PlcRealType Class

Namespace: IPS7Lnk.Advanced
Assemblies: IPS7LnkNet.Advanced.dll

Represents a Single type declaration (in PLC a REAL) its value defines a single-precision floating-point number.

C#

```
public class PlcRealType : PlcValueType, IPlcSymbol, IPlcEntity, IPlcRelocatable<PlcType>,
IPlcRelocatable
```

Inheritance Object › PlcType › PlcValueType › PlcRealType

Implements IPlcSymbol, IPlcEntity, IPlcRelocatable<PlcType>, IPlcRelocatable

Remarks

While a PLC type of this type represents a Single value, all PLC operations performed using this class are done using the DWord. A PLC developer knows a value of this type as REAL.

Fields

Name	Description
MaxLength	Specifies the maximum value that can be used for the Length property. (Inherited from PlcType)
MinLength	Specifies the minimum value that can be used for the Length property. (Inherited from PlcType)

Properties

Name	Description
Address	Gets the start address of the PlcType in the PLC. (Inherited from PlcType)
DefaultValue	Gets the type dependent default value which can be assigned to an entity of the type represented.
DefaultValue	Gets the type dependent default value which can be assigned to an entity of the type represented. (Inherited from PlcType)
Description	Gets or sets more meaningful information about the type and its usage than only using the Name property. (Inherited from PlcType)
EndAddress	Gets the end address of the PlcType in the PLC. (Inherited from PlcType)
FrameworkType	Gets the concrete .NET framework type used when working with the PlcType. (Inherited from PlcType)

Name	Description
HasElementType	Gets a value indicating whether the current PlcType encompasses another type this is the case when the current PlcType is an array. (Inherited from PlcType)
Identity	Gets the identity of the PlcType in the PLC. (Inherited from PlcType)
IsAbsolute	Gets a value indicating whether the PlcType does absolutely refer to a PLC resource. (Inherited from PlcType)
IsArray	Gets a value indicating whether the framework Type of the PlcType is an array. (Inherited from PlcType)
IsClass	Gets a value indicating whether the framework Type of the PlcType is a class; that is, not a value type or interface. (Inherited from PlcType)
Layout	Gets the characteristics to use when aligning the Members of the PlcType. (Inherited from PlcType)
Length	Gets a 32-bit integer that represents the total number of elements that can be stored in a value of the type. (Inherited from PlcType)
Members	Gets the members associated with the PLC type. (Inherited from PlcType)
Name	Gets the name of the PLC type represented. (Inherited from PlcType)
Relative	Gets the relative type declaration of type.
RelativeType	Gets the PlcType from that this PlcType has been absolutely defined. (Inherited from PlcType)
Size	Gets a 32-bit integer that represents the total number of bytes required to store a value of the type within the PLC memory. (Inherited from PlcType)
SizeInBits	Gets a 32-bit integer that represents the total number of bits required to store a value of the type within the PLC memory. (Inherited from PlcType)
TypeCode	Gets the PlcTypeCode of the PLC type represented. (Inherited from PlcType)

Methods

Name	Description
CreateEntity	Creates a new IPlcEntity object which represents a concrete accessible entity of this PlcType.
CreateEntity	Creates a new IPlcEntity object which represents a concrete accessible entity of this PlcType. (Inherited from PlcType)
CreateEntity	Creates a new IPlcEntity object which represents a concrete accessible entity of this PlcType. (Inherited from PlcValueType)
Equals(Object)	Determines whether the specified `other` is equal to this PlcType. (Inherited from PlcType)
Equals(PlcType)	Determines whether the specified `other` is equal to this PlcType. (Inherited from PlcType)

