

BUILDING MANAGEMENT SYSTEM SCHNEIDER ELECTRIC

Product Family

Schneider Electric WISER control platform

Wiser gateway with table stand, micro switch module, dimmer, Wiser blinds, switch, rotary dimmer, push dimmer, blinds switch, motion detector with switch, motion detector with dimmer, Wiser New Unica socket, simple switch, double switch, single universal dimmer, double universal dimmer, DALI dimmer, 1-10V dimmer, roller shutter switch, socket, single wireless switch, Wiser Elegance and D-Life double wireless switch, Wiser indoor IP camera, outdoor IP camera Wiser, Wiser IR remote control, Wiser smart socket, Wiser door/window sensor, Wiser flood sensor, Wiser fire sensor, Wiser temperature/humidity sensor, Wiser motion sensor, Power Tag energy sensor, Wiser for KNX Logic controller, KNX SpaceLynk Logic Controller, SpaceLogic KNX 1280m power supply, KNX cable (100 meter roll), Box of 50 red/grey terminals, KNX binary flush-mount actuator 1 output 16 A and 3 inputs, KNX pushbutton interface, Hybrid module KNX Wiser.

Control System

CONTROL SYSTEM

SCHNEIDER ELECTRIC



Schneider Electric WISER Control Platform

Product Family Representative
Hub / Gateway

Description

WISER is an energy monitoring, control and automation platform for residential buildings, which achieves interaction between the user and the different building systems. The flexibility of the system allows the solution to be implemented according to the needs of each user, improving occupant comfort and reducing both energy consumption and operational costs.

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Summary table: Environmental parameters to which the material has a specific contribution. Detailed in the sheets of the respective environmental certifications VERDE, LEED and BREEAM

Supporting Documents		Certifications: DAP, CSR, REACH			Declarations			Potential
Mobility Site	Material reflection index SRI	Rainwater management	Ext. light control	...				
Energy Atmosphere	Embedded Energy	Greenhouse gases	Reduction of energy demand	Equipment efficiency	Other polluting gases	Renewable energy	Energy management	
Materials	Accredited location	Pre-consumer recycled content	Post-consumer recycled content	Potential reuse	Certified Wood	Residue work	Chemical composition	
Water	Consumption < reference	Water management	...					
Indoor Environment	Low VOC emission	Low Formal-Dehyde Emission	Comfort control	Lighting comfort	Acoustic comfort	Air quality	...	
Innovation	Innovation Design	...						

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SUMMARY OF CRITERIA

GREEN



ENERGY AND ATMOSPHERE (EA)

- EA 01 Primary power consumption.
- EA 03 Consumption in common areas.



QUALITY IN BUILDING (CE)

- CE 04 Systematic Commissioning.



Site and Location



Energy and Atmosphere



Natural resources



Indoor Environment



Social Aspects



Building Quality



Innovation

VERDE Certification Standards

VERDE 2022

Building

DUP

Urban Developments Polygons

CRITERIA SHEET

GREEN



CATEGORY

ENERGY AND ATMOSPHERE

EA 01 Primary power consumption. (VERDE EDIFICIOS 2022)

Objective

Promote the reduction of non-renewable primary energy consumption (to zero consumption) and total primary energy consumption necessary to cover the demands of heating, cooling, DHW, ventilation, humidity control and, where appropriate, lighting.

Compliance data

To justify the criteria of energy efficiency and low emissions in GREEN, it is necessary to demonstrate reductions in primary energy consumption above the limit value set by CTE DB-HE 0. To assess it, a simulation must be carried out with any of the recognized programs for the evaluation of energy efficiency of buildings.

Below are the elements of the *SCHNEIDER ELECTRIC Wisier* control platform that help reduce the building's energy consumption, contributing to compliance with the GREEN criteria.

The following products allow programming the opening and closing of blinds during the hours of solar incidence depending on whether it is a hot or cold season of the year. Savings can be calculated by simulating different solar gains in the window based on incident solar radiation, which the simulation program calculates based on orientation and climate data.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wisier, white
CCT5015-0002	Wiser micro module blinds & shutters
NU350918, NU350930, NU350954	Connected Blind control switch / Aluminum / Anthracite
MTN5165-0000	Shutter control 1000VA
MTN5116-6000, MTN5116-0300	Connected switch, Merten System Design, Wisier/ Connected switch, Merten System M, Wisier

NOTE: The result to determine the total valuation of the criterion also depends on many other factors, such as the design of the building, its location, orientation, materials, definition of the envelope and systems used.

Evaluation procedure

The criterion values two indicators:

- Reduction of non-renewable primary energy consumption to zero consumption (corresponding to a score of 50% of the criterion).

- Reduction of total primary energy consumption (corresponding to a score of 50% of the criterion).

The score is calculated on the limit value set by CTE DB-HE 0.

In the case of using a simplified method to perform the calculations, the valuation will be reduced by 20%.

When the total primary energy consumption for heating or cooling is equal to or less than 15kWh/m²-year, it will be necessary to justify the criterion to carry out a *blower door* test in accordance with the UNE-EN ISO 9972: 2019 standard of the building in use, which justifies that the air tightness has a deviation value of less than 5% with respect to that indicated in the energy rating. If this test is not performed, the evaluation of the criterion will be reduced by 10%.

To evaluate this criterion, it is necessary to carry out an energy simulation that can be used to carry out the energy certification or the justification of CTE DB-HE compliance.

Analysis example

NA

Supporting Documents

[WISER Technical Catalogue](#)

Reference standard

CTE



CATEGORY ENERGY AND ATMOSPHERE

EA 03 Consumption in common areas. (VERDE EDIFICIOS 2022)

Objective Reduce the consumption of electrical energy in lifting and transport systems (elevators, forklifts, etc.), and in buildings for private residential use, also in the lighting of common areas.

Compliance data The Schneider Electric presence and motion detector registers the presence of people in the room and can act on the lighting, turning on the light for a certain time without touching the mechanism, when it detects presence in the passage areas or depending on the exterior lighting.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT5010-0002	Connected dimmer, Wiser, Micro module
CCT5011-0002	Connected switch, Wiser, Module
NU351718, NU351730, NU351754, NU351818, NU351830, NU351854	Connected dimmer, New Unica Wiser White/Aluminium/Anthracite pulsation and rotary regulator
NU353818, NU353854, NU353830,	Connected switch, New Unica, Wiser, 1-pole 1-way White/Aluminium/Anthracite
NU352618, NU352654, NU352630,	Connected movement detector, New Unica Wiser, switch White/Aluminium/Anthracite
NU352718, NU352754, NU352730,	Connected movement detector, New Unica Wiser, universal, LED, White/Aluminium/Anthracite
MTN5171-0000	multifunction control unit, PlusLink, universal dimmer, 1 rocker
MTN5172-0000	multifunction control unit, PlusLink, universal dimmer, 2 rockers
MTN5180-0000	1-10V Dimmer
MTN5185-0000	DALI Dimmer
MTN5161-0000, MTN5162-0000	multifunction control unit, PlusLink, relay, 1 rocker/2 rockers
MTN5116-6000, MTN5116-0300, MTN5126-6000, MTN5126-0300	Connected switch, Merten System Design, Wiser, module, 1 or 2 push bottom/ Connected switch, Merten System M, Wiser, module, 1or 2 Push button
CCT595011	connected movement detector, Wiser, white

It can therefore contribute to obtaining 20% of the score in the criterion since it contributes with presence detector combined with illumination probe.

Evaluation procedure

The criteria requirements for common areas of residential buildings are as follows:

- Energy savings in lifting and transport elements (lifts, forklifts, etc.): The lift has a B classification, according to the UNE-EN ISO 25745-2 standard.
- Efficient lighting systems in common areas:
 - The VEEI value of common areas, hallways, portals, distributors and landings, which must be equal to or less than 3.

- The lighting of common areas has some of the following saving devices in this order of priorities:
 - Presence detector combined with illumination probe
 - Presence detector
 - Illumination probe
 - Timer

Analysis example NA

Supporting Documents [WISER Technical Catalogue](#)

Reference standard CTE



CATEGORY QUALITY IN BUILDING

◆ CE 04 Systematic Commissioning. (VERDE EDIFICIOS 2022)

Objective Ensure that the building is delivered with the appropriate technical equipment and operating according to the requirements of the project and complying with the manufacturer's specifications.

Compliance data The following Schneider Electric devices allow the measurement of instantaneous power consumption and visualized energy consumption by days, weeks, months and year. The consumption of those electrical loads plugged into the intelligent power outlets is measured, with the ability to give voltage or remove voltage either manually, by touching the mechanism itself or remotely from the application or automatically depending on a time schedule or reaching a limit consumption.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT711119	Smart Plug, Wiser, Schuko
NU555718, NU555754	NU555730, Connected socket-outlet, New Unica, Wiser, White/Alum/Antr
MTN2380-0319, 0325, MTN2380-0460	MTN2380- 0414, Connected socket-outlet, Merten, System M, Wiser, Schuko White/White Act/Anthracite/Aluminium
MTN2380-6035, 6034, MTN2380-6036	MTN2380- Connected socket-outlet, Merten, System D, Wiser, Schuko, Lotus White/Antr/Aluminium

The following devices are placed in the electrical protections of the electrical panel and measures the electrical consumption that passes through these protections of the house. The Schneider Electric application shows consumption in a bar graph, displayed in hours, days, weeks, months and years. There is also the possibility of making the equivalence of energy to € and being able to obtain an estimate of the electricity bill.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
R9M41	PowerTag Energy Resi9 M63A 3P+N SUPERIOR
R9M60, R9M70	PowerTag Energy Resi9 F63A 1P/3P+N FLEX

Schneider Electric devices therefore allow the collection of information on the main energy supplies and the main building systems (air conditioning, lighting, DHW, power, etc.). Any individual final energy use representing 10% or more of the building's total annual consumption can also be measured. They can therefore contribute to the consumption measurement requirement of this GREEN criterion.

