
typepy Documentation

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CHAPTER 1

typepy

CHAPTER 2

Summary

typepy is a Python library for variable type checker/validator/converter at a run time.

- checking a value type
- validate a value for a type
- convert a value from a type to the other type

The correspondence between Python types and `typepy` classes are as follows:

Table 1: Supported Types

Python Type	typepy: Type Class
<code>bool</code>	<code>Bool</code>
<code>datetime</code>	<code>DateTime</code>
<code>dict</code>	<code>Dictionary</code>
<code>float/decimal.Decimal (not infinity/NaN)</code>	<code>RealNumber</code>
<code>float/decimal.Decimal (infinity)</code>	<code>Infinity</code>
<code>float/decimal.Decimal (NaN)</code>	<code>Nan</code>
<code>int</code>	<code>Integer</code>
<code>list</code>	<code>List</code>
<code>None</code>	<code>None</code>
<code>str (not null)</code>	<code>String</code>
<code>str (null)</code>	<code>NullString</code>
<code>str (IP address)</code>	<code>IpAddress</code>

4.1 Type Check Method

Examples

```
>>> from typepy import Integer
>>> Integer(1).is_type()
True
>>> Integer(1.1).is_type()
False
```

4.2 Type Validation Method

Examples

```
>>> from typepy import Integer
>>> Integer(1).validate()
>>> try:
...     Integer(1.1).validate()
... except TypeError as e:
...     # validate() raised TypeError when the value unmatched the type_
↪class
...     print(e)
...
invalid value type: expected=INTEGER, actual=<type 'float'>
```

4.3 Type Conversion Methods

4.3.1 convert method

Examples

```
>>> from typepy import Integer, TypeConversionError
>>> Integer("1").convert()
1
>>> try:
...     Integer(1.1).convert()
... except TypeConversionError as e:
...     # convert() raised TypeConversionError when conversion failed
...     print(e)
...
failed to convert from float to INTEGER
```

4.3.2 try_convert method

Examples

```
>>> from typepy import Integer
>>> Integer("1").try_convert()
1
>>> print(Integer(1.1).try_convert()) # try_convert() returned None_
↳when conversion failed
None
```

4.3.3 force_convert

Examples

```
>>> from typepy import Integer, TypeConversionError
>>> Integer("1").force_convert() # force_convert() forcibly convert the_
↳value
1
>>> Integer(1.1).force_convert()
1
>>> try:
...     Integer("abc").force_convert()
... except TypeConversionError as e:
...     # force_convert() raised TypeConversionError when the value not_
↳convertible
...     print(e)
...
failed to force_convert to int: type=<class 'str'>
```

4.4 For more information

Type check/validate/convert results differed according to `strict_level` value which can pass to typepy classes constructors as an argument. More information can be found in the [API reference](#).

5.1 Install from PyPI

```
pip install typepy
```

Install additional dependency packages with the following command if using `typepy.DateTime` class

```
pip install typepy[datetime]
```

5.2 Install from PPA (for Ubuntu)

```
sudo add-apt-repository ppa:thombashi/ppa
sudo apt update
sudo apt install python3-typepy
```


Python 2.7+ or 3.5+

- `mbstrdecoder`
- `six`

6.1 Optioal dependencies

These packages can be installed via `pip install typepy[datetime]:`

- `python-dateutil`
- `pytz`

6.2 Test dependencies

- `pytest`
- `pytest-runner`
- `tox`

7.1 Errors

exception `typepy.TypeConversionError`

Bases: `TypeError`

Exception raised when failed to convert data.

7.2 Type Classes

7.2.1 Boolean Type

class `typepy.Bool` (*value*, *strict_level=2*, ***kwargs*)

For each member methods, the result matrix for each `strict_level` is as follows. Column headers (except Method column) indicate input data to `value` argument of a method in the Method column. For each cell shows the output of the method.

