

Interface units for Yokogawa CS3000 and ProSafe

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Interface units for Yokogawa CS3000 and ProSafe

Secure and fast connection between Distributed Control Systems and the field

C

The goal is to provide a simple and clean connection between sensors/actuators and the Yokogawa controllers. This is achieved by using our interface units in the marshalling cabinets. Let's connect.

The main goals of the Yokogawa CS3000 and Prosafe interfaces are to prevent cabling errors, save space in the electronics cabinet and save time and costs in the construction of electronics cabinets.

This is where our interface units for the Yokogawa CS3000 and ProSafe controllers score: the compact interfaces minimise cabling costs and offer significant benefits such as the regulated power supply with control relay.

If required we supply the components with a coating according to corrosion class G3.

These benefits and more will enable you to establish the optimum connection between field elements and input/output cards from Yokogawa. Let's connect

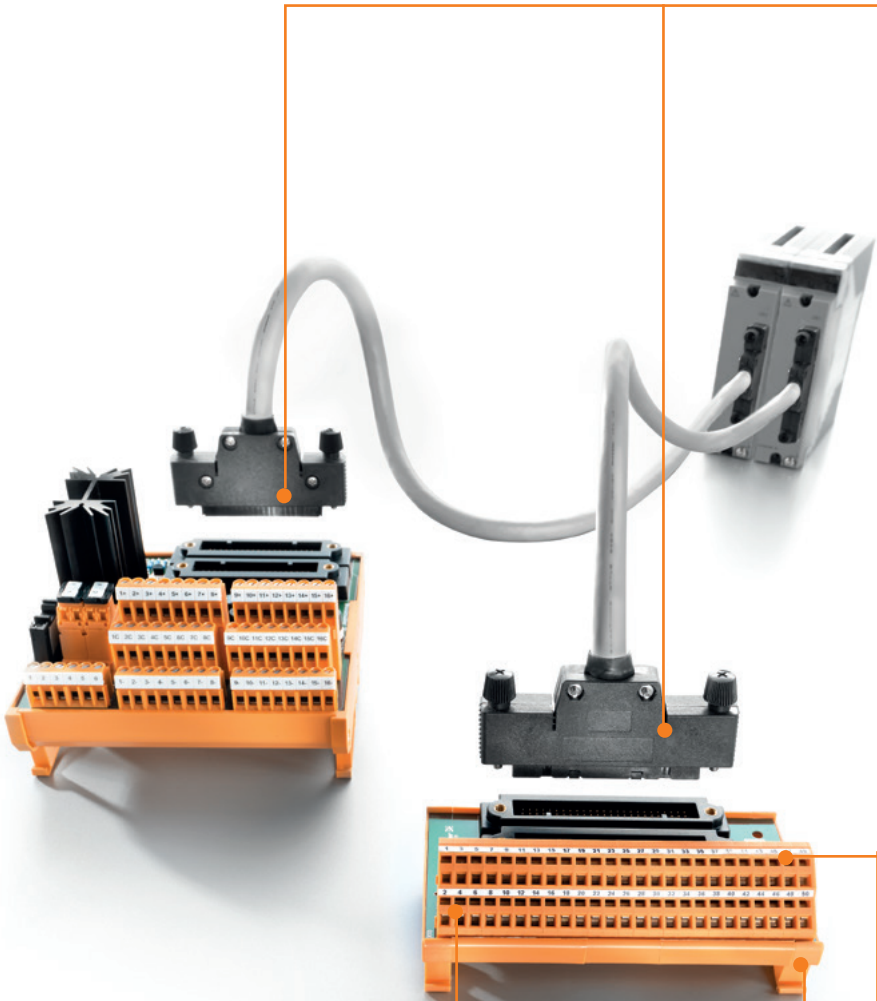


You are shaping the future of the process industry

Global competition and market dynamism are driving change in the process industry. New global strategies, mergers and takeovers, investments and spin-offs are all part of the change. Plant operators and manufacturers who ensure a higher standardisation of production processes are one step ahead of the market. The best conditions for efficient plant operation are secure connectivity and a cost- and space-saving connection when transmitting and converting signals.

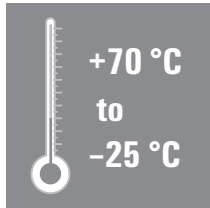
Reliable connection

The interface units are provided with a screw or tension clamp connection on the field side and with compatible connectors to KS or AKB cables on the control side.



Wide temperature range

The interface can work in ambient temperatures ranging from -25 to +70 °C.



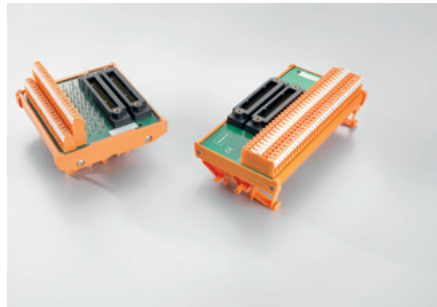
Wide range of interfaces

The range includes passive input/output interfaces for digital and analogue signals and isolated interfaces with relays incorporating a compact design.



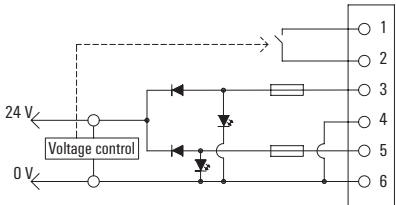
Numerous integral functions

Isolators, fuses with fault display, status LEDs: field sensors may be supplied with power within the individual modular terminal.



Redundancy supply control

Up to two power supplies can be connected to the interface units for Yokogawa systems. If one of the power supplies falls below approx. 12 V an alarm is activated and the power supply LED is extinguished.



The following selection guides enable you to quickly and easily choose the correct products according to your application needs:

STEP 1: Choose the Yokogawa Card to be used.

STEP 2: Choose the most suitable interface for the application.

Example: For AAB841 it's possible to select different options:

* In screw: 1371470000, 1371600000, 1371640000

* In tension clamp: 1371500000, 1371610000, 1371650000

This is small selection of the most frequently used termination boards. Other termination boards are also available. G3 termination boards can also be provided under demand.