Evaluation procedure

The criteria requirements are as follows:

- **Monitoring of consumption:** An adequate monitoring plan has been implemented for the building, in which, all energy and water consumption on a regular monthly basis is recorded, and it is done exhaustively. The project must at least collect the information of the main energy supplies of the project and the main systems of the building of the building (air conditioning, lighting, DHW, force, etc. Additionally, it is recommended to measure any individual end use of energy that represents 10% or more of the total annual consumption of the building.
- Commissioning protocol.
- Preliminary functional test.
- Commissioning and training of operators.
- Final report on the start-up.
- Comprehensive operation manual and systematic preventive maintenance plan.
- Commissioning management.

Analysis example

NA

Supporting Documents

[WISER Technical Catalogue](#)

Reference standard

CTE, RITE

SUMMARY OF CREDITS

LEED v4



Location and Transportation (LT)

- Green vehicles



Water Efficiency (WE)

- Building-level water metering (prerequisite)
- Water metering



Energy and Atmosphere (EA)

- Minimum energy performance (prerequisite)
- Optimize energy performance
- Building-level energy metering (prerequisite)
- Advanced energy metering
- Advanced utility tracking
- Demand response
- Enhanced Commissioning



Indoor Environmental Quality (EQ)

- Minimum indoor air quality performance (prerequisite)
- Combustion venting (prerequisite)
- Enhanced indoor air quality strategies
- Thermal comfort
- Interior lighting
- Daylight



Innovation in Design (ID)

- Innovation

LEED Environmental Categories



(LT)

Location and Transportation



(SS)

Sustainable Sites



(WE)

Water efficiency



(EA)

Energy and atmosphere



(MR)

Materials and Resources



(IEQ) Indoor Environmental Quality



(ID)

Innovation in Design



(PR)

Regional Priority

LEED Certification Standards (v4)

EB Existing Building
NC New Construction
CI Commercial Interiors
CS Core & Shell
SNC School New Construction
SEB School Existing Building
MMR Multifamily Mid Rise

RNC Retail New Construction
REB Retail Existing Building
RCI Retail Commercial Interiors
HC Healthcare
HNC Hospitality-New Constr.
HEB Hospitality-Existing Building
HCI Hospitality-Commercial Int.

DCNC Data Center NC
DCEB Data Center EB
WNC Warehouse NC
WEB Warehouse EB
NDP Neighborhood Devel. Plan
ND Neighborhood Develop.
HM Homes

CREDIT SHEET

LEED v4



CATEGORY

LOCATION AND TRANSPORTATION (LT)

Green vehicles. (NC, CS, RNC, HNC, DCNC, WNC, SNC, HCNC, HC)

Objective To reduce pollution by promoting alternatives to conventionally fueled automobiles.

Compliance data SCHNEIDER ELECTRIC electric vehicle chargers can be integrated into WISER. From the App it is possible to monitor, control and parameterize the charging conditions. They are therefore accessible via the Internet and would be able to participate in a demand response program.

Below are the references of electric vehicle chargers:

REFERENCE	PRODUCT
EVH4A03N2	EVlink Home Smart T2S 1P+N 3.7 kW 16 A RDC-DD
EVH4A07N2	EVlink Home Smart T2S 1P+N 7.4 kW 32 A RDC-DD
EVH4A11N2	EVlink Home Smart T2S 3P+N 11 kW 16 A RDC-DD
EVH4A03NC	Home Smart cable 5 m T2 1P+N 3.7 kW 16 A RDC-DD
EVH4A07NC	Home Smart cable 5 m T2 1P+N 7.4 kW 32 A RDC-DD
EVH4A11NC	Home Smart cable 5 m T2 3P+N 11 kW 16 A RDC-DD

There are three models without hose and three with 5-meter hose and all have type 2 charging socket. The powers are 3.7kW and 7.4kW in single-phase and 11kW in three-phase.

You can start or stop charging from the app, have a historical supervision of the energy consumption involved in the charge of the vehicle, make an economic estimate and also establish schedules to start charging in those time slots where the price of energy is cheaper or when there are surpluses of solar production.

They can therefore contribute to compliance with the criterion.

Evaluation procedure Reserve 5% of parking spaces for environmentally friendly vehicles (Euro 6 limit values of Regulation (CE) n° 715/2007).

In addition, alternative fuel service stations must be provided for 2% of the seats, such as liquid or alternative gas fuel or charging points for electric vehicles.

Electric vehicle charging points must comply:

- Level 2 (208 - 240 volt) or higher charging capacity.
- Comply with IEC 62196.

- Be networked or accessible from the Internet and be able to participate in a demand response or hourly differential electricity tariff program to encourage off-peak charging.

Analysis example NA

Supporting Documents [EVlink Home Smart User Manual](#)

Reference standard NA





CATEGORY WATER EFFICIENCY (WE)

➤ **Building-level water metering (prerequisite)**

➤ **Water metering (credit).**

(NC, CS, CI, RNC, HNC, DCNC, WNC, SNC, HCNC, EB, SEB, REB, RCI, HC, HEB, DCEB, WEB, HM, MMR)

Objective To support water management and identify opportunities for additional water savings by tracking water consumption.

Compliance data The analyzed SCHNEIDER ELECTRIC products contribute to compliance with the credit and prerequisite through the measurement of partialized consumption using the following elements:

REFERENCE	PRODUCT
LSS100100, MTN693003	Wiser for KNX Logic Controller/ Power supply REG, 24 V DC / 0.4 A, light grey
LSS100200, MTN693003	KNX SpaceLynk Logic Controller/ Power supply REG, 24 V DC / 0.4 A, light grey
MTN6513-1201	Power supply SpaceLogic KNX 1280m
MTN5001-0000	KNX Cable (100 meter roll)
MTN689701	Red/grey Bus connecting Terminal
MTN6003-0011	Switch actuator, SpaceLogic KNX, 16 AX ,1 gang, flush mounted, 3 binary inputs, KNX secure
MTN670802	Push-button interface, 2-gang plus, polar white
LSS100400	KNX Wiser hybrid module

The mentioned equipment allows the measurement of the water flow passing through a conduct recording said measurement.

Evaluation procedure

Prerequisite: Install meters to measure total water consumption in the building.

Credit: Install independent meters for at least two of the following systems:

- Irrigation
- Faucets and toilets
- ACS
- Reclaimed water
- Boilers over 375000 litres or 150kW
- Other process water

Note: The Homes-Multifamily midrise system only has the prerequisite available, not the credit.

Analysis example

NA

Supporting Documents

KNX electronic catalogue

Reference standard

NA



CATEGORY ENERGY AND ATMOSPHERE (EA)

➤ **Minimum Energy Performance (prerequisite)**

➤ **Optimize Energy Performance (credit).**

(NC, CS, CI, RNC, HNC, DCNC, WNC, SNC, HCNC, EB, SEB, REB, RCI, HC, HEB, DCEB, WEB, HM, MMR)

Objective To reduce the environmental and economic harms of excessive energy use by achieving a increasing level of energy efficiency for the building and its systems.

Compliance data **New construction projects:**

To justify energy performance criteria in LEED, it is necessary to demonstrate reductions in primary energy consumption, by comparison with a reference building defined in Appendix G of ASHARE 90.1.2010. To assess it, an energy simulation will have to be carried out.

Below are the elements of the *SCHNEIDER ELECTRIC Wisier* control platform that help reduce the building's energy consumption, contributing to compliance with LEED criteria.

The combination of the following products has the ability to regulate the intensity of the light either manually by use of the mechanism, through the application by sending the lighting dimming command directly from the application, or automatically by programming in the application.

In the simulation, the savings produced by varying the lighting at times when it is not necessary can be estimated.

REFERENCE	PRODUCT
NU351718, NU351730, NU351754, NU351818, NU351830, NU351854	Connected dimmer, New Unica, Wisier universal/Rotary Universal White/ Aluminium / Anthracite
CCT501901	Wisier Gateway
CCT501400_0001	Docking kit for hub, Wisier, white
CCT5010-0002	Connected dimmer, Wisier, Micro module
CCT595011	Wisier Movement Detector
MTN5180-0000, MTN5185-0000, MTN5171-0000, MTN5172-0000	1-10 Dimmer/DALI DIMMER/ push button dimmer / push button dimmer 2 gangs
MTN5116-6000, MTN5116-0300, MTN5126-6000, MTN5126-0300	Connected switch, Merten System Design, Wisier, module, 1 or 2 Push button/ Connected switch, Merten System M, Wisier, module, 1 or 2 Push buttons

The following products are regulatory mechanisms with detector integrated into the mechanism itself. Lighting can be turned on or off by means of a presence detector, programming its intensity according to a schedule. The simulation program allows to compute savings by the control of the lighting according to the estimated hours of presence.

REFERENCE	PRODUCT
NU352718, NU352730, NU352754	Movement detector with Wisier White / Aluminium / Anthracite regulator

CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white

The following products allow programming the opening and closing of blinds during the hours of more or less solar incidence depending on whether it is a hot or cold season of the year. Savings can be calculated by simulating different solar transmittances in the window based on the incident solar radiation, which the simulation program calculates based on orientation and climate data.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT5015-0002	Wiser micro module blinds & shutters
NU350918, NU350930, NU350954	Wiser White / Aluminium / Anthracite Connected blinds Blind switch
MTN5165-0000	Shutter control 1000VA
MTN5116-6000, MTN5116-0300	Connected switch, Merten System Design, Wiser, module, 1 Push button/ Connected switch, Merten System M, Wiser, module, 1 Push button

NOTE: The result to determine the total valuation of the criterion also depends on many other factors, such as the design of the building, its location, orientation, materials, definition of the envelope, and systems used.

Existing buildings:

In addition to the systems mentioned for new construction, there are other measures, which, although they cannot be simulated in an energy model, can contribute to energy savings and reduce consumption improving the score, as indicated below.

