



ENVIRONMENTAL PRODUCT DECLARATION

OpenAir™ - Electromotoric Rotary Damper Actuators

GD..., GL..., GP..., GQ..., GS... Actuators

Type II according to ISO 14021 including life cycle impact assessment (LCIA)



SIEMENS

General information

This environmental product declaration (EPD) is based on the international standard ISO 14021 (“Environmental labels and declarations – Self declared environmental claims – Type II environmental labelling”). The data in this EPD has been evaluated on a full-scale life cycle assessment (LCA) study according to ISO 14040/44, taking into account the product category rules (PCR) for electronic and electrotechnical products and systems defined in EN 50693.

Siemens is dedicated to an environmentally conscious design of its products in line with IEC 62430 and has implemented an integrated management system according to ISO 9001, ISO 14001 and ISO 45001.

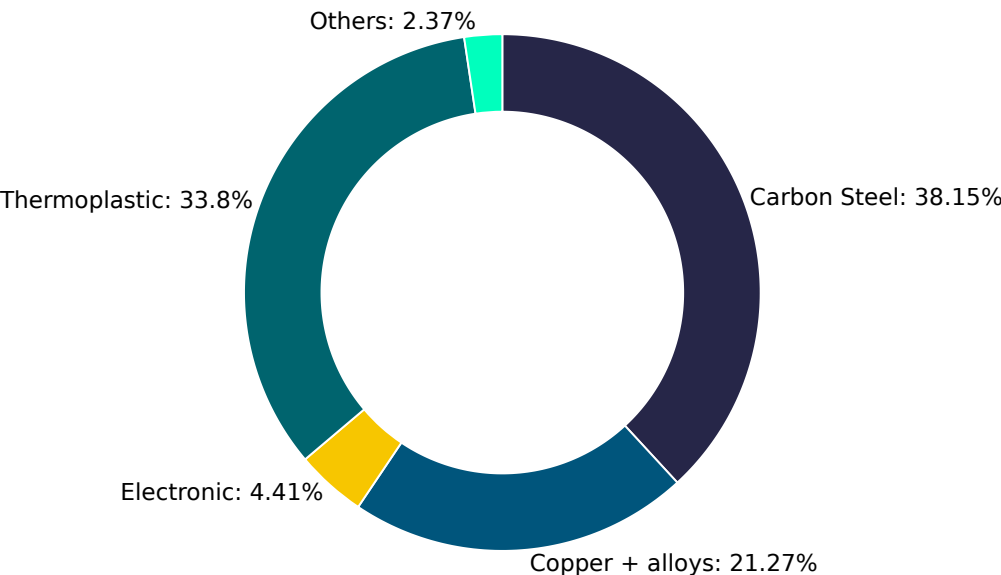
Products	All products which can be found in the appendix.
Represented by the reference product	S55499-D266 (GDB161.1E)
Product Description	Electromotoric actuator for 2-position, 3-position, or modulating control for HVAC and railway applications.
Functional Unit	The damper actuator positions an air damper in an air handling unit with 5% runtime over a reference lifetime of 10 years. ¹

¹ The lifetime value used for calculation is a reference value and does not equate with the minimum, average or real life time.

Material composition

The following chart outlines the overall material composition of the calculated reference product without packaging. Product weight of 0.56 kg adds up with packaging weight of 0.06 kg to a total weight of 0.62 kg. Packaging consists of: Corrugated box (average composition), Graphic paper.

Product Weight 0.56 kg



Substance assessment

At Siemens, we are committed to the development and production of environmentally sound and sustainably produced equipment. This includes avoiding hazardous substances in our products without compromising their benefits for our customers. Please visit the following website to learn more about how we comply with product-related environmental regulations like RoHS, REACH, WEEE and others: [Product Related Environmental Protection](#)

Life cycle stages and reference scenarios

 Manufacturing This stage covers the extraction of natural resources, production of raw materials, manufacturing, packaging, and transportation.	 Distribution and Operation This stage covers the product's distribution, installation, use, and maintenance. Different operating conditions can lead to deviations from the reference scenario.	 End-of-Life This stage covers the disassembly or shredding and material recycling of all recyclable materials, as well as energy recovery, thermal treatment and the disposal of all other materials.
Scenarios		
Energy model used: Switzerland (standard mix), Germany (standard mix), China (standard mix), Switzerland (renewable mix) Transportation model: EN 50693	Energy model used: Europe (standard mix) Distribution scenario: Truck (20-26 t) 1542 km Use Scenario: Energy consumption in standby 0.7 W and run 1.2 W 5.00% runtime Reference lifetime 10 years	Energy model used: EMEA End-of-Life methodology: Avoided burden (net-scrap calculation)

