

MOSAIC

MODULAR SAFETY INTEGRATED CONTROLLER M1S COM



Process data mapping



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Version history

| Version | Date | Modifications |
|---------|------------|---------------|
| 0.0 | 18/11/2021 | First issue |

EtherCAT

PDO predefined connection set

| PDO Designation | Name | Length | Mapping Object |
|-----------------|---------|---------|----------------|
| RxPDO 1 | RxPDO 1 | 4 Byte | 1600h |
| TxPDO 1 | TxPDO 1 | 99 Byte | 1A00h |

Process data mapping (PDO)

| RxPDO | | Mapped object | | Name |
|-------|----------|---------------|----------|-----------------------|
| Index | Subindex | Index | Subindex | |
| 1600h | 01h | 2101h | 01h | Fieldbus input byte 0 |
| 1600h | 02h | 2101h | 02h | Fieldbus input byte 1 |
| 1600h | 03h | 2101h | 03h | Fieldbus input byte 2 |
| 1600h | 04h | 2101h | 04h | Fieldbus input byte 3 |

| TxPDO | | Mapped object | | Name |
|-------|----------|---------------|----------|--------------------------------|
| Index | Subindex | Index | Subindex | |
| 1A00h | 01h | 2001h | 01h | System status |
| 1A00h | 02h | 2001h | 02h | Reserved_2001_02 |
| 1A00h | 03h | 2001h | 03h | Reserved_2001_03 |
| 1A00h | 04h | 2001h | 04h | Reserved_2001_04 |
| 1A00h | 05h | 2201h | 01h | Input status byte 0 |
| 1A00h | 06h | 2201h | 02h | Input status byte 1 |
| 1A00h | 07h | 2201h | 03h | Input status byte 2 |
| 1A00h | 08h | 2201h | 04h | Input status byte 3 |
| 1A00h | 09h | 2201h | 05h | Input status byte 4 |
| 1A00h | 0Ah | 2201h | 06h | Input status byte 5 |
| 1A00h | 0Bh | 2201h | 07h | Input status byte 6 |
| 1A00h | 0Ch | 2201h | 08h | Input status byte 7 |
| 1A00h | 0Dh | 2201h | 09h | Input status byte 8 |
| 1A00h | 0Eh | 2201h | 0Ah | Input status byte 9 |
| 1A00h | 0Fh | 2201h | 0Bh | Input status byte 10 |
| 1A00h | 10h | 2201h | 0Ch | Input status byte 11 |
| 1A00h | 11h | 2201h | 0Dh | Input status byte 12 |
| 1A00h | 12h | 2201h | 0Eh | Input status byte 13 |
| 1A00h | 13h | 2201h | 0Fh | Input status byte 14 |
| 1A00h | 14h | 2201h | 10h | Input status byte 15 |
| 1A00h | 15h | 2201h | 11h | Restart Input byte 0 |
| 1A00h | 16h | 2201h | 12h | Restart Input byte 1 |
| 1A00h | 17h | 2201h | 13h | Restart Input byte 2 |
| 1A00h | 18h | 2181h | 01h | Fieldbus input byte 0 feedback |
| 1A00h | 19h | 2181h | 02h | Fieldbus input byte 1 feedback |
| 1A00h | 1Ah | 2181h | 03h | Fieldbus input byte 2 feedback |
| 1A00h | 1Bh | 2181h | 04h | Fieldbus input byte 3 feedback |
| 1A00h | 1Ch | 2203h | 01h | Probe status byte 0 |
| 1A00h | 1Dh | 2203h | 02h | Probe status byte 1 |
| 1A00h | 1Eh | 2203h | 03h | Probe status byte 2 |
| 1A00h | 1Fh | 2203h | 04h | Probe status byte 3 |
| 1A00h | 20h | 2202h | 01h | OSSD status byte 0 |
| 1A00h | 21h | 2202h | 02h | OSSD status byte 1 |
| 1A00h | 22h | 2202h | 03h | OSSD status byte 2 |
| 1A00h | 23h | 2202h | 04h | OSSD status byte 3 |

| TxPDO | | Mapped object | | Name |
|-------|----------|---------------|----------|----------------------|
| Index | Subindex | Index | Subindex | |
| 1A00h | 24h | 2204h | 01h | Analog data float 0 |
| 1A00h | 25h | 2204h | 02h | Analog data float 1 |
| 1A00h | 26h | 2204h | 03h | Analog data float 2 |
| 1A00h | 27h | 2204h | 04h | Analog data float 3 |
| 1A00h | 28h | 2204h | 05h | Analog data float 4 |
| 1A00h | 29h | 2204h | 06h | Analog data float 5 |
| 1A00h | 2Ah | 2204h | 07h | Analog data float 6 |
| 1A00h | 2Bh | 2204h | 08h | Analog data float 7 |
| 1A00h | 2Ch | 2204h | 09h | Analog data float 8 |
| 1A00h | 2Dh | 2204h | 0Ah | Analog data float 9 |
| 1A00h | 2Eh | 2204h | 0Bh | Analog data float 10 |
| 1A00h | 2Fh | 2204h | 0Ch | Analog data float 11 |
| 1A00h | 30h | 2204h | 0Dh | Analog data float 12 |
| 1A00h | 31h | 2204h | 0Eh | Analog data float 13 |
| 1A00h | 32h | 2204h | 0Fh | Analog data float 14 |
| 1A00h | 33h | 2204h | 10h | Analog data float 15 |

Vendor specific Objects

Object Index 2001h – System status

Object Type: Array

| Subindex | Type | Name |
|----------|-----------|-------------------|
| 00h | UNSIGNED8 | Number Of Entries |
| 01h | UNSIGNED8 | System status |
| 02h | UNSIGNED8 | Reserved_2001_02 |
| 02h | UNSIGNED8 | Reserved_2001_03 |
| 02h | UNSIGNED8 | Reserved_2001_04 |

Object Index 2003h – Errors data CPU 0

Object Type: Array

| Subindex | Type | Name |
|----------|-----------|--------------------------|
| 00h | UNSIGNED8 | Number Of Entries |
| 01h | UNSIGNED8 | Module name |
| 02h | UNSIGNED8 | Error code (*) |
| 03h | UNSIGNED8 | Error address byte 0 (*) |
| 04h | UNSIGNED8 | Error address byte 1 (*) |
| 05h | UNSIGNED8 | Error address byte 2 (*) |
| 06h | UNSIGNED8 | Error address byte 3 (*) |
| 07h | UNSIGNED8 | CPU firmware version |
| 08h | UNSIGNED8 | Extended code 0 (*) |
| 09h | UNSIGNED8 | Extended code 1 (*) |