The following products allow controlling the on and off of the household stand by appliances, being able to save the consumption of the stand by when they are not necessary.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
NU555718, NU555730, NU555754, MTN2380-0319, MTN2380-0325, MTN2380-0414, MTN2380-0460, MTN2380-6035, MTN2380-6034, MTN2380-6036	Connected socket-outlet, New Unica, Wiser White/Alum/Antr Power Outlet, Connected socket-outlet, Merten, System M, Wiser Polar White/White Act/Anthracite/Aluminum, Connected socket-outlet, Merten, System D, Wiser Lotus White/Antr/Aluminum
CCT711119	Smart Plug, Wiser, Schuko, 230 V AC, 2P + E, white

The following products allow the measurement of consumption of those loads connected to the power outlets, enabling the programming of disconnecting the load if it reaches a maximum consumption and/or specific hours.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white

NU555718, NU555730, NU555754, MTN2380- 0319, MTN2380-0325, MTN2380-0414, MTN2380-0460, MTN2380-6035, MTN2380-6034, MTN2380-6036	Connected socket-outlet, New Unica, Wiser White/Alum/Antr Power Outlet, Connected socket-outlet, Merten, System M, Wiser Polar White/White Act/Anthracite/Aluminum, Connected socket-outlet, Merten, System D, Wiser Lotus White/Antr/Aluminum
CCT711119	Smart Plug, Wiser, Schuko, 230 V AC, 2P + E, white

The following products allow to know the consumption of the appliances that consume the most by limiting their ignition to a certain schedule.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
NU555718, NU555730, NU555754, MTN2380- 0319, MTN2380-0325, MTN2380-0414, MTN2380-0460, MTN2380-6035, MTN2380-6034, MTN2380-6036	Connected socket-outlet, New Unica, Wiser White/Alum/Antr Power Outlet, Connected socket-outlet, Merten, System M, Wiser Polar White/White Act/Anthracite/Aluminum, Connected socket-outlet, Merten, System D, Wiser Lotus White/Antr/Aluminum
CCT711119	Smart Plug, Wiser, Schuko, 230 V AC, 2P + E, white

The following products allow the control of split climate systems with IR remote control, to allow scheduled programming.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT501411	Hub, Wiser, ZB/IR convertor, black & white

Evaluation procedure

BD+C, CI and Homes + MMR tools, Option 1: Energy simulation

Demonstrate, through an energy simulation, the improvement in the energy efficiency of the proposed building compared to a reference building (defined according to the ANSI / ASHRAE / IESNA 90.1-2.010 standard, Appendix G, with errata).

NOTES:

- LEED Multifamily Midrise also includes commissioning requirements in the prerequisite.
- LEED Homes relies on the Energy Star HERS index, rather than ASHRAE 90.1-2.010 energy simulation, to assess energy savings. Prerequisite EAp1 also requires the installation of appliances with the ENERGY STAR seal or equivalent.

EBOM tools: Energy efficiency will be assessed in comparison of energy bills with:

- Valid typologies for Energy Star Portfolio Manager: Energy Star Portfolio Manager Rating
- Typologies not valid for Energy Star Portfolio Manager:

- Comparison with the national average of buildings of the same type. If this average is not available, it can be compared with three buildings of the same type.
- Comparison with historical data of consumption of the building.

Exemplary performance (extra score):

- LEED BD+C, option1: Achieve at least 54% energy savings compared to the reference building.
- LEED CI: Achieve energy savings of 32% compared to the reference building.
- LEED EBOM:
 - Projects eligible for Energy Star Portfolio Manager: Score 97 on Energy Star Portfolio Manager.
 - Projects not valid for Energy Star Portfolio Manager: Compare them with three similar buildings and with the consumption history and obtain a 47% saving.
- LEED Homes and Midrise:
 - 100% improvement over LEED energy budget (LEED requirement based on HERS index)
 - HERS 10 Index
 - 65% reduction from ASHRAE 90.1–2010

Analysis example

NA

Supporting Documents

[WISER Technical Catalogue](#)

Reference standard

ASHRAE 90.1-2010



CATEGORY ENERGY AND ATMOSPHERE (EA)

- **Building-level energy metering (prerequisite)**
- **Advanced energy metering (credit).**
(NC, CS, CI, RNC, HNC, DCNC, WNC, SNC, HCNC, EB, SEB, REB, RCI, HC, HEB, DCEB, WEB, HM, MMR)

Objective Support energy management and identify opportunities for additional savings by monitoring the energy consumption of the building and systems.

Compliance data SCHNEIDER ELECTRIC products contribute to credit compliance with the measurement of partialized consumption.

The following Schneider Electric devices measure the instantaneous power consumption and energy consumed displayed by days, weeks, months and year. The consumption of those electrical loads plugged into the intelligent power outlets is measured, with the ability to give voltage or remove voltage either manually, by touching the mechanism itself or remotely from the application or automatically depending on a time schedule or reaching a limit consumption.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT711119	Smart Plug, Wiser, Schuko, 230 V AC, 2P + E, white
NU555718, NU555730, NU555754	Connected socket-outlet, New Unica, Wiser White/Alum/Antr Power Outlet
MTN2380-0319, MTN2380-0325, MTN2380-0414, MTN2380-0460	Connected socket-outlet, Merten, System M, Wiser PolarWhite/White Act/Anthracite/Aluminum
MTN2380-6035, MTN2380-6034, MTN2380-6036	Connected socket-outlet, Merten, System D, Wiser Lotus White/Antr/Aluminum

The following devices are placed in the protections of the electrical panel and measures the electrical consumption that passes through these protections of the house. The Schneider Electric application shows consumption in a bar graph, displayed in hours, days, weeks, months and years. There is also the possibility of making the equivalence of energy to € and being able to obtain an estimate of the electricity bill.

REFERENCE	PRODUCT
R9M41	PowerTag Energy Resi9 M63 3P+N Top Position
R9M60, R9M70	PowerTag Energy Resi9 F63A 1P/3P+N Top and Bottom Position

To measure the consumption of other energy sources, such as gas, the following devices are used:

REFERENCE	PRODUCT
LSS100100	Wiser for KNX Logic controller

LSS100400	Hybrid module Wiser KNX
MTN6513-1201	Power supply SpaceLogic KNX 1280mA
MTN5001-0000	KNX cable (100-meter roll)
MTN689701	Bus connecting terminal, red/dark grey
MTN670802	Push-button interface, 2-gang plus, polar white

Schneider Electric devices therefore allow the collection of information on the main energy supplies and the main building systems (air conditioning, lighting, DHW, power, etc.). Any individual final energy use representing 10% or more of the building's total annual consumption can also be measured. They can therefore contribute to the consumption measurement requirement of this LEED criterion.

The elements described form a measuring system that meets the requirements:

- Is permanent, taking data at hourly intervals or less and transmits the data remotely.
- Measures the consumption and power.
- The data collection system employs a local network, building automation, wireless system or other comparable communication system.
- The system stores data for at least 36 months.
- The data is accessible remotely.
- The installed measurers transmit hourly, daily, monthly and annual energy data.

Evaluation procedure

Prerequisite Requirements:

- Install measurers to count the total energy consumption of the building (electricity, gas, tempered water, steam, fossil fuels, biofuels, etc.)
- Collection of data in monthly and annual summaries.

Credit Requirements (1 point):

- Install measurers or consumption measurers of:
 - All energy sources used in the building.
 - Each final energy use that accounts for more than 10% of annual energy consumption (based on building simulation data). It will be valued: Power supply to equipment (computers, printers, etc.), lighting, cooling, heating, fans, pumps, condensing circuits, outdoor lighting, DHW.

Note: The Homes -Multifamily midrise system only has the prerequisite available, not the credit.

Analysis example

NA

Supporting Documents

[WISER Technical Catalogue
https://download.schneider-electric.com/files?p_Doc_Ref=ESMKT01240C23&p_enDocType=Catalog&p_File_Name=eCatalog-KNX_2023_ES.pdf](https://download.schneider-electric.com/files?p_Doc_Ref=ESMKT01240C23&p_enDocType=Catalog&p_File_Name=eCatalog-KNX_2023_ES.pdf)

Reference standard

American National Standards Institute, ANSI C12.20, Class 0.2 (± 0.2)
American National Standards Institute, ANSI B109
EN Standard, EN-1434: Thermal energy (Btu meter or heat meter)



CATEGORY ENERGY AND ATMOSPHERE (EA)

Advanced utility tracking (HM, MMR)

Objective To support energy efficiency efforts through real-time monitoring of energy and water use.

Compliance data SCHNEIDER ELECTRIC products contribute to credit compliance with the measurement of partialized consumption.

The following Schneider Electric devices are placed in the electrical protections of the electrical panel and measures the electrical consumption that passes through these protections of the house. The measuring interval is every 5 seconds.

The Schneider Electric application shows consumption in a bar graph, which is displayed in hours, days, weeks, months and years. There is also the possibility of making the equivalence of energy to € and being able to obtain an estimate of the electricity bill.

REFERENCE	PRODUCT
R9M41	PowerTag Energy Resi9 M63A 3P+N Top Position
R9M60, R9M70	PowerTag Energy Resi9 F63A 1P/3P+N Top and Bottom Position

Schneider Electric devices therefore allow the collection of energy consumption information from the different building systems (air conditioning, lighting, DHW, force, etc.) can therefore contribute to the fulfillment of this LEED criterion.

Evaluation procedure

Option 1:

Do one of the following:

- Install measurers that count the energy consumption of each home at intervals of 1 hour or less and with the ability to transmit data remotely, or
- If the project has a landscaped area greater than 90m² with automated irrigation system, install a measurer to monitor the consumption of the components of the irrigation system.

Option 2:

- Share consumption data for the entire building with USGBC, or at least 50% of homes.

Analysis example

NA

Supporting Documents

[WISER Technical Catalogue](#)

Reference standard

American National Standards Institute, ANSI C12.20, Class 0.2 (± 0.2)
American National Standards Institute, ANSI B109
EN Standard, EN-1434:Thermal energy (Btu meter or heat meter)



CATEGORY ENERGY AND ATMOSPHERE (EA)

Demand response. (NC, CS, CI, RNC, HNC, DCNC, WNC, SNC, HCNC, RCI, HC)

Objective Increase participation in demand response technologies and programs that make power generation and distribution systems more efficient, increase grid reliability, and reduce greenhouse gas emissions.

