



BG1 Schraube DC Contactors

Representative product	DILM12-10(24VDC) (Y7-276845) Product Category: Contactors, Remote control switch		
Description of the product	Eaton Moeller series DILM contactor are designed to establish and cut off the supply of a downstream installation from an electrical and/or mechanical control in industrial application areas. The reference product has 3 poles, DC operation.		
Homogeneous Environmental Families Covered	The PEP concerns following product offerings from Eaton Moeller contactor as mentioned below:		
	DILM12-10(24VDC) (Reference)	DILM9-10-EA(24VDC)	DILM9-01(24VDC)
	DILM7-01-SOND516(24VDC)	DILM9-01-EA(24VDC)	DILM9-01(48VDC)
	DILM7-10-SOND516(24VDC)	DILM12-10-EA(24VDC)	DILM9-01(110VDC)
	DILM9-01-SOND516(24VDC)	DILM12-01-EA(24VDC)	DILM9-01(220VDC)
	DILM9-10-SOND516(24VDC)	DILM15-10-EA(24VDC)	DILM9-21(24VDC)
	DILM12-01-SOND516(24VDC)	DILMS12-23(24VDC)	DILM9-32(24VDC)
	DILM12-10-SOND516(24VDC)	DILMS7-R23(24VDC)	DILM12-10(12VDC)
	DILM7-22(24VDC)	DILMS9-R23(24VDC)	DILM12-10(48VDC)
	DILM9-22(24VDC)	DILMS12-R23(24VDC)	DILM12-10(110VDC)
	DILM12-22(24VDC)	DILMS7-23(24VDC)	DILM12-10(220VDC)
	DILM15-22(24VDC)	DILMS9-23(24VDC)	DILM12-01(12VDC)
	DILM7-10(24VDC)-GVP	DILM7-10(12VDC)	DILM12-01(24VDC)
	DILM12-01(120VDC)	DILM7-10(24VDC)	DILM12-01(48VDC)
	DILM12-10(120VDC)	DILM7-10(48VDC)	DILM12-01(110VDC)
	DILM15-01(120VDC)	DILM7-10(110VDC)	DILM12-01(220VDC)
	DILM15-10(120VDC)	DILM7-10(220VDC)	DILM12-21(24VDC)
	DILM7-01(120VDC)	DILM7-01(12VDC)	DILM12-32(24VDC)
	DILM7-10(120VDC)	DILM7-01(24VDC)	DILMP20(12VDC)
	DILM9-01(120VDC)	DILM7-01(48VDC)	DILMP20(24VDC)

	DILM9-10(120VDC) DILMP20(120VDC) DILM9-10(24VDC)SOND733 DILM9-01(24VDC)SOND733 DILM9-32(24VDC)SOND733 DILM7-10(26VDC) DILM7-01(26VDC) DILM15-01-EA(24VDC) DILM7-10-EA(24VDC) DILM7-01-EA(24VDC)	DILM7-01(110VDC) DILM7-01(220VDC) DILM7-21(24VDC) DILM7-32(24VDC) DILM9-10(12VDC) DILM9-10(24VDC) DILM9-10(48VDC) DILM9-10(60VDC) DILM9-10(110VDC) DILM9-10(220VDC)	DILMP20(48VDC) DILMP20(220VDC) DILM15-10(12VDC) DILM15-10(24VDC) DILM15-10(48VDC) DILM15-10(220VDC) DILM15-01(12VDC) DILM15-01(24VDC) DILM15-01(48VDC) DILM15-01(220VDC)
Functional unit	Establish and cut off the supply of a downstream installation from an electrical and/or mechanical control characterized by the composition of 3 NO main poles, 1 NO auxiliary contact, a rated voltage of 690 V AC, a rated current 12A at AC-3, a control circuit voltage 24V DC, with 4 poles, and, IP00 rating in the Industrial application areas, according to the appropriate use scenario, and during the reference service life of the product of 20 years.		
Company information	Eaton Industries GmbH, Holzhausen, Germany, 56357 Email: productstewardship-es@eaton.com		

