

PlcValue<T> Class

Namespace: IPS7Lnk.Advanced

Assemblies: IPS7LnkNet.Advanced.dll

Represents an abstract implementation of the [IPlcValue`1](#) interface.

C#

```
public abstract class PlcValue<T> : IPlcValue<T>, IPlcValue, IPlcSymbol, IPlcEntity,
IPlcStatusProvider, IPlcRelocatable<IPlcValue>, IPlcRelocatable, ISupportInitialize
```

Inheritance Object > PlcValue<T>

Derived

- [PlcArray`2](#)
- [PlcBoolean](#)
- [PlcByte](#)
- [PlcChar](#)
- [PlcDate](#)
- [PlcDateTime](#)
- [PlcDouble](#)
- [PlcInt16](#)
- [PlcInt32](#)
- [PlcInt64](#)
- [PlcLReal](#)
- [PlcReal](#)
- [PlcS5Time](#)
- [PlcString](#)
- [PlcTime](#)
- [PlcTimeOfDay](#)
- [PlcUInt16](#)
- [PlcUInt32](#)
- [PlcUInt64](#)

Implements [IPlcValue<T>](#), [IPlcValue](#), [IPlcSymbol](#), [IPlcEntity](#), [IPlcStatusProvider](#),
[IPlcRelocatable<IPlcValue>](#), [IPlcRelocatable](#), [ISupportInitialize](#)

Constructors

Name	Description
PlcValue`1(PlcType)	Initializes a new instance of the PlcValue`1 class using the specified type .
PlcValue`1(PlcType, PlcName)	Initializes a new instance of the PlcValue`1 class using the specified type and name .
PlcValue`1(PlcType, PlcName,)	Initializes a new instance of the PlcValue`1 class using the specified type , name and value .

Name	Description
<code>PlcValue`1(PlcType,)</code>	Initializes a new instance of the <code>PlcValue`1</code> class using the specified <code>type</code> and <code>value</code> .

Events

Name	Description
<code>Changed</code>	Occurs when the value of the <code>Value</code> property has changed.

Properties

Name	Description
<code>Description</code>	Gets or sets more meaningful information about the value and its usage than only using the <code>Name</code> property.
<code>IsInitializing</code>	Gets a value indicating whether the instance is in initializing mode.
<code>Name</code>	Gets the name of the value represented.
<code>Status</code>	Gets the status information provided by the software driver related to the value.
<code>Tag</code>	Gets or sets the object that contains additional user data about the value.
<code>Type</code>	Gets the type of value represented by the PLC value.
<code>Value</code>	Gets or sets the value assigned to the PLC value.

Methods

Name	Description
<code>BeginInitCore</code>	When implemented in a derived class; signals the <code>PlcValue`1</code> that initialization is started.
<code>EndInitCore</code>	When implemented in a derived class; signals the <code>PlcValue`1</code> that initialization is completed.
<code>GetInstanceValue</code>	Retrieves the value assigned to the PLC value.
<code>GetValue(IPlcDevice)</code>	Retrieves the current value of the PLC value from the <code>device</code> specified.
<code>GetValue(PlcDeviceConnection)</code>	Retrieves the current value of the PLC value from a <code>IPlcDevice</code> using the <code>connection</code> specified.
<code>GetValueCore(PlcDeviceConnection)</code>	Retrieves the current value of the PLC value from a <code>IPlcDevice</code> using the <code>connection</code> specified.
<code>IsValidType(Object)</code>	Determines whether a specified value is acceptable for this <code>PlcValue`1</code> .
<code>IsValidValue(Object)</code>	Determines whether the provided value is accepted for the type of PLC value through basic type checking and also potentially if it is within the allowed range of value for that type.
<code>OnChanged(ValueChangedEventArgs)</code>	Raises the <code>Changed</code> event.
<code>OnChanged(ValueChangedEventArgs)</code>	Raises the <code>Changed</code> event.
<code>RaiseChanged(,)</code>	Raises the <code>Changed</code> and <code>Changed</code> events.
<code>Relocate(Int32)</code>	Relocates the <code>PlcValue`1</code> using the specified offset. The original <code>PlcValue`1</code> remains unmodified.
<code>Relocate(Int32, Int32)</code>	Relocates the <code>PlcValue`1</code> using the specified offset. The original <code>PlcValue`1</code> remains unmodified.
<code>Relocate(Int32, Int32, Int32)</code>	Relocates the <code>PlcValue`1</code> using the specified offset. The original <code>PlcValue`1</code> remains unmodified.

Name	Description
Relocate(PlcAddress)	Relocates the <code>PlcValue`1</code> using the specified <code>address</code> . The original <code>PlcValue`1</code> remains unmodified.
RelocateCore(PlcAddress)	When implemented in a derived class, relocates the value to the <code>address</code> specified.
SetInstanceValue()	Applies the value to the PLC value.
SetValue(IPlcDevice)	Stores the <code>Value</code> in the <code>device</code> specified.
SetValue(IPlcDevice,)	Stores the <code>value</code> in the <code>device</code> specified.
SetValue(PlcDeviceConnection)	Stores the <code>Value</code> in the <code>IPlcDevice</code> assigned to the <code>connection</code> specified.
SetValue(PlcDeviceConnection,)	Stores the <code>value</code> in the <code>IPlcDevice</code> assigned to the <code>connection</code> specified.
SetValueCore(PlcDeviceConnection,)	Stores the <code>value</code> in the <code>IPlcDevice</code> assigned to the <code>connection</code> specified.
ToString	Converts the value to its string representation.
ValidateValue(Object)	Validates the specified <code>value</code> whether it can be assigned to this <code>PlcValue`1</code> .

Operators

Name	Description
op_Explicit(PlcValue)	Converts a <code>PlcValue`1</code> to an object of the type <code>T</code> .

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