DETAILED AND EASY MONITORING AND OPERATION OF VRV® SYSTEMS (MAXIMUM 2 X 64 GROUPS)

NETWORK SOLUTIONS

touch intelligent Controller

www.daikin.eu

Daikin Europe N.V.

ABOUT DAIKIN

Daikin has a worldwide reputation based on almost 85 years' experience in the successful manufacture of high quality air conditioning equipment for industrial, commercial and residential use.

Daikin quality

Daikin's much envied quality quite simply stems from the close attention paid to design, production and testing as well as aftersales support. To this end, every component is carefully selected and rigorously tested to verify its contribution to product quality and reliability.

ENVIRONMENTAL AWARENESS

Air Conditioning and the Environment

Air conditioning systems provide a significant level of indoor comfort, making **optimum working and living conditions** possible in the most extreme climates.

In recent years, motivated by a global awareness of the need to reduce the burdens on the environment, Daikin has invested enormous efforts in limiting the negative effects associated with the production and the operation of air conditioners.

Hence, models with **energy saving** features and improved **eco-production** techniques have seen the light of day, making a significant contribution to limiting the impact on the environment.

This sign highlights features where Daikin has invested into technologies to reduce the impact of air conditioning on the environment.

This sign can be found on pages 9 to 11

CONTROL SYSTEMS

In order to realise maximum efficiency, commercial air conditioning systems must be subject to precise, 24 hour control.

Daikin's manufactures and markets a complete suite of advanced computerised central control and monitoring systems designed to simplify air conditioning management and reduce energy usage running costs.

Daikin's computerised control systems not only provide the highly sophisticated regulation and day to day monitoring necessary for modern, hi tech air conditioning installations – they also provide owners, landlords and tenants of commercial buildings with valuable performance data on consumption as well as a wide range of operating parameters. Dedicated central control can be applied to both VRV® and mixed VRV®/Sky Air® and Split installations with up to 1,024 indoor units and can also be integrated with building management systems.