Compliance data At present there are no demand response programs available in Spain for residential buildings, not being viable the fulfillment of "Case 1".

Schneider Electric's WISER system can contribute to "Case 2" compliance through power tag *energy sensors* with communication to the building automation system that allows the system the ability to accept an external price or an external control signal from the company.

REFERENCE	PRODUCT
R9M41	PowerTag Energy Resi9 M63A 3P+N Top Position
R9M60, R9M70	PowerTag Energy Resi9 F63A 1P/3P+N Top and Bottom Position

Evaluation procedure

Case 1: Demand response programs available:

Participate in an existing RD (real-time dynamic pricing programs) demand response program with at least 10% of the estimated peak electricity demand.

Case 2: Demand response programs not available:

Provide the necessary infrastructure to take advantage of future demand response programs and complete the following activities:

- Install time-log meters capable of making the building automation system accept an external price or external control signal.
- Develop a plan to reduce at least 10% of the building's estimated maximum electrical power at given times for participation in a DR program.
- Include DR processes in the scope of Commissioning.
- Contact local electricity providers to discuss participation in future DR programs.

Analysis example

NA

Supporting Documents

[WISER Technical Catalogue](#)

Reference standard

NA



CATEGORY ENERGY AND ATMOSPHERE (EA)

◆ Enhanced commissioning (NC, CS, CI, RNC, HNC, DCNC, WNC, SNC, HCNC, RCI, HC)

Objective	Encourage the performance of a building in terms of energy, water, indoor environmental quality and durability to meet the needs of the developer efficiently.
Compliance data	<p>The Schneider Electric WISER system allows the monitoring of the building in a way that contributes to the monitoring commissioning.</p> <p>Schneider Electric devices allow monitoring the building's operation and collecting information from its main energy supplies and building systems (such as air conditioning, lighting, hot water, power, etc.), as well as comfort and air quality. This enables the optimization of the building's operation based on measured data and trend analysis.</p> <p>Therefore, it can contribute to meeting the commissioning criterion based on monitoring. It will be necessary to include operational control tests of this system during the start-up phase.</p>
Evaluation procedure	<p>Path 1: Enhanced Commissioning. Perform the commissioning process (CxP) for mechanical, electrical, plumbing, and renewable energy systems in accordance with ASHRAE guideline 0-2005 and ASHRAE guideline 1.1-2007 for HVAC&R systems, considering energy, water, indoor environmental quality, and durability.</p> <p>Path 2: Enhanced and monitoring-based commissioning (4 points) In addition to meeting the requirements of track 1, develop procedures based on monitoring and identify control points that must be measured and evaluated to assess the performance of systems that consume energy and water.</p>
Analysis example	NA
Supporting Documents	WISER Technical Catalogue
Reference standard	<ul style="list-style-type: none"> • <i>ASHRAE Guideline 0–2005, The Commissioning Process</i> • <i>ASHRAE Guideline 1.1–2007, HVAC&R Technical Requirements for the Commissioning Process</i> • <i>NIBS Guideline 3–2012, Exterior Enclosure Technical Requirements for the Commissioning Process</i>



CATEGORY INDOOR ENVIRONMENTAL QUALITY (IEQ)

Minimum Indoor Air Quality Performance (prerequisite) (NC, CS, SNC, RNC, HCNC, HNC, DCNC and WNC)

Objective To contribute to the comfort, well-being, and productivity of occupants by establishing minimum standards for indoor air quality.

Compliance data SCHNEIDER ELECTRIC contributes to the criteria monitoring requirements through the products listed below.

The following products allow the measurement of CO₂ levels required for natural ventilation and CO required for homes, reporting these levels to the system and being able to run ventilation systems accordingly or activate an alarm.

REFERENCE	PRODUCT
LSS100100, MTN693003	Wiser Logic Controller for KNX / Power supply REG, 24 V DC / 0.4 A, light grey
LSS100200, MTN693003	KNX SpaceLynk Logic Controller/ Power supply REG, 24 V DC / 0.4 A, light grey
MTN6513-1201	Power supply SpaceLogic KNX 1280mA
MTN5001-0000	KNX cable 100-meter roll)
MTN689701	Bus connecting terminal, red/dark grey
MTN6005-0001	KNX CO ₂ , temperature and humidity sensor AP
MTN6005-0011	KNX Air Quality Multi-sensor
MTN6705-0008	SpaceLogic KNX Switch/Blind Master 8ch 10AX/16AC1
LSS100400	Hybrid module Wiser KNX

The following products allow sending notifications based on the status of the door or window (Open/Closed) according to the LEED requirement for natural ventilation, and acting on other Wiser devices for ventilation, lighting, blinds and smart outlets, or set an alarm.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT591011	Wiser door/window sensor
NU353818	On/Off Wiser White button

Evaluation procedure

Ventilation

The ventilation prerequisite has requirements in respect of two aspects. The first is compliance with ASHRAE Standard 62.1–2010 (Option 1) or EN 15251-2007 and EN 13779-2007 considered equivalent by USGBC (Option 2).

Monitoring

The second aspect is monitoring, which must comply with the aspects specified below.

For mechanically ventilated spaces (and for mixed-mode systems when mechanical ventilation is activated), it is necessary to monitor the outside air intake flow in one of the following ways:

- For variable air volume systems, provide a direct air flow measurement device that measures the outside air inlet flow, with an accuracy of +/- 10% of the design flow rate. An alarm should warn if the flow rate varies by 15% to design.
- For constant volume systems, the outside air flow must meet the design flow rates defined in ASHRAE 62.1-2010 (with errata). Install a current transducer in the supply fan, a gate controller to control the flow rate, or a similar monitoring device.

For naturally ventilated spaces, adhere to at least one of the following strategies.

- Provide an air flow measurement device capable of measuring the flow at the air outlet with an accuracy of 10% and incorporating an alarm indicating discrepancies with the expected flow rates greater than 15%.
- Provide devices in all natural ventilation openings, connected to an alarm that warns when any of the openings are closed during the building's hours of occupancy.
- Install CO₂ sensors in each thermal zone, which have an audible or visual alarm, which warns if the detected concentration of CO₂ exceeds the expected concentration by 10%. To calculate reference CO₂ concentrations, use the methods described in ASHRAE 62.1-2010, Appendix C.

For residential buildings, in addition to meeting the requirements defined above, each household must meet different requirements regarding the combustion of chimneys, boilers and stoves, as well as install carbon monoxide detectors on each floor of each household.

Analysis example

NA

Supporting Documents

[WISER Technical Catalogue](#)
[KNX electronic catalogue](#)

Reference standard

- ASHRAE Standard 62.1–2010: Ventilation for Acceptable Indoor Air Quality
- Comité Européen de Normalisation (CEN) Standard EN 15251–2007: Indoor environmental input parameters for design and assessment of energy performance of buildings addressing indoor air quality, thermal environment, lighting and acoustics
- Comité Européen de Normalisation (CEN) Standard EN 13779–2007: Ventilation for nonresidential buildings, Performance requirements for ventilation and room conditioning systems
- Chartered Institution of Building Services Engineers (CIBSE) Applications Manual AM10, March 2005, Natural Ventilation in Nondomestic Buildings
- ASHRAE Standard 170–2008: Ventilation of Health Care Facilities
- 2010 FGI Guidelines for Design and Construction of Health Care Facilities



CATEGORY INDOOR ENVIRONMENTAL QUALITY (IEQ)

◆ Combustion venting (prerequisite) (HM, HMM)

Objective To limit the leakage of combustion gases into the occupied space of the home.

Compliance data SCHNEIDER ELECTRIC contributes to the requirements of the criterion with the measurement of CO levels through the following products:

REFERENCE	PRODUCT
LSS100100	Wiser Logic Controller for KNX
LSS100200	KNX SpaceLynk Logic Controller
MTN6513-1201	Power supply SpaceLogic KNX 1280m
MTN5001-0000	Cable KNX (100-meter roll)
MTN689701	Bus connecting terminal, red/dark grey
MTN6005-0011	KNX Air Quality Multi-sensor
MTN6705-0008	SpaceLogic KNX Switch/Blind Master 8ch 10AX/16AC1
LSS100400	Hybrid module Wiser KNX

Evaluation procedure

- Do not install any combustion appliances without ventilation (excluding ovens and stoves).
- Install a carbon monoxide (CO) detector in each home and on each floor if the home has more than one floor.
- Interior fireplaces and wood stoves will have doors for closing. Non-closed combustion or electrically ventilated combustion must pass the BPI or RESNET combustion safety testing protocols to ensure that the depressurization of the combustion equipment zone is less than 5 Pa.
- Space heating and DHW equipment that has combustion must meet one of the following conditions:
 - The combustion zone must be closed and sealed (with sealed supply and extraction lines)
 - Have a flue gas evacuation system.
 - Be outdoors or located in a separate facility building.

Projects that obtain the EPA Indoor airPLUS label automatically meet the requirements of this prerequisite.

Analysis example

NA

Supporting Documents

[KNX electronic catalogue](#)

Reference standard

- 2006 Mortgage Industry National Home Energy Rating System Standards
- Building Performance Institute (BPI) Technical Standards for the Building Analyst Professional (v1/4/12)



CATEGORY INDOOR ENVIRONMENTAL QUALITY (IEQ)

◆ **Enhanced indoor air quality strategies**
(NC, CS, CI, RNC, HNC, DCNC, WNC, SNC, HCNC, EB, SEB, REB, RCI, HC, HEB, DCEB, WEB)

Objective Promote productivity, comfort, and well-being through measures that improve indoor air quality.

Compliance data SCHNEIDER ELECTRIC contributes to the requirements of the criterion through the products listed below.

The following products can measure the humidity of the room valued by LEED for residential (option 1) and if it is below an assigned setpoint activate the extractor:

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT593011	Wiser Temperature/Humidity Sensor
NU555718, NU555730, NU555754, MTN2380-0319, MTN2380-0325, MTN2380-0414, MTN2380-0460, MTN2380-6035, MTN2380-6034, MTN2380-6036	Connected socket-outlet, New Unica, Wiser White/Alum/Antr Power Outlet, Connected socket-outlet, Merten, System M, Wiser Polar White/White Act/Anthracite/Aluminum, Connected socket-outlet, Merten, System D, Wiser Lotus White/Antr/Aluminum
CCT711119	Smart Plug, Wiser, Schuko, 230 V AC, 2P + E, white
CCT5011-0002	Connected switch, Wiser, Module

An automatic timer can also be configured that runs the fan for at least 20 minutes required by LEED for residential (option 1).

