

Accessories

Control systems

Modbus interface - RTD

- » Integration of Daikin portfolio in BMS system via modbus
- » Indoor unit control via 0~10 volt, dry contact or resistance contact
- » Retail applications
- » Hotel applications
- » IT applications
- » Heating interlock
- » Alarm signal



www.daikin.eu



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
- › Duty/standby function for server rooms

RTD-NET

- › Modbus interface for monitoring and control of Sky Air, VRV, VAM and VKM

RTD-HO

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

RTD-20

- › Retail applications
- › Advanced control of Sky Air, VRV, VAM/VKM and air curtains
- › Clone or independent zone control
- › Partition mode for meeting rooms
- › Increased comfort with integration of CO² sensor for fresh air volume control
- › Save on running costs via
 - pre/post and trade mode
 - set point limitation
 - overall shut down
 - PIR sensor for adaptive deadband

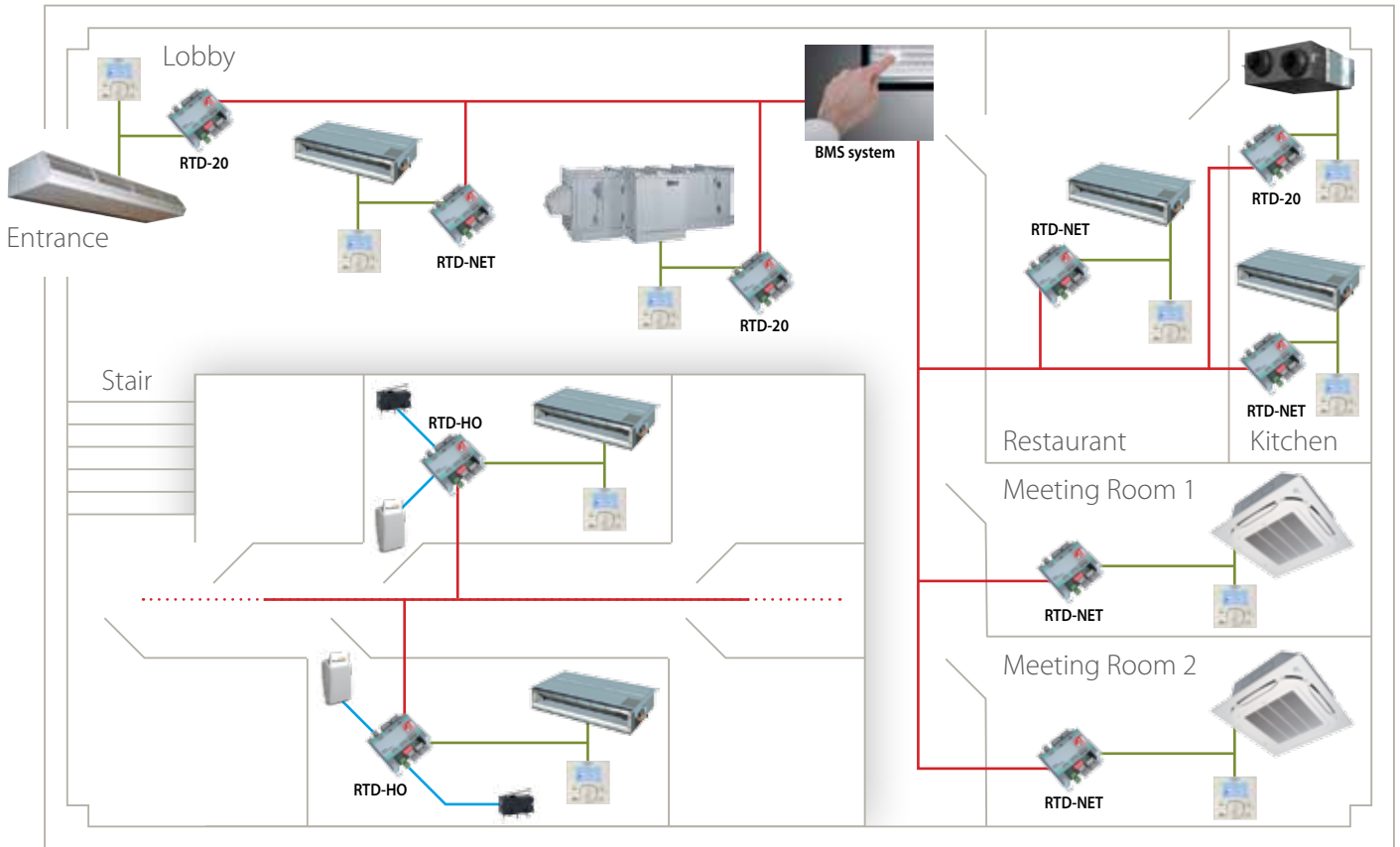
RTD-W

- › Modbus interface for monitoring and control of Daikin Altherma Flex Type, VRV HT hydrobox and inverter 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 optimized for hotels, shops, server rooms, ...

