

## UR20-FBC-MOD-TCP-ECO

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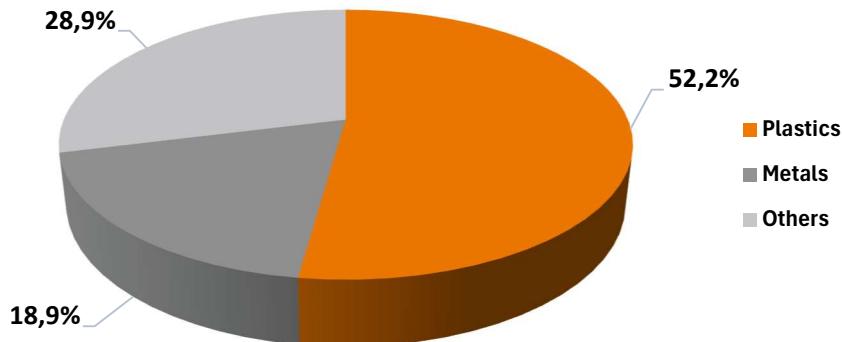


## General data

Reference product	2659700000
Description of the product	The UR20-FBC-MOD-TCP-ECO fieldbus coupler are Modbus TCP participants according to IEC 61158. As a head module of the u-remote system bus the coupler supports up to 16 open connections. The two Ethernet ports form an unmanaged 2-port switch that supports a line network structure. The coupler can be accessed with a system-independent web server application via the Ethernet. Thus, all information, such as diagnostics, status values and parameters, can be read and all connected modules can be simulated or forced. The station's main power supply is integrated in the coupler. Power is supplied via a 4-pole connector.
Functional unit	The ECO fieldbus coupler connects the station I/O modules to the fieldbus and exchanges all of the data traffic with the programmable logic controller including the diagnostic messages for 55,34% within 10 years.

## Constituent Materials

The total weight of the reference product is 287,0 g (including packaging material). The constituent materials are distributed as follows:



Categorisation according to the material classes of IEC 62474:

Plastics		Metals		Other		
M-204	PolyCarbonate (PC)	25,9 %	M-119	Other ferrous alloys, non-stainless steels	13,3 %	Miscellaneous 22,8 %
M-258	PolyAmide (PA), filled	23,3 %	M-121	Copper and its alloys	5,5 %	M-341 Paper 6,1 %
M-208	PolyAmide (PA)	1,5 %	M-100	Stainless steel	0,1 %	
M-261	PolyButyleneTerephthalate (PBT), filled	1,5 %				
<b>Plastics in total</b>		<b>52,20 %</b>	<b>Metals in total</b>		<b>18,9 %</b>	<b>Others in total</b> <b>28,9%</b>

The products are in compliance with RoHS (EU Directive 2011/65/EU).

According to the REACH Regulation 1907/2006, the ECHA publishes on its website which substances are to be classified as so-called substances of very high concern (SVHC). As soon as an article contains SVHC above the respective threshold values for the declaration obligation according to Article 33, the affected articles and the SVHC they contain are published in the online product catalogue at each product.

The online product catalogue site of the reference product can be accessed via the link:

<https://eshop.weidmueller.com/p/2659700000>

## Additional Environmental Information

<b>Manufacture</b>	This stage includes the manufacturing of the product and its packaging as well as the transport to the manufacturer's last logistics platform located in Hörselbach-Hainich (Germany). The final assembly site is located in Romania and has an ISO 14001 certified environmental management system
<b>Distribution</b>	The shipment is made from the distribution centre to the customer by truck. The transport route to the customer was assumed to be 3500 km by lorry.
<b>Installation</b>	Only the disposal of the packaging is considered in this phase, as the installation is carried out manually with non-electrical tools.
<b>Use</b>	No maintenance or utilities are required during use.
<b>End of Life</b>	The end-of-life stage is modelled based on the data from Eurostat. The transport route to the disposal company was assumed to be 1000 km by lorry.

## Environmental Impacts

<b>Reference Service Lifetime</b>	10 Years										
<b>Product category</b>	I/O Systems IP20										
<b>Installation elements</b>	No special installation elements required.										
<b>Use scenario</b>	The product is operated over the reference period of 10 years with a power loss of 1,92W at 55,34% in active mode and 44,66% in off mode.										
<b>Geographical representativeness</b>	Europe										
<b>Software</b>	Sphera LCA for Experts, v10.9.1.10										
<b>Database</b>	LCA for Experts 10.9.1										
<b>Energy model</b>	<table border="1"> <thead> <tr> <th></th> <th><b>Manufacture*</b></th> <th><b>Installation</b></th> <th><b>Use</b></th> <th><b>End of Life</b></th> </tr> </thead> <tbody> <tr> <td></td> <td>Romania</td> <td>-</td> <td>Europe</td> <td>Europe</td> </tr> </tbody> </table>		<b>Manufacture*</b>	<b>Installation</b>	<b>Use</b>	<b>End of Life</b>		Romania	-	Europe	Europe
	<b>Manufacture*</b>	<b>Installation</b>	<b>Use</b>	<b>End of Life</b>							
	Romania	-	Europe	Europe							

\*Energy model of the final assembly site.

The following tables represent the impact values of the reference product according to DIN EN 15804:2022-03 except for the environmental indicators of output flows and information on the biogenic carbon content of the product and the associated packaging.