Yokogawa CS3000 – Selection guide

STEP 1		STEP 2											
Yokogawa Card		TBY (Weidmüller Interfaces for Yokogawa)											
Kind of Card	Card	Kind of connector	Redundancy Power supply	Fuses per channel	Disconnect + Test points	Forks for components	Led channel	Led fuse	Relay	Type	Order No. Screw	Order No. Tension clamp	Page
8 analogue input/ 8 analogue output	AAB841	KS								TBY-C3-AIO-2KS	1371470000	1371500000	C.6
		KS			↔					TBY-C3-AIO+2KS	1371600000	1371610000	C.8
		KS				Y				TBY-C3-UNIV-SP-2KS	1371640000	1371650000	C.9
8 analogue inputs	AAI135 AAP135	KS								TBY-C3-AIO-2KS	1371470000	1371500000	C.6
		KS			↔					TBY-C3-AIO+2KS	1371600000	1371610000	C.8
		KS				Y				TBY-C3-UNIV-SP-2KS	1371640000	1371650000	C.9
16 analogue current input	AAI141 AAI143	KS								TBY-C3-AIO-2KS	1371470000	1371500000	C.6
		KS								TBY-C3-16AI-2KS	1371530000	1371550000	C.6
		KS			↔					TBY-C3-AIO+2KS	1371600000	1371610000	C.8
4 analogue current input/ 4 analogue current output	AAI835	KS								TBY-C3-UNIV-SP-2KS	1371640000	1371650000	C.9
		KS			↔					TBY-C3-AIO-2KS	1371470000	1371500000	C.6
		KS								TBY-C3-AIO+2KS	1371600000	1371610000	C.8
8 analogue input/ 8 analogue output	AAI841	KS								TBY-C3-AIO-2KS	1371470000	1371500000	C.6
		KS			↔					TBY-C3-AIO+2KS-Z	1371600000	1371610000	C.8
		KS				Y				TBY-C3-UNIV-SP-2KS	1371640000	1371650000	C.9
16 analogue voltage input	AAV141 AAV142 AAV144	KS								TBY-C3-AIO-2KS	1371470000	1371500000	C.6
		KS								TBY-C3-16AIO-2KS	1371580000	1371590000	C.6
		KS			↔					TBY-C3-AIO+2KS-Z	1371600000	1371610000	C.8
16 analogue output	AAV542 AAV544 AAI543	KS								TBY-C3-UNIV-SP-2KS	1371640000	1371650000	C.9
		KS								TBY-C3-AIO-2KS	1371470000	1371500000	C.6
		KS			↔					TBY-C3-16AIO-2KS	1371580000	1371590000	C.6
16 RTD analogue input 12 RTD input modules	AAR145 AAR181	AKB								TBY-C3-AIO+2KS	1371600000	1371610000	C.8
		AKB								TBY-C3-UNIV-SP-2KS	1371640000	1371650000	C.9
		AKB				Y				TBY-C3-UNIV-2KB	1384090000	1384080000	C.10
32 digital input	ADV151 ADV161 (Use 2 TBY per card)	AKB	2 A							TBY-C3-UNIV-2KB	1384090000	1384080000	C.10
		AKB	2 A	100 mA			⚡			TBY-ADV151-PS-L-2KB	1384350000	1384340000	C.11
		AKB	2 A	100 mA			⚡			TBY-ADV151-PS-F-L-2KB	1397820000	1397830000	C.12
		AKB	2 A	100 mA			⚡		24 V DC	TBY-ADV151-24-PS-2KB	1384330000	1384320000	C.13
32 digital output	ADV551 ADV561 (Use 2 TBY per card)	AKB								TBY-ADV151-48-PS-2KB	1384280000	1384250000	C.14
		AKB	1 A							TBY-C3-UNIV-2KB	1384090000	1384080000	C.10
		AKB					⚡		24 V DC	TBY-ADV551-CF-PS-2KB	1379500000	1379510000	C.15

Note:

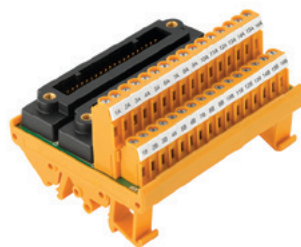
C

TBY-CS3000 Input/output interfaces for CS3000 analogue cards

Interface for 8 or 16 analogue signals (depend on marking)

- 2 KS connectors (40 poles) for redundancy
- Direct connection between the Yokogawa card and the field connectors.
- Basic modul also without marking available and markers as accessory for customer flexibility
- Complete modules with marking available
- Screw and tension clamp connection

TBY-C3-



Technical data

Connected to	Connection to the card
Connection data and functionality	
Connection on control side	No
LED status display per channel	No
LED status of the supply voltage	No
Fuse per channel	No
Power supply fuse	No
Disconnection per channel	No
Type of test point	No
Rated data	
Operating voltage	50 V AC / 70 V DC
Max. current per channel	1 A
Operating voltage (supply)	50 V AC / 70 V DC
Operating current (supply)	1 A
General data	
Ambient temperature (operational)	-25...70°C
Storage temperature	-40...85 °C
Insulation coordination (EN 50178)	
Rated insulation voltage	< 50 V AC
Surge voltage category	III
Pollution severity level	2
Insulation test voltage	0.35 kVAC
Pulse voltage test (1,2/50µs)	0.8 kV
Dimensions	
Clamping range, min./max. (field)	0.13 mm ² / 6 mm ²
Clamping range, min./max. (supply)	0.13 mm ² / 6 mm ²
Mounting rail	TS 32, TS 35
Length x width	90 mm / 70 mm
Note	

Ordering data

Terminal block for:	
Analog signals without marking (S)	TBY-C3-AIO-2KS-S
Analog signals without marking (Z)	TBY-C3-AIO-2KS-Z
AAI141, AAI143 (S)	TBY-C3-16AI-2KS-S
AAI141, AAI143 (Z)	TBY-C3-16AI-2KS-Z
AAI543, AAV141, AAV142, AAV144, AAV542, AAV544 (S)	TBY-C3-16AIO-2KS-S
AAI543, AAV141, AAV142, AAV144, AAV542, AAV544 (Z)	TBY-C3-16AIO-2KS-Z
Note	

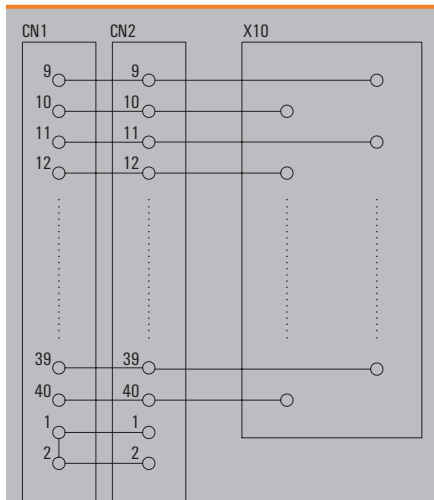
Accessories

	DEK for AAI141, AAI143 (S)	DEK 5 TB-V1	40	1379120000
DEK for AAV141, AAV142, AAV144, SAI543, AAV542, AAV544 (S)	DEK for AAI841 (S)	DEK 5 TB-V2	40	1379110000
	DEK for AAB841 (S)	DEK 5 TB-V6	40	1390690000
	DEK for AAI135, AAP135 (S)	DEK 5 TB-V7	40	1390680000
	DEK for AAI835 (S)	DEK 5 TB-V8	40	1388240000
	KSW for AAI141, AAI143 (Z)	DEK 5 TB-V9	40	1388250000
KSW for AAV141, AAV142, AAV144, SAI543, AAV542, AAV544 (Z)	KSW for AAI841 (Z)	KSW 5 TB-V1	0.1	1390700000
	KSW for AAB841 (Z)	KSW 5 TB-V2	0.1	1394320000
	KSW for AAI135, AAP135 (Z)	KSW 5 TB-V6	0.1	1394340000
	KSW for AAI835 (Z)	KSW 5 TB-V7	0.1	1394350000
	KSW for AAI135, AAP135 (Z)	KSW 5 TB-V8	0.1	1394370000
	KSW for AAI835 (Z)	KSW 5 TB-V9	0.1	1394380000
Note				

