

# NLC-055-024D-08I-04QRD-05A - Base unit



2700464

<https://www.phoenixcontact.com/us/products/2700464>

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24 V DC Nanoline base unit. Equipped with 8 digital inputs, 2 analog (0-10 V) inputs and 4 relay 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

- 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
- Basic unit has integrated digital inputs, relay outputs, and analog inputs, including high-speed counters

## Commercial Data

Item number	2700464
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	DR11
Product Key	DRACAA
Catalog Page	Page 460 (C-8-2015)
GTIN	4046356576611
Weight per Piece (including packing)	336.5 g
Weight per Piece (excluding packing)	336.5 g
Customs tariff number	85371098
Country of origin	IN

## Technical Data

### Product properties

Product type	Base unit
Product family	Nanoline

### System properties

#### System requirements

Engineering tool	nanoNavigator 3 or above
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### 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	150 mA

#### Real-time clock

Realtime clock	Yes (battery-backed)
Description realtime clock	±2 s/day @ 25°C ±4 s/day @ -20 °C ... +60 °C Lithium BR2330

### Input data

#### Analog

Description of the input	Analog input
Number of inputs	2
A/D converter resolution	12 bit (monotonic)
Connection technology	Screw connection
Voltage input signal	0 V DC ... 10 V DC
Input resistance of voltage input	20 kΩ
Input filter	Digital
Limit frequency (3 dB)	1 Hz (3 dB)
Measuring principle	Successive approximation
Protective circuit	Transient voltage suppression

#### Digital

Input name	Digital inputs
Description of the input	EN 61131-2 type 1 NPN/PNP
Number of inputs	8
Connection method	Screw connection
Input voltage range "0" signal	0 V DC ... 5 V DC
Input voltage range "1" signal	15 V DC ... 30 V DC

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Nominal input voltage $U_{IN}$	24 V DC
Nominal input current at $U_{IN}$	5 mA DC (On)
	< 100 mA (Off)
Typical response time	20 ms (on)
	70 $\mu$ s (OFF)

## Counter

Number of inputs	2
Input frequency	6 kHz

## Output data

### Digital

Output name	Relay output
Output description	Relay output
Connection method	Screw connection
Number of outputs	4
Protective circuit	External protection required
Maximum output current per channel	5 A
Maximum output current per module / terminal block	20 A
Maximum output current per module	5 A
Nominal output voltage	24 V DC
Nominal load, ohmic	600 W (@ 24 ohms)
Maximum operating frequency with ohmic nominal load	0.5 Hz (at full load)

## Connection data

Connection method	Screw connection
Conductor cross section, rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 12

## Interfaces

### Operator Panel

Connection method	RJ45 / COMBICON
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### RS-232

Connection method	Slot 1
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### USB

Connection method	Slot 1
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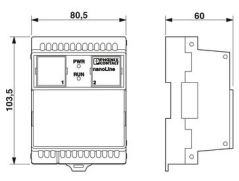
## Dimensions

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Dimensional drawing		
Width		80.5 mm
Height		103.5 mm
Depth		60 mm

## Material specifications

Color	white
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## 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
Permissible humidity (operation)	90 %
Permissible humidity (storage/transport)	90 %

## Mounting

Mounting type	DIN rail mounting
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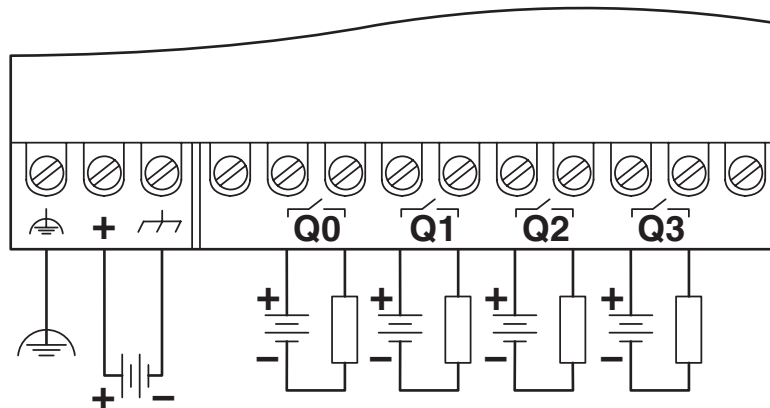