Key environmental performance indicators

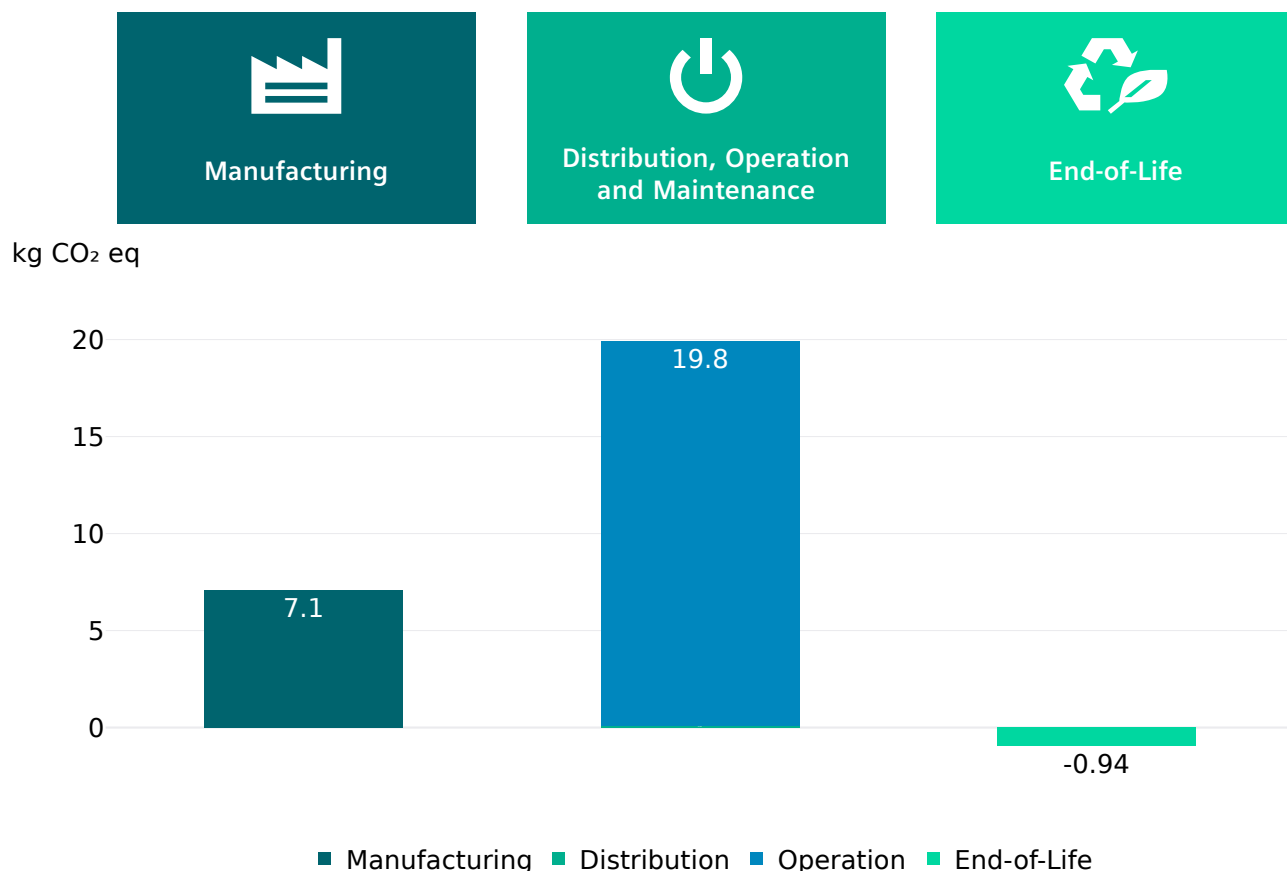
The following impact categories characterize the product's environmental footprint. They have been calculated with LCIA methodology EF3.1; LCA tool: Green Digital Twin (GDT), Database: One Siemens LCA Database (based on MLC CUP 2023.2, formerly GaBi).

