Product Environmental Profile

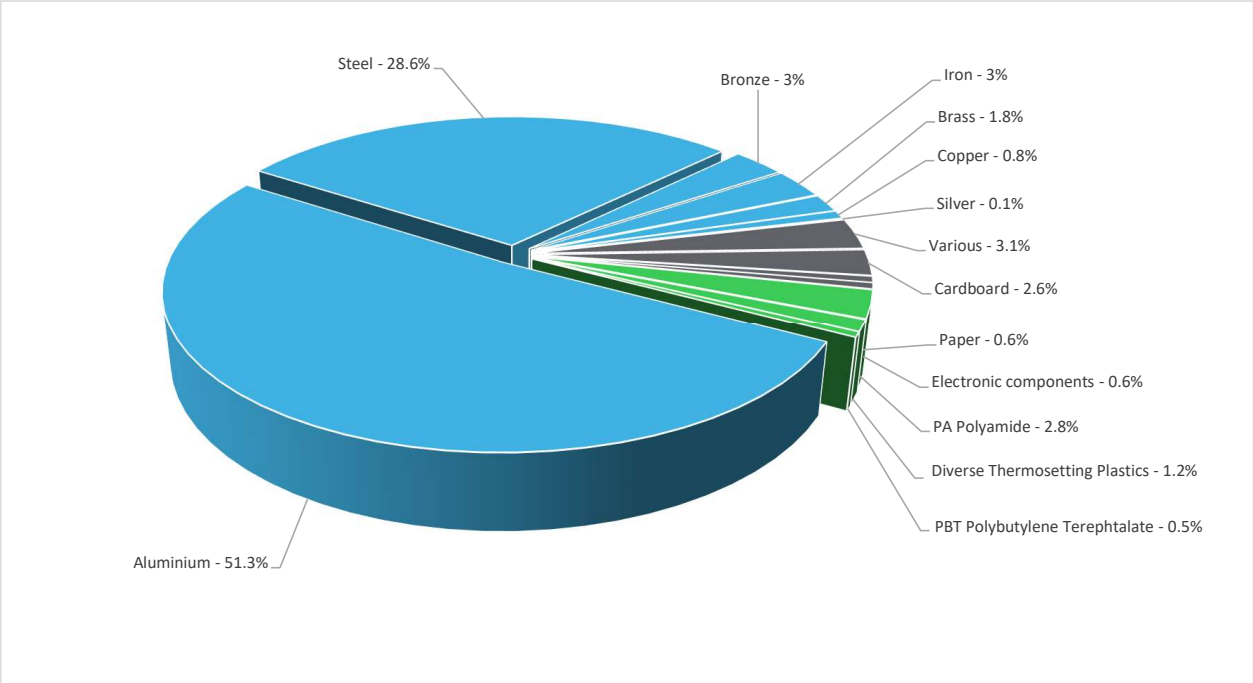
MP-453-370 Foot Mounted Actuator, Rotary, NSR, 120 V, TB, 220 in-lb

General information

Reference product	MP-453-370 Foot Mounted Actuator, Rotary, NSR, 120 V, TB, 220 in-lb - MP-453-370
Description of the product	The MP Series Electrical Foot Mount Actuators are designed for precise and reliable control of dampers, valves, and program switches in HVAC and similar systems, offering two-position, floating, and proportional operation with built-in feedback potentiometers for accurate response. Available in 24 Vac, 120 Vac, and 240 Vac models, these actuators feature durable die-cast housings with four ½-inch conduit openings, and an oil-immersed motor and gear train for smooth, long-lasting performance. Both spring return and non-spring return options are offered to meet diverse application needs.
Description of the range	Single product
Functional unit	The Foot Mount Actuator MP-453-370 is under the scope of Automatic electrical controls (TC72) according to PSR0005. To provide precise and reliable control of dampers, valves, and program switches in HVAC and similar systems, through offering two-position, floating, and proportional operation with built-in feedback potentiometers for accurate response, for 10 years.
Specifications are:	To Provide a precise and reliable control in HVAC system for 10 years, with: - Operating Temperature Limits:-40° F (-40° C) to +140° F (+60° C) - Humidity: 5% to 95% - UL:UL873 File E9429 Temperature Indicating and Regulating Equipment - CUL: Canadian Standard #LR3728 - European Community: EMC Directive 89/336/EEC and 92/31/EEC Low Voltage Directive 72/23/EEC

Constituent materials

Reference product mass	4655 g	including the product, its packaging, additional elements and accessories



Metals	88.6%
Others	6.9%
Plastics	4.5%

Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric website
https://www.se.com

Additional environmental information

End Of Life	Recyclability potential:	93%	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the EIME database and the related PSR was taken. If no data was found a conservative assumption was used (0% recyclability).