The following devices allow the measurement of CO₂ levels (according to point C of option 2 for other uses valued by LEED) and CO (according to point D of option 2 for other uses valued by LEED), reporting these levels to the system allowing to activate an alarm if the values of achieved are exceeded, as well as activate the ventilation system.

REFERENCE	PRODUCT
LSS100100, MTN693003	Wiser Logic Controller for KNX/ Power supply REG, 24 V DC / 0.4 A, light grey
LSS100200, MTN693003	KNX SpaceLynk Logic Controller/ Power supply REG, 24 V DC / 0.4 A, light grey
MTN6513-1201	Power supply SpaceLogic KNX 1280mA
MTN5001-0000	Cable KNX (100-meter roll)
MTN689701	Bus connecting terminal, red/dark grey
MTN6005-0001	KNX CO ₂ , temperature and humidity sensor AP
MTN6005-0011	KNX Air Quality Multi-sensor
MTN6705-0008	SpaceLogic KNX Switch/Blind Master 8ch 10AX/16AC1

**Evaluation
procedure****RESIDENTIAL BUILDINGS:****Option 1. Enhanced Local Exhaust (1 point):**

Control the use of the exhaust fan in each bathroom that contains a shower, bathtub or spa using one of the following options:

- Occupancy sensor
- humidity sensor
- Continuously running exhaust fan
- Timer that runs the fan for at least 20 minutes.

Option 2. Enhanced Whole-House Ventilation (2 points):

Install a ventilation system that meets the minimum requirements of ASHRAE 62.2-2010, sections 4 and 7.

OTHER USES:**Option 1. Enhanced IAQ strategies (1 point)**Mechanically ventilated spaces:

- A. cleaning systems at accesses
- B. prevention of indoor cross-contamination; and
- C. filtration.

Naturally ventilated spaces:

- A. access cleaning systems; and
- D. design calculations of natural ventilation.

Mixed-mode systems:

- A. access cleaning systems;
- B. prevention of indoor cross-contamination;
- C. filtration;
- D. natural ventilation design calculations; and
- E. mixed ventilation design calculations.

Option 2. Additional enhanced IAQ strategies (1 point)Mechanically ventilated spaces:

Do one of the following:

- A. prevention of outdoor pollution
- B. increased ventilation flows
- C. control of carbon dioxide in high-occupancy spaces. CO2 monitors must trigger an alarm if the CO2 concentration exceeds the set point (set according to ASHRAE 62.1-2010, appendix C) by more than 10%
- D. control of other contaminants. For spaces with the possibility of having some type of contaminant in the air, implement a plan to reduce the probability of release of pollutants and install sensors for such pollutants connected to an alarm that indicates an increase in levels.

Naturally ventilated spaces:

Do one of the following:

- A. prevention of external pollution
- D. control of other contaminants
- E. space-to-space natural ventilation calculations

Mixed-mode systems:

Do one of the following:

- A. prevention of external pollution
- B. increased ventilation flows
- D. control of other contaminants
- E. space-to-space natural ventilation calculations

Exemplary performance: An extra point can be earned if both Option 1 and Option 2 are met and an additional strategy from Option 2 is incorporated.

Analysis example

NA

Supporting Documents

[WISER Technical Catalogue](#)
[KNX electronic catalogue](#)

Reference standard

- Chinese Standard GB/T 14295-2008 (air filter).
- ASHRAE Standard 62.1–2010
- ASHRAE Standard 52.2–2007
- CEN Standard EN 779–2002
- Chartered Institution of Building Services Engineers (CIBSE) Applications Manual AM10, March 2005, Natural Ventilation in Nondomestic Buildings
- Chartered Institution of Building Services Engineers (CIBSE) Applications Manual 13, 2000
- National Ambient Air Quality Standards (NAAQS)



CATEGORY INDOOR ENVIRONMENTAL QUALITY (IEQ)

◆ Thermal comfort (NC, CS, SNC, RNC, HCNC, HNC, DCNC y WNC)

Objective To promote productivity, comfort, and well-being through measures that ensure quality thermal comfort.

Compliance data SCHNEIDER ELECTRIC contributes to the criteria control requirements by controlling the comfort parameters provided by its products.

Temperature and humidity sensors measure the humidity and temperature of the rooms.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT593011	Wiser Temperature/Humidity Sensor
NU555718, NU555730, NU555754, MTN2380-0319, MTN2380-0325, MTN2380-0414, MTN2380-0460, MTN2380-6035, MTN2380-6034, MTN2380-6036	Connected socket-outlet, New Unica, Wiser White/Alum/Antr Power Outlet, Connected socket-outlet, Merten, System M, Wiser Polar White/White Act/Anthracite/Aluminum, Connected socket-outlet, Merten, System D, Wiser Lotus White/Antr/Aluminum
CCT711119	Smart Plug, Wiser, Schuko, 230 V AC, 2P + E, white

The Wiser application allows home management through mobile, tablet, or voice assistants such as Amazon Alexa, Google Home and Siri, being able to control the temperature and humidity depending on the user's preferences.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white

NOTE: The credit requires the design of the thermal envelope, together with the building systems, so that it maintains the thermal comfort conditions within certain ranges. SCHNEIDER ELECTRIC control systems allow controlling the parameters defined by the credit reference standards, contributing to the credit control section.

Evaluation procedure

Thermal comfort design: Design the enclosure and HVAC and ventilation systems to comply with ASHRAE 55-2010 or the applicable standard:

- ISO 7730:2005
- CEN Standard EN 15251:2007, Section A2.

Thermal comfort control:

- Provide individual thermal comfort controls for 50% of individual occupancy spaces.
- Provide thermal comfort controls for all multi-occupancy spaces.
- Thermal comfort controls must allow occupants to adjust at least one of the following comfort parameters: air temperature, radiant temperature, air velocity, or humidity.

Analysis example NA

Supporting Documents [WISER Technical Catalogue](#)

Reference standard

- ISO 7730:2005 Ergonomics of the thermal environment.
- 2011 HVAC Applications, ASHRAE Handbook, Chapter 48, Noise and Vibration Control
- EN 15251–2007:Indoor environmental input parameters for design and assessment of energy performance of buildings addressing indoor air quality, thermal environment, lighting and acoustics
- ASHRAE 55–2010, Thermal Environmental Conditions for Human Occupancy
- The Lighting Handbook, 10th edition, Illuminating Engineering Society of North America
- IES Lighting Measurements (LM) 83-12, Approved Method: IES Spatial Daylight Autonomy (sDA) and Annual Sunlight Exposure (ASE)
- Windows and Offices: A Study of Office Worker Performance and the Indoor Environment
- ANSI S1.4, Performance Measurement Protocols for Commercial Buildings



CATEGORY INDOOR ENVIRONMENTAL QUALITY (IEQ)

Interior lighting (NC, CS, CI, RNC, HNC, DCNC, WNC, SNC, HCNC, EB, SEB, REB, RCI, HC, HEB, DCEB, WEB)

Objective Promote the productivity, comfort, and well-being of the occupants through quality lighting.

Compliance data SCHNEIDER ELECTRIC contributes to the requirements of the criterion through its lighting control products mentioned below.

The lighting can be controlled for on, off, and dimming directly on the mechanism, remotely through the application, automatically using voice assistants, or based on a schedule, local weather data, or the status of other Wisier devices.

They can also be controlled by scenes, joining the mechanisms of control of blinds with other devices such as lighting control to make them act all at once and create special environments in the home, such as the night scene, cinema, guests, good morning. etc.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT5010-0002	Connected dimmer, Wiser, Micro module
CCT5011-0002	Connected switch, Wiser, Module
NU351718, NU351730, NU351754, NU351818, NU351830, NU351854	Connected dimmer, New Unica, Wiser, universal, LED, White/Aluminum/Anthracite and Connected dimmer, New Unica, Wiser, rotary, universal, LED White/Aluminum/Anthracite
NU353818, NU353830, NU353854	Connected switch, New Unica, Wiser, 1-pole 1-way White/Aluminum/Anthracite
NU352618, NU352630, NU352654	Connected movement detector, New Unica Wiser White/Aluminum/Anthracite
NU352718, NU352730, NU352754	Detector mov. New Unica Wiser White/Aluminum/Anthracite
MTN5171-0000, MTN5172-0000	multifunction control unit, PlusLink, universal dimmer, 1 rocker/2 rockers, Merten System M
MTN5180-0000, MTN5185-0000	1-10 V Dimmer and DALI Dimmer
MTN5161-0000, MTN5162-0000	Multifunction control unit, PlusLink, relay, 1 rocker/ 2 rockers, Merten
MTN5116-6000, MTN5116-0300, MTN5126-6000, MTN5126-0300	Connected switch, Merten System Design, Wiser, module, 1 Push button/ 2 push bottoms, Connected switch, Merten System M, Wiser, module, 1 Push button/ 2 push bottoms

Evaluation procedure OPTION 1, Lighting control (1 point):

- 90% of the spaces of individual occupation will have an individualized lighting control (task lighting), with a system, with a minimum of three scenes: on / off / medium (average level corresponds to a lighting level between 30 and 70%).
- All multi-occupancy spaces (classrooms, meeting rooms, etc.) will have:
 - An accessible control device that allows the lighting to be adjusted by the occupants, with a minimum of three scenes: on/off/medium.
 - The lighting of the presentation or projection wall must be controlled separately.
 - The controls must be located in the same space as the luminaires, and these must be visible from the control point.

NOTE: This credit values other measures of good design in lighting, not applicable to the products studied.

