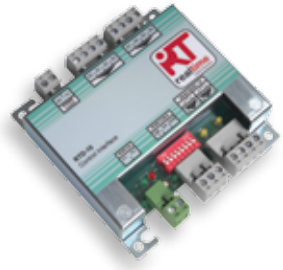
Accessories

Control systems

Modbus interface - RTD

- **Integration of entire Daikin portfolio in BMS system via modbus**
- **Indoor unit control via 0~10 volt, dry contact or resistance contact**
- **Key card connection**
- **Duty/standby**
- **Heating interlock**
- **Alarm signal**



RTD

Integration of RA, Sky Air, VRV, Daikin Altherma Flex and AHU in BMS or home automation systems

RTD-RA

› Modbus interface for monitoring and control of residential indoor units

RTD-10

Advanced integration into BMS of Sky Air, VRV, VAM and VKM through either:

› Modbus
› Voltage (0-10V)
› Resistance

RTD-NET

› Modbus interface for monitoring and control of Sky Air, VRV, VAM and VKM
› Duty/standby function for server rooms

RTD-HO

› Modbus interface for monitoring and control of Sky Air, VRV, VAM and VKM
› Intelligent hotel room controller

RTD-20

› Advanced integration of Sky Air, VRV, VAM/VKM and air curtains
› Clone or independent zone control
› CO_2 sensor for VAM fresh air control
› Save on runningcosts via
  › pre/post and trade mode
  › set point limitation
  › overall shut down
  › PIR sensor for adaptive deadband