Table 1: `typepy.Bool: strict_level = 0`

Method	True	"true"	1
<code>is_type()</code>	True	True	True
<code>validate()</code>	NOP ¹	NOP ¹	NOP ¹
<code>convert()</code>	True	True	True
<code>try_convert()</code>	True	True	True
<code>force_convert()</code>	True	True	True

¹ No Operation

Table 2: typepy.Bool: strict_level = 1

Method	True	"true"	1
is_type()	True	True	False
validate()	NOP ¹	NOP ¹	E ²
convert()	True	True	E ²
try_convert()	True	True	None
force_convert()	True	True	True

Table 3: typepy.Bool: strict_level = 2

Method	True	"true"	1
is_type()	True	False	False
validate()	NOP ¹	E ²	E ²
convert()	True	E ²	E ²
try_convert()	True	None	None
force_convert()	True	True	True

strict_level

Represents how much strict to detect the value type. Higher `strict_level` means that stricter type check.

convert()

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

force_convert()

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

is_type()

Returns

Return type `bool`

try_convert()

Returns Converted value. `None` if failed to convert.

validate (*error_message=None*)

Raises `TypeError` – If the value is not matched the type that the class represented.

7.2.2 Date Time Type

class `typepy.DateTime` (*value, strict_level=2, **kwargs*)

For each member methods, the result matrix for each `strict_level` is as follows. Column headers (except Method column) indicate input data to `value` argument of a method in the Method column. For each cell shows the output of the method.

² Error (raise `TypeError`)

Table 4: typepy.DateTime: strict_level = 0

Method	datetime(2017, 1, 23, 4, 56)	"2017-01-22T04:56:00+09:00"	1485685623	"1485685623"
is_type()	True	True	True	True
validate()	NOP ¹	NOP ¹	NOP ¹	NOP ¹
convert()	2017-01-23 04:56:00	2017-01-22 04:56:00+09:00	2017-01-29 19:27:03	2017-01-29T19:27:03
try_convert()	2017-01-23 04:56:00	2017-01-22 04:56:00+09:00	2017-01-29 19:27:03	2017-01-29T19:27:03
force_convert()	2017-01-23 04:56:00	2017-01-22 04:56:00+09:00	2017-01-29 19:27:03	2017-01-29T19:27:03

Table 5: typepy.DateTime: strict_level = 1

Method	datetime(2017, 1, 23, 4, 56)	"2017-01-22T04:56:00+09:00"	1485685623	"1485685623"
is_type()	True	True	False	False
validate()	NOP ¹	NOP ¹	E ²	E ²
convert()	2017-01-23 04:56:00	2017-01-22 04:56:00+09:00	E ²	E ²
try_convert()	2017-01-23 04:56:00	2017-01-22 04:56:00+09:00	None	None
force_convert()	2017-01-23 04:56:00	2017-01-22 04:56:00+09:00	2017-01-29 19:27:03	2017-01-29T19:27:03

Table 6: typepy.DateTime: strict_level = 2

Method	datetime(2017, 1, 23, 4, 56)	"2017-01-22T04:56:00+09:00"	1485685623	"1485685623"
is_type()	True	False	False	False
validate()	NOP ¹	E ²	E ²	E ²
convert()	2017-01-23 04:56:00	E ²	E ²	E ²
try_convert()	2017-01-23 04:56:00	None	None	None
force_convert()	2017-01-23 04:56:00	2017-01-22 04:56:00+09:00	2017-01-29 19:27:03	2017-01-29T19:27:03

strict_level Represents how much strict to detect the value type. Higher **strict_level** means that stricter type check.

convert()

Returns Converted value.

Raises *typepy.TypeConversionError* – If the value cannot convert.

force_convert()

Returns Converted value.

Raises *typepy.TypeConversionError* – If the value cannot convert.

is_type()

Returns

Return type bool

`try_convert()`

Returns Converted value. `None` if failed to convert.

`validate(error_message=None)`

Raises `TypeError` – If the value is not matched the type that the class represented.

7.2.3 Dictionary Type

class `typepy.Dictionary` (*value*, *strict_level=1*, ***kwargs*)

For each member methods, the result matrix for each `strict_level` is as follows. Column headers (except Method column) indicate input data to `value` argument of a method in the Method column. For each cell shows the output of the method.