To ensure the high quality and completeness of the LCA results, Primary Data have been used whenever possible. Datasets for resources, such as electrical energy or natural gas, are chosen from the region where the device is produced and assembled. If primary data are not available, datasets reflecting state-of-the-art manufacturing technology are considered.

Impact Category	Unit	Total	Manufacturing	Distribution	Operation	End-of-life
Acidification	Mole of H+ eq	2.79E-1	2.69E-1	1.25E-4	4.19E-2	-3.18E-2
Climate change – total	kg CO ₂ eq	2.61E+1	7.10E+0	9.14E-2	1.98E+1	-9.37E-1
Climate change – fossil	kg CO ₂ eq	2.59E+1	7.08E+0	9.03E-2	1.97E+1	-9.35E-1
Climate change – biogenic	kg CO ₂ eq	1.88E-1	1.44E-2	2.45E-4	1.74E-1	-9.80E-4
Climate Change, land use and land use change	kg CO ₂ eq	6.12E-3	5.24E-3	8.46E-4	2.14E-3	-1.26E-3
Ecotoxicity, freshwater – total	CTUe	1.58E+2	4.65E+1	8.91E-1	1.15E+2	-3.97E+0
Eutrophication, freshwater	kg P eq	1.05E-4	3.12E-5	3.34E-7	7.37E-5	-4.83E-7
Eutrophication, marine	kg N eq	3.58E-2	2.72E-2	4.38E-5	1.00E-2	-1.47E-3
Eutrophication, terrestrial	Mole of N eq	3.87E-1	2.97E-1	5.23E-4	1.05E-1	-1.55E-2
Human toxicity, cancer – total	CTUh	1.21E-8	6.40E-9	1.81E-11	6.07E-9	-4.41E-10
Human toxicity, non-cancer – total	CTUh	2.31E-7	1.54E-7	8.05E-10	9.68E-8	-2.11E-8
Ionising radiation, human health	kBq U235 eq	1.12E+1	3.69E-1	3.49E-4	1.09E+1	-2.19E-2
Land Use	dimensionless (pt)	1.80E+2	2.08E+1	5.20E-1	1.63E+2	-4.35E+0
Ozone depletion	kg CFC-11 eq	4.98E-9	4.61E-9	1.19E-14	3.63E-10	-2.00E-12
Particulate matter	Disease incidences	1.92E-6	1.84E-6	9.14E-10	3.52E-7	-2.70E-7
Photochemical ozone formation, human health	kg NMVOC eq	1.06E-1	8.47E-2	1.09E-4	2.68E-2	-5.78E-3
Resource use, fossils	MJ	4.92E+2	9.38E+1	1.24E+0	4.13E+2	-1.57E+1
Resource use, mineral and metals	kg Sb eq	4.04E-4	7.28E-4	6.06E-9	3.04E-6	-3.26E-4
Water use	m ³ water eq deprived water	7.00E+0	3.00E+0	1.10E-3	4.32E+0	-3.21E-1

Climate change

This chart shows the overall impact of the product on climate change – total. The operations phase is the lifecycle phase with the biggest overall impact. Different operating conditions can lead to deviations from the reference scenario.



End-of-Life results

The end-of-life stage was modelled by shredding of the device, followed by sorting and material separation process.



It leads to:

- an overall **product recyclability of up to 58%** mainly due to metal content
- an **energy recoverability of up to 32%** from plastic materials
- a **minimum disposal rate of 11%**

The exact final values depend on the used recycling process and add up to 100%.

Note: The device should not be disposed of as unsorted municipal waste. Special treatment for specific components may be mandated by law or recommended for environmental reasons. Observe all local and applicable laws.

Appendix

Scaling factors

The results of the LCA of the reference product can be extrapolated to other products of a homogeneous product family according to the standard EN50693. The scaling factors listed here are calculated according to this standard.

