned with soaring and elegant shapes to match any architectural solution, even the most demanding.

ACCESSORIES

- Basic functions selector
- Electric locking system
- Tamper-proof key for night closing
- Microwave radar
- Passive and/or active infrared sensor
- Single or double field safety photocell
- Push button
- Brackets for toughened glass doors
- Floor guides
- Electronic key for access control

RERAL FEATURES:

TYPE OF DERIVE	KS200	KS300
Width of doors 2 wings	800 - 2000 mm	1000 - 3000 mm
Width of doors 1wing	800 - 1200 mm	800 - 1800 mm
Height of doors	Max. 2500 mm	Max. 2800 mm
Weight Of doors leaf	Max.160 kg/leaf	Max .240 kg/leaf
Motor Spec.	24V - 80W -1360 rpm SSA	24V- 120W -1360 rpm SSA
Mains voltage	230 V/AC 50Hz	
Supply Voltage	AC24V ± 10% or DC24V	
Motor Encoder	Exclusive Encoder used	
Motor Lock(Brake)	Selected by user	
Display	7-Segment (11.7 * 19 mm) Display from 000 to 999 (Only Number)	
Button	4 Buttons (Menu, Setup, Up, Down)	
Status LED	2 LED(Red Color) (External Safety Sensor Input, Open Input)	
External Output Voltage	DC12V (Max. 1A)	
Opening speed	Max.1 m/s (depends on weight)	
Closing speed	Max.07 m/s	

SPECIFICATIONS:

Electromechanical automation for straight sliding doors, complete with box and cover made of aluminum extruded profile.

Motion transmission by direct drive by means of anti static noise proof cogged belt, internally reinforced with Kevlar fibers.

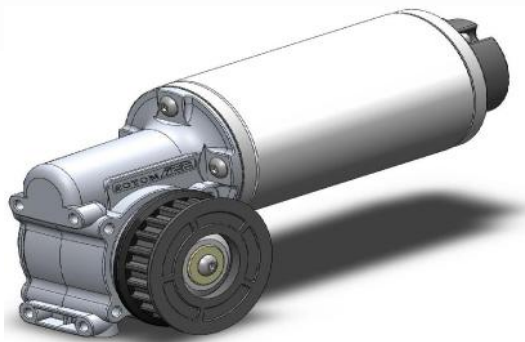
Most of the electromechanical parts are mounted on a steel module, thus making the assembly, wiring, maintenance and installation operations easier with an extremely advanced concept of space rationalization.

The electromechanical parts may be installed after the installation of the wall beam.

The belt tension may be adjusted through a spring located on the parts module and through the indicator of optimum tension.

Drive is obtained by means of a d.c gear motor with worm gear and sealed lubrication, requiring no maintenance.

A tropical transformer with low dispersion of the magnetic flow into the core assures optimum performance.



Rugged body made of aluminum extruded profile, pre-drilled to facilitate wall installation.

Cover made of aluminum extrusion with a particularly slender design and with sophisticated coupling system, to enable automation inspection without complete cover removal; thus one only person may service even very long automations.

The cover is fitted with raceways to house the proper closing brushes. When very thin wings are used, full closure between the cover and the wing may be assumed by an optional plugging aluminum profile, that can be easily and quickly adjusted to the size of the wing.

The aluminum cover profile may be supplied rough, black or silver anodized, or painted, depending upon the RAL code.

The wing supporting slides are made of steel. The height of the wing may be easily adjusted by means of a cam system included in the bearing.

An easily adjustable anti-slipping off system prevents the wing to jerk during strong acceleration, braking or motion reversal.

The slides' wheels are made of high strength blued steel, and run on a plastic guide assuring noiseless motion and wear resistance.

The guide may be easily replaced, whenever necessary, without replacing the whole automation.

OPENING: if during the opening operation, the wings meet an obstacle, the central unit orders the immediate stop of the motion. After a short standing time, the central unit checks that the obstacle has been removed in through a slow opening move; in the negative, after the third attempt the automation will stop operating and enter the failure mode; at the same time proper LEDs will light up on the central unit or on any function selector eventually connected.

unit is equipped with terminals supplying the external peripheral units at 12 Volts and with maximum power of 10 W.



Electronic Features:

The RADOS electronic central unit BX-100 is run by a microprocessor controlling the wing motion and all the connected peripheral units.

During the reset operation the length of the transit space is automatically stored, thanks to an encoder.

During normal operation, the central unit controls the wing opening and closing speed according to preset acceleration, constant speed and deceleration values. The selected speed is kept constant even in presence of slight external jamming forces, such as for instance friction.