TABLE OF CONTENTS

MAIN FEATURES

1. LANGUAGES

- English
- French
- German
- Italian
- Spanish
- NEW Dutch *
- NEW Portuguese *

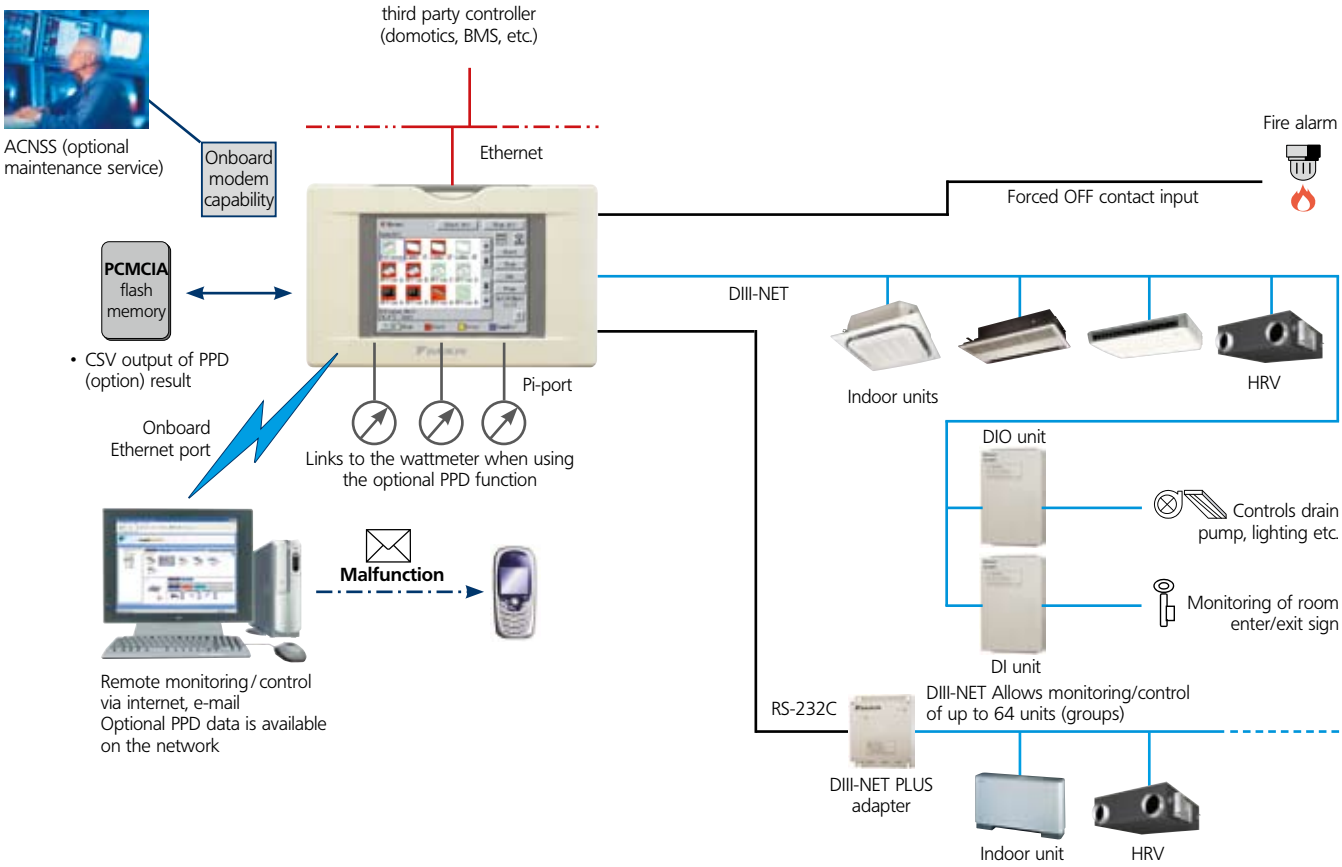
2. MANAGEMENT

- Web application & internet compatibility
  - Monitoring & control according to user
  - Remote monitoring & control of more than one building
  - Remote monitoring & control of more than one building via internet
- Easy management of electricity consumption: Power Proportional Distribution (option)
- PPD data is available on the network through Web option
- Enhanced history function
- NEW Http interface option

3. CONTROL

- Individual control (set point, start / stop, fan speed, etc) (Max. 2 x 64 groups / indoor units)
- NEW Set back schedule *
- Enhanced scheduling function (8 schedules, 17 patterns)
- Yearly schedule
- Flexible grouping in zones
- NEW Free cooling function
- Automatic cooling / heating changeover
- Temperature limit
- Heating optimization
- Fire emergency stop control
- Interlocking control
- Increased HRV monitoring and control function
- Password security: 3 levels (general, administration & service)
- Quick selection & full control
- Simple navigation

* Contact your local dealer for more information and availability



4. MONITORING

› Visualisation via Graphical User Interface (GUI)
› Icon colour display change function
› Indoor units operation mode
› Error messages via e-mail (Web option)
› Indication filter replacement
› Multi PC

5. COST PERFORMANCE

› Labour saving
› Easy installation
› Compact design: limited installation space
› Overall energy saving

6. CONNECTABLE TO:

› VRV®
› HRV
› Sky Air® (via interface adapter)
› Split (via interface adapter)

7. SYSTEM LAYOUT

› Up to 2 x 64 indoor units can be controlled
› Onboard Ethernet port (web + e-mail)
› Digital i/o contacts (option DEC101A51/DEC102A51)
› Touch panel (full colour LCD via icon display)

8. OPEN INTERFACE

› Communication to a third party controller (domotics, BMS, etc.) is possible via http interface option

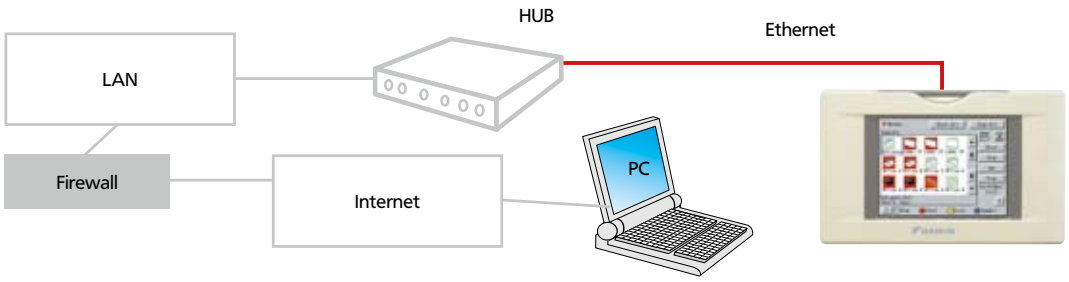
MANAGEMENT

1. WEB APPLICATION AND INTERNET COMPATIBILITY

Enables monitoring and control via the Internet from any PC worldwide with your standard Microsoft IE browser. You do not need to be on site to control your air conditioning system. There are 3 different options by which control can also be combined.

