

# NLC-050-024D-06I-04QTP-00A - Base unit



2701027

<https://www.phoenixcontact.com/in/products/2701027>

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24 V DC Nanoline base unit. Equipped with 6 digital input and 4 PNP digital output channels. Additional I/O channels can be added using a maximum of three I/O extension modules. Optional communication modules provide network or serial connectivity. Optional Operator Panel provides user interface. Programming is via nanoNavigator.

## Your advantages

- Basic unit has integrated digital inputs, relay outputs, and analog inputs, including high-speed counters
- An operator panel can be integrated in the basic unit or installed remotely on a panel as an option
- Intuitive programming language with options for flowcharts and ladder diagrams

## Commercial Data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2701027             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales Key                            | DRA                 |
| Product Key                          | DRACAA              |
| Catalog Page                         | Page 462 (C-8-2015) |
| GTIN                                 | 4046356325387       |
| Weight per Piece (including packing) | 298.1 g             |
| Weight per Piece (excluding packing) | 294.8 g             |
| Customs tariff number                | 85371098            |
| Country of origin                    | DE                  |

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## Technical Data

### Product properties

|                |           |
|----------------|-----------|
| Product type   | Base unit |
| Product family | Nanoline  |

### System properties

#### System requirements

|                  |                      |
|------------------|----------------------|
| Engineering tool | nanoNavigator 1 or 2 |
|------------------|----------------------|

### Electrical properties

#### Supply

|                             |   |
|-----------------------------|---|
| Supply voltage              | 24 V DC (Power available to the I/O and Communications modules) |
| Supply voltage range        | 19.2 V DC ... 30 V DC   |
| Power supply connection     | Screw connection  |
| Max. current consumption    | 250 mA  |
| Typical current consumption | 92 mA   |

#### Real-time clock

|                |                 |
|----------------|-----------------|
| Realtime clock | Optional module |
|----------------|-----------------|

### Input data

#### Digital

|                                   |                           |
|-----------------------------------|---------------------------|
| Input name                        | Digital inputs            |
| Description of the input          | EN 61131-2 type 1 NPN/PNP |
| Number of inputs                  | 6                         |
| Connection method                 | Screw connection          |
| Input voltage                     | 24 V DC                   |
| Input voltage range "0" signal    | 0 V DC ... 5 V DC         |
| Input voltage range "1" signal    | 15 V DC ... 30 V DC       |
| Nominal input current at $U_{IN}$ | 5 mA DC (On)              |
|                                   | < 100 mA (Off)            |
| Typical response time             | 60 $\mu$ s (on)           |
|                                   | 70 $\mu$ s (OFF)          |

### Output data

#### Digital

|                    |                  |
|--------------------|------------------|
| Output name        | Digital outputs  |
| Output description | PNP outputs      |
| Connection method  | Screw connection |
| Number of outputs  | 4                |

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|   |                                       |
|---|---------------------------------------|
| Protective circuit                                  | Short-circuit and overload protection |
| Output voltage                                      | 24 V DC                               |
| Maximum output current per channel                  | 500 mA                                |
| Maximum output current per module / terminal block  | 2 A                                   |
| Maximum output current per module                   | 2 A                                   |
| Nominal load, inductive                             | 12 VA ((1.2H))                        |
| Nominal load, lamp                                  | 12 W                                  |
| Nominal load, ohmic                                 | 12 W                                  |
| Maximum operating frequency with ohmic nominal load | 100 Hz                                |

## Connection data

|                   |                  |
|-------------------|------------------|
| Connection method | Screw connection |
|-------------------|------------------|

## Interfaces

### Operator Panel

|                   |                 |
|-------------------|-----------------|
| Connection method | RJ45 / COMBICON |
|-------------------|-----------------|

### RS-232

|                   |        |
|-------------------|--------|
| Connection method | Slot 1 |
|-------------------|--------|

