

# Module carrier - TC-2KS50-DI32-2EX-PR-CS - 2904676

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Termination Carrier for redundantly connecting 16 two-channel MACX Analog Ex i NAMUR signal conditioners to digital input cards of the Yokogawa Centum VP controller, via two KS50 connectors, 50-pos. Suitable for Yokogawa ADV151 and ADV161 cards.

## Your advantages

- ✓ Mechanically decoupled, passive PCB
- ✓ Redundant system connection, 50-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 882262
GTIN	4046356882262

## 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	Supply and error message via 2904673 TC-MACX-MCR-PTB
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	50

### 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
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-31322122 - 2904674



Cable set for signal transmission on the Termination Carrier for two-channel modules or modules with double output from the MACX Analog Ex series. Connection of terminal points 3.1 and 3.2 as well as 2.1 and 2.2 (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	27250300
eCl@ss 4.1	27250300
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 6.01	30211824
UNSPSC 7.0901	39121421
UNSPSC 11	39121421
UNSPSC 12.01	39121421
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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# Module carrier - TC-2KS50-DI32-2EX-PR-CS - 2904676

## Approvals

Approvals

UL Listed / cUL Listed / EAC / cULus Listed

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

Isolation amplifier - MACX MCR-EX-SL-2NAM-T - 2865489



Ex i NAMUR isolating amplifier, 2-channel. For operating proximity sensors and switches in Ex areas. The signals are transmitted via transistor outputs (passive) to the safe area. Line fault detection (LFD), 3-way isolation, SIL 2.

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### Accessories

Isolation amplifier - MACX MCR-EX-SL-NAM-2T - 2865463



Ex i NAMUR isolating amplifier For operating proximity sensors and switches in Ex areas. The signals are transmitted via 2 transistor outputs (passive) to the safe area. Line fault detection (LFD), 3-way isolation, SIL 2.

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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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Isolation amplifier - MACX MCR-EX-SL-2NAM-RO - 2865476



Ex i NAMUR isolating amplifier, 2-channel. For operating proximity sensors and switches in Ex areas. The signals are transmitted via relay outputs (N/O contact) to the safe area. Line fault detection (LFD), 3-way isolation, SIL 2.

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Isolation amplifier - MACX MCR-SL-2NAM-RO - 2865049



NAMUR 2-channel signal conditioner for operating proximity sensors and switches. The signals are transferred to the control level using relay outputs (N/O contact). Line fault detection, 3-way electrical isolation, SIL 2, screw connection.

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Isolation amplifier - MACX MCR-SL-2NAM-T - 2865036



NAMUR 2-channel signal conditioner for operating proximity sensors and switches. The signals are transmitted to the control level via transistor outputs (passive). Line fault detection, 3-way electrical isolation, SIL 2, screw connection.

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## Module carrier - TC-2KS50-DI32-2EX-PR-CS - 2904676

### Accessories

Front adapters - FLK 50-PA/EZ-DR/KS/ 100/YUC - 2900991



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/ 200/YUC - 2314299



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/ 300/YUC - 2314309



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/ 400/YUC - 2314312



Cast front adapter with attached round cable and a 50-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 4.0 m

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Front adapters - FLK 50-PA/EZ-DR/KS/ 500/YUC - 2321499



Cast front adapter with attached round cable and a 50-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 5.0 m

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## Module carrier - TC-2KS50-DI32-2EX-PR-CS - 2904676

### Accessories

#### Front adapters - FLK 50-PA/EZ-DR/KS/ 600/YUC - 2314927



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/ 700/YUC - 2321509



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/ 800/YUC - 2314930



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/ 900/YUC - 2321512



Cast front adapter with attached round cable and a 50-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 9.0 m

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#### Front adapters - FLK 50-PA/EZ-DR/KS/1000/YUC - 2314325



Cast front adapter with attached round cable and a 50-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 10.0 m

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## Module carrier - TC-2KS50-DI32-2EX-PR-CS - 2904676

### Accessories

Front adapters - FLK 50-PA/EZ-DR/KS/1100/YUC - 2321389



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/1200/YUC - 2321525



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/1300/YUC - 2321392



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/1400/YUC - 2321402



Cast front adapter with attached round cable and a 50-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 14.0 m

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Front adapters - FLK 50-PA/EZ-DR/KS/1500/YUC - 2314338



Cast front adapter with attached round cable and a 50-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 15.0 m

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## Module carrier - TC-2KS50-DI32-2EX-PR-CS - 2904676

### Accessories

#### Front adapters - FLK 50-PA/EZ-DR/KS/1600/YUC - 2321538



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/1700/YUC - 2321541



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/1800/YUC - 2321554



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/1900/YUC - 2321567



Cast front adapter with attached round cable and a 50-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 19.0 m

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#### Front adapters - FLK 50-PA/EZ-DR/KS/2000/YUC - 2314503



Cast front adapter with attached round cable and a 50-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 20.0 m

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## Module carrier - TC-2KS50-DI32-2EX-PR-CS - 2904676

### Accessories

#### Front adapters - FLK 50-PA/EZ-DR/KS/2500/YUC - 2314516



Cast front adapter with attached round cable and a 50-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 50-PA/EZ-DR/KS/3000/YUC - 2314529



Cast front adapter with attached round cable and a 50-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 30.0 m

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#### Front adapters - FLK 50-PA/EZ-DR/KS/5000/YUC - 2318981



Cast front adapter with attached round cable and a 50-pos. socket strip injection-molded on both sides for the connection of Yokogawa controllers. Cable length: 50.0 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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