

Package ‘fluxtools’

September 18, 2025

Type Package

Title A 'shiny' App for Reproducible QA/QC of Eddy Covariance Data

Version 0.7.0

Description An interactive 'shiny'-based tool for exploration and quality assurance and quality control (QA/QC) of eddy covariance flux tower data processing. It generates data-point removal code via user-directed selection from a scatterplot, and can export a cleaned .csv with removed points set to NA plus an R script for reproducibility. Reference: Key (2025) <[DOI:10.5281/zenodo.15597159](https://doi.org/10.5281/zenodo.15597159)>.

License GPL-3

URL <https://github.com/kesondrakey/fluxtools>,
<https://doi.org/10.5281/zenodo.15597159>

BugReports <https://github.com/kesondrakey/fluxtools/issues>

Depends R (>= 4.1.0)

Imports dplyr, plotly, readr, shiny, tibble

Suggests kableExtra, knitr, rmarkdown, shinyWidgets, testthat (>= 3.0.0)

VignetteBuilder knitr

BuildVignettes TRUE

Encoding UTF-8

RoxygenNote 7.3.2

NeedsCompilation no

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Repository CRAN

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apply_prm	<i>Apply Physical Range Module (PRM) bounds to AmeriFlux-style data</i>
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Description

Clamps values to PRM ranges by variable *family* (e.g., ^SWC(\$|_), ^P(\$|_)). Columns with "QC" in their names are skipped by default. Out-of-range values are set to NA. No columns are removed.

Usage

```
apply_prm(.data, include = NULL, skip_qc = TRUE, note = TRUE, summarize = TRUE)
```

Arguments

.data	A data.frame or tibble.
include	Optional character vector of base family names to apply (e.g., "SWC", "P"). If NULL, all families are applied.
skip_qc	Logical; when TRUE, skip columns that look like flags: names ending/containing _QC or _SSITC_TEST (case-insensitive). Default: TRUE.
note	Logical; print a per-column summary with expected units, PRM range, and counts.
summarize	Logical; if TRUE, return a list with data and summary; otherwise return only the clamped data frame.

Value

If summarize = TRUE, a list with data and summary; else a data.frame.

get_prm_rules	<i>Get the PRM rules as a tibble (for vignettes & checks)</i>
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Description

Get the PRM rules as a tibble (for vignettes & checks)

Usage

```
get_prm_rules()
```

Value

A tibble with columns: family (regex), variable (base), min, max, units, description

run_fluxtools	<i>Launch the interactive 'shiny' QA/QC app for flux data</i>
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Description

Launch the interactive 'shiny' QA/QC app for flux data

Usage

```
run_fluxtools()
```

Value

No return value, called for side effects (it launches the Shiny app).

Examples

```
if (interactive()) {  
  run_fluxtools()  
}
```

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