Constituent Materials			
Reference product mass	3.04E-01 kg (With packaging)		
Category PEP Material	Materials	Mass (kg)	Percentage (%)
Metals	Steel	1.06E-01	34.2%
Metals	Copper	8.89E-02	28.7%
Plastics	Polyamide 6.6	7.28E-02	23.5%
Others	Corrugated cardboard	1.30E-02	4.2%
Metals	Stainless steel	1.01E-02	3.2%
Others	Water	6.02E-03	1.9%
Metals	Zinc	4.08E-03	1.3%
Others	Wood	3.43E-03	1.1%
Metals	Bronze	3.34E-03	1.1%
Metals	Silver	1.05E-03	0.3%
Plastics	Polyethylene low density	4.00E-04	0.1%
Others	Paper	3.28E-04	0.1%
Others	Glue	4.03E-05	<0.1%
Others	Silicon	2.52E-05	<0.1%
Others	Miscellaneous	6.96E-04	0.2%
Total		3.04E-01	100.00%

Substance Assessment

The representative product is compliant with the EU-RoHS Directive (2011/65/EU) without any exemption and the product doesn't contain any substance listed as Substance-of-Very-High-Concern (SVHC) on the Candidate List of the EU-REACH Regulation (1907/2006/EC).

Additional Environmental Information

Manufacturing	The reference product is assembled at an Eaton plant Holzhausen, Germany holding management system certifications according to ISO 14001 standards.
Distribution	Eaton is committed to minimizing weight and volume of product and packaging with focus to optimize transport efficiency.
Installation	The installation process does not require any energy consumption and there is no waste other than the obsolete product packaging generated during this step.
Use	The product requires energy consumption during operation.
End of life	The recyclability rate of the overall product is 92% if it is properly dismantled prior to shredding. The rate is calculated 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).

Environmental Impacts

The calculation of the environmental impacts is the result of the Product's Life Cycle Analysis in accordance with ISO 14040/44, covering the entire lifecycle, i.e., "Cradle-to-Grave" including the following life cycle phases: production, distribution, installation, use and end of life.

System modelling was carried out using the commercial LCA software EIME v6.2-22 with database version CODDE-2023-02.

Manufacturing Phase	The product is assembled as well as packed at Eaton facility in Holzhausen, Germany. Energy model used: Germany
Distribution Phase	Distribution of the product in its packaging from the Eaton's last logistics platform to the installation place in Europe is considered as per PCR rules.
Installation Phase	Product is installed in Europe. Installation of product and treatment of packaging waste are considered in this phase. There is no energy consumption for reference product. Energy model used: Europe
Use Phase	Reference lifetime: 20 Years Usage profile: The product has power loss of 1.5 W at full load condition. For Industrial applications considering 50% of the loading rate and 50% of the use time rate, total losses are 32.85 kWh over the 20 years. Product do not require any maintenance/replacement during useful life. Energy Model Used: Europe
End of life Phase	Product disposed with WEEE guidelines. Energy model used: Europe

Module D

Module D is calculated according to PCR-ed4-EN-2021 09 06 based on the materials recycled and the modelled end-of-life scenario.

It expresses the net benefits and loads beyond the boundaries of the system and are not to be included in the life cycle totals.

Environmental Impact Indicators: Mandatory

Mandatory environmental impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Only B6* Use	End of life	Module D (Optional)
Resource use, minerals, and metals (ADPe)	kg SB eq.	1.51E-03	1.49E-03	2.85E-09	4.16E-10	9.75E-07	1.86E-05	-8.02E-04
Resource use, fossils (ADPf)	MJ	4.40E+02	6.92E+01	1.01E+00	1.49E-01	3.43E+02	2.63E+01	-3.50E+01
Acidification (AP)	mol H ⁺ eq.	1.14E-01	3.32E-02	4.59E-04	4.59E-05	7.68E-02	3.81E-03	-1.84E-02
Eutrophication, freshwater (Epf)	kg P eq.	9.04E-04	2.77E-04	2.72E-08	2.18E-07	3.69E-05	5.90E-04	-3.90E-06
Eutrophication marine (Epm)	kg N eq.	1.18E-02	2.39E-03	2.15E-04	2.28E-05	8.73E-03	4.84E-04	-1.21E-03
Eutrophication, terrestrial (Ept)	mol N eq.	1.63E-01	2.31E-02	2.36E-03	1.46E-04	1.31E-01	5.93E-03	-9.11E-03
Climate change (GWP)	kg CO ₂ eq.	1.66E+01	2.43E+00	7.25E-02	1.91E-02	1.35E+01	5.61E-01	-1.26E+00
Climate change-Biogenic (GWPb)	kg CO ₂ eq.	7.37E-02	3.77E-02	0.00E+00	6.80E-04	1.80E-02	1.73E-02	-1.80E-02
Climate change-Fossil (GWPf)	kg CO ₂ eq.	1.65E+01	2.40E+00	7.25E-02	1.84E-02	1.34E+01	5.44E-01	-1.25E+00
Climate change-Land use and land use change (GWPlu)	kg CO ₂ eq.	5.07E-07	1.61E-07	0.00E+00	-1.39E-10	0.00E+00	3.46E-07	0.00E+00
Ozone depletion (ODP)	kg CFC-11 eq.	2.60E-07	1.72E-07	1.11E-10	2.01E-10	5.76E-08	2.99E-08	-9.37E-08
Photochemical ozone formation - human health (POCP)	kg NMVOC eq.	3.85E-02	8.10E-03	5.95E-04	3.50E-05	2.80E-02	1.73E-03	-3.79E-03
Water use (WU)	m ³ eq.	4.28E+00	3.20E+00	2.75E-04	1.60E-03	4.76E-01	6.00E-01	-1.84E+00

