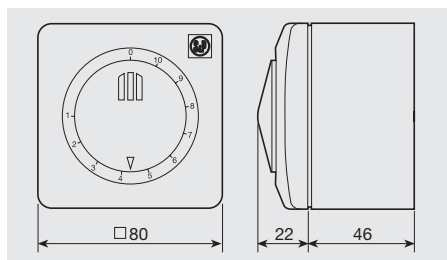


**REB-1N / REB-1NE /  
REB-2,5N / REB-2,5NE**



Electronic single phase speed controllers. Available in wall box or flush mount versions.  
Fuse protected + spare fuse included.  
Minimum speed adjustment.  
Single ON/OFF and speed regulation control knob.



Model	Electrical supply		IP Protection	Power (VA)	Maximum current (A)	Minimum current (A)	Class	Operating temperature range (°C)
	Frequency (Hz)	Voltage (V)						
REB-1N/1NE	50	220-240	IP44	220	1	0,15	Class II	0 / +40
REB-2,5N/2,5NE				550	2,5	0,15		



LxWxH (mm): 83 x 81 x 160

**REB-5**

Electronic single phase speed controller.  
Surface mounted.  
Fuse protected.  
Minimum speed adjustment.  
Separate ON/OFF switch.

Model	Electrical supply		IP Protection	Power (VA)	Maximum current (A)	Class	Operating temperature range (°C)
	Frequency (Hz)	Voltage (V)					
REB-5	50	230	IP54	1150	5	Class I	+5 / +35



LxWxH (mm): 115 x 95 x 195

**REB-10**

Electronic single phase speed controller.  
Surface mounted.  
Fuse protected.  
Minimum speed adjustment.  
Separate ON/OFF switch.

Model	Electrical supply		IP Protection	Power (VA)	Maximum current (A)	Class	Operating temperature range (°C)
	Frequency (Hz)	Voltage (V)					
REB-10	50	230	IP54	2300	10	Class I	+5 / +35



LxWxH (mm): 90 x 54 x 134

### RRB-100

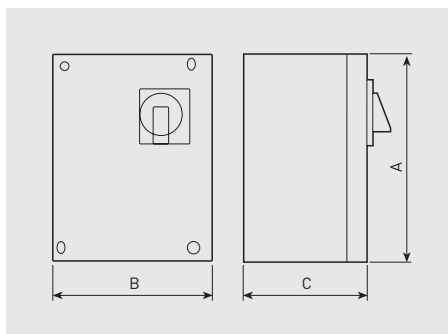
Electromechanical single-phase speed controller.  
Variable reactance.  
Surface mounted.  
Five position knob.

Model	Electrical supply		IP Protection	Power (VA)	Maximum current (A)	Class	Operating temperature range (°C)
	Frequency (Hz)	Voltage (V)					
RRB-100	50	230	IP20	94,3W	0,41	Class II	5-45°C



### RMB

Single phase speed controller by auto-transformer.  
IP56 ABS casing.  
Electrical supply: 1/230V/50-60Hz.  
Five position knob (0/1/2/3/4).  
Voltage: 80, 105, 130, 160 and 230 V.  
Pilot light.



Model	Maximum current (A)	Casing	IP Protection	Class	Operating temperature range (°C)	Dimensions (mm)			Weight (kg)
						A	B	C	
RMB-1,5	1,5	PP V0	IP55	Class I	0 / +40	230	180	95	3
RMB-3,5	3,5					230	180	95	4
RMB-5	5					230	180	95	4,5
RMB-8	8					310	230	125	10
RMB-10	10					310	230	125	12



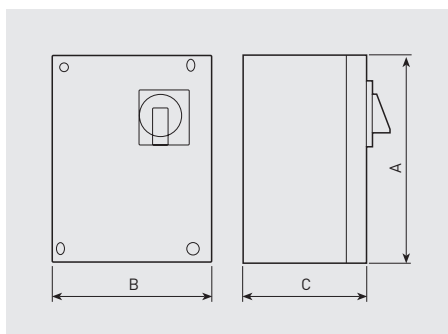
RMT configuration with metallic box



RMT configuration with ABS box

### RMT

Three phase speed controller by auto-transformer.  
IP54 ABS casing for RMT-1,5 and RMT-2,5 models.  
IP54 metallic casing from RMT-5 to RMT-12 models.  
Electrical supply: 3/400V/50-60Hz.  
Six position knob (0/1/2/3/4/5).  
Voltage: 90, 150, 200, 280 and 400 V.  
Pilot light.

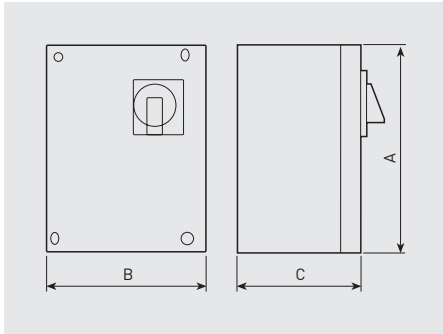


Model	Maximum current (A)	Casing	IP Protection	Class	Operating temperature range (°C)	Dimensions			Weight (kg)
						A	B	C	
RMT-1,5	1,5	ABS	IP54	Class I	0 / +40	280	200	140	6
RMT-2,5	2,5	ABS				280	200	140	13
RMT-5	5	Metallic				300	250	205	16
RMT-8	8	Metallic				400	300	205	21
RMT-12	12	Metallic				400	300	205	30



### REV

Auto-transformer.  
Single phase 230V-50 Hz.  
Wall mounting.  
IP44.  
Motor PTO connection.  
Maximum switch output: (1A).

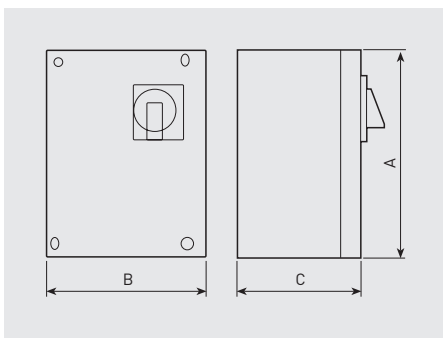


Model	Maximum current (A)	Dimensions			Weight (kg)
		A	B	C	
REV-1,6N	1,6 A	240	190	120	3
REV-3N	3 A	240	190	120	5
REV-5N	5 A	240	190	120	6
REV-7N	7 A	240	190	120	7
REV-10N	10 A	290	240	160	12



### RDV

Auto-transformer.  
Three phase 400V-50 Hz.  
Wall mounting.  
IP44.  
Motor PTO connection.  
Maximum switch output: (1A).



Model	Maximum current (A)	Dimensions			Weight (kg)
		A	B	C	
RDV-0,8N	0,8 A	290	240	160	5,8
RDV-1,2N	1,2 A	290	240	160	8
RDV-2,5N	2,5 A	290	240	160	11,2
RDV-3,2N	3,2 A	290	240	160	14,7
RDV-5N	5 A	340	290	160	18,5
RDV-7N	7 A	340	290	160	21
RDV-10N	10 A	400	300	200	38



LxWxH (mm): 85 x 90 x 120

### PARO/MARCHA 5P and PARO/MARCHA 8P

ON/OFF Electrical isolation switch.

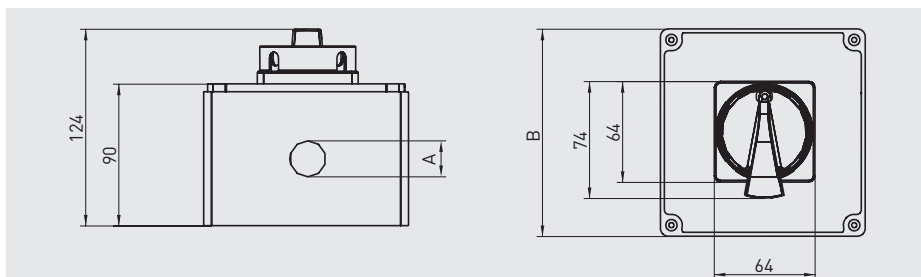
**PARO/MARCHA 5P (ON/OFF 5P):**  
Five pole electrical isolation switch.  
One speed motor application (3 wires).  
Maximum absorbed current: 20A.  
Open / close position reset.  
IP66 / IP67 protection.  
3x380V / 3x440V motors.  
1x220-240V motors.

**PARO/MARCHA 8P (ON/OFF 8P):**  
Eight pole electrical isolation switch.  
Two speed motor application (6 wires).  
Maximum absorbed current: 20A.  
Open / close position reset.  
IP55 protection.  
3/380-440V motors.



### DESENFUMAGE SWITCHES

ON/OFF switches to work immersed at 400°C/2h.  
Aluminum enclosure.  
Maximum intensity allowed depending on Model, from 25A to 125A.  
To apply to 3x380V / 3x440V motors.  
Frequency: 50-60Hz.  
IP65.



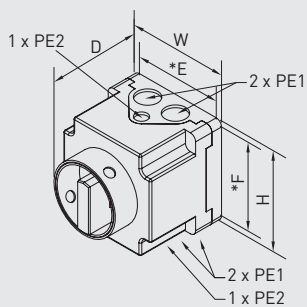
Model	A	B
Desenfumage switches		
INT-IPM 25/6P-F300		
INT-IPM 25/6P-F400		
INT-IPM 40/6P-F400		
INT-IPM 63/6P-F400		
INT-IPM 125/6P-F400		
Desenfumage switches with auxiliary contactors		
INT-IPM 25/6P+1NA+1NC-F300		
INT-IPM 25/6P+2AUX-F300		
INT-IPM 25/6P+2AUX-F400		
INT-IPM 40/6P+2AUX-F400		





## INTZ

ON/OFF electrical isolation switch.  
3 and 6 pole electrical isolation switch.  
3-point lock.  
Open / close position reset.  
230V single-phase or 400V-50/60Hz  
three-phase motor.  
IP65 Protection Index: outdoor  
installation if possible.  
Supplied with cable.



Model	Switch output main contacts (AC23)		W (mm)	H (mm)	D (mm)	E* (mm)	F* (mm)	PE1	PE2
	Confort	Smoke extract**							
1 speed									
INTZ 1V15	15,4 A	10,2 A	90,5	90,5	102	80	80	M20	M12
INTZ 1V22	22,4 A	14,9 A	115	115	136	100	100	M25	M16
INTZ 1V29	29,8 A	19,8 A	115	115	136	100	100	M25	M16
INTZ 1V43	43 A	28,6 A	145	145	158	130	130	M25/32/40	M20
INTZ 1V68	68 A	45,3 A	167	220	144	151	203	M25/32/40	M20
2 speed									
INTZ 2V15	15,4 A	10,2 A	90,5	90,5	139	80	80	M20	M12
INTZ 2V22	22,4 A	14,9 A	115	115	163	100	100	M25	M16
INTZ 2V29	29,8 A	19,8 A	115	115	163	100	100	M25	M16
INTZ 2V43	43 A	28,6 A	145	145	188	130	130	M25/32/40	M20
INTZ 2V68	68 A	45,3 A	216	267	170	190	242	M40/50	M20

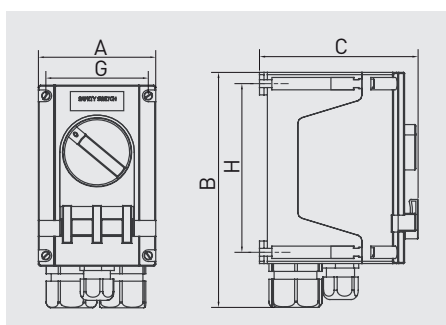
\* Mounting dimensions.

\*\* Accordance with the regulations: smoke extract size = size confort/1.5.



### INTZ ATEX

ON/OFF electrical isolation switch.  
3 and 6 pole electrical isolation switch.  
Electrical supply:  
Single phase 230V-50/60Hz.  
Three phase 400V-50/60Hz.  
IP66.



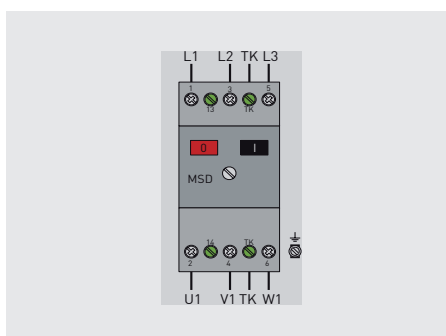
Model	A	B	C	G	H	Ø
INTZ 02.10 ATEX	84	135	112	68,5	61,5	5,5
INTZ 02.20 ATEX	110	208	141	96	150	7
INTZ 02.40 ATEX	140	270	168	126	197	7
INTZ 04.20 ATEX						
INTZ 04.40 ATEX	271	316	275	247	247	7

Model	Maximum current (A)	Weight (kg)
3 pole, 1 speed		
INTZ 02.10 ATEX	10	0,55
INTZ 02.20 ATEX	20	1,48
INTZ 02.40 ATEX	40	2,75
6 pole, 2 speed		
INTZ 04.20 ATEX	20	2,43
INTZ 04.40 ATEX	40	6,5



### MSD

Motor starter for single and three phase motors with integrated thermal contacts.  
- Surface mounting.  
- Cabinet installation.  
- Potential free contact.  
- IP 54.



Model	Supply	Operating range
MSD	3 - 400 V	Max. 25 A



LxWxH (mm): 85 x 90 x 120

### COM D/S

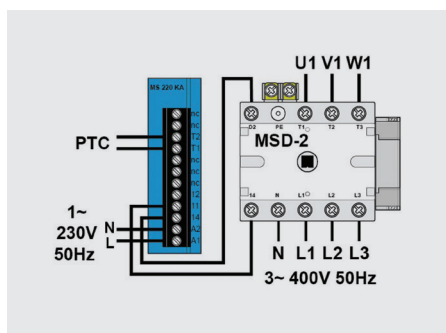
Three phase fan Y / Δ switch.  
Rotary switch with three positions,  
OFF, Y and Δ.  
Maximum absorbed current: 20A.  
IP67 protection.