Name	Description
GetElementType(Int32)	Retrieves the PlcType object encompassed or referred to by the current array type. (Inherited from PlcType)
GetHashCode	Retrieves a hash code for this PlcType. (Inherited from PlcType)
GetRawType(PlcTypeCode)	Retrieves the according PlcRawType for the `typeCode` specified. (Inherited from PlcType)
GetRawType(Type)	Retrieves the according PlcRawType for the `type` specified. (Inherited from PlcType)
GetSize(PlcRawType)	Retrieves the according size for the `rawType` specified. (Inherited from PlcType)
GetSize(PlcRawType, Boolean)	Retrieves the according size (optionally in bytes or bits) for the `rawType` specified. (Inherited from PlcType)
GetSize(PlcTypeCode)	Retrieves the according size for the `typeCode` specified. (Inherited from PlcType)
GetSize(PlcTypeCode, Boolean)	Retrieves the according size (optionally in bytes or bits) for the `typeCode` specified. (Inherited from PlcType)
GetSize(Type)	Retrieves the according size for the `type` specified. (Inherited from PlcType)
GetSize(Type, Boolean)	Retrieves the according size (optionally in bytes or bits) for the `type` specified. (Inherited from PlcType)
GetSupportedRawTypes(PlcTypeCode)	Retrieves the PlcRawType members supported by the PlcTypeCode specified by `typeCode`. (Inherited from PlcType)
GetSupportedRawTypes(Type)	Retrieves the PlcRawType members supported by the PlcTypeCode of the Type specified by `type`. (Inherited from PlcType)
GetType(PlcTypeCode)	Retrieves the according framework Type for the `typeCode` specified. (Inherited from PlcType)
GetTypeCode(Type)	Retrieves the according PlcTypeCode for the framework Type specified. (Inherited from PlcType)
IsSupported(PlcTypeCode, PlcRawType)	Determines whether the specified `rawType` can be used to address the PLC memory to access data of the PlcTypeCode specified by `typeCode`. (Inherited from PlcType)
IsSupportedArrayType(PlcTypeCode)	Determines whether the PlcTypeCode specified by `typeCode` can be also used to access the PLC memory by an array of that PlcTypeCode. (Inherited from PlcType)
MakeAbsoluteType(PlcIdentity)	Retrieves the absolute PlcType using the PlcIdentity specified by `identity`. (Inherited from PlcType)

Name	Description
MakeArrayType	Returns a PlcType object representing a one-dimensional array of the current type, with a length of zero. (Inherited from PlcType)
MakeArrayType(Int32)	Returns a PlcType object representing an array of the current type, with the specified `length`. (Inherited from PlcType)
Of(PlcIdentity)	Retrieves the according PlcRealType which matches the supplied type metadata.
Of(PlcIdentity, PlcName)	Retrieves the according PlcRealType which matches the supplied type metadata.
Of(PlcTypeCode)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, PlcIdentity)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, PlcIdentity, Int32)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, PlcIdentity, PlcName)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, PlcIdentity, PlcName, Int32)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, PlcIdentity, PlcName, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, PlcIdentity, PlcName, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, PlcIdentity, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, PlcIdentity, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, Int32)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, Int32, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)

Name	Description
Of(PlcTypeCode, Type, Int32, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcIdentity)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcIdentity, Int32)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcIdentity, Int32, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcIdentity, Int32, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcIdentity, PlcName)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcIdentity, PlcName, Int32)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcIdentity, PlcName, Int32, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcIdentity, PlcName, Int32, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcIdentity, PlcName, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcIdentity, PlcName, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcIdentity, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcIdentity, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(PlcTypeCode, Type, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(Type)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(Type, PlcIdentity)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(Type, PlcIdentity, Int32)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)

Name	Description
Of(Type, PlcIdentity, PlcName)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(Type, PlcIdentity, PlcName, Int32)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(Type, PlcIdentity, PlcName, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(Type, PlcIdentity, PlcName, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(Type, PlcIdentity, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(Type, PlcIdentity, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(Type, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of(Type, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of``1	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of``1(PlcIdentity)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of``1(PlcIdentity, Int32)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of``1(PlcIdentity, PlcName)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of``1(PlcIdentity, PlcName, Int32)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of``1(PlcIdentity, PlcName, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of``1(PlcIdentity, PlcName, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of``1(PlcIdentity, PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of``1(PlcIdentity, PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Of``1(PlcTypeLayout, IEnumerable)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)

Name	Description
Of``1(PlcTypeLayout, IPlcMemberInfo)	Retrieves the according PlcType which matches the supplied type metadata. (Inherited from PlcType)
Relocate(Int32)	Relocates the PlcType using the specified offset. (Inherited from PlcType)
Relocate(Int32, Int32)	Relocates the PlcType using the specified offset. (Inherited from PlcType)
Relocate(Int32, Int32, Int32)	Relocates the PlcType using the specified offset. (Inherited from PlcType)
Relocate(PlcAddress)	Relocates the PlcType using the specified `address`. (Inherited from PlcType)
ToString	Returns a String representing the framework type name and the address range of the current PlcType. (Inherited from PlcType)

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