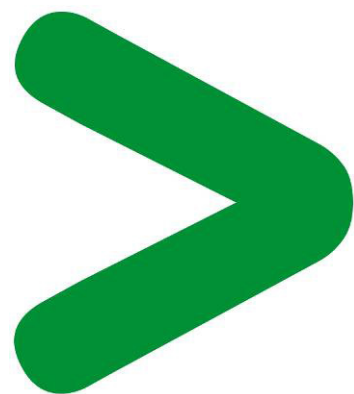


# Product Environmental Profile

**ABE7H16R11 Telefast2**



# Product Environmental Profile - PEP

## Product overview

The Telefast 2 system is a set of products for rapid connection of I/O modules (24 v discrete, analog and counter) to operative parts. It acts as a substitute for screw terminal blocks, remotely locating and partly eliminating the single-wire connection.

The Telefast 2 system only connects to channels which have HE10 and SUB-D connectors or to standard terminal blocks with a cabled connector. It consists of connecting cables and interface sub-bases.

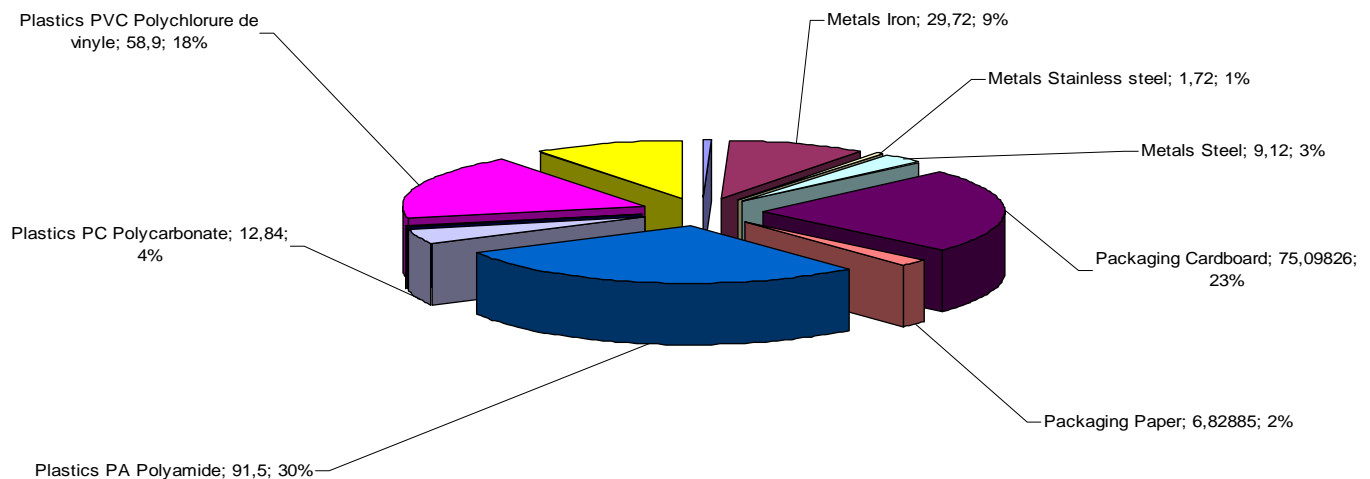
The Telefast ABE7H16R11 is a product pre wired for rapid connection of I/O modules. It acts as a substitute for screw terminal blocks, remotely locating and partly eliminating the single-wire connection.

The Telefast ABE7H16R11 only connects to channels which have HE10 . It consists of connecting cables and interface sub-bases.

The environmental analysis was performed in conformity with ISO 14040.

## Constituent materials

The mass of the Telefast ABE7 is from 160 g and 1300 g including packaging. It is 320 g for the Telefast ABE7H16R11 . The constituent materials are distributed as follows:



## Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2002/95/EC of 27 January 2003) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers - PBDE) as mentioned in the Directive

Details of ROHS and REACH substances information are available on the Schneider-Electric [Green Premium website](#) .

(<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page> )

## Manufacturing

The Telefast ABE7H16R11 is manufactured in Schneider Electric production sites (Agriers and Pisek) on which an ISO14001 certified environmental management system has been established.

## Distribution

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

The Telefast ABE7H16R11 packaging weight is 75 g. It is exclusively made of recycled cardboard materials

The weight of recycled materials used is 100% of total packaging mass.

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

## Use

The products of the Telefast ABE7H16R11 do not generate environmental pollution (noise, emissions) requiring special precautionary measures in standard use. The electrical power consumption depends on the conditions under which the product is implemented and used. The electrical power consumed by the Telefast ABE7 is between 20 W and 25 W. It is 20 W in active mode for the referenced Telefast ABE7H16R11 of the representative product. The Telefast ABE7 does not require special maintenance operations.

# Product Environmental Profile - PEP

## End of life

At end of life, the products in the Telefast ABE7H16R11 have been optimized to decrease the amount of waste and allow recovery of the product components and materials.

This product range contains PCBA without electrolytic capacitor The PCBA will be treated following recommendation in the End of Live instruction ENVEoLi111131EN

This Telefast ABE7 need special end-of-life treatment. According to countries practices this product can enter the usual end-of-life treatment process.

The recyclability potential of the products has been evaluated using the "ECO DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

According to this method, the potential recyclability ratio is: 12.09%.