HOTEL GROUND FLOOR



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

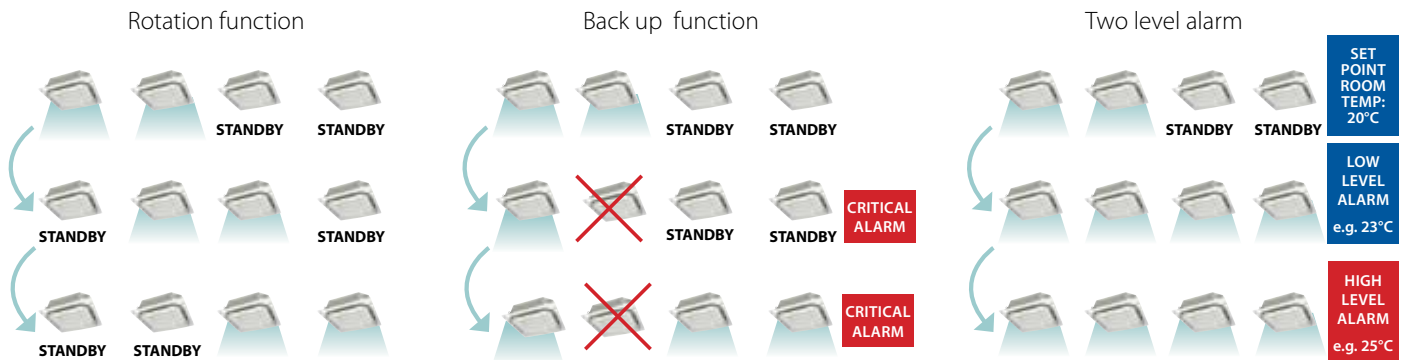


RTD-10

Application: Duty/standby function for server rooms

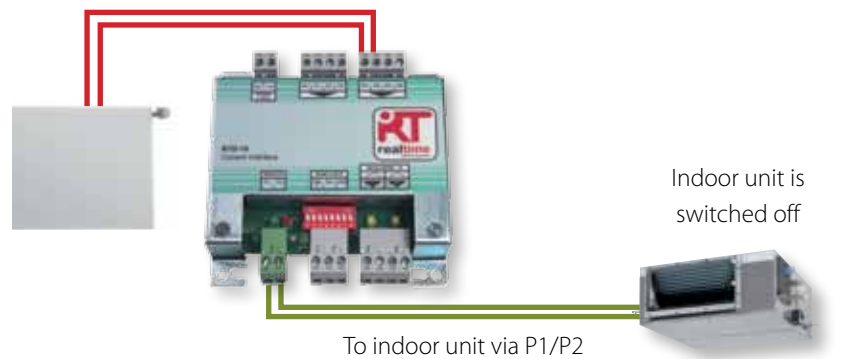
Suitable for IT and Telecom applications.

- > 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



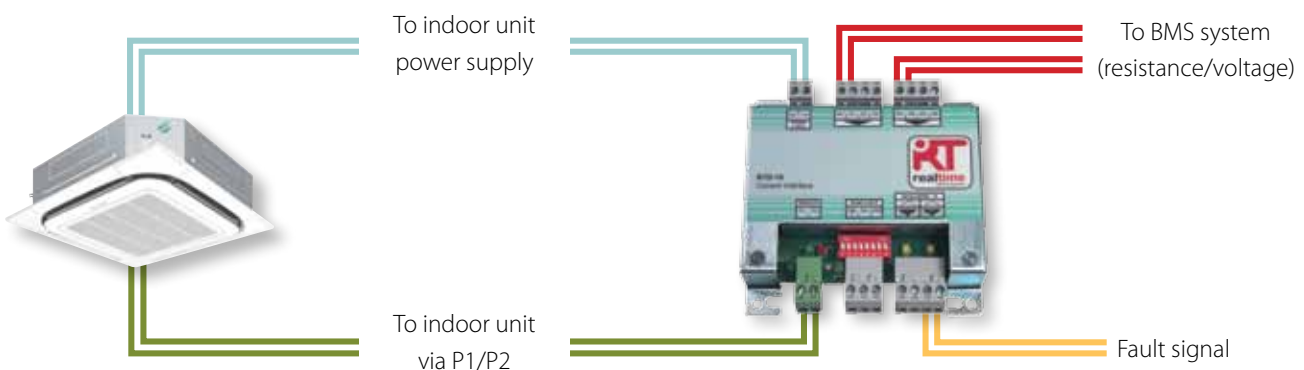
Application: Heating interlock of air conditioning with central heating

