Product Environmental Profile

Acti 9 ARA - Automatic Recloser Auxiliary





General information

Representative product	Acti 9 ARA - Automatic Recloser Auxiliary -A9C70134
Description of the product	The product performs automatic reclosing of the associated protection device, after tripping. Increase the availability of installations without supervision, isolated, hard of access and demanding very great availability (mobile telephony systems, motorways, pumping stations, airports, railways, meteorological stations, public lighting, tunnels, etc.) by restoring them to operation without intervention by personnel in the event of a transient fault (atmospheric disturbances, industrial overvoltages, etc.)
Functional unit	The product is able to reclose associated protection devices10 000 times during 20 years. The functional unit is characterized by: control circuit voltage Uc : 230VAC and Ip: 13A

Constituent materials



I Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 8 June 2011) 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) as mentioned in the Directive

As the products of the range are designed in accordance with the RoHS Directive (European Directive 2002/95/EC of 27 January 2003), they can be incorporated without any restriction in an assembly or an installation subject to this Directive.

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 Acti 9 ARA - Automatic Recloser Auxiliary presents the following relevent environmental aspects							
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified						
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 98.7 g, consisting of Cardboard (83%); Paper (17%)						
Installation	Ref A9C70134 does not require any installation operations						
Use	The product does not require special maintenance operations.						
End of life	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials This product contains 1. Plastic with brominate FR (AAV56777)-2.3g; 2. PCBA RM TERMINAL CONNECTOR BOARD (AAV80923)-32g 3. PCBA POWER (AAV63331)-21g 4. PCBA CPU RM230V (AAV63342)-16g that should be separated from the stream of waste so as to optimize end-of-life treatment. 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.page Based on "ECO'DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).						

\mathcal{O} Environmental impacts

Reference life time	20 years							
Product category	Passive products - non-continuous operation							
Installation elements	No special components needed	No special components needed						
Use scenario	The electrical power consumed by the Automatic recloser or Remote control range is 3 kW in active pulse mode for opening and closing during 200 ms and 1 W in standby mode for the rest time. The product is able to run 10 000 times in active mode during is cycle of life. As PSR requires, the load factor is 50% of Ip, this mean the product is 750 W (3KW*0.5*0.5) with 0,000076% active mode and 0.25 (1W*0.5*0.5) with 99.999924% standby mode The product is in active mode 0.000076% of the time with power use of 3kW and in stand-by mode 99.999924% of the time with power use of 1W, for 20 years.							
Geographical representativeness	Europe							
Technological representativeness	The product performs automatic reclosing of the associated protection device, after tripping. Increase the availability of installations without supervision, isolated, hard of access and demanding very great availability (mobile telephony systems, motorways, pumping stations, airports, railways, meteorological stations, public lighting, tunnels, etc.) by restoring them to							
	Manufacturing	Installation	Use	End of life				
Energy model used	Energy model used: SPAIN	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU- 27				

Compulsory indicators

Acti 9 ARA - Automatic Recloser Auxiliary - A9C70134

Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	9,51E-04	9,50E-04	0*	0*	1,19E-06	0*
Contribution to the soil and water acidification	kg SO₂ eq	2,10E-01	1,32E-02	3,06E-04	2,82E-05	1,97E-01	1,34E-04
Contribution to water eutrophication	kg PO4 ³⁻ eq	1,04E-02	2,92E-03	7,05E-05	6,65E-06	7,37E-03	3,92E-05
Contribution to global warming	$kg CO_2 eq$	3,32E+01	7,06E+00	6,70E-02	9,16E-03	2,60E+01	7,87E-02
Contribution to ozone layer depletion	kg CFC11 eq	7,23E-06	9,01E-07	0*	0*	6,32E-06	3,49E-09
Contribution to photochemical oxidation	$kg C_2 H_4 eq$	1,08E-02	1,45E-03	2,18E-05	3,06E-06	9,30E-03	1,38E-05
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1,35E-01	6,66E-02	0*	0*	6,79E-02	6,39E-05
Total Primary Energy	MJ	6,40E+02	1,11E+02	9,48E-01	1,58E-01	5,27E+02	7,21E-01



	Optional indicators		Acti 9 ARA -	- Automatic Recloser Auxiliary - A9C70134				
Impact indicators		Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life

Contribution to fossil resources depletion	MJ	3,51E+02	8,16E+01	9,42E-01	1,30E-01	2,68E+02	5,94E-01
Contribution to air pollution	m ³	2,25E+03	1,13E+03	2,85E+00	1,01E+00	1,12E+03	4,67E+00
Contribution to water pollution	m ³	2,04E+03	9,31E+02	1,10E+01	1,08E+00	1,09E+03	5,89E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	8,05E-03	8,05E-03	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	4,04E+01	2,69E+00	0*	0*	3,77E+01	0*
Total use of non-renewable primary energy resources	MJ	5,99E+02	1,08E+02	9,47E-01	1,58E-01	4,89E+02	7,20E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3,84E+01	7,05E-01	0*	0*	3,77E+01	0*
Use of renewable primary energy resources used as raw material	MJ	1,98E+00	1,98E+00	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	5,96E+02	1,05E+02	9,47E-01	1,58E-01	4,89E+02	7,20E-01
Use of non renewable primary energy resources used as raw material	MJ	3,70E+00	3,70E+00	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	3,35E+01	3,28E+01	0*	9,96E-02	0*	6,30E-01
Non hazardous waste disposed	kg	1,01E+02	4,08E+00	0*	0*	9,73E+01	0*
Radioactive waste disposed	kg	8,03E-02	9,52E-04	0*	0*	7,93E-02	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	3,93E-01	4,95E-02	0*	9,82E-02	0*	2,46E-01
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	1,31E-02	9,02E-04	0*	0*	0*	1,22E-02
Exported Energy	MJ	0,00E+00	0*	0*	0*	0*	0*

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

Life cycle assessment performed with EIME version EIME v5.5, database version 2015-04.

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

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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