PHŒNIX CONTACT

Module carrier - TC-2KS40-AI16-M-PRH-CS - 2905257

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Termination Carrier for redundantly connecting 16 MINI Analog signal conditioners to analog input cards of the Yokogawa Centum VP controller, via KS40 connector, 40-pos. Suitable for Yokogawa AAI141 and AAI143 cards.

Your advantages

- ☑ Mechanically decoupled, passive PCB
- ☑ Redundant system connection, 40-pos. (KS/AKB-compatible)
- ☑ Simple or redundant supply (decoupled from diode, protected against polarity reversal) and monitoring function implemented via separate DIN rail module
- ☑ FLK26 high-density HART connection
- ☑ Robust aluminum profile with integrated DIN rail
- ☑ Side parts with integrated end clamps
- ☑ Cable sets for signal connection are supplied as standard and do not have to be ordered separately

RoHS

Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356950732
Weight per Piece (excluding packing)	1,220.000 g
Custom tariff number	85366990
Country of origin	Germany
Note	Made to Order (non-returnable)

Technical data

Dimensions

Width	148 mm
Height	170 mm
Depth	160 mm

Ambient conditions

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Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C (Please observe module specifications)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Maximum altitude	$\leq$ 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Degree of protection	IP00
Shock	15g, according to IEC 60068-2-27
Vibration (operation)	2g, according to IEC 60068-2-6

General

Nominal voltage U_N	< 30 V DC (Per signal/channel)
Max. permissible current	23 mA (Signal/channel)

Supply

Designation	Power module
Note	Power supply via 2902958 MINI MCR-SL-PTB-FM power terminal and 2902961 MINI MCR-SL-FM-RC-NC error signaling module.
Input voltage	24 V DC
Input voltage range	19.2 V DC ... 30 V DC
Input current	$\leq$ 2 A
Redundant supply	yes, decoupled from diodes
Polarization and surge protection	Yes
Output name	Switching output
Contact type	1 N/C contact (alarm = open)
Maximum switching voltage	30 V DC (50 mA)
Fuse	2x 2.5 A on PCB, slow-blow (replaceable)
Status display	2 x red LED (error)
	2x green LEDs (PWR1 and PWR2)

Connection data

Connection name	Power supply
Connection method	Screw connection
Stripping length	7 mm
Number of connections	1
Number of positions	6
Conductor cross section solid	0.14 mm² ... 2.5 mm²
Conductor cross section flexible	0.14 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 12

Connection data 2

Connection name	Controller level
Connection method	Yokogawa KS-compatible
Number of connections	2
Number of positions	40

![PHŒNIX CONTACT logo]

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Technical data

Standards and Regulations

Designation	Air clearances and creepage distances
Standards/regulations	DIN EN 50178
Rated insulation voltage	50 V
Rated surge voltage	0.5 kV
Insulation	Basic insulation
Pollution degree	2
Overvoltage category	II
Shock	15g, according to IEC 60068-2-27
Vibration (operation)	2g, according to IEC 60068-2-6
UL, USA/Canada	UL 61010 Listed
	Class I, Div. 2, Groups A, B, C, D T4
	Class I, Zone 2, Group IIC

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Articles in set

Cable set - TC-C-2MIN-AI-05061516 - 2905224

Cable set for signal transmission on the termination carrier for modules from the MINI Analog series. Connection of terminal points 5 and 6 of two adjacent MINI Analog modules to the signal PCB via a 4-pos. PTSM connector.

Cable set - TC-C-PTB1-AI-SET1 - 2905217

Cable set for MINI MCR-SL-PTB-FM power module (Order No. 2902958) and MINI MCR-SL-FM-RC-NC error message module (Order No. 2902961), for use on the termination carrier for modules from the MINI Analog series.

