Technibel

FAN COIL

FAN COIL

Consisting of a fan unit, a heat exchange element and a filter, fan coils are ideal machines for summer air conditioning and winter heating of any room. The new range of Technibel fancoils is the result of our experience in designing and manufacturing indoor hydronic units and innovative systems as well as adjustment concepts. Technibel fancoils can be used in a very large number of applications: from the classic service sector (office, shops, hotel) installation down to the customized residential solution. The wide range available includes:

- **CAWI**: brand new inverter cassette models, provided with a BLDC electric motor, drain pump and humidity sensor. Top choice for high performance and comfort.
- **CAW**: 4 speeds cassette models, standard high level solution in false ceiling applications. Drain pump included.
- **KPSW**: floor/ceiling models, featuring a great flexibility of installation.
- **TWN**: standard fancoil units, available with or without cabinet.
- **MPW**: high wall type, mostly use everywhere a simple and fast installation is needed.

All Technibel manufactured stand out for the quality and in the care taken in making and assembling all the components, assuring quiet operation and comfort.
A full list off accessories is available: wireless and wired controls, 3 way valves, charcoal filters, etc…

CAW

DCI

CAW, the cassette unit for dropped ceilings that we can often observe above our heads in public spaces, offices, shops and restaurants.
Unit's structure is made by galvanised steel, externally and internally insulated with heat and soundproof materials.
Now the range is available with dc inverter technology drain pump included.
Mandatory accessory: 3-way valve kit

	UNIT		GRID
2 PIPES	CAW3P2I5AA	+	K70N145TAA
	CAW4P2I5AA	+	K70N145TAA
	CAW5P2I5AA	+	K70N145TAA
	CAW6P2I5AA	+	K70N146TAA
	CAW8P2I5AA	+	K70N147TAA
	CAW10P2I5AA	+	K70N147TAA
4 PIPES	CAW3P4I5AA	+	K70N145TAA
	CAW4P4I5AA	+	K70N145TAA
	CAW5P4I5AA	+	K70N145TAA
	CAW6P4I5AA	+	K70N146TAA

3
4
5

Dimensions: HxLxD 296x575x575 mm
Weight: 3 |19 kg - 4/5 | 20.5 kg

6

Dimensions: HxLxD 338x860x860 mm
Weight: 22 kg

8
10

Dimensions: HxLxD 338x860x1150 mm
Weight: 30,5 kg

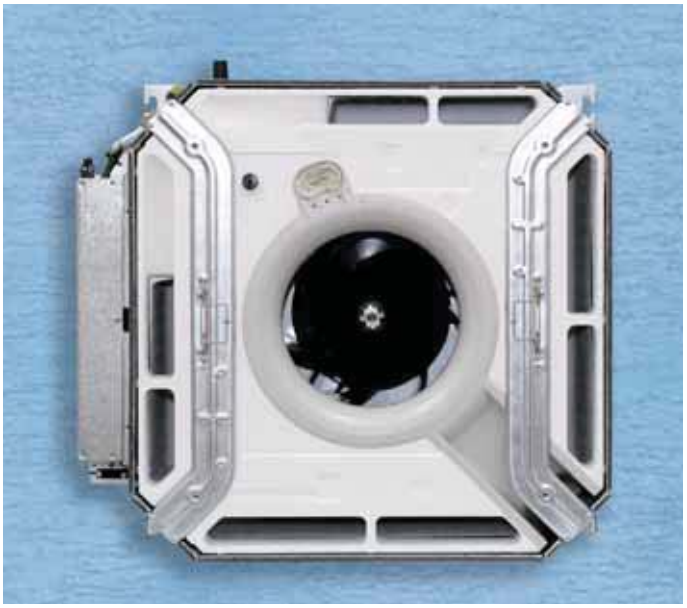
Accessories

Type		Code
3-way valve + by-pass	Cassette with pipes 1/2"	70600088
	Cassette with pipes 3/4"	70600089

to be fitted outside the appliance during installation work - 4 pipes models need 1 valve for each exchager