Inventory Flow Indicators: Mandatory

Inventory flow indicators	Unit	Total	Manufacturing	Distribution	Installation	Only B6* Use	End of life	Module D (Optional)
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	6.91E+01	2.72E+00	1.35E-03	3.40E-02	6.59E+01	4.64E-01	-4.13E-01
Use of renewable primary energy resources used as raw material	MJ	2.99E-01	2.99E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.18E-01
Total use of renewable primary energy resources	MJ	6.94E+01	3.02E+00	1.35E-03	3.40E-02	6.59E+01	4.64E-01	-6.31E-01
Use of non-renewable primary energy excluding non-renewable primary energy used as raw material	MJ	4.38E+02	6.75E+01	1.01E+00	1.49E-01	3.43E+02	2.63E+01	-3.35E+01
Use of non-renewable primary energy resources used as raw material	MJ	1.70E+00	1.70E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.51E+00
Total use of non-renewable primary energy resources	MJ	4.40E+02	6.92E+01	1.01E+00	1.49E-01	3.43E+02	2.63E+01	-3.50E+01
Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Inventory flow indicators	Unit	Total	Manufacturing	Distribution	Installation	Only B6* Use	End of life	Module D (Optional)
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of freshwater	m³	9.96E-02	7.45E-02	6.41E-06	3.74E-05	1.11E-02	1.40E-02	-4.28E-02
Components for reuse	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	3.63E-01	9.36E-02	0.00E+00	1.22E-03	0.00E+00	2.68E-01	0.00E+00
Materials for energy recovery	kg	3.57E-03	1.15E-03	0.00E+00	2.42E-03	0.00E+00	0.00E+00	0.00E+00
Exported Energy	MJ	1.16E-03	0.00E+00	0.00E+00	1.16E-03	0.00E+00	0.00E+00	0.00E+00
Hazardous waste disposed	kg	1.99E+01	1.94E+01	0.00E+00	3.58E-04	2.52E-01	2.88E-01	-1.23E+01
Non-hazardous waste disposed	kg	2.73E+00	6.02E-01	2.54E-03	8.83E-03	1.94E+00	1.83E-01	-6.49E-02
Radioactive waste disposed	kg	9.30E-04	3.86E-04	1.81E-06	8.12E-07	4.05E-04	1.36E-04	-4.60E-05
Biogenic carbon content of the product	kg C	2.80E-01	2.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the associated packaging	kg C	3.95E-01	3.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Environmental Impact Indicators: Optional

Environmental impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Only B6* Use	End of life	Module-D (Optional)
Ecotoxicity, freshwater	CTUe	2.46E+02	5.03E+01	4.88E-02	1.86E-01	1.45E+02	5.06E+01	-1.40E+01
Human toxicity, cancer	CTUh-c	2.48E-06	2.38E-06	1.27E-12	1.63E-09	1.57E-09	9.48E-08	-1.56E-06
Human toxicity, non-cancer	CTUh-nc	4.92E-07	3.78E-07	1.38E-10	7.02E-11	6.23E-08	5.17E-08	-2.25E-07
Ionising radiation, human health	kBq U ²³⁵ eq.	6.40E+01	4.40E+01	1.76E-04	2.25E-03	2.00E+01	4.31E-02	-2.35E+01
Land use	--	2.71E+00	7.67E-01	0.00E+00	1.85E-03	2.68E-01	1.67E+00	-1.37E-04
EF-particulate Matter	Disease occurrence	8.40E-07	2.17E-07	3.73E-09	2.84E-10	5.96E-07	2.27E-08	-1.18E-07
Total Primary Energy	MJ	5.09E+02	7.22E+01	1.01E+00	1.83E-01	4.09E+02	2.68E+01	-3.56E+01