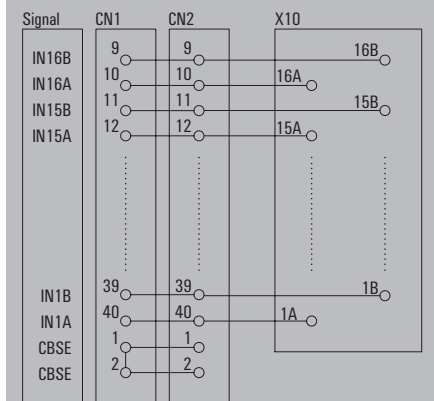
	AAB841, AAI135, AAI141, AAI143, AAI543, AAI841, AAI835, AAP135, AAV141, AAV142, AAV144, AAV542, AAV544
	2 x KS (40P)
	No
	No
	No
	No
	No
	No
	50 V AC / 70 V DC
	1 A
	50 V AC / 70 V DC
	1 A
	-25...70°C
	-40...85 °C
	< 50 V AC
	III
	2
	0.35 kVAC
	0.8 kV
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
90 mm / 70 mm	90 mm / 70 mm

Type	Height	Order No.
TBY-C3-AIO-2KS-S	56 mm	1371470000
TBY-C3-AIO-2KS-Z	52 mm	1371500000
TBY-C3-16AI-2KS-S	56 mm	1371530000
TBY-C3-16AI-2KS-Z	52 mm	1371550000
TBY-C3-16AIO-2KS-S	56 mm	1371580000
TBY-C3-16AIO-2KS-Z	52 mm	1371590000
Picture shows article number 1371530000		
S (screw connection), Z (tension-clamp connection)		

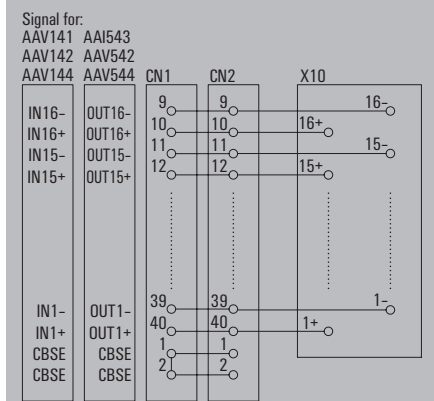
Type	Units x TBY	Order No.
DEK 5 TB-V1	40	1379120000
DEK 5 TB-V2	40	1379110000
DEK 5 TB-V6	40	1390690000
DEK 5 TB-V7	40	1390680000
DEK 5 TB-V8	40	1388240000
DEK 5 TB-V9	40	1388250000
KSW 5 TB-V1	0.1	1390700000
KSW 5 TB-V2	0.1	1394320000
KSW 5 TB-V6	0.1	1394340000
KSW 5 TB-V7	0.1	1394350000
KSW 5 TB-V8	0.1	1394370000
KSW 5 TB-V9	0.1	1394380000
S (screw connection), Z (tension-clamp connection)		



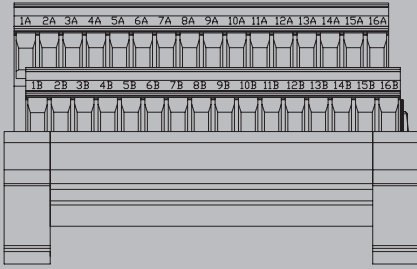
Schematic for 1371470000/1371500000



Schematic for 1371530000/1371550000 (AAI141,AAI143)

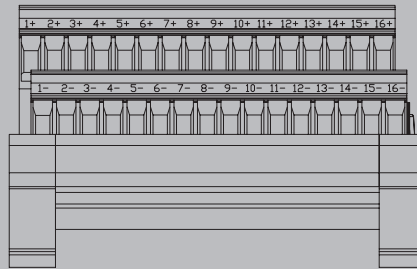


Schematic for 1371580000/1371590000 (AAV141, AAV142, AAV144, AAI543, AAV542, AAV544)

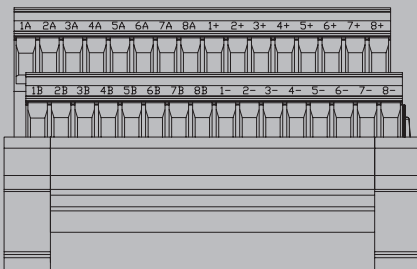


Field terminals view 1371530000 / 1371550000
(AAI141, AAI143)

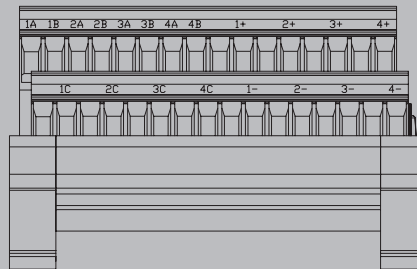
Application note: With the markers showed as accessories, is possible to configurate the TBY for other cards



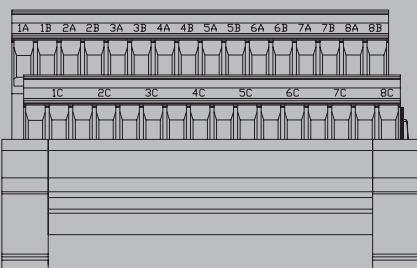
Field terminals view 1371580000 / 1371590000
(AAV141, AAV142, AAV144, AAI543, AAV542, AAV544)



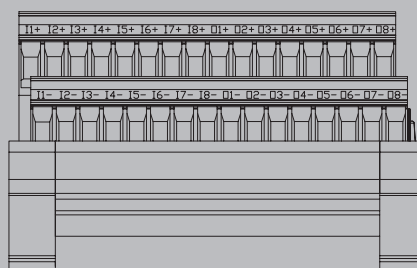
Connection for AAI841



Connection for AAI835



Connection for AAI135, AAP135



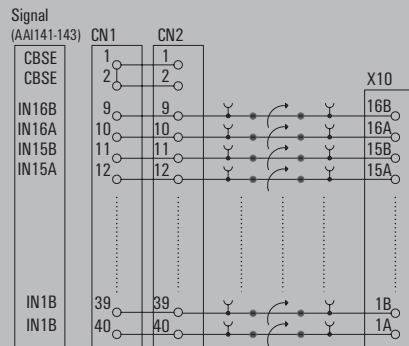
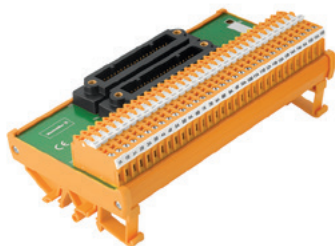
Connection for AAB841

