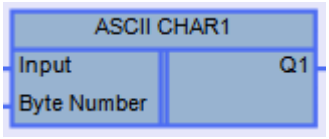
# ASCII_CHAR




| Input | Data type | Description | Range |
|---|---|---|---|
| Input | INT | INT Variable | 0 to 127 |
| Byte Number | INT | Sequential number of the required byte | 0 to 3 |
| **Output** | **Data type** | **Description** | **Range** |
| Q1 | INT | ASCII code (decimal) | 0 to 77 |

**Function**

The ASCII_CHAR macro is intended to extract the desired byte from a decimal (INT) variable bit by bit and form an 8-bit decimal value from it with the '-45' offset. This offset is required in order to eliminate the first 45 ASCII codes for control characters: codes originally intended not to represent printable information, but rather to control devices (such as printers) that make use of ASCII, or to provide meta-information about data streams such as those stored on magnetic tape.

INT Variable 0000 0000 0000 0000 0000 0000 0000 0000

Byte 3 Byte 2 Byte 1 Byte 0

If there is an INT variable applied to the **Input** input and the sequential number of the required byte of that variable to the **Byte Number** input, the **Q1** output will output a decimal ASCII code according to the following table:

| ASCII code | ASCII symbol | ASCII code | ASCII symbol | ASCII code | ASCII symbol | ASCII code | ASCII symbol |
|---|---|---|---|---|---|---|---|
| 0 | * | 21 | B | 42 | W | 63 | l |
| 1 | . | 22 | C | 43 | X | 64 | m |
| 2 | / | 23 | D | 44 | Y | 65 | n |
| 3 | 0 | 24 | E | 45 | Z | 66 | o |
| 4 | 1 | 25 | F | 46 | [ | 67 | p |
| 5 | 2 | 26 | G | 47 | \ | 68 | q |
| 6 | 3 | 27 | H | 48 | ] | 69 | r |
| 7 | 4 | 28 | I | 49 | ^ | 70 | s |
| 8 | 5 | 29 | J | 50 | _ | 71 | t |
| 9 | 6 | 30 | K | 51 | ` | 72 | u |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10 | 7 | 31 | L | 52 | a | 73 | V |
| 11 | 8 | 32 | M | 53 | b | 74 | w |
| 12 | 9 | 33 | N | 54 | c | 75 | x |
| 13 | : | 34 | O | 55 | d | 76 | y |
| 14 | ; | 35 | P | 56 | e | 77 | z |
| 15 | < | 36 | Q | 57 | f | 78 | * |
| 16 | = | 37 | R | 58 | g | | |
| 17 | > | 38 | S | 59 | h | | |
| 18 | ? | 39 | T | 60 | i | | |
| 19 | @ | 40 | U | 61 | j | | |
| 20 | A | 41 | V | 62 | k | | |