

# FLK 50/EZ-DR/ 100/KONFEK/S - Cable



2299107

<https://www.phoenixcontact.com/nl/products/2299107>

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Assembled shielded round cable; connection 1: IDC/FLK socket strip (1x 50-position); connection 2: IDC/FLK socket strip (1x 50-position) (The braided shield is routed to a separate cable end.); cable length: 1 m

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2299107                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | DK2212                         |
| Product key                          | DK2212                         |
| GTIN                                 | 4017918832162                  |
| Weight per piece (including packing) | 204,5 g                        |
| Weight per piece (excluding packing) | 199,7 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | DE                             |

## Technical data

### Environmental and real-life conditions

#### Ambient conditions

|                                                         |                                          |
|---------------------------------------------------------|------------------------------------------|
| Degree of protection                                    | IP00                                     |
| Degree of protection (Installation location)            | ≥ IP54 (Installation location)           |
| Ambient temperature (operation) (fixed installation)    | -40 °C ... 70 °C (fixed installation)    |
| Ambient temperature (operation) (flexible installation) | -10 °C ... 70 °C (flexible installation) |
| Ambient temperature (storage/transport)                 | -40 °C ... 80 °C                         |
| Altitude                                                | ≤ 2000 m                                 |

### Electrical properties

|                          |                                  |
|--------------------------|----------------------------------|
| Operating voltage (AC)   | ≤ 30 V AC                        |
| Operating voltage (DC)   | ≤ 60 V DC                        |
| Nominal operating mode   | 100% operating factor            |
| Current (Per path, 50°C) | ≤ 1 A (Uncoiled, see derating)   |
| Current (Per path, 70°C) | ≤ 0.6 A (Uncoiled, see derating) |

#### Supported controller: SIEMENS S7-1500

|                   |                    |
|-------------------|--------------------|
| Suitable I/O card | 6ES7521-1BL00-0AB0 |
|                   | 6ES7521-1BL10-0AA0 |
|                   | 6ES7522-1BL00-0AB0 |
|                   | 6ES7522-1BL01-0AB0 |
|                   | 6ES7522-1BL10-0AA0 |
|                   | 6ES7523-1BL00-0AA0 |
|                   | 6ES7531-7KF00-0AB0 |
|                   | 6ES7531-7LH00-0AB0 |
|                   | 6ES7531-7MH00-0AB0 |
|                   | 6ES7531-7NF00-0AB0 |
|                   | 6ES7531-7NF10-0AB0 |
|                   | 6ES7531-7PF00-0AB0 |
|                   | 6ES7532-5HF00-0AB0 |

#### Supported controller: SIEMENS S7-300 / ET 200 M

|                   |                    |
|-------------------|--------------------|
| Suitable I/O card | CPU 313C           |
|                   | CPU 313C-2DP       |
|                   | CPU 313C-2PiP      |
|                   | CPU 314C-2DP       |
|                   | CPU 314C-2PiP      |
|                   | 6ES7321-1BL00-0AA0 |
|                   | 6ES7322-1BL00-0AA0 |
|                   | 6ES7322-8BH01-0AB0 |
|                   | 6ES7323-1BL00-0AA0 |
|                   | 6ES7331-1KF01-0AB0 |
|                   |                    |

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|  |                    |
|--|--------------------|
|  | 6ES7331-7NF00-0AB0 |
|  | 6ES7331-7NF10-0AB0 |
|  | 6ES7331-7PF01-0AB0 |
|  | 6ES7331-7PF11-0AB0 |
|  | 6ES7332-5HF00-0AB0 |
|  | 6ES7350-2AH01-0AE0 |
|  | 6ES7357-4AH01-0AE0 |

Supported controller: SIEMENS S7-400

|                   |                    |
|-------------------|--------------------|
| Suitable I/O card | 6ES7421-1BL01-0AA0 |
|                   | 6ES7421-7BH01-0AB0 |
|                   | 6ES7421-7DH00-0AA0 |
|                   | 6ES7422-1BL00-0AA0 |
|                   | 6ES7422-7BL00-0AB0 |
|                   | 6ES7431-0HH0-0AB0  |
|                   | 6ES7431-1KF00-0AB0 |
|                   | 6ES7431-1KF10-0AB0 |
|                   | 6ES7431-1KF20-0AB0 |
|                   | 6ES7431-7KF00-0AB0 |
|                   | 6ES7431-7KF10-0AB0 |
|                   | 6ES7431-7QH00-0AB0 |
|                   | 6ES7432-1HF00-0AB0 |

