



Environmental Product Declaration

Product	Type of equipment / Product No.	GEB141.1x	Damper Actuator; 20Nm - S55499-D329 /-D427 /-D428	
		GEB142.1x	Damper Actuator; 20Nm - S55499-D330 /-D429	
		GEB146.1x	Damper Actuator; 20Nm - S55499-D331 /-D430	
		GEB161.1x	Damper Actuator; 20Nm - S55499-D332 /-D431 /-D432	
		GEB163.1E	Damper Actuator; 20Nm - S55499-D333	
		GEB164.1x	Damper Actuator; 20Nm - S55499-D334 /-D433	
		GEB166.1x	Damper Actuator; 20Nm - S55499-D335 /-D434	
		GEB341.1x	Damper Actuator; 20Nm - S55499-D336 /-D435	
		GEB346.1E	Damper Actuator; 20Nm - S55499-D337	
		GEB361.1x	Damper Actuator; 20Nm - S55499-D338 /-D437	
	Product line, Product range	Damper Actuator GAP Small MK3 / OpenAirTM		
Process control	Siemens Schweiz AG			
	Building Technologies Division			
	Theilerstrasse 1a			
	CH-6300 Zug			
	Management System	since	by	
	ISO 9001 (Quality)	22-July-1986	SQS	
	ISO 14001 (Environment)	20-October-1998	SQS	
Environmentally compatible product design	Product responsibility of Siemens covers the entire product life cycle. Siemens already assesses, avoids and minimizes the environmental impact of its products with respect to production, procurement, sales, use, services and disposal during the product and process planning phases by complying with Siemens EP Standard (former SN 36350) "Specifications on Environmentally Compatible Product and System Design".			
Product use	Typical energy consumption	variant *) see below		
	Maintenance	Not necessary None		
Risk of fire	Fire protection according to	EN 60730 & UL 60730		
	Fire load	variant *) see below		
Packaging	20-PAP Corrugated fiber board	cardboard actuator	73.8g	
	20-PAP Corrugated fiber board	cardboard shaft adapter	13.8g	
	22-PAP paper	label on cardboard	0.5g	
	Notes on disposal	One-way, recyclable		
Materials	Total weight of device	variant *) see below		
	The total weight of a device may deviate from the total of the weights of all individual components due to rounding.			
Plastics	PC; GF 10%; low-halogen	Internal housing	variant	
	PUR; low-halogen	Sealing of external housing	0.1g	
	PC; GF 10%; low-halogen	Strain relief blade	variant	
	POM; low-halogen	UI rotary knobs, slider on PCB	variant	
	TPE; low-halogen	DIL cab	variant	
	POM; low-halogen	Bearing rings and gear bushings	5.8g	
	POM; low-halogen	Gear wheel 7 and Gear Wheel 8/9	4.2g	

	TPE; low-halogen	Gear wheel 10/11	0.8g
	POM; low-halogen	Potentiometer coupling incl. cab	variant
	PC; GF 10%; low-halogen	Manual declutch knob	1.1g
	PC; GF 10%; low-halogen	Switch housing	variant
	POM; low-halogen	Switch wheels, other plastic parts	variant
	POM; low-halogen	Switch blind plug	variant
	PC; GF 10%; low-halogen	Isolation piece	variant
	POM; low-halogen	Cat eye	3.4g
	ABS+PC; low-halogen	Cat eye spacer piece	4.0g
Metals	Al alloy	External housing	339.0g
	Zn / Zn alloy	Hub gear segment	39.9g
	Steel	Gear segment, gear wheel 3, 5	87.6g
	Steel	Pinion 2, 4, 6	13.9g
	CuZn	Motor pinion	0.8g
	Steel	Gear Plate	68.7g
	Steel	Axles on gear plate	15.3g
	steel CrNi	Declutch springs	0.5g
	Cu alloy	Shaft adapter housing	104.5g
	Sintered steel	Shaft adapter pull- and push-bracket	61.4g
	Steel; zinc plated	Shaft adapter threaded parts	17.6g
	Steel; zinc plated	Screws	15.8g
	Steel	Washers	0.7g
	Steel	Axial circlips	3.1g
	Steel; zinc plated	Torque blade	54.5g
	Zn / Zn alloy	Conduit Adapter **	variant
Others	Steel, copper, PCBA	Motor	46.7g
	PVC / copper	PVC cable switch	variant
	PVC / copper	PVC cable signal and source	variant
	PVC / copper	PVC cable power	variant
	PVC / copper	PVC cable potentiometer	variant
	Plastics, ceramic, copper, steel	Potentiometer	variant
	Plastics, copper, steel	Micro switches	variant
	Polyester	Label on actuator	0.8g
	Lubricant with PTFE	Grease	2.2g
	Lubricant	Grease	0.8g
	Adhesive	Epoxy adhesive	variant
PCBAs (Printed Circuit Board assembled)	FR4; TBBA; solder SnAgCu	PCB Assembled	variant

