

YORK RESIDENTIAL AND LIGHT COMMERCIAL PRODUCTS

VRF System 2008 YDS-C R410A



YDS

Variable refrigerant flow system

YDMH 100, 140, 252, 280, 335, 400, 450 C

Cooling capacities 11,0 kW to 180,0 kW



YDS Digital Scroll Technology



YDS System

- Operating range of nominal power (10% - 100 %)
- Digital Scroll Technology
- Low noise levels
- High performance
- Flexible and quickly installation

Comfort & Quality

- Capacities from 11 to 180 kW
- Cooling and heating
- Connection up to 64 indoor units per refrigeration circuit (4 outdoor units)
- Complete range in R410A
- Reduced space of ground
- Is appropriate particularly for existing buildings
- Cooling to -10°C to +48°C (outdoor temperature)
- Heating to -15°C to +30°C (outdoor temperature)



YDS Variable refrigerant flow system

With the introduction of the third generation of the YDS systems, we offer one of the biggest capacity capabilities in the VRF market. Cooling capacity from 11 kW to 180 kW is now available. This capacity is now possible to achieve through connecting from 4 outdoor units together.

The range is based on 2 outdoor units of 11 kW and 14 kW capacity (Digital scroll compressor) and 4 basic modules of different capacities from 25.2 kW to 45 kW, each basic module including a Digital Scroll compressor and a conventional compressor.

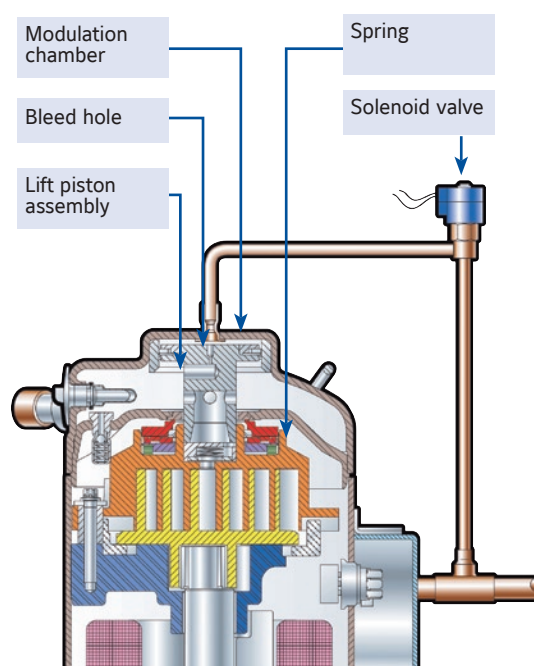
You can connect up to 64 indoor units in one

refrigerant circuit. More than 30 models are available, high walls, cassettes, duct and floor/ceiling types. The individual setting is done by infra red or wired remote control. Additionally it is possible to use a central controller.



Technology of future: Digital Scroll Compressor operation

The Digital Scroll Compressor uses a simple and effective method to modulate the capacity of an AC, giving unparalleled performance in the modulation field. To modulate the capacity the Digital Scroll operates in two stages, the "loaded state" in which the compressor works as a normal Scroll compressor at full capacity and mass flow, and the "unloaded state", where there is not capacity and mass flow. During the "unloaded state" there is a separation between the scrolls. Once the scrolls separate, any gas passing through is no longer compressed. Changing the cycle time ("Loaded state" time and "Unloaded state" time) determines the capacity modulation of the compressor.



YDS Variable refrigerant flow system

YDMH 100 to 900



YDS Technical features – Single module outdoor unit

Model		YDMH 100C	YDMH 140C	YDMH 252C	YDMH 280C	YDMH 335C	YDMH 400C	YDMH 450C
Cooling capacity	kW	11.00	14.00	25.20	28.00	33.50	40.00	45.00
Heating capacity	kW	12.00	16.00	27.00	31.50	35.00	43.00	47.00
Air flow	m³/h	6.000	6.000	10.000	10.000	10.000	14.000	14.000
Noise level at 1 m	dB(A)	55	55	58	58	58	60	60

Electrical features

Power supply		3/N/ 400V 50Hz						
Power input "cooling"	kW	3.50	4.50	7.31	8.05	9.68	11.53	12.86
Running current "cooling"	A	8.50	8.50	12.5	14.60	17.30	20.20	23.00
Power input "heating"	kW	3.40	4.40	7.01	8.14	9.12	11.17	12.08
Running current "heating"	A	7.60	7.60	12.00	14.50	16.40	19.50	21.40