• *Easy installation and discharge* • *Perfect integration!*

• *Flocked anti-condensation flaps*



• *Body in anti-corrosion metal*

• *Simple and convenient maintenance*

Wireless or wired Universal Digital Remote Control

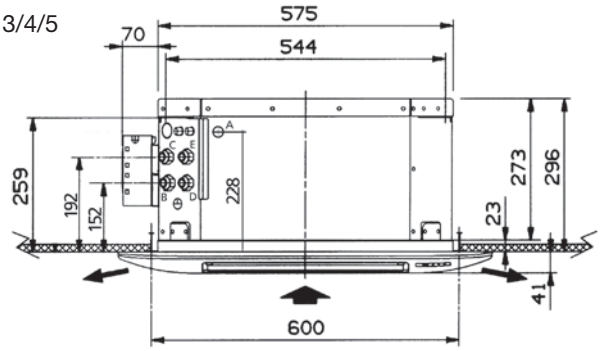
All operating parameters can be controlled from the remote control: operating modes (auto or cooling only, heat pump only, dehumidification only, fan only), 1h and 24h timer, setpoint temperature, room temperature reading, fan speed, flap oscillation for optimum air distribution in the room and economy or night functions. Many operations can be set automatically or managed when needed.

"EASY Mode" buttons
The new layout lets you simply and quickly choose the start up and the two operating modes, cooling and heating

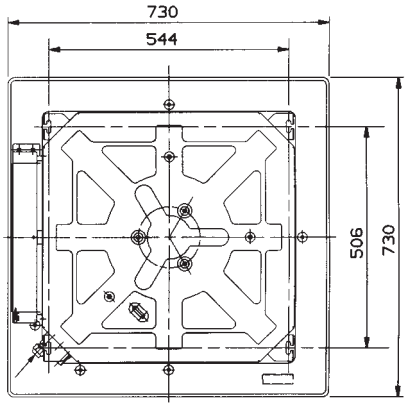
"WIRED Mode"
The remote control may also be used as a wired command by simply removing the protection lid and connecting the communication cable to the indoor unit.

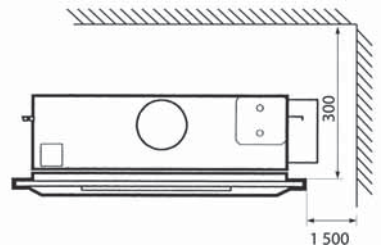
Adjustable set point from 10° to 32° C
both in cooling and heat pump modes

CAW 3/4/5



dimensions in mm





A Condensate connection: : Ø 10 mm
B Main coil water inlet: : 1/2" (female)
C Main coil water outlet: : 1/2" (female)
D Additional coil water inlet: : 1/2" (female)
E Additional coil water outlet: : 1/2" (female)

Weight when empty: 18 kg CAW 3
20 kg CAW 4/5
Grille: 3 kg

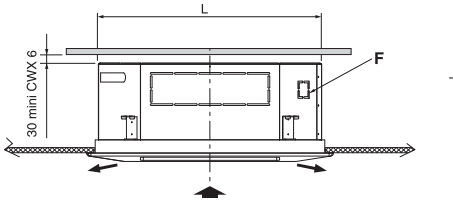
Maximum condensate pump head: 200 mm

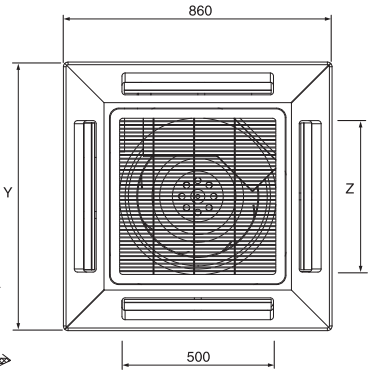
CAW 6/8/10

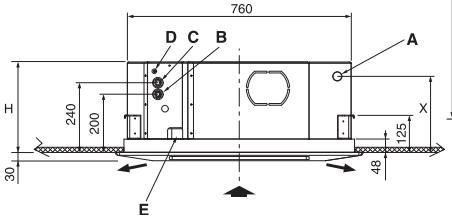
	L	H	X	Y	Z
CAW 6	760	310	260	860	500
CAW 8/10	1 050	340	290	1 150	750

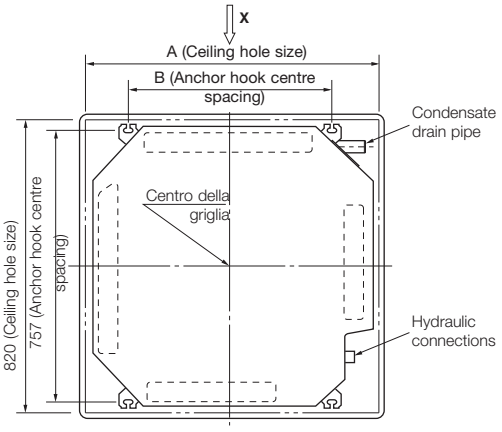
	CAW 6	CAW8/10
Unit	23 kg	29 kg
Panel/grille assembly	5 kg	7 kg

