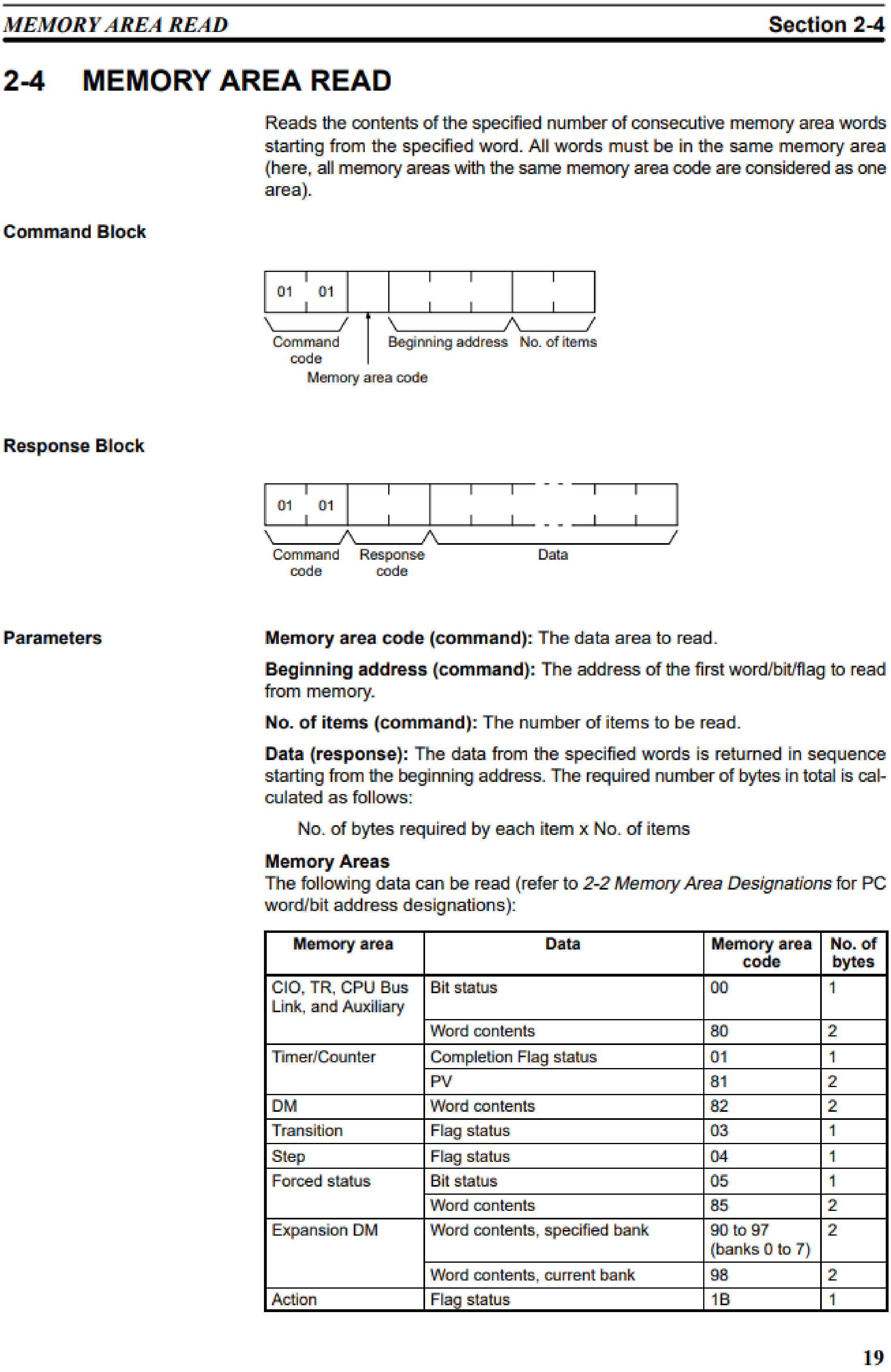
Example 1.



## 2-4 MEMORY AREA READ

Reads the contents of the specified number of consecutive memory area words starting from the specified word. All words must be in the same memory area (here, all memory areas with the same memory area code are considered as one area).