Supported controller: SCHNEIDER ELECTRIC Modicon TSX QUANTUM

|                   |         |
|-------------------|---------|
| Suitable I/O card | DDI 353 |
|                   | DDI 841 |
|                   | DDI 853 |
|                   | DAI 340 |
|                   | DAI 440 |
|                   | DAI 453 |
|                   | DDO 353 |
|                   | DDM 390 |
|                   | ACI 030 |
|                   | ACI 040 |
|                   | ATI 030 |
|                   | ARI 030 |
|                   | AVI 030 |
|                   | ACO 020 |
|                   | ACO 130 |
|                   | AVO 020 |
|                   | EHC 105 |
|                   | EHC 202 |
|                   |         |
|                   |         |

Supported controller: ALLEN-BRADLEY ControlLogix

1756-IA16I

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|                   |            |
|-------------------|------------|
| Suitable I/O card | 1756-IB16D |
|                   | 1756-IB16I |
|                   | 1756-IB32  |
|                   | 1756-IH16I |
|                   | 1756-OB32  |
|                   | 1756-IF8   |
|                   | 1756-IF16  |
|                   | 1756-HSC   |
|                   | 1756-M02AE |

Supported controller: HONEYWELL Experion PKS C200

|                   |            |
|-------------------|------------|
| Suitable I/O card | TC-IDK 161 |
|                   | TC-IDX 161 |
|                   | TC-IDJ 161 |
|                   | TC-IDD 321 |
|                   | TC-ODD 321 |
|                   | TC-IAH 161 |

## Cable/line

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

### 50X0.14 [PVC]

|                                               |                                                                   |
|-----------------------------------------------|-------------------------------------------------------------------|
| UL AWM Style                                  | 2464/1061                                                         |
| Number of positions                           | 50                                                                |
| Shielded                                      | yes                                                               |
| Cable type                                    | 50X0.14 [PVC]                                                     |
| Conductor type                                | Assembled shielded round cable                                    |
| Conductor structure signal line               | 7x 0.16 mm                                                        |
| AWG signal line                               | 26                                                                |
| Conductor cross-section                       | 50x 0.14 mm <sup>2</sup>                                          |
| Wire diameter incl. insulation                | 1 mm ±0.03 mm                                                     |
| External cable diameter                       | 11.00 mm ±0.3 mm                                                  |
| Outer sheath, material                        | Semi-rigid PVC                                                    |
| External sheath, color                        | gray                                                              |
| Conductor material                            | Tin-plated Cu litz wires                                          |
| Cable resistance                              | ≤ 145 Ω/km (at 20 °C)                                             |
| Insulation resistance                         | ≥ 20 MΩ*km (20 °C)                                                |
| Smallest bending radius, fixed installation   | 114 mm                                                            |
| Smallest bending radius, movable installation | 205 mm                                                            |
| Dynamic load capacity (bending)               | Max. bending cycles: 5000 (at a radius of ≥ 18x outside diameter) |
| Halogen-free                                  | no                                                                |
| Flame resistance                              | IEC 60332-1-2 (raw cable)                                         |
|                                               | VDE 0842, Part 332-1-2 (raw cable)                                |
|                                               | IEC 60332-3-22 (raw cable)                                        |

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|                   |                                               |
|-------------------|-----------------------------------------------|
|                   | UL VW-1                                       |
|                   | CSA FT-1                                      |
| Resistance to oil | can withstand occasional splashes (raw cable) |
| Cable type        | Cable for one module                          |