Table 7: `typepy.Dictionary: strict_level = 0`

Method	{}	{"a": 1}	(("a", 1),)
<code>is_type()</code>	True	True	True
<code>validate()</code>	NOP ¹	NOP ¹	NOP ¹
<code>convert()</code>	{}	{'a': 1}	{'a': 1}
<code>try_convert()</code>	{}	{'a': 1}	{'a': 1}
<code>force_convert()</code>	{}	{'a': 1}	{'a': 1}

Table 8: `typepy.Dictionary: strict_level = 1`

Method	{}	{"a": 1}	(("a", 1),)
<code>is_type()</code>	True	True	False
<code>validate()</code>	NOP ¹	NOP ¹	E ²
<code>convert()</code>	{}	{'a': 1}	E ²
<code>try_convert()</code>	{}	{'a': 1}	None
<code>force_convert()</code>	{}	{'a': 1}	{'a': 1}

`strict_level` Represents how much strict to detect the value type. Higher `strict_level` means that stricter type check.

`convert()`

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

`force_convert()`

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

`is_type()`

Returns

Return type `bool`

`try_convert()`

Returns Converted value. `None` if failed to convert.

`validate(error_message=None)`

Raises `TypeError` – If the value is not matched the type that the class represented.

7.2.4 Infinity Type

class `typepy.Infinity` (*value*, *strict_level=1*, ***kwargs*)

For each member methods, the result matrix for each `strict_level` is as follows. Column headers (except Method column) indicate input data to `value` argument of a method in the Method column. For each cell shows the output of the method.

Table 9: `typepy.Infinity: strict_level = 0`

Method	<code>float("inf")</code>	"Infinity"	0.1
<code>is_type()</code>	True	True	False
<code>validate()</code>	NOP ¹	NOP ¹	E ²
<code>convert()</code>	<code>Decimal("inf")</code>	<code>Decimal("inf")</code>	E ²
<code>try_convert()</code>	<code>Decimal("inf")</code>	<code>Decimal("inf")</code>	None
<code>force_convert()</code>	<code>Decimal("inf")</code>	<code>Decimal("inf")</code>	0.1

Table 10: `typepy.Infinity: strict_level = 1`

Method	<code>float("inf")</code>	"Infinity"	0.1
<code>is_type()</code>	True	False	False
<code>validate()</code>	NOP ¹	E ²	E ²
<code>convert()</code>	<code>Decimal("inf")</code>	E ²	E ²
<code>try_convert()</code>	<code>Decimal("inf")</code>	None	None
<code>force_convert()</code>	<code>Decimal("inf")</code>	<code>Decimal("inf")</code>	0.1

strict_level Represents how much strict to detect the value type. Higher `strict_level` means that stricter type check.

convert ()

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

force_convert ()

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

is_type ()

Returns

Return type `bool`

try_convert ()

Returns Converted value. `None` if failed to convert.

validate (*error_message=None*)

Raises `TypeError` – If the value is not matched the type that the class represented.

7.2.5 Integer Type

class `typepy.Integer` (*value*, *strict_level=1*, ***kwargs*)

For each member methods, the result matrix for each `strict_level` is as follows. Column headers (except Method column) indicate input data to `value` argument of a method in the Method column. For each cell shows the output of the method.

Table 11: `typepy.Integer: strict_level = 0`

Method	1	1.0	1.1	"1"	"1.0"	"1.1"	True
<code>is_type()</code>	True	True	True	True	True	True	True
<code>validate()</code>	NOP ¹	NOP ¹	NOP ¹	NOP ¹	NOP ¹	NOP ¹	NOP ¹
<code>convert()</code>	1	1	1	1	1	1	1
<code>try_convert()</code>	1	1	1	1	1	1	1
<code>force_convert()</code>	1	1	1	1	1	1	1

Table 12: `typepy.Integer: strict_level = 1`

Method	1	1.0	1.1	"1"	"1.0"	"1.1"	True
<code>is_type()</code>	True	True	False	True	True	False	False
<code>validate()</code>	NOP ¹	NOP ¹	E ²	NOP ¹	NOP ¹	E ²	E ²
<code>convert()</code>	1	1	E ²	1	1	E ²	E ²
<code>try_convert()</code>	1	1	None	1	1	None	None
<code>force_convert()</code>	1	1	1	1	1	1	1

Table 13: `typepy.Integer: strict_level = 2`

Method	1	1.0	1.1	"1"	"1.0"	"1.1"	True
<code>is_type()</code>	True	False	False	False	False	False	False
<code>validate()</code>	NOP ¹	E ²	E ²	E ²	E ²	E ²	E ²
<code>convert()</code>	1	E ²	E ²	E ²	E ²	E ²	E ²
<code>try_convert()</code>	1	None	None	None	None	None	None
<code>force_convert()</code>	1	1	1	1	1	1	1

`strict_level` Represents how much strict to detect the value type. Higher `strict_level` means that stricter type check.