A special procedure to release elastic energy assures that wings do not move away when they reach the fully closed position.

Antisquashing control with automatic force limitation. In presence of an obstacle, the central unit activates a special safety mode. The intervention logics depend upon the wing motion:

CLOSURE: if during the closing operation, the wings meet an obstacle, the central unit orders the immediate reversal of the wings motion, thus starting the opening operation. The subsequent closure is made at low speed, to check that the obstacle has been removed; should this be still present, the move will be repeated again for three times. After the third attempt, the automation will stop operating and enter the failure mode; at the same time proper LEDs will light up on the central unit.

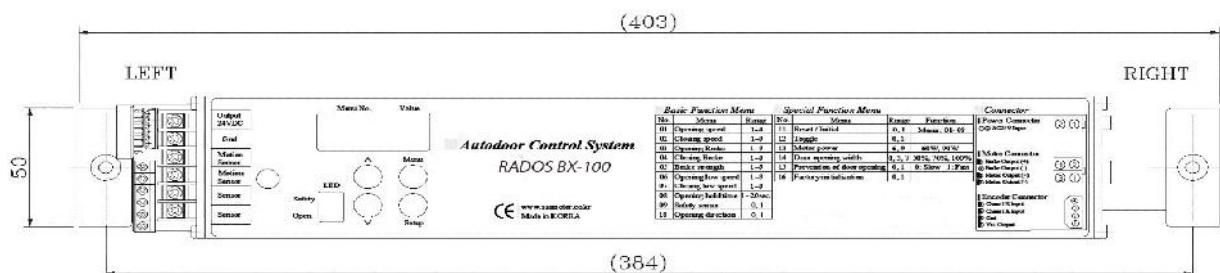
Control of an optional electric locking system is also possible, to lock the wing in the fully closed position.

Control of an optional electric locking system is also possible, to lock the wing in the fully closed position. The unit may be equipped with an independent battery-operated supply system (optional) assuring operation even in case of failure of the mains supply. This system consists of two 12V rechargeable lead batteries, assuring an independent operation for some 100 complete closing and opening moves in normal conditions.

The central unit controls the battery level and recharges them when it is too low. At the time of installation, it is possible to select the battery operation mode

- **SAFETY MODE:** in case of power supply failure, the central unit brings automatically the wings in fully open position and keeps them open until the mains supply resumes

- **CONTINUOUS OPERATION MODE:** in case of power supply failure all the functions are assured and remain unchanged.



The automation may be controlled by means of function selectors in one versions:

- BASIC SELECTOR SX-200, that enables to select the
- The selectors may be connected to the central units in the following modes:



[Default when Powered ON]

If the mode switch is powered on for the first time, it will display the non-selected status.

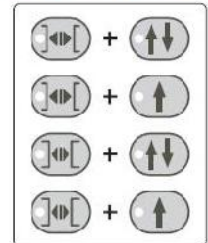
[Initial Motion when Powered ON]

If powered on, all the LEDs will turn on and off three times, and then turn off.

[Description of Functions]

- Doors operate in full open mode
- Door operate in half open mode
- Fully automatic mode (For external & internal)
- Semi automatic mode (No entry from external)
- Hold open mode
- Operator locking mode (not for the contacts)

[Combination Functions]



The setting intended not to use all the contacts built in the auto door controller

Automation units:

Adjustment of the functional parameters may be obtained by means of the advanced function selector or through connection to a PC.

Here follows a list of some possible adjustments:

- Speed adjustment: possibility to adjust separately the opening and closing speed.
- Adjustment of the standing time during the opening move: may be adjusted between 0 and 60 seconds.
- Adjustment of partial opening: may be adjusted from a minimum 10% to a maximum 90% of the full opening width.

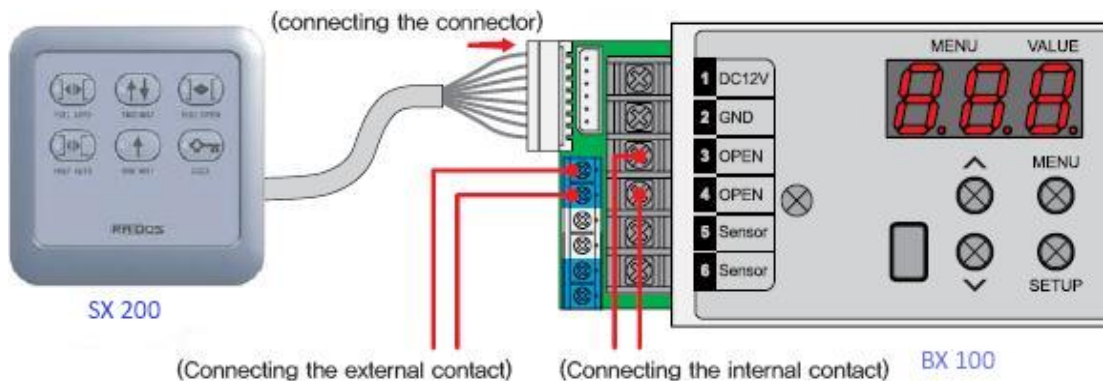
Adjustments remain permanently stored even in case of supply failure in an Eeprom type memory.