Object Index 2004h – Errors data CPU 1

Object Type: Array

| Subindex | Type | Name |
|----------|-----------|-------------------------|
| 00h | UNSIGNED8 | Number Of Entries |
| 01h | UNSIGNED8 | Module name |
| 02h | UNSIGNED8 | Error code(*) |
| 03h | UNSIGNED8 | Error address byte 0(*) |
| 04h | UNSIGNED8 | Error address byte 1(*) |
| 05h | UNSIGNED8 | Error address byte 2(*) |
| 06h | UNSIGNED8 | Error address byte 3(*) |
| 07h | UNSIGNED8 | CPU firmware version |
| 08h | UNSIGNED8 | Extended code 0(*) |
| 09h | UNSIGNED8 | Extended code 1(*) |

➔ (*) When the errors are originated from the Ethernet Board of M1S COM then Error Code assumes the value listed below. Furthermore Error address byte fields in these particular cases do not hold the error address but they hold the detail of error code. Extended code are set to 0.

| Error code | NETX_CORE_FAILURE | NETX_SW_FAILURE |
|-----------------------------|-----------------------------|-------------------------------|
| Error address byte 0 | NetX Core error code byte 0 | NetX SW Auxiliary code byte 0 |
| Error address byte 1 | NetX Core error code byte 1 | NetX SW Auxiliary code byte 1 |
| Error address byte 2 | NetX Core error code byte 2 | NetX SW Auxiliary code byte 2 |
| Error address byte 3 | NetX Core error code byte 3 | NetX SW Auxiliary code byte 3 |
| Extended code 0 | 0 | 0 |
| Extended code 1 | 0 | 0 |

Object Index 2005h – Input diagnostics

Object Type: Array

| Subindex | Type | Name |
|----------|-----------|---------------------|
| 00h | UNSIGNED8 | Number Of Entries |
| 01h | UNSIGNED8 | Diagnostic index 0 |
| 02h | UNSIGNED8 | Diagnostic code 0 |
| 03h | UNSIGNED8 | Diagnostic index 1 |
| 04h | UNSIGNED8 | Diagnostic code 1 |
| 05h | UNSIGNED8 | Diagnostic index 2 |
| 06h | UNSIGNED8 | Diagnostic code 2 |
| 07h | UNSIGNED8 | Diagnostic index 3 |
| 08h | UNSIGNED8 | Diagnostic code 3 |
| 09h | UNSIGNED8 | Diagnostic index 4 |
| 0Ah | UNSIGNED8 | Diagnostic code 4 |
| 0Bh | UNSIGNED8 | Diagnostic index 5 |
| 0Ch | UNSIGNED8 | Diagnostic code 5 |
| 0Dh | UNSIGNED8 | Diagnostic index 6 |
| 0Eh | UNSIGNED8 | Diagnostic code 6 |
| 0Fh | UNSIGNED8 | Diagnostic index 7 |
| 10h | UNSIGNED8 | Diagnostic code 7 |
| 11h | UNSIGNED8 | Diagnostic index 8 |
| 12h | UNSIGNED8 | Diagnostic code 8 |
| 13h | UNSIGNED8 | Diagnostic index 9 |
| 14h | UNSIGNED8 | Diagnostic code 9 |
| 15h | UNSIGNED8 | Diagnostic index 10 |
| 16h | UNSIGNED8 | Diagnostic code 10 |
| 17h | UNSIGNED8 | Diagnostic index 11 |
| 18h | UNSIGNED8 | Diagnostic code 11 |
| 19h | UNSIGNED8 | Diagnostic index 12 |
| 1Ah | UNSIGNED8 | Diagnostic code 12 |
| 1Bh | UNSIGNED8 | Diagnostic index 13 |
| 1Ch | UNSIGNED8 | Diagnostic code 13 |
| 1Dh | UNSIGNED8 | Diagnostic index 14 |
| 1Eh | UNSIGNED8 | Diagnostic code 14 |
| 1Fh | UNSIGNED8 | Diagnostic index 15 |
| 20h | UNSIGNED8 | Diagnostic code 15 |

➔ A maximum of 16 Input diagnostics are transferred, if more diagnostics are present on the system only the first 16 are available on the fieldbus

Object Index 2006h – OSSD diagnostics

Object Type: Array

| Subindex | Type | Name |
|----------|-----------|---------------------|
| 00h | UNSIGNED8 | Number Of Entries |
| 01h | UNSIGNED8 | Diagnostic index 0 |
| 02h | UNSIGNED8 | Diagnostic code 0 |
| 03h | UNSIGNED8 | Diagnostic index 1 |
| 04h | UNSIGNED8 | Diagnostic code 1 |
| 05h | UNSIGNED8 | Diagnostic index 2 |
| 06h | UNSIGNED8 | Diagnostic code 2 |
| 07h | UNSIGNED8 | Diagnostic index 3 |
| 08h | UNSIGNED8 | Diagnostic code 3 |
| 09h | UNSIGNED8 | Diagnostic index 4 |
| 0Ah | UNSIGNED8 | Diagnostic code 4 |
| 0Bh | UNSIGNED8 | Diagnostic index 5 |
| 0Ch | UNSIGNED8 | Diagnostic code 5 |
| 0Dh | UNSIGNED8 | Diagnostic index 6 |
| 0Eh | UNSIGNED8 | Diagnostic code 6 |
| 0Fh | UNSIGNED8 | Diagnostic index 7 |
| 10h | UNSIGNED8 | Diagnostic code 7 |
| 11h | UNSIGNED8 | Diagnostic index 8 |
| 12h | UNSIGNED8 | Diagnostic code 8 |
| 13h | UNSIGNED8 | Diagnostic index 9 |
| 14h | UNSIGNED8 | Diagnostic code 9 |
| 15h | UNSIGNED8 | Diagnostic index 10 |
| 16h | UNSIGNED8 | Diagnostic code 10 |
| 17h | UNSIGNED8 | Diagnostic index 11 |
| 18h | UNSIGNED8 | Diagnostic code 11 |
| 19h | UNSIGNED8 | Diagnostic index 12 |
| 1Ah | UNSIGNED8 | Diagnostic code 12 |
| 1Bh | UNSIGNED8 | Diagnostic index 13 |
| 1Ch | UNSIGNED8 | Diagnostic code 13 |
| 1Dh | UNSIGNED8 | Diagnostic index 14 |
| 1Eh | UNSIGNED8 | Diagnostic code 14 |
| 1Fh | UNSIGNED8 | Diagnostic index 15 |
| 20h | UNSIGNED8 | Diagnostic code 15 |

➔ A maximum of 16 OSSD diagnostics are transferred, if more diagnostics are present on the system only the first 16 are available on the fieldbus.