TBY-CS3000 Input/output interfaces for CS3000 analogue cards

Interface for 8 or 16 analogue signals

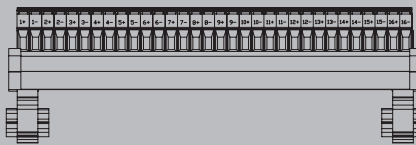
- 2 KS connectors (40 poles) for redundancy
- Disconnecting plugs and test points (2 mm diameter) for voltage or current measurement.
- The TBY is delivered with the marking for AAI141, AAI143 and it's compatible with other analogue cards.
- Marker available as accessory.
- Screw and tension clamp connection

TBY-C3-AIO-I-2KS

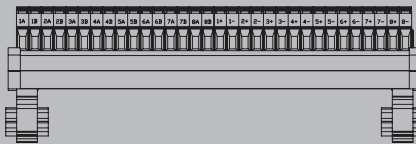


Connection for AAI141, AAI143

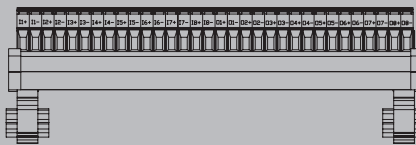
Application note: With the markers showed as accessories, is possible to configure the TBY for other cards



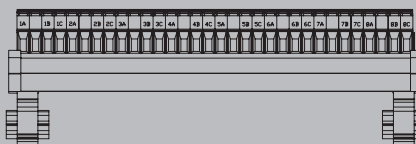
Connection for AAV141, AAV142, AAV144, AAI543, AAV542, AAV544)



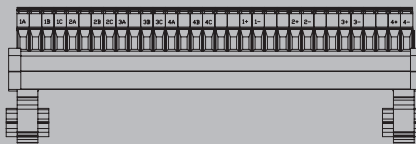
Connection for AAI841



Connection for AAB841



Connection for AAI135, AAP135



Connection for AAI835

Technical data

Connected to	Connection to the card	
Connection data and functionality	AAB841, AAI135, AAI141, AAI143, AAI841, AAI543, AAI835, AAP135, AAV141, AAV142, AAV144, AAV542, AAV544	
Connection on control side	2 x KS (40P)	
LED status display per channel	No	
LED status of the supply voltage	No	
Fuse per channel	No	
Power supply fuse	No	
Disconnection per channel	Yes	
Type of test point	Diameter: 2 mm	
Rated data		
Operating voltage	50 V AC / 70 V DC	
Max. current per channel	1 A	
Operating voltage (supply)	50 V AC / 70 V DC	
Operating current (supply)	1 A	
General data		
Ambient temperature (operational)	-25...70°C	
Storage temperature	-40...85 °C	
Insulation coordination (EN 50178)		
Rated insulation voltage	< 50 V AC	
Surge voltage category	III	
Pollution severity level	2	
Insulation test voltage	0.35 kVAC	
Pulse voltage test (1,2/50µs)	0.8 kV	
Dimensions	Screw connection	Tension-clamp connection
Clamping range, min./max. (field)	0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
Clamping range, min./max. (supply)	0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
Mounting rail	TS 32, TS 35	TS 32, TS 35
Length x width	170 mm / 87 mm	170 mm / 87 mm
Note		

Ordering data

	Screw connection	Type	Height	Order No.
	Tension-clamp connection	TBY-C3-AIO-I-2KS-S	56 mm	1371600000
		TBY-C3-AIO-I-2KS-Z	59.2 mm	1371610000
Note				

Accessories

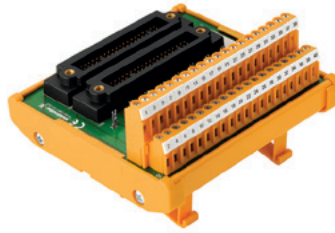
	Type	Units x TBY	Order No.
Dekafix for AAV141, AAV142, AAV144, AAI543, AAV542, AAV544 (S)	DEK 5/5 TB-V15	40	1404320000
	DEK 5/5 TB-V19	40	1411880000
	DEK 5/5 TB-V17	40	1411860000
	DEK 5/5 TB-V18	40	1411870000
	DEK 5/5 TB-V20	40	1411890000
KSW for AAV141, AAV142, AAV144, AAI543, AAV542, AAV544 (Z)	KSW 4 TB-V15	0.1	1404550000
	KSW 4 TB-V19	0.1	1411830000
	KSW 4 TB-V17	0.1	1411810000
	KSW 4 TB-V18	0.1	1411820000
	KSW 4 TB-V20	0.1	1411840000
	PS 2.0 MC	1	0310000000
Note	S (screw connection), Z (tension-clamp connection)		

TBY-CS3000 Input/output interfaces for CS3000 analogue cards

Interface for analogue signals

- 2 KS connectors (40 poles) for redundancy
- Direct connection between the Yokogawa card and the field connectors.
- The soldering tags allows the mounting of external components: voltage conversion or monitorization of the current loop.
- Screw and tension clamp connection

TBY-C3-UNIV-SP-2KS



Technical data

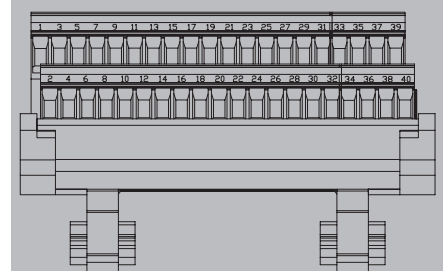
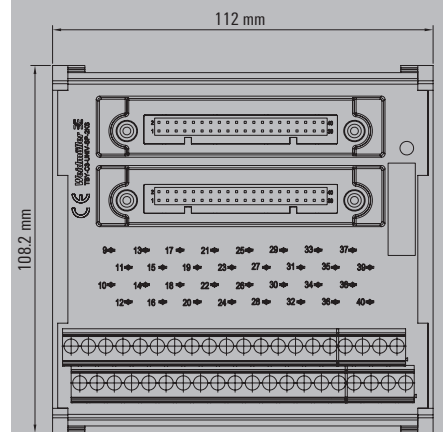
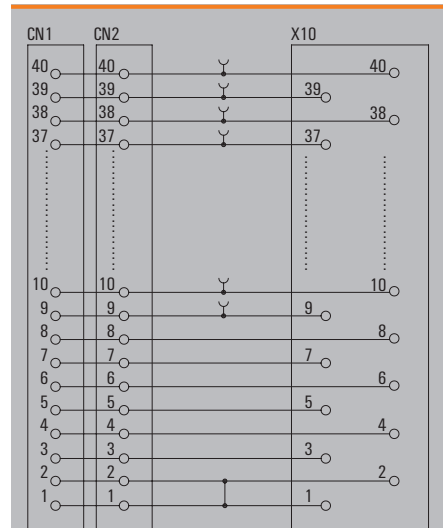
Connected to	Connection to the card
Connection data and functionality	Connection on control side LED status display per channel LED status of the supply voltage Fuse per channel Power supply fuse Disconnection per channel Type of test point
Rated data	Operating voltage Max. current per channel Operating voltage (supply) Operating current (supply)
General data	Ambient temperature (operational) Storage temperature
Insulation coordination (EN 50178)	Rated insulation voltage Surge voltage category Pollution severity level Insulation test voltage Pulse voltage test (1,2/50µs)
Dimensions	Clamping range, min./max. (field) Clamping range, min./max. (supply) Mounting rail Length x width
Note	

