

# NBC-M12MRY/1,0-94H - Hybrid cable



1146462

<https://www.phoenixcontact.com/us/products/1146462>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Hybrid cable, Ethernet hybrid CAT5 (100 Mbps), 8-position, PUR halogen-free, black RAL 9005, shielded (Advanced Shielding Technology), Plug angled M12, coding: Y / IP65/IP67, on free cable end, cable length: 1 m, Power with Ethernet (PWE)

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1146462       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF04          |
| Product key                          | AF1CML        |
| GTIN                                 | 4063151137533 |
| Weight per piece (including packing) | 149.166 g     |
| Weight per piece (excluding packing) | 22.22 g       |
| Customs tariff number                | 85444290      |
| Country of origin                    | PL            |

# NBC-M12MRY/1,0-94H - Hybrid cable

1146462

<https://www.phoenixcontact.com/us/products/1146462>

## Technical data

### Product properties

|                      |                         |
|----------------------|-------------------------|
| Product type         | Data cable preassembled |
| Application          | Standard                |
| Number of positions  | 8                       |
| No. of cable outlets | 1                       |
| Shielded             | yes                     |
| Coding               | Y                       |

### Interfaces

|                      |  |
|----------------------|--|
| Bus system           | Ethernet                                   |
| Signal type/category | Ethernet hybrid CAT5 (IEC 11801), 100 Mbps |

### Signaling

|                        |    |
|------------------------|----|
| Status display         | no |
| Status display present | no |

### Electrical properties

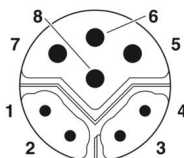
|                       |                          |
|-----------------------|--------------------------|
| Nominal voltage $U_N$ | 48 V AC (Power and data) |
|                       | 50 V DC (Power and data) |
| Nominal current $I_N$ | 6 A (Power)              |
|                       | 0.5 A (Data)             |
| Transmission medium   | Copper                   |
| Transmission speed    | 100 Mbps                 |

### Material specifications

|  |    |
|--|----|
| Flammability rating according to UL 94 | V0 |
|--|----|

### Connector

#### Connection 1

|                      |  |
|----------------------|--|
| Dimensional drawing  |  <p>M12 hybrid plug pin assignment, 8-pos., Y-coded, pin side view</p> |
| Type                 | M12 Plug, angled, 8-position, shielded (Advanced Shielding Technology), Keying: Y  |
| Number of positions  | 8  |
| Shielded             | yes  |
| Shielding            | Advanced Shielding Technology  |
| Signal type/category | EtherCAT® CAT5 (IEC 11801), 100 Mbps   |

# NBC-M12MRY/1,0-94H - Hybrid cable



1146462

<https://www.phoenixcontact.com/us/products/1146462>

|  |   |
|--|---|
|  | PROFINET CAT5 (IEC 11801)                   |
| Insertion/withdrawal cycles            | ≥ 100                                       |
| Insulation resistance                  | ≥ 100 MΩ                                    |
| Overvoltage category                   | II  |
| Degree of pollution                    | 3   |
| Tightening torque                      | 0.4 Nm                                      |
| Material Contact                       | CuZn  |
| Material Contact surface               | Ni/Au                                       |
| Material Contact carrier               | PA 6.6                                      |
| Material Screw connection              | Die-cast zinc, nickel-plated                |
| Material Grip body                     | TPU, hardly inflammable, self-extinguishing |
| Material Seal                          | FKM   |
| Flammability rating according to UL 94 | V0  |
| Degree of protection                   | IP65<br>IP67                                |
| Ambient temperature (operation)        | -25 °C ... 85 °C                            |
| Standard designation                   | M12 connector                               |
| Standards/regulations                  | IEC 61076-2-113                             |


## Connection 2

|      |                |
|------|----------------|
| Type | free cable end |
|------|----------------|

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 1 m |
|--------------|-----|

## Ethernet hybrid [94H]

|                                |  |
|--------------------------------|--|
| Dimensional drawing            |  |
| UL AWM Style                   | 20233 (80°C/300 V)   |
| Number of positions            | 8  |
| Shielded                       | yes  |
| Cable type                     | Ethernet hybrid [94H]  |
| Conductor structure            | 1x4x AWG 26+1x4x AWG 18  |
| AWG signal line                | 26   |
| AWG power supply               | 18   |
| Conductor cross-section        | 4x 0.15 mm <sup>2</sup> (Data)<br>4x 0.85 mm <sup>2</sup> (Power)                    |
| Wire diameter incl. insulation | 1.03 mm ±0.02 mm (Data)<br>1.6 mm ±0.1 mm (Power)                                    |