1. Using a LAN
2. Access via a public phone line and dial-up router
3. Access via an Internet connection

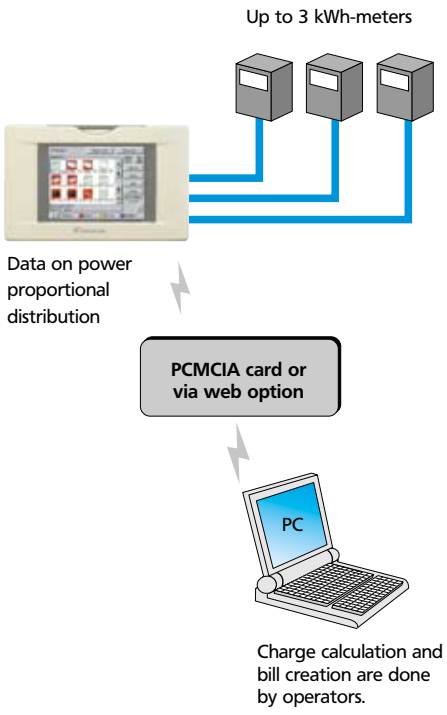
System example when using an Internet connection



Note :
* A network security device such as a firewall is necessary when connecting via the Internet

2. EASY MANAGEMENT OF ELECTRICITY CONSUMPTION

Intelligent Touch Controller also provides information on the proportional distribution of electric power, making it easier to manage electricity consumption. Optional software to compute electric power proportional distribution, (PDD) enables the electric consumption data (CSV format) per hour for each indoor unit (or zone) connected to Intelligent Touch Controller to be saved on a dedicated memory card (13 months data storage possible). It can then be displayed on a PC or spreadsheet programme. Consumption rates can then be calculated relative to the different accounting methods that may be used according to the respective conditions. Once your calculations are complete, the bill can be printed.



3. PPD DATA IS NOW AVAILABLE ON THE INTERNET VIA COMBINED WEB ACCESS AND PPD FUNCTION

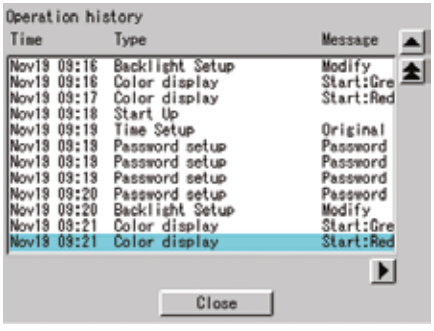
PPD data can be accessed from remote and multiple buildings via the Internet. Access can be gained from any location by a PC through a combination of web access and PPD function, thereby simplifying electrical consumption management.

PPD data originally had to be accessed via a PCMCIA card in each building.

But PPD data can now be accessed remotely via the internet.

4. ENHANCED HISTORY FUNCTION

The error history function keeps a detailed record split up by malfunction item. This is an important feature for maintaining the system and dealing with malfunctions. It helps ensure that appropriate maintenance work is performed.



5. HTTP INTERFACE OPTION

Communication to a third party controller is possible via http interface option.

CONTROL

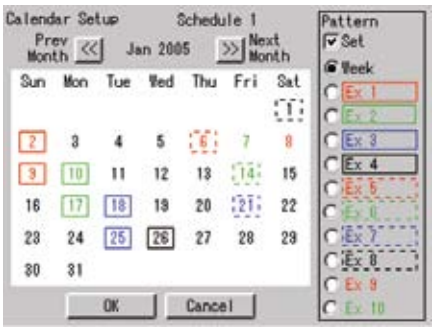
1. SET BACK FUNCTION

A single setting enables a building's temperature to be monitored and managed during both heating and cooling seasons. Activation of the schedule driven optional set back function reduces the band width between upper and lower temperature settings, allowing comfort zones, rather than set points, to be created, thereby saving energy.