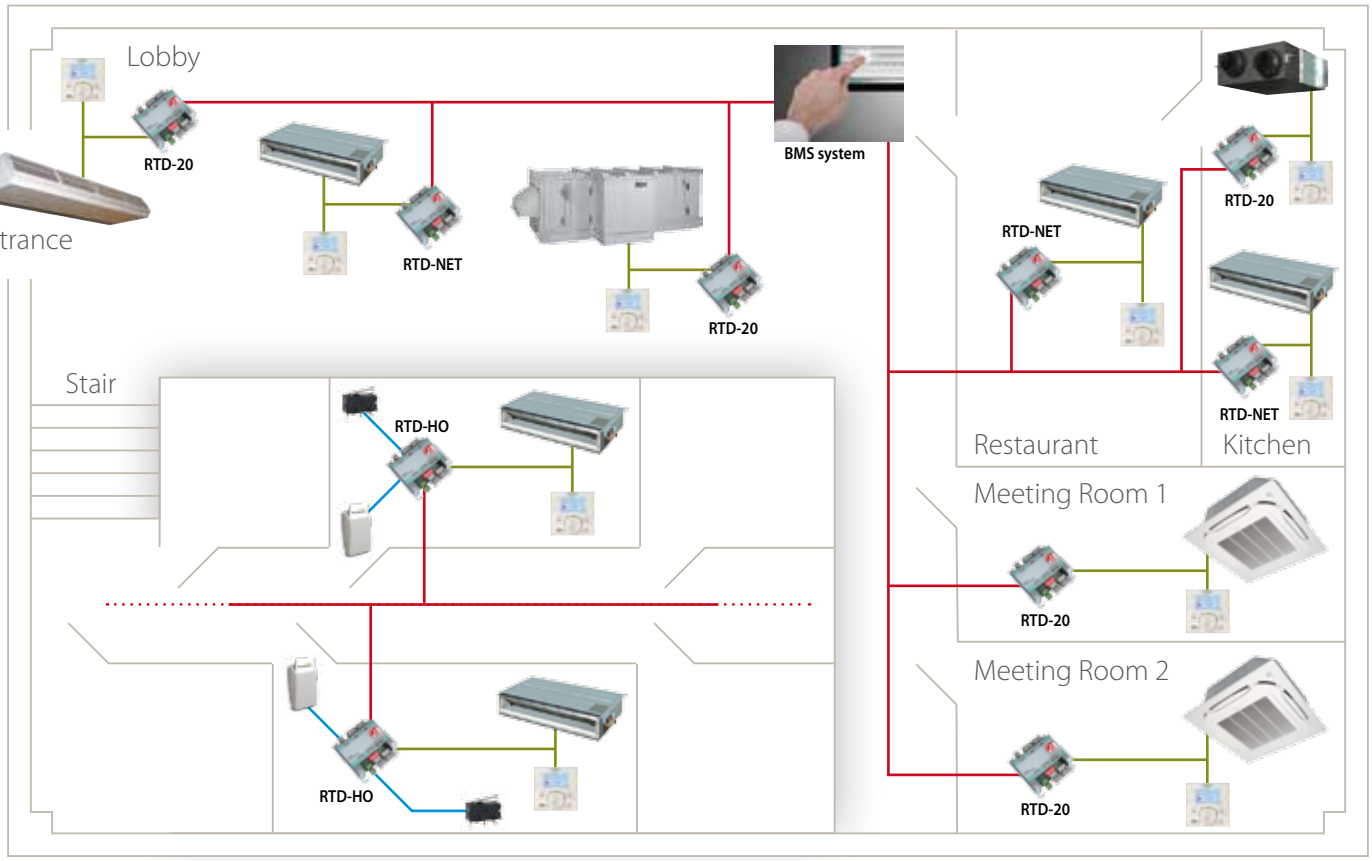
RTD-W

› Modbus interface for monitoring and control of Daikin Altherma Flex Type, VRV HT hydrobox and chillers

Concept

- Full integration of entire product portfolio, allowing easy and central control of your entire commercial space
- Full flexibility (access to all main functions) (ON/OFF, mode, setpoint, fan speed, error…)
- Dedicated pre-programmed functions optimzed for hotels, shops, server rooms, ...

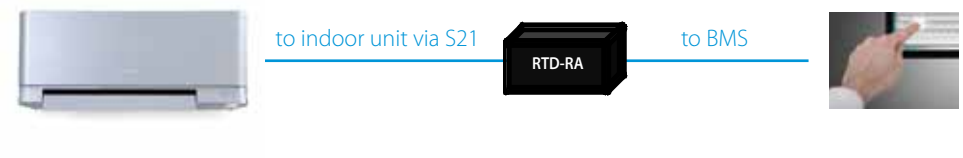
HOTEL GROUNDFLOOR



RTD-RA

Application: Integration of Split units in BMS system

- Modbus RTU RS485 for Splits
- Harmonized Modbus registers with RTD line-up
- Control prohibition from the R/C
- IT application together with RTD-10
- Group control (clone from master RTD)
- Energy saving with PIR & Di connection



RTD-10

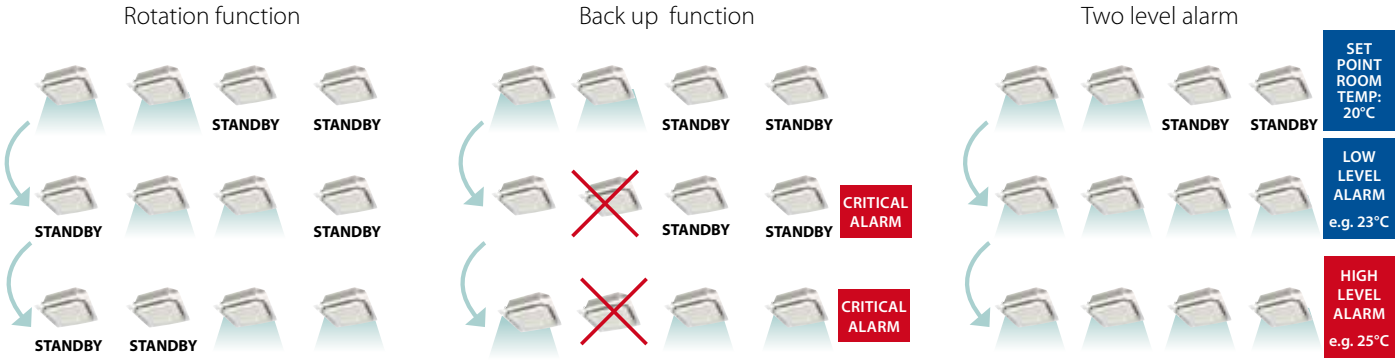
Application: Duty/standby function for server rooms

Suitable for IT and Telecom applications.