The control of the photocells mounted on the door is completely entrusted to an (optional) expansion card to be included into the automation central control system.

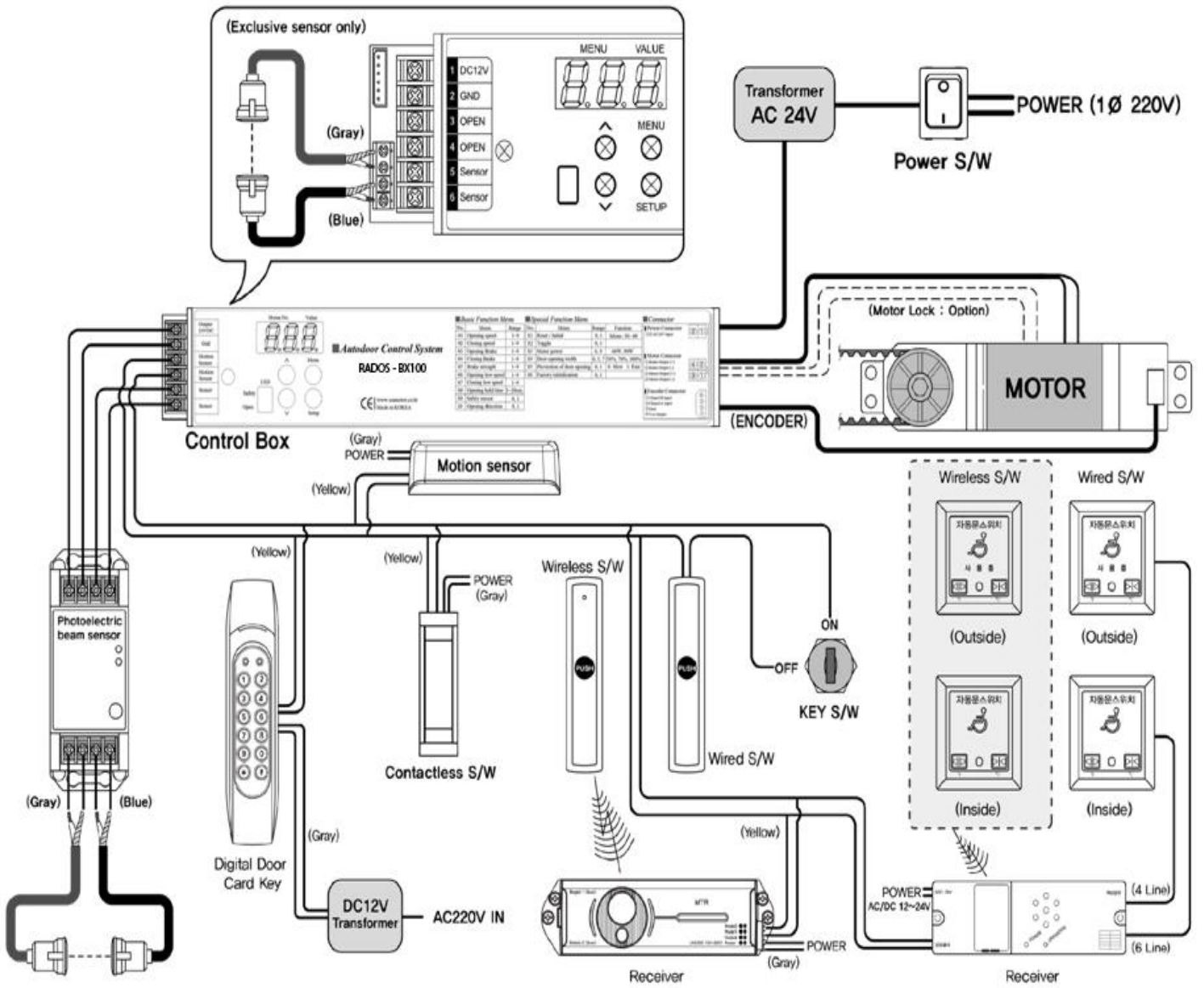
By means of a fault test signal, the central unit cyclically controls the good operation of the card and photocells in compliance with European standards; in case of failure, the operation of the whole automation is immediately stopped.