To extrapolate the impact from the reference product to another product from the range, multiply the following scaling factors to the impact category per life cycle stage from page 4:

Article Type	Manufacturing	Distribution	Operation	End-of-Life	Control type*
GDA141.1E/RW	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDA142.1E/RW	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDA146.1E	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDA146.1E/RW	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDA161.1E/RW	1.00	1.00	0.72	1.00	Modulating - NFS
GDB111.1E/KN	1.00	1.13	0.83	1.13	Networked - NFS
GDB111.1E/MO	1.02	1.17	0.83	1.17	Networked - NFS
GDB141.1E	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.07		3P-Floating - NFS (3 Wire)
GDB142.1E	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.07		3P-Floating - NFS (3 Wire)
GDB146.1E	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.07		3P-Floating - NFS (3 Wire)
GDB161.1E	1.00	1.00	1.00	1.00	Modulating - NFS
GDB161.1H	1.00	1.00	1.00	1.00	Modulating - NFS
GDB163.1E	1.00	1.00	1.00	1.00	Modulating - NFS
GDB164.1E	1.00	1.00	1.00	1.00	Modulating - NFS
GDB166.1E	1.00	1.00	1.00	1.00	Modulating - NFS
GDB181.1E/3	1.26	1.24	0.97	1.24	3P-Floating - NFS (4 Wire)
			0.97		Modulating - NFS
GDB181.1E/BA	1.24	1.20	0.97	1.20	Networked - NFS
GDB181.1E/KN	1.22	1.16	0.97	1.16	Networked - NFS

Article Type	Manufacturing	Distribution	Operation	End-of-Life	Control type*
GDB181.1E/MO	1.24	1.20	0.97	1.20	Networked - NFS
GDB341.1E	1.00	1.00	1.26	1.00	2P- NFS (3 Wire)
			0.11		3P-Floating - NFS (3 Wire)
GDB341.1G	1.00	1.00	1.26	1.00	2P- NFS (3 Wire)
			0.11		3P-Floating - NFS (3 Wire)
GDB346.1E	1.00	1.00	1.26	1.00	2P- NFS (3 Wire)
			0.11		3P-Floating - NFS (3 Wire)
GDB361.1E	1.00	1.00	0.74	1.00	Modulating - NFS
GDB361.1G	1.00	1.00	0.74	1.00	Modulating - NFS
GDD141.1E	1.00	1.00	0.56	1.00	2P- NFS (3 Wire)
			0.03		3P-Floating - NFS (3 Wire)
GDD141.1E/RW	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDD142.1E/RW	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDD146.1E	1.00	1.00	0.56	1.00	2P- NFS (3 Wire)
			0.03		3P-Floating - NFS (3 Wire)
GDD146.1E/RW	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDD146.1G/RW	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDD161.1E	1.00	1.00	0.85	1.00	Modulating - NFS
GDD161.1E/RW	1.00	1.00	0.72	1.00	Modulating - NFS
GDD241.1E/RW	1.00	1.00	0.84	1.00	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GDD241.1E/RWT	1.01	1.02	0.84	1.02	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GDD241.1G/RW	1.00	1.00	0.84	1.00	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GDD241.1H/RW	1.00	1.00	0.84	1.00	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GDD242.1E/RW	1.00	1.00	0.84	1.00	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)

Article Type	Manufacturing	Distribution	Operation	End-of-Life	Control type*
GDD242.1E/RWT	1.01	1.02	0.84	1.02	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GDD246.1E/RW	1.00	1.00	0.84	1.00	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GDD246.1E/RW1	1.00	1.00	0.84	1.00	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GDD246.1E/RWT	1.01	1.02	0.84	1.02	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GDD246.1G/RW1	1.00	1.00	0.84	1.00	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GDD246.1H/RW1	1.00	1.00	0.84	1.00	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GDD261.1E/RW	1.05	1.12	0.86	1.12	Modulating - NFS
GDD261.1E/RWT	1.07	1.16	0.86	1.16	Modulating - NFS
GDE131.1P	0.59	1.05	0.04	1.05	3P-Floating - NFS (3 Wire)
GDE131.1T	0.51	0.86	0.04	0.86	3P-Floating - NFS (3 Wire)
GDE131.1U	0.59	1.05	0.04	1.05	3P-Floating - NFS (3 Wire)
GDE141.1P	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDE141.1Q	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDE141.1U	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDE142.1P	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDE146.1P	1.00	1.00	0.70	1.00	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GDE161.1N	0.91	0.90	1.42	0.90	Modulating - NFS
GDE161.1P	1.00	1.00	1.42	1.00	Modulating - NFS
GDE161.1Q	1.00	1.00	1.42	1.00	Modulating - NFS
GDE161.1T	0.91	0.90	1.42	0.90	Modulating - NFS
GDE163.1P	1.00	1.00	1.42	1.00	Modulating - NFS