AAI141, AAI143, AAV141, AAV142, AAV144, AAI841, AAB841, AAV542, AAI543, AAV544, AAR181, AAI135, AAP135, AAI835	
2 x KS (40P)	
No	
No	
No	
No	
No	
Soldering tags	
50 V AC / 70 V DC	
1 A	
50 V AC / 70 V DC	
1 A	
-25...70°C	
-40...85°C	
< 50 V AC	
III	
2	
0.35 kVAC	
0.8 kV	
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
112 mm / 109 mm	112 mm / 109 mm

Ordering data

	Screw connection
	Tension-clamp connection
Note	

Type	Height	Order No.
TBY-C3-UNIV-SP-2KS-S	70 mm	1371640000
TBY-C3-UNIV-SP-2KS-Z	65 mm	1371650000

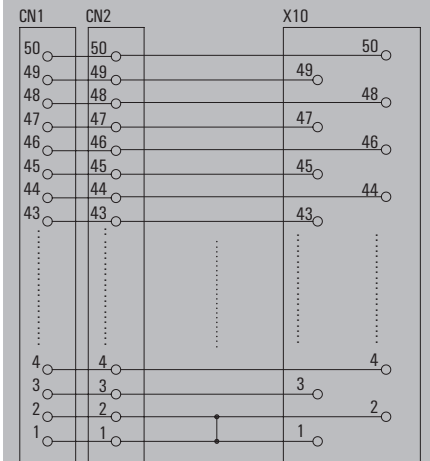
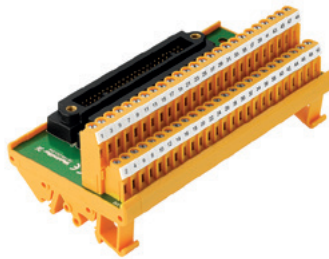


TBY-CS3000 Input/output interfaces for CS3000 digital cards

Interface for Centum CS3000 digital Cards

- AKB connectors (50 poles) for redundancy
- Direct connection between the Yokogawa card and the field connectors.
- Screw and tension clamp connection

TBY-C3-UNIV-2KB



Technical data

Connected to	Connection to the card
Connection data and functionality	Connection on control side LED status display per channel LED status of the supply voltage Fuse per channel Power supply fuse Disconnection per channel Type of test point
Rated data	Operating voltage Max. current per channel Operating voltage (supply) Operating current (supply)
General data	Ambient temperature (operational) Storage temperature
Insulation coordination (EN 50178)	Rated insulation voltage Surge voltage category Pollution severity level Insulation test voltage Pulse voltage test (1,2/50µs)
Dimensions	Clamping range, min./max. (field) Clamping range, min./max. (supply) Mounting rail Length x width
Note	

ADV151, ADV161, ADV551, ADV561, AAR145	
2 x AKB (50P)	
No	
No	
No	
No	
No	
50 V AC / 70 V DC	
1 A	
50 V AC / 70 V DC	
1 A	
-25...70°C	
-40...85 °C	
< 50 V AC	
III	
2	
0.35 kVAC	
0.8 kV	
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
135 mm / 70 mm	135 mm / 70 mm

Ordering data

	Screw connection
	Tension-clamp connection
Note	

Type	Height	Order No.
TBY-C3-UNIV-2KB-S	56 mm	1384090000
TBY-C3-UNIV-2KB-Z	52 mm	1384080000

TBY-CS3000 Input/output interfaces for CS3000 digital cards

Interface for Centum ADV151 32 digital input Card

- 2 AKB connectors (50 poles) for redundancy
- Green LED shows channel Status
- The Card can be configured with positive or negative common (see schematic)
- Monotorization of the Power supply status with green LED and alarm contact (24 V DC / 2...100 mA): close contact and led shinning means no supply fault.
- Screw and tension clamp connection

TBY-ADV151-PS-L-2KB



Technical data

Connected to	Connection to the card
Connection data and functionality	Connection on control side LED status display per channel LED status of the supply voltage Fuse per channel Power supply fuse Disconnection per channel Type of test point
Rated data	Operating voltage Max. current per channel Operating voltage (supply) Operating current (supply)
General data	Ambient temperature (operational) Storage temperature
Insulation coordination (EN 50178)	Rated insulation voltage Surge voltage category Pollution severity level Insulation test voltage Pulse voltage test (1,2/50µs)
Dimensions	Clamping range, min./max. (field) Clamping range, min./max. (supply) Mounting rail Length x width
Note	

Connected to	ADV151, ADV161 (2 TBY by Card)
Connection data and functionality	2 x AKB (50P) green green No 2 A No No
Rated data	24 V DC 1 A 24 V DC 2 A
General data	-25...70°C -40...85 °C
Insulation coordination (EN 50178)	< 50 V AC III 2 0.35 kVAC 0.8 kV
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
190 mm / 109 mm	190 mm / 109 mm

Ordering data

	Screw connection
	Tension-clamp connection
Note	

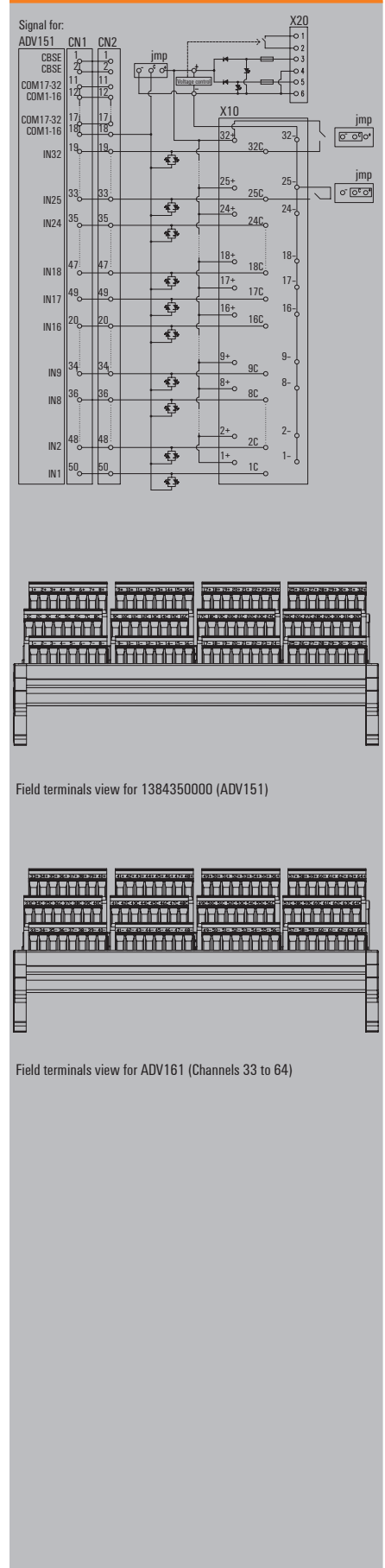
Type	Height	Order No.
TBY-ADV151-PS-L-2KB-S	85 mm	1384350000
TBY-ADV151-PS-L-2KB-Z	85 mm	1384340000