To evaluate the environmental impact of other product covered by this PEP, multiply the impact figures by-

Factors for Manufacturing, Distribution, Installation, End-of-Life, and Module-D Phase:

Product	Phases	ADPe (kg Sb eq.)	ADPf (MJ)	AP (mol H ⁺ eq.)	Epf (kg P eq.)	Epm (kg N eq.)	Ept (mol N eq.)	GWP (kg CO ₂ eq.)	GWPb (kg CO ₂ eq.)	GWPf (kg CO ₂ eq.)	GWPlu (kg CO ₂ eq.)	ODP (kg CFC- 11 eq.)	POCP (kg NMVOC eq.)	WU (m³ eq.)
DILM12-10(24VDC)	Manufacturing	1												
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-01-SOND516(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-10-SOND516(24VDC)	Manufacturing													
	Distribution													

Product	Phases	ADPe (kg Sb eq.)	ADPf (MJ)	AP (mol H ⁺ eq.)	Epf (kg P eq.)	Epm (kg N eq.)	Ept (mol N eq.)	GWP (kg CO ₂ eq.)	GWPb (kg CO ₂ eq.)	GWPf (kg CO ₂ eq.)	GWPlu (kg CO ₂ eq.)	ODP (kg CFC- 11 eq.)	POCP (kg NMVOC eq.)	WU (m ³ eq.)
	Installation													
	End of Life													
	Module D													
DILM9-01-SOND516(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-10-SOND516(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-01-SOND516(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-10-SOND516(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-22(24VDC)	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
DILM9-22(24VDC)	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
DILM12-22(24VDC)	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
DILM15-22(24VDC)	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
DILM7-10(24VDC)-GVP	Manufacturing	1												
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-01(120VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													

Product	Phases	ADPe (kg Sb eq.)	ADPf (MJ)	AP (mol H ⁺ eq.)	Epf (kg P eq.)	Epm (kg N eq.)	Ept (mol N eq.)	GWP (kg CO ₂ eq.)	GWpb (kg CO ₂ eq.)	GWPf (kg CO ₂ eq.)	GWPlu (kg CO ₂ eq.)	ODP (kg CFC- 11 eq.)	POCP (kg NMVOC eq.)	WU (m ³ eq.)
	Module D													
DILM12-10(120VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM15-01(120VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM15-10(120VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-01(120VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-10(120VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-01(120VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-10(120VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILMP20(120VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-10(24VDC)SOND733	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-01(24VDC)SOND733	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-32(24VDC)SOND733	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24

Product	Phases	ADPe (kg Sb eq.)	ADPf (MJ)	AP (mol H ⁺ eq.)	Epf (kg P eq.)	Epm (kg N eq.)	Ept (mol N eq.)	GWP (kg CO ₂ eq.)	GWpb (kg CO ₂ eq.)	GWpf (kg CO ₂ eq.)	GWPlu (kg CO ₂ eq.)	ODP (kg CFC- 11 eq.)	POCP (kg NMVOC eq.)	WU (m ³ eq.)
	Distribution	1.24												
	Installation	1.40												
	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
DILM7-10(26VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-01(26VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM15-01-EA(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-10-EA(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-01-EA(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-10-EA(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-01-EA(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-10-EA(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-01-EA(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM15-10-EA(24VDC)	Manufacturing													
	Distribution													
	Installation													

Product	Phases	ADPe (kg Sb eq.)	ADPf (MJ)	AP (mol H ⁺ eq.)	Epf (kg P eq.)	Epm (kg N eq.)	Ept (mol N eq.)	GWP (kg CO ₂ eq.)	GWPb (kg CO ₂ eq.)	GWPf (kg CO ₂ eq.)	GWPlu (kg CO ₂ eq.)	ODP (kg CFC- 11 eq.)	POCP (kg NMVOC eq.)	WU (m ³ eq.)
DILMS12-23(24VDC)	End of Life													
	Module D													
	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
DILMS7-R23(24VDC)	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
DILMS9-R23(24VDC)	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
DILMS12-R23(24VDC)	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
DILMS7-23(24VDC)	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
DILMS9-23(24VDC)	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
DILM7-10(12VDC)	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
DILM7-10(24VDC)	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
DILM7-10(48VDC)	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
DILM7-10(110VDC)	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												