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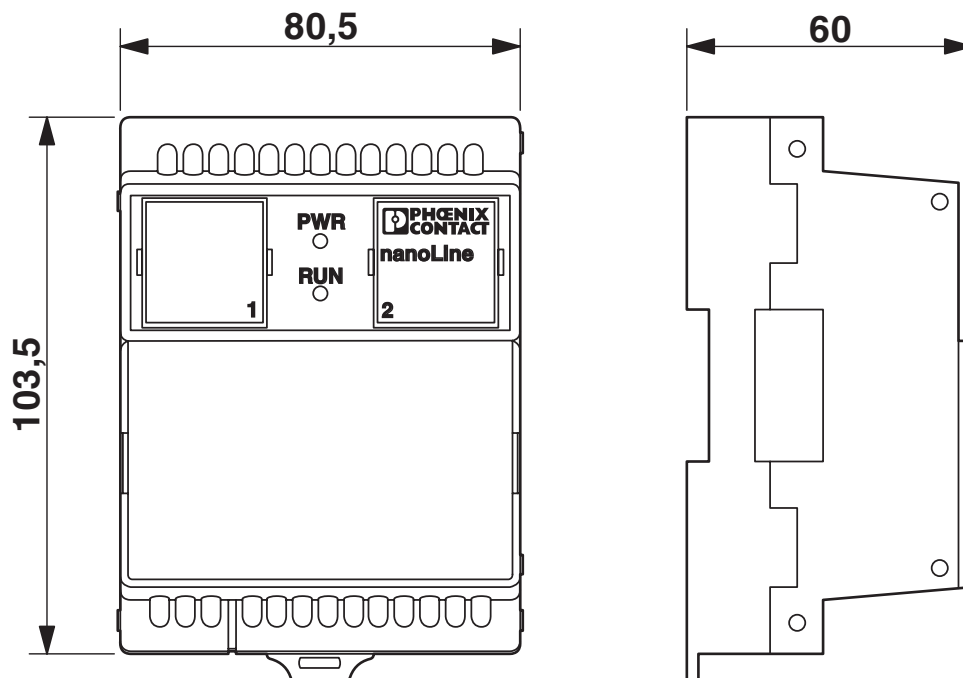
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## Drawings

Connection diagram



Dimensional drawing



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2700464>



**UL Listed**

Approval ID: FILE E 238705



**cUL Listed**

Approval ID: FILE E 238705



**EAC**

Approval ID: TR\_TS\_D\_01831-19

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## Classifications

### ECLASS

ECLASS-11.0	27242216
ECLASS-12.0	27242216
ECLASS-13.0	27242216

### ETIM

ETIM 8.0	EC001417
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	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/us/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/us/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/us/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/us/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

<https://www.phoenixcontact.com/us/products/2701098>



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-IO-2AI-2AO-01 - I/O extension module

2701040

<https://www.phoenixcontact.com/us/products/2701040>



I/O extension module for use with Nanoline base unit. Equipped with 2 analog input (0...10 V DC, -10...+10 V DC, 0/4...20 mA) and 2 analog output (0...10 V DC, 0/4...20 mA) channels. A maximum of three I/O extension modules can be attached to a base unit.

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

2701137

<https://www.phoenixcontact.com/us/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

<https://www.phoenixcontact.com/us/products/2701140>

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

<https://www.phoenixcontact.com/us/products/2701182>

RS-485 connection for data transfer or software configuration



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## NLC-MOD-USB - nanoLC module

2701195

<https://www.phoenixcontact.com/us/products/2701195>

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



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

2701124

<https://www.phoenixcontact.com/us/products/2701124>



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/us/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/us/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/us/products/2701247>

Cable, serial



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