Kaiko

MIGRATION GUIDE

Volatility Index

Amberdata → Kaiko

2026

www.kaiko.com

1 At a glance

What this endpoint gives you: Deribit's **DVOL** volatility index for BTC or ETH as **open, high, low and close bars**, every minute, hour or day. On Kaiko, the endpoint is called `volatility-index`.

What changes for you

- You will call a new endpoint, `/analytics/volatility/volatility-index`, using your Kaiko API key in the `X-Api-Key` header (§2).
- `currency=BTC` becomes `base_asset=btc`, which is now required, in lowercase and without a quote asset. `exchange` is optional, and its only value is `drbt`, for Deribit (§3, §6).
- The default bar is now the day: without `interval`, Kaiko returns daily bars, whereas Amberdata returned minute bars. To get minute bars, simply send `interval=1m` (§3).
- Values are now returned as decimals, for example `0.3978` where Amberdata returned `39.78` (percent).
- `exchangeTimestamp` becomes `value_time`, an ISO 8601 string. `exchange`, `instrument` and `currency` are no longer returned (§5).
- The bars, the window and the limits stay the same as on Amberdata.

Coverage & distribution

Data type: Time series, one bar per row, newest first

Index: Deribit DVOL, for BTC and ETH

Bars: Minute, hour or day (default), rolled up from Deribit's one-minute bars

Range: Up to 1, 90 or 3,660 days per request (minute, hour, day)

History: From March 2021

Distribution: REST API

2 Endpoint & authentication

	Amberdata (today)	Kaiko (new)
Method	GET	GET
Base URL	`https://api.amberdata.com`	`https://api.kaiko.io`
Path	`/markets/derivatives/analytics/volatility/index`	`/analytics/volatility/volatility-index`
Auth	API key header `x-api-key`	API key header `X-Api-Key` (your Kaiko key)

Header names are not case-sensitive, so `x-api-key` and `X-Api-Key` refer to the same header: only the key itself changes. **Versioning:** Amberdata reported its version in `payload.metadata.api-version` (`2023-09-30`). Kaiko accepts an optional `api_version` query parameter (the default and current version is `2026-10-01`) and returns it in `meta.api_version`.

3 Request parameters

Amberdata param	Kaiko param	Change	Notes
`currency` (optional)	`base_asset` (required)	RENAMED	**Now required**, one asset per request (§4). `BTC` → `btc`, `ETH` → `eth`. Lowercase only.
`exchange` (optional)	`exchange` (optional)	RENAMED	`deribit` → `drbt`, the default and only value.
`startDate` (optional)	`start_time` (optional)	RENAMED	Inclusive. ISO 8601 with a time zone.
`endDate` (optional)	`end_time` (optional)	RENAMED	Exclusive. Defaults to now. ISO 8601 with a time zone.
`timeInterval` (optional)	`interval` (optional)	RENAMED	`minute` → `1m`, `hour` → `1h`, `day` → `1d`. **Default** `1d` (Amberdata: `minute`). Amberdata's values return a 400 error.
`timeFormat` (optional)	None	REMOVED	Kaiko times are always ISO 8601 strings, the same as Amberdata's `timeFormat=iso`. You can simply remove it from your requests.
None	`sort` (optional)	NEW	`desc` (default, newest first, as Amberdata) or `asc`.
None	`api_version` (optional)	NEW	Lets you pin the response format. The default is `2026-10-01`.

Window and limits

- **Window:** `[start_time, end_time)`, the same as Amberdata: 2026-09-01 to 2026-09-04 at `1d` returns the bars of 1, 2 and 3 September on both sides.
- **Limits, the same as Amberdata:** you can request at most 1 day at `1m`, 90 days at `1h` and 3,660 days at `1d`. A wider window, including a `start_time` alone further back than that, returns a 400 error. The whole window comes in one response, without pagination.
- **Without dates:** you get the widest window before now, as on Amberdata: the last day of minute bars, the last 90 days of hourly bars, or the last 3,660 days of daily bars. With no parameter besides `base_asset`, Kaiko returns daily bars, whereas Amberdata returned the last day of minute bars: add `interval=1m` to keep receiving minute bars.
- **Bars:** each bar is stamped at its start in UTC: `hh:mm` at `1m`, `hh:00` at `1h`, and 00:00 UTC at `1d`. A minute, hour or day without any published value has no bar.
- **Window edges:** a bar is returned when its start lies in the window. When `start_time` falls inside a bar, Kaiko does not return that bar, whereas Amberdata returned it, built from the minutes after `start_time`. When `end_time` falls inside a bar, the last bar only holds the minutes before `end_time`, as on Amberdata.
- **Current bar:** the bar in progress is returned while still open, with the minutes so far, as on Amberdata. For example, today's daily bar keeps changing until 00:00 UTC.
- **Time format:** please use ISO 8601 with a time zone, for example `2026-09-01T00:00:00.000Z`. Amberdata also accepted a date alone or a time without zone, but Kaiko returns a 400 error for both.
- **History:** from March 2021.

4 Response envelope & metadata

These are the fields around the data, in other words the wrapper your parser reads before reaching the numbers. This envelope is **identical on every Amberdata endpoint**.

Amberdata field	Kaiko field	Change	Notes
`status`	None	REMOVED	Please use the HTTP status code (200) instead.
`title`	None	REMOVED	There is no equivalent on success.
`description`	None	REMOVED	There is no equivalent on success.
`payload.data`	`data`	RENAMED	Now at the top level. An **array** with one row per bar.
`payload.metadata`	`meta`	RENAMED	Now at the top level.
`api-version`	`api_version`	RENAMED	`2026-10-01` (Amberdata: `2023-09-30`).
None	`count`	NEW	The number of rows in `data` (bars).
None	`next_url`	NEW	Always `null`, since there is a single page.
None	`url`	NEW	Your request URL, including `api_version`.