Object Index 2007h – Project CRC

Object Type: Array

| Subindex | Type | Name |
|----------|-----------|-----------------------|
| 00h | UNSIGNED8 | Number Of Entries |
| 01h | UNSIGNED8 | Project CRC High byte |
| 02h | UNSIGNED8 | Project CRC Low byte |

Object Index 2101h – Fieldbus inputs

Object Type: Array

| Subindex | Type | Name |
|----------|-----------|-----------------------|
| 00h | UNSIGNED8 | Number Of Entries |
| 01h | UNSIGNED8 | Fieldbus input byte 0 |
| 02h | UNSIGNED8 | Fieldbus input byte 1 |
| 03h | UNSIGNED8 | Fieldbus input byte 2 |
| 04h | UNSIGNED8 | Fieldbus input byte 3 |

Object Index 2181h – Fieldbus inputs feedback

Object Type: Array

| Subindex | Type | Name |
|----------|-----------|--------------------------------|
| 00h | UNSIGNED8 | Number Of Entries |
| 01h | UNSIGNED8 | Fieldbus input byte 0 feedback |
| 02h | UNSIGNED8 | Fieldbus input byte 1 feedback |
| 03h | UNSIGNED8 | Fieldbus input byte 2 feedback |
| 04h | UNSIGNED8 | Fieldbus input byte 3 feedback |

Object Index 2201h – Input status

Object Type: Array

| Subindex | Type | Name |
|----------|-----------|----------------------|
| 00h | UNSIGNED8 | Number Of Entries |
| 01h | UNSIGNED8 | Input status byte 0 |
| 02h | UNSIGNED8 | Input status byte 1 |
| 03h | UNSIGNED8 | Input status byte 2 |
| 04h | UNSIGNED8 | Input status byte 3 |
| 05h | UNSIGNED8 | Input status byte 4 |
| 06h | UNSIGNED8 | Input status byte 5 |
| 07h | UNSIGNED8 | Input status byte 6 |
| 08h | UNSIGNED8 | Input status byte 7 |
| 09h | UNSIGNED8 | Input status byte 8 |
| 0Ah | UNSIGNED8 | Input status byte 9 |
| 0Bh | UNSIGNED8 | Input status byte 10 |
| 0Ch | UNSIGNED8 | Input status byte 11 |
| 0Dh | UNSIGNED8 | Input status byte 12 |
| 0Eh | UNSIGNED8 | Input status byte 13 |
| 0Fh | UNSIGNED8 | Input status byte 14 |
| 10h | UNSIGNED8 | Input status byte 15 |
| 11h | UNSIGNED8 | Restart Input byte 0 |
| 12h | UNSIGNED8 | Restart Input byte 1 |
| 13h | UNSIGNED8 | Restart Input byte 2 |

Object Index 2202h – OSSD status

Object Type: Array

| Subindex | Type | Name |
|----------|-----------|--------------------|
| 00h | UNSIGNED8 | Number Of Entries |
| 01h | UNSIGNED8 | OSSD status byte 0 |
| 02h | UNSIGNED8 | OSSD status byte 1 |
| 03h | UNSIGNED8 | OSSD status byte 2 |
| 04h | UNSIGNED8 | OSSD status byte 3 |

Object Index 2203h – Probe status

Object Type: Array

| Subindex | Type | Name |
|----------|-----------|---------------------|
| 00h | UNSIGNED8 | Number Of Entries |
| 01h | UNSIGNED8 | Probe status byte 0 |
| 02h | UNSIGNED8 | Probe status byte 1 |
| 03h | UNSIGNED8 | Probe status byte 2 |
| 04h | UNSIGNED8 | Probe status byte 3 |

Object Index 2204h – Analog data

Object Type: Array

| Subindex | Type | Name |
|----------|-----------|----------------------|
| 00h | UNSIGNED8 | Number Of Entries |
| 01h | REAL32 | Analog data float 0 |
| 02h | REAL32 | Analog data float 1 |
| 03h | REAL32 | Analog data float 2 |
| 04h | REAL32 | Analog data float 3 |
| 05h | REAL32 | Analog data float 4 |
| 06h | REAL32 | Analog data float 5 |
| 07h | REAL32 | Analog data float 6 |
| 08h | REAL32 | Analog data float 7 |
| 09h | REAL32 | Analog data float 8 |
| 0Ah | REAL32 | Analog data float 9 |
| 0Bh | REAL32 | Analog data float 10 |
| 0Ch | REAL32 | Analog data float 11 |
| 0Dh | REAL32 | Analog data float 12 |
| 0Eh | REAL32 | Analog data float 13 |
| 0Fh | REAL32 | Analog data float 14 |
| 10h | REAL32 | Analog data float 15 |

EtherNet/IP

Process data mapping (Class 1 Connection)

Assembly instance 96h (Connection point O->T Consuming Instance)

| Byte offset | Type | Name |
|-------------|-------|-----------------------|
| 0 | USINT | Fieldbus input byte 0 |
| 1 | USINT | Fieldbus input byte 1 |
| 2 | USINT | Fieldbus input byte 2 |
| 3 | USINT | Fieldbus input byte 3 |

➔ O->T connection type: Point-to-point

Assembly instance 64h (Connection point T->O Producing Instance)

| Byte offset | Type | Name | Byte offset | Type | Name |
|-------------|-------|--------------------------------|-------------|-------|----------------------|
| 0 | USINT | System status | 25 | USINT | Probe status byte 0 |
| 1 | USINT | Reserved | 26 | USINT | Probe status byte 1 |
| 2 | USINT | Input status byte 0 | 27 | USINT | Probe status byte 2 |
| 3 | USINT | Input status byte 1 | 28 | USINT | Probe status byte 3 |
| 4 | USINT | Input status byte 2 | 29 | USINT | OSSD status byte 0 |
| 5 | USINT | Input status byte 3 | 30 | USINT | OSSD status byte 1 |
| 6 | USINT | Input status byte 4 | 31 | USINT | OSSD status byte 2 |
| 7 | USINT | Input status byte 5 | 32 | USINT | OSSD status byte 3 |
| 8 | USINT | Input status byte 6 | 33 | REAL | Analog data float 0 |
| 9 | USINT | Input status byte 7 | 37 | REAL | Analog data float 1 |
| 10 | USINT | Input status byte 8 | 41 | REAL | Analog data float 2 |
| 11 | USINT | Input status byte 9 | 45 | REAL | Analog data float 3 |
| 12 | USINT | Input status byte 10 | 49 | REAL | Analog data float 4 |
| 13 | USINT | Input status byte 11 | 53 | REAL | Analog data float 5 |
| 14 | USINT | Input status byte 12 | 57 | REAL | Analog data float 6 |
| 15 | USINT | Input status byte 13 | 61 | REAL | Analog data float 7 |
| 16 | USINT | Input status byte 14 | 65 | REAL | Analog data float 8 |
| 17 | USINT | Input status byte 15 | 69 | REAL | Analog data float 9 |
| 18 | USINT | Restart Input byte 0 | 73 | REAL | Analog data float 10 |
| 19 | USINT | Restart Input byte 1 | 77 | REAL | Analog data float 11 |
| 20 | USINT | Restart Input byte 2 | 81 | REAL | Analog data float 12 |
| 21 | USINT | Fieldbus input byte 0 feedback | 85 | REAL | Analog data float 13 |
| 22 | USINT | Fieldbus input byte 1 feedback | 89 | REAL | Analog data float 14 |
| 23 | USINT | Fieldbus input byte 2 feedback | 93 | REAL | Analog data float 15 |
| 24 | USINT | Fieldbus input byte 3 feedback | | | |

