

# FLK 40-PA/EZ-DR/HF/KS/ 500/YUC - Front adapter



2904645

<https://www.phoenixcontact.com/us/products/2904645>

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Cast front adapter with attached, halogen-free round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 5.0 m

## Your advantages

- Molded connectors
- Can be screwed on
- KS/AKB-compatible connectors on the module side
- Lateral cable outlet of the I/O module

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2904645                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | C421                           |
| Product key                          | DK222N                         |
| GTIN                                 | 4046356868419                  |
| Weight per piece (including packing) | 892.5 g                        |
| Weight per piece (excluding packing) | 845.7 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | DE                             |

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## Technical data

### Product properties

|              |               |
|--------------|---------------|
| Product type | Front adapter |
|--------------|---------------|

### Electrical properties

|                        |                       |
|------------------------|-----------------------|
| Operating voltage (DC) | ≤ 30 V DC             |
| Nominal operating mode | 100% operating factor |
| Current (Per path)     | ≤ 500 mA (uncoiled)   |

#### Supported controller YOKOGAWA CS3000 CentumVP

|                   |        |
|-------------------|--------|
| Suitable I/O card | AAI543 |
|                   | AAI141 |
|                   | AAI143 |
|                   | AAI835 |
|                   | AAI841 |
|                   | AAI135 |
|                   | AAR181 |
|                   | AAT141 |
|                   | AAV141 |
|                   | AAV142 |
|                   | AAB841 |
|                   | AAV542 |

#### Supported controller YOKOGAWA STARDOM

|                   |         |
|-------------------|---------|
| Suitable I/O card | NFAI543 |
|                   | NFAI141 |
|                   | NFAI143 |
|                   | NFAI835 |
|                   | NFAI841 |
|                   | NFAI135 |
|                   | NFAV141 |
|                   | NFAV142 |
|                   | NFAB841 |
|                   | NFAV542 |

#### Supported controller YOKOGAWA ProSafe-RS

|                   |        |
|-------------------|--------|
| Suitable I/O card | SAI143 |
|                   | SAV144 |
|                   | SAI533 |

## Connection data

### Connection 1

|                                  |                              |
|----------------------------------|------------------------------|
| Connection in acc. with standard | IEC 60603-13 (in compliance) |
|----------------------------------|------------------------------|

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|                             |                                |
|-----------------------------|--------------------------------|
| Connection method           | Yokogawa, I/O cards compatible |
| Number of connections       | 1                              |
| Number of positions         | 40                             |
| Tightening torque           | 0.5 Nm (Screw connection)      |
| Insertion/withdrawal cycles | > 50                           |
| Pitch                       | 2.54 mm                        |

## Connection 2

|                                  |                              |
|----------------------------------|------------------------------|
| Connection in acc. with standard | IEC 60603-13 (in compliance) |
| Connection method                | Yokogawa, KS compatible      |
| Number of connections            | 1                            |
| Number of positions              | 40                           |
| Tightening torque                | 0.5 Nm (Screw connection)    |
| Insertion/withdrawal cycles      | > 50                         |
| Pitch                            | 2.54 mm                      |

## Dimensions

### Cable

|        |     |
|--------|-----|
| Length | 5 m |
|--------|-----|

### Cable/line

|                                               |                                                                                               |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------|
| UL AWM Style                                  | 21946                                                                                         |
| Number of positions                           | 40                                                                                            |
| Shielded                                      | yes                                                                                           |
| Conductor type                                | Assembled, shielded, halogen-free round cable                                                 |
| Conductor structure signal line               | 7x 0.16 mm                                                                                    |
| AWG signal line                               | 26                                                                                            |
| Conductor cross section                       | 40x 0.14 mm <sup>2</sup>                                                                      |
| Wire diameter incl. insulation                | 1 mm ±0.03 mm                                                                                 |
| External cable diameter                       | 9.80 mm ±0.4 mm                                                                               |
| Outer sheath, material                        | Halogen-free sheath                                                                           |
| External sheath, color                        | gray                                                                                          |
| Conductor material                            | Tin-plated Cu litz wires                                                                      |
| Cable resistance                              | ≤ 145 Ω/km                                                                                    |
| Insulation resistance                         | ≥ 20 MΩ*km                                                                                    |
| Smallest bending radius, fixed installation   | 102 mm                                                                                        |
| Smallest bending radius, movable installation | 184 mm                                                                                        |
| Dynamic load capacity (bending)               | Max. bending cycles: 5000                                                                     |
| Halogen-free                                  | yes                                                                                           |
| Flame resistance                              | IEC 60332-1-2 (raw cable)<br>VDE 0842, Part 332-1-2 (raw cable)<br>IEC 60332-3-22 (raw cable) |
| Resistance to oil                             | can withstand occasional splashes (raw cable)                                                 |

## Environmental and real-life conditions

### Ambient conditions

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

## Approvals

### UKCA

|             |                |
|-------------|----------------|
| Certificate | UKCA-compliant |
|-------------|----------------|

## Mounting

|                   |     |
|-------------------|-----|
| Mounting position | any |
|-------------------|-----|

## 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. |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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## Drawings

Connection diagram

| 40-pos.<br>connector the<br>I/O card | 40-pos.<br>connector to<br>the module | Wire color    |
|--------------------------------------|---------------------------------------|---------------|
| 1                                    | 40                                    | black         |
| 2                                    | 39                                    | brown         |
| 3                                    | 38                                    | red           |
| 4                                    | 37                                    | orange        |
| 5                                    | 36                                    | yellow        |
| 6                                    | 35                                    | green         |
| 7                                    | 34                                    | blue          |
| 8                                    | 33                                    | violet        |
| 9                                    | 32                                    | gray          |
| 10                                   | 31                                    | white         |
| 11                                   | 30                                    | white-black   |
| 12                                   | 29                                    | white-brown   |
| 13                                   | 28                                    | white-red     |
| 14                                   | 27                                    | white-orange  |
| 15                                   | 26                                    | white-yellow  |
| 16                                   | 25                                    | white-green   |
| 17                                   | 24                                    | white-blue    |
| 18                                   | 23                                    | white-violet  |
| 19                                   | 22                                    | white-gray    |
| 20                                   | 21                                    | brown-black   |
| 21                                   | 20                                    | brown-red     |
| 22                                   | 19                                    | brown-orange  |
| 23                                   | 18                                    | brown-yellow  |
| 24                                   | 17                                    | brown-green   |
| 25                                   | 16                                    | brown-blue    |
| 26                                   | 15                                    | brown-violet  |
| 27                                   | 14                                    | brown-gray    |
| 28                                   | 13                                    | brown-white   |
| 29                                   | 12                                    | green-black   |
| 30                                   | 11                                    | green-brown   |
| 31                                   | 10                                    | green-red     |
| 32                                   | 9                                     | green-orange  |
| 33                                   | 8                                     | green-blue    |
| 34                                   | 7                                     | green-violet  |
| 35                                   | 6                                     | green-gray    |
| 36                                   | 5                                     | green-white   |
| 37                                   | 4                                     | yellow-black  |
| 38                                   | 3                                     | yellow-brown  |
| 39                                   | 2                                     | yellow-red    |
| 40                                   | 1                                     | yellow-orange |

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2904645>



**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                 | 0.5 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                 | 0.5 A                 | -                 | -                           |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27242292 |
| ECLASS-15.0 | 27242292 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002584 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 32151600 |
|-------------|----------|

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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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