

## The TYPE Namespace:

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```
typedef unsigned char type; // type's type is subject to change
typedef const type tc;
```

TYPE contains a number of constants which represent different types that input\_handler supports.

They are organized as follows:

1<sup>st</sup>, there are constants with values [0, n) where n is the number of supported types, which represent each type. Some of these constants have synonyms.

2<sup>nd</sup>, in the sub-namespace FUNC, there are constants with values [n, 2n), each of which has the same name as one of the previous constants and a value of that constant's value + n.

3<sup>rd</sup>, in the sub-namespace PTR, there are constants with values [2n, 3n), each of which has the same name as one of the previous constants and a value of that constant's value + 2n.

Within the groups, there is some organization:

integral types are guaranteed to have adjacent values

floating point types are guaranteed to have adjacent values

integral types and floating point types are guaranteed to be adjacent, with integers being before floats.

There is one final sub-namespace named DIVIDERS, which contains the following:

```
namespace DIVIDERS
{
    tc type_func_startVal
    tc type_ptr_startVal
    tc integralTypeStart
    tc floatingTypeStart // can be used as integralTypeEnd
    tc floatingTypeEnd
}
```

Constants in the namespace TYPE represent variables with no default value, or whose default value is a simple value.

Constants in the namespace TYPE::FUNC represent variables whose default value is a CIP::function-object of that type.

Constants in the namespace TYPE::PTR represent variables whose default value is a pointer to that type (i.e. whose default value is "the same value as another variable").

If you use this namespace and wish to make a decision based on the type of a var ignoring its default, use `switch(typeConstant % type_func_startVal)`. You can determine what type of default value a variable has by comparing its type with `type_func_startVal` and `type_ptr_startVal`.

## **List of Type Constants:**

These are the type constants defined in TYPE, TYPE::FUNC, and TYPE::PTR. Constants listed in the same bullet are synonyms. U = unsigned prefix.

- STRING, STR
- CHAR, C
- UCHAR, UC
- SHORT, S
- USHORT, US
- INT, I
- UINT, UI
- LONG, L
- ULONG, UL
- LONGLONG, LL
- ULONGLONG, ULL
- FLOAT, F
- DOUBLE, D
- LONG\_DOUBLE, LD
- BOOL
- BOOLSTR, BSTR
- INTSTR, ISTR