T->O connection type: Point-to-point, Multicast.

Assembly instance 05h (Configuration Data)

Set this instance to Type 0

Supported trigger types: Cyclic

Explicit messaging

To access Errors data, Input diagnostics, OSSD diagnostic and Project CRC the service 0x0E (Get attribute single) shall be used.

Fieldbus inputs

- Class: A2h
- Instance: 101h
- Attribute: 05h
- Length: 4 bytes
- Access type: get

| Byte offset | Type | Name |
|-------------|-------|------------------|
| Byte 0 | USINT | Fieldbus input 1 |
| Byte 1 | USINT | Fieldbus input 2 |
| Byte 2 | USINT | Fieldbus input 3 |
| Byte 3 | USINT | Fieldbus input 4 |

System I/O

- Class: A2h
- Instance: 01h
- Attribute: 05h
- Length: 33 bytes
- Access type: get

| Byte offset | Type | Name |
|-------------|-------|--------------------------------|
| Byte 0 | USINT | System Status |
| Byte 1 | USINT | Reserved |
| Byte 2 | USINT | Input status byte 0 |
| Byte 3 | USINT | Input status byte 1 |
| Byte 4 | USINT | Input status byte 2 |
| Byte 5 | USINT | Input status byte 3 |
| Byte 6 | USINT | Input status byte 4 |
| Byte 7 | USINT | Input status byte 5 |
| Byte 8 | USINT | Input status byte 6 |
| Byte 9 | USINT | Input status byte 7 |
| Byte 10 | USINT | Input status byte 8 |
| Byte 11 | USINT | Input status byte 9 |
| Byte 12 | USINT | Input status byte 10 |
| Byte 13 | USINT | Input status byte 11 |
| Byte 14 | USINT | Input status byte 12 |
| Byte 15 | USINT | Input status byte 13 |
| Byte 16 | USINT | Input status byte 14 |
| Byte 17 | USINT | Input status byte 15 |
| Byte 18 | USINT | Restart Input byte 0 |
| Byte 19 | USINT | Restart Input byte 1 |
| Byte 20 | USINT | Restart Input byte 2 |
| Byte 21 | USINT | Fieldbus input byte 0 feedback |
| Byte 22 | USINT | Fieldbus input byte 1 feedback |
| Byte 23 | USINT | Fieldbus input byte 2 feedback |
| Byte 24 | USINT | Fieldbus input byte 3 feedback |
| Byte 25 | USINT | Probe status byte 0 |
| Byte 26 | USINT | Probe status byte 1 |

| Byte offset | Type | Name |
|-------------|-------|---------------------|
| Byte 27 | USINT | Probe status byte 2 |
| Byte 28 | USINT | Probe status byte 3 |
| Byte 29 | USINT | OSSD status byte 0 |
| Byte 30 | USINT | OSSD status byte 1 |
| Byte 31 | USINT | OSSD status byte 2 |
| Byte 32 | USINT | OSSD status byte 3 |

Analog data

- Class: A2h
- Instance: 204h
- Attribute: 05h
- Length: 64 bytes
- Access type: get

| | | |
|---------|------|----------------------|
| Byte 0 | REAL | Analog data float 0 |
| Byte 4 | REAL | Analog data float 1 |
| Byte 8 | REAL | Analog data float 2 |
| Byte 12 | REAL | Analog data float 3 |
| Byte 16 | REAL | Analog data float 4 |
| Byte 20 | REAL | Analog data float 5 |
| Byte 24 | REAL | Analog data float 6 |
| Byte 28 | REAL | Analog data float 7 |
| Byte 32 | REAL | Analog data float 8 |
| Byte 36 | REAL | Analog data float 9 |
| Byte 40 | REAL | Analog data float 10 |
| Byte 44 | REAL | Analog data float 11 |
| Byte 48 | REAL | Analog data float 12 |
| Byte 52 | REAL | Analog data float 13 |
| Byte 56 | REAL | Analog data float 14 |
| Byte 60 | REAL | Analog data float 15 |

Errors data CPU 0

- Class: A2h
- Instance: 03h
- Attribute: 05h
- Length: 9 bytes
- Access type: get

| Byte | Type | Name |
|--------|-------|--------------------------|
| Byte 0 | USINT | Module name |
| Byte 1 | USINT | Error code (*) |
| Byte 2 | USINT | Error address byte 0 (*) |
| Byte 3 | USINT | Error address byte 1 (*) |
| Byte 4 | USINT | Error address byte 2 (*) |
| Byte 5 | USINT | Error address byte 3 (*) |
| Byte 6 | USINT | CPU firmware version |
| Byte 7 | USINT | Extended code 0 (*) |
| Byte 8 | USINT | Extended code 1 (*) |

Errors data CPU 1

- Class: A2h
- Instance: 04h
- Attribute: 05h
- Length: 9 bytes
- Access type: get

| Byte | Type | Name |
|--------|-------|--------------------------|
| Byte 0 | USINT | Module name |
| Byte 1 | USINT | Error code (*) |
| Byte 2 | USINT | Error address byte 0 (*) |
| Byte 3 | USINT | Error address byte 1 (*) |
| Byte 4 | USINT | Error address byte 2 (*) |
| Byte 5 | USINT | Error address byte 3 (*) |
| Byte 6 | USINT | CPU firmware version |
| Byte 7 | USINT | Extended code 0 (*) |
| Byte 8 | USINT | Extended code 1 (*) |

➔ (*) When the errors are originated from the Ethernet Board of M1S COM then Error Code assumes the value listed below. Furthermore Error address byte fields in these particular cases do not hold the error address but they hold the detail of error code. Extended code are set to 0.

