



Linux Ubuntu 26.04 Manual Pages on command 'strtod.3'

\$ man strtod.3

strtod(3) Library Functions Manual strtod(3)

NAME

strtod, strtodf, strtold - convert ASCII string to floating-point number

LIBRARY

Standard C library (libc, -lc)

SYNOPSIS

```
#include <stdlib.h>
```

```
double strtod(const char *restrict nptr,  
              char **_Nullable restrict endptr);
```

```
float strtodf(const char *restrict nptr,  
              char **_Nullable restrict endptr);
```

```
long double strtold(const char *restrict nptr,  
                    char **_Nullable restrict endptr);
```

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

strtodf(), strtold():

```
_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L
```

DESCRIPTION

The strtod(), strtodf(), and strtold() functions convert the initial portion of the string pointed to by nptr to double, float, and long double representation, respectively.

The expected form of the (initial portion of the) string is optional leading white space as recognized by isspace(3), an optional plus ('+') or minus sign ('-') and then either (i) a decimal number, or (ii) a hexadecimal number, or (iii) an infinity, or (iv) a NAN (not-a-number).

A NAN is "NAN" (disregarding case) optionally followed by a string, (n-char-sequence), where n-char-sequence specifies in an implementation-dependent way the type of NAN (see VERSIONS).

If the correct value would cause underflow, a value with magnitude no larger than DBL_MIN, FLT_MIN, or LDBL_MIN is returned and ERANGE is stored in errno.

Page 2/3

VERSIONS

In the glibc implementation, the n-char-sequence that optionally follows "NAN" is interpreted as an integer number (with an optional '0' or '0x' prefix to select base 8 or 16) that is to be placed in the mantissa component of the returned value.

STANDARDS

C11, POSIX.1-2008.

HISTORY

strtod()

C89, POSIX.1-2001.

strtof()

strtold()

C99, POSIX.1-2001.

CAVEATS

Since 0 can legitimately be returned on both success and failure, the calling program should set errno to 0 before the call, and then determine if an error occurred by checking whether errno has a nonzero value after the call.

EXAMPLES

See the example on the strtol(3) manual page; the use of the functions described in this manual page is similar.

SEE ALSO

atof(3), atoi(3), atol(3), nan(3), nanf(3), nanl(3), strfromd(3), strtol(3), strtoul(3)

Linux man-pages 6.17

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strtod(3)