

# Cable - FLK 50/EZ-DR/D37SUB/ 50/X81-I



2302641

<https://www.phoenixcontact.com/pc/products/2302641>

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Round cable set; controller: Mitsubishi Electric MELSEC Q (X81); connection 1: D-SUB socket strip (1x 37-position); connection 2: IDC/FLK socket strip (1x 50-position); cable length: 0.5 m

## Commercial Data

Item number	2302641
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Product Key	CK2143
Catalog Page	Page 482 (C-5-2019)
GTIN	4017918910310
Weight per Piece (including packing)	213.2 g
Weight per Piece (excluding packing)	211.9 g
Customs tariff number	85444290
Country of origin	DE

## Technical Data

### Product properties

Product type	System cable
Insulation characteristics	
Overvoltage category	II
Pollution degree	2
Insulation	Functional insulation

### Environmental and real-life conditions

#### Ambient conditions

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

### Electrical properties

Max. permissible operating voltage	25 V AC
	60 V DC
Nominal operating mode	100% operating factor
Max. current carrying capacity per path	1 A (50 °C)
	0.6 A (70 °C)
Rated insulation voltage	63 V
Rated surge voltage	0.6 kV

#### Supported controller MITSUBISHI MELSEC Q

Suitable I/O card	QX81
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### Cable / line

Cable length	0.5 m
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#### 50X0.14 [PVC]

UL AWM Style	2464/1061
Number of positions	50
Shielded	no
Cable type	50X0.14 [PVC]
Conductor type	Round cable set
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

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External cable diameter	10.3 mm ±0.4 mm
Outer sheath, material	Semi-rigid PVC
External sheath, color	gray
Conductor material	Tin-plated Cu litz wires
Cable resistance	≤ 145 Ω/km (20 °C)
Insulation resistance	≥ 20 MΩ*km (20 °C)
Smallest bending radius, fixed installation	86 mm
Smallest bending radius, movable installation	161 mm
Max. bending cycles	5000 (at a radius of ≥ 15x 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)
	UL VW-1
	CSA FT-1
Resistance to oil	can withstand occasional splashes (raw cable)
Type	Cable for one module

## color code

D-SUB37 (1)	IDC/FLK50 (3) = black
D-SUB37 (20)	IDC/FLK50 (4) = brown
D-SUB37 (2)	IDC/FLK50 (5) = red
D-SUB37 (21)	IDC/FLK50 (6) = orange
D-SUB37 (3)	IDC/FLK50 (7) = yellow
D-SUB37 (22)	IDC/FLK50 (8) = green
D-SUB37 (4)	IDC/FLK50 (9) = blue
D-SUB37 (23)	IDC/FLK50 (10) = violet
D-SUB37 (17)	IDC/FLK50 (11) = gray
D-SUB37 (18)	IDC/FLK50 (12) = white
D-SUB37 (5)	IDC/FLK50 (15) = white-black
D-SUB37 (24)	IDC/FLK50 (16) = white-brown
D-SUB37 (6)	IDC/FLK50 (17) = white-red
D-SUB37 (25)	IDC/FLK50 (18) = white-orange
D-SUB37 (7)	IDC/FLK50 (19) = white-yellow
D-SUB37 (26)	IDC/FLK50 (20) = white-green
D-SUB37 (8)	IDC/FLK50 (21) = white-blue
D-SUB37 (27)	IDC/FLK50 (22) = white-violet
D-SUB37 (17)	IDC/FLK50 (23) = white-gray
D-SUB37 (18)	IDC/FLK50 (24) = brown-black
D-SUB37 (9)	IDC/FLK50 (27) = brown-red
D-SUB37 (28)	IDC/FLK50 (28) = brown-orange
D-SUB37 (10)	IDC/FLK50 (29) = brown-yellow
D-SUB37 (29)	IDC/FLK50 (30) = brown-green
D-SUB37 (11)	IDC/FLK50 (31) = brown-blue