Supply voltage	Voltage of motor
380-400 V	III / 380 / 50
	III / 400 / 50
220-230 V	III / 220-380 / 50
	III / 230-400 / 50



### MSK-EX

Set comprising a protection relay in  
combination with a circuit breaker.  
- For 400 V three-phase motors with PTC.  
- Maximum current: 25 A.  
- Mounting: (mount to the outside of the  
Atex zone).  
MSD-2: IP54.  
MS 220 KA: DIN rail mounting IP20.



Model	W	H	D
MSD-2	92	122	112
MS 220 KA	23	76	116



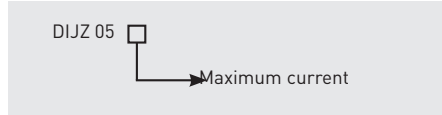
### APG-130

IP54 surface mounting box for  
MS 220 KA.

Model	IP Protection	Dimensions (mm)
APG-130	IP54	115x115x135

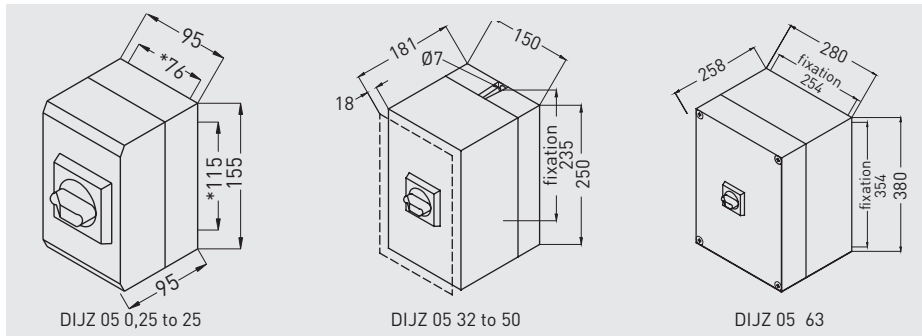


**DIJZ**



Switch for 1-speed motor single or three phase. Thermal-magnetic circuit breaker and ON/OFF control for single speed motor.

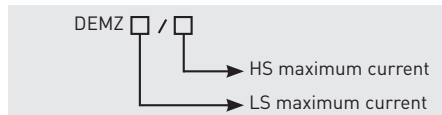
- Unit Protection Indication = 0.25 to 32 A: IP65 and 40 to 63 A: IP 54.
- ON/OFF padlockable rotary switch.
- Auxiliary contact 0 / C.
- Outdoor installation possible.



Model	Current Range (A) High speed
DIJZ 05 0,25	0,16 to 0,25
DIJZ 05 0,4	0,25 to 0,4
DIJZ 05 0,63	0,4 to 0,63
DIJZ 05 1,0	0,63 to 1
DIJZ 05 1,6	1 to 1,6
DIJZ 05 2,5	1,6 to 2,5
DIJZ 05 4,0	2,5 to 4
DIJZ 05 6,3	4 to 6,3
DIJZ 05 10,0	6,3 to 10
DIJZ 05 16,0	10 to 16
DIJZ 05 20,0	16 to 20
DIJZ 05 25,0	20 to 25
DIJZ 05 32,0	25 to 32
DIJZ 05 40,0	28 to 40
DIJZ 05 50,0	40 to 50
DIJZ 05 63,0	45 to 63



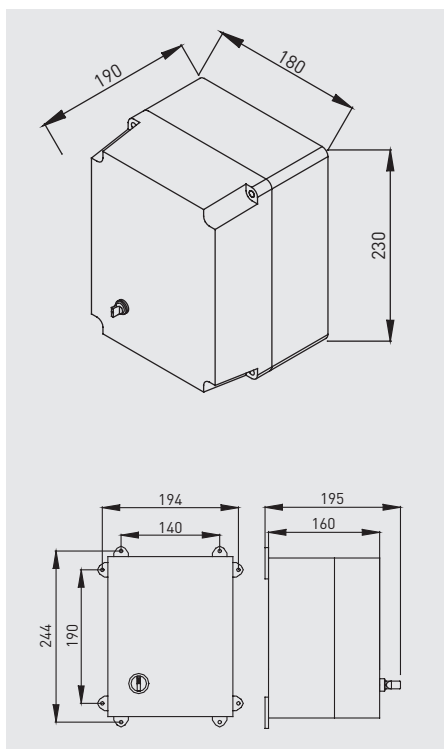
**DEMZ**



**DEMZ BI**  
Switch for 2-speed motors with independent windings.

**DEMZ DA**  
Switch for 2-speed motors with Dahlander.

- IP 55 Enclosure.
- 0/LS/HS Rotary switch.
- Thermal protection integrated.
- Auxiliary contact for gas solenoid valve.
- Outdoor installation possible.



Model	Current range (A)	
	Low speed	High speed
DEMZ 0,55/1,3 BI	0,41 to 0,55	1 to 1,3
DEMZ 0,74/1,3 BI	0,55 to 0,74	1 to 1,3
DEMZ 1/1,7 BI	0,74 to 1	1,3 to 1,7
DEMZ 1/2,3 BI	0,74 to 1	1,7 to 2,3
DEMZ 1,3/1,7 BI	1 to 1,3	1,3 to 1,7
DEMZ 1,3/2,3 BI	1 to 1,3	1,7 to 2,3
DEMZ 1,3/3,1 BI	1 to 1,3	2,3 to 3,1
DEMZ 1,7/2,3 BI	1,3 to 1,7	1,7 to 2,3
DEMZ 1,7/3,1 BI	1,3 to 1,7	2,3 to 3,1
DEMZ 1,7/4,2 BI	1,3 to 1,7	3,1 to 4,2
DEMZ 2,3/3,1 BI	1,7 to 2,3	2,3 to 3,1
DEMZ 3,1/4,2 BI	2,3 to 3,1	3,1 to 4,2
DEMZ 3,1/5,7 BI	2,3 to 3,1	4,2 to 5,7
DEMZ 3,1/7,6 BI	2,3 to 3,1	5,7 to 7,6
DEMZ 4,2/5,7 BI	3,1 to 4,2	4,2 to 5,7
DEMZ 4,2/7,6 BI	3,1 to 4,2	5,7 to 7,6
DEMZ 4,2/10 BI	3,1 to 4,2	7,6 to 10
DEMZ 5,7/7,6 BI	4,2 to 5,7	5,7 to 7,6
DEMZ 5,7/10 BI	4,2 to 5,7	7,6 to 10
DEMZ 5,7/13 BI	4,2 to 5,7	10 to 13
DEMZ 7,6/13 BI	5,7 to 7,6	10 to 13
DEMZ 7,6/15,5 BI	5,7 to 7,6	13 to 15,5
DEMZ 10/13 BI	7,6 to 10	10 to 13
DEMZ 10/20 BI	7,6 to 10	16 to 20
DEMZ 10/24 BI	7,6 to 10	20 to 24
DEMZ 13/15,5 BI	10 to 13	13 to 15,5
DEMZ 13/29 BI	10 to 13	24 to 29
DEMZ 20/24 BI	16 to 20	20 to 24

Model	Current range (A)	
	Low speed	High speed
DEMZ 0,55/1 DA	0,41 to 0,55	0,74 to 1
DEMZ 0,74/1,7 DA	0,55 to 0,74	1,3 to 1,7
DEMZ 0,74/2,3 DA	0,55 to 0,74	1,7 to 2,3
DEMZ 1/1,3 DA	0,74 to 1	1 to 1,3
DEMZ 1/1,7 DA	0,74 to 1	1,3 to 1,7
DEMZ 1/2,3 DA	0,74 to 1	1,7 to 2,3
DEMZ 1/3,1 DA	0,74 to 1	2,3 to 3,1
DEMZ 1,3/3,1 DA	1 to 1,3	2,3 to 3,1
DEMZ 1,3/4,2 DA	1 to 1,3	3,1 to 4,2
DEMZ 1,7/5,7 DA	1,3 to 1,7	4,2 to 5,7
DEMZ 2,3/5,7 DA	1,7 to 2,3	4,2 to 5,7
DEMZ 2,3/7,6 DA	1,7 to 2,3	5,7 to 7,6
DEMZ 2,3/10 DA	1,7 to 2,3	7,6 to 10
DEMZ 3,1/7,6 DA	2,3 to 3,1	5,7 to 7,6
DEMZ 3,1/10 DA	2,3 to 3,1	7,6 to 10
DEMZ 4,2/10 DA	3,1 to 4,2	7,6 to 10
DEMZ 4,2/13 DA	3,1 to 4,2	10 to 13
DEMZ 5,7/13 DA	4,2 to 5,7	10 to 13
DEMZ 5,7/15,5 DA	4,2 to 5,7	13 to 15,5
DEMZ 5,7/24 DA	4,2 to 5,7	20 to 24
DEMZ 7,6/24 DA	5,7 to 7,6	20 to 24
DEMZ 10/20 DA	7,6 to 10	16 to 20
DEMZ 10/29 DA	7,6 to 10	24 to 29



LxWxH (mm): 80 x 45 x 80

### REGUL-2

Fan ON/OFF and speed selector  
I/II switch.  
Maximum absorbed current: 4.5A.



LxWxH (mm): 84 x 37 x 81

### COM-2

Two speed switch.  
Fan ON/OFF and speed selector  
I/II rotary switch.  
Maximum current rating 4A.



LxWxH (mm): 90 x 90 x 75

### COM-3

Three-speed switch  
Fan ON/OFF and speed selector  
Maximum current rating 4A.



LxWxH (mm): 86 x 86 x 60,4

### INTER 4P

Three speed switch.  
Fan ON/OFF and speed selector  
Maximum current rating 4A.



LxA (mm): 80 x 75

### INTERRUPTOR VMC 2V

Two speed switch.  
Normal / Boost switch (No 'OFF') suitable for use with whole house extract units.



LxWxH (mm): 110 x 57 x 80

### PRESOSTATO DPS

Differential pressure switch to control the fan running and the filter clogging up.  
Protection class: IP54.  
Can be used outside.

Model	$\Delta P$
PRESOSTATO DPS 2-30	20 - 300 Pa
PRESOSTATO DPS 10-100	100 - 1000 Pa
PRESOSTATO DPS 100-500	1000 - 5000 Pa



LxWxH (mm): 130 x 43 x 82

**CT-12/14 and CT-12/14R**

Safety isolating transformer  
230V/12V - 50Hz.  
Fuse protection.  
CT-12/14R: incorporates adjustable timer  
(1-30 minutes).

Electrical supply		Output voltage (V)	IP protection	Class	Maximum power (V.A.)
Frequency (Hz)	Supply voltage (V)				
50	220-240	12	IP21	Class II	14



LxWxH (mm): 130 x 43 x 82

**HIG-2**

Humidistat.  
Enables the automatic ON/OFF operation of an extract fan by monitoring the relative humidity level.  
Adjustable pre-set RH level 60-90%.  
Incorporates timer.

IP Protection	Class	Maximum current (A)	Operating temperature	Humidity adjustment
IP21	Class II	*6 (2)**	0-40 °C	60-90%

\* For resistive loads  
\*\* For inductive loads



LxWxH (mm): 130 x 43 x 82

**SQA**

Air quality sensor.  
Automatically switches the fan on when the quality of the ambient air deteriorates below an acceptable level due to fumes, odours, tobacco, smoke or dampness, etc.  
Adjustable run-on-timer facility which enables the fan to operate for a pre-selected time period after the air quality sensor has switched off.

Important: this sensor must not be used to detect combustible gases or fires and in connection with any safety alarm systems.

IP Protection	Class	Maximum current (A)	Operating temperature	Timing
IP21	Class II	*6 (2)**	0-50 °C	1-25 min.

\* For resistive loads  
\*\* For inductive loads



LxWxH (mm): 86 x 80 x 50

**THE 16/4 A**

- Surface-mounted adjustable thermostat.
- 230V-50Hz.
  - IP54. Can be installed outdoors.
  - Maximum current: 4A (inductive).
  - Temperature range: 0°C to +40°C.
  - Differential:  $\pm 0.75$  K.



LxWxH (mm): 85 x 125 x 58

**THE-F thermostat with capillary tube anti-frost sensor**

- Thermostat with capillary tube sensor to prevent the risk for freezing.
- IP30.
  - Contact capacity: 16A to 1-230V-50Hz.
  - Temperature range: -18°C to +13°C.
  - Includes mounting support, channel and set of 3m long capillary tubes.



LxWxH (mm): 32 x 10 x 20

**TIMER ZN 62**

- Timer habitat range products.
- Starting up: 1 min.
  - Timing: 6 min.
  - Resistive load – 2.5 A
  - Inductive load – 1.6 A





LxWxH (mm): 83 x 40 x 153

### PULSER

Single phase electric heater controller. Electronic controller to regulate the heat output of electric heater in order to maintain a constant pre-selected temperature. Depending on the selected temperature, the controller pulses the entire power output and uses a time-proportional control to maintain that temperature.

Electrical supply		IP Protection	Voltage (V)	Minimum		Maximum		Operating temperature	Thermostat adjustment (airtemp)
Frequency (Hz)	Supply voltage (V)			Current (A)	Power (W)	Current (A)	Power (W)		
50-60	220-415	IP30	230 V - I	1	230	16	3680	0-50°C	0-30°C
			400 V - III	1	400	16	6400		



LxWxH (mm): 83 x 40 x 153

### PULSER-ADD

Single phase electric heater controller. Supplementary unit for slave control from another PULSER to control electric heaters with power ratings high to the PULSER capacity (3600W-230V).



LxWxH (mm): 83 x 40 x 153

### PULSER-M

Single phase electric heater controller. Set point: 0-30°C, the sensor determines the scale range (for use with NTC-sensor). Output (load): 16 A (min. 1 A). Protection class: IP30. Input regulation maximum and minimum. Maximum absorbed power: 3.6 kW.



