Compliance sheet — star-sexagesimal

Everything a supplier qualification, a legal review or an export check usually asks about star-sexagesimal 0.1.0, in one document.

1. Identity

Document	STAR-PKG-STAR-SEXAGESIMAL-EN · v2.3 · 2026-11-14
Package	star-sexagesimal
Version	0.1.0
Capability	star.units.sexagesimal
Maturity	Released & Verified (RELEASED)
Python	>=3.9
Source commit	dc09f61d
Source	https://github.com/Andrea07072000/S.T.A.R.-/tree/main/packages/star_sexagesimal

2. Licence and obligations

Apache License 2.0. You may use, copy, modify and distribute it, also commercially, and you receive a patent licence from the contributors. When you redistribute it: keep the LICENSE file and the copyright notices (and a NOTICE file, if a future version adds one), and state in modified files that you changed them. You may not use the S.T.A.R. name to endorse your product.

3. What it needs at run time

Nothing beyond the Python standard library: it works offline.

4. Integrity

SHA-256 fingerprints of the files published on this website. Check a downloaded file with:

```
python -c "import
hashlib,sys;print(hashlib.sha256(open(sys.argv[1],'rb').read()).hexdigest())"
star_sexagesimal-0.1.0-py3-none-any.whl
```

FILE	SHA-256
star_sexagesimal-0.1.0-py3-none-any.whl	b804bf747da87b5dbce14a4c3905cf6f01d76ee6f7a73ff3012b29fb88a82747
star_sexagesimal.py	07e835372095a413980d157be650a4c907b9af3fd37a99ce6c26fac087e4b6ed
star_sexagesimal-0.1.0-source.zip	fe2b34fe73974f55cda368fd04d662f8936b2d39de401913da6975ba3cc57699

5. What it does, and its limits

Degrees to and from degrees/minutes/seconds and hours/minutes/seconds with one rounding on the whole angle; rounded fields identical to ERFA on 1200 of 1200 cases, joined angles within 1.2e-13 deg of ERFA and astropy, and out-of-range input refused.

No formatting to text and no parsing of text: fields in, fields out. No wrapping into [0, 360) or [0, 24 h). At most six decimals of a second. A binary floating-point angle that is not exactly on a tie is rounded as the float it is, not as the decimal it was typed as.

- `deg_to_dms(deg, decimals)` and `deg_to_hms(deg, decimals)` return (sign, whole, minutes, seconds, fraction) as a '+'/'-' sign and four integers, `fraction` in units of 10**-decimals second; rounding to the nearest unit, ties away from zero, once on the whole angle. Reproduce 23° 26' 21.448" and 17h 48m 59.74s (Meeus).
- `dms_to_deg` and `hms_to_deg` join the fields; 15° = 1 h. No wrapping: 360° is 360° and 24 h.
- Measured on 600 angles (100 within 1e-9 deg of a whole arcminute) and 600 sets of fields: rounded fields identical to ERFA in 1200 of 1200, never a 60; joined angle within 1.2e-13 deg of ERFA and astropy; unrounded seconds within 5e-7 s of astropy (the rounding step at six decimals).
- Every function returns its result or raises `ValueError`: non-numeric, boolean, NaN or infinite input, an angle outside [-360, 360], decimals not an integer in 0…6, a sign other than '+' or '-', degrees not an integer in 0…360 (hours 0…24), minutes not an integer in 0…59, seconds outside [0, 60), a total above 360° (24 h).

6. Export, use and certification

The package is published and freely available. That usually takes software out of export-control lists, but not every use of it: read the page on space activities and export control before using it in a controlled programme. It is not certified or qualified for flight; the evidence describes what was tested and how.

7. Citation and bill of materials

```
@software{cavazzini_star_sexagesimal_0_1_0,
  author  = {Cavazzini, Andrea},
  title   = {{star-sexagesimal}: Degrees ⇄ degrees/minutes/seconds and
hours/minutes/seconds},
  version = {0.1.0},
  year    = {2026},
  url     = {https://andrea07072000.github.io/S.T.A.R.-/software/star_sexagesimal/},
  note    = {Apache-2.0. Source: https://github.com/Andrea07072000/S.T.A.R.-, commit dc09f61d}
}
```

CITATION.cff · BibTeX · SBOM CycloneDX 1.5 · SBOM SPDX 2.3

8. Warranty and liability

Provided "as is", without warranties or conditions of any kind (Apache License 2.0, sections 7 and 8), to the extent the law allows. This never excludes liability that the law does not allow to exclude.

Related: space activities and export control · acceptable use · evidence and limits · licence texts