



# COMPACT RESIDUAL CURRENT CIRCUIT BREAKER WITH OVERCURRENT PROTECTION – MDC Range

# **GEWISS S.p.A.**



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	Supplemented by <b>PSR-0005-ed3.1-EN-2023 12 08</b>
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Indipendent verification of the declaration and data	a. in compliance with ISO 14025: 2010
Internal : 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 or EN 50	
The components of the present PEP may not be comp program	bared with components from any other
Document in compliance with ISO 14025: 2010 « Environmental declarations »	ironmental labels and declarations. Type III



## **GEWISS Sustainability commitment**

GEWISS mission is to create value for our customer and our staff providing innovative and scalable solutions for building, industries and infrastructures. connecting people and things. while improving the safety and the quality of life, driven by **integrity**, culture of **excellence** and **sustainability**.

GEWISS is strongly convinced that being sustainable is essential, and therefore has decided to develop a responsible business model. which promotes respectful conduct towards people and the environment in developing products, solutions and services.

## **Disclaimer**

The information contained in this declaration is provided under the responsibility of GEWISS in accordance with standard UNI EN ISO 14025. PCR-ed4-EN-2021 09 06 and PSR-0005-ed3.1-EN-2023 12 08

The information contained in this document is updated as of the date of its issuance. Such information is the property of GEWISS. Any inappropriate use that alters its meaning and/or damages GEWISS's reputation is strictly prohibited.

## **Reading instructions**

The following display rules are used:

- Values are expressed in simplified scientific notation: 0.0038 = 3.80 x 10<sup>-3</sup> = 3.80E-3 ;
- When the result of the inventory calculation is zero, the value zero is displayed;
- Non-zero values are expressed with three significant figures.

## **General background**

This declaration is an individual declaration covering the life cycle from cradle to grave.

The declaration is available at the following address: www.pep-ecopassport.org/

## Person responsible for this declaration

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# **General information**

### Product category

The assessed products range is part of the Gewiss 90 RCD range, residual current devices ideal for protection from direct and indirect contact in the event of an earth fault, meeting any ground fault protection requirement for any area of application, with also overcurrent protection integrated.

### **Functional Unit**

Protect the installation from overloads and short circuits in a circuit with rated voltage 230/240 V (Ue), rated current 16 A (In), with 2P poles. a rated breaking capacity of 4500 A (Icn) or 6 kA (Icu) and the tripping curve C, in the Household/Commercial application area, according to the appropriate use scenario, and during the reference service life of the product of 20 years.

### **Reference product**

Compact residual current circuit breaker with overcurrent protection - MDC 45 - 2P curve C 16A type AC Idn=0.03A - 2 modules. Article Code: GW94027

#### **Reference** period

All inventory data refer to the year 2023.

# Geographical representativeness

Europe.

#### **Technological representativeness**

The dataset used are have a good representatives of the material and processes modelled.

### Energy model

[A1 - A3]	[A5]	[B6]	[C1 - C4]
ltaly, IT (2022 Residual Mix) Germany, DE (2022 Residual Mix) Portugal, PT (2023 Supplier Mix)	Europe (2022 Country Mix)	Europe (2022 Country Mix)	Europe (2022 Country Mix)

### Products belonging to the same environmental family:

The range comprises MDC compact residual current c.b. with overcurrent protection. (from 6 to 32 A. curves B and C. up to 10 kA and IΔn from 30 and 300 mA type AC. A. A[IR] and A[S] and F).

## **Reference product characteristics**

Product family	Circuit breakers for residual current protection				
Sub-family	Compact residual current circuit breaker				
Main function	Residual current and overcurrent protection for the Residential. commercial. and light industrial				
Relevant standard					
Manufacturing site	1. Via Domenico Bosatelli 1, 24069 Cenate Sotto (BG), Italy 2. Auf d. Fohrt 1, 57482 Wenden, Germany 3. Zona Industrial 2a fase - Bustelo 4560-043 Penafiel, Portugal				
Range	MDC 2P 16A 30mA				
Reference product	GW94027				