Color code: Single-core wire

|              |                                 |
|--------------|---------------------------------|
| black        | IDC/FLK50 (1) = IDC/FLK50 (1)   |
| brown        | IDC/FLK50 (2) = IDC/FLK50 (2)   |
| red          | IDC/FLK50 (3) = IDC/FLK50 (3)   |
| orange       | IDC/FLK50 (4) = IDC/FLK50 (4)   |
| yellow       | IDC/FLK50 (5) = IDC/FLK50 (5)   |
| green        | IDC/FLK50 (6) = IDC/FLK50 (6)   |
| blue         | IDC/FLK50 (7) = IDC/FLK50 (7)   |
| violet       | IDC/FLK50 (8) = IDC/FLK50 (8)   |
| gray         | IDC/FLK50 (9) = IDC/FLK50 (9)   |
| white        | IDC/FLK50 (10) = IDC/FLK50 (10) |
| white-black  | IDC/FLK50 (11) = IDC/FLK50 (11) |
| white-brown  | IDC/FLK50 (12) = IDC/FLK50 (12) |
| white-red    | IDC/FLK50 (13) = IDC/FLK50 (13) |
| white-orange | IDC/FLK50 (14) = IDC/FLK50 (14) |
| white-yellow | IDC/FLK50 (15) = IDC/FLK50 (15) |
| white-green  | IDC/FLK50 (16) = IDC/FLK50 (16) |
| white-blue   | IDC/FLK50 (17) = IDC/FLK50 (17) |
| white-violet | IDC/FLK50 (18) = IDC/FLK50 (18) |
| white-gray   | IDC/FLK50 (19) = IDC/FLK50 (19) |
| brown-black  | IDC/FLK50 (20) = IDC/FLK50 (20) |
| brown-red    | IDC/FLK50 (21) = IDC/FLK50 (21) |
| brown-orange | IDC/FLK50 (22) = IDC/FLK50 (22) |
| brown-yellow | IDC/FLK50 (23) = IDC/FLK50 (23) |
| brown-green  | IDC/FLK50 (24) = IDC/FLK50 (24) |
| brown-blue   | IDC/FLK50 (25) = IDC/FLK50 (25) |
| brown-violet | IDC/FLK50 (26) = IDC/FLK50 (26) |
| brown-gray   | IDC/FLK50 (27) = IDC/FLK50 (27) |
| brown-white  | IDC/FLK50 (28) = IDC/FLK50 (28) |
| green-black  | IDC/FLK50 (29) = IDC/FLK50 (29) |
| green-brown  | IDC/FLK50 (30) = IDC/FLK50 (30) |
| green-red    | IDC/FLK50 (31) = IDC/FLK50 (31) |
| green-orange | IDC/FLK50 (32) = IDC/FLK50 (32) |
| green-blue   | IDC/FLK50 (33) = IDC/FLK50 (33) |
| green-violet | IDC/FLK50 (34) = IDC/FLK50 (34) |
| green-gray   | IDC/FLK50 (35) = IDC/FLK50 (35) |
| green-white  | IDC/FLK50 (36) = IDC/FLK50 (36) |
| yellow-black | IDC/FLK50 (37) = IDC/FLK50 (37) |
| yellow-brown | IDC/FLK50 (38) = IDC/FLK50 (38) |

|               |                                 |
|---------------|---------------------------------|
| yellow-red    | IDC/FLK50 (39) = IDC/FLK50 (39) |
| yellow-orange | IDC/FLK50 (40) = IDC/FLK50 (40) |
| yellow-blue   | IDC/FLK50 (41) = IDC/FLK50 (41) |
| yellow-violet | IDC/FLK50 (42) = IDC/FLK50 (42) |
| yellow-gray   | IDC/FLK50 (43) = IDC/FLK50 (43) |
| yellow-white  | IDC/FLK50 (44) = IDC/FLK50 (44) |
| gray-black    | IDC/FLK50 (45) = IDC/FLK50 (45) |
| gray-brown    | IDC/FLK50 (46) = IDC/FLK50 (46) |
| gray-red      | IDC/FLK50 (47) = IDC/FLK50 (47) |
| gray-orange   | IDC/FLK50 (48) = IDC/FLK50 (48) |
| gray-yellow   | IDC/FLK50 (49) = IDC/FLK50 (49) |
| gray-green    | IDC/FLK50 (50) = IDC/FLK50 (50) |

## Connection data

### Connection 1

|                                  |                              |
|----------------------------------|------------------------------|
| Connection in acc. with standard | IEC 60603-13 (in compliance) |
| Connection method                | IDC/FLK socket strip         |
| Number of connections            | 1                            |
| Number of positions              | 50                           |
| Insertion/withdrawal cycles      | > 50                         |
| Pitch                            | 2.54 mm                      |

### Connection 2

|                                  |                                                                                       |
|----------------------------------|---------------------------------------------------------------------------------------|
| Connection in acc. with standard | IEC 60603-13 (in compliance)                                                          |
| Connection method                | IDC/FLK socket strip                                                                  |
| Number of connections            | 1                                                                                     |
| Number of positions              | 50                                                                                    |
| Note                             | The braided shield is routed to a separate cable end.                                 |
|                                  | The separate cable end is approximately 0.5 m long (H05V-K 1 mm <sup>2</sup> , black) |
| Insertion/withdrawal cycles      | > 50                                                                                  |
| Pitch                            | 2.54 mm                                                                               |

## Notes

|                    |                                                                                                                                                                                                                                                                                |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes on operation | For proper use, the specifications of the installation directive (see Downloads) must be observed. For applications or use with third-party products, the specifications, and the safety and warning instructions of the respective third-party manufacturer must also be met. |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Drawings

Diagram



Maximum permissible current per path in uncoiled state

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/nl/products/2299107>



**EAC**

Approval ID: RU\*-DE.HB\*35.B00385



**UL Listed**

Approval ID: E238705

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 125 V                 | 1 A                   | -                 | -                           |



**cUL Listed**

Approval ID: E238705

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 125 V                 | 1 A                   | -                 | -                           |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27242220 |
| ECLASS-15.0 | 27242220 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC000237 |
|-----------|----------|

### UNSPSC

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

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## 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% |
|-------------------------------------|----------------------------|

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