› Rotation function:
- Up to 8 duty/standby groups
- 1 or 2 standby units
- Daily, Weekly or Multi-week duty rotation
- Optional thermistor space temperature alarm

› Back up function

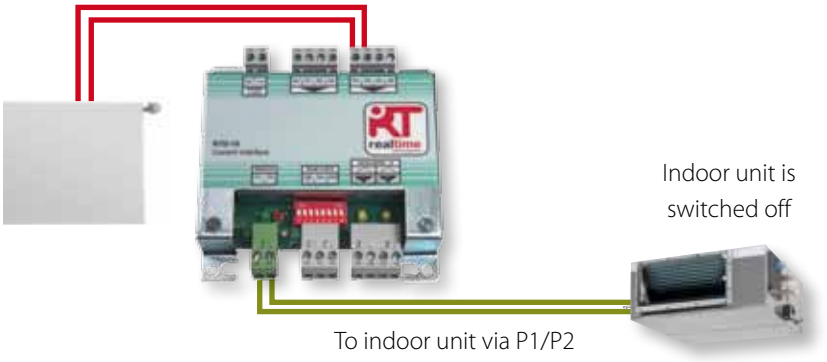
› Two level alarm on high temperature or unit fault



Application: Heating interlock of air conditioning with central heating

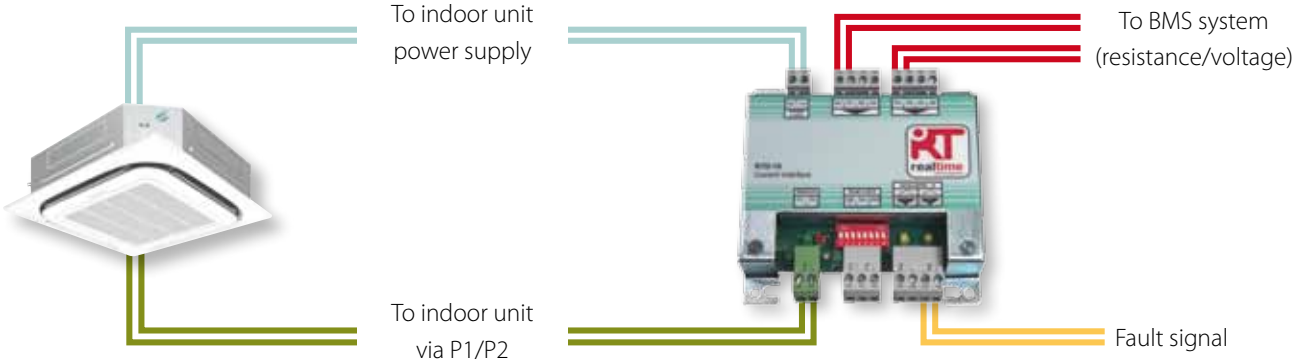
› Avoids having simultaneous cooling and heating occurring when a separate heating system is installed

› The setting of the interlock function offers several possibilities on the indoor unit: to block certain functions, to switch it off or to change the mode to fan only



Application: Integration in BMS system

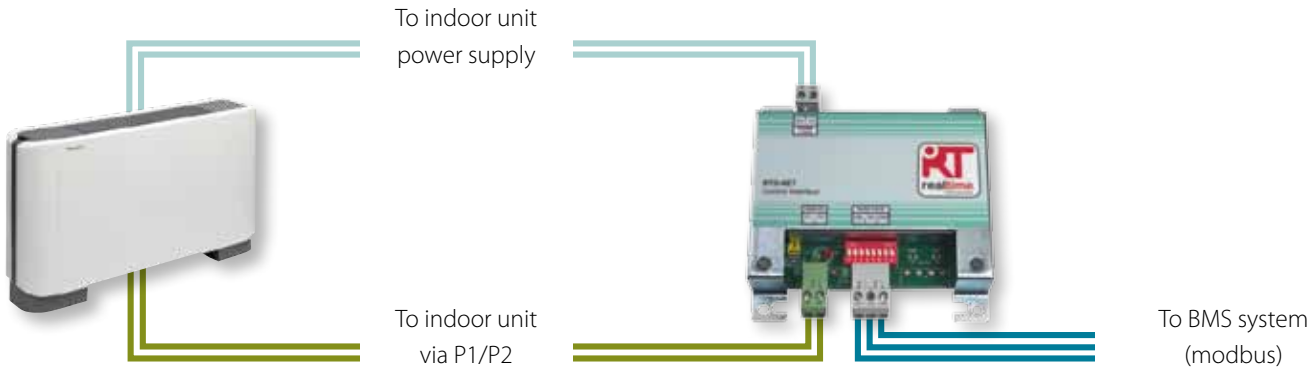
› Integration in BMS system via resistance and/or voltage control