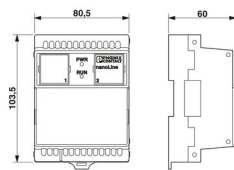
### USB

|                   |        |
|-------------------|--------|
| Connection method | Slot 1 |
|-------------------|--------|

### Realtime Clock

|                   |        |
|-------------------|--------|
| Connection method | Slot 2 |
|-------------------|--------|

## Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 80.5 mm  |
| Height              | 103.5 mm   |
| Depth               | 60 mm  |

## Material specifications

|       |       |
|-------|-------|
| Color | white |
|-------|-------|

## Environmental and real-life conditions

### Ambient conditions

|   |                  |
|---|------------------|
| Degree of protection                    | IP20             |
| Ambient temperature (operation)         | -25 °C ... 60 °C |
| Ambient temperature (storage/transport) | -25 °C ... 85 °C |

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2701027

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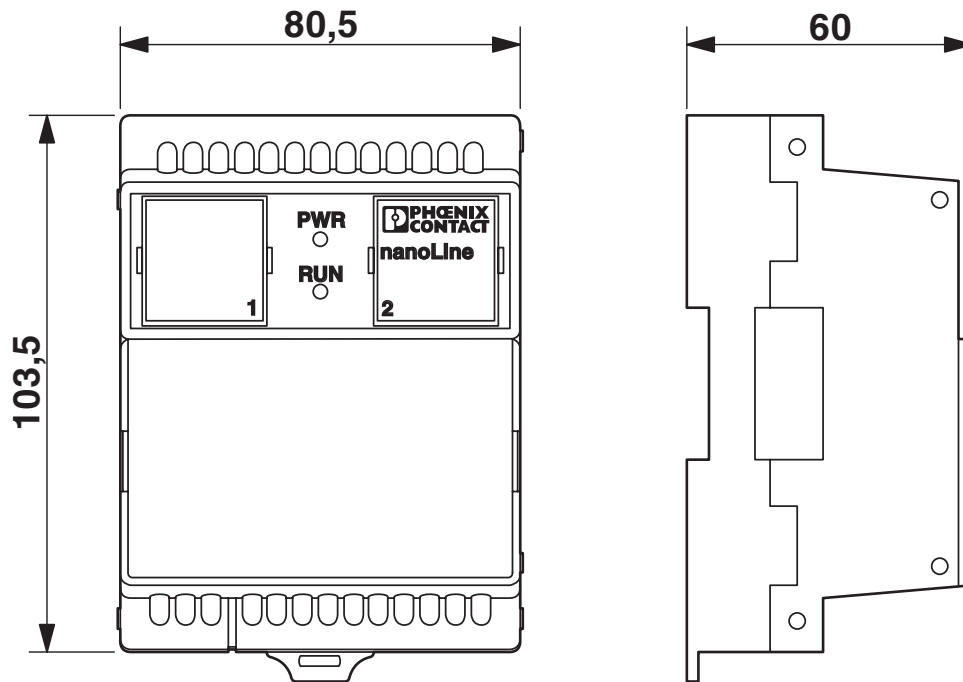
|  |      |
|--|------|
| Permissible humidity (operation)         | 90 % |
| Permissible humidity (storage/transport) | 90 % |

## Mounting

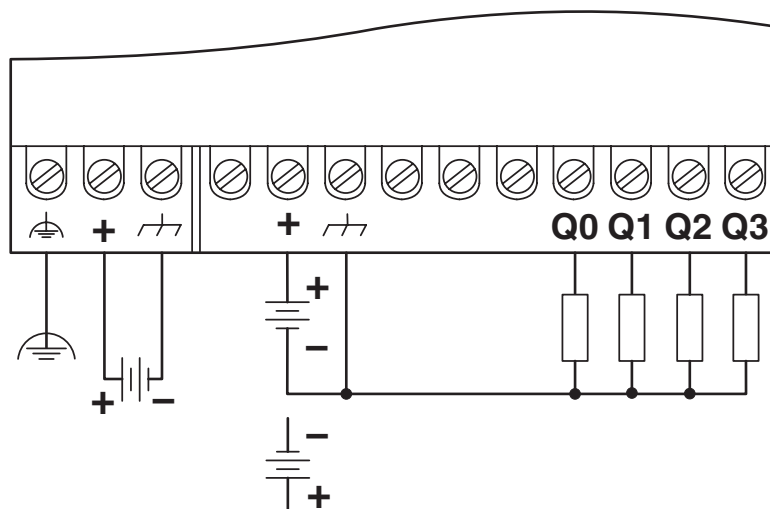
|               |                   |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
|---------------|-------------------|