Product	Phases	ADPe (kg Sb eq.)	ADPf (MJ)	AP (mol H ⁺ eq.)	Epf (kg P eq.)	Epm (kg N eq.)	Ept (mol N eq.)	GWP (kg CO ₂ eq.)	GWPb (kg CO ₂ eq.)	GWPf (kg CO ₂ eq.)	GWPlu (kg CO ₂ eq.)	ODP (kg CFC- 11 eq.)	POCP (kg NMVOC eq.)	WU (m ³ eq.)
DILM7-10(220VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-01(12VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-01(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-01(48VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-01(110VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-01(220VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM7-21(24VDC)	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
DILM7-32(24VDC)	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
DILM9-10(12VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-10(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-10(48VDC)	Manufacturing													
	Distribution													

Product	Phases	ADPe (kg Sb eq.)	ADPf (MJ)	AP (mol H ⁺ eq.)	Epf (kg P eq.)	Epm (kg N eq.)	Ept (mol N eq.)	GWP (kg CO ₂ eq.)	GWpb (kg CO ₂ eq.)	GWpf (kg CO ₂ eq.)	GWPlu (kg CO ₂ eq.)	ODP (kg CFC- 11 eq.)	POCP (kg NMVOC eq.)	WU (m ³ eq.)
	Installation													
	End of Life													
	Module D													
DILM9-10(60VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-10(110VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-10(220VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-01(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-01(48VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-01(110VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-01(220VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM9-21(24VDC)	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
DILM9-32(24VDC)	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
DILM12-10(12VDC)	Manufacturing	1												
	Distribution													
	Installation													
	End of Life													

Product	Phases	ADPe (kg Sb eq.)	ADPf (MJ)	AP (mol H ⁺ eq.)	Epf (kg P eq.)	Epm (kg N eq.)	Ept (mol N eq.)	GWP (kg CO ₂ eq.)	GWpb (kg CO ₂ eq.)	GWpf (kg CO ₂ eq.)	GWPlu (kg CO ₂ eq.)	ODP (kg CFC- 11 eq.)	POCP (kg NMVOC eq.)	WU (m ³ eq.)
	Module D													
DILM12-10(48VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-10(110VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-10(220VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-01(12VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-01(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-01(48VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-01(110VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-01(220VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													
DILM12-21(24VDC)	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
DILM12-32(24VDC)	Manufacturing	1.48	1.18	1.16	1.00	1.38	1.30	1.30	1.08	1.31	0.98	1.38	1.26	1.24
	Distribution	1.24												
	Installation	1.40												
	End of Life	1.10	1.12	1.19	1.10	1.22	1.20	1.18	1.06	1.19	1.16	1.47	1.20	1.09
	Module D	1.38	1.21	1.16	1.56	1.47	1.36	1.36	1.11	1.36	1.00	1.30	1.27	1.28
DILMP20(12VDC)	Manufacturing	1												

Product	Phases	ADPe (kg Sb eq.)	ADPf (MJ)	AP (mol H ⁺ eq.)	Epf (kg P eq.)	Epm (kg N eq.)	Ept (mol N eq.)	GWP (kg CO ₂ eq.)	GWPb (kg CO ₂ eq.)	GWPf (kg CO ₂ eq.)	GWPlu (kg CO ₂ eq.)	ODP (kg CFC- 11 eq.)	POCP (kg NMVOC eq.)	WU (m ³ eq.)
	Distribution													
	Installation													
	End of Life													
	Module D													
DILMP20(24VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
DILMP20(48VDC)	Module D													
	Manufacturing													
	Distribution													
	Installation													
DILMP20(220VDC)	End of Life													
	Module D													
	Manufacturing													
	Distribution													
DILM15-10(12VDC)	Installation													
	End of Life													
	Module D													
	Manufacturing													
DILM15-10(24VDC)	Distribution													
	Installation													
	End of Life													
	Module D													
DILM15-10(48VDC)	Manufacturing													
	Distribution													
	Installation													
	End of Life													
DILM15-10(220VDC)	Module D													
	Manufacturing													
	Distribution													
	Installation													
DILM15-01(12VDC)	End of Life													
	Module D													
	Manufacturing													
	Distribution													
DILM15-01(24VDC)	Installation													
	End of Life													
	Module D													
	Manufacturing													
DILM15-01(48VDC)	Distribution													
	Installation													
	Module D													