As described in the recyclability calculation method this ratio includes only metals and plastics which have proven industrial recycling processes.

## 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).

Modelling hypothesis and method:

- the calculation was performed on the Telefast ABE7H16R11
- product packaging: is included
- installation components: No special components included.
- scenario for the Use phase: this Telefast range is included in the category 2 : (assumed service life is 10 years consumption is 20W 66% of the time and 0W 34%)
- the geographical representative area for the assessment is European zone and the electrical power model used for calculation is European model.

End of life impacts are based on a worst case transport distance to the recycling plant (1000 km)

### Presentation of the product environmental impacts

Environmental indicators	Unit	For give the name and commercial reference or description of the representative product					
		S=M+D +I+U+E	M	D	I	U	E
I							
Raw Material Depletion	Y-1	6,53E-19	1.9346E-14	1.402E-18	0,00E+00	1.5032E-15	6,53E-19
Energy Depletion	MJ	4,79E-01	59.592	1.028	0,00E+00	1.3237E3	4,79E-01
Water Depletion	dm3	4,54E-02	41.743	9.7597E-2	0,00E+00	1.9136E2	4,54E-02
Global Warming	g ~CO2	3,79E+01	3.4452E3	81.413	0,00E+00	6.6812E4	3,79E+01
Ozone Depletion	g ~CFC-11	2,68E-05	5.9268E-4	5.7562E-5	0,00E+00	3.6288E-3	2,68E-05
Air Toxicity	m3	7,14E+03	7.8482E5	1.534E4	0,00E+00	1.1084E7	7,14E+03
Photochemical Ozone Creation	g ~C2H4	3,24E-02	1.659	6.9575E-2	0,00E+00	22.614	3,24E-02
Air Acidification	g ~H+	4,83E-03	5.5114E-1	1.0377E-2	0,00E+00	9.021	4,83E-03
Water Toxicity	dm3	4,74E+00	9.9206E2	10.178	0,00E+00	1.9066E4	4,74E+00
Water Eutrophication	g ~PO4	6,30E-04	6.0361E-1	1.3533E-3	0,00E+00	1.57E-1	6,30E-04
Hazardous Waste Production	kg	1,41E-05	7.1003E-2	3.0274E-5	0,00E+00	1.108	1,41E-05

Life cycle assessment has been performed with the EIME software (Environmental Impact and Management Explorer), version 4.1, and with its database version 2012.

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

Depending on the impact analysis, the environmental indicators (without RMD) of other products in this family may be proportional extrapolated by energy consumption values. For RMD, impact may be proportional extrapolated by mass of the product

## System approach

As the products of the range are designed in accordance with the RoHS Directive (European Directive 2002/95/EC of 27 January 2003), they can be incorporated without any restriction in an assembly or an installation subject to this Directive.

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.

## Glossary

<b>Raw Material Depletion (RMD)</b>	This indicator quantifies the consumption of raw materials during the life cycle of the product. It is expressed as the fraction of natural resources that disappear each year, with respect to all the annual reserves of the material.
<b>Energy Depletion (ED)</b>	This indicator gives the quantity of energy consumed, whether it be from fossil, hydroelectric, nuclear or other sources. This indicator takes into account the energy from the material produced during combustion. It is expressed in MJ.
<b>Water Depletion (WD)</b>	This indicator calculates the volume of water consumed, including drinking water and water from industrial sources. It is expressed in dm <sup>3</sup> .
<b>Global Warming (GW)</b>	The global warming of the planet is the result of the increase in the greenhouse effect due to the sunlight reflected by the earth's surface being absorbed by certain gases known as "greenhouse-effect" gases. The effect is quantified in gram equivalent of CO <sub>2</sub> .
<b>Ozone Depletion (OD)</b>	This indicator defines the contribution to the phenomenon of the disappearance of the stratospheric ozone layer due to the emission of certain specific gases. The effect is expressed in gram equivalent of CFC-11.
<b>Air Toxicity (AT)</b>	This indicator represents the air toxicity in a human environment. It takes into account the usually accepted concentrations for several gases in the air and the quantity of gas released over the life cycle. The indication given corresponds to the air volume needed to dilute these gases down to acceptable concentrations.
<b>Photochemical Ozone Creation (POC)</b>	This indicator quantifies the contribution to the "smog" phenomenon (the photochemical oxidation of certain gases which generates ozone) and is expressed in gram equivalent of ethylene (C <sub>2</sub> H <sub>4</sub> ).
<b>Air Acidification (AA)</b>	The acid substances present in the atmosphere are carried by rain. A high level of acidity in the rain can cause damage to forests. The contribution of acidification is calculated using the acidification potentials of the substances concerned and is expressed in mode equivalent of H <sup>+</sup> .
<b>Water Toxicity (WT)</b>	This indicator represents the water toxicity. It takes into account the usually accepted concentrations for several substances in water and the quantity of substances released over the life cycle. The indication given corresponds to the water volume needed to dilute these substances down to acceptable concentrations.
<b>Hazardous Waste Production (HWP)</b>	This indicator calculates the quantity of specially treated waste created during all the life cycle phases (manufacturing, distribution and utilization). For example, special industrial waste in the manufacturing phase, waste associated with the production of electrical power, etc. It is expressed in kg.

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