`convert()`

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

`force_convert()`

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

`is_type()`

Returns

Return type `bool`

`try_convert()`

Returns Converted value. `None` if failed to convert.

validate (*error_message=None*)

Raises **TypeError** – If the value is not matched the type that the class represented.

7.2.6 IP address Type

class typepy.**IpAddress** (*value, strict_level=1, **kwargs*)

For each member methods, the result matrix for each *strict_level* is as follows. Column headers (except Method column) indicate input data to *value* argument of a method in the Method column. For each cell shows the output of the method.

Table 14: typepy.IpAddress: strict_level = 0

Method	ip_address('127.0.0.1')	'127.0.0.1'	'::1'	'192.168.0.256'	None
is_type()	True	True	True	False	False
validate()	NOP ¹	NOP ¹	NOP ¹	E ²	E ²
convert()	ip_address("127.0.0.1")	ip_address("127.0.0.1")	"::1"	E ²	E ²
try_convert()	ip_address("127.0.0.1")	ip_address("127.0.0.1")	"::1"	None	None
force_convert()	ip_address("127.0.0.1")	ip_address("127.0.0.1")	"::1"	E ²	E ²

Table 15: typepy.IpAddress: strict_level = 1

Method	ip_address('127.0.0.1')	'127.0.0.1'	'::1'	'192.168.0.256'	None
is_type()	True	False	False	False	False
validate()	NOP ¹	E ²	E ²	E ²	E ²
convert()	ip_address("127.0.0.1")	E ²	E ²	E ²	E ²
try_convert()	ip_address("127.0.0.1")	None	None	None	None
force_convert()	ip_address("127.0.0.1")	ip_address("127.0.0.1")	"::1"	E ²	E ²

strict_level Represents how much strict to detect the value type. Higher *strict_level* means that stricter type check.

convert ()

Returns Converted value.

Raises **typepy.TypeConversionError** – If the value cannot convert.

force_convert ()

Returns Converted value.

Raises **typepy.TypeConversionError** – If the value cannot convert.

is_type ()

Returns

Return type **bool**

`try_convert()`

Returns Converted value. `None` if failed to convert.

`validate(error_message=None)`

Raises `TypeError` – If the value is not matched the type that the class represented.

7.2.7 List Type

class `typepy.List` (*value*, *strict_level=1*, ***kwargs*)

For each member methods, the result matrix for each `strict_level` is as follows. Column headers (except Method column) indicate input data to `value` argument of a method in the Method column. For each cell shows the output of the method.

Table 16: `typepy.List: strict_level = 0`

Method	[]	["a", "b"]	("a", "b")	{"a": 1}	"abc"
<code>is_type()</code>	True	True	True	True	False
<code>validate()</code>	NOP ¹	NOP ¹	NOP ¹	NOP ¹	E ²
<code>convert()</code>	[]	['a', 'b']	['a', 'b']	['a']	E ²
<code>try_convert()</code>	[]	['a', 'b']	['a', 'b']	['a']	None
<code>force_convert()</code>	[]	['a', 'b']	['a', 'b']	['a']	['a', 'b', 'c']

Table 17: `typepy.List: strict_level = 1`

Method	[]	["a", "b"]	("a", "b")	{"a": 1}	"abc"
<code>is_type()</code>	True	True	False	False	False
<code>validate()</code>	NOP ¹	NOP ¹	E ²	E ²	E ²
<code>convert()</code>	[]	['a', 'b']	E ²	E ²	E ²
<code>try_convert()</code>	[]	['a', 'b']	None	None	None
<code>force_convert()</code>	[]	['a', 'b']	['a', 'b']	['a']	['a', 'b', 'c']

strict_level Represents how much strict to detect the value type. Higher `strict_level` means that stricter type check.

`convert()`

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

`force_convert()`

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

`is_type()`

Returns

Return type `bool`

`try_convert()`

Returns Converted value. `None` if failed to convert.

`validate(error_message=None)`

Raises `TypeError` – If the value is not matched the type that the class represented.