- > 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

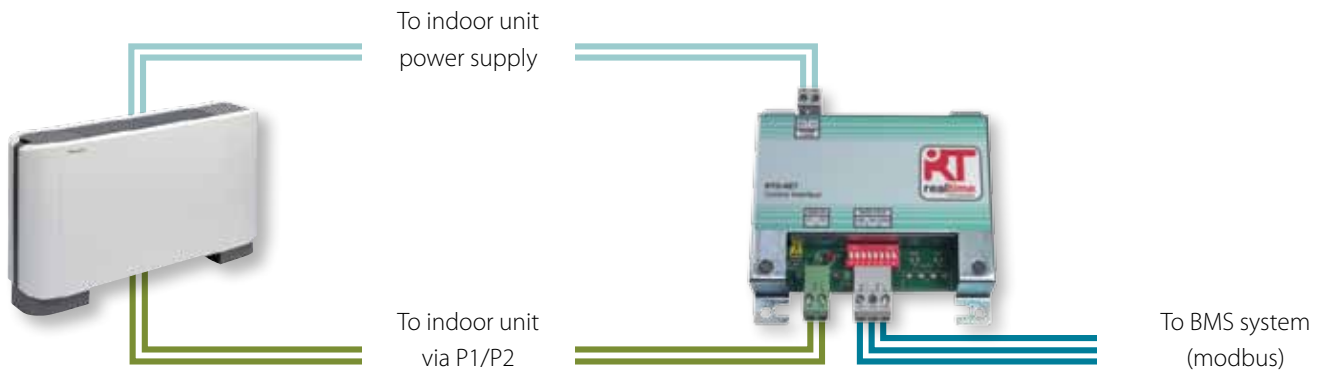
- > Integration in BMS system via resistance and/or voltage control



RTD-NET

Application: Integration in BMS system via Modbus control

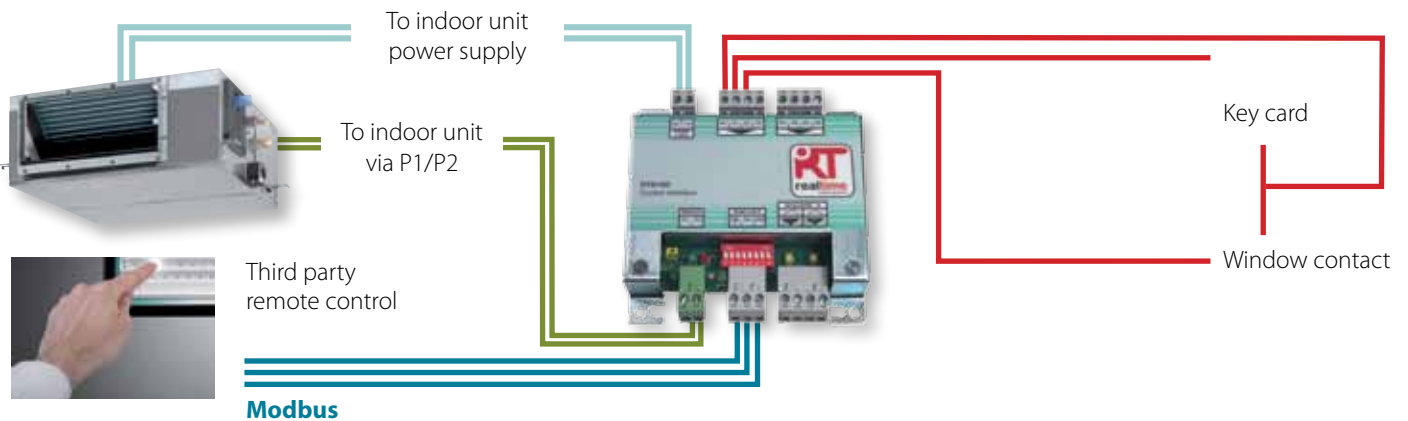
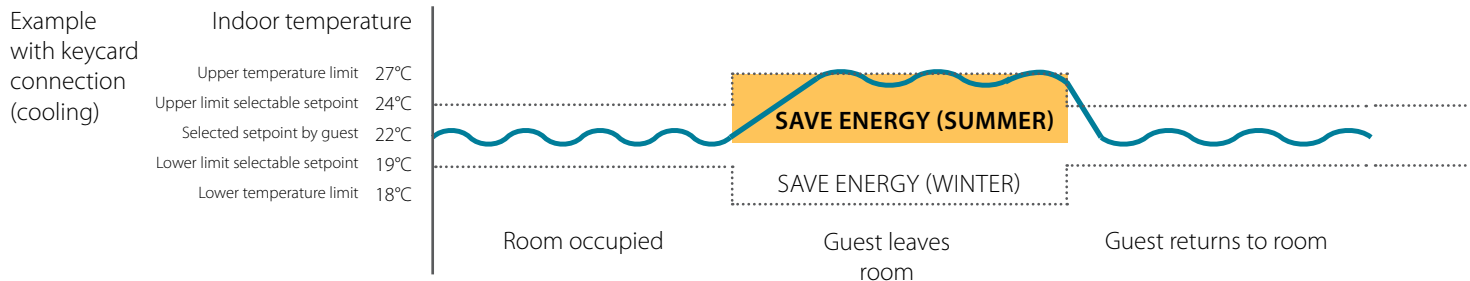
- › Integration in BMS system via Modbus