Compressor	Type	Digital Scroll		Digital Scroll and Fix Scroll				
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Dimensions and Weight

Height x Width x Length	mm	1245 x 940 x 340	1245 x 940 x 340	1630 x 980 x 800			1630 x 1380 x 830	
Weight	kg	117	117	245			382	

Piping connections

Gas		18mm / 3/4"		28mm / 1 1/8"			35mm / 1 3/8"	
Liquid		10mm / 3/8"		12mm / 1/2"			16mm / 5/8"	
Refrigerant charge	Type	R410A						
	kg	4.10	4.10	11.0	11.00	11.00	16.00	16.00

Piping length / Height difference

Max. piping length	m	70	70	175	175	175	175	175
Max. height difference	m	8	8	70	70	70	70	70
Max. number of indoor units		6	8	13	16	20	20	20

YDS Technical features – Outdoor units with two module combinations

Model		YDMH 532C	YDMH 560C	YDMH 615C	YDMH 680C	YDMH 730C	YDMH 785C	YDMH 850C	YDMH 900C
Module combinations		1x YDMH252 1x YDMH280	2x YDMH280	1x YDMH280 1x YDMH335	1x YDMH280 1x YDMH400	1x YDMH280 1x YDMH450	1x YDMH335 1x YDMH450	1x YDMH400 1x YDMH450	2x YDMH450
Cooling capacity	kW	53.2	56.00	61.50	68.00	73.00	78.50	85.00	90.00
Heating capacity	kW	58.5	63.00	66.50	74.50	78.50	82.00	90.00	94.00
Noise level at 1 m	dB(A)	62	62	62	62	62	63	63	63

Electrical features

Electrical features		3/N/ 400V 50Hz							
Power supply									
Power input "cooling"	kW	15.36	16.10	17.73	19.58	20.91	22.54	24.39	25.72
Power input "heating"	kW	15.15	16.28	17.26	19.31	20.22	21.20	23.25	24.16

Dimensions and Weight

Height x Width x Length	mm	1630 x 1960 x 800			1630 x 2360 x 830			1630 x 2760 x 830	
Weight	kg	490			627			764	

Piping size between the outdoor unit and the first branch

Gas		35mm / 1 3/8"						42mm / 1 5/8"	
Liquid		18mm / 3/4"						22mm / 7/8"	

Refrigerant piping

Piping 1	16mm / 5/8"							
Piping 2	18mm / 3/4"							
Connection between modules (out. groups)	YDSA / RD102						YDSA / RD103	
Max. number of indoor units	20	20	20	20	20	20	32	32

YDS Variable refrigerant flow system

YDMH 960 to 1800



YDS Technical features – Outdoor units with three module combinations

Model		YDMH 960C	YDMH 1010C	YDMH 1065C	YDMH 1130C	YDMH 1180C	YDMH 1235C	YDMH 1300C	YDMH 1350C
Module combinations		2x YDMH280 1x YDMH400	2x YDMH280 1x YDMH450	1x YDMH280 1x YDMH335 1x YDMH450	1x YDMH280 1x YDMH400 1x YDMH450	1x YDMH280 2x YDMH450	1x YDMH335 2x YDMH450	1x YDMH400 2x YDMH450	3x YDMH450
Cooling capacity	kW	96.00	101.00	106.50	113.00	118.00	122.50	130.00	135.00
Heating capacity	kW	106.00	110.00	113.50	121.50	125.50	129.00	137.00	141.00
Noise level at 1 m	dB(A)	64	64	64	64	64	64	64	64
Electrical features									
Power supply		3/N/ 400V 50Hz							
Power input "cooling"	kW	27.63	28.96	30.59	32.44	33.77	35.40	37.25	38.58
Power input "heating"	kW	27.45	28.36	29.34	31.39	32.30	33.28	35.33	36.24
Dimensions and Weight									
Height x Width x Length	mm	1630 x 3340 x 830			1630 x 3740 x 830			1630 x 4140 x 830	
Weight	kg	872			1.009			1.146	
Piping size between the outdoor unit and the first branch									
Gas		42mm / 1 5/8"							
Liquid		22mm / 7/8"							
Refrigerant piping									
Piping 1		16mm / 5/8"							
Piping 2		18mm / 3/4"							
Connection between modules (out. groups)		1x YDSA / RD102 + 1x YDSA / RD01					1x YDSA / RD103 + 1x YDSA / RD01		
Max. number of indoor units		32	32	32	40	40	40	40	40