| Error code | NETX_CORE_FAILURE | NETX_SW_FAILURE |
|----------------------|-----------------------------|-------------------------------|
| Error address byte 0 | NetX Core error code byte 0 | NetX SW Auxiliary code byte 0 |
| Error address byte 1 | NetX Core error code byte 1 | NetX SW Auxiliary code byte 1 |
| Error address byte 2 | NetX Core error code byte 2 | NetX SW Auxiliary code byte 2 |
| Error address byte 3 | NetX Core error code byte 3 | NetX SW Auxiliary code byte 3 |
| Extended code 0 | 0 | 0 |
| Extended code 1 | 0 | 0 |

Input diagnostics

- Class: A2h
- Instance: 05h
- Attribute: 05h
- Length: 32 bytes
- Access type: get

| Byte | Type | Name |
|---------|-------|---------------------|
| Byte 0 | USINT | Diagnostic index 0 |
| Byte 1 | USINT | Diagnostic code 0 |
| Byte 2 | USINT | Diagnostic index 1 |
| Byte 3 | USINT | Diagnostic code 1 |
| Byte 4 | USINT | Diagnostic index 2 |
| Byte 5 | USINT | Diagnostic code 2 |
| Byte 6 | USINT | Diagnostic index 3 |
| Byte 7 | USINT | Diagnostic code 3 |
| Byte 8 | USINT | Diagnostic index 4 |
| Byte 9 | USINT | Diagnostic code 4 |
| Byte 10 | USINT | Diagnostic index 5 |
| Byte 11 | USINT | Diagnostic code 5 |
| Byte 12 | USINT | Diagnostic index 6 |
| Byte 13 | USINT | Diagnostic code 6 |
| Byte 14 | USINT | Diagnostic index 7 |
| Byte 15 | USINT | Diagnostic code 7 |
| Byte 16 | USINT | Diagnostic index 8 |
| Byte 17 | USINT | Diagnostic code 8 |
| Byte 18 | USINT | Diagnostic index 9 |
| Byte 19 | USINT | Diagnostic code 9 |
| Byte 20 | USINT | Diagnostic index 10 |
| Byte 21 | USINT | Diagnostic code 10 |
| Byte 22 | USINT | Diagnostic index 11 |
| Byte 23 | USINT | Diagnostic code 11 |
| Byte 24 | USINT | Diagnostic index 12 |
| Byte 25 | USINT | Diagnostic code 12 |
| Byte 26 | USINT | Diagnostic index 13 |
| Byte 27 | USINT | Diagnostic code 13 |
| Byte 28 | USINT | Diagnostic index 14 |
| Byte 29 | USINT | Diagnostic code 14 |
| Byte 30 | USINT | Diagnostic index 15 |
| Byte 31 | USINT | Diagnostic code 15 |

OSSD diagnostics

- Class: A2h
- Instance: 06h
- Attribute: 05h
- Length: 32 bytes
- Access type: get

| Byte | Type | Name |
|---------|-------|--------------------|
| Byte 0 | USINT | Diagnostic index 0 |
| Byte 1 | USINT | Diagnostic code 0 |
| Byte 2 | USINT | Diagnostic index 1 |
| Byte 3 | USINT | Diagnostic code 1 |
| Byte 4 | USINT | Diagnostic index 2 |
| Byte 5 | USINT | Diagnostic code 2 |
| Byte 6 | USINT | Diagnostic index 3 |
| Byte 7 | USINT | Diagnostic code 3 |
| Byte 8 | USINT | Diagnostic index 4 |
| Byte 9 | USINT | Diagnostic code 4 |
| Byte 10 | USINT | Diagnostic index 5 |

| Byte | Type | Name |
|---------|-------|---------------------|
| Byte 11 | USINT | Diagnostic code 5 |
| Byte 12 | USINT | Diagnostic index 6 |
| Byte 13 | USINT | Diagnostic code 6 |
| Byte 14 | USINT | Diagnostic index 7 |
| Byte 15 | USINT | Diagnostic code 7 |
| Byte 16 | USINT | Diagnostic index 8 |
| Byte 17 | USINT | Diagnostic code 8 |
| Byte 18 | USINT | Diagnostic index 9 |
| Byte 19 | USINT | Diagnostic code 9 |
| Byte 20 | USINT | Diagnostic index 10 |
| Byte 21 | USINT | Diagnostic code 10 |
| Byte 22 | USINT | Diagnostic index 11 |
| Byte 23 | USINT | Diagnostic code 11 |
| Byte 24 | USINT | Diagnostic index 12 |
| Byte 25 | USINT | Diagnostic code 12 |
| Byte 26 | USINT | Diagnostic index 13 |
| Byte 27 | USINT | Diagnostic code 13 |
| Byte 28 | USINT | Diagnostic index 14 |
| Byte 29 | USINT | Diagnostic code 14 |
| Byte 30 | USINT | Diagnostic index 15 |
| Byte 31 | USINT | Diagnostic code 15 |

Project CRC

- Class: A2h
- Instance: 07h
- Attribute: 05h
- Length: 2 bytes
- Access type: get

| Byte | Type | Name |
|--------|-------|-----------------------|
| Byte 0 | USINT | Project CRC high byte |
| Byte 1 | USINT | Project CRC high byte |