Article Type	Manufacturing	Distribution	Operation	End-of-Life	Control type*
GDE164.1P	1.00	1.00	1.42	1.00	Modulating - NFS
GDE166.1P	1.00	1.00	1.42	1.00	Modulating - NFS
GDE341.1U	1.00	1.00	1.25	1.00	2P- NFS (3 Wire)
			0.07		3P-Floating - NFS (3 Wire)
GDE346.1U	1.00	1.00	1.25	1.00	2P- NFS (3 Wire)
			0.07		3P-Floating - NFS (3 Wire)
GLA161.1E/RW	1.30	1.28	0.74	1.28	Modulating - NFS
GLB111.1E/KN	1.00	1.13	0.83	1.13	Networked - NFS
GLB111.1E/MO	1.02	1.17	0.83	1.17	Networked - NFS
GLB141.1E	1.20	1.27	0.56	1.27	2P- NFS (3 Wire)
			0.06		3P-Floating - NFS (3 Wire)
GLB141.1H	1.20	1.27	0.56	1.27	2P- NFS (3 Wire)
			0.06		3P-Floating - NFS (3 Wire)
GLB141.1P	1.20	1.27	0.56	1.27	2P- NFS (3 Wire)
			0.06		3P-Floating - NFS (3 Wire)
GLB141.1Q	1.20	1.27	0.56	1.27	2P- NFS (3 Wire)
			0.06		3P-Floating - NFS (3 Wire)
GLB142.1E	1.20	1.27	0.56	1.27	2P- NFS (3 Wire)
			0.06		3P-Floating - NFS (3 Wire)
GLB146.1E	1.20	1.27	0.56	1.27	2P- NFS (3 Wire)
			0.06		3P-Floating - NFS (3 Wire)
GLB146.1P	1.20	1.27	0.56	1.27	2P- NFS (3 Wire)
			0.06		3P-Floating - NFS (3 Wire)
GLB161.1E	1.20	1.27	0.86	1.27	Modulating - NFS
GLB161.1H	1.20	1.27	0.86	1.27	Modulating - NFS
GLB161.1P	1.20	1.27	0.86	1.27	Modulating - NFS
GLB161.1Q	1.20	1.27	0.86	1.27	Modulating - NFS
GLB163.1E	1.20	1.27	0.86	1.27	Modulating - NFS
GLB164.1E	1.20	1.27	0.86	1.27	Modulating - NFS
GLB166.1E	1.20	1.27	0.86	1.27	Modulating - NFS
GLB166.1P	1.20	1.27	0.86	1.27	Modulating - NFS