Environmental impacts

Reference service life time	10 years
Product category	Other equipments - Active product
Life cycle of the product	The manufacturing, the distribution, the installation, the use and the end of life were taken into consideration in this study
Electricity consumption	The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates a negligible consumption
Installation elements	The product installation requires no energy. The disposal of packaging materials is also accounted during the installation phase, including transport to disposal. The material constituents of the packaging are Cardboard (80.9%), Plastic (1.3%) and Paper (17.8%).
Use scenario	The product is in active mode 15% of the time with a power use of 78W, in sleep mode 5% of the time with a power consumption of 0.5W and in stand-by mode 80% of the time with a power use of 5W, for 10 years.
Time representativeness	The collected data are representative of the year the data represents the information that aggregate in year of 2025.
Technological representativeness	The Modules of Technologies such as material production, manufacturing processes and transport technology used in the PEP analysis (LCA EIME in the case) are Similar and représentaive of the actual type of technologies used to make the product.

Geographical representativeness	Final assembly site	Use phase		End-of-life
	Monterrey, Mexico	North America		North America
	[A1 - A3]	[A5]	[B6]	[C1 - C4]
Energy model used	Electricity Mix; Low voltage; 2020; Global, GLO Electricity Mix; Low voltage; 2020; Mexico, MX Electricity Mix; Low voltage; 2020; United States	No energy used	Electricity Mix; Low voltage; 2020; United States, US	Global, European and French datasets are used.

Detailed results of the optional indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - http://www.se.com/contact

Mandatory Indicators		MP-453-370 Foot Mounted Actuator, Rotary, NSR, 120 V, TB, 220 in-lb - MP-453-370						
Impact indicators	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads
Contribution to climate change	kg CO2 eq	7.16E+02	4.65E+01	8.36E-01	2.96E-01	6.63E+02	5.76E+00	-3.86E+01
Contribution to climate change-fossil	kg CO2 eq	7.12E+02	4.58E+01	8.36E-01	0*	6.59E+02	5.74E+00	-3.76E+01
Contribution to climate change-biogenic	kg CO2 eq	4.34E+00	6.63E-01	0*	2.38E-01	3.42E+00	1.94E-02	-9.98E-01
Contribution to climate change-land use and land use change	kg CO2 eq	8.08E-06	1.07E-06	1.26E-06	2.60E-08	0*	5.72E-06	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	9.25E-06	6.40E-06	1.02E-08	2.04E-09	2.56E-06	2.68E-07	-5.47E-06
Contribution to acidification	mol H+ eq	3.38E+00	3.30E-01	1.39E-03	0*	3.02E+00	2.40E-02	-2.53E-01
Contribution to eutrophication, freshwater	kg P eq	1.38E-03	2.55E-04	3.17E-06	0*	1.10E-03	2.41E-05	-1.34E-04
Contribution to eutrophication, marine	kg N eq	4.12E-01	2.85E-02	2.69E-04	7.51E-05	3.80E-01	2.94E-03	-2.12E-02
Contribution to eutrophication, terrestrial	mol N eq	4.84E+00	3.12E-01	2.95E-03	9.97E-04	4.49E+00	3.48E-02	-2.34E-01
Contribution to photochemical ozone formation - human health	kg COVNM eq	1.37E+00	1.06E-01	9.26E-04	2.13E-04	1.26E+00	1.07E-02	-7.91E-02
Contribution to resource use, minerals and metals	kg Sb eq	6.76E-03	6.65E-03	0*	0*	1.01E-04	2.44E-06	-1.81E-03
Contribution to resource use, fossils	MJ	1.53E+04	7.86E+02	1.51E+01	0*	1.44E+04	1.02E+02	-5.70E+02
Contribution to water use	m3 eq	9.42E+01	5.99E+01	3.02E-02	0*	3.33E+01	9.86E-01	-9.11E+00

Inventory flows Indicators		MP-453-370 Foot Mounted Actuator, Rotary, NSR, 120 V, TB, 220 in-lb - MP-453-370						
Inventory flows	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads
Contribution to renewable primary energy used as energy	MJ	1.79E+03	3.67E+01	0*	0*	1.75E+03	4.84E+00	-2.21E+01
Contribution to renewable primary energy used as raw material	MJ	2.99E+00	2.99E+00	0*	0*	0*	0*	0.00E+00
Contribution to total renewable primary energy	MJ	1.80E+03	3.96E+01	0*	0*	1.75E+03	4.84E+00	-2.21E+01
Contribution to non renewable primary energy used as energy	MJ	1.53E+04	7.72E+02	1.51E+01	0*	1.44E+04	1.02E+02	-5.70E+02
Contribution to non renewable primary energy used as raw material	MJ	1.35E+01	1.35E+01	0*	0*	0*	0*	0.00E+00
Contribution to total non renewable primary energy	MJ	1.53E+04	7.86E+02	1.51E+01	0*	1.44E+04	1.02E+02	-5.70E+02
Contribution to use of secondary material	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to net use of fresh water	m^3	2.20E+00	1.40E+00	7.04E-04	0*	7.76E-01	2.97E-02	-2.12E-01
Contribution to hazardous waste disposed	kg	1.52E+02	1.39E+02	0*	5.64E-02	1.24E+01	1.46E-01	-1.44E+02
Contribution to non hazardous waste disposed	kg	1.74E+02	7.26E+01	7.73E-02	0*	9.80E+01	3.06E+00	-5.99E+01
Contribution to radioactive waste disposed	kg	7.94E-02	5.58E-02	6.13E-05	0*	2.32E-02	3.91E-04	-4.61E-02
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	4.68E+00	5.37E-01	0*	0*	0*	4.14E+00	0.00E+00
Contribution to materials for energy recovery	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to exported energy	MJ	4.63E-02	5.39E-03	0*	0*	0*	4.09E-02	0.00E+00