Modbus TCP/IP

Register mapping

Holding Registers (4x) Fieldbus Inputs, System I/O

| Register(s) | Type | Name |
|----------------|-------|--------------------------------|
| 000h Low byte | UINT8 | Fieldbus input byte 0 |
| 000h High byte | UINT8 | Fieldbus input byte 1 |
| 001h Low byte | UINT8 | Fieldbus input byte 2 |
| 001h High byte | UINT8 | Fieldbus input byte 3 |
| 400h Low byte | UINT8 | System status |
| 400h High byte | UINT8 | Reserved |
| 401h Low byte | UINT8 | Input status byte 0 |
| 401h High byte | UINT8 | Input status byte 1 |
| 402h Low byte | UINT8 | Input status byte 2 |
| 402h High byte | UINT8 | Input status byte 3 |
| 403h Low byte | UINT8 | Input status byte 4 |
| 403h High byte | UINT8 | Input status byte 5 |
| 404h Low byte | UINT8 | Input status byte 6 |
| 404h High byte | UINT8 | Input status byte 7 |
| 405h Low byte | UINT8 | Input status byte 8 |
| 405h High byte | UINT8 | Input status byte 9 |
| 406h Low byte | UINT8 | Input status byte 10 |
| 406h High byte | UINT8 | Input status byte 11 |
| 407h Low byte | UINT8 | Input status byte 12 |
| 407h High byte | UINT8 | Input status byte 13 |
| 408h Low byte | UINT8 | Input status byte 14 |
| 408h High byte | UINT8 | Input status byte 15 |
| 409h Low byte | UINT8 | Restart Input byte 0 |
| 409h High byte | UINT8 | Restart Input byte 1 |
| 40Ah Low byte | UINT8 | Restart Input byte 2 |
| 40Ah High byte | UINT8 | Reserved |
| 40Bh Low byte | UINT8 | Fieldbus input feedback byte 0 |
| 40Bh High byte | UINT8 | Fieldbus input feedback byte 1 |
| 40Ch Low byte | UINT8 | Fieldbus input feedback byte 2 |
| 40Ch High byte | UINT8 | Fieldbus input feedback byte 3 |
| 40Dh Low byte | UINT8 | Probe status byte 0 |
| 40Dh High byte | UINT8 | Probe status byte 1 |
| 40Eh Low byte | UINT8 | Probe status byte 2 |
| 40Eh High byte | UINT8 | Probe status byte 3 |
| 40Fh High byte | UINT8 | OSSD status byte 0 |
| 40Fh Low byte | UINT8 | OSSD status byte 1 |
| 410h High byte | UINT8 | OSSD status byte 2 |
| 410h Low byte | UINT8 | OSSD status byte 3 |

Holding Registers (4x) Analog Data

| Register(s) | Type | Name |
|-------------|-------|----------------------|
| 411h-412h | FLOAT | Analog data float 0 |
| 413h-414h | FLOAT | Analog data float 1 |
| 415h-416h | FLOAT | Analog data float 2 |
| 417h-418h | FLOAT | Analog data float 3 |
| 419h-41Ah | FLOAT | Analog data float 4 |
| 41Bh-41Ch | FLOAT | Analog data float 5 |
| 41Dh-41Eh | FLOAT | Analog data float 6 |
| 41Fh-420h | FLOAT | Analog data float 7 |
| 421h-422h | FLOAT | Analog data float 8 |
| 423h-424h | FLOAT | Analog data float 9 |
| 425h-426h | FLOAT | Analog data float 10 |
| 427h-428h | FLOAT | Analog data float 11 |
| 429h-42Ah | FLOAT | Analog data float 12 |
| 42Bh-42Ch | FLOAT | Analog data float 13 |
| 42Dh-42Eh | FLOAT | Analog data float 14 |
| 42Fh-430h | FLOAT | Analog data float 15 |

Holding Registers (4x) Error CPU0

| Register(s) | Type | Name |
|----------------|--------|----------------------------------|
| 500h Low byte | UINT8 | Error CPU0 – Module |
| 500h High byte | UINT8 | Error CPU0 – Error code (*) |
| 501h-502h | UINT32 | Error CPU0 – Error address (*) |
| 503h Low byte | UINT8 | Error CPU0 – Firmware version |
| 503h High byte | UINT8 | Error CPU0 – Extended code 0 (*) |
| 504h Low byte | UINT8 | Error CPU0 – Extended code 1 (*) |

Holding Registers (4x) Error CPU1

| Register(s) | Type | Name |
|----------------|--------|----------------------------------|
| 510h Low byte | UINT8 | Error CPU1 – Module |
| 510h High byte | UINT8 | Error CPU1 – Error code (*) |
| 511h-512h | UINT32 | Error CPU1 – Error address (*) |
| 513h Low byte | UINT8 | Error CPU1 – Firmware version |
| 513h High byte | UINT8 | Error CPU1 – Extended code 0 (*) |
| 514h Low byte | UINT8 | Error CPU1 – Extended code 1 (*) |

➔ (*) When the errors are originated from the Ethernet Board of M1S COM then Error Code assumes the value listed below. Furthermore Error address byte fields in these particular cases do not hold the error address but they hold the detail of error code. Extended code are set to 0.

| Error code | NETX_CORE_FAILURE | NETX_SW_FAILURE |
|----------------------|-----------------------------|-------------------------------|
| Error address byte 0 | NetX Core error code byte 0 | NetX SW Auxiliary code byte 0 |
| Error address byte 1 | NetX Core error code byte 1 | NetX SW Auxiliary code byte 1 |
| Error address byte 2 | NetX Core error code byte 2 | NetX SW Auxiliary code byte 2 |
| Error address byte 3 | NetX Core error code byte 3 | NetX SW Auxiliary code byte 3 |
| Extended code 0 | 0 | 0 |
| Extended code 1 | 0 | 0 |

Holding Registers (4x) Input diagnostics

| Register(s) | Type | Name |
|----------------|-------|----------------------------|
| 600h Low byte | UINT8 | Input diagnostics index 1 |
| 600h High byte | UINT8 | Input diagnostics code 1 |
| 601h Low byte | UINT8 | Input diagnostics index 2 |
| 601h High byte | UINT8 | Input diagnostics code 2 |
| 602h Low byte | UINT8 | Input diagnostics index 3 |
| 602h High byte | UINT8 | Input diagnostics code 3 |
| 603h Low byte | UINT8 | Input diagnostics index 4 |
| 603h High byte | UINT8 | Input diagnostics code 4 |
| 604h Low byte | UINT8 | Input diagnostics index 5 |
| 604h High byte | UINT8 | Input diagnostics code 5 |
| 605h Low byte | UINT8 | Input diagnostics index 6 |
| 605h High byte | UINT8 | Input diagnostics code 6 |
| 606h Low byte | UINT8 | Input diagnostics index 7 |
| 606h High byte | UINT8 | Input diagnostics code 7 |
| 607h Low byte | UINT8 | Input diagnostics index 8 |
| 607h High byte | UINT8 | Input diagnostics code 8 |
| 608h Low byte | UINT8 | Input diagnostics index 9 |
| 608h High byte | UINT8 | Input diagnostics code 9 |
| 609h Low byte | UINT8 | Input diagnostics index 10 |
| 609h High byte | UINT8 | Input diagnostics code 10 |
| 60Ah Low byte | UINT8 | Input diagnostics index 11 |
| 60Ah High byte | UINT8 | Input diagnostics code 11 |
| 60Bh Low byte | UINT8 | Input diagnostics index 12 |
| 60Bh High byte | UINT8 | Input diagnostics code 12 |
| 60Ch Low byte | UINT8 | Input diagnostics index 13 |
| 60Ch High byte | UINT8 | Input diagnostics code 13 |
| 60Dh Low byte | UINT8 | Input diagnostics index 14 |
| 60Dh High byte | UINT8 | Input diagnostics code 14 |
| 60Eh Low byte | UINT8 | Input diagnostics index 15 |
| 60Eh High byte | UINT8 | Input diagnostics code 15 |
| 60Fh Low byte | UINT8 | Input diagnostics index 16 |
| 60Fh High byte | UINT8 | Input diagnostics code 16 |