YDS Technical features – Outdoor units with four module combinations

Model	YDMH 1405C	YDMH 1455C	YDMH 1520C	YDMH 1570C	YDMH 1630C	YDMH 1685C	YDMH 1750C	YDMH 1800C	
Module combinations	3x YDMH335 1x YDMH400	3x YDMH335 1x YDMH450	2x YDMH335 1x YDMH400 1x YDMH450	2x YDMH335 2x YDMH450	1x YDMH280 3x YDMH450	1x YDMH335 3x YDMH450	1x YDMH400 3x YDMH450	4x YDMH450	
Cooling capacity	kW	140.50	145.50	152.00	156.00	163.00	168.50	175.00	180.00
Heating capacity	kW	148.00	152.00	160.00	164.00	172.50	176.00	184.00	188.00
Noise level at 1 m	dB(A)	65	65	65	65	65	65	65	65
Electrical features									
Power supply	3/N/ 400V 50Hz								
Power input "cooling"	kW	40.57	41.90	43.75	45.08	46.63	48.26	50.11	51.44
Power input "heating"	kW	38.53	39.44	41.49	42.40	44.38	45.36	47.41	48.32
Dimensions and Weight									
Height x Width x Length	mm	1.630 x 4.320 x 830		1.630 x 4.720 x 830		1.630 x 5.120 x 830		1.630 x 5.520 x 830	
Weight	kg	1.117		1.254		1.391		1.528	
Piping size between the outdoor unit and the first branch									
Gas	54mm / 2 1/8"								
Liquid	28mm / 1 1/8"								
Refrigerant piping									
Piping 1	16mm / 5/8"								
Piping 2	18mm / 3/4"								
Connection between modules (out. groups)		1x YDSA / RD102 + 2x YDSA / RD01					1x YDSA / RD103 + 2x YDSA / RD01		
Max. number of indoor units	50	50	50	50	50	50	64	64	64

YDS Technical features indoor units

High wall



Model			YDHW022C	YDHW028C	YDHW036C	YDHW045C	YDHW056C
Capacity	Cooling	kW	2.20	2.80	3.60	4.50	5.60
	Heating	kW	2.50	3.20	4.00	5.00	6.30
	Air flow	m³/h	580 / 430 / 410			850 / 610 / 470	1.150 / 800 / 650
Noise level at 1 m		dB(A)	34			37	41
Electrical features	Power supply	V/Ph/Hz	230/1/ 50 + N + E				
	Starting current	A	2.20			3.20	
Dimensions and Weight	H x W x D	mm	265 x 790 x 195			292 x 920 x 225	
	Weight	kg	9			13	
Piping	Gas		12mm / 1/2"				
	Liquid		6mm / 1/4"				

High wall (EXV integrated)



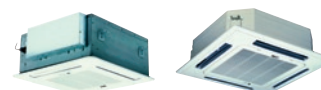
Model			YDHC022C	YDHC028C	YDHC036C	YDHC045C	YDHC056C
Capacity	Cooling	kW	2.20	2.80	3.60	4.50	5.60
	Heating	kW	2.60	3.20	4.00	5.00	6.30
	Air flow	m³/h	380	450	580	720	800
Noise level at 1 m		dB(A)	39	39	40	41	41
Electrical features	Power supply	V/Ph/Hz	220 / 240 / 50-1				
	Starting current	A	2.5				3.3
Dimensions and Weight	H x W x D	mm	915 x 289 x 216				1080 x 315 x 216
	Weight	kg	12				14
Piping	Gas		12mm / 1/2"				
	Liquid		6mm / 1/4"				

Convertible console floor/ceiling



Model			YDFC036C	YDFC045C	YDFC056C	YDFC071C	YDFC080C	YDFC090C	YDFC112C	YDFC140C
Capacity	Cooling	kW	3.60	4.50	5.60	7.10	8.00	9.00	11.20	14.00
	Heating	kW	4.00	5.00	6.30	8.00	9.00	10.00	12.50	16.00
	Air flow	m³/h	650 / 570 / 500	800 / 700 / 600		1000 / 900 / 700		1200/1000/800	1400/1200/1000	2000/1800/1600
Noise level at 1 m		dB(A)	36	38		40		41	42	
Electrical features	Power supply	V/Ph/Hz	230/1/ 50 + N + E							
	Starting current	A	4.70	5.40			6.20		7.70	
Dimensions and Weight	H x W x L	mm	198 x 995 x 660					198 x 1285 x 660	240 x 1670 x 680	
	Weight	kg	30					34	52	
Piping	Gas		12mm / 1/2"	16mm / 5/8"						
	Liquid		6mm / 1/4"	10mm / 3/8"						