The set back function must however, be activated at installation stage since it conflicts with the standard iTouch Controller schedule, temperature limit, upper and lower temperature settings and changeover functions.

2. ENHANCED SCHEDULING FUNCTION

It is possible to set up an automated yearly schedule, specifying such items as daily start up and shut off times, temperature settings and operation modes.
With 17 types of settings (Monday-Sunday + 10 special days) up to 16 operations can be registered per type, for example – Intelligent Touch Controller allows any kind of schedule (up to 8) to be set, including air conditioning unit operating hours for every day of the year. In fact, it fully automates the daily management of the system in place. Efficient automation also allows the user to save on electricity bills. (Including daylight savings option)



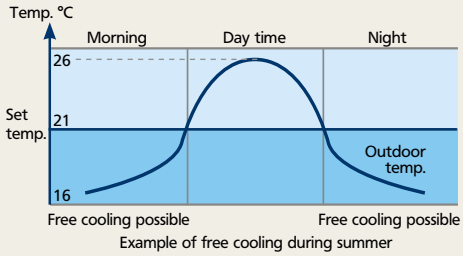
Calendar screen

3. HRV INTERLOCK

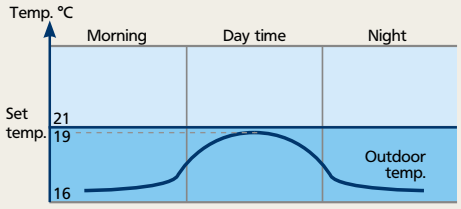
Centralised operation of HRV (heat reclaim ventilation) via the iTouch Controller enables VRV® air conditioning and HRV units to be interlocked. Automatic switching into ventilation mode simplifies overall system control and greatly enhances energy conservation.

4. FREE COOLING

The free cooling option reduces the air conditioning energy consumption and uses energy in a more efficient way by actively introducing fresh air into rooms. Free cooling maintains indoor comfort through the introduction of low temperature outdoor air into rooms.



Example of free cooling during summer



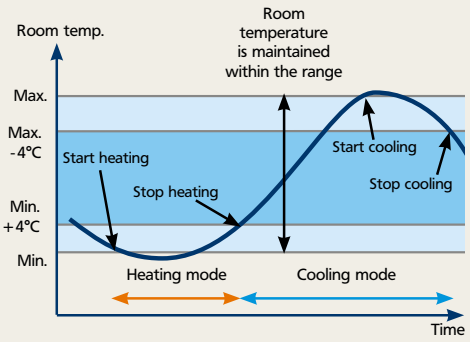
Example of free cooling during intermediate season

5. TEMPERATURE LIMIT

Automatically starts and stops the air conditioner to prevent temperatures from rising or falling too far, e.g. in unoccupied rooms.

› prevents overheating of equipment and formation of condensation in temperature controlled equipment in unoccupied rooms

› also assists in preserving heat in entire buildings by preventing unoccupied rooms from reaching extreme night time temperatures.

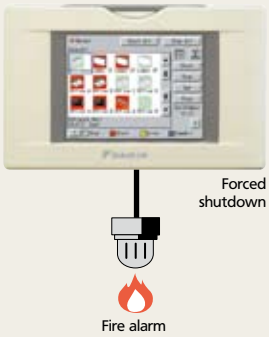


6. HEATING OPTIMIZATION

Controls the air conditioner's fan during heating mode, depending on room and set temperatures to prevent the temperature from rising.

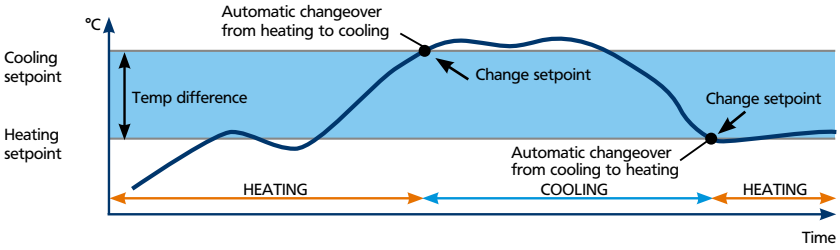
7. INTERLOCKING CONTROL

The iTC function automatically shuts down the air conditioner whenever a window is opened in the same room. A wide variety of control functions can be configured. For example, the controller can be linked with a fire alarm device to terminate operation in the event of an emergency. In fact, any "if ….then…." functions can be activated via digital input/output accessories or iTC.