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D-SUB37 (30)	IDC/FLK50 (32) = brown-violet
D-SUB37 (12)	IDC/FLK50 (33) = brown-gray
D-SUB37 (31)	IDC/FLK50 (34) = brown-white
D-SUB37 (17)	IDC/FLK50 (35) = green-black
D-SUB37 (18)	IDC/FLK50 (36) = green-brown
D-SUB37 (13)	IDC/FLK50 (39) = green-red
D-SUB37 (32)	IDC/FLK50 (40) = green-orange
D-SUB37 (14)	IDC/FLK50 (41) = green-blue
D-SUB37 (33)	IDC/FLK50 (42) = green-violet
D-SUB37 (15)	IDC/FLK50 (43) = green-gray
D-SUB37 (34)	IDC/FLK50 (44) = green-white
D-SUB37 (16)	IDC/FLK50 (45) = yellow-black
D-SUB37 (35)	IDC/FLK50 (46) = yellow-brown
D-SUB37 (36)	IDC/FLK50 (47) = yellow-red
	IDC/FLK50 (48) = yellow-orange

## Connection data

### Field level

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

### Controller level

Connection in acc. with standard	IEC 60807-2
	DIN 41652
Connection method	D-SUB socket strip
Screw thread	M2,5
Number of connections	1
Number of positions	37
Tightening torque	0.2 Nm
Insertion/withdrawal cycles	> 200

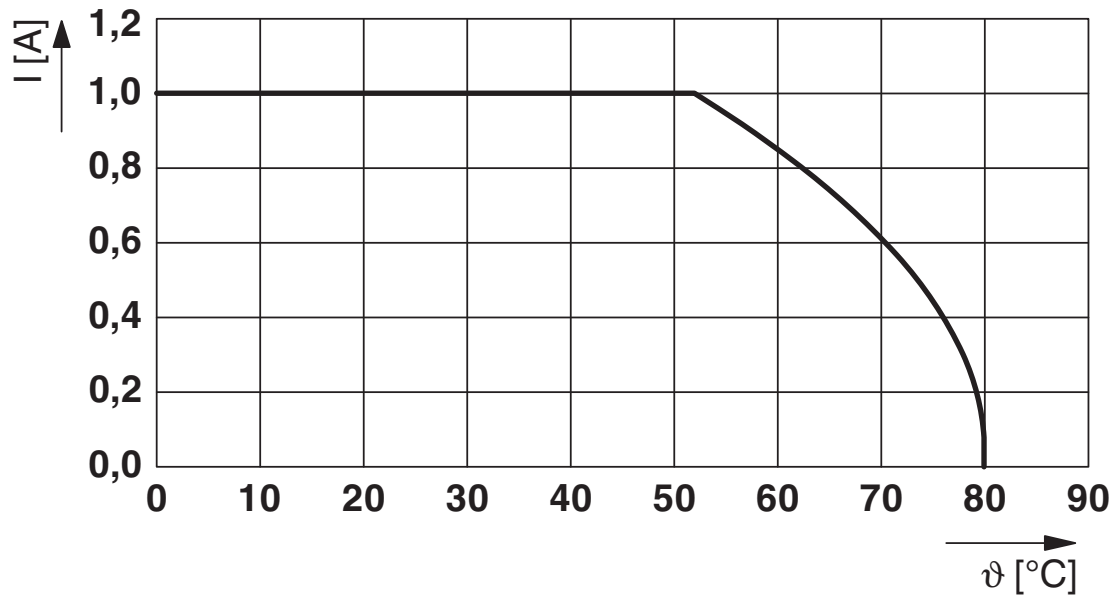
## Standards and regulations

### Air clearances and creepage distances

Standards/regulations	DIN EN 50178
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Drawings

Diagram



Maximum permissible current per path in uncoiled state

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## Approvals



### EAC

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



### UL Listed

Approval ID: FILE E 238705

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	125 V	1 A	-	-



### cUL Listed

Approval ID: FILE E 238705

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	125 V	1 A	-	-

### cULus Listed

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## Classifications

### ECLASS

ECLASS-9.0	27242220
ECLASS-10.0.1	27242220
ECLASS-11.0	27242220

### ETIM

ETIM 8.0	EC000237
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### UNSPSC

UNSPSC 21.0	26121600
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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

### Cable marker carrier

Cable marker carrier - KME - 0807083

<https://www.phoenixcontact.com/pc/products/0807083>



Cable marker carrier, white, unlabeled, mounting type: Assembly with cable ties, cable diameter: > 5 mm, lettering field size: 20 mm x 8 mm

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