Cassette



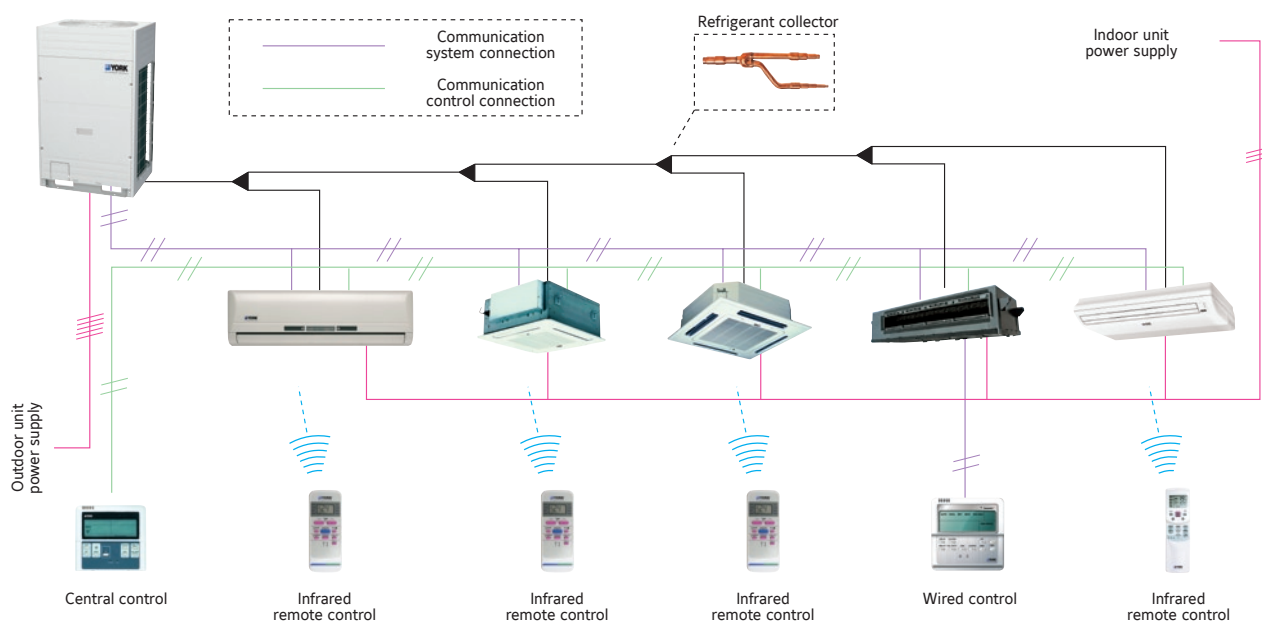
Model			YDCS028C	YDCS036C	YDCS045C	YDCL056C	YDCL071C	YDCL080C	YDCL090C	YDCL112C
Capacity	Cooling	kW	2.80	3.60	4.50	5.60	7.10	8.00	9.00	11.20
	Heating	kW	3.20	4.00	5.00	6.30	8.00	9.00	10.00	12.50
	Air flow	m³/h	860 / 760 / 650			1000/920/840	1200 / 1080 / 970		1320/1210/1110	1860/1720/1610
Noise level at 1 m		dB(A)	36			38	42		44	
Electrical features	Power supply	V/Ph/Hz	230/1/ 50 + N + E							
	Starting current	A	3.60			3.60	4.20		6.00	
Dimensions and Weight	H x W x L	mm	254 x 580 x 580			240 x 840 x 840			310 x 840 x 840	
	Weight	kg	22			28			35	
Panel	H x W x L	mm	30 x 650 x 650			40 x 950 x 950				
	Weight	kg	3			6				
Piping	Gas		12mm / 1/2"			16mm / 5/8"				
	Liquid		6mm / 1/4"			10mm / 3/8"				