Two automation units with interlocked operation may be connected one another. The interlock is an exchange of agreements between the two automation units, enabling the operation of one single automation only when the other is stopped during closure.

The central unit is equipped with a system of polarized connectors for the connection of the external devices. Thus wiring and installation are made easier and protected from any connection fault.



Wiring Diagram:



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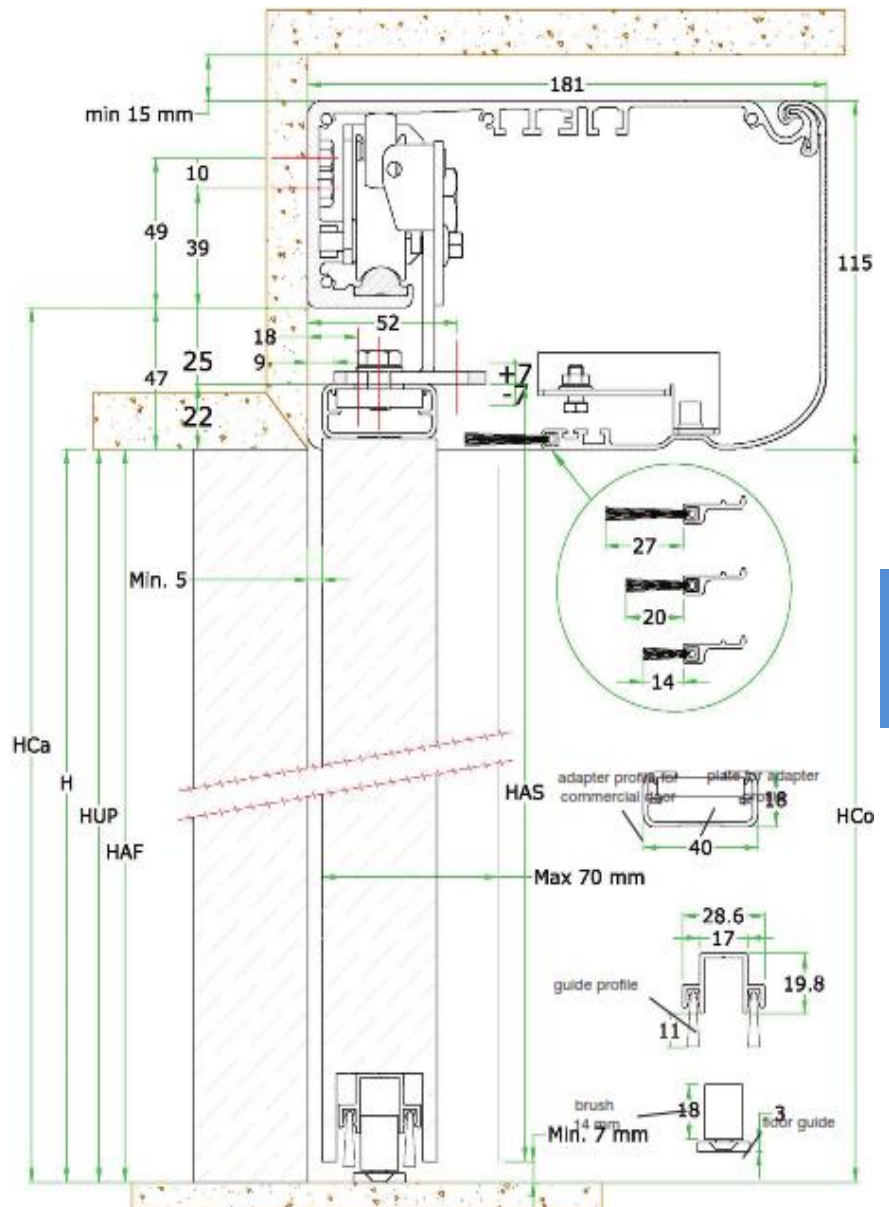
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H	Height
HUP	Height of working transit
HAF	Height of the fixed wing
HAS	Height of the sliding wing
HCO	Height from cover's lower face to floor
HCA	Height from track's lower face to floor

H	HUP
HCO	H
HAF	HCO
HAS	HCO + 15 mm
HCA	HCO + 47 mm