## Environmental impact indicators

Indicator	Unit	Total*	Manufacturing A1-A3	Distribution A4	Installation A5	Use B1-B7	End of Life C1-C4	Benefits and Loads D
Climate change - total	kg CO <sub>2</sub> eq.	4,23E+01	1,32E+01	8,32E-02	4,33E-03	2,98E+01	1,02E-01	-8,11E-01
Climate change - fossil	kg CO <sub>2</sub> eq.	4,18E+01	1,31E+01	8,42E-02	3,10E-04	2,94E+01	3,41E-02	-8,45E-01
Climate change - biogenic	kg CO <sub>2</sub> eq.	4,57E-01	4,77E-02	-1,86E-03	4,02E-03	3,02E-01	6,73E-02	3,75E-02
Climate change - land use and land use change	kg CO <sub>2</sub> eq.	1,24E-01	2,87E-02	8,67E-04	1,66E-06	9,70E-02	2,55E-04	-2,77E-03
Ozone depletion	kg CFC 11 eq.	8,04E-10	1,38E-10	1,40E-14	5,49E-16	6,70E-10	1,20E-14	-3,67E-12
Acidification	mol H <sup>+</sup> eq.	1,71E-01	1,10E-01	1,58E-04	1,39E-06	6,44E-02	5,90E-05	-3,52E-03
Eutrophication - freshwater	kg P eq.	1,13E-04	5,06E-05	2,27E-07	1,37E-08	6,29E-05	1,66E-06	-2,09E-06
Eutrophication - marine aquatic	kg N eq.	2,64E-02	1,15E-02	6,78E-05	6,57E-07	1,54E-02	3,47E-05	-6,12E-04
Eutrophication - terrestrial	mol N- eq.	2,94E-01	1,26E-01	7,25E-04	5,76E-06	1,73E-01	2,43E-04	-6,56E-03
Photochemical ozone formation	kg NMVOC	7,33E-02	3,70E-02	1,43E-04	2,03E-06	3,83E-02	8,00E-05	-2,25E-03
Resource use, mineral and metals	kg Sb eq.	1,48E-03	1,55E-03	5,60E-09	1,77E-11	6,11E-06	1,78E-09	-7,85E-05
Resource use, fossils	MJ	7,65E+02	1,80E+02	1,08E+00	4,17E-03	6,00E+02	3,66E-01	-1,70E+01
Water use	m <sup>3</sup>	9,91E+00	2,68E+00	3,85E-04	2,67E-04	7,37E+00	5,60E-04	-1,37E-01

## Additional environmental impact indicators

Indicator	Unit	Total*	Manufacturing A1-A3	Distribution A4	Installation A5	Use B1-B7	End of Life C1-C4	Benefits and Loads D
Particulate matter	Disease incidences	1,58E-06	1,08E-06	1,33E-09	1,09E-11	5,32E-07	5,48E-10	-3,20E-08
Ionising radiation, human health	kBq U235 eq.	1,64E+01	8,00E-01	2,92E-04	8,78E-06	1,56E+01	1,91E-04	-1,90E-02
Ecotoxicity, freshwater	CTUe	1,99E+02	1,02E+02	1,40E+00	3,96E-03	1,01E+02	4,84E-01	-5,80E+00
Human toxicity, cancer	CTUh	1,25E-08	3,51E-09	1,89E-11	7,42E-14	9,55E-09	6,80E-12	-6,19E-10
Human toxicity, non-cancer	CTUh	3,15E-07	1,21E-07	1,06E-09	5,03E-12	2,01E-07	4,16E-10	-8,45E-09
Land Use	-	2,73E+02	3,44E+01	4,77E-01	1,14E-03	2,40E+02	1,43E-01	-2,44E+00

## Resource use indicators

Indicator	Unit	Total*	Manufacturing A1-A3	Distribution A4	Installation A5	Use B1-B7	End of Life C1-C4	Benefits and Loads D
Use of renewable primary energy	MJ	4,58E+02	4,98E+01	8,13E-02	4,90E-04	4,10E+02	2,97E-02	-2,29E+00
Total use of renewable primary energy resources	MJ	4,58E+02	4,98E+01	8,13E-02	4,90E-04	4,10E+02	2,97E-02	-2,29E+00
Use of non-renewable primary energy	MJ	7,65E+02	1,80E+02	1,08E+00	4,17E-03	6,00E+02	3,66E-01	-1,70E+01
Total use of non-renewable primary energy resources	MJ	7,65E+02	1,80E+02	1,08E+00	4,17E-03	6,00E+02	3,66E-01	-1,70E+01
Input of secondary material	kg	1,57E-03	1,57E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m³	4,05E-01	9,77E-02	4,02E-05	6,38E-06	3,18E-01	2,38E-05	-1,08E-02

## Waste category indicators

Indicator	Unit	Total*	Manufacturing A1-A3	Distribution A4	Installation A5	Use B1-B7	End of Life C1-C4	Benefits and Loads D
Hazardous waste disposed	kg	-4,73E-07	1,53E-07	4,33E-11	6,81E-13	7,84E-07	2,17E-11	-1,41E-06
Non-hazardous waste disposed	kg	1,06E+00	5,57E-01	1,51E-04	1,29E-03	4,65E-01	5,51E-02	-1,54E-02
Radioactive waste disposed	kg	1,02E-01	7,24E-03	2,04E-06	5,75E-08	9,47E-02	1,31E-06	-1,84E-04

\*In accordance with the current Product Category Rules (PCR), the values presented in the 'Total' column do not include the benefits and loads beyond the system boundaries as represented in 'Module D'.

Date of issue: 07.07.2025

Validity period: 5 Years

Document in compliance with ISO 14021

« Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »

The content of this PEP cannot be compared with content based on another program