On Amberdata, `api-version` sits inside `payload.metadata`. On Kaiko, `api_version`, `count`, `next_url` and `url` all sit inside `meta`.

Errors and empty results

- **Asset without a DVOL index:** Amberdata returned a 200 response with an empty `data` array (for example `DOGE`). Kaiko returns a **404** error with the code `unknown_instrument` (for example "drbt publishes no volatility index for doge").
- **Missing base_asset:** Kaiko returns a **400** error. Amberdata returned BTC and ETH together in one response, so please send one request per asset.
- **Uppercase or Amberdata codes:** Amberdata accepted any case. Kaiko returns a **400** error (for example `BTC`, `deribit`, `minute`).
- **Start equal to or after end:** Amberdata returned a 200 response with an empty `data` array. Kaiko returns a **400** error.
- **Window wider than the limits:** both APIs return a 400 error.
- **No data in the window:** both APIs return a 200 response with an empty `data` array.
- **Missing or invalid parameter:** both APIs return a 400 error. Kaiko errors are `application/problem+json` (RFC 9457) bodies that include `status`, `title`, a `detail` message naming the parameter, and the code `invalid_parameter`.

5 Response data fields

Amberdata field	Kaiko field	Type	Change
`exchangeTimestamp`	`value_time`	string	RENAMED

Amberdata field	Kaiko field	Type	Change
`exchange`	None	string	REMOVED
`instrument`	None	string	REMOVED
`currency`	None	string	REMOVED
`open`	`open`	number	RENAMED
`high`	`high`	number	RENAMED
`low`	`low`	number	RENAMED
`close`	`close`	number	RENAMED

- **value_time** is the start of the bar, as an ISO 8601 string (`"2026-09-03T00:00:00.000Z"`), whereas Amberdata returned a number of milliseconds by default.
- **exchange, instrument and currency** are no longer repeated in the rows: they are in your request and in `meta.url`.
- **open, high, low, close** are the first minute's open, the highest high, the lowest low and the last minute's close over the bar, as decimals. Deribit quotes DVOL in percentage points, so `39.78` becomes `0.3978`.

Units: DVOL is an annualised 30-day implied volatility. Amberdata expressed it in percent (`39.78` = 39.78%), while Kaiko uses decimals (`0.3978` = 39.78%).

6 Exchange & venue names

For this endpoint, the venue is the exchange **publishing the volatility index**. Please map the exchange and the currency you send:

Amberdata exchange	Amberdata currency	Kaiko exchange	base_asset	History from
deribit	BTC	drbt	btc	Mar 2021
deribit	ETH	drbt	eth	Mar 2021

The index is Deribit's DVOL, published for BTC and ETH. It is quoted against no asset, so there is no `quote_asset`. Amberdata's codes (for example `deribit`) return a 400 error.

7 Will your values change?

Short answer

The bars are built the same way: once divided by 100, the values are directly comparable with Amberdata's. Only a window that starts inside a bar behaves differently: Kaiko does not return that first bar (§3).

- **Same methodology:** on both sides, the DVOL index is relayed as Deribit publishes it, every minute, and not recomputed. Hourly and daily bars roll the minutes up over UTC hours and days: open of the first minute, highest high, lowest low and close of the last minute.
- **Units:** Amberdata used percent, while Kaiko uses decimals (§5).

- **Precision:** the precision is the same on both sides, two decimals in percentage points: `39.78` becomes `0.3978`.

8 Before / after example

Request

Amberdata

```
GET https://api.amberdata.com
    /markets/derivatives/analytics
    /volatility/index
    ?exchange=deribit
    &currency=BTC
    &startDate=2026-09-01T00:00:00
    &endDate=2026-09-04T00:00:00
    &timeInterval=day
x-api-key: <your-amberdata-key>
```

Kaiko

```
GET https://api.kaiko.io
    /analytics/volatility
    /volatility-index
    ?base_asset=btc
    &start_time=2026-09-01T00:00:00.000Z
    &end_time=2026-09-04T00:00:00.000Z
    &interval=1d
X-Api-Key: <your-kaiko-key>
```

Response (real responses, most recent bar; fields reordered)

Amberdata

```
{
  "status": 200,
  "title": "OK",
  "description": "Successful request",
  "payload": {
    "data": [ {
      "exchangeTimestamp": 1788393600000,
      "exchange": "deribit",
      "instrument": "DERIBIT_BTC_DVOL_INDEX",
      "currency": "BTC",
      "open": 37.19,
      "high": 40.87,
      "low": 36.3,
      "close": 39.78
    },
    … 2 more days, to 2026-09-01
    ],
    "metadata": {
      "api-version": "2023-09-30"
    }
  }
}
```

Kaiko

```
{
  "data": [ {
    "value_time": "2026-09-03T00:00:00.000Z",
    "open": 0.3719,
    "high": 0.4087,
    "low": 0.363,
    "close": 0.3978
  },
  … 2 more days, to 2026-09-01
  ],
  "meta": {
    "api_version": "2026-10-01",
    "count": 3,
    "next_url": null,
    "url": "https://api.kaiko.io/analytics/
volatility/volatility-index?
base_asset=btc&start_time=2026-09-01T00:00:00.000Z
&end_time=2026-09-04T00:00:00.000Z&interval=1d&api
_version=2026-10-01"
  }
}
```