DIN rail bus connectors - ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - 2869728

DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

Module carrier - TC-2KS40-AI16-M-PRH-CS - 2905257

Articles in set

Classifications

eCl@ss

eCl@ss 4.0	27250313
eCl@ss 4.1	27250313
eCl@ss 5.0	27371600
eCl@ss 5.1	27371600
eCl@ss 6.0	27371600
eCl@ss 7.0	27141152
eCl@ss 8.0	27141152
eCl@ss 9.0	27141152

ETIM

ETIM 4.0	EC002780
ETIM 5.0	EC002780
ETIM 6.0	EC002780
ETIM 7.0	EC002780

UNSPSC

UNSPSC 13.2	39121432
UNSPSC 18.0	39121432
UNSPSC 19.0	39121432
UNSPSC 20.0	39121432
UNSPSC 21.0	39121432

Approvals

Approvals

Approvals

UL Listed / cUL Listed / EAC / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

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Module carrier - TC-2KS40-AI16-M-PRH-CS - 2905257

Approvals

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 330267
Nominal voltage UN		50 V	
Nominal current IN		1 A	

cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 330267
Nominal voltage UN		50 V	
Nominal current IN		1 A	

EAC		RU C-DE.A*30.B.01742

cULus Listed	

Accessories

Necessary add-on products

Repeater power supply - MINI MCR-SL-RPSS-I-I - 2864079

MCR repeater power supply with HART transmission, input signal 4...20 mA, output signal 4...20 mA, with screw connection.

Monitoring module - MINI MCR-SL-FM-RC-NC - 2902961

The fault monitoring module is used to evaluate and report group errors from the fault monitoring system and to monitor the supply voltages. The error is reported via an N/O contact. Screw connection, standard configuration.

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Accessories

Power terminal block - MINI MCR-SL-PTB-FM - 2902958

The MINI MCR-SL-PTB-FM(-SP) power terminal block is used to supply the supply voltage to the DIN rail connector. The FM power terminal block offers the additional function of monitoring in combination with the fault monitoring module. Screw connection.

Signal conditioner - MINI MCR-SL-UI-UI - 2864383

MCR 3-way signal conditioner, input/output can be configured via DIP switches, for the electrical isolation of analog signals, with screw connection, order configuration. Replacement part: 2902036 MINI MCR-2-UI-UI-C.

Signal conditioner - MINI MCR-SL-SHUNT-UI - 2810858

MCR 3-way signal conditioner, with configurable input/output, for electrical isolation and conversion of analog signals in the mV range, both unipolar and bipolar with screw connection, pre-configured. Replacement part: 2902018 MINI MCR-2-U-UI-C.

Signal conditioner - MINI MCR-SL-U-UI - 2864053

MCR 3-way signal conditioner, with configurable input/output, for electrical isolation and conversion of analog signals up to 30 V with screw connection, order configuration. Replacement part: 2902036 MINI MCR-2-UI-UI-C.

Signal conditioner - MINI MCR-SL-I-I - 2864406

MCR 3-way isolating amplifier, for electrical isolation of analog signals, with screw connection, input signal: 0(4) mA ... 20 mA, output signal: 0(4) mA ... 20 mA

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Module carrier - TC-2KS40-AI16-M-PRH-CS - 2905257

Accessories

Loop-powered isolators - MINI MCR-SL-1CP-I-I - 2864419

MCR loop-powered isolator, 1-channel, for the electrical isolation of current signals without auxiliary power, with screw connection

Loop-powered isolators - MINI MCR-SL-2CP-I-I - 2864655

MCR passive isolator, 2-channel, for the electrical isolation of current signals without auxiliary power, with screw connection

Signal conditioner - MINI MCR-SL-UI-I-LP-NC - 2902829

2-way loop-powered isolating amplifier (supplied on the output side), can be configured via DIP switches, with screw connection technology and standard configuration.

Resistance thermometer measuring transducer - MINI MCR-RTD-UI-NC - 2902849

Configurable temperature transducer for the connection of 2, 3, and 4-conductor resistance thermometers and resistance-type sensors. Can be configured via DIP switches or, with extended functionality, using the software. Screw connection, standard configuration.