RTD-NET

Application: Integration in BMS system via Modbus control

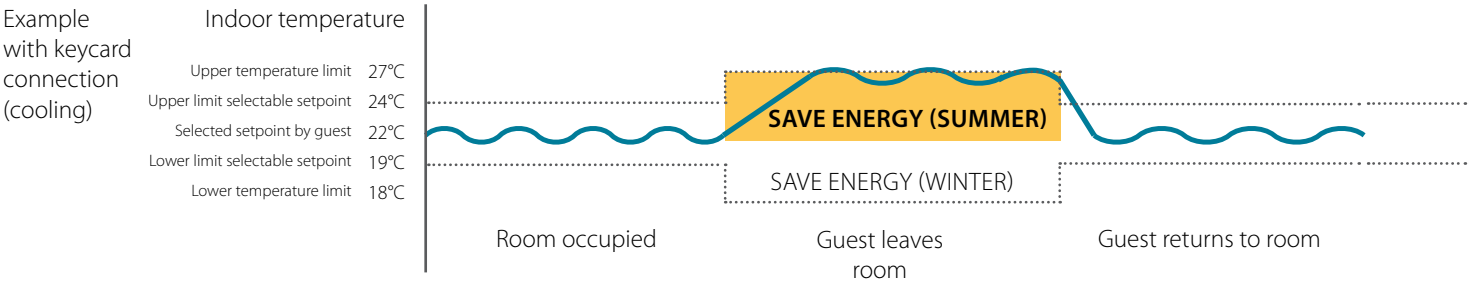
› Integration in BMS system via Modbus

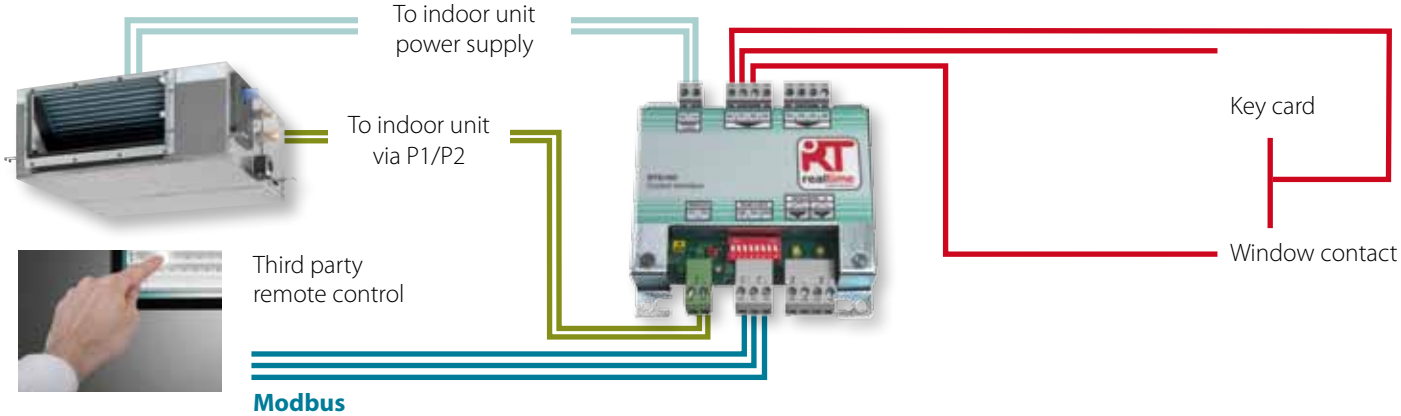


RTD-HO

Application: Hotel room

› Interlock with key card
› Interlock with window contact
› Control via third party remote control
› Limit selectable setpoint
(e.g. between 19 and 24°C)
› Prohibit several remote control settings like indoor unit
on/off , indoor unit mode …

