



## Voltage measurement modules

### **DIRIS Digiware U**

U-10, U-20, U-30



### The commitments of Socomec to respect the environment

As part of its environmental policy, Socomec is committed to:

- Develop innovating solutions primarily focused on energy efficiency to help its customer in the design of less energy-consuming, better managed and eco friendly installations.
- Diversify its product offer in the renewable energy and energy efficiency sectors,
- Minimize the environmental impact of its industrial activities through the progressive ISO 14001 certification of its production sites,
- Minimize at the preliminary design stage the environmental impacts of its products taking into account their whole life cycle,
- Provide his customers with reliable data on the environmental performance of the products.

Socomec is member of :

**créer** CLUSTER RESEARCH :  
EXCELLENCE IN ECODSIGN  
& RECYCLING



**Gimélec**

Environment and sustainable  
development commissions

## ■ Representative product

### Reference product

The representative product is the DIRIS Digiware U-30 with sales reference 48290102.

### References covered by this PEP

DIRIS Digiware U-10, U-20 respectively of the sales references 48290105, 48290106.

### Function

The DIRIS Digiware U module measures the reference voltage for the entire DIRIS Digiware system. The Digiware RJ 45 bus allows to measure the voltage as well as supply power to all connected devices during 10 years.

## ■ Material and substances

### Declaration of the constitutive materials according to IEC 62474

Total weight including packaging U-10: 85g.

U-20: 85g.

U-30: 85g.

#### For the U-30

Metals, % weight		Plastics, % weight		Others, % weight	
Stainless steels	<1 %	Thermoplastics	34 %	Ceramics and Glass	9 %
Aluminium and its alloys	3,5 %	Others	1 %	Others Inorganics	4,5 %
Copper and its alloys	11 %			Cardboard and paper	34%
Nickel and its alloys	1,5 %			Others Organics	<1 %
Precious Metals	<1 %				
Other non-ferrous metals and alloys	1 %				

U-10	<b>Metals, % weight:</b> 17%	<b>Plastics, % weight:</b> 35%	<b>Others, % weight:</b> 48%
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U-20	<b>Metals, % weight:</b> 17%	<b>Plastics, % weight:</b> 35%	<b>Others, % weight:</b> 48%
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The recycled content is estimated at 24 %.

## Substances management

Socomec is leading a program to limit the use of hazardous substances in the design of new products and to monitor the presence of substances of concern in its supplies to anticipate future use restrictions.



ROHS directives 2002/95/EC and 2011/65/EC compliance: although the majority of Socomec products are outside the scope of the ROHS directives, a ROHS compliance process has been in progress on a voluntary basis since 2006. Product references covered by this PEP meet the requirements of the RoHS Directive on the restriction of substances such as lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ethers (PBDEs).



REACH 1907/2006 regulation: to the best of our knowledge at the publication date of this document, none of the substance of the candidate list to authorization (SVHC) have been found in the references covered by this PEP.

## ■ Manufacturing

The products covered by this PEP are manufactured on a site where impacts on the environment are reduced by optimizing its energy consumption and by practicing a rigorous waste management.

Moreover, Socomec is committed to the progressive ISO 14001 certification of its manufacturing sites.

## ■ Distribution

As part of its distribution policy aiming to respect the environment, Socomec is in favor of groupage transports and ISO14001 certified logistic partners.



The packaging complies with Directive 94/62/EC. The sizing of the packaging has been optimized to ensure the best possible protection of the product at the lowest possible volume in order to reduce the impact of the transport stage on the environment.

Packaging design solutions favors mono-material recyclable cardboard without coloring or bleaching. The wedging of the packaged product is made of recycled cardboard, no polystyrene is used.

## ■ Installation

The installation stage consists in connecting the product to the existing electrical installation. The installation does not generate any significant impacts on the environment.

## ■ Use phase

### Power consumption

Use phase scenario: continuous operation during 10 years.

Mode	Power consumption of the reference product (W)	Time distribution (%)
Active	0,7W	100

Product power consumption during its total lifespan (10 years) : 61,4 kWh  
 Declared consumption takes into account the maximum consumption of the electronic box.

### Care and maintenance

The product does not require any maintenance under normal conditions of use.

### Consumables

The product does not require consumables.

## ■ End of life

### End of life treatment

- 1) With a screwdriver in the notches\*, dissociate the 2 parts of the plastic housing.

Then repeat the operations on the opposite face of the product.

- 2) Remove the superior part of the plastic housing in order to access the electronic cards.

Take the electronic card out of the plastic housing.

Head all of the parts towards the appropriate recycling industry according to the legislation.

#### Remark:

This product does not contain any battery.



### Recovery potential of the product according to IEC TR 62635

The total potential value of this product is 53%.

This potential value takes into account the material recycling and energy recovery.