Accessories

	Supply fuse
	DEK for ADV161 (Channels 33...64) (S)
	KSW for ADV161 (Channels 33...64) (Z)
Note	

Type	Units x TBY	Order No.
FUSE G 25/2A/F BL	2	4007530000
DEK 5/5 TB-V25	200	1414820000
KSW 4 TB-V25	0.65	1414880000

S (screw connection), Z (tension-clamp connection)

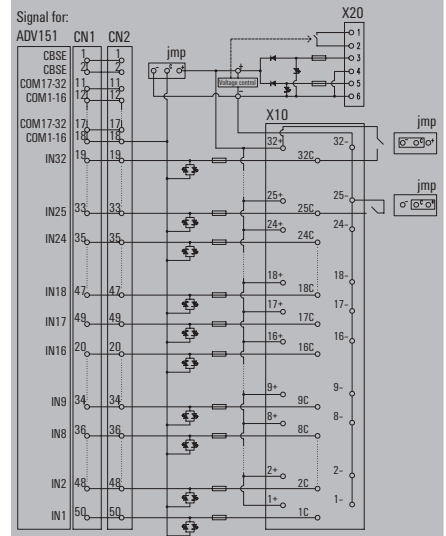


TBY-CS3000 Input/output interfaces for CS3000 digital cards

Interface for Centum ADV151 32 digital input Card

- 2 AKB connectors (50 poles) for redundancy
- The input sensors are connected to the card with fuses.
- Green LED shows channel status
- The Card can be configured with positive or negative common (see schematic)
- Monotorization of the Power supply status with green LED and alarm contact (24 V DC / 2...100 mA); close contact and led shinning means no supply fault.
- Screw and tension clamp connection

TBY-ADV151-PS-F-L-2KB



Field terminals view for 1397820000 (ADV151)



Field terminals view for ADV161 (Channels 33 to 64)

Technical data

Connected to	Connection to the card	
Connection data and functionality	Connection on control side	
	LED status display per channel	
	LED status of the supply voltage	
	Fuse per channel	
	Power supply fuse	
	Disconnection per channel	
	Type of test point	
Rated data	Operating voltage	
	Max. current per channel	
	Operating voltage (supply)	
	Operating current (supply)	
General data	Ambient temperature (operational)	
	Storage temperature	
Insulation coordination (EN 50178)	Rated insulation voltage	
	Surge voltage category	
	Pollution severity level	
	Insulation test voltage	
	Pulse voltage test (1,2/50µs)	
Dimensions	Clamping range, min./max. (field)	
	Clamping range, min./max. (supply)	
	Mounting rail	
	Length x width	
Note		

ADV551, ADV561 (2 TBY by Card)	
2 x AKB (50P)	
green	
green	
100 mA	
2 A	
No	
No	
24 V DC	
1 A	
24 V DC	
2 A	
-25...70°C	
-40...85 °C	
< 50 V AC	
III	
2	
0.35 kVAC	
0.8 kV	
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
190 mm / 131 mm	190 mm / 131 mm

Ordering data

	Screw connection
	Tension-clamp connection
Note	

Type	Height	Order No.
TBY-ADV151-PS-F-L-2KB-S	95 mm	1397820000
TBY-ADV151-PS-F-L-2KB-Z	95 mm	1397830000

Accessories

Type	Units x TBY	Order No.
FUSE MST250 0.1A TR5	32	1391740000
FUSE G 25/2A/F BL	2	4007530000
DEK 5/5 TB-V25	200	1414820000
KSW 4 TB-V25	0.65	1414880000

S (screw connection), Z (tension-clamp connection)

TBY-CS3000 Input/output interfaces for CS3000 digital cards

Interface for Centum ADV151 32 digital input Card

- 2 AKB connectors (50 poles) for redundancy
- 100 mA fuse per channel
- Green LED shows relays switching status (control side).
- Red LED shows fuse blow
- The input sensors can be connected in 2 ways:
 - Powered by field terminals
 - Powered by the TBY with auxiliary voltage
- Monotorization of the Power supply status with green LED and alarm contact (24 V DC / 2...100 mA): close contact and led shinning means no supply fault.
- Screw and tension clamp connection

Technical data

Connected to	Connection to the card
Connection data and functionality	Connection on control side
	Relay type
	Power supply fuse
Nominal input data	Input voltage
	Input current
	Operating voltage (supply)
	Operating current (supply)
Nominal output data	Contact material
	Operating voltage
	Max. DC continuous current of the I/O card
	Minimum contact current
	Minimum contact voltage
	Mechanical service life
General data	Ambient temperature (operational)
	Storage temperature
Insulation coordination (EN 50178)	Rated input insulation voltage
	Rated output insulation voltage
	Overvoltage category input/output
	Overvoltage category input/input
	Overvoltage category output/output
	Pollution severity level
	Pulse voltage test (1,2/50µs)
	Insulation test voltage
	Clearance input/output
Dimensions	Clamping range, min./max. (field)
	Clamping range, min./max. (supply)
	Mounting rail
	Length x width
Note	

Ordering data

	Screw connection
	Tension-clamp connection
Note	

Accessories

	Fuse per channel
	Supply fuse
	Relay
	DEK for ADV161 (Channels 33...64) (S)
	KSW for ADV161 (Channels 33...64) (Z)
Note	

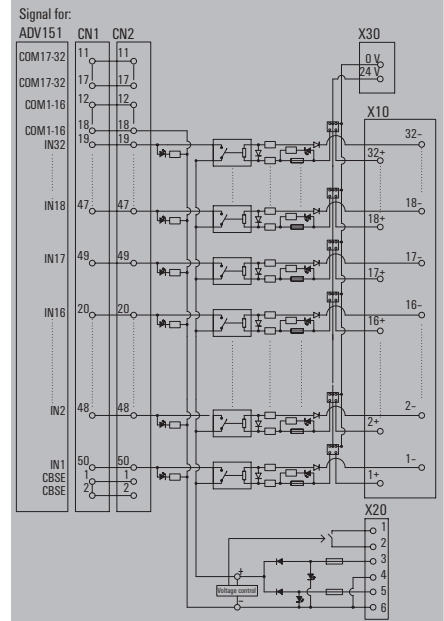
TBY-ADV151-24-PS-2KB



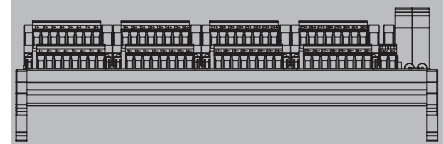
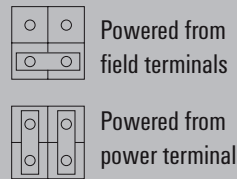
	ADV151, ADV161 (2 TBY by Card)
	2 x AKB (50P)
	RSS
	1 A
	24 V DC ± 10%
	7mA /fuse on) / 0.5mA (fuse off)
	24 V DC
	1 A
	AgNi gold-plated
	18 ... 26,4 V DC
	10 mA
	1 mA
	1 V
	5 x 10 ⁶ switching cycles
	-25...70°C
	-40...85 °C
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
317 mm / 131 mm	317 mm / 131 mm