**Command Block**

01
01
Command code
Memory area code
Beginning address
No. of items

**Response Block**

01
01
Command code
Response code
Data

**Parameters**

**Memory area code (command):** The data area to read.

**Beginning address (command):** The address of the first word/bit/flag to read from memory.

**No. of items (command):** The number of items to be read.

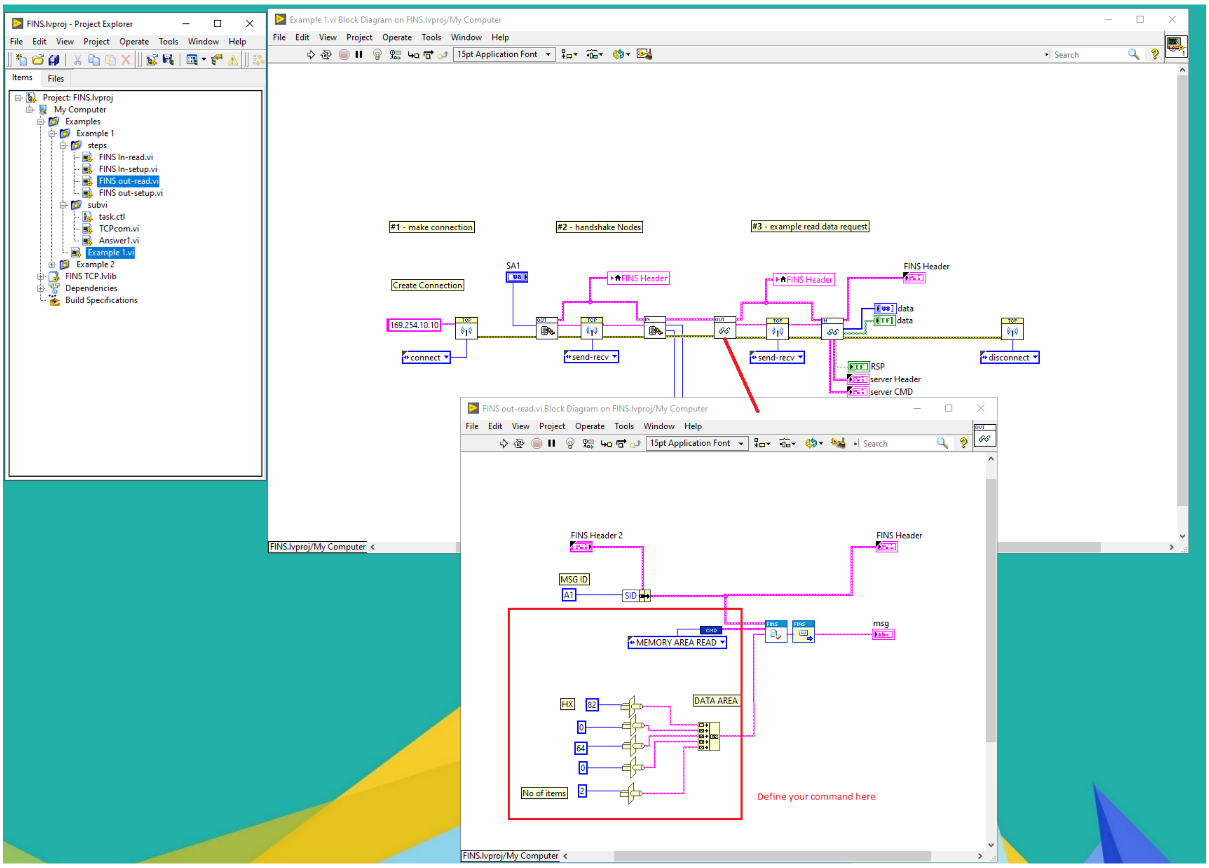
**Data (response):** The data from the specified words is returned in sequence starting from the beginning address. The required number of bytes in total is calculated as follows:

No. of bytes required by each item x No. of items

**Memory Areas**

The following data can be read (refer to *2-2 Memory Area Designations* for PC word/bit address designations):

| Memory area | Data | Memory area code | No. of bytes |
|---|---|---|---|
| CIO, TR, CPU Bus Link, and Auxiliary | Bit status | 00 | 1 |
| | Word contents | 80 | 2 |
| Timer/Counter | Completion Flag status | 01 | 1 |
| | PV | 81 | 2 |
| DM | Word contents | 82 | 2 |
| Transition | Flag status | 03 | 1 |
| Step | Flag status | 04 | 1 |
| Forced status | Bit status | 05 | 1 |
| | Word contents | 85 | 2 |
| Expansion DM | Word contents, specified bank | 90 to 97 (banks 0 to 7) | 2 |
| | Word contents, current bank | 98 | 2 |
| Action | Flag status | 1B | 1 |



Example 1.

FINS out-read.vi

This defines what command you want to send.

The example defines a ‘Memory Area Read’ (see previous page for details).

Specifically, it is reading:

Memory area code (1 Byte)

| | |
|---|---|
| 82 | the DM memory area (code 82) |

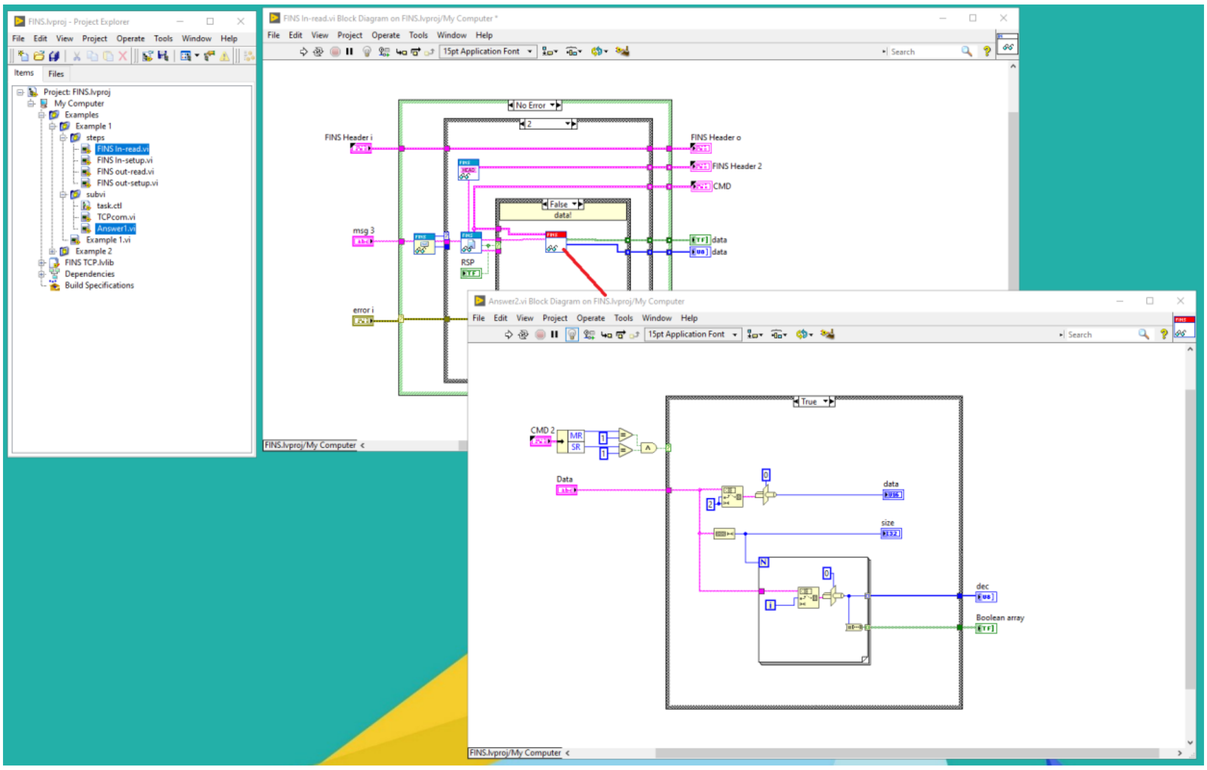
Beginning address (3 Bytes)

| | |
|---|---|
| 0 | =0 |
| 64 | =hex to decimal = 100 |
| 0 | =0 |

No. of items

2

This command will read memory areas D00100 and D00101, as D00100 is the starting address, and we request 2 items to read.