RTD-HO

Application: Hotel room

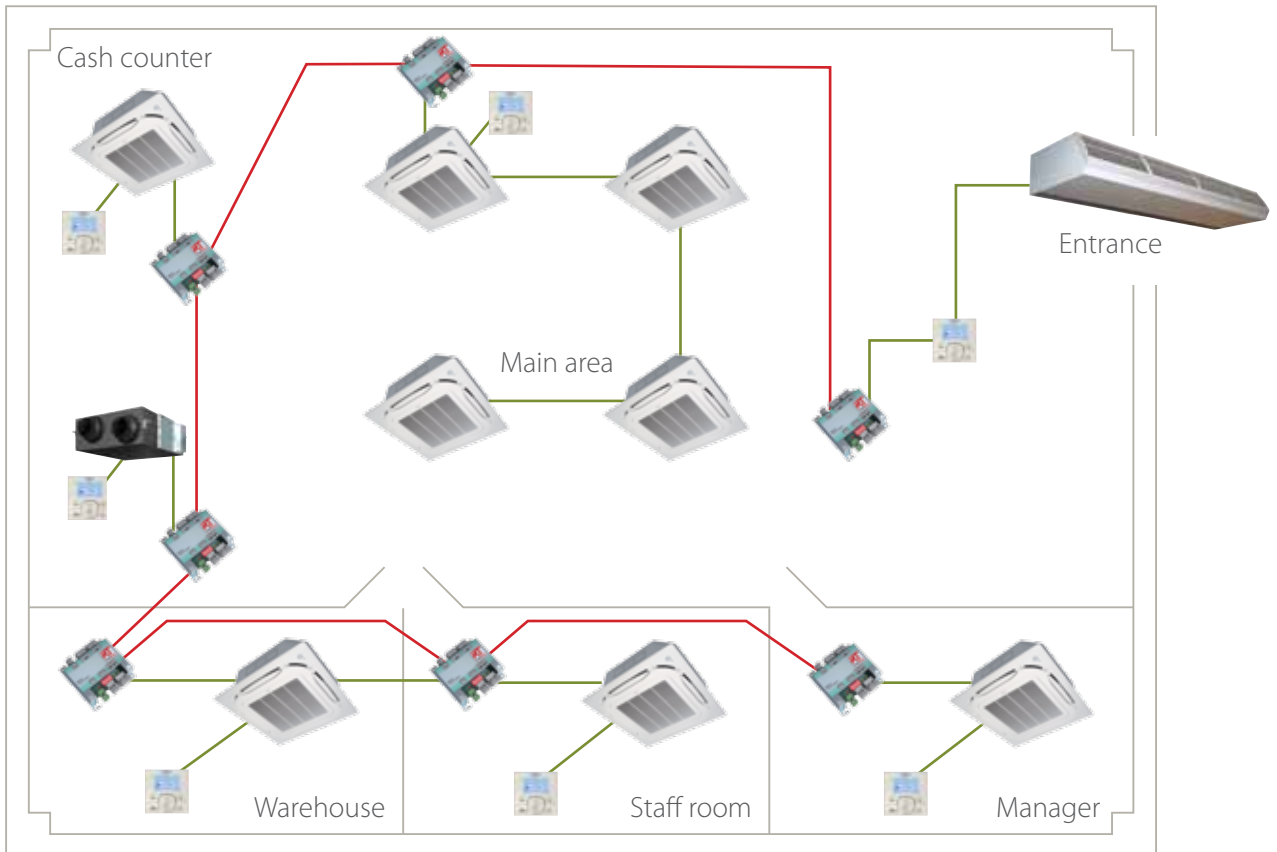
- › Interlock with key card
- › Interlock with window contact
- › Control via third party remote control
- › Limit selectable setpoint (e.g. between 19 and 24°C)
- › Prohibit several remote control settings like indoor unit on/off, indoor unit mode ...