# NBC-M12MRY/1,0-94H - Hybrid cable



1146462

<https://www.phoenixcontact.com/us/products/1146462>

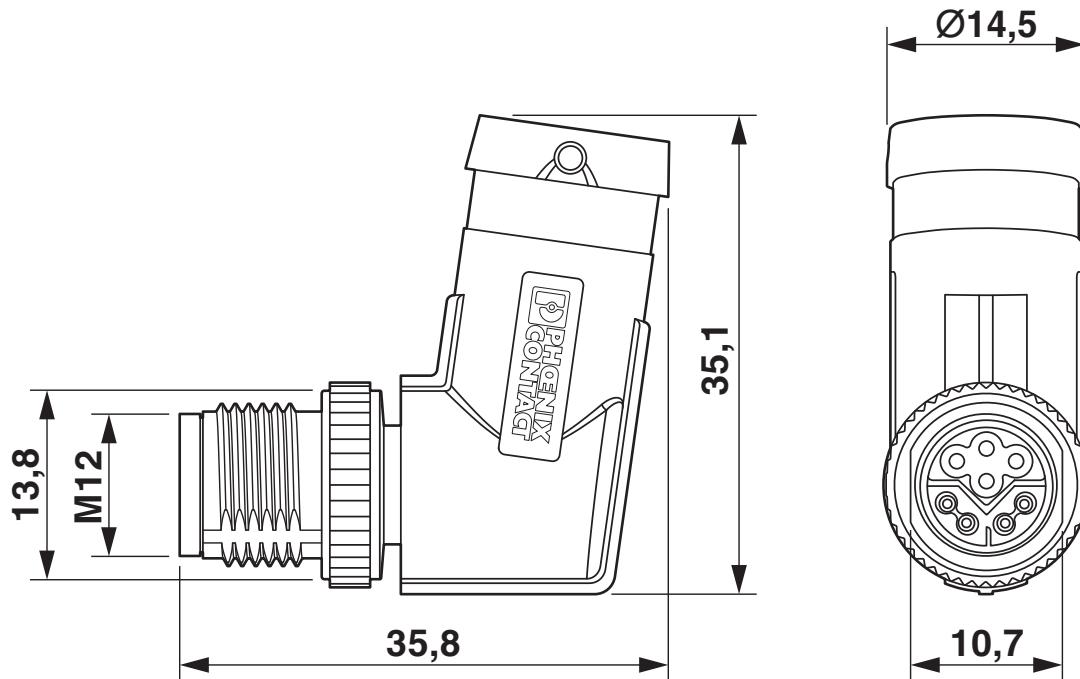
|   |  |
|---|--|
| External cable diameter                       | 8.80 mm ±0.2 mm  |
| Outer sheath, material                        | PUR  |
| External sheath, color                        | black RAL 9005   |
| Conductor material                            | Bare Cu litz wires   |
| Material wire insulation                      | PP (Data)  |
|   | PP (Power)   |
| Single wire, color                            | white/orange, orange, white/green, green, white, blue, brown, black  |
| Overall twist                                 | 1 star quad and 4 wires with 2 fillers   |
| Optical shield covering                       | 85 %   |
| Insulation resistance                         | ≥ 5 GΩ*km  |
| Loop resistance                               | ≤ 280.00 Ω/km (Data)   |
|   | ≤ 45.00 Ω/km (Power)   |
| Wave impedance                                | 100 Ω ±5 Ω (at 100 MHz)  |
| Differential impedance                        | 100 Ω ±5 % (at 100 MHz)  |
| Nominal voltage, cable                        | ≤ 125 V (Peak value, not for high-power applications)  |
| Test voltage Core/Core                        | 2000 V (50 Hz, 1 min.)   |
| Test voltage Core/Shield                      | 2000.00 V (50 Hz, 1 min.)  |
| Minimum bending radius, fixed installation    | 4 x D  |
| Minimum bending radius, flexible installation | 8 x D  |
| Dynamic load capacity (bending)               | Max. bending cycles: 2000000, Bending radius: 15 x D, Traversing path: 4.5 m, Traversing rate: 3 m/s, Acceleration: 3 m/s <sup>2</sup> , Ambient temperature: -20 °C ... 60 °C |
| Shield attenuation                            | ≥ 80.00 dB (30 MHz ... 100 MHz)  |
| Halogen-free                                  | according to IEC 60754-1   |
| Flame resistance                              | UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1)   |
|   | IEC 60332-1-2  |
| Resistance to oil                             | in accordance with IEC 60811-404   |
|   | According to DIN EN 50363-10-2   |
| Ambient temperature (operation)               | -40 °C ... 80 °C (cable, fixed installation)   |
|   | -30 °C ... 70 °C (Cable, flexible installation)  |
|   | -20 °C ... 60 °C (for installation)  |
|   | -20 °C ... 60 °C (cable, drag chain applications)  |

