

# Product Environmental Profile

**TeSys F series three pole contactor, 780A, 220V, 50/60Hz**

**TeSys F**





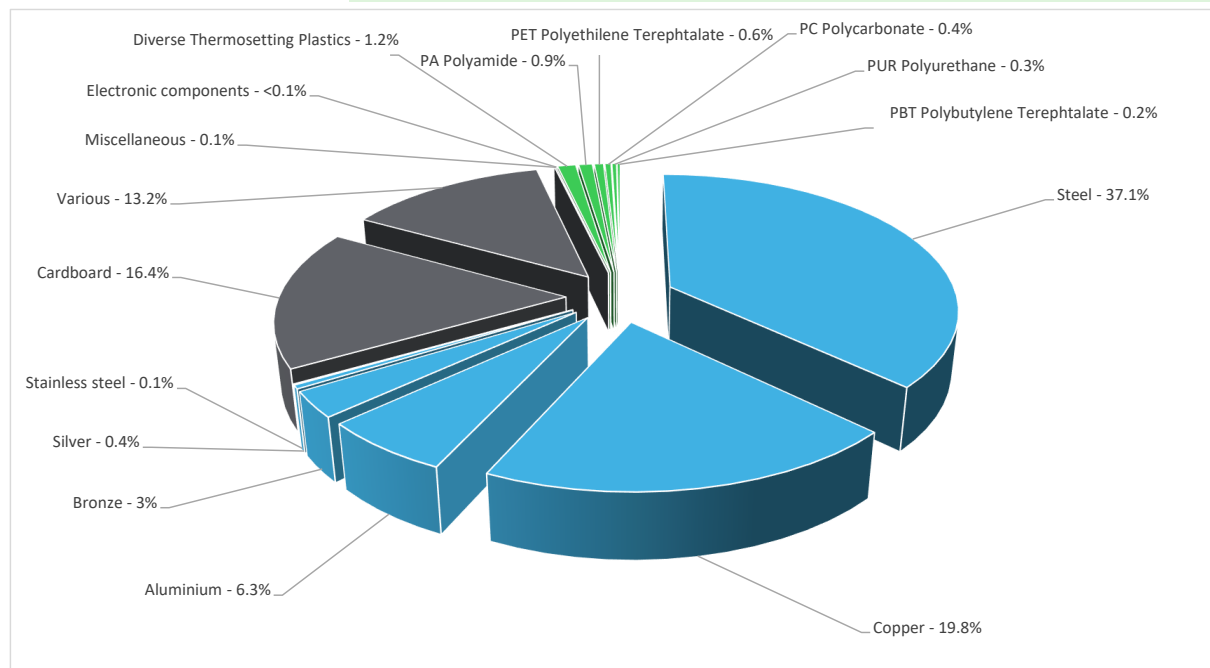
## General information

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reference product          | TeSys F series three pole contactor, 780A, 220V, 50/60Hz - LC1F780M7                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Description of the product | The main purpose of the product is to switch on and off electrical power supply of a downstream installation with an electrical and/or mechanical control.                                                                                                                                                                                                                                                                                                                                      |
| Description of the range   | The range product report includes : rated current:780A,3P/4P,TeSys F contactor ,the representative product used for analysis is 3P(product number: LC1F780M7)                                                                                                                                                                                                                                                                                                                                   |
| Functional unit            | Establish and cut off the supply of a downstream installation from an electrical and/or mechanical control characterised by the composition of the poles or type of contacts X, a rated voltage of Ue, a rated current Ie, a control circuit voltage Uc, with Np poles, and if applicable the specific specifications, in the Household/Commercial or Industrial application areas, according to the appropriate use scenario, and during the reference service life of the product of 20 years |
| Specifications are:        | X =3 NO<br>Ue = 460 V DC<br>Ie = 780 A (T <=55 °C) <=<= 440 V AC AC-3<br>Np = 3<br>Uc = 220 V                                                                                                                                                                                                                                                                                                                                                                                                   |



## Constituent materials

|                        |                                                                                      |
|------------------------|--------------------------------------------------------------------------------------|
| Reference product mass | 47590 g including the product, its packaging and additional elements and accessories |
|------------------------|--------------------------------------------------------------------------------------|



|          |        |
|----------|--------|
| Plastics | 3.60%  |
| Metals   | 66.70% |
| Others   | 29.70% |



## Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website

<https://www.se.com/ww/en/work/support/green-premium/>



## Additional environmental information

|             |                          |     |                                                                                                                                                                                                                                                                                             |
|-------------|--------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| End Of Life | Recyclability potential: | 93% | The recyclability rate was calculated from the recycling rates of each material making up the product with the exception of data using the ESR database. For materials or components using the ESR database or the absence of data the conservative hypothesis "0% recyclability" was used. |
|-------------|--------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