Dimension



# Mass of the reference product

Item	Quantity
Total mass (product + packaging) [g]	2.54E+02
Product mass [g]	2.14E+02
Packaging mass [g]	3.97E+01

## **Constituent materials**

Constituent materials of the reference product and packaging are:

Materials	Weight [g]	%
Metal	1.35E+02	53.4%
Plastic	7.79E+01	30.7%
Cardboard/paper	3.95E+01	15.6%
Other	4.58E-01	0.2%
Printed Circuit Board	4.20E-01	0.2%

## **Biogenic carbon content**

Biogenic carbon content in the reference product	0.00E+00 kg C
Biogenic carbon content in the packaging	1.70E-02 kg C

## Life Cycle Assessment Methodology

The Life Cycle Assessment (LCA), on which this Product Environmental Profile (PEP) is based, complies with the criteria set out in PCR-ed4-EN-2021 09 06 of the PEP ecopassport® program. The life cycle analysis was carried out using SIMAPRO software version V9.6.0.1 and Ecoinvent V3.10 - system model: allocation, cut-off by classification. The reference service life has been modelled according to the provisions of PSR-0005-ed3.1-EN-2023 12 08. The end-of-life modelling follows the Eurostat 2021 data (Waste\_electrical\_and\_electronic\_equipment\_2023-10)



## Life Cycle stages

### Manufacturing stage

The manufacturing stage take please is three different plants:

- . Via Domenico Bosatelli 1, 24069 Cenate Sotto (BG), Italy Manufacturing of plastic components
- . Auf d. Fohrt 1, 57482 Wenden, Germany Manufacturing of relay
- . Zona Industrial 2a fase Bustelo 4560-043 Penafiel, Portugal Assembling and testing

The country specific residual mix was used for Italy and Germany, while the specific supplier sustainable mix was used for the Portuguese plant.

### **Distribution stage**

The compact residual current circuit breaker is stored in the logistic hub in Calcinate. From there the products are shipped to the final destinations around the world as described below:

Market	Share %
Italy	85.8%
France	12.7%
Spain	0.6%
Hungary	0.5%
Romania	0.2%
South Africa	0.1%
Germany	0.1%

### Installation stage

The impact associated with the installation of the product is considered negligible and therefore not accounted for. Only the end of life scenario of the packaging material is considered in this phase considering Eurostat data 2022 for EU27.

### Use stage

The use stage has been modelled in accordance with the prescriptions of the PSR "Development of scenarios (default scenarios)" considering the European country mix.

Application area: Household / Commercial

### End-of-life stage

Considering the complexity and the lack of knowledge of the electric and electronic recycling channel and processes, the Eurostat 2021 data (Waste\_electrical\_and\_electronic\_equipment\_2023-10) was used.

Materials	Weight [ton]	%
Total put on the market	1.35E+04	
Total collected	4.90E+03	36.3%
Total treatment	4.79E+03	35.5%
Total recovered (incl. recycling. energy recovery)	4.41E+03	32.7%
Total reused and recycled	3.98E+03	29.5%





### Benefits and loads beyond the system boundaries (module D)

Module D accounts for the potential environmental benefits or burdens that occur after the product has been removed from use in a building (beyond the system boundary of the life cycle assessment). This includes:

- . Recycling and Reuse.
- . Energy Recovery.
- . Allocation of Environmental Loads.



## **Environmental impacts**

The results presented below were obtained using the methods defined in PCR-ed4-EN-2021 09 06. and are referred to the Functional Unit.