	A	B
CAW 6	820	566
CAW 8/10	1 110	853









A Condensate connection: Ø 32 mm outdoor
B Water inlet: 3/4" gas female
C Water outlet: 3/4" gas female
D Coil air vent
E Electrical wiring passage
F Fresh air inlet: 60 mm x 55 mm

Maximum condensate pump head: 250 mm

Ratings and technical data of CAW fan coil units with 1 heat exchanger for 2 pipes systems													
Model		**CAW3P2I**				**CAW4P2I**				**CAW5P2I**			
Speed		1	2	3	4	1	2	3	4	1	2	3	4
water temperature 7/12°C, air temperature dry bulb 27°C, wet bulb 19°C													
Total cooling capacity	kW	1,24	2,15	2,35	2,60	1,70	3,50	4,00	4,60	2,46	3,80	4,42	5,06
Sensible cooling capacity	kW	0,92	1,78	2,00	2,23	1,15	2,63	3,06	3,56	1,82	2,87	3,33	3,80
Water flow	l/h	213	368	404	445	291	600	687	789	422	653	758	869
Pressure drop	kPa	3	8	9	11	3	11	14	17	7	14	18	23
inlet water temperature 50°C, water flow rate same as in cooling mode, air inlet temperature 20°C													
Heating capacity	kW	1,55	2,83	3,11	3,49	1,87	4,35	4,85	5,70	3,35	5,33	6,14	6,75
Pressure drop	kPa	3	7	8	10	3	10	13	17	6	14	18	23
water temperature 60/50°C, air temperature 20°C													
Heating capacity	kW	2,02	3,72	4,09	4,61	2,42	5,70	6,32	7,46	4,46	7,11	8,17	8,91
Water flow	l/h	175	323	355	400	210	495	549	648	387	617	710	774
Pressure drop	kPa	2	6	7	8	2	7	9	12	5	12	16	18
Water content	dm^3	0,43				0,86				0,86			
Air flow	m^3/h	180	400	460	520	200	530	630	750	370	630	760	880
Power input	W	4,25	10	12,5	15	8	24	28,1	36,2	12,2	33,5	40	46,3
Sound power level (1)	dB(A)	30	41	44	46	32	48	51	55	41	53	57	61
Sound pressure level (2)	dB(A)	25	36	39	41	27	43	46	50	36	48	52	56
Water connections	inches	1/2				1/2				1/2			
Unit dimensions HxLxP	mm	273x575x575				273x575x575				273x575x575			
Grille dimensions HxLxP	mm	64x730x730				64x730x730				64x730x730			

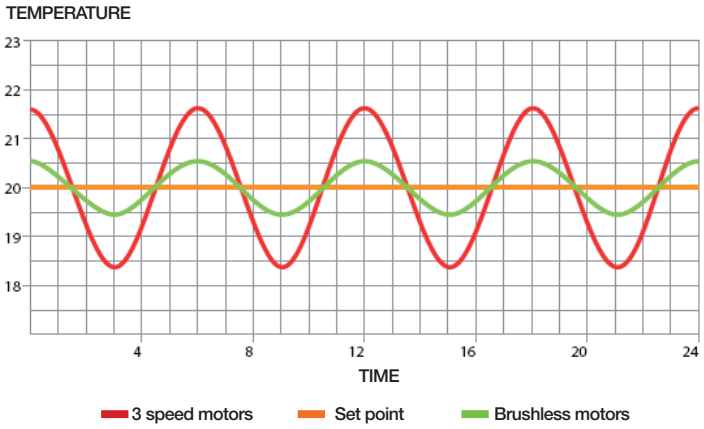
Ratings and technical data of CAW fan coil units with 1 heat exchanger for 2 pipes systems													
Model		**CAW6P2I**				**CAW8P2I**				**CAW10P2I**			
Speed		1	2	3	4	1	2	3	4	1	2	3	4
water temperature 7/12°C, air temperature dry bulb 27°C, wet bulb 19°C													
Total cooling capacity	kW	4,20	5,00	5,40	6,00	5,50	6,50	8,00	9,10	6,23	8,09	8,90	9,92
Sensible cooling capacity	kW	3,13	3,70	3,99	4,40	4,11	5,08	6,10	6,84	4,69	6,17	6,87	7,71
Water flow	l/h	720	859	930	1029	944	1116	1373	1561	1070	1389	1529	1702
Pressure drop	kPa	16	22	25	30	21	28	41	51	27	42	50	60
inlet water temperature 50°C, water flow rate same as in cooling mode, air inlet temperature 20°C													
Heating capacity	kW	5,40	6,40	7,10	7,70	6,28	8,52	9,42	10,19	7,34	9,53	10,59	11,69
Pressure drop	kPa	15	21	25	30	21	29	39	48	26	42	49	60
water temperature 60/50°C, air temperature 20°C													
Heating capacity	kW	7,08	8,39	9,33	10,08	8,14	11,24	12,26	13,18	9,52	12,34	13,73	15,11
Water flow	l/h	615	729	810	875	707	976	1065	1145	827	1072	1192	1312
Pressure drop	kPa	12	16	19	22	12	21	24	27	16	26	31	37
Water content	dm^3	1,00				1,50				1,50			
Air flow	m^3/h	850	1060	1160	1300	830	1190	1270	1400	1200	1700	1980	2300
Power input	W	13	20	25	41	15	22	41	55	22	36	43	64
Sound power level (1)	dB(A)	43	48	49	51	37	46	50	53	43	49	53	57
Sound pressure level (2)	dB(A)	38	43	44	46	32	41	45	48	38	44	48	52
Water connections	inches	3/4				3/4				3/4			
Unit dimensions HxLxP	mm	273x766x766				290x1066x766				290x1066x766			
Grille dimensions HxLxP	mm	64x860x860				64x1150x860				64x1150x860			

