



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

\$ man memcmp.3

memcmp(3) Library Functions Manual memcmp(3)

NAME _____

memcmp - compare memory areas

LIBRARY

Standard C library (libc, -lc)

SYNOPSIS

```
#include <string.h>
```

```
int memcmp(size_t n;
```

```
const void s1[n], const void s2[n], size t n);
```

DESCRIPTION

The `memcmp()` function compares the first `n` bytes (each interpreted as unsigned char) of the memory areas `s1` and `s2`.

RETURN VALUE

The `memcmp()` function returns an integer less than, equal to, or greater than zero if the first `n` bytes of `s1` is found, respectively, to be less than, to match, or be greater than the first `n` bytes of `s2`.

For a nonzero return value, the sign is determined by the sign of the difference between the first pair of bytes (interpreted as unsigned char) that differ in s1 and s2.

If n is zero, the return value is zero.

ATTRIBUTES

For an explanation of the terms used in this section, see [attributes\(7\)](#).

[illegible]

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? Interface

? Attribute ? Value ?

[illegible]

? memcmp() ? Thread safety ? MT-Safe ?

[illegible]

STANDARDS

C11, POSIX.1-2008.

HISTORY

POSIX.1-2001, C89, SVr4, 4.3BSD.

CAVEATS

Do not use `memcmp()` to compare confidential data, such as cryptographic secrets, because the CPU time required for the comparison depends on the contents of the addresses compared, this function is subject to timing-based side-channel attacks. In such cases, a function that performs comparisons in deterministic time, depending only on `n` (the quantity of bytes compared) is required. Some operating systems provide such a function (e.g., NetBSD's `consttime_memequal()`), but no such function is specified in POSIX. On Linux, you may need to implement such a function yourself.

SEE ALSO

bstring(3), strcasecmp(3), strcmp(3), strcoll(3), strncasecmp(3), strncmp(3), wmemcmp(3)

Linux man-pages 6.17

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