# **Product Environmental Profile**

### **RP-V-5A CONTROLLER**

### RP-V-5A, RP-V-4A, RP-V-5C-M







### General information

Representative product	RP-V-5A CONTROLLER - SXWRPV5A10001				
Description of the product	RP-V is a room-purpose, fullyprogrammable, IP based field controller dedicated forVAV cooling and Heating applications. RP-V integratesa controller, a damper actuator, and an air flow sensorin a single compact package for ease of installation. RP-V comes in three models with different I/O count.				
Description of the range	RP-V-5A, RP-V-4A, RP-V-5C-M The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.				
Functional unit	RP-V is a room-purpose, fully programmable, IP based field controller dedicated for VAV cooling and Heating applications during 10 years. The RP-V can either be used as a standalone BACnet/IP field controller or as part of an EcoStruxure BMS with a SpaceLogic AS-P or AS-B server or an Enterprise Server as the parent server.				

## Constituent materials



#### Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 2 January 2013, amended in March 2015, 2015/863/EU and in November 2017, 2017/2102/EU) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers – PBDE), Bis (2-ethylhexyl)phthalate - DEHP, Benzyl butyl phthalate – BBP, Dibutyl phthalate - DBP, Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page

# **Additional environmental information**

The RP-V-5A CONTROLLER presents the following relevent environmental aspects								
Design	Only one PCBA instead of two on previous MP-V design.							
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified							
	Weight and volume of the packaging optimized, based on the European Union's packaging directive							
Distribution	Packaging weight is 128.9 g, consisting of cardboard (75%), paper (25%)							
Distribution	Packaging recycled materials is 60% of total pa	Packaging recycled materials is 60% of total packaging mass.						
	Product distribution optimised by setting up local distribution centres							
Installation	Ref. SXWRPV5A10001 does not require any installation operations.							
Use	The product does not require special maintenance operations.							
	End of life optimized to decrease the amount of	waste and allow recovery of the product components and materials						
This product contains electronic cards (183g) that should be separated from the stream of waste so as to end-of-life treatment.								
End of life	The location of these components and other recommendations are given in the End of Life Instruction document which is available on the Schneider-Electric Green Premium website							
http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.p								
	Based Recyclability potential: 82% (version and En	on "ECO'DEEE recyclability and recoverability calculation method" v V1, 20 Sep. 2008 presented to the French Agency for Environment ergy Management: ADEME).						

# *P* Environmental impacts

Reference life time	10 years						
Product category	Other equipments - Active product						
Installation elements	The transport of packaging for	disposal, and the disposal a	re accounted for in the in	saltation phase.			
Use scenario	PSR0005, sec. 3.13 Other Equipment, Active Products Category 2 - 100% active mode, 18W over 10 years						
Geographical representativeness	Europe, US, China, France						
Technological representativeness	RP-V is a room-purpose, fullyprogrammable, IP based field controller dedicated forVAV cooling and Heating applications. RP-V integratesa controller, a damper actuator, and an air flow sensorin a single compact package for ease of installation. RP-V comes in three models with different I/O count.						
	Manufacturing	Installation	Use	End of life			
Energy model used	Energy model used: Mexico	Electricity mix; AC; consumption mix, at consumer; 120V; US	Electricity mix; AC; consumption mix, at consumer; 120V; US	Electricity mix; AC; consumption mix, at consumer; 120V; US			

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Compulsory indicators	RP-V-5A CONTROLLER - SXWRPV5A10001						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2.17E-03	2.14E-03	0*	0*	2.76E-05	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	1.72E+00	2.26E-02	6.65E-04	0*	1.70E+00	3.55E-04
Contribution to water eutrophication	kg PO4 <sup>3-</sup> eq	2.67E-01	1.52E-02	1.53E-04	0*	2.51E-01	1.19E-04
Contribution to global warming	$kg CO_2 eq$	1.01E+03	1.20E+01	1.46E-01	0*	9.96E+02	2.85E-01
Contribution to ozone layer depletion	kg CFC11 eq	3.43E-05	5.30E-06	0*	0*	2.90E-05	1.19E-08
Contribution to photochemical oxidation	$kg  C_2 H_4  eq$	1.73E-01	2.73E-03	4.74E-05	0*	1.70E-01	3.50E-05
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	8.42E+02	1.21E-01	0*	0*	8.42E+02	0*
Total Primary Energy	MJ	1.51E+04	2.14E+02	2.06E+00	0*	1.49E+04	1.69E+00