LxWxH (mm): 115 x 59 x 88

### PULSER-D

Single phase electric heater controller. Similar controller to the PULSER designed to be fitted in a cabinet on DIN-rail (IP20). Set point: 0-30°C, the sensor determines the scale range (for use with NTC-sensor). Output (load): 16 A (min. 1 A). Maximum absorbed power: 3.6 kW.

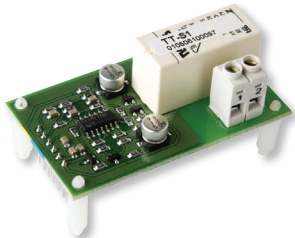


LxWxH (mm): 160 x 140 x 280

### TTC-2000

Three phase electric heater controller. Electronic controller to regulate the heat output for three phase electric heater in order to maintain a constant pre-selected temperature. Depending on the selected temperature, the controller pulses the entire power output and uses a time-proportional control to maintain that temperature.  
 Control signal: 0-10 V (external signal).

Frequency (Hz)	Electrical supply		Voltage (V)	Minimum		Maximum		Operating temperature	Thermostat adjustment (airtemp)
	Supply voltage (V)	IP Protection		Current (A)	Power (W)	Current (A)	Power (W)		
50-60	380-415	IP30	230 V	3	1,5	25	17	0-50°C	0-30°C
			400 V						



LxWxH (mm): 60 x 30 x 35

### TT-S1

Additional PCB to increase the output power controlled. The load connected to TT-S1 should be of equal size to the load connected to the TTC2000. TTC2000 detects if a TT-S1 is installed and automatically adapts the control function accordingly.



LxWxH (mm): 195 x 95 x 220

### TTC-25 and TTC-40F

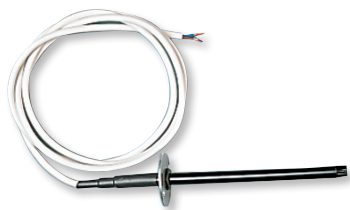
Three-phase electric heater controller. Electronic controllers to regulate the heat output for three phase electric heaters and controllers in order to maintain a constant pre-selected temperature. Depending on the selected temperature, the controllers pulse the entire power output and uses a time-proportional control to maintain that temperature. The TTC-25 and 40F are designed to be fitted in a cabinet on DIN-rail. Supply voltage: three phase 210-415 V.  
 - Output: TTC25: 25 A, 400 V, 17 kW.  
 TTC40: 40 A, 400 V, 27 kW.  
 Set point: 0-30°C (sensor determines the scale range).  
 Sensor inputs: Two (2), main- and max, min. limit sensors.  
 Control signal: 0-10 V.  
 Protection class: IP20.



LxWxH (mm): 70 x 30 x 70

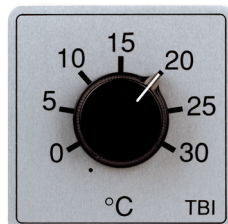
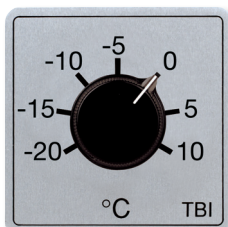
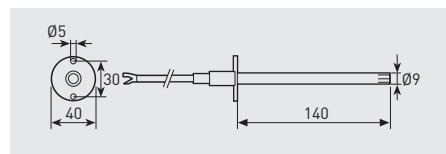
### TG-R

Used in conjunction with electric heaters and controllers. NTC type with liner scale. Range of temperature 0-30°C. Protection class IP30.  
 2 models:  
 - Room sensor with set point adjustment, 0-30°C (TG-R430).  
 - Room sensor without set point adjustment, 0-30°C (TG-R530).



**TG-K**

Duct temperature sensor.  
 Used in conjunction with electric heater and controller.  
 NTC type with linear scale.  
 Protection class IP20.  
 Models:  
 - TG-K330: from 0 to 30°C.  
 - TG-K360: from 0 to 60°C.  
 - TG-K310: from -20 to 10°C.



LxWxH (mm): 60 x 38 x 60

**TBI**

External potentiometer.

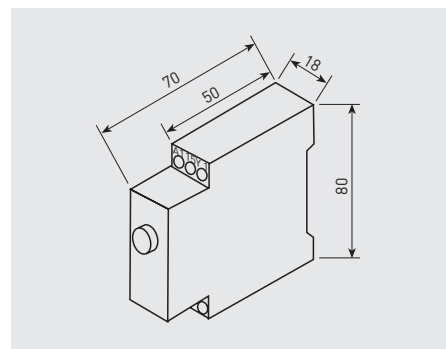
**TBI-10**  
 Potentiometer mounted on the main board panel for setting temperature between -20 and +10°C.  
 Used with the controller and a TG-K310 duct sensor to set the minimum air temperature before entering in the heat exchanger.

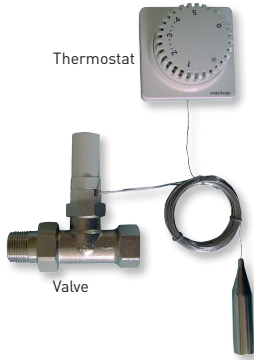
**TBI-30**  
 Potentiometer mounted on the main board panel for setting temperature between 0 and +30°C.  
 Used with the controller and with a TG-K330 duct sensor to set the air temperature after the electric heater in post heating operation.



**MCR-1**

Timer with set point between 1 second and 100 hours.  
 Used in an electric heating system to delay the fan switch off after disconnecting the system.

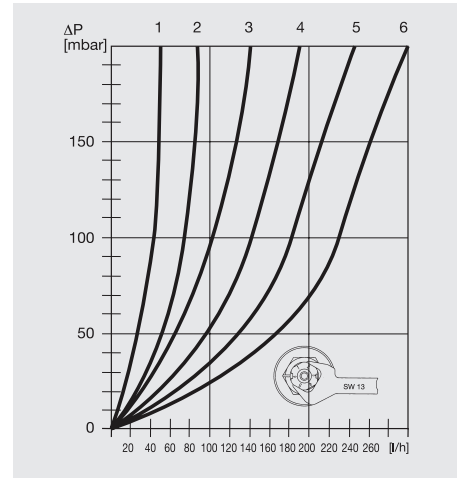




**The temperature control unit for MBW 100-200**

The temperature control unit for MBW 100-200 hot water coil comprises a thermostat with a capillary tube sensor and a 2-way valve.

- 3/4" thermostatic valve
- Material: brass
- Surface: nickel plated
- Kv value: 0.65
- Kvs value: 0.90
- Size: DN 20
- Finish: Straight valve
- Max. diff. pressure: 1 bar
- Max. operating pressure: PN 10
- Max. temperature: 120 °C
- Thermostat unit 7-28 C 0 \* 1-5, remote sensor and control, 5m
- Connection: M30 x 1.5

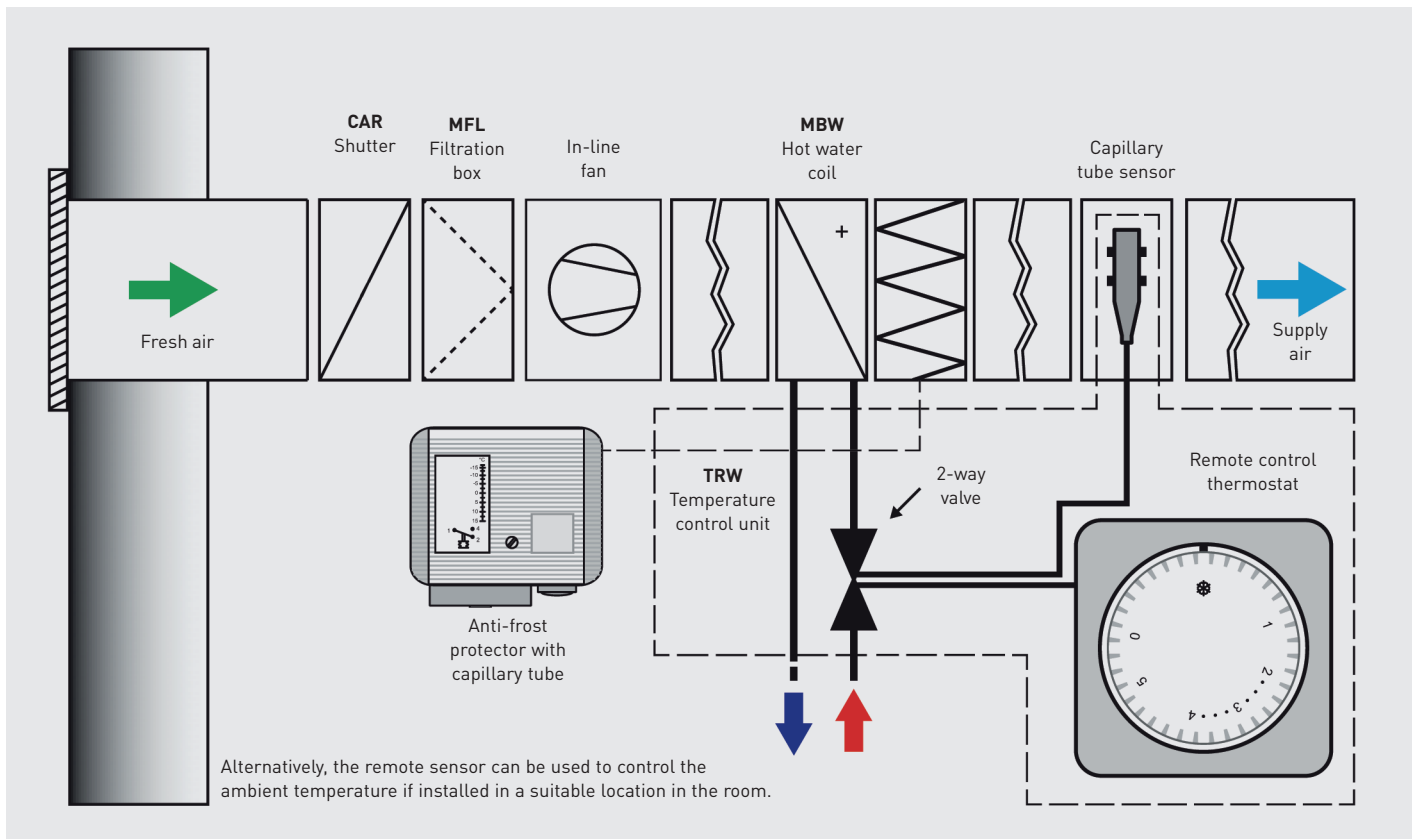


**TRW control unit valve setting**  
 The default factory setting for the valve is position 6.

**Thermostat**

With 5 temperature control positions (12°C, 16°C, 20°C, 24°C, 28°C) and anti-frost protection which opens the valve automatically whenever the indoor temperature falls below 6°C.

**Installation diagram**





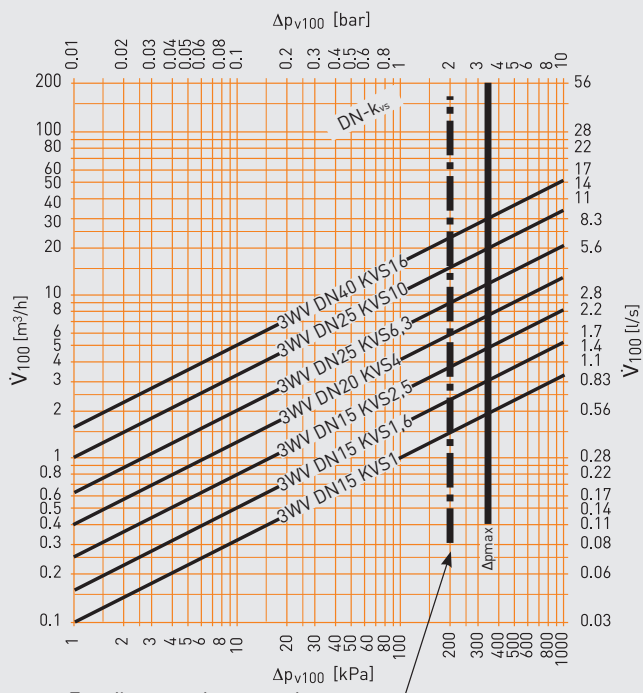
**3WV 3P**

3-way motorized valves (CCV) with 3-point actuator.  
Maximum pressure 16 bar.  
Internal thread Rp".  
Forged brass and nickel-plated casing.  
Stainless steel valve cone.  
Stainless steel shaft.  
Water temperatures -10 to +120°C.  
5Nm mounted rotary actuator.  
AC 230V 3 points on-off.  
90s/90° response time.  
IP54.

**3WV PROP**

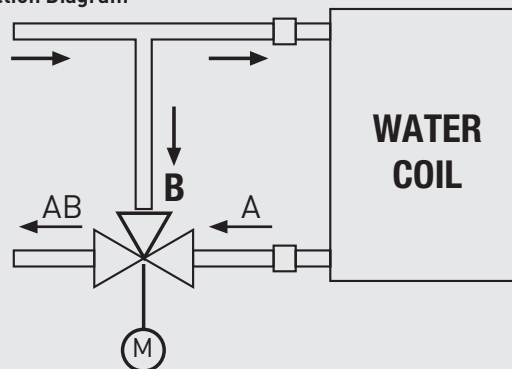
3-way motorized valves (CCV) with proportional actuator.  
Maximum pressure 16 bar.  
Internal thread Rp".  
Forged brass and nickel-plated casing.  
Stainless steel valve cone.  
Stainless steel shaft.  
Water temperatures -10 to +120°C.  
5Nm mounted rotary actuator.  
AC/DC 24V Proportional.  
90s/90° response time.  
DC 2...10V analogue input range.  
IP54.

