

## Module carrier - TC-2KS40-AI16-EX-PR-CS - 2905677

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Termination Carrier for redundantly connecting 16 MACX Analog Ex i signal conditioners to analog input cards of the Yokogawa CENTUM VP controller, via two KS40 connectors, 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
- ✓ 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



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 986724
GTIN	4046356986724

### Technical data

#### Dimensions

Width	242 mm
Height	170 mm
Depth	160 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C (Please observe module specifications)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Maximum altitude	≤ 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Degree of protection	IP00

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## Technical data

### Ambient conditions

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	1 A (Signal/channel)

### Supply

Designation	Power module
Note	Power supply via 2904673 TC-MACX-MCR-PTB power supply and error signaling module.
Input voltage	24 V DC
Input voltage range	19.2 V DC ... 30 V DC
Input current	≤ 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	50 V DC (0.3 A)
Fuse	2x 2.5 A on PCB, slow-blow (replaceable)
Status display	1 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 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
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

### 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

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## Technical data

### Standards and Regulations

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 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Articles in set

### Cable set - TC-C-MAX2-SC-31320000 - 2902425



Cable set for signal transmission on the Termination Carrier for modules from the MACX Analog Ex series. Connection of terminal points 3.1 and 3.2 (signal transmission) to the signal PCB.

### Cable set - TC-C-PTB3-SC-SET1 - 2905216



Cable set for TC-MACX-MCR-PTB power and fault signaling module (Order No. 2904673), for use on the Termination Carrier for signal conditioners from the MACX Analog Ex series.

### DIN rail bus connectors - ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561



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

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## Articles in set

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.

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## Classifications

### eCl@ss

eCl@ss 10.0.1	27141152
eCl@ss 4.0	27250313
eCl@ss 4.1	27250313
eCl@ss 5.0	27371000
eCl@ss 5.1	27371000
eCl@ss 6.0	27242600
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

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Approvals

UL Listed / cUL Listed / EAC / cULus Listed

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# Module carrier - TC-2KS40-AI16-EX-PR-CS - 2905677

## Approvals

Ex Approvals

UL Listed / cUL Listed / cULus Listed

### Approval details

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

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

EAC		RU C- DE.A*30.B.01742
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cULus Listed	
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## Accessories

### Necessary add-on products

Power/input isolating amplifier - MACX MCR-EX-SL-RPSSI-I - 2865340



Ex i repeater power supply and input signal conditioner, HART. Transmits supplied or active 0/4 - 20 mA signals from the hazardous area to a load (active or passive) in the safe area. 3-way electrical isolation; SIL 2 according to IEC 61508, with screw connection

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### Accessories

Power and error message module - TC-MACX-MCR-PTB - 2904673



Power and fault signaling module with screw connection, only for use on the Termination Carrier, excluding corresponding DIN rail bus connector

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Power/input isolating amplifier - MACX MCR-SL-RPSSI-I - 2865955



Repeater power supply and input isolating amplifier, HART. Transfers supplied or active 0/4 - 20 mA signals to a load (active or passive). 3-way electrical isolation, SIL 2 according to IEC 61508.

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Temperature measuring transducer - MACX MCR-EX-SL-RTD-I - 2865939



Ex i temperature transducer: converts signals from resistance temperature detectors installed in the Ex area and transmits a 0/4 - 20 mA signal to a load in the safe area. Freely programmable. 3-way isolation, screw connection, order configuration. Replacement item: 1052463 MACX MCR-EX-RTD-I-C.

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Temperature measuring transducer - MACX MCR-SL-RTD-I - 2865065



Temperature transducer, converts signals from resistance temperature detectors and resistors into 0/4 - 20 mA analog signals. Freely programmable, 3-way electrical isolation, custom-configured. Replacement item: 1052472 MACX MCR-RTD-I-C.

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Temperature measuring transducer - MACX MCR-EX-SL-TC-I - 2865942



Ex i temperature transducer: converts signals from thermocouples installed in the Ex area and mV sources and transmits a 0/4 - 20 mA signal to a load in the safe area. Freely programmable, custom-configured. Replacement item: 1052458 MACX MCR-EX-TC-I-C.

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## Module carrier - TC-2KS40-AI16-EX-PR-CS - 2905677

### Accessories

#### Temperature measuring transducer - MACX MCR-SL-TC-I - 2924333



Temperature transducer, converts signals from thermocouples and linear mV sources into 0/4 – 20 mA analog signals. Freely programmable, 3-way electrical isolation, custom-configured. Replacement item: 1052459 MACX MCR-TC-I-C.

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#### 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

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#### 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

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#### 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

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#### 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

## Module carrier - TC-2KS40-AI16-EX-PR-CS - 2905677

### Accessories

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

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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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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

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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

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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

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## Module carrier - TC-2KS40-AI16-EX-PR-CS - 2905677

### Accessories

#### 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

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#### 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

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#### 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

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#### 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

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#### 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

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## Module carrier - TC-2KS40-AI16-EX-PR-CS - 2905677

### Accessories

#### 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

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#### 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

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#### 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

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#### 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

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#### 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

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## Module carrier - TC-2KS40-AI16-EX-PR-CS - 2905677

### Accessories

#### 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

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#### 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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#### 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

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### 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

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#### 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

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