Optional indicators	l indicators RP-V-5A CONTROLLER - SXWRPV5A10001						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1.21E+04	1.23E+02	2.04E+00	0*	1.19E+04	1.36E+00
Contribution to air pollution	m³	7.65E+04	1.58E+03	0*	0*	7.49E+04	1.20E+01
Contribution to water pollution	m³	4.86E+04	1.32E+03	2.39E+01	0*	4.72E+04	1.75E+01
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1.58E-01	1.58E-01	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1.21E+03	5.56E+00	0*	0*	1.21E+03	0*
Total use of non-renewable primary energy resources	MJ	1.39E+04	2.09E+02	2.06E+00	0*	1.37E+04	1.69E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.21E+03	4.48E+00	0*	0*	1.21E+03	0*
Use of renewable primary energy resources used as raw material	MJ	1.07E+00	1.07E+00	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.39E+04	1.96E+02	2.06E+00	0*	1.37E+04	1.69E+00
Use of non renewable primary energy resources used as raw material	MJ	1.25E+01	1.25E+01	0*	0*	0*	0*
Use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*
Use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*
Waste categories	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Hazardous waste disposed	kg	5.77E+01	3.58E+01	0*	0*	2.06E+01	1.35E+00

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kg	9.86E+02	4.76E+00	0*	0*	9.81E+02	0*
kg	5.92E-01	3.20E-03	0*	0*	5.89E-01	0*
Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
kg	1.08E+00	1.03E-01	0*	1.28E-01	0*	8.51E-01
kg	0.00E+00	0*	0*	0*	0*	0*
kg	5.81E-02	0*	0*	0*	0*	5.81E-02
MJ	4.07E-04	3.83E-05	0*	3.69E-04	0*	0*
	kg kg Unit kg kg kg MJ	kg 9.86E+02   kg 5.92E-01   Unit Total   kg 1.08E+00   kg 0.00E+00   kg 5.81E-02   MJ 4.07E-04	kg 9.86E+02 4.76E+00   kg 5.92E-01 3.20E-03   Unit Total Manufacturing   kg 1.08E+00 1.03E-01   kg 0.00E+00 0*   kg 5.81E-02 0*   MJ 4.07E-04 3.83E-05	kg 9.86E+02 4.76E+00 0*   kg 5.92E-01 3.20E-03 0*   Unit Total Manufacturing Distribution   kg 1.08E+00 1.03E-01 0*   kg 0.00E+00 0* 0*   kg 5.81E-02 0* 0*   MJ 4.07E-04 3.83E-05 0*	kg 9.86E+02 4.76E+00 0* 0*   kg 5.92E-01 3.20E-03 0* 0*   Unit Total Manufacturing Distribution Installation   kg 1.08E+00 1.03E-01 0* 1.28E-01   kg 0.00E+00 0* 0* 0*   kg 5.81E-02 0* 0* 0*   MJ 4.07E-04 3.83E-05 0* 3.69E-04	kg 9.86E+02 4.76E+00 0* 0* 9.81E+02   kg 5.92E-01 3.20E-03 0* 0* 5.89E-01   Unit Total Manufacturing Distribution Installation Use   kg 1.08E+00 1.03E-01 0* 1.28E-01 0*   kg 0.00E+00 0* 0* 0* 0*   kg 5.81E-02 0* 0* 0* 0*   MJ 4.07E-04 3.83E-05 0* 3.69E-04 0*

\* represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version EIME v5.9.1, database version 2016-11 in compliance with ISO14044.

The use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range.

RP-V-5A, RP-V-4A and RP-V-5E have the same size and mass, sharing over 99% of components. The only significant impact difference is energy usage. The use phase has the greatest impact on the majority of environmental indicators. The impacts from other product(s) in the range can be calculated based on the following rules...

Manufacturing - same impact for all products

Distribution - same for impact for all products

Installation - same for impact for all products

Use - RP-V-4A and RP-V-5E, have similar use phase impact due to same energy use.

End of Life - same impact for all products

Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

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Date of issue	01/2022	Information and reference documents	www.pep-ecopassport.org			
		Validity period	5 years			
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010						
Internal	External X					
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)						
PEP are compliant with XP C08-100-1 :2016						
The elements of the present PEP cannot be compared with elements from another program.						
Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »						

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