Product	Phases	ADPe (kg Sb eq.)	ADPf (MJ)	AP (mol H ⁺ eq.)	Epf (kg P eq.)	Epm (kg N eq.)	Ept (mol N eq.)	GWP (kg CO ₂ eq.)	GWPb (kg CO ₂ eq.)	GWPf (kg CO ₂ eq.)	GWPlu (kg CO ₂ eq.)	ODP (kg CFC- 11 eq.)	POCP (kg NMVOC eq.)	WU (m ³ eq.)
DILM15-01(220VDC)	End of Life													
	Module D													
	Manufacturing													
	Distribution													
	Installation													
	End of Life													
	Module D													

Multiplying Factors and Use Phase Energy Consumption for homogenous products.

Product	Part Number	Equipment heat dissipation, current-dependent	Energy used in Wh	Extrapolation Factor
DILM12-10(24VDC)	Y7-276845	1.5	32850	1.00
DILM7-01-SOND516(24VDC)	Y7-102042	0.3	6570	0.20
DILM7-10-SOND516(24VDC)	Y7-102043	0.3	6570	0.20
DILM9-01-SOND516(24VDC)	Y7-102044	0.9	19710	0.60
DILM9-10-SOND516(24VDC)	Y7-102045	0.9	19710	0.60
DILM12-01-SOND516(24VDC)	Y7-102046	1.5	32850	1.00
DILM12-10-SOND516(24VDC)	Y7-102047	1.5	32850	1.00
DILM7-22(24VDC)	Y7-106367	0.36	7884	0.24
DILM9-22(24VDC)	Y7-106368	0.9	19710	0.60
DILM12-22(24VDC)	Y7-106369	1.5	32850	1.00
DILM15-22(24VDC)	Y7-106370	2.4	52560	1.60
DILM7-10(24VDC)-GVP	Y7-107830	0.3	6570	0.20
DILM12-01(120VDC)	Y7-158187	1.5	32850	1.00
DILM12-10(120VDC)	Y7-158191	1.5	32850	1.00
DILM15-01(120VDC)	Y7-158195	2.4	52560	1.60
DILM15-10(120VDC)	Y7-158200	2.4	52560	1.60
DILM7-01(120VDC)	Y7-158214	0.3	6570	0.20
DILM7-10(120VDC)	Y7-158218	0.3	6570	0.20
DILM9-01(120VDC)	Y7-158222	0.9	19710	0.60
DILM9-10(120VDC)	Y7-158226	0.9	19710	0.60
DILMP20(120VDC)	Y7-158235	5.1	111690	3.40
DILM9-10(24VDC)SOND733	Y7-180526	0.9	19710	0.60
DILM9-01(24VDC)SOND733	Y7-180527	0.9	19710	0.60
DILM9-32(24VDC)SOND733	Y7-180531	0.9	19710	0.60
DILM7-10(26VDC)	Y7-186879	0.3	6570	0.20
DILM7-01(26VDC)	Y7-186880	0.3	6570	0.20
DILM15-01-EA(24VDC)	Y7-189908	2.4	52560	1.60
DILM7-10-EA(24VDC)	Y7-190026	0.3	6570	0.20
DILM7-01-EA(24VDC)	Y7-190028	0.3	6570	0.20
DILM9-10-EA(24VDC)	Y7-190030	0.9	19710	0.60