Type	Height	Order No.
TBY-ADV151-24-PS-2KB-S	95 mm	1384330000
TBY-ADV151-24-PS-2KB-Z	95 mm	1384320000

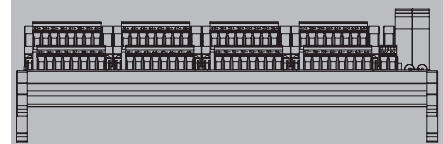
Type	Units x TBY	Order No.
FUSE MST250 0.1A TR5	32	1391740000
FUS G 25/1.00A/F	2	2437240000
RSS112024 24VDC-REL1U	32	4061590000
DEK 5/5 TB-V23	100	1414780000
KSW 4 TB-V23	0.5	1414850000
S (screw connection), Z (tension-clamp connection)		



Jumpers configuration



Field terminals view 1384330000 (ADV 151)



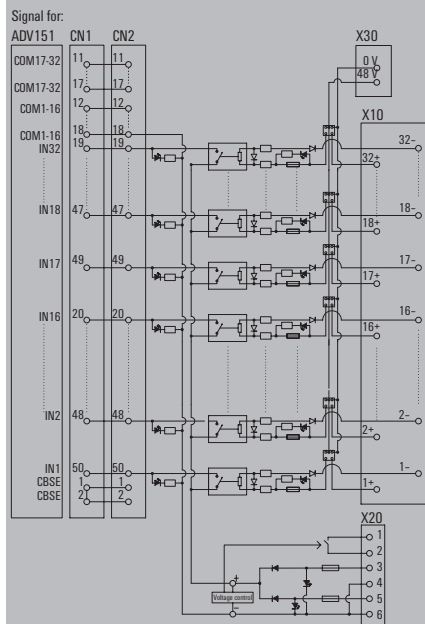
Field terminals view for ADV161 (Channels 33 to 64)

TBY-CS3000 Input/output interfaces for CS3000 digital cards

Interface for Centum ADV151 32 digital input Card

- 2 AKB connectors (50 poles) for redundancy
- Green LED shows relays switching status (control side).
- Red LED shows fuse blowper channel (100 mA)
- The input sensors can be powered from field terminals or from auxiliary voltage.
- Dual power supply can be connected to the TBY to supply sensors and Yokogawa Card.
- Monotorization of the Power supply status with green LED and alarm contact (24 V DC / 2...100 mA); close contact and led shinning means no supply fault.
- Screw and tension clamp connection

TBY-ADV151-48-PS-2KB



Technical data

Connected to	Connection to the card
Connection data and functionality	Connection on control side
	Relay type
	Power supply fuse
Nominal input data	Input voltage
	Input current
	Operating voltage (supply)
	Operating current (supply)
Nominal output data	Contact material
	Operating voltage
	Max. DC continuous current of the I/O card
	Minimum contact current
	Minimum contact voltage
	Mechanical service life
General data	Ambient temperature (operational)
	Storage temperature
Insulation coordination (EN 50178)	Rated input insulation voltage
	Rated output insulation voltage
	Overvoltage category input/output
	Overvoltage category input/input
	Overvoltage category output/output
	Pollution severity level
	Pulse voltage test (1,2/50µs)
	Insulation test voltage
	Clearance input/output
Dimensions	Clamping range, min./max. (field)
	Clamping range, min./max. (supply)
	Mounting rail
	Length x width
Note	

ADV151, ADV161 (2 TBY by Card)	
2 x AKB (50P)	
RSS	
1 A	
48 V DC ± 10%	
7mA /fuse on) / 0.5mA (fuse off)	
24 V DC	
1 A	
AgNi gold-plated	
18 ... 26,4 V DC	
10 mA	
1 mA	
1 V	
5 x 10 ⁶ switching cycles	
-25...70°C	
-40...85 °C	
≤ 50 V DC	
≤ 50 V DC	
III	
III	
III	
2	
1.5 kV	
0.35 kVAC	
≥ 5.5 mm	
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
317 mm / 131 mm	317 mm / 131 mm

Ordering data

	Screw connection
	Tension-clamp connection
Note	

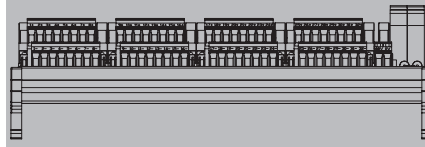
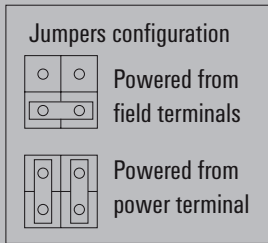
Type	Height	Order No.
TBY-ADV151-48-PS-2KB-S	95 mm	1384280000
TBY-ADV151-48-PS-2KB-Z	95 mm	1384250000

Accessories

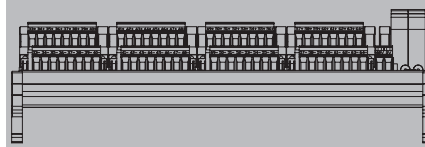
	Fuse per channel
	Supply fuse
	Relay
	DEK for ADV161 (Channels 33...64) (S)
	KSW for ADV161 (Channels 33...64) (Z)
Note	

Type	Units x TBY	Order No.
FUSE MST250 0.1A TR5	32	1391740000
FUS G 25/1.00A/F	2	2437240000
RSS112024 24VDC-REL1U	32	4061590000
DEK 5/5 TB-V23	100	1414780000
KSW 4 TB-V23	0.5	1414850000

S (screw connection), Z (tension-clamp connection)



Field terminals view 1324280000 (ADV 151)



Field terminals view for ADV161 (Channels 33 to 64)

TBY-CS3000 Input/output interfaces for CS3000 digital cards

Interface for Centum ADV551 32 digital output Card

- 2 AKB connectors (50 poles) for redundancy
- Green LED shows relays switching status (control side).
- The output sensors can be connected in 2 ways:
 - Powered by field terminals
 - Powered by the TBY with auxiliary voltage (groups of 8 channels)
- Monitorization of the Power supply status with green LED and alarm contact (24 V DC / 2...100 mA): close contact and led shinning means no supply fault.
- Screw and tension clamp connection