Temperature measuring transducer - MINI MCR-SL-PT100-UI-200 - 2864309

MCR temperature transducer, can be configured, for Pt 100 temperature sensors, with screw connection, order configuration. Replacement part: 2902048 MINI MCR-2-RTD-UI-C.

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Module carrier - TC-2KS40-AI16-M-PRH-CS - 2905257

Accessories

Resistance thermometer measuring transducer - MINI MCR-SL-PT100-UI - 2864435

MCR temperature transducer for Pt 100 temperature sensors, configured via DIP switches, with screw connection, pre-configured (please observe the order key). Replacement part: 2902048 MINI MCR-2-RTD-UI-C.

Temperature measuring transducer - MINI MCR-SL-PT100-LP - 2810298

Loop-powered temperature transducer for Pt 100 temperature sensors, configured via DIP switches, with screw connection, pre-configured (please observe the order key). Replacement part: 2810308 MINI MCR-SL-PT100-LP-NC.

Thermocouple measuring transducer - MINI MCR-TC-UI-NC - 2902851

Configurable temperature transducer for the connection of thermocouples. Can be configured via DIP switches or, with extended functionality, using the software. Screw connection, standard configuration.

Resistance/potiposition transducer - MINI MCR-SL-R-UI - 2864095

MCR potiposition transducer for conversion of potentiometer positions into a standard analog signal, 0 Ω input... 100 Ω to 0 kΩ ... 100 kΩ

Front adapters - FLK 40-PA/EZ-DR/KS/ 100/YUC - 2322786

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 1.0 m

Module carrier - TC-2KS40-AI16-M-PRH-CS - 2905257

Accessories

Front adapters - FLK 40-PA/EZ-DR/KS/ 200/YUC - 2314341

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 2.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/ 300/YUC - 2314354

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 3.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/ 400/YUC - 2314367

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 4.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/ 500/YUC - 2321570

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

Front adapters - FLK 40-PA/EZ-DR/KS/ 600/YUC - 2314943

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 6.0 m

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Module carrier - TC-2KS40-AI16-M-PRH-CS - 2905257

Accessories

Front adapters - FLK 40-PA/EZ-DR/KS/ 700/YUC - 2321583

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 7.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/ 800/YUC - 2314956

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 8.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/ 900/YUC - 2321415

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 9.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/1000/YUC - 2314370

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 10.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/1100/YUC - 2321428

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 11.0 m

Module carrier - TC-2KS40-AI16-M-PRH-CS - 2905257

Accessories

Front adapters - FLK 40-PA/EZ-DR/KS/1200/YUC - 2321431

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 12.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/1300/YUC - 2321444

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 13.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/1400/YUC - 2321457

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 14.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/1500/YUC - 2314383

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 15.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/1600/YUC - 2321596

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 16.0 m

Module carrier - TC-2KS40-AI16-M-PRH-CS - 2905257

Accessories

Front adapters - FLK 40-PA/EZ-DR/KS/1700/YUC - 2321606

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 17.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/1800/YUC - 2321619

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 18.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/1900/YUC - 2321622

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 19.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/2000/YUC - 2314532

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 20.0 m

Front adapters - FLK 40-PA/EZ-DR/KS/2500/YUC - 2314545

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 25.0 m

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Module carrier - TC-2KS40-AI16-M-PRH-CS - 2905257

Accessories

Front adapters - FLK 40-PA/EZ-DR/KS/3000/YUC - 2314558

Cast front adapter with attached round cable and a 40-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 30.0 m

Additional products

Label, highly flexible - EMLF (108XE)R - 0800549

Label, highly flexible, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: 108 x 48000 mm, Number of individual labels: 1

Zack Marker strip, flat - ZBF 15:UNBEDRUCKT - 0811202

Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 15 mm, lettering field size: 15 x 5.2 mm, Number of individual labels: 5