**Valve dimensioning diagram**



For silent running operation  $\Delta p_{v100}$  should be  $\leq 2$  kPa.  
 $\Delta p_{v100}$ : Differential pressure with valve fully opened  
 $V_{100}$ : Nominal flow at  $\Delta p_{v100}$

**Connection Diagram**



**Model**

Motorized 3-way valves with 3-point actuator

3WV DN15 KVS1 3P 230V

3WV DN15 KVS1,6 3P 230V

3WV DN15 KVS2,5 3P 230V

3WV DN20 KVS4 3P 230V

3-way motorized valves with proportional actuator

3WV DN15 KVS1 PROP 24V

3WV DN15 KVS1,6 PROP 24V

3WV DN15 KVS2,5 PROP 24V

3WV DN20 KVS4 PROP 24V



**WCT**

Proportional thermostat for control of 3-way-valves. Includes an air temperature sensor to be placed into duct.



### AIRSENS-CO2 / VOC / RH

Intelligent sensor available in three different versions: CO2, VOC and RH. Designed to create direct demand control ventilation systems without the need to install an intermediate control. AirSens can be linked with AC, ECOWATT (EC) fans or VFTM frequency drive. WiFi version also facilitates remote monitoring through CONNECTAIR® platform.

**Main features:**

- 4 working modes:
  - Relay output.
  - 0-10V output.
  - 2-10V output.
  - Total control through Modbus or CONNECTAIR® platform (WiFi version).
- Adjustable set point.
- IAQ level indicator (3-LED light diffuser).
- Adjustable 3-LED light diffuser intensity (OFF-100%).

**Standard version**

Model	Electrical supply	Power (W)	Relay	Analog output	Lecture range	IP protection	Dimensions LxWxH (mm)
AIRSENS-CO2	100-240 VAC 50/60Hz	0,7W	3A 250 VAC	0-10 V 2-10 V	450-2000 ppm (NDIR technology)	IP30	122x23x89
AIRSENS-VOC					450-2000 ppm		
AIRSENS-RH					0-100%		

**RF version**

Wireless radio frequency communication (868.3MHz) between the AIRSENS RF transmitter and the REC. AIRSENS RF receiver. Each receiver can receive up to 4 signals simultaneously allowing the control of the indoor air quality in different rooms.

Model	Electrical supply	Power (W)	Relay	Analog output	Lecture range	IP protection	Dimensions LxWxH (mm)
AIRSENS RF CO2	100-240 VAC 50/60Hz	0,7W	3A 250 VAC	0-10 V 2-10 V	450-2000 ppm (NDIR technology)	IP30	122x23x89
AIRSENS RF VOC					450-2000 ppm		
AIRSENS RF RH					45-100%		
REC.AIRSENS RF					Up to 4 signals from AIRSENS RF units		135x31x77

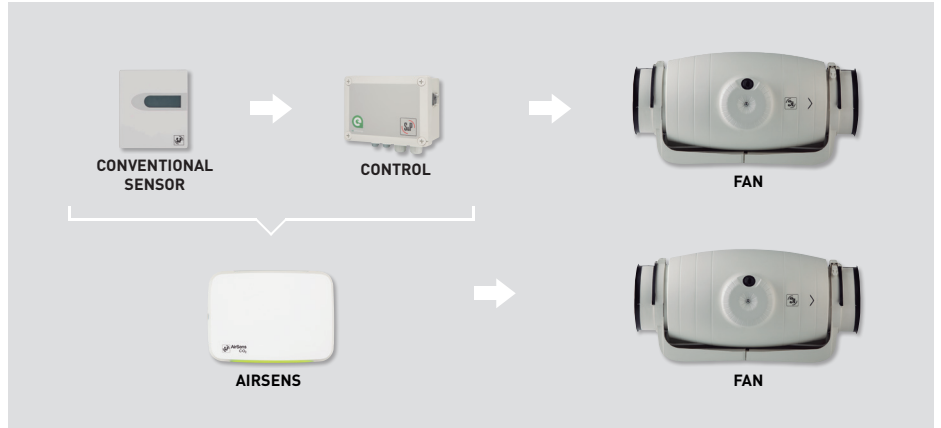
**WiFi version**

IAQ remote monitorization through WiFi communication (2,4GHz) and S&P CONNECTAIR platform. All models include relative humidity and temperature reading. Ventilation unit control through relay output or analogic (0-10V/2-10V).

Model	Electrical supply	Power (W)	Relay	Analog output	Lectures	Lecture range	IP protection	Dimensions LxWxH (mm)
AIRSENS WIFI CO2	100-240 VAC 50/60Hz	0,7W	3A 250 VAC	0-10 V 2-10 V	CO2/RH/T	CO2: 450-2000 ppm (NDIR technology) VOC: 450-2000 ppm (Relative CO2 equivalent, CMOS technology) RH: 45-100% T: 0-50°C	IP30	122x23x89
AIRSENS WIFI VOC					VOC/RH/T			
AIRSENS WIFI RH					RH/T			

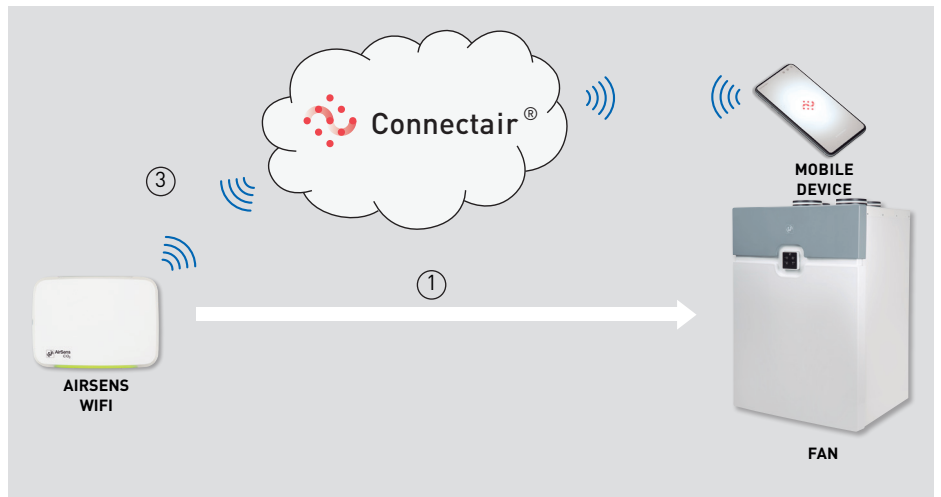
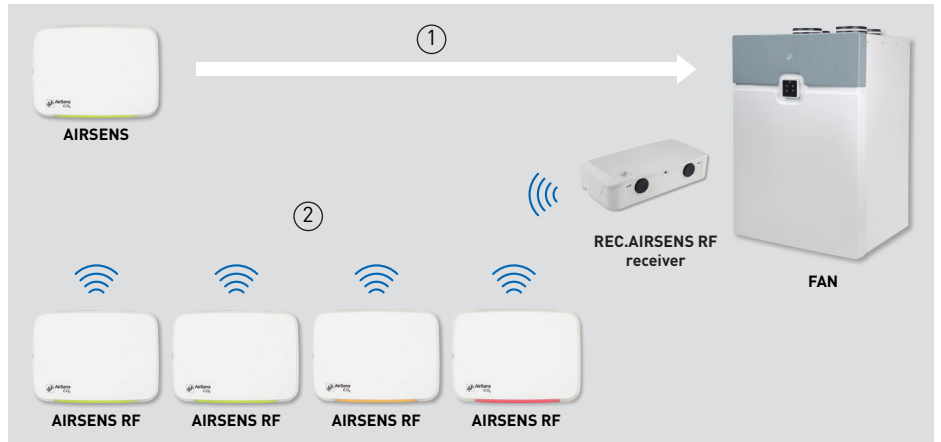
**All-in-one:**

Reduces components, simplifies installation, increases savings.



**Communication with the ventilation unit**

- ① Standard version: wiring between AIRSENS and fan.
- ② RF version: No cables between AIRSENS RF and REC. AIRSENS RF. Final wiring between receiver and fan.
- ③ WiFi version: No cables between AIRSENS WIFI and mobile monitoring device. Wiring between sensor and ventilation unit.



The front LED indicator lets you know at any moment the IAQ level of the air.







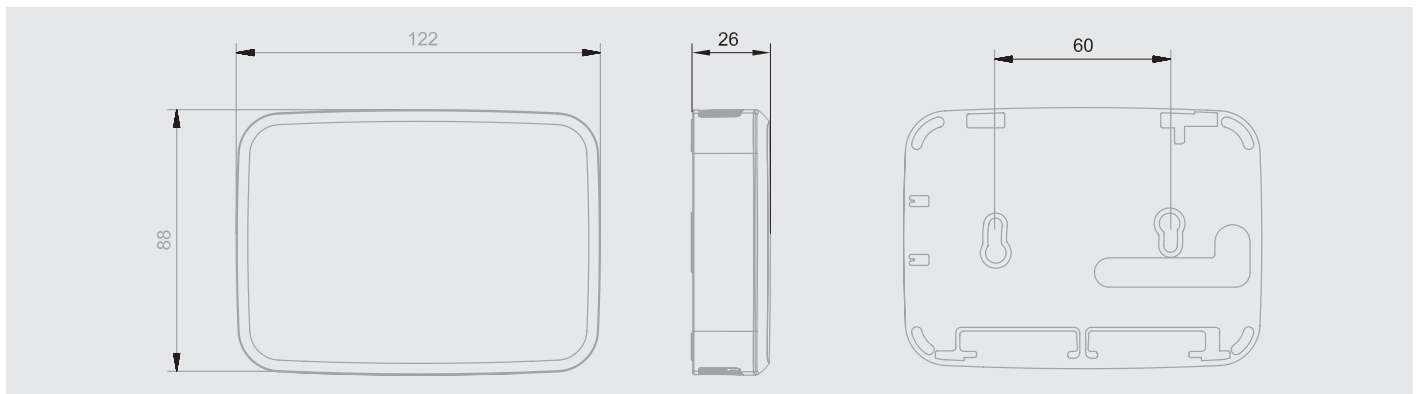
The new AirSens range offers a minimalist design patented by S&P so it can easily integrate into different ambients.

Recomendations of use

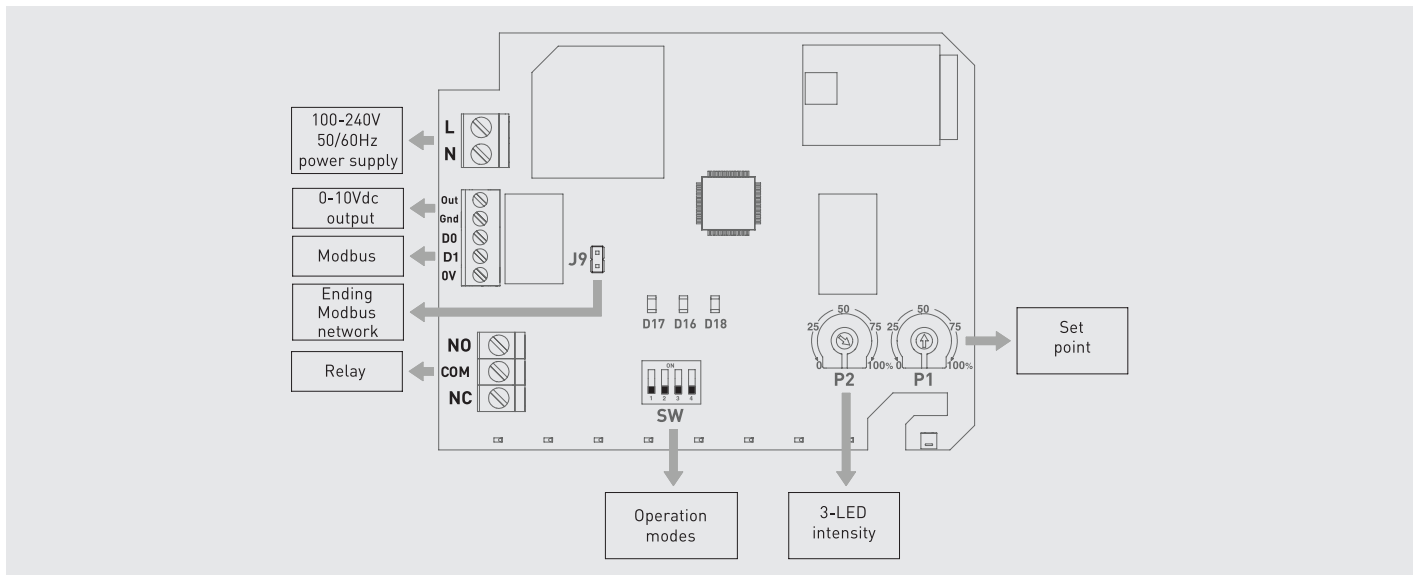
Use	COMMERCIAL / SERVICES SECTOR							RESIDENTIAL			
	Office	Meeting room	Private office	Restaurant	Shop	Gym	Classrooms	Kitchen	Living room	Bedroom	Bathroom
AIRSENS-CO2	●	●	●	●	●	●	●		●	●	
AIRSENS-VOC	●	●	●	●	●			●	●	●	●
AIRSENS-RH						●		●			●

- Good
- Excellent

Dimensions (mm)



Electronic board







Model SC02-A

### SC02 / SHT / SHT

Ambient sensors that, combining with a control, allow optimizing the energy of the ventilation system.

Model	Lecture			Analog output	Adjustable relay output	Display
	CO <sub>2</sub>	Temperature	HR			
SC02-AR	•				•	
SC02-A	•	•		•		
SC02-AD	•	•		•		•
SC02-A 0/10V	•	•		•		
SHT-A		•	•	•		
SCHT-AD	•	•	•	•		•



Models SC02-AD and SHT-AD

Model	Electrical supply	Power (W)	Voltage	Height installation	IP protection	CO <sub>2</sub> Range	Temperature range	HR Range	Dimensions LxWxH (mm)
SC02-AR	24VDC-24VAC	5	Relé (0,5A)	1,5-3,5 m	IP20	0-2000 pm	-	-	85x26x100
SC02-A							-		
SC02-AD							-		
SC02-A 0/10V							-		
SHT-A			-			0-100%			
SCHT-AD			0-10V			0-2000 pm			



### SHT-G / SC02-G / SC02-G 0/10V

Sensors for the duct that, combining with a control, allow optimizing the energy of the ventilation system.