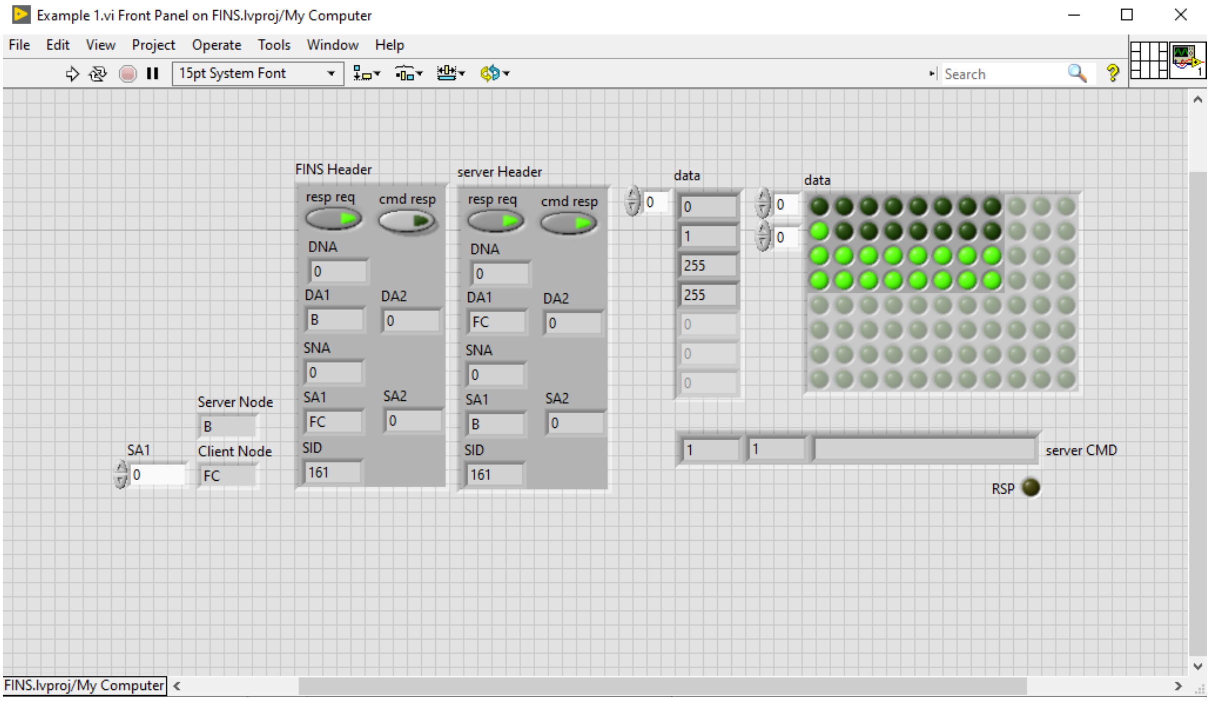
Next, after sending the command, the data will be sent back and will need to be decoded.

This is done in FINS In-read.vi, with Answer1.vi.

As per the Omron Command Reference Manual, the “response block” is a byte string which will need to be divided up, with 2bytes per memory DM memory area.

In this example that is 2 bytes for DM00100 and 2 bytes for DM00101.

This data can then be converted for use, such as Hex or Boolean.


Example 1.vi Front Panel on FINS.lvproj/My Computer
File Edit View Project Operate Tools Window Help
15pt System Font
Search
FINS.lvproj/My Computer

FINS Header
resp req cmd resp
DNA 0
DA1 B DA2 0
SNA 0
SA1 FC SA2 0
SID 161

server Header
resp req cmd resp
DNA 0
DA1 FC DA2 0
SNA 0
SA1 B SA2 0
SID 161

Server Node B
Client Node FC
SA1 0

data 0
0
1
255
255
0
0
0

data 0 0

1 1 server CMD

RSP