8. AUTOMATIC COOLING/HEATING CHANGEOVER

Maintains optimum room temperature by automatically selecting cooling or heating mode according to room temperature in locations subject to large temperature differences between night and day.



9. PASSWORD SECURITY

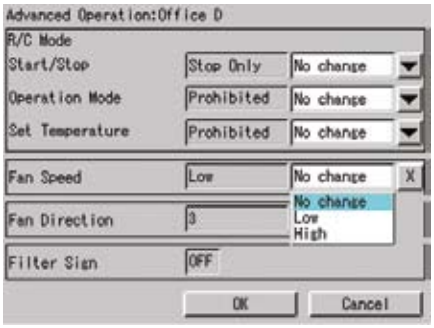
3 different password levels can be registered separately, permitting access to different levels of control functions:

› General
› Administration
› Service

10. QUICK SELECTION AND CONTROL

Just two or three simple operations enable an individual air conditioning unit to be quickly selected and controlled.
The operator can scroll search and then specify the air conditioning unit required merely by touching the icon. Icons display the operating status of the air conditioning unit(s) in question and the menu allows a variety of settings to be made without any problem.

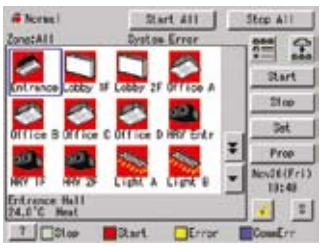
11. FULL CONTROL



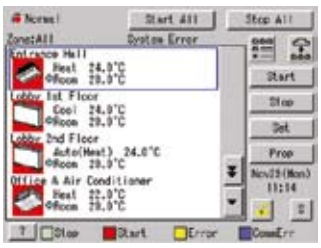
It allows easy operation of a variety of functions including the setting of operation mode and temperature.
Touching upon "Operation/Details" brings the operator to the screen used on a daily basis and input simply requires a touch of a pen.

12. SIMPLE NAVIGATION

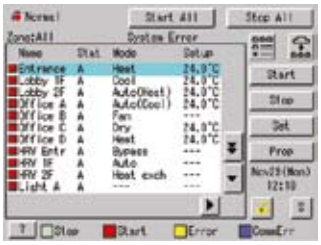
Changes from icon to detailed icon or even list display and vice versa can be made according to operator preference. Intelligent Touch Controller enables icon, detailed icon and list displays to be changed according to management and monitoring requirements, irrespective whether individual indoor unit information is being confirmed or room temperatures compared.



Icon display



Detailed icon display

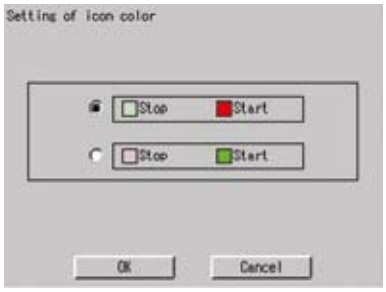


List display

MONITORING

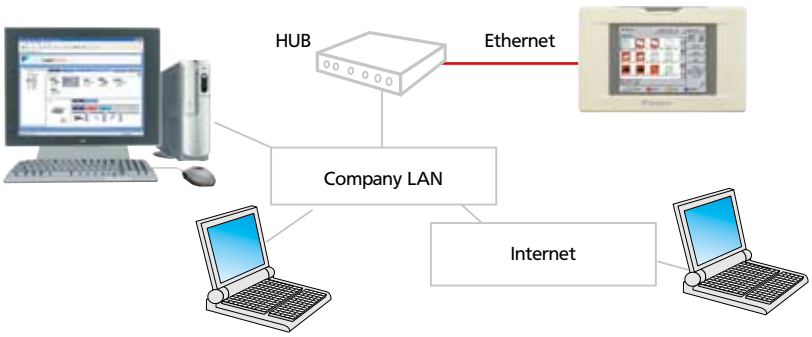
1. ICON COLOUR DISPLAY CHANGE FUNCTION

The colour of the icons, indicating running and stopped status can be changed. This makes it easy to customize the display to match administrator preferences or match the display of other control devices.