Indicator	Unit	Manufacturing	Distribution	Installation	Use	End of Life	Total Life cycle	Module D
Climate change - total	kg CO2 eq	2.43E+00	2.17E-02	1.82E-02	1.69E+00	3.38E-01	4.51E+00	-4.61E-01
Climate change - Fossil	kg CO2 eq	2.41E+00	2.17E-02	4.61E-03	1.63E+00	2.77E-01	4.34E+00	-4.58E-01
Climate change - Biogenic	kg CO2 eq	2.18E-02	7.10E-06	1.36E-02	6.42E-02	6.08E-02	1.60E-01	-2.63E-03
Climate change - Land use and LU change	kg CO2 eq	2.56E-03	5.33E-07	1.86E-07	5.16E-03	7.31E-06	7.72E-03	-3.15E-04
Ozone depletion	kg CFC11 eq	2.09E-08	4.42E-10	7.16E-11	2.57E-08	7.73E-10	4.79E-08	-9.43E-09
Acidification	mol H+ eq	4.93E-02	5.49E-05	2.55E-05	8.14E-03	1.27E-04	5.77E-02	-1.23E-02
Eutrophication, freshwater	kg P eq	2.18E-04	1.82E-08	1.38E-08	1.59E-04	1.39E-06	3.78E-04	-4.66E-05
Eutrophication, marine	kg N eq	3.65E-03	2.09E-05	1.47E-05	1.05E-03	1.23E-04	4.86E-03	-6.54E-04
Eutrophication, terrestrial	mol N eq	4.36E-02	2.29E-04	1.22E-04	1.19E-02	4.81E-04	5.63E-02	-8.81E-03
Photochemical ozone formation	kg NMVOC eq	1.38E-02	9.48E-05	4.95E-05	3.94E-03	1.97E-04	1.80E-02	-2.83E-03
Resource use, minerals and metals	kg Sb eq	7.95E-04	7.16E-10	2.10E-10	1.02E-07	3.92E-09	7.95E-04	-2.18E-04
Resource use, fossils	MJ	3.13E+01	2.86E-01	5.89E-02	3.94E+01	5.40E-01	7.16E+01	-6.11E+00
Water use	m3 depriv.	1.53E+00	1.22E-04	0.00E+00	4.28E-01	0.00E+00	1.95E+00	-2.20E-01
Particulate matter	disease inc.	1.92E-07	1.42E-09	5.92E-10	1.87E-08	2.46E-09	2.15E-07	-3.49E-08
Ionising radiation	kBq U-235 eq	5.86E-02	3.90E-05	5.91E-06	3.56E-01	2.82E-04	4.15E-01	-1.02E-02
Ecotoxicity, freshwater	CTUe	6.03E+01	9.72E-03	9.66E-02	3.12E+00	3.25E+00	6.68E+01	-1.50E+01
Human toxicity, cancer	CTUh	4.38E-08	1.63E-12	3.42E-12	5.40E-10	4.32E-11	4.44E-08	-1.27E-08
Human toxicity, non-cancer	CTUh	4.79E-07	1.43E-10	3.36E-10	9.65E-09	6.10E-09	4.95E-07	-1.36E-07
Land use	Pt	1.61E+01	6.41E-04	1.80E-03	5.62E+00	5.81E-02	2.18E+01	-3.64E+00
Use of renewable primary energy. excluding renewable primary energy resources used as raw materials	MJ	4.90E+00	9.94E-04	1.56E-04	1.08E+01	8.12E-03	1.57E+01	-6.62E-01
Use of renewable primary energy resources used as raw materials	MJ	5.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E-01	0.00E+00
Total use of renewable primary energy resources	MJ	5.36E+00	8.88E-04	1.39E-04	9.69E+00	7.30E-03	1.51E+01	-6.62E-01



Indicator	Unit	Manufacturing	Distribution	Installation	Use	End of Life	Total Life cycle	Module D
Use of non-renewable primary energy. excluding non- renewable primary energy resources used as raw materials	MJ	3.13E+01	2.86E-01	5.89E-02	3.94E+01	5.40E-01	7.16E+01	-6.16E+00
Use of non-renewable primary energy resources used as raw materials	MJ	2.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	3.38E+01	2.87E-01	5.89E-02	4.05E+01	5.41E-01	7.51E+01	-6.62E-01
Secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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
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 fresh water	m3	4.07E-02	7.35E-06	0.00E+00	3.29E-02	3.25E-05	7.37E-02	-5.66E-03
Hazardous waste disposed	kg	1.49E-04	8.11E-03	1.90E-06	4.06E-07	5.43E-05	8.31E-03	-4.12E-05
Non-hazardous waste disposed	kg	5.65E-02	6.18E-03	8.51E-06	1.89E-03	2.18E-02	8.64E-02	-1.04E-02
Radioactive waste disposed	kg	3.31E-05	7.85E-06	2.69E-08	3.44E-09	2.89E-04	3.30E-04	-6.44E-06
Component for reuse	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recicling	kg	1.38E+00	0.00E+00	3.24E+01	0.00E+00	7.59E+01	1.10E+02	0.00E+00
Material for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.79E+01	7.79E+01	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



## **Extrapolation rules**

According to this environmental analysis, proportionality rules can be used to evaluate the impacts of other products belonging to the same environmental family.

