# System Operator Product Type

The relation that links a system operator to a type of product they want to buy on a flexibility market. The system operator creates one resource for each product type they ask for.

## Status transitions for system operator product type

The system operator can ask for a product type temporarily or periodically. The status field on the resource is there to give this information. A system operator product type resource always starts as active, but it can be marked inactive when the system operator does not need the product.

## Relevant links

* [API Documentation](https://flex-test.elhub.no/api/v0/#/operations/list_system_operator_product_type)
* [Download docx](../download/system_operator_product_type.docx)

## Fields

| Name | Description | Format | Reference |
| --- | --- | --- | --- |
| id | Unique surrogate identifier. | bigintRead only |  |
| system\_operator\_id | Reference to the system operator. | bigintRequiredNon-updatable | [party.id](party.md#field-id) |
| product\_type\_id | Reference to the product type. | bigintRequiredNon-updatable | [product\_type.id](product_type.md#field-id) |
| status | The status of the relation. | textOne of: active, inactiveDefault: active |  |
| recorded\_at | When the resource was recorded (created or updated) in the system. | timestamp with time zoneRead only |  |
| recorded\_by | The identity that recorded the resource. | bigintRead only |  |

## Validation Rules

No validation rules.

## Notifications

| Action | Recipient | Comment |
| --- | --- | --- |
| create | All active SPs, SO on SOPT |  |
| update, delete | SO on SOPT |  |

## Authorization

### Resource Level Authorization

Below is the [RLA](../technical/auth.md#resource-level-authorization-rla) for the resource. The default policy is **deny**.

#### Anonymous

No policies.

#### Common

| Policy key | Policy | Status |
| --- | --- | --- |
| SOPT-COM001 | Read history on SOPT that they can read. | DONE |
| SOPT-COM002 | Read all SOPT. | DONE |

#### Balance Responsible Party

No policies.

#### End User

No policies.

#### Energy Supplier

No policies.

#### Flexibility Information System Operator

| Policy key | Policy | Status |
| --- | --- | --- |
| SOPT-FISO001 | Read, create and update all SOPT. | DONE |

#### Market Operator

No policies.

#### System Operator

| Policy key | Policy | Status |
| --- | --- | --- |
| SOPT-SO001 | Read, create and update SOPT concerning themselves. | DONE |

#### Service Provider

No policies.

#### Third Party

No policies.

### Field Level Authorization

For party type abbreviations, check [the auth docs](../technical/auth.md#party)

| FIELD | ANON | BRP | ES | EU | FISO | MO | SO | SP | TP |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id |  | R | R | R | R | R | R | R | R |
| system\_operator\_id |  | R | R | R | RC | R | RC | R | R |
| product\_type\_id |  | R | R | R | RC | R | RC | R | R |
| status |  | R | R | R | RU | R | RU | R | R |
| recorded\_at |  | R | R | R | R | R | R | R | R |
| recorded\_by |  | R | R | R | R | R | R | R | R |