Analysis example

NA

Supporting Documents

[WISER Technical Catalogue](#)

Reference standard

- The Lighting Handbook, 10th edition, Illuminating Engineering Society of North America
- IES Lighting Measurements (LM) 83-12, Approved Method: IES Spatial Daylight Autonomy (sDA) and Annual Sunlight Exposure (ASE)
- Windows and Offices: A Study of Office Worker Performance and the Indoor Environment
- ANSI S1.4, Performance Measurement Protocols for Commercial Buildings



CATEGORY INDOOR ENVIRONMENTAL QUALITY (IEQ)

◆ Daylight (NC, CS, SNC, RNC, HNC, DCNC, WNC and HCNC)

Objective Connect building occupants to the outside, reinforce circadian rhythms and reduce the use of electric lighting by introducing natural light into spaces.

Compliance data SCHNEIDER ELECTRIC contributes to the requirements of the criterion through its brightness sensors that measure the available natural lighting and the blind controls that allow the blind to be operated based on the sensor data, to avoid glare according to the credit requirements. Manual control is always possible.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT595011	Connected movement detector, Wiser, white
CCT5015-0002	Wiser micro module blinds & shutters
NU350918, NU350930, NU350954	Connected Blind control switch, New Unica White/Aluminum/Anthracite
MTN5165-0000	Shutter control 1000VA
MTN5116-6000, MTN5116-0300, MTN5126-6000, MTN5126-0300	Connected switch, Merten System Design, Wiser, module, 1 Push button/ 2 push bottoms, Connected switch, Merten System M, Wiser, module, 1 Push button/ 2 push bottoms

Evaluation procedure Provide manual or automatic glare control devices (with the possibility of manual control), for all spaces of habitual occupation. In addition, it is necessary to demonstrate through simulation or measurements, that most of the spaces of habitual occupation have quality natural lighting.

Analysis example NA

Supporting Documents [WISER Technical Catalogue](#)

Reference standard

- IES Lighting Measurements (LM) 83-12, Approved Method: IES Spatial Daylight Autonomy (sDA) and Annual Sunlight Exposure (ASE)
- The Lighting Handbook, 10th edition, Illuminating Engineering Society of North America
- Windows and Offices: A Study of Office Worker Performance and the Indoor Environment
- ANSI S1.4, Performance Measurement Protocols for Commercial Buildings



CATEGORY INNOVATION IN DESIGN (ID)

Innovation (NC, CS, SNC, RNC, HNC, HCNC DCNC and WNC)

Objective	Reward projects that achieve exceptional or innovative performance in meeting LEED requirements.
Compliance data	<p>SCHNEIDER ELECTRIC can contribute to meeting the requirements of exemplary performance in credits:</p> <ul style="list-style-type: none"> • EA – Optimize Energy Performance. • EQ – Enhanced Indoor Air Quality Strategies
Evaluation procedure	<p><u>To achieve the five innovation points, at least one pilot credit, at least one innovation credit, and no more than two exemplary performance credits must be justified.</u></p> <p><u>Option 3: Exemplary Performance (EP)</u></p> <p>Some LEED credits give the option of earning an extra point for Exemplary Performance (EP) if the requirements of that credit are exceeded, reaching the values defined by LEED as Exemplary Performance (EP). This way, it is possible to achieve a maximum of 2 points (related to two different credits).</p> <p>The values defined as Exemplary Performance have been indicated in this sheet as EP, in the corresponding credits.</p>
Analysis example	NA
Supporting Documents	<i>See corresponding credit</i>
Reference standard	<i>See reference standards in the corresponding credits</i>

BREEAM REQUIREMENTS OVERVIEW



MANAGEMENT

GST 5, Post-Occupancy Tracking



HEALTH & WELLBEING

SyB 4 Thermal Comfort
SyB 11 Security
SyB 12 Smart Homes



ENERGY

ENE 1 Energy efficiency
ENE 3 External lighting



WATER

AG 3, Detection and prevention of water leaks
AG 4, Water Efficient Equipment



INNOVATION

INNOVATION

Environmental categories BREEM ES



Management



Health & Wellbeing



Energy



Transport



Water



Materials



Waste



Land use and ecology



Pollution



Innovation

BREEM ES Certification Standards

UR
NC

BREEM ES Urbanism
BREEM ES New Construction

VIV

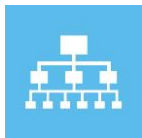
BREEM ES housing

USE

BREEM ES In Use

REQUIREMENTS SHEET

BREEM ES



CATEGORY MANAGEMENT

➤ GST 5 Post-occupancy tracking (BREEAM ES HOUSING 2020)

Objective Provide follow-up after delivery of the building to the owner(s) during the first year of occupancy to ensure that the building operates and adapts, where relevant, according to design intent and operating requirements.

Compliance data SCHNEIDER ELECTRIC products facilitate the work to be done by the company that manages the building (Facility Management), valued by BREEAM ES in point 2 of post-occupancy monitoring and point 6 of exemplary performance.

The following equipment allows the measurement of the flow of water passing through a conduit and record this measurement:

REFERENCE	PRODUCT
LSS100100	Wiser Logic Controller for KNX
LSS100200	KNX SpaceLynk Logic Controller
MTN6513-1201	Power supply SpaceLogic KNX 1280mA
MTN5001-0000	Cable KNX (100-meter roll)
MTN689701	Bus connecting terminal, red/dark grey
MTN6003-0011	Switch actuator, SpaceLogic KNX, 16 AX ,1 gang, flush mounted, 3 binary inputs, KNX secure
MTN670802	Push-button interface, 2-gang plus, polar white
LSS100400	KNX Wiser hybrid module

The following Schneider Electric devices allow the measurement of instantaneous power consumption and visualized energy consumption by days, weeks, months and year. The consumption of those electrical loads plugged into the intelligent power outlets is measured, with the ability to give voltage or remove voltage either manually, by touching the mechanism itself or remotely from the application or automatically depending on a time schedule or reaching a limit consumption.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT711119	Smart Plug, Wiser, Schuko, 230 V AC, 2P + E, white
NU555718, NU555754	Connected socket-outlet, New Unica, Wiser, 16A, Schuko, screwless terminals, White/Alum/Antr

MTN2380-0319, MTN2380-0325, MTN2380-0460	MTN2380-0414,	Connected socket-outlet, Merten, System M, Wiser PolarWhite/White Act/Anthracite/Aluminum
MTN2380-6035, MTN2380-6034, MTN2380-6036	MTN2380-6036	Connected socket-outlet, Merten, System D Lotus White/Antr/Aluminum

The following devices are placed in the electrical protections of the electrical panel and measure the electrical consumption that passes through these protections of the house. The Schneider Electric application displays consumption in a bar graph, displayed in hours, days, weeks, months and years. There is also the possibility of making the equivalence of energy to € and being able to obtain an estimate of the electricity bill.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
R9M41	PowerTag Energy Resi9 M63A 3P+N Top Position
R9M60, R9M70	PowerTag Energy Resi9 F63A 1P/3P+N Top and Bottom Position

Schneider Electric devices allow collecting information on the main water and energy supplies of the main building systems (air conditioning, lighting, DHW, power, etc.).

By measuring partialized consumption, it allows the data to be analyzed exhaustively and compared with the expected behavior of the building. Energy and water consumption reduction targets can be set and monitored.

Evaluation procedure

BREEAM evaluates in this requirement several aspects of building management.

Post-occupancy monitoring:

- 1.- Operational infrastructure and resources for post-occupancy monitoring (follow-up, meetings, training, etc.).
- 2.- Operational infrastructure and resources necessary to coordinate the collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is occupied.

The objective is to facilitate the analysis of discrepancies between the actual behavior and the objective, to adjust the system or user behavior accordingly.

Periodic commissioning:

- 3.- Periodic commissioning once the building is occupied.

Post-occupancy evaluation:

- 4.- Post-occupancy evaluation one year after the occupation of the building.
- 5.- Disseminate information on the post-occupancy behavior of the building.

Exemplary level criteria:

6.- There are infrastructures and resources to coordinate the following activities on a quarterly basis during the first three years after the occupation:

- Collection of information on occupant satisfaction, energy consumption and (where available) water consumption.
- Analysis of the data to verify that the behavior of the building conforms to expectations, and when it is necessary to adjust for control systems or to report on the behavior of building users.
- Setting targets to reduce water consumption and energy consumption and monitoring progress towards their achievement.

Analysis example NA

Supporting Documents [WISER Technical Catalogue](#)
[KNX electronic catalogue](#)





CATEGORY HEALTH & WELLBEING

SyB 4 Thermal comfort (BREEAM ES HOUSING 2020)

Objective Ensure, through design, the achievement of adequate levels of thermal comfort, as well as the selection of the necessary control devices to maintain a thermally comfortable environment for the occupants of the building.

Compliance data SCHNEIDER ELECTRIC contributes to the requirements of the control criterion of the comfort parameters (controls and thermal zoning) provided by its products.

The temperature and humidity sensors measure whether the humidity and temperature of the rooms.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT593011	Wiser Temperature/Humidity Sensor
CFMT02ZB	Thermostat, Wiser, flush mounted, 2A power module, Zigbee, white

The Wiser application allows home management through mobile, tablet, or voice assistants such as Amazon Alexa, Google Home and Siri, being able to control the temperature and humidity depending on the user's preferences.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway

Evaluation procedure

BREEAM evaluates three aspects in this requirement:

Thermal modeling

The thermal comfort is analyzed through thermal modeling (or an analytical measurement/evaluation of the thermal comfort levels of the building) and it is shown that the design of the project maintains the thermal comfort conditions within certain ranges, according to the UNE-EN ISO 7730: 2005 standard.

Adaptability

Thermal modeling demonstrates that the requirements of the previous section are achieved for a predicted climate change scenario either the building has been adapted or designed to be easily adapted in the future using passive design solutions.

Thermal controls and zoning

Thermal modeling analysis informs the temperature control strategy of the building and users.

The strategy for the proposed heating/cooling systems demonstrates that the following aspects have been taken into consideration:

- The occupied spaces of the building and how these could be heated or cooled effectively and adequately through its facilities, that is, if zoning by uses within the house has been considered. For this, each of the

occupied spaces will have an independent temperature control, with the exception of those areas where it is not possible due to technical reasons.