	Technical characteristics of the homogeneous environmental family
Product	Circuit breakers for residual current protection
Function	Residential, commercial and light industrial overcurrent and residual current protection
Manufacturing site	1. Via Domenico Bosatelli  1, 24069 Cenate Sotto (BG), Italy 2. Auf d. Fohrt 1, 57482 Wenden, Germany 3. Zona Industrial 2a fase - Bustelo 4560-043 Penafiel,  Portugal

The extrapolation parameters, calculated following the method provided by PCR-ed4-EN-2021 09 06 are shown in the table below.

To calculate the environmental impact of the desired article code, multiply the results presented above for the extrapolation factor available in the table.

Article Code	Phase A+C+D	Phase B
GW94005. GW94105. GW94205. GW94305	1.03E+00	2.53E-01
GW94006. GW94011. GW94106. GW94111. GW94206. GW94211. GW94306. GW94311. GW95111	1.03E+00	5.09E-01
GW94007. GW94107. GW94207. GW94307	1.04E+00	6.46E-01
GW94008. GW94108. GW94208. GW94308. GW95108	1.06E+00	8.25E-01
GW94009. GW94109. GW94209. GW94309. GW95016. GW95109. GW95216	1.06E+00	9.88E-01
GW94010. GW94110. GW94210. GW94310. GW95110	1.06E+00	1.39E+00
GW94011. GW94111. GW94211. GW94311. GW95111	1.03E+00	6.34E-01
GW94015. GW94115. GW94215. GW94315. GW95115	1.07E+00	2.53E-01
GW94016. GW94116. GW94216. GW94316	1.07E+00	5.09E-01
GW94017. GW94117. GW94217. GW94317. GW95117	1.08E+00	6.46E-01
GW94018. GW94118. GW94218. GW94318	1.09E+00	8.25E-01
GW94019. GW94119. GW94219. GW94319	1.09E+00	9.88E-01
GW94020. GW94120. GW94220. GW94320. GW95120	1.09E+00	1.39E+00
GW95005. GW95205	1.02E+00	2.53E-01
GW95006. GW95206	1.02E+00	5.09E-01
GW95007. GW95207	1.03E+00	6.46E-01
GW95008. GW95208	1.06E+00	8.25E-01
GW94030. GW94130. GW94230. GW94330. GW95030. GW95130. GW95230. GW95330	1.06E+00	9.88E-01
GW95010. GW95210	1.06E+00	1.39E+00
GW95011. GW95211	1.02E+00	6.34E-01
GW95015. GW95215	1.06E+00	2.53E-01
GW95016. GW95216	1.06E+00	5.09E-01
GW95017. GW95217	1.07E+00	6.46E-01
GW95018. GW95218	1.09E+00	8.25E-01
GW95019. GW95219	1.07E+00	9.88E-01
GW95020. GW95220	1.09E+00	1.39E+00