Blower



Model			YDDN022C	YDDN028C	YDDN036C	YDDN045C	YDDN056C	YDDN071C	YDDN080C	YDDN090C	YDDN112C	YDDN140C
Capacity	Cooling	kW	2.20	2.80	3.60	4.50	5.60	7.10	8.00	9.00	11.20	14.00
	Heating	kW	2.50	3.20	4.00	5.00	6.30	8.00	9.00	10.00	12.50	16.00
	Air flow	m³/h	580 / 490 / 420			1160 / 1100 / 1050		1460 / 1360 / 1150		2000 / 1800 / 1600		2400/2100/1900
Noise level at 1 m		dB(A)	34			38		42		44		46
Electrical features	Power supply	V/Ph/Hz	230/1/ 50 + N + E									
	Starting current	A	3.10			3.90		9.50		9.00		11.00
Dimensions and Weight	H x W x L	mm	210 x 955 x 385			298 x 1000 x 800			298 x 1350 x 800			
	Weight	kg	15			38			48			
Piping	Gas		12mm / 1/2"			16mm / 5/8"						
	Liquid		6mm / 1/4"			10mm / 3/8"						

YDS System - System Diagram



Management System YDS

The possible connection to an overall BMS will be available soon via a management software system.

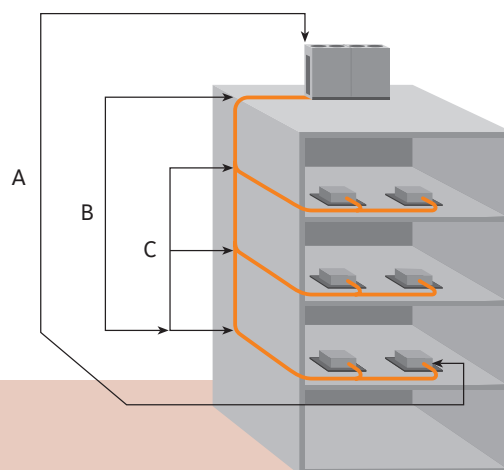
This system will control up to 1024 indoor units.



YORK System YDS

The York system with Digital Scroll is working like the VRF principle and offers you economical air-conditioning system for projects, which are requiring more capacity than the normal split and multi split solutions.

The lengths for the connecting tubes between the indoor and outdoor have been prolonged, which brings you more flexible solutions for complex air-conditioning projects.



A – Real length of refrigerant piping : 150 m.

B – Maximum difference in height : 70 m.

C – Maximum difference in height between 2 indoor units : 15 m.

Controllers

Remote Controllers

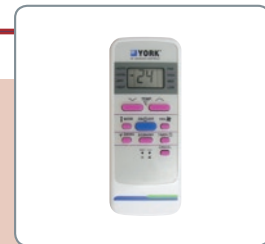
R05 Remote Controller

Light background, LCD display screen, clock function, ON / OFF / Temperature setting / Mode setting / Fan speed setting / Horizontal swing setting functions. Using for the Floor/Ceiling units.



R51 Remote Controller

LCD display, clock function, ON / OFF / Temperature setting / Mode setting / Fan speed / Swing etc. Using for all the indoor units except Floor/Ceiling units.



Wired Controller

AMR01M

ON / OFF / Mode setting / Temp. setting / Fan speed / Time setting / Swing, etc.



AMR01Y

ON / OFF / Mode setting / Temp. setting / Fan speed / Time setting / Swing, etc.
Temp sensor built-in.



Weekly Timer

AMR02M Weekly schedule timer

Control one indoor unit.

Note: Weekly schedule timer and indoor CCM cannot be used simultaneously



Central Control Monitor

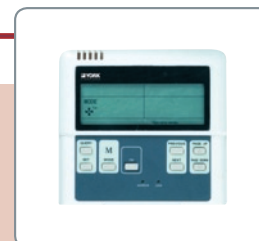
AMR03M Indoor CCM

Max. 64 indoor units control.



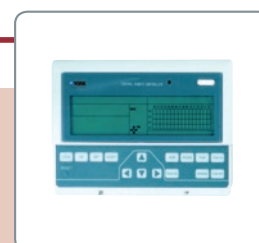
AMR02Y Outdoor CCM

Max. 32 outdoor units control.



AMR03Y Indoor CCM

Max. 64 indoor units control; New mode lock function.