Ratings and technical data of CAW fan coil units with 2 heat exchanger for 4 pipes systems																	
Model		**CAW3P4I**				**CAW4P4I**				**CAW5P4I**				**CAW6P4I**			
Speed		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
water temperature 7/12°C, air temperature dry bulb 27°C, wet bulb 19°C																	
Total cooling capacity	kW	1,03	1,72	1,88	2,05	1,52	2,88	3,28	3,76	2,60	3,90	4,50	4,97	4,25	5,10	5,60	6,20
Sensible cooling capacity	kW	0,81	1,51	1,66	1,82	1,07	2,27	2,60	3,00	1,85	2,90	3,36	3,75	3,15	3,73	4,02	4,45
Water flow	l/h	177	295	323	351	295	494	563	645	445	678	781	863	735	890	970	1075
Pressure drop	kPa	3	8	9	11	8	11	13	17	15	25	32	37	13	19	22	28
water temperature 70/60°C, air temperature 20°C																	
Heating capacity	kW	1,10	1,78	1,95	2,20	1,48	2,87	3,14	3,76	2,55	3,86	4,43	4,92	4,80	5,58	6,20	6,80
Water flow	l/h	96	155	169	191	129	249	273	327	218	330	380	422	410	477	531	580
Pressure drop	kPa	11	25	29	36	7	22	26	36	12	25	35	41	28	37	42	50
Water content	dm^3	0,43				0,86				0,99				1,47			
Air flow	m^3/h	180	400	460	520	200	530	630	750	370	630	760	880	850	1060	1160	1300
Power input	W	5	12	14	17	8	24	28	36	12	34	40	46	13	20	25	41
Sound power level (1)	dB(A)	30	41	44	46	32	48	51	55	41	53	57	61	43	48	49	51
Sound pressure level (2)	dB(A)	25	36	39	41	27	43	46	50	36	48	52	56	38	43	44	46
Cooling heat exchanger water connections	inches	1/2				1/2				3/4				3/4			
Heating heat exchanger water connections	inches	1/2				1/2				1/2				3/4			
Unit dimensions HxLxP	mm	273x575x575				273x575x575				273x575x575				273x776x776			
Grille dimensions HxLxP	mm	64x730x730				64x730x730				64x730x730				64x860x860			

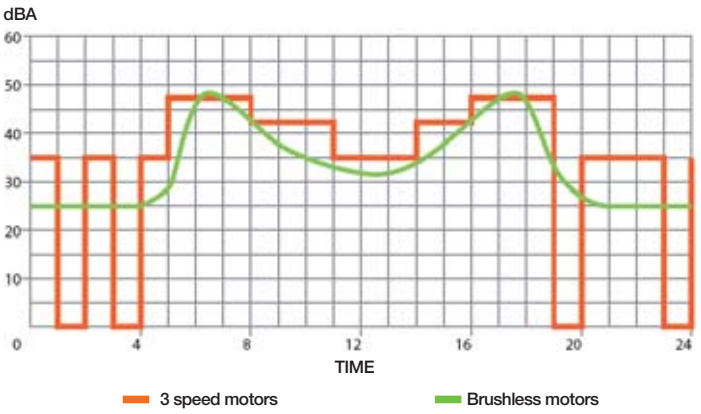
Notes:
1 = sound power conforming ISO 3741 and ISO 3742
2 = Sound pressure level measured at a distance of 1m with a directivity facor of 4

Plus & Benefits

DC brushless motors: with auto mode active, fan speed is managed by control system according to actual thermal load.
Temperature trend is more stable, specially when thermal loads are low. Comfort and energy saving are increased.