Article Code	Phase A+C+D	Phase B
GW95105	1.03E+00	2.53E-01
GW95106	1.03E+00	5.09E-01
GW95107	1.04E+00	6.46E-01
GW95116	1.07E+00	5.09E-01
GW95118	1.09E+00	8.25E-01
GW95119	1.09E+00	9.88E-01
GW94025. GW94125. GW94225. GW94325. GW95025. GW95125. GW95225. GW95325	1.02E+00	4.65E-01
GW94026. GW94126. GW94226. GW94326. GW95026. GW95226	1.02E+00	9.04E-01
GW94027	1.00E+00	1.00E+00
GW94028. GW94128. GW94228. GW94328. GW95028. GW95128. GW95228. GW95328	1.06E+00	1.19E+00
GW95841. GW95971. GW95981	1.06E+00	1.26E+00
GW94031. GW94131. GW94231. GW94331. GW95031. GW95131. GW95231. GW95331	1.02E+00	1.08E+00
GW94035. GW94135. GW94235. GW94335. GW95135. GW95235. GW95335	1.06E+00	4.65E-01
GW94036. GW94136. GW94236. GW94336. GW95036. GW95236	1.05E+00	9.04E-01
GW94037. GW94137. GW94237. GW94337. GW95037. GW95237. GW94337	1.07E+00	1.00E+00
GW94038. GW94138. GW94238. GW94338. GW95038. GW95238	1.09E+00	1.19E+00
GW94039. GW94139. GW94239. GW94339. GW95039. GW95139. GW95239. GW95339	1.09E+00	1.26E+00
GW94040. GW94140. GW94240. GW94340. GW95040. GW95140. GW95240. GW95340	1.09E+00	1.62E+00
GW94127. GW94227. GW94327. GW95027. GW95127. GW95227. GW95327	1.03E+00	1.00E+00
GW95035	1.05E+00	4.65E-01
GW95126. GW95326	1.02E+00	9.04E-01
GW95836. GW95966. GW95976	1.06E+00	1.62E+00
GW95136. GW95336	1.06E+00	9.04E-01
GW95137. GW95337	1.07E+00	1.00E+00
GW95138. GW95338	1.09E+00	1.19E+00
GW95232. GW95332	1.03E+00	8.79E-01
GW95785	1.01E+00	4.65E-01
GW95786	1.01E+00	9.04E-01
GW95787. GW95797	1.02E+00	1.00E+00
GW95788. GW95798	1.04E+00	1.19E+00
GW95789. GW95799	1.04E+00	1.26E+00
GW95790	1.04E+00	1.62E+00
GW95791. GW95801	1.01E+00	1.08E+00
GW95792. GW95802	1.02E+00	8.79E-01
GW95795	1.01E+00	4.65E-01
GW95796	1.01E+00	9.04E-01
GW95800	1.05E+00	1.62E+00
GW95805. GW95825. GW95935. GW95955	1.08E+00	4.65E-01
GW95806. GW95826. GW95936. GW95956	1.07E+00	9.04E-01
GW95807. GW95827. GW95937. GW95957	1.09E+00	1.00E+00
GW95808. GW95828. GW95938. GW95958	1.11E+00	1.19E+00
GW95796	1.10E+00	1.26E+00
GW95811. GW95831. GW95941	1.07E+00	1.08E+00
GW95832. GW95962	1.09E+00	8.79E-01



