# Product data sheet
## Characteristics

# 170ANR12090
## distributed analog/discrete I/O Modicon Momentum



## Main

| | |
|---|---|
| Range of product | Modicon Momentum automation platform |
| Product or component type | Analogue,Discrete I/O base |
| Group of channels | 1 group of 8 discrete outputs<br>2 groups of 4 discrete inputs<br>1 group of 6 analog inputs<br>1 group of 4 analog outputs |
| Analogue output range | 0...10 V 14 bits |
| Output short-circuit protection | With discrete output |
| Output overload protection | With discrete output |
| Discrete input number | 8 |

## Complementary

| | |
|---|---|
| Current state 0 guaranteed | <= 2 mA (discrete input) |
| Current state 1 guaranteed | >= 6 mA (discrete input) |
| Input overvoltage protection | 45 V 10 s discrete input |
| Input resistance | 1 MOhm analogue input circuit |
| Output load | >= 2 kOhm 0...10 V analogue output |
| Conversion error | +/- 0.4 % 0...10 V 25 °C analogue output<br>0,002 0...10 V 25 °C analogue input circuit |
| Fail state | For analogue output: hold<br>For analogue output: reset to zero |
| Maximum voltage drop | <0.4 V 0.25 A at state on discrete output |
| Surge current | 2.5 A 1 ms discrete output |
| Isolation voltage | 500 V (duration = 1 min) between analogue I/O and operating voltage<br>500 V (duration = 1 min) between operating voltage and I/O from ground |
| Discrete input voltage | 24 V DC |
| Discrete input logic | Positive |
| Analogue input type | Single ended, input range: 0...10 V |
| Analogue input resolution | 14 bits |
| Input voltage limits | 3...32 V |
| Discrete output logic | Positive |
| Discrete output current | 2 A per group<br>2 A per module<br>0.25 A per point |
| Maximum leakage current | 0.4 MA for discrete output |
| Conversion time | 0.75 ms for analog output<br>1.2 ms for analogue input circuit |
| Analogue output resolution | 14 bits, 0...10 V |

| | |
|---|---|
| Response time | 1.05 ms from state 1 to state 0 for discrete output<br>1.2 ms from state 0 to state 1 for discrete input<br>1.2 ms from state 0 to state 1 for discrete output<br>1.2 ms from state 1 to state 0 for discrete input |
| [Us] rated supply voltage | 24 V DC |
| Local signalling | 4 LEDs for channel status |
| Current consumption | 400 mA at 24 V DC |
| Maximum power dissipation in W | 6 W |
| Height | 125 Mm |
| Width | 141.5 Mm |
| Depth | 47.5 Mm |

## Environment

| | |
|---|---|
| Protective treatment | TC |
| Marking | CE |
| Product certifications | UL[RETURN]CSA |
| Ambient air temperature for operation | 0…60 °C |
| Ambient air temperature for storage | -40…85 °C |
| Relative humidity | 0…95 % without condensation |
| Operating altitude | <= 5000 m |

## Packing Units

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|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 5.500 Cm |
| Package 1 Width | 18.000 Cm |
| Package 1 Length | 26.000 Cm |
| Package 1 Weight | 391.000 G |
| Unit Type of Package 2 | S03 |
| Number of Units in Package 2 | 10 |
| Package 2 Height | 30.000 Cm |
| Package 2 Width | 30.000 Cm |
| Package 2 Length | 40.000 Cm |
| Package 2 Weight | 4.281 Kg |

## Offer Sustainability

| | |
|---|---|
| Recyclability potential, in % | 4 |
| Total lifecycle Carbon footprint | 268 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 126.24982600428719 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 126 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.11677569499341384 |
| Carbon footprint of the distribution phase [A4] | 0.1 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.21473722685856353 |
| Carbon footprint of the installation phase [A5] | 0.2 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 141.10219037035654 |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 141 kg CO2 eq. |
| Mercury free | Yes |
| Sustainable packaging | Yes |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.4836839316120609 |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.5 kg CO2 eq. |
| Environmental Disclosure | Product Environmental Profile |
| Total lifecycle Carbon footprint | 268 |
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| SCIP Number | 441d5619-6318-4bbf-ac83-96d05888ee7e |
| REACh Regulation | Reference contains Substances of Very High Concern above the threshold |

| | |
|---|---|
| EU RoHS Directive | Compliant By Exemption |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, w |
| 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