

# TakerTraits

## TakerTraitsLib

This library to manage and check TakerTraits, which are used to encode the taker's preferences for an order in a single uint256.

*The TakerTraits are structured as follows: High bits are used for flags 255 bit `_MAKER_AMOUNT_FLAG` - If set, the taking amount is calculated based on making amount, otherwise making amount is calculated based on taking amount. 254 bit `_UNWRAP_WETH_FLAG` - If set, the WETH will be unwrapped into ETH before sending to taker. 253 bit `_SKIP_ORDER_PERMIT_FLAG` - If set, the order skips maker's permit execution. 252 bit `_USE_PERMIT2_FLAG` - If set, the order uses the permit2 function for authorization. 251 bit `_ARGS_HAS_TARGET` - If set, then first 20 bytes of args are treated as target address for maker's funds transfer. 224-247 bits `ARGS_EXTENSION_LENGTH` - The length of the extension calldata in the args. 200-223 bits `ARGS_INTERACTION_LENGTH` - The length of the interaction calldata in the args. 0-184 bits - The threshold amount (the maximum amount a taker agrees to give in exchange for a making amount).*

## Functions

### argsHasTarget

```
function argsHasTarget(TakerTraits takerTraits) internal pure returns (bool)
```

Checks if the args should contain target address.

## Parameters

Name	Type	Description
takerTraits	TakerTraits	The traits of the taker.

## Return Values

Name	Type	Description
[0]	bool	result A boolean indicating whether the args should contain target address.

## argsExtensionLength

```
function argsExtensionLength(TakerTraits takerTraits) internal pure returns (uint256)
```

Retrieves the length of the extension calldata from the takerTraits.

### Parameters

Name	Type	Description
takerTraits	TakerTraits	The traits of the taker.

### Return Values

Name	Type	Description
[0]	uint256	result The length of the extension calldata encoded in the takerTraits.

## argsInteractionLength

```
function argsInteractionLength(TakerTraits takerTraits) internal pure returns (uint256)
```

Retrieves the length of the interaction calldata from the takerTraits.

### Parameters

Name	Type	Description
takerTraits	TakerTraits	The traits of the taker.

### Return Values

Name	Type	Description
[0]	uint256	result The length of the interaction calldata encoded in the takerTraits.

## isMakingAmount

```
function isMakingAmount(TakerTraits takerTraits) internal pure returns (bool)
```

Checks if the taking amount should be calculated based on making amount.

## Parameters

Name	Type	Description
takerTraits	TakerTraits	The traits of the taker.

## Return Values

Name	Type	Description
[0]	bool	result A boolean indicating whether the taking amount should be calculated based on making amount.

## unwrapWeth

```
function unwrapWeth(TakerTraits takerTraits) internal pure returns (bool)
```

Checks if the order should unwrap WETH and send ETH to taker.

## Parameters

Name	Type	Description
takerTraits	TakerTraits	The traits of the taker.

## Return Values

Name	Type	Description
[0]	bool	result A boolean indicating whether the order should unwrap WETH.

## skipMakerPermit

```
function skipMakerPermit(TakerTraits takerTraits) internal pure returns (bool)
```

Checks if the order should skip maker's permit execution.

## Parameters

Name	Type	Description
takerTraits	TakerTraits	The traits of the taker.

## Return Values

Name	Type	Description
[0]	bool	result A boolean indicating whether the order don't apply permit.

## usePermit2

```
function usePermit2(TakerTraits takerTraits) internal pure returns (bool)
```

Checks if the order uses the permit2 instead of permit.

## Parameters

Name	Type	Description
takerTraits	TakerTraits	The traits of the taker.

## Return Values

Name	Type	Description
[0]	bool	result A boolean indicating whether the order uses the permit2.

## threshold

```
function threshold(TakerTraits takerTraits) internal pure returns (uint256)
```

Retrieves the threshold amount from the takerTraits. The maximum amount a taker agrees to give in exchange for a making amount.

## Parameters

Name	Type	Description
takerTraits	TakerTraits	The traits of the taker.

## Return Values

Name	Type	Description
[0]	uint256	result The threshold amount encoded in the takerTraits.

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