Low noise level compared to standard speed steps technology. The DC Inverter technology makes it possible to continuously adjust the air flow rate to the actual needs of the environment.



Humidity control and felt air temperature: thanks to the humidity sensor placed inside the unit, control system is able to manage the real body temperature. This value is calculated considering the latent heat exchanged, function of dry bulb temperature and relative humidity values of inside spaces.

Doubling speed function: it limits fan speed when temperature is close to setpoint value. In this way, noise level and power input are reduced when temperature approaches desired value.

SAC bus and Modbus: with these two features, network connections are now available. With SAC bus you can manage all the operations parameters from one single point; in a Modbus network an external supervisor can control all installed units.

Humidity sensor

CAW P2I are provided with a special humidity sensor. The humidity sensor signal is used by the logic, placing it in relation with the temperature measured by the room air and Humidex sensor, which measures the perception of the human body considering the combined effects of temperature and humidity. This function is available only in “auto heating mode” and “auto cooling mode” for 2 pipes units.

	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%
42°	48	50	52	55	57	59	62	64	66	68	71	73	75	77	80	82
41°	46	48	51	53	55	57	59	61	64	66	68	70	72	74	76	79
40°	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75
39°	43	45	47	49	51	53	55	57	59	61	63	65	66	68	70	72
38°	42	44	45	47	49	51	53	55	56	58	60	62	64	66	67	69
37°	40	42	44	45	47	49	51	52	54	56	58	59	61	63	65	66
36°	39	40	42	44	45	47	49	50	52	54	55	57	59	60	62	63
35°	37	39	40	42	44	45	47	48	50	51	53	54	56	58	59	61
34°	36	37	39	40	42	43	45	46	48	49	51	52	54	55	57	58
33°	34	36	37	39	40	41	43	44	46	47	48	50	51	53	54	55
32°	33	34	36	37	38	40	41	42	44	45	46	48	49	50	52	53
31°	32	33	34	35	37	38	39	40	42	43	44	45	47	48	49	50
30°	30	32	33	34	35	36	37	39	40	41	42	43	45	46	47	48
29°	29	30	31	32	33	35	36	37	38	39	40	41	42	43	45	46
28°	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
27°	27	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
26°	26	26	27	28	29	30	31	32	33	34	34	35	36	37	38	39
25°	25	25	26	27	27	28	29	30	31	32	33	34	34	35	36	37
24°	24	24	24	25	26	27	28	28	29	30	31	32	33	33	34	35
23°	23	23	23	24	25	25	26	27	28	28	29	30	31	32	32	33
22°	22	22	22	22	23	24	25	25	26	27	27	28	29	30	30	31

iFeel function

Wireless/Wired Universal Digital Remote Control

By pressing the iFeel button on the wireless controller, the iFeel function is activated: the room temperature is detected and checked by the temperature sensor placed in the remote controller. This function is designed to provide a personalized environment by transmitting the temperature control command from the location next to you. When using this option, the remote control should always be aimed, without obstruction, at the unit, therefore it should be placed in a position in which it is visible by the unit. It is possible to disable the remote controller room sensor pressing the iFeel button. In this case the iFeel icon on the remote controller display lights off and the sensor placed in the unit becomes active.

Fan speeds management

Wireless/Wired Universal Digital Remote Control

You can manually select one of these 3 fan speeds:

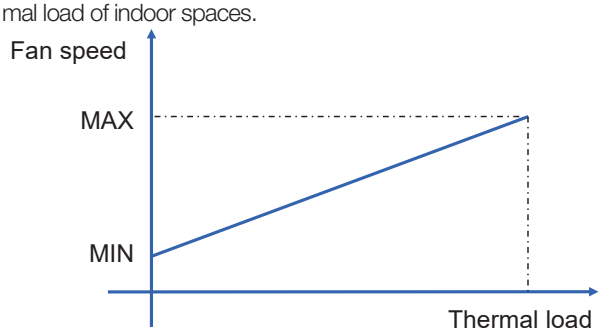
High Speed | Medium Speed | Low Speed

NOTE:

- If you set “Auto” fan mode, the control system will automatically choose one of these speeds
- If you select “Silent Mode” option, the unit will run at a “low low speed” in order to reduce noise level. Fan speed symbol, previously selected, on wireless controller will not change.