2. ERROR MESSAGES VIA E-MAIL (OPTION)

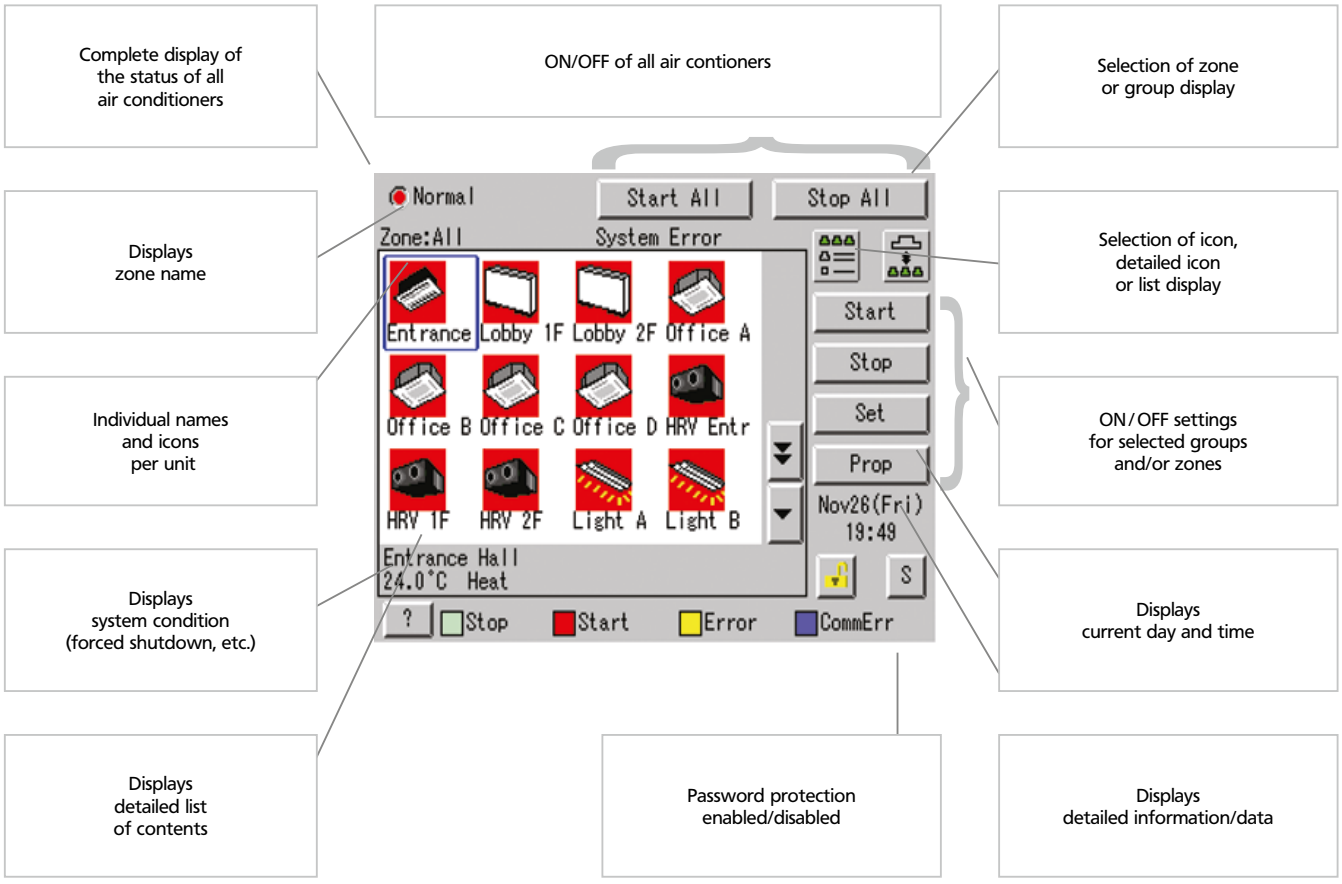
If an error should occur, you will receive a malfunction report via e-mail.