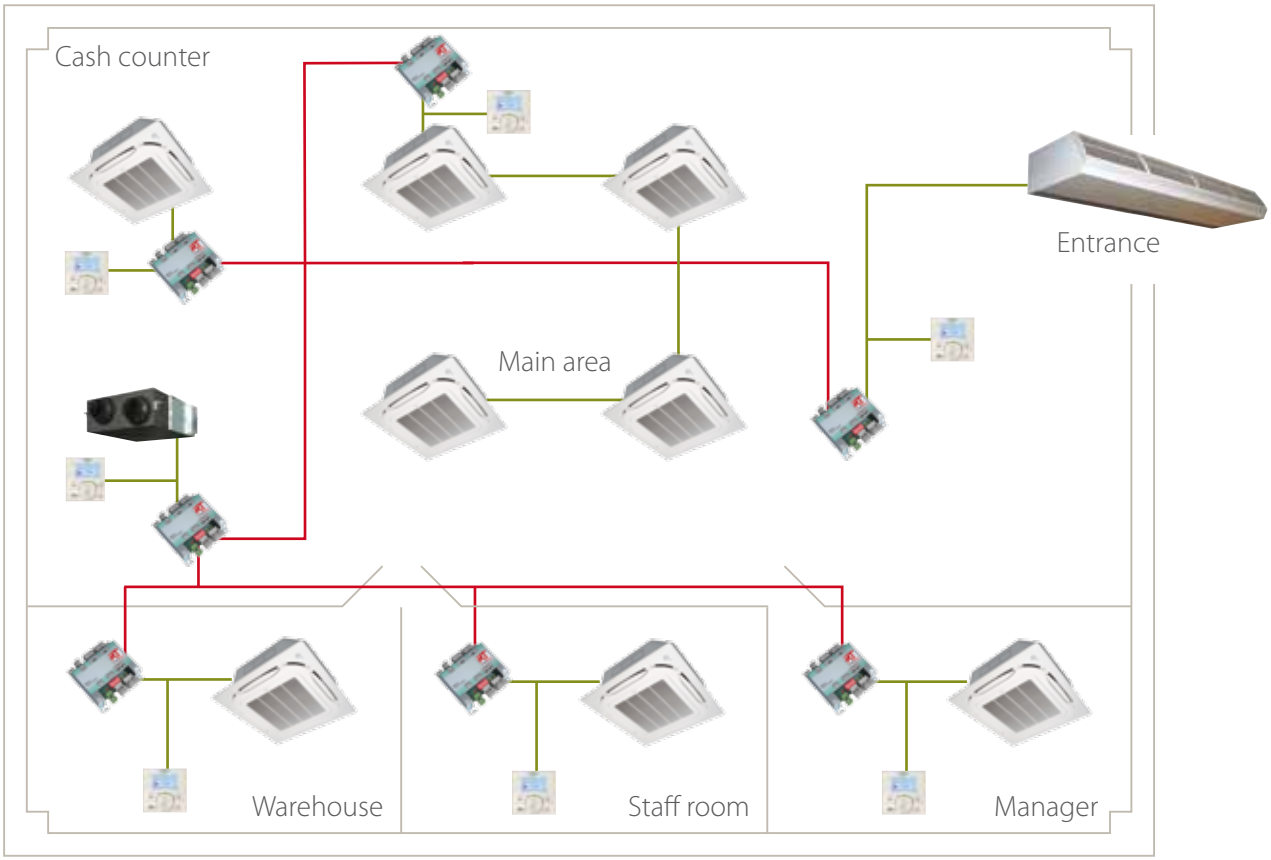




RTD-20

Application: Retail shop

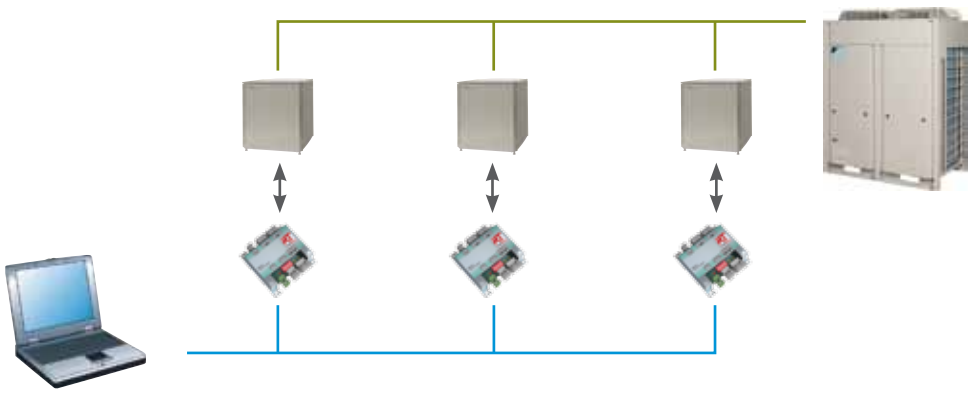
- Operation management of retail shops zone
- Energy saving functions
- Flexible partition modes
- Enhance the BMS integration of:
  - Air curtains
  - VAM
  - ERQ with 0-10V controls



RTD-W

Application: Integration of the domestic hot water (HT hydrobox) through Modbus

- Modbus RTU RS485 for the HT hydrobox & DHW
- I/O for the monitoring & the control of the HT hydrobox and the DHW
- Offer the platform for the integration with commercial heating sequence controller