7.2.8 NaN Type

class `typepy.Nan` (*value*, *strict_level=1*, ***kwargs*)

For each member methods, the result matrix for each `strict_level` is as follows. Column headers (except Method column) indicate input data to `value` argument of a method in the Method column. For each cell shows the output of the method.

Table 18: `typepy.Nan: strict_level = 0`

Method	<code>float("nan")</code>	<code>"NaN"</code>	<code>0.1</code>
<code>is_type()</code>	True	True	False
<code>validate()</code>	NOP ¹	NOP ¹	E ²
<code>convert()</code>	<code>Decimal("nan")</code>	<code>Decimal("nan")</code>	E ²
<code>try_convert()</code>	<code>Decimal("nan")</code>	<code>Decimal("nan")</code>	None
<code>force_convert()</code>	<code>Decimal("nan")</code>	<code>Decimal("nan")</code>	<code>0.1</code>

Table 19: `typepy.Nan: strict_level = 1`

Method	<code>float("nan")</code>	<code>"NaN"</code>	<code>0.1</code>
<code>is_type()</code>	True	False	False
<code>validate()</code>	NOP ¹	E ²	E ²
<code>convert()</code>	<code>Decimal("nan")</code>	E ²	E ²
<code>try_convert()</code>	<code>Decimal("nan")</code>	None	None
<code>force_convert()</code>	<code>Decimal("nan")</code>	<code>Decimal("nan")</code>	<code>0.1</code>

strict_level Represents how much strict to detect the value type. Higher `strict_level` means that stricter type check.

convert ()

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

force_convert ()

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

is_type ()

Returns

Return type `bool`

try_convert ()

Returns Converted value. `None` if failed to convert.

validate (*error_message=None*)

Raises `TypeError` – If the value is not matched the type that the class represented.

7.2.9 None Type

class typepy.**NoneType** (*value*, *strict_level=0*, ***kwargs*)

For each member methods, the result matrix for each *strict_level* is as follows. Column headers (except Method column) indicate input data to *value* argument of a method in the Method column. For each cell shows the output of the method.

Table 20: typepy.NoneType: *strict_level* = 0

Method	"abc"	""	" "	None	1
<code>is_type()</code>	False	False	False	True	False
<code>validate()</code>	E ²	E ²	E ²	NOP ¹	E ²
<code>convert()</code>	E ²	E ²	E ²	None	E ²
<code>try_convert()</code>	None	None	None	None	None
<code>force_convert()</code>	None	None	None	None	None

strict_level Represents how much strict to detect the value type. Higher *strict_level* means that stricter type check.

convert ()

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

force_convert ()

Returns Converted value.

Raises `typepy.TypeConversionError` – If the value cannot convert.

is_type ()

Returns

Return type `bool`

try_convert ()

Returns Converted value. `None` if failed to convert.

validate (*error_message=None*)

Raises `TypeError` – If the value is not matched the type that the class represented.

7.2.10 Null String Type

class typepy.**NullString** (*value*, *strict_level=1*, ***kwargs*)

For each member methods, the result matrix for each *strict_level* is as follows. Column headers (except Method column) indicate input data to *value* argument of a method in the Method column. For each cell shows the output of the method.

Table 21: typepy.NullString: *strict_level* = 0

Method	"abc"	""	" "	None	1
<code>is_type()</code>	False	True	True	True	False
<code>validate()</code>	E ²	NOP ¹	NOP ¹	NOP ¹	E ²
<code>convert()</code>	E ²	""	""	""	E ²
<code>try_convert()</code>	None	""	""	""	None
<code>force_convert()</code>	""	""	""	""	""

Table 22: typepy.NullString: strict_level = 1

Method	"abc"	""	" "	None	1
is_type()	False	True	True	False	False
validate()	E ²	NOP ¹	NOP ¹	E ²	E ²
convert()	E ²	""	""	E ²	E ²
try_convert()	None	""	""	None	None
force_convert()	""	""	""	""	""

strict_level Represents how much strict to detect the value type. Higher *strict_level* means that stricter type check.

convert()

Returns Converted value.

Raises *typepy.TypeConversionError* – If the value cannot convert.

force_convert()

Returns Converted value.

Raises *typepy.TypeConversionError* – If the value cannot convert.

is_type()

Returns

Return type bool

try_convert()

Returns Converted value. None if failed to convert.

validate (*error_message=None*)

Raises *TypeError* – If the value is not matched the type that the class represented.