BMS Accessories

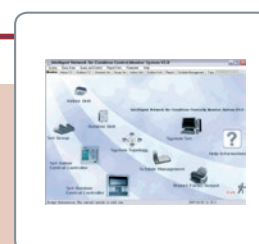
AMR07Y LonWorks gateway

Matched with network CCM system (V3.0), connect to LonWorks.



Software 3.0

3rd network central control system kit.



Available in middle 2008

AMR09Y Indoor CCM

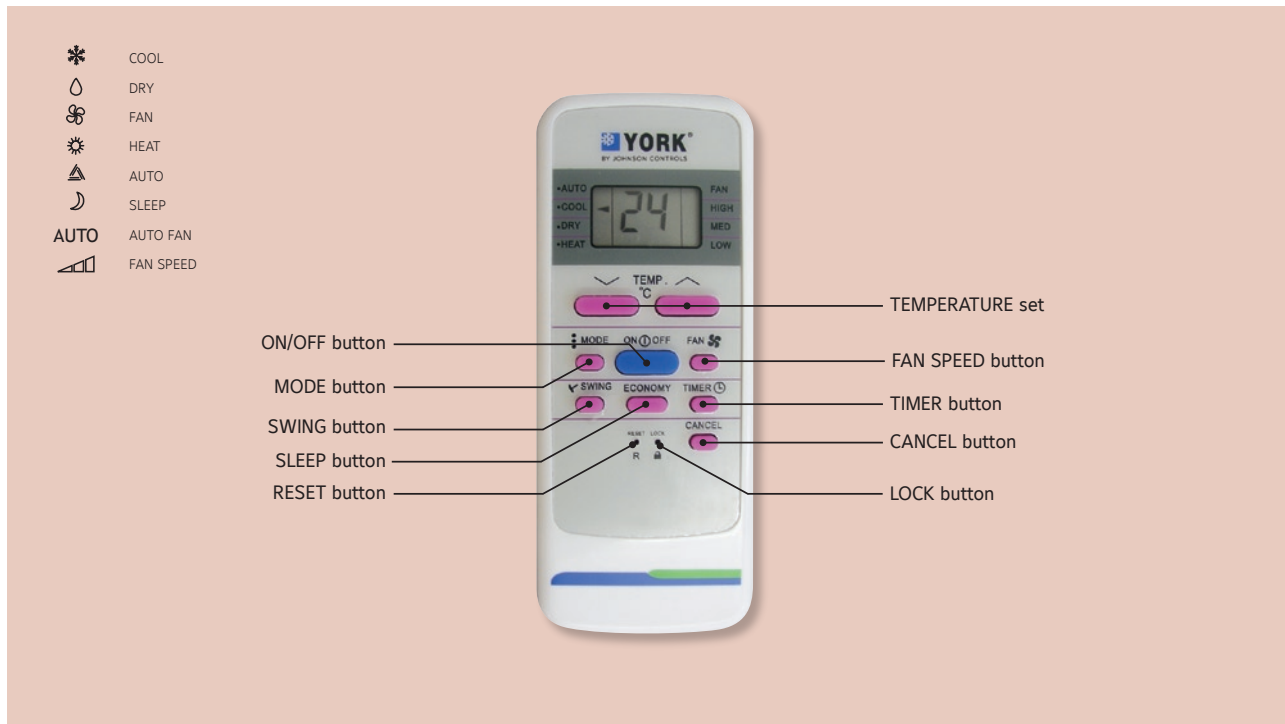
Max. 64 indoor units control. New weekly timer function.