## Standards and regulations

|                          |                 |
|--------------------------|-----------------|
| Standard designation     | M12 connector   |
| Standards/specifications | IEC 61076-2-113 |

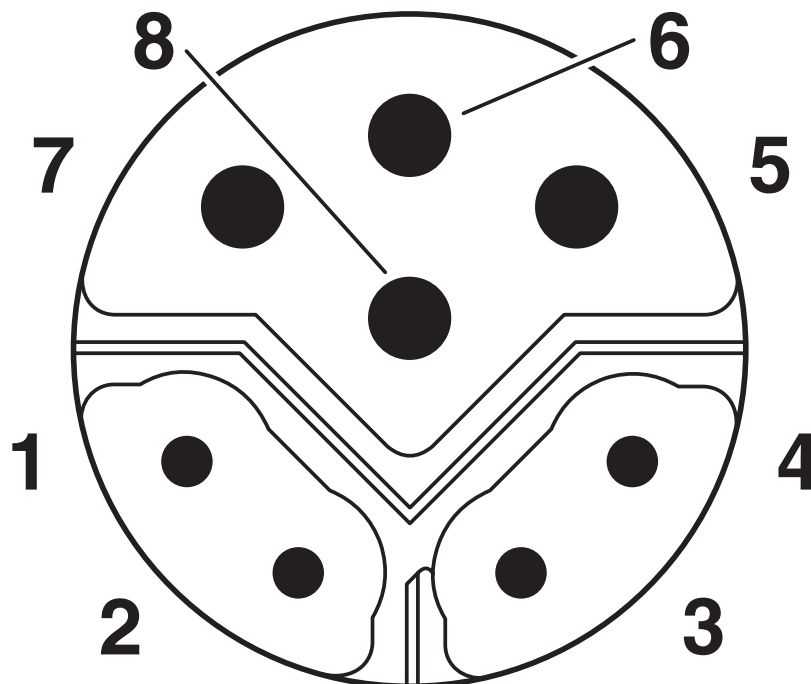
## Drawings

Dimensional drawing



M12 x 1 male plug, angled, shielded

Schematic diagram



M12 hybrid plug pin assignment, 8-pos., Y-coded, pin side view

# NBC-M12MRY/1,0-94H - Hybrid cable



1146462

<https://www.phoenixcontact.com/us/products/1146462>

Circuit diagram



Contact assignment of the M12 plug

# NBC-M12MRY/1,0-94H - Hybrid cable



1146462


<https://www.phoenixcontact.com/us/products/1146462>


## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1146462>

|  <b>UL Listed</b><br>Approval ID: FILE E 335024 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine  |                       |                       |                   |                             |
|  | 56.5 V                | 0.175 A               | -                 | -                           |

|  <b>cUL Listed</b><br>Approval ID: FILE E 335024 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine   |                       |                       |                   |                             |
|   | 56.5 V                | 0.175 A               | -                 | -                           |

|  <b>cUL Listed</b><br>Approval ID: E221474 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine   |                       |                       |                   |                             |
| Power   | 48 V                  | 6 A                   | -                 | -                           |
| Data  | 50 V                  | 0.5 A                 | -                 | -                           |

|  <b>UL Listed</b><br>Approval ID: E221474 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine  |                       |                       |                   |                             |
| Power  | 48 V                  | 6 A                   | -                 | -                           |
| Data   | 50 V                  | 0.5 A                 | -                 | -                           |

# NBC-M12MRY/1,0-94H - Hybrid cable



1146462

<https://www.phoenixcontact.com/us/products/1146462>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060307 |
| ECLASS-15.0 | 27060307 |

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

# NBC-M12MRY/1,0-94H - Hybrid cable



1146462

<https://www.phoenixcontact.com/us/products/1146462>

## Environmental product compliance

### EU RoHS

|   |                    |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

### China RoHS

|  |  |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|  | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 3.166 kg CO2e |
|---------|---------------|

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)