Overview functions

	to be confirmed				
Main functions	**RTD-RA**	**RTD-NET**	**RTD-10**	**RTD-20**	**RTD-HO**
Dimensions H x W x D mm	80 x 80 x 37,5	100 x100 x 22			
Key card + window contact					✓
Set back function					✓
Prohibit or restrict remote control functions (setpoint limitation, ...)	✓	✓	✓	✓**	✓
Modbus (RS485)	✓	✓	✓	✓	✓
0 - 10 V control			✓	✓	
Resistance control			✓	✓	
IT application	✓		✓		
Heating interlock			✓	✓	
Output signal (on/defrost, error)			✓	✓****	✓
Retail application				✓	
Partitioned room control				✓	
Air curtain		✓***	✓***	✓	

Control functions	**RTD-RA**	**RTD-NET**	**RTD-10**	**RTD-20**	**RTD-HO**
On/Off	M	M	M,V,R	M	M*
Set point	M	M	M,V,R	M	M*
Mode	M	M	M,V,R	M	M*
fan	M	M	M,V,R	M	M*
Louver	M	M	M,V,R	M	M*
HRV Damper control		M	M,V,R	M	
Prohibit/Restrict functions	M	M	M,V,R	M	M*
Forced thermo off	M				

Monitoring functions	**RTD-RA**	**RTD-NET**	**RTD-10**	**RTD-20**	**RTD-HO**
On/Off	M	M	M	M	M
Set point	M	M	M	M	M
Mode	M	M	M	M	M
fan	M	M	M	M	M
Louver	M	M	M	M	M
RC temperature		M	M	M	M
RC mode		M	M	M	M
nbr units		M	M	M	M
Fault	M	M	M	M	M
Fault code	M	M	M	M	M
Return air temperature (Average /Min/Max)	M	M	M	M	M
Filter alarm		M	M	M	M
Termo on	M	M	M	M	M
Defrost		M	M	M	M
Coil In/Out temperature	M	M	M	M	M

	
Main functions	**RTD-W**
Dimensions H x W x D mm	100x100x22
On/off prohibi	✓
Modbus RS485	✓
Dry contact	✓
Output signal(space heating on,off)	✓
Space heating	✓
Domestic hot water	✓
3 Way valve	✓

Control functions	
On/Off Space heating/cooling	M,C
Set point leaving water temperature	M
Room temperature setpoint	M
Operation mode	M
Domestic Hot Water reheat	M,C
Domestic Hot Water storage	M,C
Quiet mode	M
Weather dependent setpoint enable	M

Monitoring functions	
On/Off Space heating/cooling	M,C
Set point leaving water temperature	M
Room temperature setpoint	M
Operation mode	M
Domestic Hot Water reheat	M,C
Domestic Hot Water storage	M,C
nbr units	M
Average leaving water temperature	M
Remocon room temperature	M
Fault	M
Fault code	M
Circulation pump operation	M
Compressor status	M
Desinfection operation	M
Setback operation	M
Defrost/ start up	M
Pump running hours accumualated	M

M : Modbus / R : Resistance / V : Voltage
* : only when room is occupied / ** : setpoint limitation /
*** : no fan speed control on the CYV air curtain / **** : run & fault

Specifications

			RTD-RA	RTD-NET	RTD-10	RTD-20	RTD-HO	RTD-W
Dimensions	HeigthxWidthxDepth	mm	80x80x37,5	100x100x22				
Weight		g	120					
Operation range		°C	0~50					
Power supply			15V-24V DC					
Voltage /resistance input			2	N/A	6	6	3	6
Voltage input			N/A	N/A	0~10VDC < 1mA	0~10VDC < 1mA	N/A	0~10VDC < 1mA
Resistance input			5V, 1mA	N/A	5V, 1mA	5V, 1mA	5V, 1mA	5V, 1mA
Dry contact input ports			N/A	N/A	2	N/A	N/A	N/A
Modbus connection			RS485					
P1/P2 connection			yes					
Relay			N/A	N/A	1A, 24VAC max	1A, 25VAC max	1A, 24VAC max	1A, 25VAC max
			N/A	N/A	1A, 30VDC max	1A, 30VDC max	1A, 30VDC max	1A, 30VDC max

In all of us, a green heart

Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues. For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment. This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.

VRV products are not within the scope of the Eurovent certification programme.

FSC

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