RTD-20

Application: Retail shop

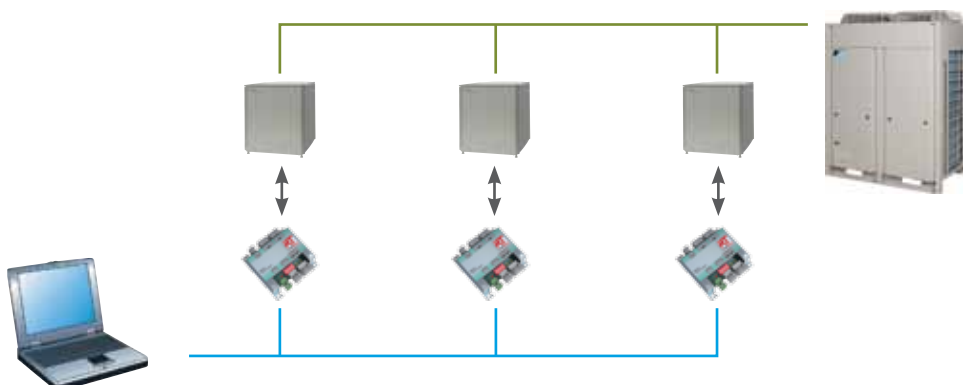
- > Operation management of retail shops zone
- > Energy saving functions
- > Flexible partition modes
- > Enhance the BMS integration of:
 - Air curtains
 - VAM
 - ERQ with 0-10V controls



RTD-W

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

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



Overview functions

						
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 x 100 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
Thermo 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 prohibition		✓
Modbus RS485		✓
Dry contact control		✓
Output signal (operation error)		✓
Space heating / cooling operation		✓
Domestic hot water control		✓

Control functions	RTD-W
On/Off Space heating/cooling	M,C
Set point leaving water temperature (heating / cooling)	M,V
Room temperature setpoint	M
Operation mode	M
Domestic Hot Water reheat	M,C
Domestic Hot Water storage	M
Quiet mode	M,C
Weather dependent setpoint enable	M
Weather dependent curve shift	M
Control source prohibition	M

Monitoring functions	RTD-W
On/Off Space heating/cooling	M,C
Set point leaving water temperature (heating/cooling)	M
Room temperature setpoint	M
Operation mode	M
Domestic Hot Water reheat	M
Domestic Hot Water storage	M
Number of units stored in the group	M
Average leaving water temperature	M
Remocon room temperature	M
Fault	M,C
Fault code	M
Circulation pump operation	M
Compressor status	M
Desinfection operation	M
Setback operation	M
Defrost/ start up	M
Pump running hours accumulated	M
Actual leaving water temperature	M
Actual return water temperature	M
Actual DHW tank temperature (*****)	M
Actual outdoor temperature	M

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



Specifications

		RTD-RA	RTD-NET	RTD-10	RTD-20	RTD-HO	RTD-W
Dimensions	HeightxWidthxDepth	80x80x37,5		100x100x22			
Weight		120					
Operation range		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



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.



The present leaflet is drawn up by way of information only and does not constitute an offer binding upon Daikin Europe N.V. Daikin Europe N.V. has compiled the content of this leaflet to the best of its knowledge. No express or implied warranty is given for the completeness, accuracy, reliability or fitness for particular purpose of its content and the products and services presented therein. Specifications are subject to change without prior notice. Daikin Europe N.V. explicitly rejects any liability for any direct or indirect damage, in the broadest sense, arising from or related to the use and/or interpretation of this leaflet. All content is copyrighted by Daikin Europe N.V.

FSC

ECPEN13-308

Daikin products are distributed by:

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