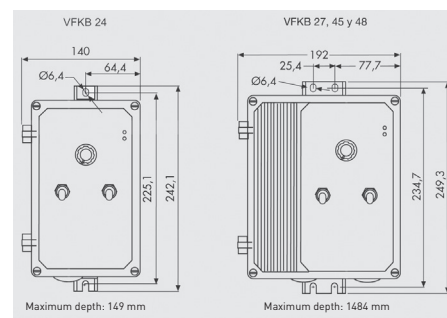
Model	Lecture			Analog output
	CO <sub>2</sub>	Temperature	HR	
SC02-G	•			•
SC02-G 0/10V	•			•
SHT-G		•	•	•

Model	Electrical Supply	Power (W)	Voltage	IP Protection	CO <sub>2</sub> Range	HR Range	Dimensions LxWxH (mm)
SC02-G	24VDC-24VAC	5	4-20mA	Caja IP65. Sonda IP20	0-2000 pm	-	80x200x101
SC02-G 0/10V			0-10V			-	
SHT-G			0-100%				



### VFKB IP65

For three phase motors from 0.37 to 4 kW.  
Die cast aluminium IP65 case.  
Simple to operate (does not require programming).  
Voltage supplies: single phase 230V-50/60Hz (VFKB 24 and 27) three phase 400V-50/60Hz (VFKB 45 and 48).  
Motor kW selection jumper.  
Power on and drive status leds.  
Speed selection with potentiometer.  
ON/OFF switch.  
Run/Fault relay output contacts.  
Motor overload and shortcut protections.  
RFI/EMI level A filter.



**The selection of the adjustable frequency drive has to be made with the maximum current absorbed of the fan or extractor.**

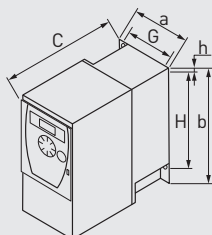
Model	Power motor (kW)	Maximum current (A)	Weight (kg)
Single phase supply 230V-50/60Hz, three phase output 230V			
VFKB 24	0,37	2,2	2,7
	0,55	3,6	
VFKB 27	0,75	4,7	4,7
	1,1	6,1	
	1,5	6,7	
Three phase supply 400V-50/60Hz, three phase output 400V			
VFKB 45	0,37	1,8	4,7
	0,55	2,1	
	0,75	2,8	
	1,1	3,4	
VFKB 48	1,5	4,6	4,7
	2,2	5,6	
	3	7,8	
	4	8,3	



### VFTM320

Frequency converters for three-phase motors from 0.18 to 15kW. IP20 protection rating.  
VFTM320 MONO Models: 230V-50/60Hz single-phase supply voltage and 230V three-phase output.  
VFTM320 TRI Models: 400V-50/60Hz three-phase supply voltage and 400V three-phase output. External screen for viewing parameters.

Front wheel for manual speed regulation (frequency).  
Special plug & play configuration for constant pressure work modes or manual regulation with front wheel.  
Overload and short circuit protection.  
Integrated class 2 EMC filter.  
Modbus and CANopen communication protocols integrated as standard.

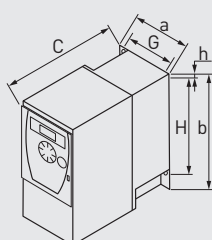


**The selection of the adjustable frequency drive has to be made with the maximum current absorbed of the fan or extractor.**

Dims.	a	b	c	G	H	h
T1	72	143	109	60	131	6
T2	72	143	128	60	121,5	6
T3	72	143	138	60	121,5	6
T4	105	142	158	93	118	5
T5	140	184	158	126	157	6,5
T6	150	308	232	130	210	5
T7	180	404	232	160	295	7



Configuration of three-phase supply models from 5.5 to 15kW.

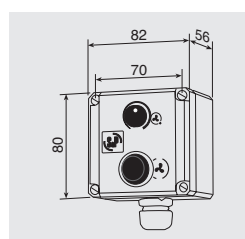


Dims.	a	b	c	G	H	h
T1	72	143	109	60	131	6
T2	72	143	128	60	121,5	6
T3	72	143	138	60	121,5	6
T4	105	142	158	93	118	5
T5	140	184	158	126	157	6,5
T6	150	308	232	130	210	5
T7	180	404	232	160	295	7

Modelo	Power motor (kW)	Maximum current (A)	Power dissipated (W)	Size reference	Weight (kg)
Single phase supply 230V-50/60Hz, three phase output 230V					
VFTM320 MONO 0,18	0,18	1,5	22	T1	0,8
VFTM320 MONO 0,37	0,37	3,3	32	T2	1
VFTM320 MONO 0,55	0,55	3,7	42	T3	1,1
VFTM320 MONO 0,75	0,75	4,8	48	T3	1,1
VFTM320 MONO 1,10	1,10	6,9	66	T4	1,6
VFTM320 MONO 1,5	1,5	8	82	T4	1,6
VFTM320 MONO 2,2	2,2	11	110	T4	1,6

Three phase supply 380/500V-50/60Hz + land, three phase output 400 V					
VFTM320 TRI 0,37	0,37	1,5	28	T4	1,2
VFTM320 TRI 0,55	0,55	1,9	33	T4	1,2
VFTM320 TRI 0,75	0,75	2,3	38	T4	1,2
VFTM320 TRI 1,10	1,10	3	47	T4	1,3
VFTM320 TRI 1,5	1,5	4,1	61	T4	1,3
VFTM320 TRI 2,2	2,2	5,5	76	T5	2,1
VFTM320 TRI 3	3	7,1	94	T5	2,1
VFTM320 TRI 4	4	9,5	112	T5	2,2
VFTM320 TRI 5,5	5,5	14,3	233	T6	4,4
VFTM320 TRI 7,5	7,5	17	263	T6	4,4
VFTM320 TRI 11	11	27,7	403	T7	6,8
VFTM320 TRI 15	15	33	480	T7	6,9

### REB-CVF



Remote control ON/OFF + potentiometer



Configuration of models  
VFTM650 TRI 11 and 15 IP55

### VFTM320 IP66 / VFTM650 IP55

Frequency converters for three-phase motors from 0.18 to 15kW. IP66 protection rating (IP55 models VFTM650 TRI 11 and 15 IP55)

#### VFTM320 MONO IP66

**Models:** 230V-50/60Hz single-phase supply voltage and 230V three-phase output.

#### VFTM320 TRI IP66 and VFTM650 TRI IP55

**Models:** 400V-50/60Hz three-phase supply voltage and 400V three-phase output. External screen for viewing parameters.

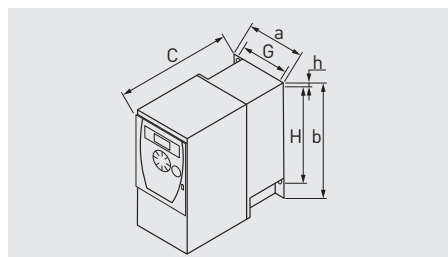
Internal front wheel for manual speed regulation (frequency).

Special plug & play configuration for constant pressure work modes or manual regulation with internal front wheel (except VFTM650 models, without factory plug & play configuration).

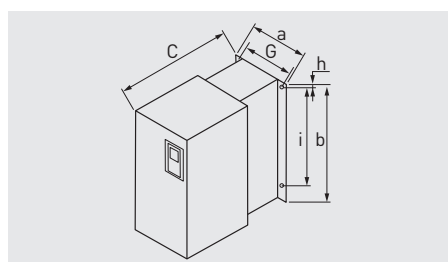
Overload and short circuit protection.

Integrated class 2 EMC filter.

Modbus and CANopen communication protocols integrated as standard (except VFTM650 IP55 models, Modbus and Ethernet protocol).



Dims.	a	b	c	G	H	h
T1	250	340	182	231	323	6,6
T2	250	340	235	231	323	6,6
T3	250	340	200	231	323	6,6
T4	320	521	295	300	496	8



a	b	c	G	i	H
264	678	299	205	661	8

**The selection of the adjustable frequency drive has to be made with the maximum current absorbed of the fan or extractor.**

Model	Power motor (kW)	Maximum current (A)	Power dissipated (W)	Size reference	Weight (kg)
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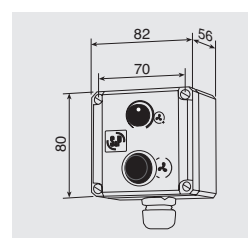
Single phase supply 230V-50/60Hz, three phase output 230V

VFTM320 MONO 0,18 IP66	0,18	1,5	22	T1	5
VFTM320 MONO 0,37 IP66	0,37	3,3	32	T1	5,1
VFTM320 MONO 0,55 IP66	0,55	3,7	42	T1	5,1
VFTM320 MONO 0,75 IP66	0,75	4,8	48	T1	5,1
VFTM320 MONO 1,10 IP66	1,10	6,9	66	T2	7,4
VFTM320 MONO 1,5 IP66	1,5	8	82	T2	7,4
VFTM320 MONO 2,2 IP66	2,2	11	110	T2	7,4

Three phase supply 380/500V-50/60Hz + land, three phase output 400 V

VFTM320 TRI 0,37 IP66	0,37	1,5	28	T3	5,9
VFTM320 TRI 0,55 IP66	0,55	1,9	33	T3	5,9
VFTM320 TRI 0,75 IP66	0,75	2,3	38	T3	5,9
VFTM320 TRI 1,10 IP66	1,10	3	47	T3	6
VFTM320 TRI 1,5 IP66	1,5	4,1	61	T3	6
VFTM320 TRI 2,2 IP66	2,2	5,5	76	T2	7,7
VFTM320 TRI 3 IP66	3	7,1	94	T2	7,7
VFTM320 TRI 4 IP66	4	9,5	112	T2	7,8
VFTM320 TRI 5,5 IP66	5,5	14,3	233	T4	22
VFTM320 TRI 7,5 IP66	7,5	17	263	T4	22
VFTM650 TRI 11 IP55	11	23,5	371	See table	13,7
VFTM650 TRI 15 IP55	15	31,7	532		19,6

### REB-CVF



Remote control  
ON/OFF + potentiometer



## CONTROL ECOWATT

Control element for demand controlled ventilation systems in public, commercial residential building it automatically modifies the fan speed to adapt it to the needs defined in the system, measured with sensors.

It has three basic modes of operation:

1. Integral proportional control at constant pressure.
2. Proportional control with maximum demand criteria with multiple sensor input: temperature, CO<sub>2</sub> and relative humidity.
3. Minimum-maximum control with three-sensor input: CO<sub>2</sub>, temperature, relative humidity or presence detectors (PIR).

DC signal output of 1 to 10 V or signal output for AC voltage variation for single phase motors at 230 V.

ECOWATT AC CONTROL: for single phase ventilation units.

ECOWATT DC CONTROL: for DC ventilation units.

Power supply:

- AC model: 1-230 V.
- DC model: 1-230 V or 24 VDC.

Model	Electrical supply	Maximum current (A)	Voltage	IP Protection	Operating temperature range	Dimensions LxWxH (mm)
CONTROL ECOWATT AC/DC	90-260 VAC	4	0-10V	IP55	-10°C to +50°C	165x220x100
CONTROL ECOWATT AC/4A	230 VAC		80-230V			



## CONTROL ECOWATT BASIC

Control element for ECOWATT fans with DC brushless motor. It allows control via signal from an analogue output 0-10V depending of the status of three digital inputs free of power. Before each change of digital signal, it can be attributed a voltage output value between 0 and 10V.

**Mode of operation:**

1. Remote ON/OFF with two speed switch.
2. Up to three switch speeds taking as output the most unfavorable value.

Model	Electrical supply	Maximum current (A)	Voltage	IP Protection	Operating temperature range	Dimensions LxWxH (mm)
CONTROL ECOWATT BASIC	230 VAC	6	0-10V	IP54	-10°C to +50°C	160x145x80

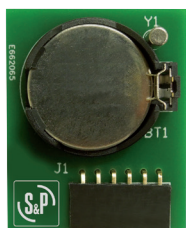


### PROSYS ECOWATT

Programming console specific for ECOWATT PLUS series. Allows user selection and adjustment of any operating mode: constant pressure (COP), constant airflow value (CAV), variable air value (VAV) and minimum-maximum.

It includes an RJ45 cable of 1 meter length for connection to the fan.

Model	Dimensions LxWxH (mm)
PROSYS ECOWATT	102x70x35



### TIMER RTC ECOWATT

Electronic unit specific for ECOWATT PLUS series. Allows user configuration of schedules with up to three daily slots, in addition to the holiday period.

The programming console PROSYS ECOWATT is also necessary.

Model	Dimensions LxWxH (mm)
TIMER RTC ECOWATT	3x70x35



### VAPZ

Electronic single-phase regulator that controls the fan speed with a simple contact (presence detector) or an analogical input, 0-10 V or 4-20 mA (CO<sub>2</sub> probe for relative humidity % RH).

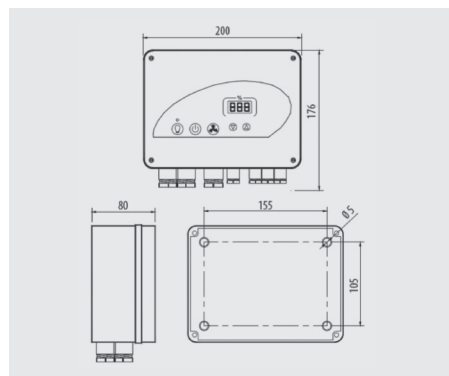
Power supply: 1~230 V.