## Environmental impacts

|                                  |                                                                                                                                                            |                                               |                                               |                                               |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| Reference service life time      | 20 years                                                                                                                                                   |                                               |                                               |                                               |
| Product category                 | Contactors - Industrial                                                                                                                                    |                                               |                                               |                                               |
| Installation elements            | The product LC1F780M7 does not require any installation operations.                                                                                        |                                               |                                               |                                               |
| Use scenario                     | Load rate = 50 %<br>Use rate = 50 %                                                                                                                        |                                               |                                               |                                               |
| Time representativeness          | The collected data are representative of the year 2023                                                                                                     |                                               |                                               |                                               |
| Technological representativeness | The main purpose of the product is to switch on and off electrical power supply of a downstream installation with an electrical and/or mechanical control. |                                               |                                               |                                               |
| Geographical representativeness  | Rest of the World                                                                                                                                          |                                               |                                               |                                               |
| Energy model used                | [A1 - A3]                                                                                                                                                  | [A5]                                          | [B6]                                          | [C1 - C4]                                     |
|                                  | Czech Republic, CZ                                                                                                                                         | Electricity Mix; Low voltage; 2018; China, CN | Electricity Mix; Low voltage; 2018; China, CN | Electricity Mix; Low voltage; 2018; China, CN |

Detailed results of the optional indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.schneider-electric.com/contact>

| Mandatory Indicators                                         |                           | TeSys F series three pole contactor, 780A, 220V, 50/60Hz - LC1F780M7 |                           |                     |                     |                 |                         |                          |
|--------------------------------------------------------------|---------------------------|----------------------------------------------------------------------|---------------------------|---------------------|---------------------|-----------------|-------------------------|--------------------------|
| Impact indicators                                            | Unit                      | Total (without Module D)                                             | [A1 - A3] - Manufacturing | [A4] - Distribution | [A5] - Installation | [B1 - B7] - Use | [C1 - C4] - End of life | [D] - Benefits and loads |
| Contribution to climate change                               | kg CO2 eq                 | 7.20E+03                                                             | 2.87E+02                  | 1.97E+01            | 8.66E+00            | 6.81E+03        | 8.17E+01                | -1.45E+02                |
| Contribution to climate change-fossil                        | kg CO2 eq                 | 7.18E+03                                                             | 2.70E+02                  | 1.97E+01            | 8.25E+00            | 6.80E+03        | 7.97E+01                | -1.40E+02                |
| Contribution to climate change-biogenic                      | kg CO2 eq                 | 2.02E+01                                                             | 1.68E+01                  | 0*                  | 4.11E-01            | 9.76E-01        | 2.03E+00                | -4.29E+00                |
| Contribution to climate change-land use and land use change  | kg CO2 eq                 | 4.12E-04                                                             | 3.38E-04                  | 0*                  | 0*                  | 0*              | 7.40E-05                | 0.00E+00                 |
| Contribution to ozone depletion                              | kg CFC-11 eq              | 7.62E-05                                                             | 3.58E-05                  | 3.01E-08            | 1.12E-07            | 3.89E-05        | 1.45E-06                | -2.27E-05                |
| Contribution to acidification                                | mol H+ eq                 | 5.55E+01                                                             | 3.95E+00                  | 1.27E-01            | 2.53E-02            | 5.09E+01        | 4.59E-01                | -2.35E+00                |
| Contribution to eutrophication, freshwater                   | kg (PO4) <sup>3-</sup> eq | 7.66E-02                                                             | 1.21E-02                  | 0*                  | 1.98E-04            | 1.44E-03        | 6.29E-02                | -4.26E-04                |
| Contribution to eutrophication marine                        | kg N eq                   | 5.95E+00                                                             | 3.58E-01                  | 5.96E-02            | 1.10E-02            | 5.45E+00        | 7.76E-02                | -1.01E-01                |
| Contribution to eutrophication, terrestrial                  | mol N eq                  | 6.72E+01                                                             | 3.90E+00                  | 6.56E-01            | 7.66E-02            | 6.17E+01        | 9.14E-01                | -1.12E+00                |
| Contribution to photochemical ozone formation - human health | kg COVM eq                | 1.99E+01                                                             | 1.28E+00                  | 1.69E-01            | 1.76E-02            | 1.82E+01        | 2.65E-01                | -4.58E-01                |
| Contribution to resource use, minerals and metals            | kg Sb eq                  | 2.34E-01                                                             | 2.32E-01                  | 0*                  | 0*                  | 8.73E-05        | 1.99E-03                | -3.48E-02                |
| Contribution to resource use, fossils                        | MJ                        | 1.21E+05                                                             | 6.52E+03                  | 2.73E+02            | 8.57E+01            | 1.10E+05        | 4.16E+03                | -2.62E+03                |
| Contribution to water use                                    | m3 eq                     | 1.07E+03                                                             | 6.86E+02                  | 0*                  | 6.68E-01            | 3.00E+02        | 8.33E+01                | -1.15E+02                |