- In the case of rehabilitation, any new cooling or heating installation is designed to ensure that there are no conflicts with the central facilities.
- The degree of control that occupants need for occupied spaces must consider the user's knowledge of the facilities; the type and functions of the rooms; and how the operation/interaction between the user and the systems will be.
- How will the interaction between the systems be and how this will affect the thermal comfort of the building's occupants.
- The need or availability of a manual control device of any automatic system available to users of the building.

Supporting Documents

[WISER Technical Catalogue](#)

Reference standard

- ISO 7730:2005



CATEGORY HEALTH & WELLBEING

SyB 11 Security (BREEAM ES HOUSING 2020)

Objective Promote the design of developments where people feel safe and where crime and fear of crime do not undermine quality of life or community cohesion.

Compliance data BREEAM values having a security consultant, residential security and crime prevention specialist (CPTED) conduct an assessment of intrusion security needs and indoor accident protection needs. Additionally, the consultant must prepare a report with specific recommendations based on Table 16 of the BREEAM manual, as outlined in the assessment procedure.

The SCHNEIDER ELECTRIC systems listed below improve home safety against intrusion and accident protection by incorporating measures based on Table 16 of the BREEAM manual.

The system indicated below incorporates two IP cameras, one indoor and the other outdoor, which connect directly to the Internet through the home Wi-Fi connection and visualize what happens inside and outside the house. It also incorporates a presence sensor.

The system can be configured to send a notification to the mobile, to third parties or to activate an alarm in case of detecting fires, flooding, opening doors and windows, and presence at times configured as non-presence.

It also allows taking photos, recording videos and saving them on a micro SD memory card or downloading them to a mobile phone.

It also allows a simulation of presence in long absences, programming that the blinds are lowered and raised at a specific time, or that lights are turned on and off at scheduled times.

Moreover, it is also possible, from the app, to lower all the blinds in the house simultaneously and set up the system to send a notification to the user's phone if presence is detected.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT723319	IP camera, Wiser, IP20, pan and tilt adjustment, indoor, white
CCT724319	IP camera, Wiser, IP56, outdoor, white
CCT592011	Water leakage sensor, Wiser
CCT599001	Smoke sensor
CCT591011	Wiser door/window sensor
CCT595011	Wiser movement sensor
CCT5011-0002	Connected switch, Wiser, Module
NU350918, NU350930, NU350954	Connected Blind control switch, New Unica White/Aluminium/Anthracite
NU351718, NU351730, NU351754, NU351818, NU351830, NU351854	Connected dimmer, New Unica, Wiser, universal, LED, White /Aluminium/Anthracite and Connected dimmer, New Unica, Wiser, rotary universal, LED, White /Aluminium/Anthracite
NU353818, NU353830, NU353854	Connected switch, New Unica, Wiser, 1-pole 1-way White/Aluminium/Anthracite

The WISER system from Schneider Electric can therefore contribute to the fulfilment of this requirement.

Evaluation procedure

BREEAM evaluates the following aspects in this requirement:

1. Evaluation in the Preliminary Project phase through a security consultant of the security needs against intrusion and protection needs against accidents inside the houses based on the CPTED concept (security and crime prevention through design).
2. The security consultant makes a report with specific recommendations according to the risk analysis and needs assessment mentioned in the previous point, in line with table 16 of the BREEAM manual.
3. Implement the recommendations or solutions proposed by the security consultant.
4. The safety consultant checks in the post-construction phase that all recommendations have been implemented and are working correctly.
5. It has been included in the User Guide of the Housing (according to GST 04 requirement) the security measures implemented.

Supporting Documents

[WISER Technical Catalogue](#)

Reference standard

- BREEAM Handbook
- CPTED Methodology



CATEGORY HEALTH & WELLBEING

SyB 12 Smart Homes (BREEAM ES HOUSING 2020)

Objective Help occupants live in their homes in the most cost-effective, healthy and environmentally friendly way, ensuring good levels of digital connectivity.

Compliance data As indicated in the evaluation procedure section, this requirement consists of three parts; "Basic smart home", "Advanced smart home" and "Additional smart solutions".

The following SCHNEIDER ELECTRIC systems contribute to the fulfillment of the BREEAM requirements for "**Basic Smart Home**":

Temperature sensors measure the temperature of the rooms. The Wiser app also has outdoor temperature and humidity data obtained directly from the cloud.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT593011	Wiser Temperature/Humidity Sensor

The following devices are placed in the electrical protections of the electrical panel and measures the electrical consumption that passes through these protections of the house. The Schneider Electric application shows consumption in a bar graph, displayed in hours, days, weeks, months and years. There is also the possibility of making the equivalence of energy to € and being able to obtain an estimate of the electricity bill.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
R9M41	PowerTag Energy Resi9 M63A 3P+N Top Position
R9M60, R9M70	PowerTag Energy Resi9 F63A 1P/3P+N Top and Bottom Position

The following products allow the measurement of partialized water consumption by:

REFERENCE	PRODUCT
LSS100100	Wiser Logic controller for KNX
LSS100200	KNX SpaceLynk Logic Controller
MTN6513-1201	Power supply SpaceLogic KNX 1280mA
MTN5001-0000	KNX cable (100-meter roll)
MTN689701	Bus connecting terminal, red/dark grey
MTN670802	Push-button interface, 2-gang plus, polar white
LSS100400	KNX Wiser hybrid module

The following SCHNEIDER ELECTRIC systems contribute to the fulfillment of the BREEAM requirements for "Advanced Smart Home":

The following products can measure the humidity level:

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white

And CO2:

REFERENCE	PRODUCT
LSS100100	Wiser Logic controller for KNX
LSS100200	KNX SpaceLynk Logic Controller
MTN6513-1201	Power supply SpaceLogic KNX 1280mA
MTN5001-0000	Cable KNX (100-meter roll)
MTN689701	Bus connecting terminal, red/dark grey
MTN6005-0001	KNX CO2, temperature and humidity sensor AP
MTN6005-0011	KNX Air Quality Multi-sensor
LSS100400	KNX Wiser hybrid module

The following devices are placed in the electrical protections of the electrical panel and measures the electrical consumption that passes through these protections of the house being able to measure the consumption of heating, cooling ACS and consumption of electric vehicles.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
R9M21, R9M22	PowerTag Energy Resi9 M63A 1P+N Top Position/Bottom Position
R9M41	PowerTag Energy Resi9 M63A 3P+N Top Position
R9M60, R9M70	PowerTag Energy Resi9 F63A 1P/3P+N Top Position and Bottom Position

Internal lighting in the main rooms can be monitored and install light intensity regulators that regulate the light intensity based on natural light coming from the outside.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wiser, white
CCT5010-0002	Connected dimmer, Wiser, Micro module
NU351718, NU351730, NU351754, NU351818, NU351830, NU351854	Connected dimmer, New Unica, Wiser, universal, LED, white/Aluminium/Anthracite and Connected dimmer, New Unica, Wiser, Rotray, universal, LED, White/Aluminium/Anthracite
NU352718, NU352730, NU352754	Connected movement detector, New Unica Wiser, universal, LED, white/Aluminium/Anthracite
MTN5171-0000, MTN5172-0000	multifunction control unit, PlusLink, universal dimmer, 1 rocker/ 2 rockers, Merten System M

MTN5180-0000, MTN5185-0000	1-10 V Dimmer and DALI Dimmer
MTN5161-0000, MTN5162-0000	Multifunction control unit, PlusLink, relay, 1 rocker/ 2 rockers, Merten
MTN5116-6000, MTN5116-0300, MTN5126-6000, MTN5126-0300	Connected switch, Merten System Design, Wisser, module, 1 Push button/ 2 push bottoms and Connected switch, Merten System M, Wisser, module, 1 Push button/2 push bottoms
CCT595011	Connected movement detector, Wisser, white

The following products allow the operation of an **app** on a smartphone that allows to meet the requirements of **Basic Smart Home, Advanced and Additional Smart Solutions**.

The Wisser application allows home management through mobile, tablet, or voice assistants such as Amazon Alexa, Google Home and Siri, being able among others:

- Control temperature and humidity based on user preferences.
- Display real-time int/ext temperature
- Total and partialized energy consumption in heating, cooling and DHW systems, electric vehicles and lighting.
- Water consumption.
- Generate customizable reports and create access to historical data.
- Control general lighting and its levels as well as security
- Control security systems (e.g. security cameras, door and window controls and alarm systems)

REFERENCE	PRODUCT
CCT501901	Wisser Gateway
CCT501400_0001	Docking kit for hub, Wisser, white
NU555718, NU555730, NU555754, MTN2380-0319, MTN2380-0325, MTN2380-0414, MTN2380-0460, MTN2380-6035, MTN2380-6034, MTN2380-6036	Connected socket-outlet, New Unica, Wisser White/Alum/Antr Power Outlet, Connected socket-outlet, Merten, System M, Wisser Polar White/White Act/Anthracite/Aluminum, Connected socket-outlet, Merten, System D, Wisser Lotus White/Antr/Aluminum
NU555730	Connected socket-outlet, New Unica, Wisser, 16A, Schuko, screwless terminals, aluminium
CCT711119	Smart Plug, Wisser, Schuko, 230 V AC, 2P + E, white
CCT591011	Wisser door/window sensor
CCT592011	Water leakage sensor, Wisser
CCT593011	Wisser Temperature/Humidity Sensor
CCT595011	Connected movement detector, Wisser, white
CCT599001	Smoke sensor
LSS100100	Wisser Logic controller for KNX
LSS100200	KNX SpaceLynk Logic Controller
MTN6513-1201	Power supply SpaceLogic KNX 1280mA
MTN5001-0000	Cable KNX (100-meter roll)
MTN689701	Bus connecting terminal, red/dark grey
LSS100400	Hybrid module KNX Wisser

The system also allows the future connection of other intelligent systems via a wireless connection.