Holding Registers (4x) Input diagnostics

| Register(s) | Type | Name |
|----------------|-------|-----------------------------|
| 610h Low byte | UINT8 | Output diagnostics index 1 |
| 610h High byte | UINT8 | Output diagnostics code 1 |
| 611h Low byte | UINT8 | Output diagnostics index 2 |
| 611h High byte | UINT8 | Output diagnostics code 2 |
| 612h Low byte | UINT8 | Output diagnostics index 3 |
| 612h High byte | UINT8 | Output diagnostics code 3 |
| 613h Low byte | UINT8 | Output diagnostics index 4 |
| 613h High byte | UINT8 | Output diagnostics code 4 |
| 614h Low byte | UINT8 | Output diagnostics index 5 |
| 614h High byte | UINT8 | Output diagnostics code 5 |
| 615h Low byte | UINT8 | Output diagnostics index 6 |
| 615h High byte | UINT8 | Output diagnostics code 6 |
| 616h Low byte | UINT8 | Output diagnostics index 7 |
| 616h High byte | UINT8 | Output diagnostics code 7 |
| 617h Low byte | UINT8 | Output diagnostics index 8 |
| 617h High byte | UINT8 | Output diagnostics code 8 |
| 618h Low byte | UINT8 | Output diagnostics index 9 |
| 618h High byte | UINT8 | Output diagnostics code 9 |
| 619h Low byte | UINT8 | Output diagnostics index 10 |
| 619h High byte | UINT8 | Output diagnostics code 10 |
| 61Ah Low byte | UINT8 | Output diagnostics index 11 |
| 61Ah High byte | UINT8 | Output diagnostics code 11 |
| 61Bh Low byte | UINT8 | Output diagnostics index 12 |
| 61Bh High byte | UINT8 | Output diagnostics code 12 |
| 61Ch Low byte | UINT8 | Output diagnostics index 13 |
| 61Ch High byte | UINT8 | Output diagnostics code 13 |
| 61Dh Low byte | UINT8 | Output diagnostics index 14 |
| 61Dh High byte | UINT8 | Output diagnostics code 14 |
| 61Eh Low byte | UINT8 | Output diagnostics index 15 |
| 61Eh High byte | UINT8 | Output diagnostics code 15 |
| 61Fh Low byte | UINT8 | Output diagnostics index 16 |
| 61Fh High byte | UINT8 | Output diagnostics code 16 |

Holding Registers (4x) Project CRC

| Register(s) | Type | Name |
|----------------|-------|-----------------------|
| 620h Low byte | UINT8 | Project CRC High byte |
| 620h High byte | UINT8 | Project CRC Low byte |

PROFINET RT

Process data mapping

Module Fieldbus input

| Byte offset | Data direction ¹ | Type | Name |
|-------------|-----------------------------|-------|-----------------------|
| 0 | In | UINT8 | Fieldbus input byte 0 |
| 1 | In | UINT8 | Fieldbus input byte 1 |
| 2 | In | UINT8 | Fieldbus input byte 2 |
| 3 | In | UINT8 | Fieldbus input byte 3 |

Module System I/O

| Byte offset | Data direction | Type | Name |
|-------------|----------------|-------|--------------------------------|
| 0 | Out | UINT8 | System status |
| 1 | Out | UINT8 | Reserved |
| 2 | Out | UINT8 | Input status byte 0 |
| 3 | Out | UINT8 | Input status byte 1 |
| 4 | Out | UINT8 | Input status byte 2 |
| 5 | Out | UINT8 | Input status byte 3 |
| 6 | Out | UINT8 | Input status byte 4 |
| 7 | Out | UINT8 | Input status byte 5 |
| 8 | Out | UINT8 | Input status byte 6 |
| 9 | Out | UINT8 | Input status byte 7 |
| 10 | Out | UINT8 | Input status byte 8 |
| 11 | Out | UINT8 | Input status byte 9 |
| 12 | Out | UINT8 | Input status byte 10 |
| 13 | Out | UINT8 | Input status byte 11 |
| 14 | Out | UINT8 | Input status byte 12 |
| 15 | Out | UINT8 | Input status byte 13 |
| 16 | Out | UINT8 | Input status byte 14 |
| 17 | Out | UINT8 | Input status byte 15 |
| 18 | Out | UINT8 | Restart Input byte 0 |
| 19 | Out | UINT8 | Restart Input byte 1 |
| 20 | Out | UINT8 | Restart Input byte 2 |
| 21 | Out | UINT8 | Fieldbus input byte 0 feedback |
| 22 | Out | UINT8 | Fieldbus input byte 1 feedback |
| 23 | Out | UINT8 | Fieldbus input byte 2 feedback |
| 24 | Out | UINT8 | Fieldbus input byte 3 feedback |
| 25 | Out | UINT8 | Probe status byte 0 |
| 26 | Out | UINT8 | Probe status byte 1 |
| 27 | Out | UINT8 | Probe status byte 2 |
| 28 | Out | UINT8 | Probe status byte 3 |
| 29 | Out | UINT8 | OSSD status byte 0 |
| 30 | Out | UINT8 | OSSD status byte 1 |
| 31 | Out | UINT8 | OSSD status byte 2 |
| 32 | Out | UINT8 | OSSD status byte 3 |

¹ Direction from the Mosaic point of view

Module Analog data

| Byte offset | Data direction | Type | Name |
|-------------|----------------|-------|----------------------|
| 0 | Out | FLOAT | Analog data float 0 |
| 4 | Out | FLOAT | Analog data float 1 |
| 8 | Out | FLOAT | Analog data float 2 |
| 12 | Out | FLOAT | Analog data float 3 |
| 16 | Out | FLOAT | Analog data float 4 |
| 20 | Out | FLOAT | Analog data float 5 |
| 24 | Out | FLOAT | Analog data float 6 |
| 28 | Out | FLOAT | Analog data float 7 |
| 32 | Out | FLOAT | Analog data float 8 |
| 36 | Out | FLOAT | Analog data float 9 |
| 40 | Out | FLOAT | Analog data float 10 |
| 44 | Out | FLOAT | Analog data float 11 |
| 48 | Out | FLOAT | Analog data float 12 |
| 52 | Out | FLOAT | Analog data float 13 |
| 56 | Out | FLOAT | Analog data float 14 |
| 60 | Out | FLOAT | Analog data float 15 |