Product	Part Number	Equipment heat dissipation, current-dependent	Energy used in Wh	Extrapolation Factor
DILM9-01-EA(24VDC)	Y7-190032	0.9	19710	0.60
DILM12-10-EA(24VDC)	Y7-190034	1.5	32850	1.00
DILM12-01-EA(24VDC)	Y7-190036	1.5	32850	1.00
DILM15-10-EA(24VDC)	Y7-190038	2.4	52560	1.60
DILMS12-23(24VDC)	Y7-191709	1.5	32850	1.00
DILMS7-R23(24VDC)	Y7-191721	0.3	6570	0.20
DILMS9-R23(24VDC)	Y7-191722	0.9	19710	0.60
DILMS12-R23(24VDC)	Y7-191723	1.5	32850	1.00
DILMS7-23(24VDC)	Y7-191761	0.3	6570	0.20
DILMS9-23(24VDC)	Y7-191762	0.9	19710	0.60
DILM7-10(12VDC)	Y7-276564	0.3	6570	0.20
DILM7-10(24VDC)	Y7-276565	0.3	6570	0.20
DILM7-10(48VDC)	Y7-276566	0.3	6570	0.20
DILM7-10(110VDC)	Y7-276568	0.3	6570	0.20
DILM7-10(220VDC)	Y7-276569	0.3	6570	0.20
DILM7-01(12VDC)	Y7-276599	0.3	6570	0.20
DILM7-01(24VDC)	Y7-276600	0.3	6570	0.20
DILM7-01(48VDC)	Y7-276601	0.3	6570	0.20
DILM7-01(110VDC)	Y7-276603	0.3	6570	0.20
DILM7-01(220VDC)	Y7-276604	0.3	6570	0.20
DILM7-21(24VDC)	Y7-276635	0.36	7884	0.24
DILM7-32(24VDC)	Y7-276670	0.36	7884	0.24
DILM9-10(12VDC)	Y7-276704	0.9	19710	0.60
DILM9-10(24VDC)	Y7-276705	0.9	19710	0.60
DILM9-10(48VDC)	Y7-276706	0.9	19710	0.60
DILM9-10(60VDC)	Y7-276707	0.9	19710	0.60
DILM9-10(110VDC)	Y7-276708	0.9	19710	0.60
DILM9-10(220VDC)	Y7-276709	0.9	19710	0.60
DILM9-01(24VDC)	Y7-276740	0.9	19710	0.60
DILM9-01(48VDC)	Y7-276741	0.9	19710	0.60
DILM9-01(110VDC)	Y7-276743	0.9	19710	0.60
DILM9-01(220VDC)	Y7-276744	0.9	19710	0.60
DILM9-21(24VDC)	Y7-276775	0.9	19710	0.60
DILM9-32(24VDC)	Y7-276810	0.9	19710	0.60
DILM12-10(12VDC)	Y7-276844	1.5	32850	1.00
DILM12-10(48VDC)	Y7-276846	1.5	32850	1.00
DILM12-10(110VDC)	Y7-276848	1.5	32850	1.00
DILM12-10(220VDC)	Y7-276849	1.5	32850	1.00
DILM12-01(12VDC)	Y7-276879	1.5	32850	1.00
DILM12-01(24VDC)	Y7-276880	1.5	32850	1.00
DILM12-01(48VDC)	Y7-276881	1.5	32850	1.00
DILM12-01(110VDC)	Y7-276883	1.5	32850	1.00

Product	Part Number	Equipment heat dissipation, current-dependent	Energy used in Wh	Extrapolation Factor
DILM12-01(220VDC)	Y7-276884	1.5	32850	1.00
DILM12-21(24VDC)	Y7-276915	1.5	32850	1.00
DILM12-32(24VDC)	Y7-276950	1.5	32850	1.00
DILMP20(12VDC)	Y7-276984	5.1	111690	3.40
DILMP20(24VDC)	Y7-276985	5.1	111690	3.40
DILMP20(48VDC)	Y7-276986	5.1	111690	3.40
DILMP20(220VDC)	Y7-276989	5.1	111690	3.40
DILM15-10(12VDC)	Y7-290072	2.4	52560	1.60
DILM15-10(24VDC)	Y7-290073	2.4	52560	1.60
DILM15-10(48VDC)	Y7-290074	2.4	52560	1.60
DILM15-10(220VDC)	Y7-290077	2.4	52560	1.60
DILM15-01(12VDC)	Y7-290107	2.4	52560	1.60
DILM15-01(24VDC)	Y7-290108	2.4	52560	1.60
DILM15-01(48VDC)	Y7-290109	2.4	52560	1.60
DILM15-01(220VDC)	Y7-290112	2.4	52560	1.60

Disclaimer

This Product Environmental Profile and its content is based on information available to us. It refers to the product at the date of issue. We make no express or implied representations or warranties with respect to the information contained herein.

Registration Number	EATO-00123-V01.01-EN	Drafting rules	PCR-ed4-EN-2021 09 06
Verifier accreditation Number	VH 53	Supplemented by	PSR-0005-ed3-EN-2023 06 06
Date of issue	05-2024	Information and reference documents	www.pep-ecopassport.org
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14025: 2006			
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			
The components of the present PEP may not be compared with components from any other program.			
Document complies with ISO 14025: 2006 « Environmental labels and declarations. Type III environmental declarations »			