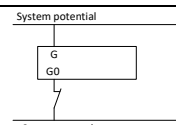
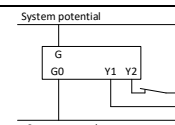
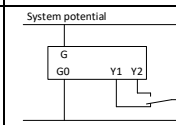
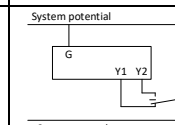
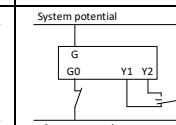
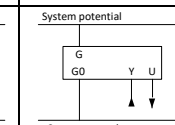
Article Type	Manufacturing	Distribution	Operation	End-of-Life	Control type*
GLB181.1E/3	1.26	1.24	0.97	1.24	3P-Floating - NFS (4 Wire)
			0.97		Modulating - NFS
GLB181.1E/BA	1.24	1.20	0.97	1.20	Networked - NFS
GLB181.1E/KN	1.22	1.16	0.97	1.16	Networked - NFS
GLB181.1E/MO	1.24	1.20	0.97	1.20	Networked - NFS
GLB341.1E	1.20	1.2	1.27	1.27	2P- NFS (3 Wire)
			0.14		3P-Floating - NFS (3 Wire)
GLB341.1H	1.20	1.27	1.27	1.27	2P- NFS (3 Wire)
			0.14		3P-Floating - NFS (3 Wire)
GLB341.1U	1.20	1.2	1.27	1.27	2P- NFS (3 Wire)
			0.14		3P-Floating - NFS (3 Wire)
GLB346.1E	1.20	1.27	1.27	1.27	2P- NFS (3 Wire)
			0.14		3P-Floating - NFS (3 Wire)
GLB346.1U	1.20	1.27	1.27	1.27	2P- NFS (3 Wire)
			0.14		3P-Floating - NFS (3 Wire)
GLB361.1E	1.20	1.27	0.89	1.27	Modulating - NFS
GLD141.1E	1.20	1.27	0.56	1.27	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GLD141.1E/RW	1.30	1.28	0.70	1.28	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GLD142.1E/RW	1.30	1.28	0.70	1.28	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GLD146.1E	1.20	1.27	0.56	1.27	2P- NFS (3 Wire)
			0.04		3P-Floating - NFS (3 Wire)
GLD146.1E/RW	1.30	1.28	0.70	1.28	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GLD161.1E	1.20	1.27	0.86	1.27	Modulating - NFS
GLD161.1E/RW	1.30	1.28	0.73	1.28	Modulating - NFS
GLD161.1G/RW	1.30	1.28	0.73	1.28	Modulating - NFS
GLD241.1E/RW	1.30	1.28	0.84	1.28	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GLD242.1E/RW	1.30	1.28	0.84	1.28	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)

Article Type	Manufacturing	Distribution	Operation	End-of-Life	Control type*
GLD246.1E/RW	1.30	1.28	0.84	1.28	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GLD261.1E/RW	1.05	1.12	0.86	1.12	Modulating - NFS
GPC121.1A	0.89	0.97	0.97	0.97	2P- FS (2 Wire)
GPC121.1A/09R	0.89	0.97	0.97	0.97	2P- FS (2 Wire)
GPC121.1A/09T	0.90	0.99	0.97	0.99	2P- FS (2 Wire)
GPC121.1A/RW	0.89	0.97	0.97	0.97	2P- FS (2 Wire)
GPC121.1P	0.89	0.97	0.97	0.97	2P- FS (2 Wire)
GPC126.1A	0.99	1.17	0.97	1.17	2P- FS (2 Wire)
GPC126.1A/09R1	0.96	1.11	0.97	1.11	2P- FS (2 Wire)
GPC126.1A/09T	0.98	1.16	0.97	1.16	2P- FS (2 Wire)
GPC126.1A/RW	1.21	1.19	0.97	1.19	2P- FS (2 Wire)
GPC126.1P	0.99	1.17	0.97	1.17	2P- FS (2 Wire)
GPC131.1A	0.90	0.99	2.14	0.99	3P-Floating - FS (4 Wire)
GPC131.1P	0.90	0.99	2.14	0.99	3P-Floating - FS (4 Wire)
GPC136.1A	1.00	1.20	2.14	1.20	3P-Floating - FS (4 Wire)
GPC136.1P	1.00	1.20	2.14	1.20	3P-Floating - FS (4 Wire)
GPC161.1A	1.03	1.01	2.11	1.01	Modulating - FS
GPC161.1A/09R	1.03	1.01	2.11	1.01	Modulating - FS
GPC161.1A/09T	1.04	1.03	2.11	1.03	Modulating - FS
GPC161.1A/RW	1.03	1.01	2.11	1.01	Modulating - FS
GPC161.1P	1.03	1.01	2.11	1.01	Modulating - FS
GPC166.1A	1.12	1.22	2.11	1.22	Modulating - FS
GPC166.1P	1.12	1.22	2.11	1.22	Modulating - FS
GPC221.1A/09R	1.11	0.98	0.96	0.98	2P- FS (2 Wire)
GPC221.1A/09T	1.12	1.00	0.96	1.00	2P- FS (2 Wire)
GPC221.1A/RW	1.11	0.98	0.96	0.98	2P- FS (2 Wire)
GPC226.1A/09R1	1.18	1.13	0.96	1.13	2P- FS (2 Wire)
GPC226.1A/09T	1.20	1.17	0.96	1.17	2P- FS (2 Wire)
GPC226.1A/RW	1.21	1.19	0.96	1.19	2P- FS (2 Wire)
GPC261.1A/RW	1.22	1.08	2.11	1.08	Modulating - FS
GPC321.1A	1.11	0.98	1.22	0.98	2P- FS (2 Wire)
GPC321.1U	1.11	0.98	1.22	0.98	2P- FS (2 Wire)
GPC326.1A	1.21	1.19	1.22	1.19	2P- FS (2 Wire)
GPC326.1U	1.21	1.19	1.22	1.19	2P- FS (2 Wire)
GPC361.1A	1.22	1.08	2.54	1.08	Modulating - FS
GQD121.1A	1.82	0.94	1.58	0.94	2P- FS (2 Wire)