Model	Electrical supply	Maximum current (A)	Voltage	IP Protection	Operating temperature range	Dimensions LxWxH (mm)
VAPZ-3	230V-50Hz	3	80 to 230V	IP54	-10°C to +50°C	205x115x92
VAPZ-5		5				
VAPZ-11		11				



### VRPU

Electronic control with display for single phase 230V-50/60Hz fans.  
 Analogical input 0-10V or 4-20mA: The fan works proportionally to the input value with adjustments of the minimum and maximum values of the inputs and outputs.  
 "ON/OFF": when the potential free contact (f.e. timer ) close, the fan putting into operation according to the voltage of the analogical input. This connection associated to a PIR detector allows to have a ventilation system type minimum-maximum.  
 Input « maximum speed »: given an external signal, the fan works at a maximum adjusted speed.  
 Outputs: Magneto-termic dry contact.  
 Illumination 230V 50Hz (max. 8A).  
 Electrical supply master/slave 24Vdc (max. 100mA).



Model	Electrical supply	Maximum current (A)	Voltage	IP Protection	Operating temperature range	Dimensions LxWxH (mm)
VRPU-5	230V-50/60Hz	5	110V-230V	IP55	-10°C to +50°C	200x176x80
VRPU-11		11				



### PACK PR

Single phase motors.  
 Allows speed control of single phase fan by voltage variation.  
 Especially suited for constant pressure systems.  
 Includes a power cable and pressure tube.  
 Integrated pressure transducer (12VDC).  
 Supplied with cable glands.  
 Function integrated boost fan, adjustable from 10-60 min.  
 Display with three digits.  
 Entries for remote control "ON/OFF" + "select maximum speed".  
 Configurable input for analog sensor current / voltage / NTC thermistor sensor / Pt1000.

Models	Max. nominal current (A)	Pressure range (Pa)	Dimensions LxWxH (mm)
PACK PR 5A	5	0-300	176x200x80
PACK PR 11A	11	0-800	176x200x80

PACK PR	
Power supply	Single phase 230V 50/60Hz
Voltage range	110 - 230V
ON / OFF input	Volt free contacts
Maximum speed input	
Remote setpoint input (control mode)	Signal 4-20mA or voltage 0-10Vdc
Measurement input (servo control or control mode)	Signal 4-20mA or voltage 0-10Vdc, or NTC thermistor sensor, or Pt1000 sensor
Outputs	Sensor supply: 24Vdc SELV (100mA max) Master-slave: 0-10Vdc (10mA max)
Electrical insulation	Class 1
IP Protection	IP55
Connections available	1 to 2.5 mm <sup>2</sup> Glands provided: 5xPg7 + 3xPg11
Conditions of use	-10 to +50 ° C, max 95% RH





**BEAS**

Control module that can adapt the all/nothing proportional input signal of a detector or a probe to control a motorised flap, or a two-speed single phase or DC\_fan, in minimum/maximum option.  
 Power supply: 24 VAC / 24 VDC.

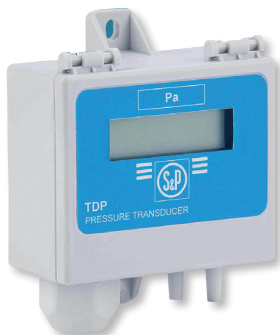
Model	Electrical supply	Power (W)	IP Protection	Operating temperature range	Dimensions LxWxH (mm)
BEAS	24VAC	1,5	IP55	-10°C to +50°C max 95% HR	175x130x80



**REB-ECOWATT**

Remote speed control.  
 Enables the speed control of the fan continuously, manually and remote.  
 Power supply: 1-230 V.

Model	IP Protection	Class	Operating temperature range	Dimensions LxWxH (mm)
REB-ECOWATT	IP44	II	-10°C to +50°C	80x68x80



**TDP-S / TDP-D / TDP-PI**

**TDP-S**  
 Pressure sensor.

**TDP-D**  
 Pressure sensor, with display.

**TDP-PI**  
 Pressure sensor with display and integral proportional control by set point. Direct control output signal for ECOWATT fans or VFTM frequency inverters.

Pressure sensors. These sensors are used to control the pressure of DCV systems with constant pressure (COP). They allow the reading of the difference of pressures between two points and transform it into an analog signal suitable for the different control devices.

Model	Electrical supply	Maximum power (VA)	Ø Connector (mm)	Voltage	IP Protection	Pressure range	Dimensions LxWxH (mm)
TDP-S	24VAC-24VDC	4	6,2	0-10 V / 4-20 mA	IP54	0-2500 Pa	91x75x36
TDP-D							
TDP-PI							



### CPTA-S / CPTA-E



CPTA-S



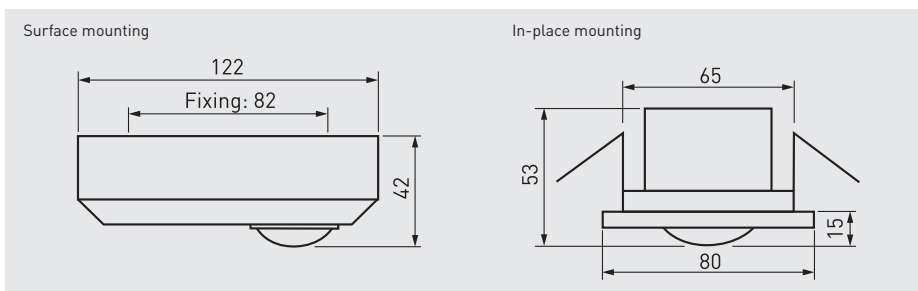
CPTA-E

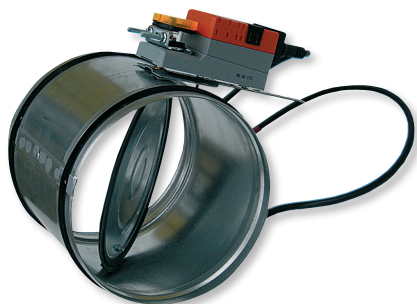
Presence detector for ceiling mount, sensitive to infrared radiation emitted by bodies in movement, with a 360° detecting angle. They incorporate an output to activate a fan (potential - free) Power supply: 1-230 V.

**CPTA-S:** Surface model.

**CPTA-E:** Flush mount model.

Model	Electrical supply	Power (W)	Lighting output	Lighting tuning	Ventilation output	Ventilation tuning	Installation Height	IP Protection	Operating temperature range
CPTA-S	230V-50/60Hz	(0.5)	Relay 230V normally open, power cut 10A	Luminosity 10 anti-light 2000 Lux Timing 5s - 20 min	Free contact voltage normally opened. Up to 250V AC or 30V DC. 5A (resistive load) and 1A (inductive load). Independent to output lighting.	Timing 10s - 60min	2,5 -3,5m	IP44	0°C to +45°C max 95% HR without condensation
CPTA-E	230V-50/60Hz	(0.5)						IP44 (Terminal box, IP20)	





## REMP

Motorised dampers open proportionately and is controlled by the BEAS control module.

Power supply: 24 VAC or 24 VD, depending on the models.

Model	Diameter (mm)	Length (mm)	Axle diameter (mm)	Motor height (mm)
REMP-160	160	200	8	80
REMP-200	200	200	8	80
REMP-250	250	200	8	80
REMP-315	315	300	12	80
REMP-355	355	300	12	80
REMP-400	400	400	12	80
REMP-450	450	400	12	80

Model	Electrical supply	Power (W)	Entry	Time of answer	IP Protection	Operating temperature range
REMP	24V-50/60Hz 24VDC	1 (ON) 0,4 (OFF)	0-10V proportional	max. 150s on having opened or to closed	IP54	-10°C to +50°C maximum 95% HR without condensation



## RMVT

Motorised dampers for the twin-flow system. Minimum / maximum opening. Controlled by a presence detector acting on the motor of the damper.

Power supply: 1-230 V.

Model	Ø (mm)	Air volume
RMVT-125 12/100	125	12/100
RMVT-125 12/120	125	12/120
RMVT-125 30/90	125	30/90
RMVT-125 60/120	125	60/120
RMVT-125 60/135	125	60/135
RMVT-125 90/150	125	90/150
RMVT-160 15/150	160	15/150

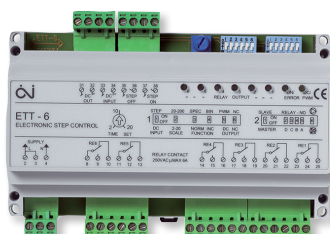
Model	Ø (mm)	Air volume
RMVT-160 24/240	160	24/240
RMVT-160 30/300	160	30/300
RMVT-200 40/210	200	40/210
RMVT-200 40/350	200	40/350
RMVT-200 40/400	200	40/400
RMVT-200 50/500	200	50/500

Model	Electrical supply	Power (W)	Entry	Time of answer	IP Protection	Class	Operating temperature range
RMVT	230V-50Hz	6,6	Contact type outside presence detector	40s opening 80s closed	IP20	Class II	0°C to +60°C maximum 95% HR without conden- sation



### TRAFO 15-D

Transformer 230/24V AC.



### CONTROL ETT-6

Electronic step controller. Can control activation of up to six devices. Can be used to switch on and off heating systems (EC wall-mounted fan heaters or TERMOTECH radiant panels) or for ventilations systems with several units.

Model	Power source	Maximum consumption (VA)	Relés		Protection index	Operating temperature (°C)	Dimensions (mm)		
			Number	Max. intensity (A)			L	A	H
CONTROL ETT-6	230V±10% 50/60Hz	6	6	6	IP20	0°C a 40°C	156	110	72



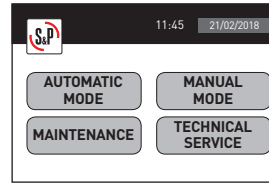
### CR-TEMP

Ambient temperature controller with an electronic sensor inside. Allows for manual or automatic control of ON/OFF switch with the following functions:

- Setpoint temperature
- Weekly programming that can switch on and off twice a day
- Detects open windows from quick drop in temperature
- Manual override. Includes an electronic sensor that reads room temperature

Model	Power source	Maximum consumption (W)	Relay ON/OFF Max. intensity (A)	Protection index	Operating temperature (°C)	Dimensions (mm)		
						L	A	H
CR-TEMP	100-250V 50/60Hz	0,5	5 (resistivos)	IP20	0°C a 40°C	100	95	25

## CAR PARK CONTROL PANEL



### Applications

Jet fan ventilation systems in enclosed car parks require control system to operate exhaust, supply and jet fans either for manual activation or depending on the inputs from pollution/smoke detection systems. S&P has developed a tailor-made, pre-programmed PLC control panel with user-friendly interface through touchscreen, allowing system's activation at high and low pollution ventilation and emergency smoke extract modes.

### Main features

**Adapted:** different regulations may apply depending on the country hence activation may be manual, automatic by detection or a combination of both.

**Efficient:** an intelligent control adjusted to the demand, capable to operate a system with defined zoning according to a specific ventilation strategy, to reduce the power consumption of the system and providing and improved performance.

**Plug & play:** simplified installation with identified terminals for each motor.

**Smart:** specific programming as per our CFD team recommendations. Includes maintenance guidance to be done and identification of eventual failures by alarm.

### Operation Modes

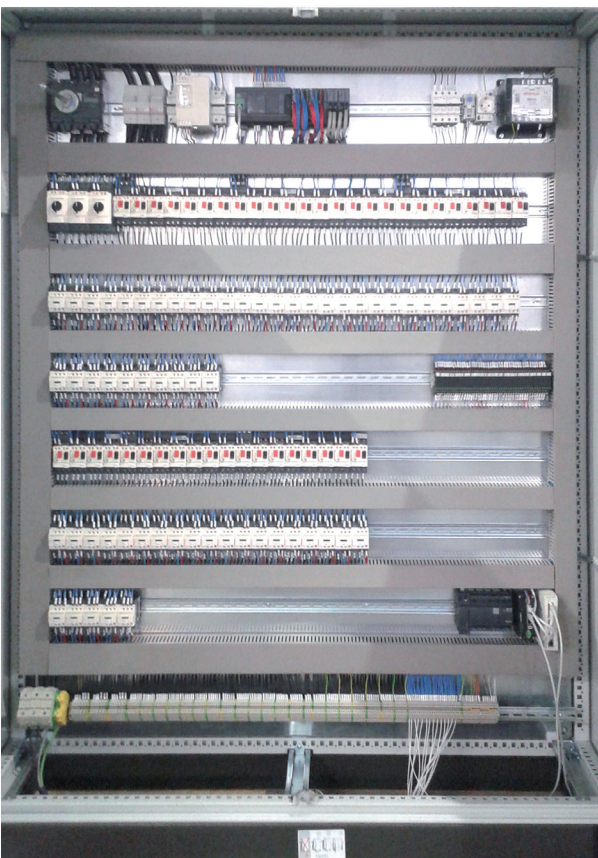
- Automatic: activation by detection.
- Manual: activation per ventilation zones.
- Maintenance: motor and detectors management, weekly schedule.
- Technical service: safety parameters.

### Description

- Tailored Control System for car park ventilation systems.
- Electrical protection and control by PLC for all the components of the ventilation system.
- Three-phase 400V 50/60Hz.
- Available for TN or TT connection.
- Metallic cabinet, IP55. Dimensions depend on the number of fan motors supplied.
- Master isolator switch.
- Compatible with single-speed and two-speed motors (Dahlander and independent windings).
- Touchscreen with user friendly interface.
- Communication with the detection system (CO/NO<sub>2</sub> and fire) for automatic operation.
- Fire-fighters emergency stop included.
- Guide with tagged and numbered terminals for each motor.
- Car park drawings with fan location and status.
- Additional 2100x400x400mm cabinet for powers over 110 kW.
- Electrical schemes and CE certification.
- Interface available in English, French or Spanish.
- Fan maintenance alarms.

### On request

- Motors equipped with Variable Speed Drive. Please note that DV/Dt filters might be required depending on the cable length necessary to connect VSD with fan motors.
- Remote access for technical assistance and software update.
- Mirroring of the touchscreen in tablets or smartphones.
- Connectivity with Building Monitoring Systems (BMS).
- Coordination with other equipment of the car park systems: motorized dampers, smoke curtains, etc.



### Specific applications



Car parks



## PILOT PARC



### Application

Master – Slave control panels for exhaust and supply fans in car park ventilation systems.