Set up is necessary to receive malfunction notifications via e-mail. Also, the location to be accessed must have an SMTP server. Consult the administrator of your company's LAN for detailed information on the required settings.

3. DETAILED AND EASY MONITORING AND OPERATION

Detailed and easy monitoring and operation of systems with up to 2 x 64 groups of indoor units (with maximum 2x 128 actual indoor units).
Just a touch on the screen brings up icons that make it easy to grasp any information regarding system control. The Intelligent Touch Controller enables an operator to carry out a variety of quick and easy operations, establish numerous settings and bring up screens to confirm the details.



SPECIFICATIONS

			Intelligent Touch Controller	DIII-NET Plus adapter
Reference			DCS601C51	DCS601A52
Power supply			externally supplied AC100V-240V, 50/60Hz	externally supplied AC100V-240V, 50/60Hz
Condition of installation method for use			JIS4 switchbox embedded in indoor wall	-
Operating condition	Surrounding temperature		0°C to 40°C	-10°C to 40°C
	Humidity		less than 85 % RH (if no condensation)	less than 90 % RH
Dimensions	HxWxD	mm	147x230x107	190x157x42
LCD panel	Size / n° of dots / n° of colours		5.7 inches / QVGA 320x240 / 4,096 colours	-
Maximum number of indoor groups			1 x 64 (2 x 64: combined with DCS601A52)	1 x 64
Maximum number of outdoor systems			1 x 10 (2 x 10: combined with DCS601A52)	10
PC & display			built-in	-
Input	Touch panel		10 bit encoded analog input	-
Communication functions	DIII-NET x 1		air conditioning equipment communication line	air conditioning equipment communication line
	Ethernet		port for Web access and e-mail function	-
	RS-232C		DIII-NET Plus adapter	-
	10BASE-T		Web option	-
	Modem	999121A	onboard modem capability	-
	PCMCIA slot		flash memory card	-
Input terminals	Digital input Di x 1		forced shutdown	-
	Pulse input Pi x 3		power measuring pulse	power measuring pulse
Overseas certification	Safety of information - Technology Equipment		IEC60730 (including IEC60335)	IEC60730 (including IEC60335)
	Interference (EMC)		EN55022 Class A, EN55024	EN55022 Class A, EN55024
Project data & Engineering			Configuration and engineering for each project are necessary. For further details, please consult with Daikin distributors and dealers.	

ACCESSORIES

Description	Reference	Comments
Software	DCS002C51	Power Proportional Distribution (PPD) Software
	DCS004A51	E-mail / Web software
	DCS007A51	Http interface option
Hardware	DCS601A52	DIII NET-Plus adapter
DIII-Ai	DAM101A51	Outdoor temperature sensor, required for free cooling changeover
Installation box	KJB411A	For wall mounted installation
Touch-Pen	1264009	Spare part n° of Touch-Pen for Intelligent Touch Controller
Interface adapters	KRP928B2S	For connection to Split units
	DTA102A52	For connection to R-22 / R-407C Sky Air® units
	DTA112B51	For connection to R-410A Sky Air® units
Digital input	DEC101A51	Input contacts: 8 inputs with additional error feedback
Digital input/output	DEC102A51	Input/output contacts: 4 inputs/outputs with additional error and on/off feedback

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.

Daikin Europe N.V. is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to services related to the product.

ISO14001 assures an effective environmental management system in order to help protect human health and the environment from the potential impact of our activities, products and services and to assist in maintaining and improving the quality of the environment.

Daikin units comply with the European regulations that guarantee the safety of the product.

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

Daikin products are distributed by:

DAIKIN EUROPE N.V.

Naamloze Vennootschap
Zandvoordestraat 300
B-8400 Oostende, Belgium
www.daikin.eu
BTW: BE 0412 120 336
RPR Oostende

FSC

ECPEN09-302 • XXX • 02/09 • Copyright © Daikin
The present publication supersedes EPCEN08-302.
Printed on non-chlorinated paper. Prepared by La Movida, Belgium
Responsible Editor: Daikin Europe N.V., Zandvoordestraat 300, B-8400 Oostende