### Drawings

Dimensional drawing



Connection diagram



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## Classifications

### ECLASS

ECLASS-11.0

27242216

### ETIM

ETIM 7.0

EC001417

### UNSPSC

UNSPSC 21.0

39122329

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## Environmental Product Compliance

|            |  |
|------------|--|
| China RoHS | Environmentally Friendly Use Period = 50 years<br>For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |
|------------|--|

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## Accessories

### NLC-MOD-CAP-PXC - Covering hood

2701292

<https://www.phoenixcontact.com/in/products/2701292>

Replacement cover for slot 2 in base unit.



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### NLC-MOD-CAP - Covering hood

2701289

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Replacement cover for slot 1 in base unit.





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## NLC-IO-06I-04QTP-01A - I/O extension module

2701072

<https://www.phoenixcontact.com/in/products/2701072>



I/O extension module for use with Nanoline base unit. Equipped with 6 digital input and 4 PNP digital output channels. A maximum of three I/O extension modules can be attached to a base unit.

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## NLC-IO-06I-04QTN-01A - I/O extension module

2701085

<https://www.phoenixcontact.com/in/products/2701085>



I/O extension module for use with Nanoline base unit. Equipped with 6 digital input and 4 NPN digital output channels. A maximum of three I/O extension modules can be attached to a base unit.

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## NLC-IO-03I-04QRD-05A - I/O extension module

2701328

<https://www.phoenixcontact.com/in/products/2701328>



I/O extension module for use with Nanoline 24 V DC base unit. Equipped with 3 digital input and 4, 5 A relay output channels. A maximum of three I/O extension modules can be attached to a base unit.

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## NLC-IO-4AI - I/O extension module

2701098

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I/O extension module for use with Nanoline base unit. Equipped with 4 analog input channels. A maximum of three I/O extension modules can be attached to a base unit.

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## NLC-OP1-LCD-032-4X20 - Operator terminal

2701137

<https://www.phoenixcontact.com/in/products/2701137>

User interface for Nanoline controllers. Mounts directly on the base unit. Can be mounted remotely using the mounting kit.



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## NLC-OP1-MKT - Mounting kit

2701140

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Mounting kit



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## NLC-MOD-RS232 - nanoLC module

2701179

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RS-232 connection for data transfer or software configuration



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## NLC-MOD-RS485 - Option module

2701182

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RS-485 connection for data transfer or software configuration



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## NLC-MOD-USB - nanoLC module

2701195

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Serial connection to PC's USB port for data transfer or software configuration



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## NLC-MOD-RTC - Option module

2701153

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Real-time clock



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## NLC-COM-ENET-MB1 - Communication module

2701124

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Ethernet communication module. Allows the Nanoline controller to be connected to an Ethernet, operating as a Modbus TCP Server.

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## NLC-COM-GSM - Communication module

2701344

<https://www.phoenixcontact.com/in/products/2701344>



GSM communication module. Allows SMS messaging to and from the Nanoline controller when connected to the GSM network.

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## NLC-PC/SERIAL-CBL 2M - Cable

2701234

<https://www.phoenixcontact.com/in/products/2701234>

**Cable**, serial, 9-pos. D-SUB to RJ11/12



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## NLC-PC/USB-CBL 2M - Cable

2701247

<https://www.phoenixcontact.com/in/products/2701247>

**Cable**, serial



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