For three-phase 400V two-speed motor control (Dahlander or independent windings).

For single speed fans, select the units for independent windings and connect only the high speed.

Operation through pollution and fire detection systems inputs, as well as manual control.

Operates fans at low speed (LS) and high speed (HS) for pollution ventilation, and high speed (HS) for emergency smoke extract modes.

### General data

To be installed outside the fire-smoke area. IP55, RAL 7035 colour.

Sizes 1 – 3, reinforced polycarbonate enclosure.

Sizes 4 – 5, steel enclosure.

Isolator switch in front panel, padlockable in 3 positions.

Cableglands and mounting kits included.

Three phase supply 400V 50/60Hz + PE.

Thermal protections included, only considered for pollution ventilation mode, FLC to be specified while placing the order.

### Types

**Master units** for managing fan speed (OFF/LS/HS) based on pollution/smoke detection panels inputs.

Priorities for pollution (LS/HS), smoke extract (HS) and fire-fighters stop (OFF). Manual control from front panel switches or accessories (BCCA).

Built-in weekly schedule for daily ventilation.

24V output for external commands' supply.

Modbus TCP/IP communication included.

Communicating version for CMSI available.

- Safety remote control input by 24V or 48Vdc signal emitted by the CMSI.
- Std-by and safety information report for the CMSI.

Units for **one two-speed motor** of 9 / 18 / 25 / 32 / 50 / 65 / 80 / 95 amps. Higher amps on demand.

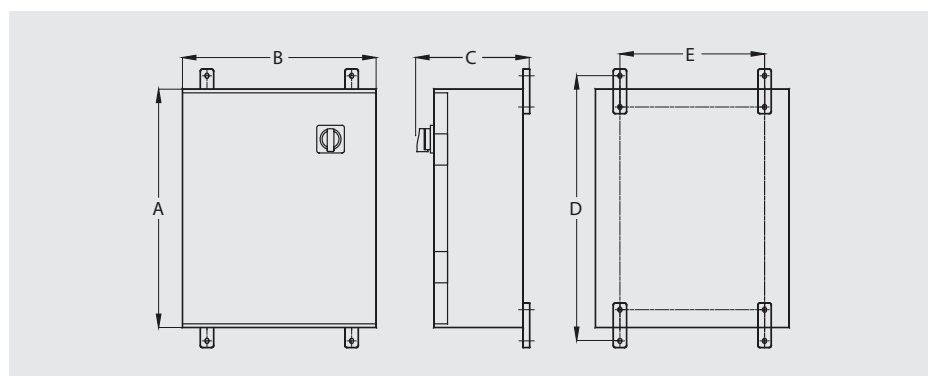
- 32A and above may control up to 3 Slave units, of any amp rate. These include magnet protection for short-circuit.

**9, 18 and 25A units, to be added by the installer.**

Units for **two two-speed motors** for 9 / 18 / 25 amps. May control up to 6 **Slave units**, of any amp rate. These include magnet protection for short-circuit for all amp rates. Slave units to be controlled by a Master unit. Units for one two-speed motor of 9 / 18 / 25 / 32 / 50 / 65 / 80 / 95 amps. Higher amps on demand.

- 32A and above may control up to 3 Slave units, of any amp rate. These include magnet protection for short-circuit.

**9, 18 and 25A units, to be added by the installer.**



Model	A	B	C	D	E
Size 1	362	254	200	371	239
Size 2	570	380	175	600	355
Size 3	600	300	235	550	216
Size 4	600	500	300	640	456
Size 5	700	500	300	740	456



BAPA firefighter stop, at the reference level near each vehicle access.



Centralized control BCCP unit for fire safety start / firefighter stop / pollution ventilation, at the reference level near each vehicle access.



BCCA 2V two-speed pollution ventilation control unit, inside the car park.



Fire alarm switch BDRA or BDBG (glass cover), at each level and at the reference level near each vehicle access.



BREA reset unit, inside the car park.

## LIST OF PILOT PARC MODELS

### Models with Dahlander connexion motor

Intensity (A)	Master with timer for 1 Dahlander connexion motor		Slave without timer for 1 Dahlander connexion motor	
	Model	Box type-size	Model	Box type-size
9	PILOT PARC MH1DA 9A	2	PILOT PARC E1DA 9A	1
18	PILOT PARC MH1DA 18A	2	PILOT PARC E1DA 18A	1
25	PILOT PARC MH1DA 25A	2	PILOT PARC E1DA 25A	1
32	PILOT PARC MH1DA 32A	3	PILOT PARC E1DA 32A	3
50	PILOT PARC MH1DA 50A	3	PILOT PARC E1DA 50A	3
65	PILOT PARC MH1DA 65A	3	PILOT PARC E1DA 65A	3
80	PILOT PARC MH1DA 80A	3	PILOT PARC E1DA 80A	3
95	PILOT PARC MH1DA 95A	5	PILOT PARC E1DA 95A	4

Intensity (A)	Master with timer for 2 Dahlander connexion motors	
	Model	Box type-size
9	PILOT PARC MH2DA 9A	2
18	PILOT PARC MH2DA 18A	2
25	PILOT PARC MH2DA 25A	2

### Models with independent windings motor

Intensity (A)	Master with timer for 1 motor of independent windings		Slave without timer for 1 motor of independent windings	
	Model	Box type-size	Model	Box type-size
9	PILOT PARC MH1BI 9A	2	PILOT PARC E1BI 9A	1
18	PILOT PARC MH1BI 18A	2	PILOT PARC E1BI 18A	1
25	PILOT PARC MH1BI 25A	2	PILOT PARC E1BI 25A	1
32	PILOT PARC MH1BI 32A	3	PILOT PARC E1BI 32A	3
50	PILOT PARC MH1BI 50A	3	PILOT PARC E1BI 50A	3
65	PILOT PARC MH1BI 65A	3	PILOT PARC E1BI 65A	3
80	PILOT PARC MH1BI 80A	3	PILOT PARC E1BI 80A	3
95	PILOT PARC MH1BI 95A	5	PILOT PARC E1BI 95A	4

Intensity (A)	Master with timer for 2 motors of independent windings	
	Model	Box type-size
9	PILOT PARC MH2BI 9A	2
18	PILOT PARC MH2BI 18A	2
25	PILOT PARC MH2BI 25A	2

### Models with CMSI connectivity, with Dahlander connection motor

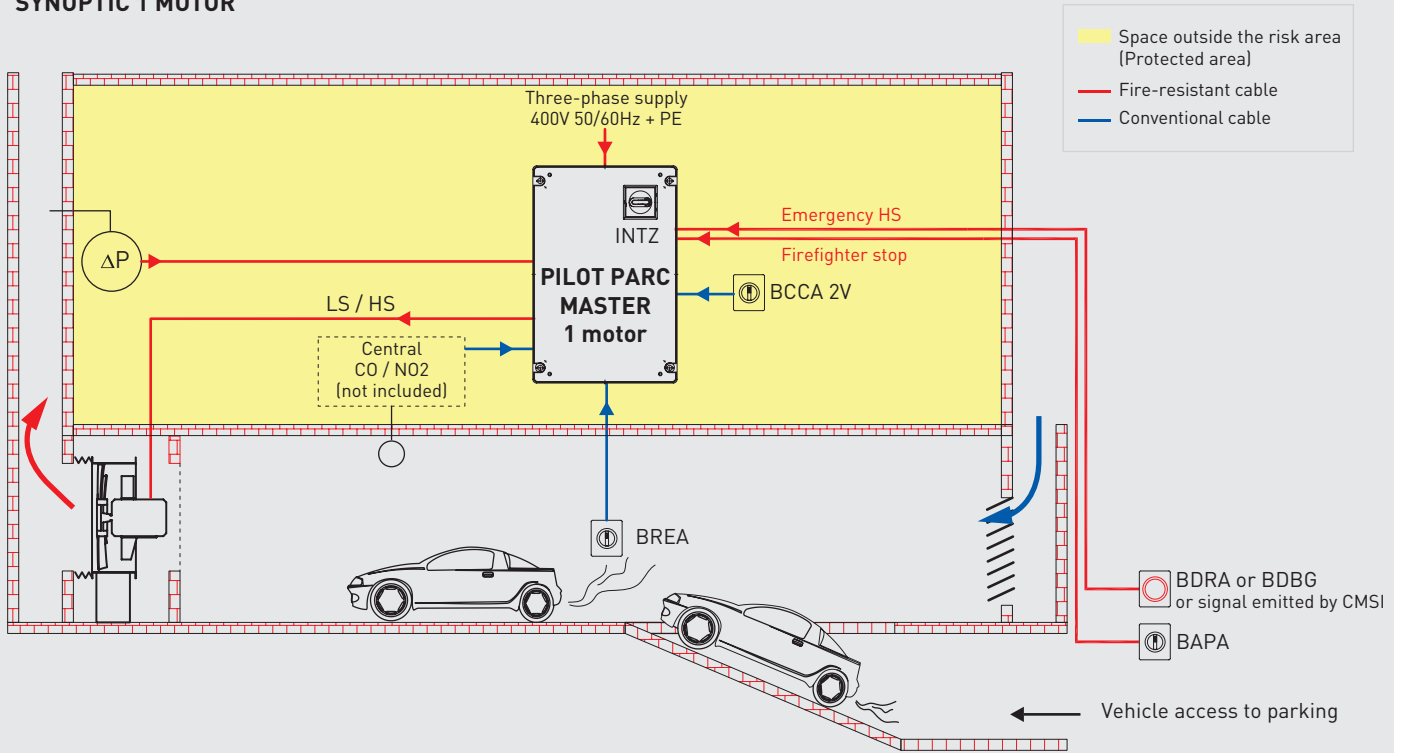
Intensity (A)	Master with timer for 1 Dahlander - CMSI connection motor		Master with timer for 2 Dahlander - CMSI connection motor	
	Model	Box type-size	Model	Box type-size
9	PILOT PARC MH1 DA 9A CMSI	1	PILOT PARC MH2 DA 9A CMSI	1
18	PILOT PARC MH1 DA 18A CMSI	1	PILOT PARC MH2 DA 18A CMSI	1
25	PILOT PARC MH1 DA 25A CMSI	1	PILOT PARC MH2 DA 25A CMSI	1
32	PILOT PARC MH1 DA 32A CMSI	3		
50	PILOT PARC MH1 DA 50A CMSI	3		
65	PILOT PARC MH1 DA 65A CMSI	3		
80	PILOT PARC MH1 DA 80A CMSI	3		
95	PILOT PARC MH1 DA 95A CMSI	4		

### Models with CMSI connectivity, with independent windings motor

Intensity (A)	Master with timer for 1 independent windings motor - CMSI		Master with timer for 1 independent windings motor - CMSI	
	Model	Box type-size	Model	Box type-size
9	PILOT PARC MH1BI 9A CMSI	2	PILOT PARC MH2BI 9A CMSI	2
18	PILOT PARC MH1BI 18A CMSI	2	PILOT PARC MH2BI 18A CMSI	2
25	PILOT PARC MH1BI 25A CMSI	2	PILOT PARC MH2BI 25A CMSI	2
32	PILOT PARC MH1BI 32A CMSI	3		
50	PILOT PARC MH1BI 50A CMSI	3		
65	PILOT PARC MH1BI 65A CMSI	3		
80	PILOT PARC MH1BI 80A CMSI	3		
95	PILOT PARC MH1BI 95A CMSI	5		

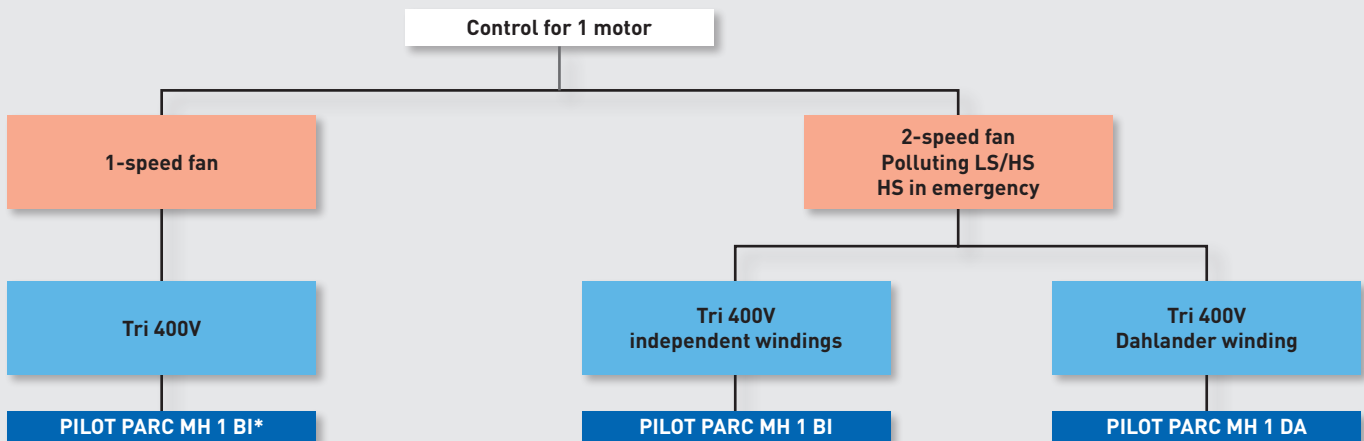
CONTROLS SCHEME MODEL

SYNOPTIC 1 MOTOR



Possibility of replacing units BREA + BDRA / BDBG + BAPA by the centralized unit BCCP.