## ■ Environmental impacts

### Calculation methodology: life cycle assessment (LCA)



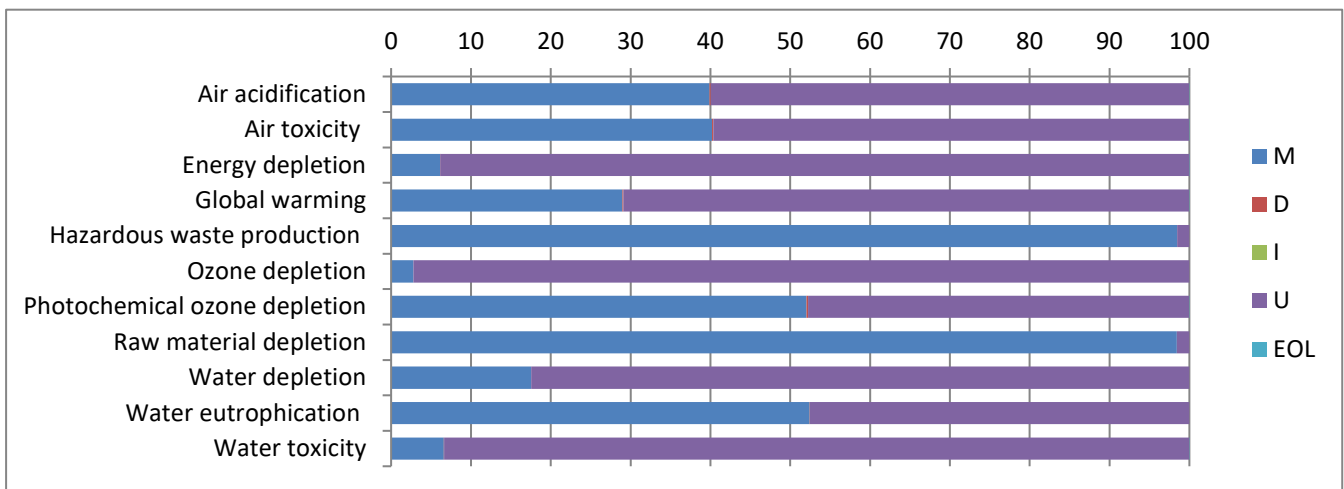
The calculation of the impacts on the environment was made using a life cycle assessment methodology in accordance with the ISO 14040 requirements and with PEP eco passport product category rules. For more details follow the link: [www.pep-ecopassport.org](http://www.pep-ecopassport.org)

The whole life cycle has been taken into account:

<b>Manufacturing (M)</b>	From the raw material extraction to the last Socomec logistic platform, including packaging.
<b>Distribution (D)</b>	From the last Socomec logistic platform to the final customer following an average French distribution scenario.
<b>Installation (I)</b>	Neglected (*)
<b>Use phase (U)</b>	Power consumption required to operate the product during 20 years according to consumption scenario described on page 4. Energy model considered: French
<b>End Of Life (EOL)</b>	Road transport over 1000 kms from the final customer to the dismantling sites.

### U-30's environmental impact

Indicators	Units	M	D	I	U	EOL	Total
Air acidification	g H+ eq	6,81E-01	2,51E-03	0,0*	1,02E+00	8,35E-04	1,71E+00
Air toxicity	m <sup>3</sup>	8,73E+05	3,72E+03	0,0*	1,29E+06	1,24E+03	2,17E+06
Energy depletion	MJ	5,45E+01	1,90E-01	0,0*	8,33E+02	6,33E-02	8,88E+02
Global warming	g CO <sup>2</sup> eq	3,85E+03	1,35E+01	0,0*	9,40E+03	4,49E+00	1,33E+04
Hazardous waste production	kg	9,28E-02	1,67E-08	0,0*	1,46E-03	5,56E-09	9,42E-02
Ozone depletion	g CFC-11 eq	5,45E-04	2,56E-08	0,0*	1,91E-02	8,52E-09	1,96E-02
Photochemical ozone depletion	g C <sub>2</sub> H <sub>4</sub> eq	7,74E-01	3,01E-03	0,0*	7,10E-01	1,00E-03	1,49E+00
Raw material depletion	Y-1	2,21E-14	2,76E-19	0,0*	3,50E-16	9,19E-20	2,25E-14
Water depletion	dm <sup>3</sup>	2,27E+01	1,40E-03	0,0*	1,07E+02	4,67E-04	1,29E+02
Water eutrophication	g PO <sub>4</sub> <sup>3-</sup> eq	2,37E-01	2,51E-05	0,0*	2,15E-01	8,35E-06	4,51E-01
Water toxicity	m <sup>3</sup>	9,50E-01	5,76E-03	0,0*	1,34E+01	1,92E-03	1,43E+01



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