

PlcArray<T, TElement> Members

Namespace: IPS7Lnk.Advanced

Assemblies: IPS7LnkNet.Advanced.dll, IPS7LnkNet.Advanced.dll

The `PlcArray<T, t>` type exposes the following members.

Constructors

PlcArray(PlcArrayType, PlcName, T[])

Initializes a new instance of the `PlcArray`2` class using the specified `type` and `name`.

C#

```
protected PlcArray(PlcArrayType type, PlcName name, params T[] values)
```

Parameters

type `PlcArrayType`

The type of array represented.

name `PlcName`

The name of the array represented.

values `T`

The initial values of the new `PlcArray`2`.

Exceptions

`ArgumentNullException`

The `type` or `name` is a null reference (Nothing in Visual Basic).

PlcArray(PlcArrayType, T[])

Initializes a new instance of the `PlcArray`2` class using the specified `type`.

C#

```
protected PlcArray(PlcArrayType type, params T[] values)
```

Parameters

type `PlcArrayType`

The type of array represented.

values `T`

The initial values of the new `PlcArray`'2.

Exceptions

`ArgumentNullException`

The `type` is a null reference (Nothing in Visual Basic).

Properties

Item[Int32]

Gets the element at the specified index.

C#

```
public T this[int index] { get; }
```

Property Value

`T`

The element at the specified index.

Exceptions

`ArgumentOutOfRangeException`

The `index` is less than zero or `index` is equal to or greater than `Length`.

Length

Gets a 32-bit integer that represents the total number of elements within the array.

C#

```
public int Length { get; }
```

Property Value

`Int32`

A 32-bit integer that represents the total number of elements within the array.

Value

Gets or sets the value assigned to the PLC value.

C#

```
public override sealed T[] Value { get; set; }
```

Property Value

T

The **T** value assigned to the PLC value.

Exceptions

[ArgumentException](#)

The [Length](#) of the value specified does not match the [Length](#) of the array.

[ArgumentNullException](#)

The value is a null reference (Nothing in Visual Basic).

Methods

BeginInitCore()

Signals the [PlcArray`2](#) that initialization is started.

C#

```
protected override void BeginInitCore()
```

EndInitCore()

Signals the [PlcValue`1](#) that initialization is completed.

C#

```
protected override void EndInitCore()
```

GetElement(Int32)

Retrieves the [TElement](#) at the specified index.

C#

```
public TElement GetElement(int index)
```

Parameters

index [Int32](#)

The zero-based index of the element to get.

Returns

`t`

The `TElement` at the specified index.

Exceptions

`ArgumentOutOfRangeException`

The `index` is less than zero or `index` is equal to or greater than `Length`.

GetElementCore(Int32)

When implemented in a derived class, retrieves the `TElement` at the specified index.

C#

```
protected abstract TElement GetElementCore(int index)
```

Parameters

`index` `Int32`

The zero-based index of the element to get.

Returns

`t`

The `TElement` at the specified index.

GetEnumerator()

Returns an enumerator that iterates through the array.

C#

```
public IEnumerator<T> GetEnumerator()
```

Returns

`IEnumerator<T>`

An `IEnumerator<T>` object that can be used to iterate through the array.

GetInstanceValue()

Retrieves the value assigned to the PLC value.

C#

```
protected override T[] GetInstanceValue()
```

Returns

T

The value assigned to the PLC value.

GetValueCore(PlcDeviceConnection)

Retrieves the current value of the PLC value from a [IPlcDevice](#) using the [connection](#) specified.

C#

```
protected override T[] GetValueCore(PlcDeviceConnection connection)
```

Parameters

[connection](#) [PlcDeviceConnection](#)

The [PlcDeviceConnection](#) from that the data is to be retrieved.

Returns

T

The current value of the PLC value.

Exceptions

[InvalidOperationException](#)

The [connection](#) is in [Faulted](#) state and cannot longer be opened.

[ObjectDisposedException](#)

The [connection](#) has been disposed of.

SetValueCore(PlcDeviceConnection, T[])

Stores the [value](#) in the [IPlcDevice](#) assigned to the [connection](#) specified.

C#

```
protected override void SetValueCore(PlcDeviceConnection connection, T[] value)
```

Parameters

[connection](#) [PlcDeviceConnection](#)

The `PlcDeviceConnection` to use to store the `value`.

`value T`

The value to be stored.

Exceptions

`InvalidOperationException`

The `connection` is in `Faulted` state and cannot longer be opened.

`ObjectDisposedException`

The `connection` has been disposed of.

ToString()

Converts the array to its string representation.

C#

```
public override string ToString()
```

Returns

`String`

A string that contains the array.

Table of Contents

Constructors	1
PlcArray(PlcArrayType, PlcName, T[])	1
PlcArray(PlcArrayType, T[])	1
Properties	2
Item[Int32]	2
Length	2
Value	2
Methods	3
BeginInitCore()	3
EndInitCore()	3
GetElement(Int32)	3
GetElementCore(Int32)	4
GetEnumerator()	4
GetInstanceValue()	4
GetValueCore(PlcDeviceConnection)	5
SetValueCore(PlcDeviceConnection, T[])	5
ToString()	6

