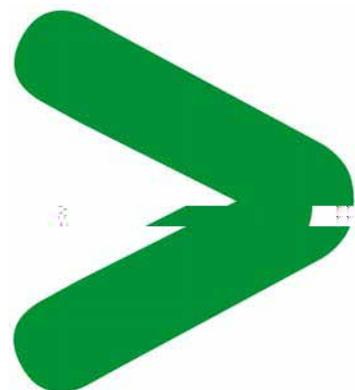


# Product Environmental Profile

**Modicon TM7 - IP67 Distributed I/O**





## Distribution

The weight and volume of the packaging have been optimized, based on the European Union's packaging directive.

The Modicon TM7 – IP67 Distributed I/O packaging weight is 56,4 g. It consists of cardboard (48 g) and paper (8,2 g).

The product distribution flows have been optimised by setting up local distribution centres close to the market areas.

## Use

The products of the Modicon TM7 – IP67 Distributed I/O

## Environmental impacts

Life cycle assessment has been performed on the following life cycle phases: Materials and Manufacturing (M), Distribution (D), Installation (I) Use (U), and End of life (E).

Modeling hypothesis and method:

- The calculation was performed on TM7NCOM16B.
- Product packaging is included.
- Installation components: no special components included.
- Scenario for the Use phase: this product range is included in the category 2 “Energy consuming products” (assumed service life is 10 years and use scenario is: 10,3 W for 100% service uptime).
- The geographical representative area for the assessment is Europe and the electrical power model used for calculation is the European model.
- End of life impacts are based on a worst case transport distance to the recycling plant (1000km)

### Presentation of the product environmental impacts

Environmental indicators	Unit	TM7NCOM16B					
		S = M + D + I + U + E	M	D	I	U	E
Air Acidification (AA)	kg H+ eq	1,17E-01	2,04E-03	1,49E-05	0,00E+00	1,15E-01	5,99E-06
Air toxicity (AT)	m <sup>3</sup>	1,36E+08	2,55E+06	2,22E+04	0,00E+00	1,34E+08	8,92E+03
Energy Depletion (ED)	MJ	1,09E+04	1,52E+02	1,12E+00	0,00E+00	1,08E+04	4,30E-01
Global Warming Potential (GWP)	kg CO eq.	5,44E+02	1,07E+01	7,95E-02	0,00E+00	5,33E+02	3,05E-02
Hazardous Waste Production (HWP)	kg	3,75E-01	2,83E-01	9,83E-08	0,00E+00	9,15E-02	3,78E-08
Ozone Depletion Potential (ODP)	kg CFC-11 eq.	1,23E-04	1,13E-06	1,50E-10	0,00E+00	1,21E-04	5,78E-11
Photochemical Ozone Creation Potential (POCP)	kg C H eq.	3,56E-02	2,64E-03	2,05E-05	0,00E+00	3,29E-02	7,60E-06
Raw Material Depletion (RMD)	Y-1	1,51E-13	1,44E-13	1,62E-18	0,00E+00	7,19E-15	6,24E-19
Water Depletion (WD)	dm <sup>3</sup>	1,46E+03	7,36E+01	8,24E-03	0,00E+00	1,39E+03	3,17E-03
Water Eutrophication (WE)	kg PO <sup>3</sup> eq.	5,95E-03	8,78E-04	1,48E-07	0,00E+00	5,07E-03	5,67E-08
Water Toxicity (WT)	m <sup>3</sup>	2,41E+02	3,18E+00	3,39E-02	0,00E+00	2,37E+02	1,30E-02

Life cycle assessment has been performed with the EIME software (Environmental Impact and Management Explorer), version 5 and with its database version 2013-02

The Use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators.

The environmental impacts of other products in this family may be estimated as follow: Raw Material Depletion and Hazardous Wastes production are proportional to the weight of the product. Other impact categories are proportional to the energy consumption of the product.

## System approach

As the products of the range are designed in accordance with the European RoHS Di

# Product Environmental Profile – PEP