Article Code	Phase A+C+D	Phase B
GW95835. GW95975	1.06E+00	4.65E-01
GW95836. GW95966. GW95976	1.06E+00	9.04E-01
GW95837. GW95967. GW95977	1.07E+00	1.00E+00
GW95838. GW95968. GW95978	1.09E+00	1.19E+00
GW95839. GW95969. GW95979	1.09E+00	1.26E+00
GW95840. GW95970. GW95980	1.09E+00	1.62E+00
GW94029. GW94129. GW94229. GW94329. GW95029. GW95129. GW95229. GW95329	1.06E+00	1.08E+00
GW95842. GW95972	1.07E+00	8.79E-01
GW95847	1.08E+00	1.00E+00
GW95848	1.10E+00	1.19E+00
GW95849	1.10E+00	1.26E+00
GW95850	1.10E+00	1.62E+00
GW95810. GW95830. GW95940. GW95960	1.11E+00	1.62E+00
GW95961	1.06E+00	1.08E+00
GW95965	1.06E+00	4.65E-01
GW94045. GW94145. GW94245. GW94345	1.48E+00	6.97E-01
GW94046. GW94146. GW94246. GW94346	1.47E+00	1.36E+00
GW94047. GW94147. GW94247. GW94347	1.47E+00	1.50E+00
GW94048. GW94148. GW94248. GW94348. GW95148	1.53E+00	1.79E+00
GW94049. GW94149. GW94249. GW94349	1.53E+00	1.89E+00
GW94050. GW94150. GW94250. GW94350	1.51E+00	2.43E+00
GW94051. GW94151. GW94251. GW94351. GW95151	1.47E+00	1.61E+00
GW94055. GW94155. GW94255. GW94355	1.51E+00	6.97E-01
GW94056. GW94156. GW94256. GW94356	1.50E+00	1.36E+00
GW94057. GW94157. GW94257. GW94357. GW95157	1.50E+00	1.50E+00
GW94058. GW94158. GW94258. GW94358	1.56E+00	1.79E+00
GW94059. GW94159. GW94259. GW94359	1.56E+00	1.89E+00
GW94060. GW94160. GW94260. GW94360	1.54E+00	2.43E+00
GW95145	1.48E+00	6.97E-01
GW95146	1.48E+00	1.36E+00
GW95147	1.47E+00	1.50E+00
GW95149	1.53E+00	1.89E+00
GW95150	1.51E+00	2.43E+00
GW95155	1.51E+00	6.97E-01
GW95156	1.51E+00	1.36E+00
GW95158	1.56E+00	1.79E+00
GW95159	1.56E+00	1.89E+00
GW95160	1.54E+00	2.43E+00
GW95245	1.46E+00	6.97E-01
GW95246	1.45E+00	1.36E+00
GW95247	1.45E+00	1.50E+00
GW95248	1.51E+00	1.79E+00
GW95249	1.51E+00	1.89E+00
GW95250	1.49E+00	2.43E+00



Article Code	Phase A+C+D	Phase B
GW94065. GW94165. GW94265. GW94365	1.90E+00	6.97E-01
GW94066. GW94166. GW94266. GW94366	1.89E+00	1.36E+00
GW94067. GW94167. GW94267. GW94367	1.89E+00	1.50E+00
GW94068. GW94168. GW94268. GW94368	1.98E+00	1.79E+00
GW94069. GW94169. GW94269. GW94369. GW95169	1.98E+00	1.89E+00
GW94070. GW94170. GW94270. GW94370	1.95E+00	2.43E+00
GW94071. GW94171. GW94271. GW94371. GW95171	1.89E+00	1.61E+00
GW94075. GW94175. GW94275. GW94375	1.92E+00	6.97E-01
GW94076. GW94176. GW94276. GW94376	1.91E+00	1.36E+00
GW94077. GW94177. GW94277. GW94377	1.91E+00	1.50E+00
GW94078. GW94178. GW94278. GW94378	1.99E+00	1.79E+00
GW94079. GW94179. GW94279. GW94379	1.99E+00	1.89E+00
GW94080. GW94180. GW94280. GW94380	1.96E+00	2.43E+00
GW95165	1.90E+00	6.97E-01
GW95166	1.89E+00	1.36E+00
GW95167	1.89E+00	1.50E+00
GW95168	1.98E+00	1.79E+00
GW95170	1.95E+00	2.43E+00
GW95175	1.92E+00	6.97E-01
GW95176	1.92E+00	1.36E+00
GW95177	1.91E+00	1.50E+00
GW95178	1.99E+00	1.79E+00
GW95179	1.99E+00	1.89E+00
GW95180	1.96E+00	2.43E+00
GW95815	1.95E+00	6.97E-01
GW95816	1.94E+00	1.36E+00
GW95817	1.86E+00	1.50E+00
GW95818	2.01E+00	1.79E+00
GW95819	2.01E+00	1.89E+00
GW95820	1.98E+00	2.43E+00
GW95821	1.94E+00	1.61E+00
GW95857	1.92E+00	1.50E+00
GW95858	2.00E+00	1.79E+00
GW95859	2.00E+00	1.89E+00
GW95860	1.97E+00	2.43E+00
GW95945	1.95E+00	4.65E-01
GW95946	1.94E+00	9.04E-01
GW95947	1.86E+00	1.00E+00
GW95948	2.02E+00	1.19E+00
GW95949	2.01E+00	1.26E+00
GW95950	1.99E+00	1.62E+00