Article Type	Manufacturing	Distribution	Operation	End-of-Life	Control type*
GQD121.1P	1.80	0.90	1.58	0.90	2P- FS (2 Wire)
GQD121.6A	1.82	0.93	1.58	0.93	2P- FS (2 Wire)
GQD126.1A	1.92	1.17	1.58	1.17	2P- FS (2 Wire)
GQD126.1P	2.02	1.38	1.58	1.38	2P- FS (2 Wire)
GQD131.1A	0.99	0.90	2.10	0.90	3P-Floating - FS (4 Wire)
GQD131.1P	0.96	0.84	2.10	0.84	3P-Floating - FS (4 Wire)
GQD136.1A	1.09	1.13	2.10	1.13	3P-Floating - FS (4 Wire)
GQD136.1P	1.18	1.33	2.10	1.33	3P-Floating - FS (4 Wire)
GQD151.1P	1.11	0.88	2.79	0.88	Modulating - FS
GQD156.1P	1.34	1.36	2.79	1.36	Modulating - FS
GQD161.1A	1.09	0.91	2.79	0.91	Modulating - FS
GQD166.1A	1.19	1.14	2.79	1.14	Modulating - FS
GQD221.1U	2.19	1.00	1.89	1.00	2P- FS (2 Wire)
GQD226.1U	2.44	1.55	1.89	1.55	2P- FS (2 Wire)
GQD321.1A	2.18	0.97	1.89	0.97	2P- FS (2 Wire)
GQD321.6A	2.17	0.96	1.89	0.96	2P- FS (2 Wire)
GQD326.1A	2.28	1.20	1.89	1.20	2P- FS (2 Wire)
GSD141.1A	0.82	0.80	0.70	0.80	2P- NFS (3 Wire)
			0.03		3P-Floating - NFS (3 Wire)
GSD141.1P	0.82	0.80	0.70	0.80	2P- NFS (3 Wire)
			0.03		3P-Floating - NFS (3 Wire)
GSD141.7K	1.79	0.75	0.70	0.75	2P- NFS (3 Wire)
GSD146.1A	0.92	1.02	0.70	1.02	2P- NFS (3 Wire)
			0.03		3P-Floating - NFS (3 Wire)
GSD146.1P	0.92	1.02	0.70	1.02	2P- NFS (3 Wire)
			0.03		3P-Floating - NFS (3 Wire)
GSD161.1A	0.94	0.82	0.98	0.82	Modulating - NFS
GSD161.1P	0.94	0.82	0.98	0.82	Modulating - NFS
GSD166.1A	1.04	1.04	0.98	1.04	Modulating - NFS
GSD166.1P	1.04	1.04	0.98	1.04	Modulating - NFS
GSD341.1A	1.04	0.81	1.25	0.81	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GSD341.1U	1.04	0.81	1.25	0.8	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GSD341.7A	2.11	0.89	2.76	0.89	2P- NFS (3 Wire)

Article Type	Manufacturing	Distribution	Operation	End-of-Life	Control type*
GSD346.1A	1.13	1.03	1.25	1.03	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GSD346.1U	1.13	1.03	1.25	1.03	2P- NFS (3 Wire)
			0.05		3P-Floating - NFS (3 Wire)
GSD361.1A	1.14	0.92	0.71	0.92	Modulating - NFS

Wiring schematics for control type

Open/Close (SpringReturn)	Open/Close	Open/Close	3-Position	3-Position (Spring Return)	Modulating
	SPST	SPDT	-		-
					

*[Operation profiles for air damper actuators](#)

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