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

Contribution to biogenic carbon content of the product	kg of C	0.00E+00
Contribution to biogenic carbon content of the associated packaging	kg of C	4.54E-02

** The calculation of the biogenic carbon is based on the Ademe for the Cardboard (28%), EN16485 for Wood (39,52%), and APESA/RECORD for Paper (37,8%)*

Mandatory Indicators		MP-453-370 Foot Mounted Actuator, Rotary, NSR, 120 V, TB, 220 in-lb - MP-453-370							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	6.63E+02	0	0	0	0	0	6.63E+02	0
Contribution to climate change-fossil	kg CO2 eq	6.59E+02	0	0	0	0	0	6.59E+02	0
Contribution to climate change-biogenic	kg CO2 eq	3.42E+00	0	0	0	0	0	3.42E+00	0
Contribution to climate change-land use and land use change	kg CO2 eq	0*	0	0	0	0	0	0*	0
Contribution to ozone depletion	kg CFC-11 eq	2.56E-06	0	0	0	0	0	2.56E-06	0
Contribution to acidification	mol H+ eq	3.02E+00	0	0	0	0	0	3.02E+00	0
Contribution to eutrophication, freshwater	kg P eq	1.10E-03	0	0	0	0	0	1.10E-03	0
Contribution to eutrophication marine	kg N eq	3.80E-01	0	0	0	0	0	3.80E-01	0
Contribution to eutrophication, terrestrial	mol N eq	4.49E+00	0	0	0	0	0	4.49E+00	0
Contribution to photochemical ozone formation - human health	kg COVNM eq	1.26E+00	0	0	0	0	0	1.26E+00	0
Contribution to resource use, minerals and metals	kg Sb eq	1.01E-04	0	0	0	0	0	1.01E-04	0
Contribution to resource use, fossils	MJ	1.44E+04	0	0	0	0	0	1.44E+04	0
Contribution to water use	m3 eq	3.33E+01	0	0	0	0	0	3.33E+01	0

Inventory flows Indicators		MP-453-370 Foot Mounted Actuator, Rotary, NSR, 120 V, TB, 220 in-lb - MP-453-370							
Inventory flows	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.75E+03	0	0	0	0	0	1.75E+03	0
Contribution to use of renewable primary energy resources used as raw material	MJ	0*	0	0	0	0	0	0*	0
Contribution to total use of renewable primary energy resources	MJ	1.75E+03	0	0	0	0	0	1.75E+03	0
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.44E+04	0	0	0	0	0	1.44E+04	0
Contribution to use of non renewable primary energy resources used as raw material	MJ	0*	0	0	0	0	0	0*	0
Contribution to total use of non-renewable primary energy resources	MJ	1.44E+04	0	0	0	0	0	1.44E+04	0
Contribution to use of secondary material	kg	0*	0	0	0	0	0	0*	0
Contribution to use of renewable secondary fuels	MJ	0*	0	0	0	0	0	0*	0
Contribution to use of non renewable secondary fuels	MJ	0*	0	0	0	0	0	0*	0
Contribution to net use of freshwater	m³	7.76E-01	0	0	0	0	0	7.76E-01	0
Contribution to hazardous waste disposed	kg	1.24E+01	0	0	0	0	0	1.24E+01	0
Contribution to non hazardous waste disposed	kg	9.80E+01	0	0	0	0	0	9.80E+01	0
Contribution to radioactive waste disposed	kg	2.32E-02	0	0	0	0	0	2.32E-02	0
Contribution to components for reuse	kg	0*	0	0	0	0	0	0*	0
Contribution to materials for recycling	kg	0*	0	0	0	0	0	0*	0
Contribution to materials for energy recovery	kg	0*	0	0	0	0	0	0*	0
Contribution to exported energy	MJ	0*	0	0	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 v6.2.5-6, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology -1/1 is used

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	10-2025	*Information and reference documents*	www.pep-ecopassport.org
		Validity period	5 years

Independent verification of the declaration and data, in compliance with ISO 14021 : 2016

Internal X External

The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)

PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 or NF E38-500 :2022

The components of the present PEP may not be compared with components from any other program.

Document complies with ISO 14021:2016 "Environmental labels and declarations. Type II environmental declarations"

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