Evaluation procedure

BREEAM evaluates three aspects in this requirement:

Basic Smart Home

- The installed sensors monitor the interior temperature in the main rooms and the exterior temperature of the house
- The installed sensors monitor electricity and fuel consumption as well as water consumption.
- There is a good signal inside the house in relation to internet access with Broadband (>24Mb / s), 3G or 4G.
- A display is installed in the house or through a Smartphone in an app that allows controlling the interior temperature and show in real time the levels of internal and external temperature, as well as the consumption of electricity, fuel and water.

Advanced Smart Home

- The installed sensors monitor the level of CO2 in the main rooms and the humidity level in wet rooms and master bedroom.
- The installed sensors monitor the consumption of heating, cooling, DHW and consumption of electric vehicles, if applicable.
- The internal lighting in the main rooms is monitored and light intensity regulators are installed according to the amount of natural light coming from outside.
- A display is installed in the house or through a Smartphone in an app that allows viewing in real time:
 - Consumption of heating, cooling and DHW systems.
 - Consumption of electric vehicles, if applicable.
 - Internal lighting in the main rooms and control of it.

Additional smart solutions.

- A display is installed in the house or through a Smartphone in an app that allows to:
 - Generate customizable reports and create access to historical data (for example, through a downloadable CSV).
 - Control safety lighting (e.g. with pre-set lighting for certain times) as well as energy saving and comfort levels (e.g. allowing occupants to disable or dim lights remotely)
 - Security systems (e.g. connection to security cameras, door and window controls and alarm systems)
 - Other.
- The housing system allows the future connection of other intelligent systems through a wireless connection.
- Information about the operation of Smart Housing has been included in the Home User's Guide.

Analysis example

NA

Supporting Documents

[WISER Technical Catalogue](#)
[KNX electronic catalogue](#)

Reference standard

- WCAG 2.0 accessibility standards (ISO/IEC 40500)
- BREEAM Handbook



CATEGORY ENERGY

◆ ENE 1 Energy efficiency (BREEAM ES HOUSING 2020)

Objective Recognize and promote buildings that minimize operational energy consumption through proper design.

Compliance data To justify the criteria of energy efficiency and low emissions in BREEAM, it is necessary to demonstrate improvements in energy efficiency with respect to the requirements of the CTE. To assess it, a simulation must be carried out with any of the recognized programs for the evaluation of energy efficiency of buildings.

Below are the elements of the *SCHNEIDER ELECTRIC Wisier* control platform that help reduce the building's energy consumption, contributing to compliance with BREEAM criteria.

The following products allow programming the opening and closing of blinds during the hours of more or less solar incidence depending on whether it is a hot or cold season of the year. Savings can be calculated by simulating different solar transmittances in the window based on the incident solar radiation, which the simulation program calculates according to orientation and climate data.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
CCT501400_0001	Docking kit for hub, Wisier, white
CCT5015-0002	Wiser micro module blinds & shutters
NU350918, NU350930, NU350954	Connected Blind control switch, New Unica White/ Aluminium / Anthracite
MTN5165-0000	Shutter control 1000VA
MTN5116-6000, MTN5116-0300	Connected switch, Merten System Design, Wisier, module, 1 Push button and Connected switch, Merten System M, Wisier, module, 1 Push button

NOTE: The final result to determine the total valuation of the criterion also depends on many other factors, such as the design of the building, its location, orientation, materials, definition of the envelope and systems used.

Evaluation procedure

BREEAM assesses the energy efficiency and associated CO2 emissions of the building compared to a reference building. The energy efficiency and emissions of the building are calculated through an energy simulation with a computer program approved by the competent Ministry.

The number of points obtained is obtained by comparing the new construction energy efficiency coefficient (EPR) with the reference values defined by BREEAM.

Exemplary level:

- "Positive Energy Balance Building (EB+)" in terms of its total operating energy consumption
- Building with zero net CO2 emissions. Part of the consumption has to be covered by generation with carbon-neutral installations. BREEAM ES New construction also values the use of accredited external renewables.

Analysis example

NA

Supporting Documents

[WISER Technical Catalogue](#)

Reference standard

CTE





CATEGORY ENERGY

◆ ENE 3 External lighting (BREEAM ES HOUSING 2020)

Objective Recognize and promote the installation of energy-efficient luminaires in the external areas of the building.

Compliance data The following elements of the SCHNEIDER ELECTRIC WisER control platform can adjust the ignition of the outdoor lighting when night falls, contributing to the fulfillment of the requirement. The application obtains from the internet the data of the hours at which dawn and dusk in the location of the house.

REFERENCE	PRODUCT
CCT501901	Wiser Gateway
NU351718, NU351730, NU351754, NU351818, NU351830, NU351854	Connected dimmer, New Unica, WisER, universal, LED, White/Aluminium/Anthracite and Connected dimmer, New Unica, WisER, Rotary universal, LED, White /Aluminium/Anthracite
CCT5010-0002	Connected dimmer, WisER, Micro module

Evaluation procedure

The lamps of external luminaires must comply with luminous efficiency limits.

All external luminaires must be automatically controlled to prevent them from being in operation during the day.

Presence detectors will be installed in areas of intermittent pedestrian traffic.

The energy rating of the outdoor lighting installation must be at least B following what is marked in the Regulation of Energy Efficiency in Outdoor Lighting Installations (REEA).

Analysis example NA

Supporting Documents [WISER Technical Catalogue](#)

Reference standard



CATEGORY WATER

AG 3 Water leaks detection (BREEAM ES HOUSING 2020)

Objective Reduce the impact of water leaks that might otherwise go undetected.

Compliance data The following control elements of SCHNEIDER ELECTRIC can perform a measurement of the flow of water passing through a conduit, having a record of this measurement and being able to act accordingly. They can therefore contribute to the control of water leaks:

REFERENCE	PRODUCT
LSS100100	Wiser Logic Controller for KNX
LSS100200	KNX SpaceLynk Logic Controller
MTN6513-1201	Power supply SpaceLogic KNX 1280mA
MTN5001-0000	Cable KNX (100-meter roll)
MTN689701	Bus connecting terminal, red/dark grey
MTN6003-0011	Switch actuator, SpaceLogic KNX, 16 AX ,1 gang, flush mounted, 3 binary inputs, KNX secure
MTN670802	Push-button interface, 2-gang plus, polar white
LSS100400	KNX Wiser hybrid module

Evaluation procedure

Leak detection system

The leak detection system detects any major leaks in the building's main supply network, as well as between the building and the water utility's meter at the site boundaries. The leak detection system must:

- Have a permanent automated leak detection system that alerts building occupants of the leak OR incorporate an automatic diagnostic procedure to detect leaks.
- Activate when the water flow passes through the meter/data log with a flow rate above the preset maximum for a predetermined period of time.
- Be able to identify different flow rates – and therefore leakage rates – for example, continuous, high or low level, or over pre-established periods of time.
- Be programmable to adapt to the water consumption criteria of the owner or occupants.
- Where appropriate, be designed to avoid false alarms arising from the normal operation of water-intensive installations, such as water chillers.
- Belong to the smart home system in accordance with SYB requirement 12.

NOTE: There is also the requirement regarding the isolation of leaks, through an adequate location of the shut-off valves.

Analysis example

NA

Supporting Documents

[KNX electronic catalogue](#)

Reference standard

NA



CATEGORY WATER

AG 4 Water efficient equipment (BREEAM ES HOUSING 2020)

Objective Reduce water consumption by encouraging the specification of water-efficient equipment.

Compliance data WISER'S SCHNEIDER ELECTRIC control elements are approved to be combined with the SCHNEIDER ELECTRIC KNX system which can include soil moisture sensors and rainfall station to control irrigation.

REFERENCE	PRODUCT
LSS100100, MTN693003	Wiser Logic Controller for KNX , Power supply REG, 24 V DC / 0.4 A, light grey
LSS100200, MTN693003	KNX SpaceLynk Logic Controller
MTN6513-1201	Power supply SpaceLogic KNX 1280mA
MTN5001-0000	KNX cable (100-meter roll)
MTN689701	Bus connecting terminal, red/dark grey
MTN682991	Weather station REG-K/4-gang, light grey

Evaluation procedure

Irrigation demand

Vegetation that does not require any irrigation system will be used or drip irrigation will be used that complies:

- Soil moisture sensors and rainfall station.
- Control of zoned irrigation (hydrozones) to allow variable irrigation grouping and dividing according to the water needs of each plant. The irrigation network is designed according to the species, hydrozones and soil texture.
- All water used in irrigation is recovered from a stormwater or greywater system.
- The cap for irrigation flow for green areas will be less than 1.8 l/m² daily and less than 2,500 m³/ha annually.
- The area of grassland is less than 15% of the total area of green area.
- A maintenance guide is developed according to BREEAM requirements.

Other water demands (other than household and irrigation sanitary appliances, e.g. swimming pools, hot tubs, hydrotherapy pools, etc.)

Systems or processes have been identified to reduce water demand, and demonstrate, through good design practices and specifications, a significant reduction in the building's total water demand.

Analysis example NA

Supporting Documents [KNX electronic catalogue](#)

Reference standard NA



CATEGORY INNOVATION

INNOVATION (BREEAM ES HOUSING 2020)

Objective	Incentivise innovation within the construction sector through the recognition of improvements in the field of sustainability that are not rewarded through the Standard Requirements.
Compliance data	<p>The SCHNEIDER ELECTRIC products tested can contribute to meeting exemplary performance in the requirements:</p> <ul style="list-style-type: none"> • GST5, post-occupancy tracking • ENE 1, Energy efficiency <p>NOTE: See exemplary level criteria in the corresponding requirement.</p>
Evaluation procedure	<p>Up to a maximum of 10 points in innovation can be obtained for a combination of the following options:</p> <p>Exemplary level in existing Requirements Some BREEAM credits give the option of obtaining extra points for demonstrating exemplary efficiency through the achievement of the exemplary level criteria defined in these credits.</p> <p>Approved innovations An extraordinary point may be earned for each BREEAM ES Approved Innovation Application provided that the criteria defined in an approved innovation application form are met.</p>
Analysis example	N/A
Supporting Documents	<i>See Corresponding Requirements</i>
Reference standard	N/A