# Product data sheet
## Characteristics

# NTSDDI1642
## Discrete Input Module, 16 In, 24V DC, Source, 1 Wire, Modicon Edge I/O NTS



## Main

| | |
|---|---|
| Range of product | Modicon Edge I/O NTS |
| Product or component type | Discrete input module |
| Mandatory accessory | NTSXBA0100H base<br>NTSXTB18_0_H terminal block |
| Product compatibility | NTSN..... |
| Range compatibility | Logic/Motion controller - Modicon M262<br>Modicon M580<br>Third party |
| Device application | Industrial application |
| Discrete input number | 16 |
| Group of input channels | 1 group |
| Discrete input voltage | 24 V DC |
| Discrete input logic | Negative logic (source) |
| Operating mode | Synchronous/Isochronous |

## Complementary

| | |
|---|---|
| Discrete input number | 16 type 3 conforming to IEC 61131-2 |
| Input wiring mode | 1 wire |
| Discrete input current | 2.5 MA |
| Voltage state 1 guaranteed | 11...30 V DC |
| Voltage state 0 guaranteed | < 5 V DC |
| Current state 1 guaranteed | >= 2 mA |
| Current state 0 guaranteed | <= 1.5 mA |
| Input impedance | 9.6 kOhm |
| Response time on input | < 125 µs (off to on)<br>< 125 µs (on to off) |
| Input filtering | 0...20 ms configurable in 0.1 ms step |
| Paralleling of inputs | Yes |
| Input protection type | Over voltage protection |
| Input diagnostic | Power supply error per channel<br>Sensor power supply error per channel |
| Power supply type | Bus power from power supply bus (24 Vdc)<br>Field power from power supply field (24 Vdc)<br>Optional field power from external power supply (24 Vdc, shared 24 V module) |
| Rated operational voltage limits | 20.4...28.8 V DC |
| Typical current consumption | 43.2 MA at 24 V DC on the Bus current<br>2.4 MA at 24 V DC on the internal field current minimum<br>2.9 MA at 24 V DC on the internal field current maximum |
| Power dissipation in W | 2.05 W maximum at 24 V DC |
| Isolation between channels and bus | 1500 V AC |

| | |
|---|---|
| Isolation between channels and ground | 1500 V AC |
| Hot swapping fallback | Yes |
| Local signalling | 1 LED (green) for module operating (RUN)<br>1 LED per channel (green) for channel diagnostic<br>1 LED (red) for module error (ERR) |
| Housing colour | Grey |
| Mounting support | Base |
| Height | 100 Mm |
| Width | 15 Mm |
| Depth | 69 Mm |
| Net weight | 0.048 Kg |

## Environment

| | |
|---|---|
| IP degree of protection | IP20 |
| Marking | CE<br>UKCA<br>CULus<br>RCM |
| Product certifications | CE[RETURN]UKCA[RETURN]CULus[RETURN]RCM[RETURN]Merchant Navy - EU RO MR (pen |
| Standards | EN/IEC 61131-2<br>EN 61010-2-201<br>UL 61010-2-201<br>IACS E10<br>EN/IEC 61000-6-5, interface type 1 and type 2<br>EN/IEC 61850-3, location G<br>EN/IEC 60079-0<br>EN 50155<br>EN 50121-4<br>EN 50121-5 |
| Directives | 2014/30/EU - electromagnetic compatibility<br>2014/34/EU - ATEX directive<br>2014/35/EU |
| Ambient air temperature for operation | -20…60 °C |
| Ambient air temperature for storage | -40…85 °C |
| Relative humidity | 5…95 % without condensation |
| Operating altitude | 0...2000 m without derating<br>2000...5000 m with derating |
| Pollution degree | 2 |
| Environmental characteristic | Gas resistant C3 and G2 |
| Vibration resistance | 1 g without accessory<br>2 g with accessory |
| Shock resistance | 15 g for 11 ms (with and without accessory) |

## Packing Units

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|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 2.5 Cm |
| Package 1 Width | 8.3 Cm |
| Package 1 Length | 11.6 Cm |
| Package 1 Weight | 50.4 G |
| Unit Type of Package 2 | S01 |
| Number of Units in Package 2 | 16 |
| Package 2 Height | 15 Cm |
| Package 2 Width | 15 Cm |
| Package 2 Length | 40 Cm |
| Package 2 Weight | 1.0056 Kg |

## Offer Sustainability

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|---|---|
| Recyclability potential, in % | 0 |
| Total lifecycle Carbon footprint | 26 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 3.5080328968345964 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 4 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.07085012429173408 |
| Carbon footprint of the distribution phase [A4] | 0.1 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.00010977117200361978 |
| Carbon footprint of the installation phase [A5] | 0 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 22.232195016127704 |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 22 kg CO2 eq. |
| Mercury free | Yes |
| Sustainable packaging | No |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.13701159343393376 |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.1 kg CO2 eq. |
| Environmental Disclosure | Product Environmental Profile |
| Total lifecycle Carbon footprint | 26 |
| Packaging made with recycled cardboard | No |
| Packaging without single use plastic | No |
| REACh Regulation | Reference contains Substances of Very High Concern above the threshold |
| EU RoHS Directive | Compliant By Exemption |
| End of life manual availability | End Of Life Information |
| Take-back | No |

## Contractual warranty

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|---|---|
| Warranty (in months) | 18 |

Product Life Status : Commercialised