AMR08Y BMS CCM

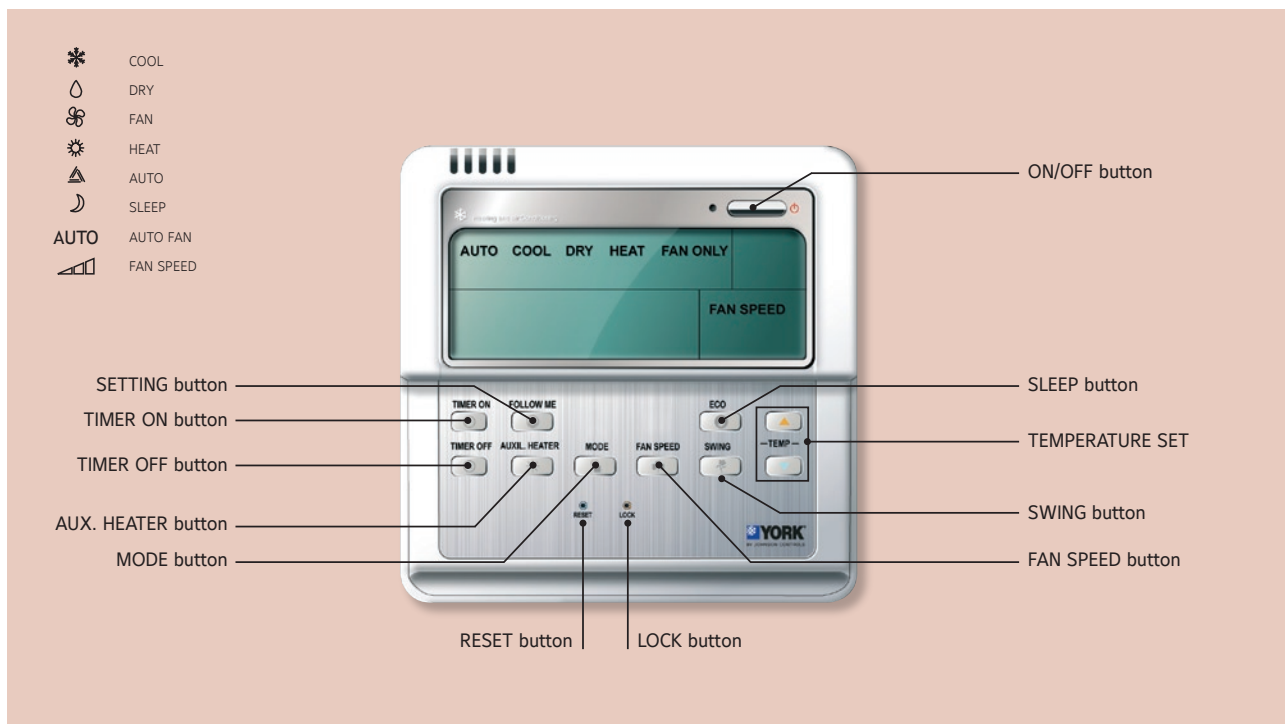
BACNET LONWORK/ETHERNET optional, Max connecting 4 group air-conditions (each group can connect Max. 64 indoor units or 32 outdoor units).

Controllers details

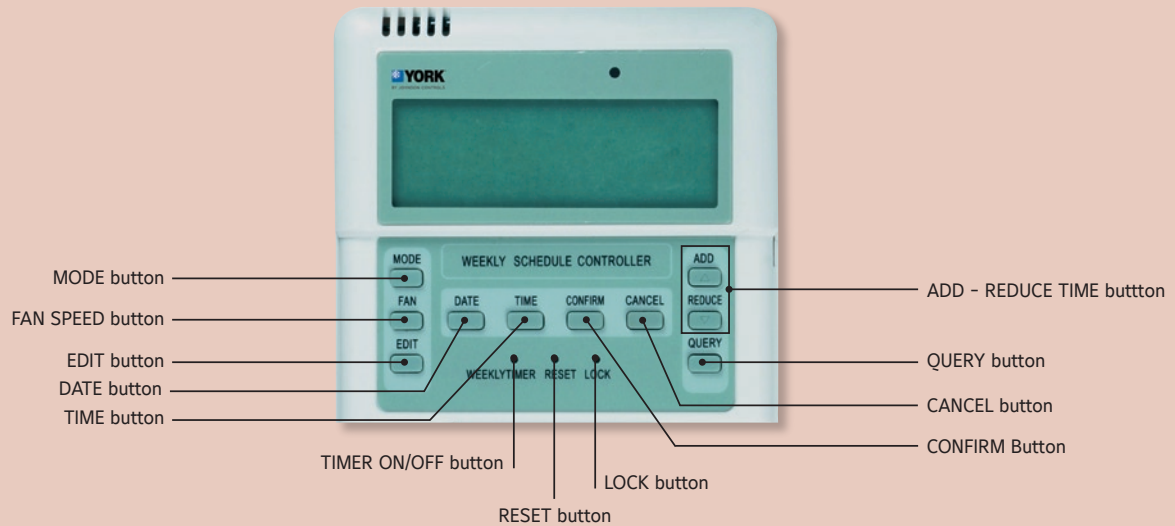
R51 Infrared Remote Control



AMR01Y Wired Remote Control



AMR02M Weekly Timer



AMR03Y Central Control Monitor