Record Data read/write services

Errors data CPU 0

- Slot: 00h
- Index: 02h
- Length: 9 bytes
- Access type: get

| Byte | Type | Name |
|--------|-------|--------------------------|
| Byte 0 | USINT | Module name |
| Byte 1 | USINT | Error code (*) |
| Byte 2 | USINT | Error address byte 0 (*) |
| Byte 3 | USINT | Error address byte 1 (*) |
| Byte 4 | USINT | Error address byte 2 (*) |
| Byte 5 | USINT | Error address byte 3 (*) |
| Byte 6 | USINT | CPU firmware version |
| Byte 7 | USINT | Extended code 0 (*) |
| Byte 8 | USINT | Extended code 1 (*) |

Errors data CPU 1

- Slot: 00h
- Index: 03h
- Length: 9 bytes
- Access type: get

| Byte | Type | Name |
|--------|-------|--------------------------|
| Byte 0 | USINT | Module name |
| Byte 1 | USINT | Error code (*) |
| Byte 2 | USINT | Error address byte 0 (*) |
| Byte 3 | USINT | Error address byte 1 (*) |
| Byte 4 | USINT | Error address byte 2 (*) |
| Byte 5 | USINT | Error address byte 3 (*) |
| Byte 6 | USINT | CPU firmware version |
| Byte 7 | USINT | Extended code 0 (*) |
| Byte 8 | USINT | Extended code 1 (*) |

➔ (*) When the errors are originated from the Ethernet Board of M1S COM then Error Code assumes the value listed below. Furthermore Error address byte fields in these particular cases do not hold the error address but they hold the detail of error code. Extended code are set to 0.

| Error code | NETX_CORE_FAILURE | NETX_SW_FAILURE |
|-----------------------------|-----------------------------|-------------------------------|
| Error address byte 0 | NetX Core error code byte 0 | NetX SW Auxiliary code byte 0 |
| Error address byte 1 | NetX Core error code byte 1 | NetX SW Auxiliary code byte 1 |
| Error address byte 2 | NetX Core error code byte 2 | NetX SW Auxiliary code byte 2 |
| Error address byte 3 | NetX Core error code byte 3 | NetX SW Auxiliary code byte 3 |
| Extended code 0 | 0 | 0 |
| Extended code 1 | 0 | 0 |

Input diagnostics

- Slot: 00h
- Index: 04h
- Length: 32 bytes
- Access type: get

| Byte | Type | Name |
|---------|-------|---------------------|
| Byte 0 | USINT | Diagnostic index 0 |
| Byte 1 | USINT | Diagnostic code 0 |
| Byte 2 | USINT | Diagnostic index 1 |
| Byte 3 | USINT | Diagnostic code 1 |
| Byte 4 | USINT | Diagnostic index 2 |
| Byte 5 | USINT | Diagnostic code 2 |
| Byte 6 | USINT | Diagnostic index 3 |
| Byte 7 | USINT | Diagnostic code 3 |
| Byte 8 | USINT | Diagnostic index 4 |
| Byte 9 | USINT | Diagnostic code 4 |
| Byte 10 | USINT | Diagnostic index 5 |
| Byte 11 | USINT | Diagnostic code 5 |
| Byte 12 | USINT | Diagnostic index 6 |
| Byte 13 | USINT | Diagnostic code 6 |
| Byte 14 | USINT | Diagnostic index 7 |
| Byte 15 | USINT | Diagnostic code 7 |
| Byte 16 | USINT | Diagnostic index 8 |
| Byte 17 | USINT | Diagnostic code 8 |
| Byte 18 | USINT | Diagnostic index 9 |
| Byte 19 | USINT | Diagnostic code 9 |
| Byte 20 | USINT | Diagnostic index 10 |
| Byte 21 | USINT | Diagnostic code 10 |
| Byte 22 | USINT | Diagnostic index 11 |
| Byte 23 | USINT | Diagnostic code 11 |
| Byte 24 | USINT | Diagnostic index 12 |
| Byte 25 | USINT | Diagnostic code 12 |
| Byte 26 | USINT | Diagnostic index 13 |
| Byte 27 | USINT | Diagnostic code 13 |
| Byte 28 | USINT | Diagnostic index 14 |
| Byte 29 | USINT | Diagnostic code 14 |
| Byte 30 | USINT | Diagnostic index 15 |
| Byte 31 | USINT | Diagnostic code 15 |

OSSD diagnostics

- Slot: 00h
- Index: 05h
- Length: 32 bytes
- Access type: get

| Byte | Type | Name |
|---------|-------|---------------------|
| Byte 0 | USINT | Diagnostic index 0 |
| Byte 1 | USINT | Diagnostic code 0 |
| Byte 2 | USINT | Diagnostic index 1 |
| Byte 3 | USINT | Diagnostic code 1 |
| Byte 4 | USINT | Diagnostic index 2 |
| Byte 5 | USINT | Diagnostic code 2 |
| Byte 6 | USINT | Diagnostic index 3 |
| Byte 7 | USINT | Diagnostic code 3 |
| Byte 8 | USINT | Diagnostic index 4 |
| Byte 9 | USINT | Diagnostic code 4 |
| Byte 10 | USINT | Diagnostic index 5 |
| Byte 11 | USINT | Diagnostic code 5 |
| Byte 12 | USINT | Diagnostic index 6 |
| Byte 13 | USINT | Diagnostic code 6 |
| Byte 14 | USINT | Diagnostic index 7 |
| Byte 15 | USINT | Diagnostic code 7 |
| Byte 16 | USINT | Diagnostic index 8 |
| Byte 17 | USINT | Diagnostic code 8 |
| Byte 18 | USINT | Diagnostic index 9 |
| Byte 19 | USINT | Diagnostic code 9 |
| Byte 20 | USINT | Diagnostic index 10 |
| Byte 21 | USINT | Diagnostic code 10 |
| Byte 22 | USINT | Diagnostic index 11 |
| Byte 23 | USINT | Diagnostic code 11 |
| Byte 24 | USINT | Diagnostic index 12 |
| Byte 25 | USINT | Diagnostic code 12 |
| Byte 26 | USINT | Diagnostic index 13 |
| Byte 27 | USINT | Diagnostic code 13 |
| Byte 28 | USINT | Diagnostic index 14 |
| Byte 29 | USINT | Diagnostic code 14 |
| Byte 30 | USINT | Diagnostic index 15 |
| Byte 31 | USINT | Diagnostic code 15 |

Project CRC

- Slot: 00h
- Index: 06h
- Length: 2 bytes
- Access type: get

| Byte | Type | Name |
|--------|-------|-----------------------|
| Byte 0 | USINT | Project CRC high byte |
| Byte 1 | USINT | Project CRC high byte |