Auto mode function

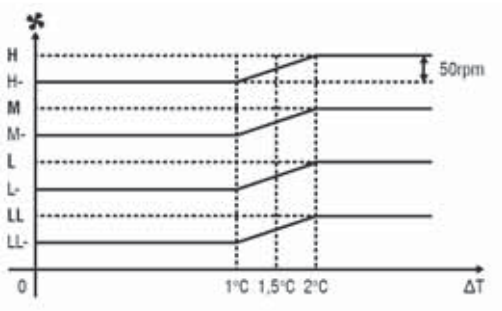
By selecting Auto fan mode, the advanced control system will automatically manage fan speed according to the actual thermal load of indoor spaces.



Indoor units with DC motor are the best solution for low energy class buildings, with high insulation. These models, modulating fan speed, can manage very low thermal input requests, typical for these class of buildings without increasing indoor temperature and avoiding start and stop situations.

Doubling speed function

This function allows to double the available fan speed, slowing the fan automatically when the room temperature is close to the set one. You can activate this function with wireless controller with a special procedure (see installation manual). The function is not available when fan mode is “Auto”.



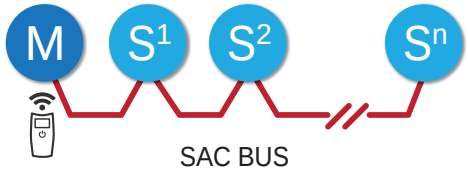
Wired “3rd parties” controls

The fan management depends on the wired controlled model used. Wired control must have a 0-10 V analog output in order to proper control the inverter fan speed and a free contact for operating mode setting (cooling/heating).

Network connections

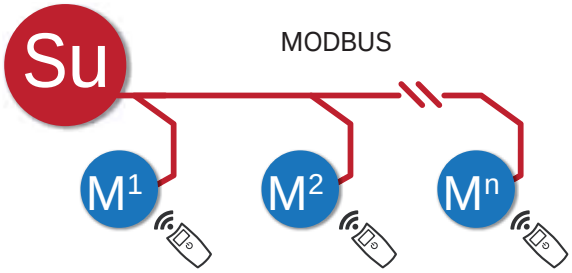
SAC BUS

This option for network connection is very useful when there is no building management system. Using SAC bus, you can connect to one Master unit up to 16 Slave units. The Master unit will accept input for single remote controller (wired or wireless) and will replicate the inputs to all Slave units. Slave units can not accept single remote controller inputs. Slave units can be different in size.



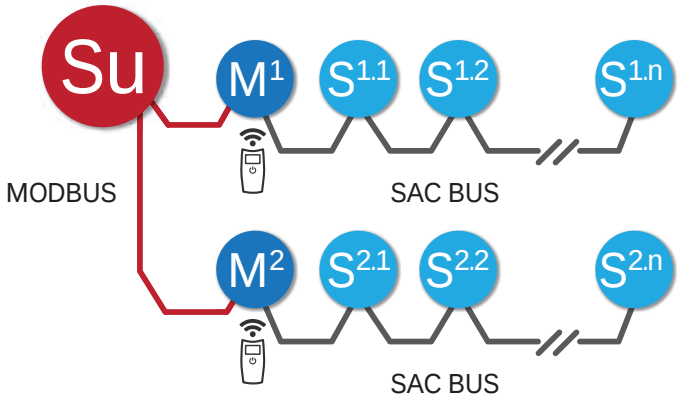
MODBUS RTU

This option for network connection is used when a high level control system (BMS) is available on the field. The Modbus supervisor will manage all operational parameters of indoor units (cooling/heating, temperature setpoint, fan speed, etc…). Only the Master units will be connected to the supervisor (you can connect up to 128 units). You can still use wireless or wired single controller only if this condition is allowed by Supervisor system. Supervisor can disable single controllers, if needed.



MIXED CONNECTION SAC BUS & MODBUS

This option can be used in order to manage several Master units and several Slave units (you can connect up to 128 units as Master and 16 unit as Slave for every Master). Master units are controlled by Supervisor system as in a Modbus connection. Slave units operate like in a SAC bus connection.



Legenda: M Master Sn Slavenumber Su Supervisor

Notes