1 MOTOR SELECTION

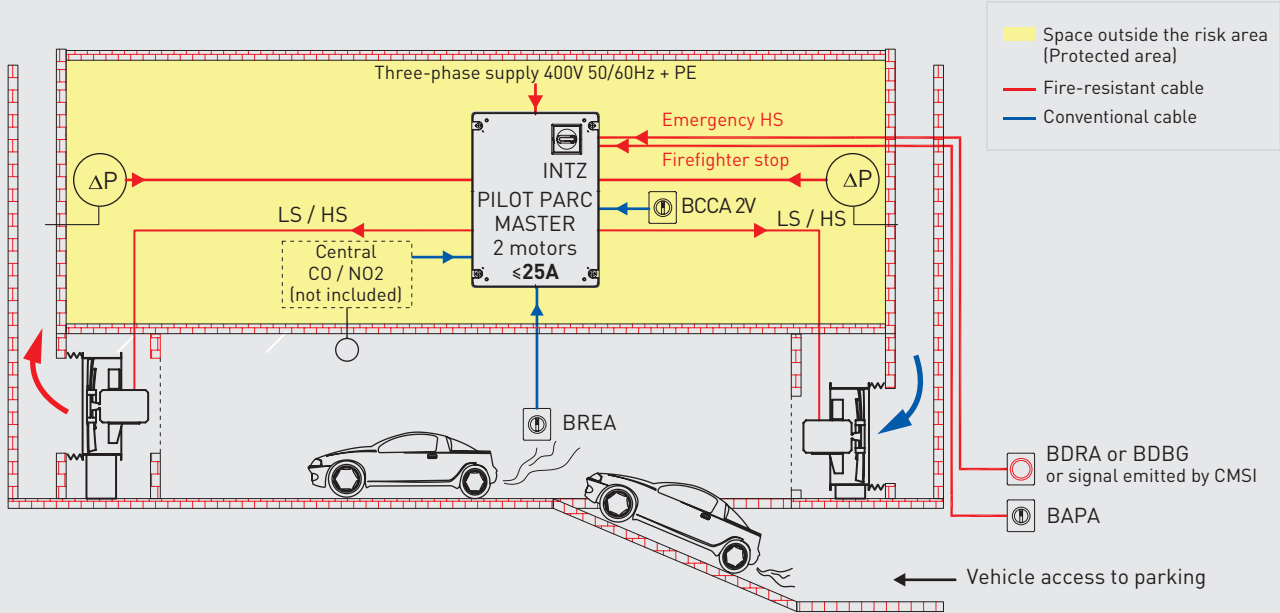


\* Use of PILOT PARC only in HS output.

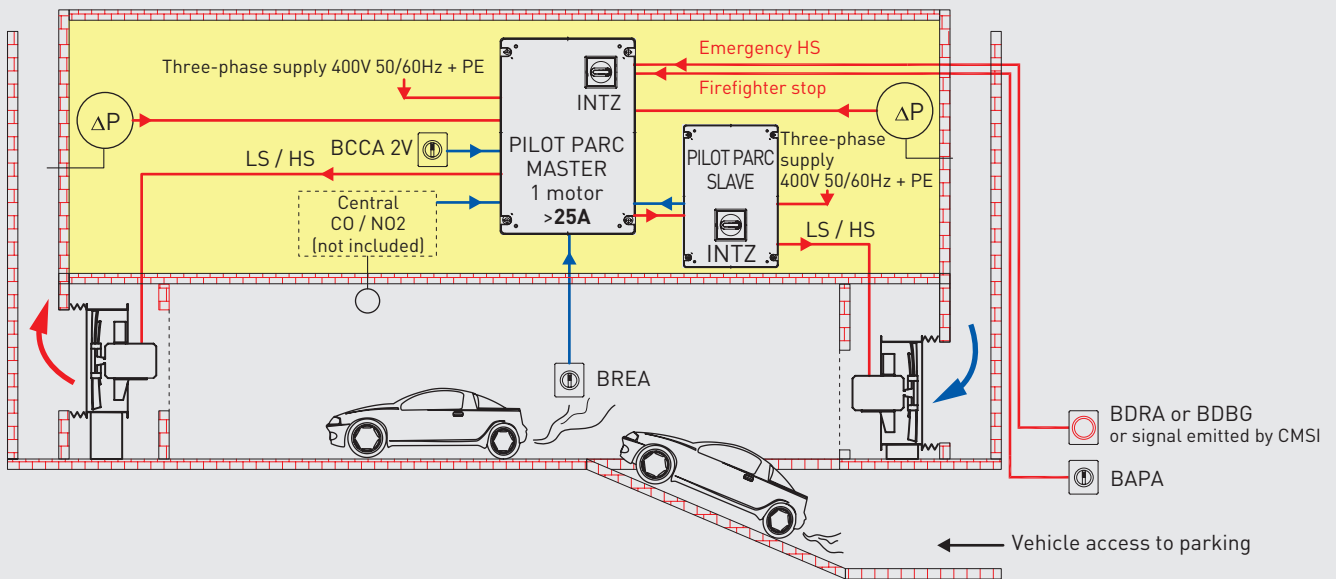
CONTROLS SCHEME MODEL

SYNOPTIC 2 MOTORS

1 PILOT PARC MASTER for 2 motors

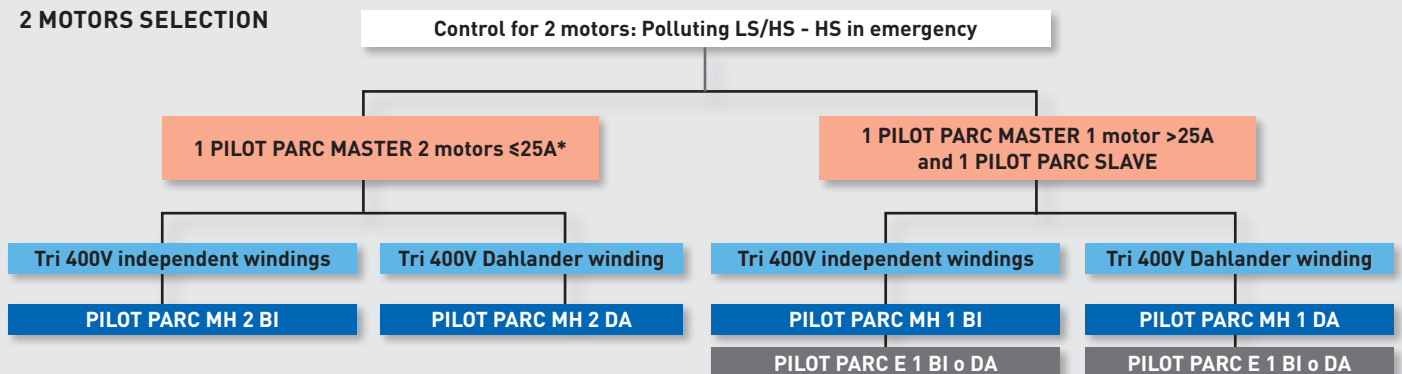


1 PILOT PARC MASTER for 1 motor + 1 PILOT PARC SLAVE for 1 motor



Possibility of replacing units BREA + BDR / BDBG + BAPA by the centralized unit BCCP.

2 MOTORS SELECTION



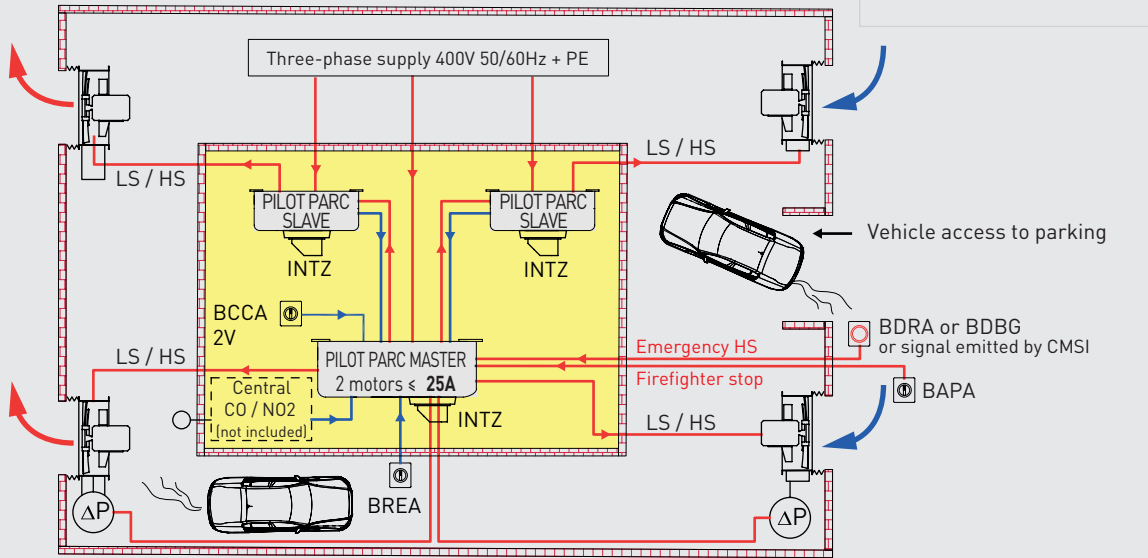
\* Selection of the caliber of the PILOT PARC MASTER for 2 motors based on the rated current HS of the higher amperage motor it controls.



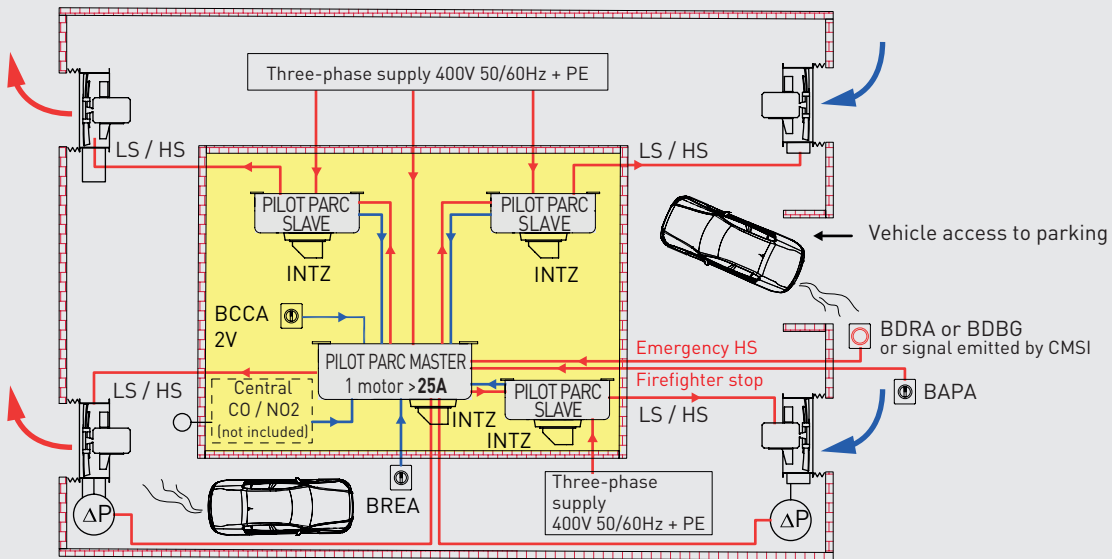
CONTROLS SCHEME MODEL

SYNOPTIC > 2 MOTORS

1 PILOT PARC MASTER for 2 motors + 2 PILOT PARC SLAVE for 1 motor each



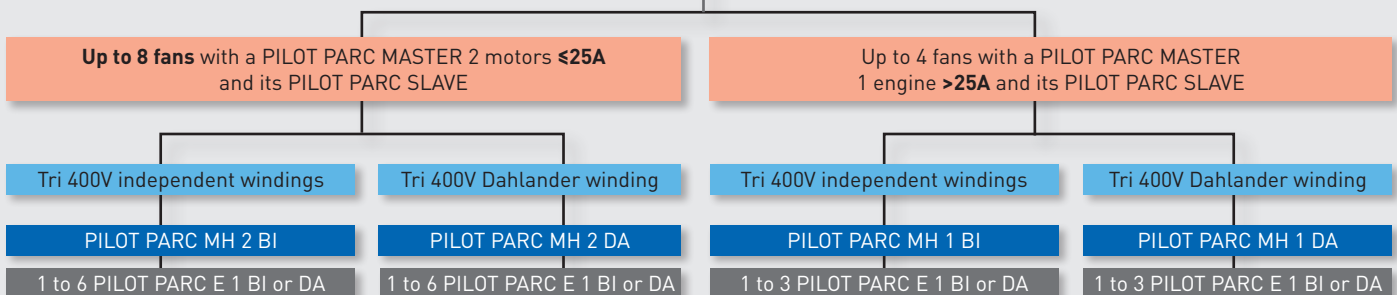
1 PILOT PARC MASTER for 1 motor + 3 PILOT PARC SLAVE for 1 motor each



Examples of installations with 4 motors.  
Possibility of replacing units BREA + BDRA / BDBG + BAPA units with the BCCP centralized unit.

SELECTION >2 MOTORS

Control > 2 motors: Polluting LS/HS - HS in emergency



The 2-motor PILOT PARC MASTER can control from 1 to 6 PILOT PARC SLAVE of any caliber.

The PILOT PARC MASTER 1 motor  $> 25A$  can control from 1 to 3 PILOT PARC SLAVE of any caliber.



### PARKING DETECTION PANEL

For simultaneous detection of both CO and NO<sub>2</sub> in a same loop. It allows for control of up to 16 detectors with the possibility of programming up to 2 groups, making it possible to carry out individual maneuvers in the case of different gases, or sectorized maneuvers in the case of the same gas being detected.

Expandable from one to four totally independent module lines.

Each detector is monitored individually, showing its status in real time on the display.

Programmed with Spanish or Portuguese standards, with the possibility of programming for Spanish, Portuguese and English languages.

PARKING DETECTION PANELS Model
PARKING DETECTION PANEL 1 ZONE
PARKING DETECTION PANEL 2 ZONE
PARKING DETECTION PANEL 3 ZONE
PARKING DETECTION PANEL 4 ZONE



### DETECTOR W/BASE

CO and NO<sub>2</sub> detectors, with electrochemical probe.

Low sensitivity to interfering gases.

DETECTOR W/BASE Models
CO DETECTOR W/BASE
NO2 DETECTOR W/BASE