7.2.11 Real Number Type

class typepy.RealNumber (*value, strict_level=0, **kwargs*)

For each member methods, the result matrix for each *strict_level* is as follows. Column headers (except Method column) indicate input data to *value* argument of a method in the Method column. For each cell shows the output of the method.

Table 23: typepy.RealNumber: strict_level = 0

Method	1	1.0	1.1	"1"	"1.0"	"1.1"	True
is_type()	True	True	True	True	True	True	False
validate()	NOP ¹	NOP ¹	NOP ¹	NOP ¹	NOP ¹	NOP ¹	E ²
convert()	1	1	1.1	1	1	1.1	E ²
try_convert()	1	1	1.1	1	1	1.1	None
force_convert()	1	1	1.1	1	1	1.1	1

Table 24: typepy.RealNumber: strict_level = 1

Method	1	1.0	1.1	"1"	"1.0"	"1.1"	True
is_type ()	False	False	True	False	False	True	False
validate ()	E ²	E ²	NOP ¹	E ²	E ²	NOP ¹	E ²
convert ()	E ²	E ²	1.1	E ²	E ²	1.1	E ²
try_convert ()	None	None	1.1	None	None	1.1	None
force_convert ()	1	1	1.1	1	1	1.1	1

Table 25: typepy.RealNumber: strict_level = 2

Method	1	1.0	1.1	"1"	"1.0"	"1.1"	True
is_type ()	False	False	True	False	False	False	False
validate ()	E ²	E ²	NOP ¹	E ²	E ²	E ²	E ²
convert ()	E ²	E ²	1.1	E ²	E ²	E ²	E ²
try_convert ()	None	None	1.1	None	None	None	None
force_convert ()	1	1	1.1	1	1	1.1	1

strict_level Represents how much strict to detect the value type. Higher *strict_level* means that stricter type check.

convert ()

Returns Converted value.

Raises *typepy.TypeConversionError* – If the value cannot convert.

force_convert ()

Returns Converted value.

Raises *typepy.TypeConversionError* – If the value cannot convert.

is_type ()

Returns

Return type `bool`

try_convert ()

Returns Converted value. `None` if failed to convert.

validate (error_message=None)

Raises *TypeError* – If the value is not matched the type that the class represented.

7.2.12 String Type

class typepy.String (value, strict_level=1, **kwargs)

For each member methods, the result matrix for each *strict_level* is as follows. Column headers (except Method column) indicate input data to value argument of a method in the Method column. For each cell shows the output of the method.

Table 26: typepy.String: strict_level = 0

Method	"abc"	""	" "	None	1
is_type()	True	True	True	True	True
validate()	NOP ¹	NOP ¹	NOP ¹	NOP ¹	NOP ¹
convert()	"abc"	""	" "	"None"	"1"
try_convert()	"abc"	""	" "	"None"	"1"
force_convert()	"abc"	""	" "	"None"	"1"

Table 27: typepy.String: strict_level = 1

Method	"abc"	""	" "	None	1
is_type()	True	True	True	False	False
validate()	NOP ¹	NOP ¹	NOP ¹	E ²	E ²
convert()	"abc"	""	" "	E ²	E ²
try_convert()	"abc"	""	" "	None	None
force_convert()	"abc"	""	" "	"None"	"1"

Table 28: typepy.String: strict_level = 2

Method	"abc"	""	" "	None	1
is_type()	True	False	False	False	False
validate()	NOP ¹	E ²	E ²	E ²	E ²
convert()	"abc"	E ²	E ²	E ²	E ²
try_convert()	"abc"	None	None	None	None
force_convert()	"abc"	""	" "	"None"	"1"

strict_level Represents how much strict to detect the value type. Higher *strict_level* means that stricter type check.

convert()

Returns Converted value.

Raises *typepy.TypeConversionError* – If the value cannot convert.

force_convert()

Returns Converted value.

Raises *typepy.TypeConversionError* – If the value cannot convert.

is_type()

Returns

Return type bool

try_convert()

Returns Converted value. None if failed to convert.

validate (*error_message=None*)

Raises *TypeError* – If the value is not matched the type that the class represented.

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Links

- [GitHub repository](#)
- [Issue tracker](#)
- [PyPI page](#)
- [pip: tool for installing Python packages](#)

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