***Variant parts list**

	GEB141.1x ***	GEB142.1x ***	GEB146.1x ***	GEB161.1x ***	GEB163.1E	GEB164.1x ***	GEB166.1x ***	GEB341.1x ***	GEB346.1E	GEB361.1x ***
Total weight of device [g]	1'115.7	1'202.5	1'252.8	1'131.2	1'069.6	1'268.7	1'268.3	1'126.5	1'201.6	1'223.9
Internal housing	64.8	64.4	64.8	64.1	64.1	64.1	64.1	64.8	64.8	64.1
Strain relief blade	1.4	1.3	1.2	1.4	1.4	1.2	1.2	1.4	1.2	1.3
UI rotary knobs, slider on PCB	0.6	0.6	0.6		0.2	0.2		0.6	0.6	
DIL cab				0.3			0.3			0.3
Potentiometer coupling incl. cab		2.1		3.3	3.3	3.3	3.3			3.3
Switch housing			14.4			14.4	14.4		14.4	
Switch wheels, other plastic parts			14.2			14.2	14.2		14.2	
Switch blind plug	4.1	4.1		4.1	4.1			4.1		4.1
Isolation piece										0.7
Conduit Adapter **	62.0	79.0	62.0	62.0		62.0	62.0	62.0		79.0
PVC cable switch			108.2			108.2	108.2		108.2	

Smart Infrastructure
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PVC cable signal and source	65.1	65.1	65.1	76.5	76.5	76.5	76.5	66.9	66.9	76.5	
PVC cable power										59.8	
PVC cable potentiometer		63.9									
Potentiometer		4.3									
Micro switches			4.6			4.6	4.6		4.6		
Epoxy adhesive										0.1	
PCB Assembled	24.5	24.5	24.5	26.3	26.8	26.8	26.3	33.5	33.5	41.5	
Fire load	[MJ]	5	7	8	5	5	9	9	5	8	7
Typical energy consumption	[kWh/a]	2.02	2.02	2.02	2.02	2.02	2.02	2.02	3.51	3.51	2.98

Disposal



The symbol or any other national label indicates the product, its packaging and where applicable, any removed batteries may not be disposed as part of normal waste. Delete any personal data and dispose of the item via separate collection and recycling facilities in accordance with local and national regulations. For additional details, refer to www.siemens.com/bt/disposal.

For country-specific requirements regarding further disposal information:
<http://www.siemens.com/download?A6V13734633>

Comments

EU-directive 2011/65/EU (RoHS)

The device does not contain substances in concentrations and applications banned under the EU RoHS Directive, including the 4 phthalates added to Annex II in 2015.

Regulation (EC) No. 1907/2006 (REACH)

The device contains the following substances of the candidate list according to Article 59 (1, 10) of the regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) in concentrations above 0.1 % w/w. Contained REACH candidate substances, including those which will become known at a later date, are listed on the delivery note.
Diboron trioxide, CAS-Nr.1303-86-2; BPA, CAS-Nr.80-05-7; Lead, CAS-Nr.7439-92-1 ; Lead titanium trioxide, CAS-Nr.12060-00-3 ; Cobalt dichloride, CAS-Nr.7646-79-9 ; 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol, CAS-Nr.119-47-1 ; Melamine, CAS-Nr.108-78-1

(Status according to the creation date of this document.)

The device is low-halogen with exception of:
PCB (TBBA); Grease (PTFE); Cables (PVC)

Further notes and comments:

***) only for .1U / .1P (not .1E) types with conduit adapter included.

***) Note: Total weight of device calculated including conduit adapter (= .1U/.1P types)

Legal Disclaimer: This declaration is for information purpose only.

This Environmental Product Declaration does not constitute a guarantee of the composition of a product, neither does it guarantee that the product will retain a particular composition for a particular period.

Siemens Schweiz AG therefore does not assume liability for any error or for any consequences which may arise from the use of this information to the maximum extent under the law.

Please contact your local Siemens branch office to get further information on environmental aspects and disposal.