

# GW MODBUS TCP/ASCII 2E/2DB9 - Interface converters



2702770  
<https://www.phoenixcontact.com/pc/products/2702770>

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The GW MODBUS TCP/ASCII... converts RAW or ASCII serial strings into Modbus registers. Includes two RJ45 ports and two D-SUB 9 ports.

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2702770             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Product key                          | DNC323              |
| Catalog page                         | Page 355 (C-6-2019) |
| GTIN                                 | 4055626339382       |
| Weight per piece (including packing) | 217 g               |
| Weight per piece (excluding packing) | 159 g               |
| Customs tariff number                | 85176200            |
| Country of origin                    | US                  |

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## Technical data

### Notes

#### Utilization restriction

|          |                                                                           |
|----------|---------------------------------------------------------------------------|
| EMC note | EMC: class A product, see manufacturer's declaration in the download area |
|----------|---------------------------------------------------------------------------|

#### Utilization restriction

|            |                                                               |
|------------|---------------------------------------------------------------|
| CCCEX note | Use in potentially explosive areas is not permitted in China. |
|------------|---------------------------------------------------------------|

### Product properties

|              |                                                                                           |
|--------------|-------------------------------------------------------------------------------------------|
| Product type | Interface converter                                                                       |
| MTBF         | 68.1 Years (Telcordia standard, 25°C temperature, 50% stress, Environmental Factor = 1.0) |
|              | 45.4 Years (Telcordia standard, 40°C temperature, 50% stress, Environmental Factor = 1.5) |

### Electrical properties

|                                            |                                       |
|--------------------------------------------|---------------------------------------|
| Electrical isolation                       | IEC UL 61010-1 (VCC // Ethernet)      |
| Test voltage data interface/data interface | 1.5 kV <sub>rms</sub> (50 Hz, 1 min.) |
| Test voltage data interface/power supply   | 1.5 kV <sub>rms</sub> (50 Hz, 1 min.) |
|                                            | 1.5 kV <sub>rms</sub>                 |

#### Supply

|                             |                                                                     |
|-----------------------------|---------------------------------------------------------------------|
| Supply voltage range        | 10.8 V DC ... 30 V DC (via pluggable COMBICON screw terminal block) |
| Typical current consumption | 88 mA (24 V DC)                                                     |
| Max. current consumption    | 100 mA (24 V DC)                                                    |

#### Function

|                                  |                                               |
|----------------------------------|-----------------------------------------------|
| Management                       | Web-based management                          |
| Status and diagnostic indicators | LEDs: Status, ACT/LNK (Ethernet data traffic) |

### Connection data

#### Supply

|                                   |                                               |
|-----------------------------------|-----------------------------------------------|
| Conductor cross section, flexible | 0.20 mm <sup>2</sup> ... 2.50 mm <sup>2</sup> |
| Conductor cross section AWG       | 24 ... 12                                     |
| Tightening torque                 | 0.5 Nm ... 0.6 Nm                             |

### Interfaces

|            |          |
|------------|----------|
| Signal     | Ethernet |
|            | Modbus   |
| Web server | yes      |

#### Data: Modbus/TCP

|                           |                               |
|---------------------------|-------------------------------|
| Serial transmission speed | 10/100 Mbps, auto negotiation |
|---------------------------|-------------------------------|

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|                     |                                 |
|---------------------|---------------------------------|
| Connection method   | RJ45 jack, shielded             |
| No. of channels     | 2                               |
| Transmission length | ≤ 100 m (shielded twisted pair) |
| Auxiliary protocols | ARP, DHCP (Client), PING        |

## Data: RS-232

|                             |                                                                   |
|-----------------------------|-------------------------------------------------------------------|
| Serial transmission speed   | 0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps |
| Number of connections       | 2                                                                 |
| Connection method           | D-SUB 9 plug                                                      |
| Pin assignment              | DTE                                                               |
| Transmission length         | 15 m                                                              |
| File format/coding          | 5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity |
| Data flow control/protocols | Software handshake, Xon/Xoff or hardware handshake RTS/CTS        |

## Data: RS-422

|                           |                                                                   |
|---------------------------|-------------------------------------------------------------------|
| Serial transmission speed | 0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps |
| Number of connections     | 2                                                                 |
| Connection method         | D-SUB 9 plug                                                      |
| Pin assignment            | 2, 3, 5, 7, 8                                                     |
| Transmission length       | ≤ 1200 m                                                          |
| Termination resistor      | 120 Ω (configurable)                                              |
| File format/coding        | 5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity |

## Data: RS-485

|                           |                                                                   |
|---------------------------|-------------------------------------------------------------------|
| Serial transmission speed | 0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps |
| Number of connections     | 2                                                                 |
| Connection method         | D-SUB 9 plug                                                      |
| Pin assignment            | 3, 5, 7                                                           |
| Termination resistor      | 120 Ω (configurable)                                              |
| File format/coding        | 5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity |

## Dimensions

|        |        |
|--------|--------|
| Width  | 45 mm  |
| Height | 99 mm  |
| Depth  | 115 mm |

## Material specifications

|                  |        |
|------------------|--------|
| Color            | gray   |
| Housing material | PA 6.6 |

## Environmental and real-life conditions

### Ambient conditions

|                      |      |
|----------------------|------|
| Degree of protection | IP20 |
|----------------------|------|

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|                                          |                                |
|------------------------------------------|--------------------------------|
| Ambient temperature (operation)          | -40 °C ... 70 °C               |
| Ambient temperature (storage/transport)  | -40 °C ... 80 °C               |
| Altitude                                 | < 2000 m                       |
| Permissible humidity (operation)         | 10 % ... 95 % (non-condensing) |
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing)  |

## Approvals

### Conformity/Approvals

|                  |                                        |
|------------------|----------------------------------------|
| Conformance      | CE-compliant                           |
| UL, USA          | UL 61010-1                             |
| UL, USA / Canada | Class I, Div. 2, Groups A, B, C, D T4A |
| Noxious gas test | ISA-S71.04-1985 G3 Harsh Group A       |

### Ex data

|       |                                               |
|-------|-----------------------------------------------|
| ATEX  | DEMKO 18ATEX 2026X: II 3 G<br>Ex ec IIC T4 Gc |
| IECEX | IECEX UL 18.0023X<br>Ex ec IIC T4 Gc          |

## EMC data

|                               |                                           |
|-------------------------------|-------------------------------------------|
| Noise immunity                | EN 61000-6-2:2005                         |
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Noise emission                | EN 61000-6-4                              |

## Standards and regulations

|                       |                    |
|-----------------------|--------------------|
| Standards/regulations | EN 55022, EN 55024 |
|-----------------------|--------------------|

## Mounting

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

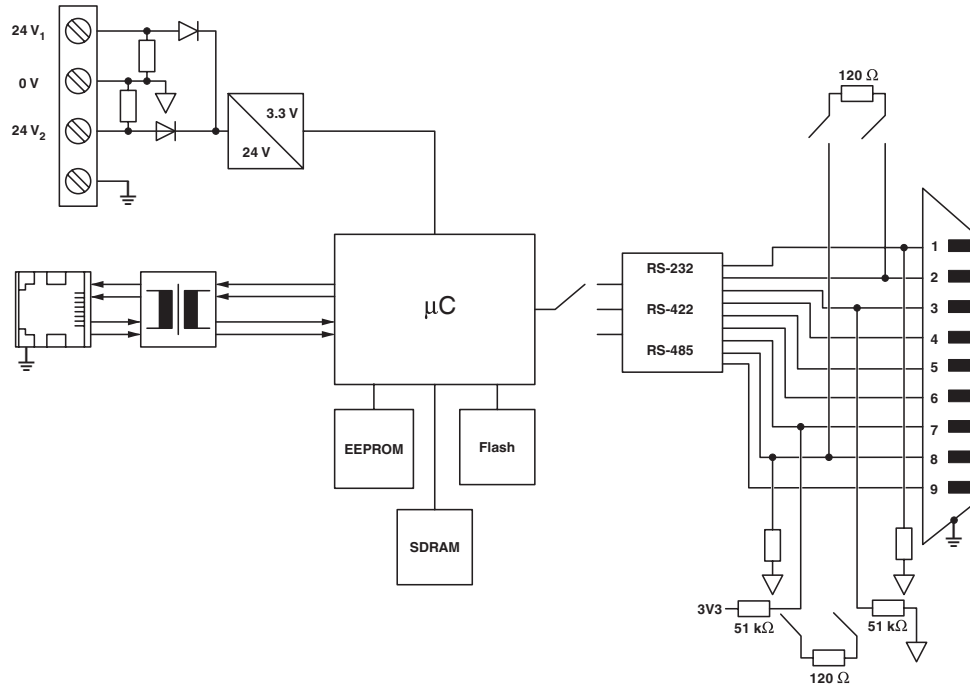
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## Drawings

Block diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/2702770>



**UL Listed**

Approval ID: FILE E 238705



**cUL Listed**

Approval ID: FILE E 238705



**KC**

Approval ID: R-R-PCK-2702761



**cUL Listed**

Approval ID: FILE E 196811



**UL Listed**

Approval ID: FILE E 196811



**IECEx**

Approval ID: IECEx UL 18.0023X



**ATEX**

Approval ID: DEMKO 18 ATEX 2026X



**IECEx**

Approval ID: IECEx UL 18.0023X



**ATEX**

Approval ID: DEMKO 18 ATEX 2026X

**cULus Listed**

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27242208 |
| ECLASS-12.0 | 27242208 |
| ECLASS-13.0 | 27242208 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001423 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 43222600 |
|-------------|----------|

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## Environmental product compliance

|            |                                                                                                              |
|------------|--------------------------------------------------------------------------------------------------------------|
| 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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