Additional indicators for the French regulation are available as well

| Inventory flows Indicators                                                                                      |      | TeSys F series three pole contactor, 780A, 220V, 50/60Hz - LC1F780M7 |                           |                     |                     |                 |                         |                          |
|-----------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------|---------------------------|---------------------|---------------------|-----------------|-------------------------|--------------------------|
| Inventory flows                                                                                                 | Unit | Total (without Module D)                                             | [A1 - A3] - Manufacturing | [A4] - Distribution | [A5] - Installation | [B1 - B7] - Use | [C1 - C4] - End of life | [D] - Benefits and loads |
| Contribution to use of renewable primary energy excluding renewable primary energy used as raw material         | MJ   | 1.18E+04                                                             | 9.74E+01                  | 0*                  | 1.12E+01            | 1.16E+04        | 5.01E+01                | -5.21E+01                |
| Contribution to use of renewable primary energy resources used as raw material                                  | MJ   | 1.68E+02                                                             | 1.68E+02                  | 0*                  | 0*                  | 0*              | 0*                      | -1.20E+02                |
| Contribution to total use of renewable primary energy resources                                                 | MJ   | 1.20E+04                                                             | 2.65E+02                  | 0*                  | 1.12E+01            | 1.16E+04        | 5.01E+01                | -1.72E+02                |
| Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ   | 1.21E+05                                                             | 6.38E+03                  | 2.73E+02            | 8.57E+01            | 1.10E+05        | 4.16E+03                | -2.62E+03                |
| Contribution to use of non renewable primary energy resources used as raw material                              | MJ   | 1.43E+02                                                             | 1.43E+02                  | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to total use of non-renewable primary energy resources                                             | MJ   | 1.21E+05                                                             | 6.52E+03                  | 2.73E+02            | 8.57E+01            | 1.10E+05        | 4.16E+03                | -2.62E+03                |
| Contribution to use of secondary material                                                                       | kg   | 5.22E-04                                                             | 5.22E-04                  | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to use of renewable secondary fuels                                                                | MJ   | 0.00E+00                                                             | 0*                        | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to use of non renewable secondary fuels                                                            | MJ   | 0.00E+00                                                             | 0*                        | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to net use of freshwater                                                                           | m³   | 2.50E+01                                                             | 1.60E+01                  | 0*                  | 1.56E-02            | 6.99E+00        | 1.96E+00                | -2.68E+00                |
| Contribution to hazardous waste disposed                                                                        | kg   | 3.70E+03                                                             | 3.49E+03                  | 0*                  | 0*                  | 2.07E+02        | 0*                      | -2.91E+03                |
| Contribution to non hazardous waste disposed                                                                    | kg   | 1.63E+03                                                             | 4.36E+02                  | 6.88E-01            | 3.70E+00            | 1.19E+03        | 5.18E+00                | -1.35E+02                |
| Contribution to radioactive waste disposed                                                                      | kg   | 1.92E-01                                                             | 1.42E-01                  | 4.90E-04            | 4.58E-04            | 4.85E-02        | 9.33E-04                | -8.62E-02                |
| Contribution to components for reuse                                                                            | kg   | 0.00E+00                                                             | 0*                        | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to materials for recycling                                                                         | kg   | 4.30E+01                                                             | 4.87E+00                  | 0*                  | 0*                  | 0*              | 3.82E+01                | 0.00E+00                 |
| Contribution to materials for energy recovery                                                                   | kg   | 0.00E+00                                                             | 0*                        | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to exported energy                                                                                 | MJ   | 1.54E+00                                                             | 1.53E-01                  | 0*                  | 3.53E-01            | 0*              | 1.03E+00                | 0.00E+00                 |

\* represents less than 0.01% of the total life cycle of the reference flow

Contribution to biogenic carbon content of the product kg de C 0.00E+00

Contribution to biogenic carbon content of the associated packaging kg de C 2.27E+00

Life cycle assessment performed with EIME version v6.1, database version 2023-02 in compliance with ISO14044, EF 3.0 method is applied, for biogenic carbon storage, assessment methodology 0/0 is used

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

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.

|                                                                                                                                                                                                                                                                                                                                                                                                |         |                                                                                                |                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Registration number :<br>Verifier accreditation N°<br><br>Date of issue                                                                                                                                                                                                                                                                                                                        | 06/2024 | Drafting rules<br>Supplemented by<br>Information and<br>reference documents<br>Validity period | PCR-4-ed4-EN-2021 09 06<br>PSR-0005-ed3-EN-2023 06 06<br><a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a><br>5 years |
| Independent verification of the declaration and data, in compliance with ISO 14025 : 2006                                                                                                                                                                                                                                                                                                      |         |                                                                                                |                                                                                                                                          |
| Internal                    X                    External                                                                                                                                                                                                                                                                                                                                      |         |                                                                                                |                                                                                                                                          |
| The PCR review was conducted by a panel of experts chaired by Julie Orgelet (Ddmain)<br>PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 or NF E38-500 :2022<br>The components of the present PEP may not be compared with components from any other program.<br>Document complies with ISO 14025:2006 "Environmental labels and declarations. Type III environmental declarations" |         |                                                                                                |                                                                                                                                          |

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