Technical data

Connected to	Connection to the card
Connection data and functionality	Connection on control side
	Relay type
	Fuse per channel
	Power supply fuse
Nominal input data	
	Input voltage
	Input current
	Operating voltage (supply)
	Operating current (supply)
Nominal output data	
	Contact material
	Operating voltage
	Max. AC continuous current
	Minimum contact current
	Minimum contact voltage
	Mechanical service life
General data	
	Ambient temperature (operational)
	Storage temperature
Insulation coordination (EN 50178)	
	Rated input insulation voltage
	Rated output insulation voltage
	Overvoltage category input/output
	Overvoltage category input/input
	Overvoltage category output/output
	Pollution severity level
	Pulse voltage test (1,2/50µs)
	Insulation test voltage
	Clearance input/output
Dimensions	
	Clamping range, min./max. (field)
	Clamping range, min./max. (supply)
	Mounting rail
	Length x width
Note	

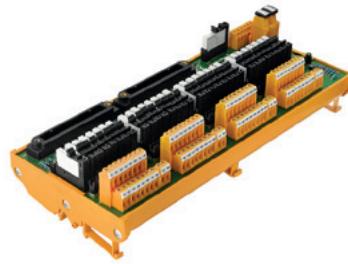
Ordering data

	Screw connection
	Tension-clamp connection
Note	

Accessories

	Supply fuse	
	Relay (for channels)	
	Relay (for alarm)	
	DEK for ADV561 (Channels 33...64) (S)	
	KSW for ADV561 (Channels 33...64) (Z)	
Note		

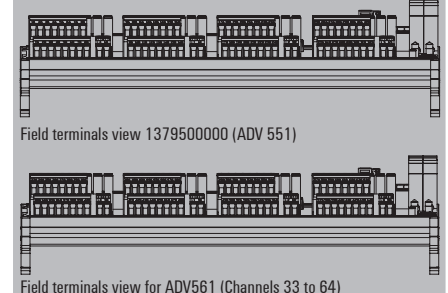
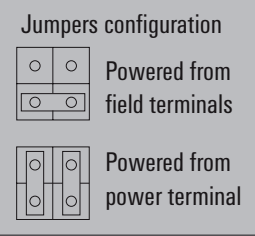
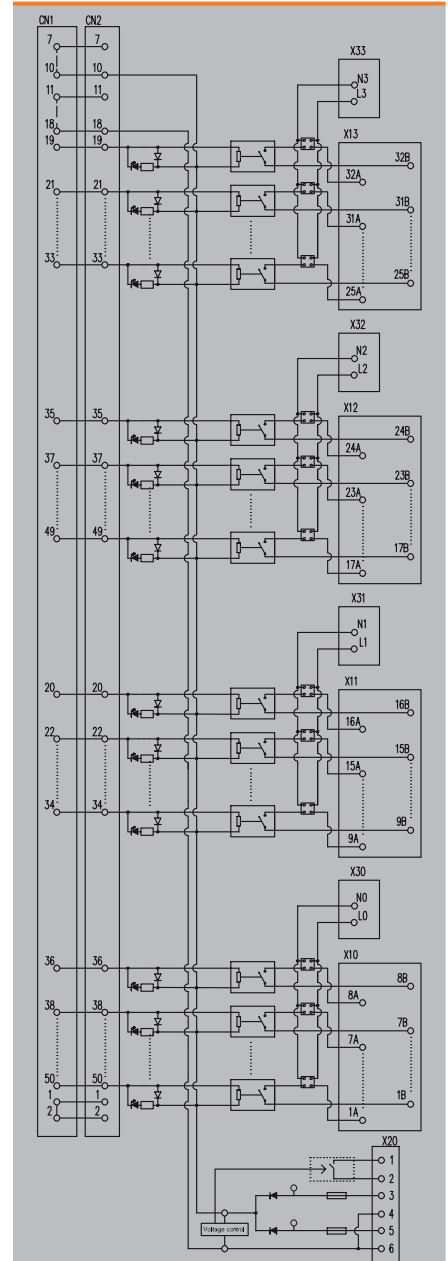
TBY-ADV551-CF-PS-2KB



	ADV551, ADV561 (2 TBY by Card)	
	2 x AKB (50P)	
	RSS	
	No	
	1 A	
	24 V DC ± 10%	
	13 mA	
	24 V DC	
	1 A	
	AgNi 90/10	
	250 V AC	
	2.5 A	
	0.1 A	
	5 V	
	5 x 10 ⁶ switching cycles	
	-25...70°C	
	-40...85 °C	
	≤ 50 V DC	
	250 V AC	
	III	
	II	
	II	
	2	
	6 kV	
	1.2 kVAC	
	≥ 5.5 mm	
	Screw connection	Tension-clamp connection
	0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
	0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
	TS 32, TS 35	TS 32, TS 35
	303 mm / 131 mm	303 mm / 131 mm

Type	Height	Order No.
TBY-ADV551-CF-PS-2KB-S	80 mm	1379500000
TBY-ADV551-CF-PS-2KB-Z	80 mm	1379510000

Type	Units x TBY	Order No.
FUSE G 25/1.00A/F	2	2437240000
RSS113024 24VDC-REL1U	32	4060120000
RSS112024 24VDC-REL1U	1	4061590000
DEK 5/5 TB-V26	100	1414830000
KSW 4 TB-V26	0.5	1414910000
S (screw connection), Z (tension-clamp connection)		



The following selection guides enable you to quickly and easily choose the correct products according to your application needs:

STEP 1: Choose the Yokogawa Card to be used.

STEP 2: Choose the most suitable interface for the application.

Example: For SAI143 it's possible to select different options:

* In screw: 1371130000,1371150000,1371220000,1371340000,1371240000

* In tension clamp: 1371140000,1371170000,1371230000,1371250000

This is small selection of the most frequently used termination boards. Other termination boards are also available.

G3 termination boards can also be provided under demand.

Yokogawa Pro Safe – Selection guide

STEP 1		STEP 2											
Yokogawa Card		TBY (Weidmüller Interfaces for Yokogawa)											
Kind of Card	Card	Kind of connector	Redundancy Power supply	Fuses per channel	Disconnect + Test points	Forks for components	Led channel	Led fuse	Relay	Type	Order No. Screw	Order No. Tension clamp	Page
16 analogue current input	SAI143	KS								TBY-RS-AIO-2KS	1371130000	1371140000	C.18
		KS								TBY-SAI143-2KS	1371150000	1371170000	C.18
		KS			↔					TBY-RS-AIO4-2KS	1371220000	1371230000	C.20
		KS				Y				TBY-RS-UNIV-SP-2KS	1371340000	1371370000	C.21
		KS	6,3 A	1 A					Yes	TBY-SAI143-F-L-PS-2KS	1371240000	1371250000	C.22
8 analogue current output	SAI533	KS								TBY-RS-AIO-2KS	1371130000	1371140000	C.18
		KS								TBY-SAI533-2KS	1371200000	1371210000	C.18
		KS			↔					TBY-RS-AIO4-2KS	1371220000	1371230000	C.20
		KS				Y				TBY-RS-UNIV-SP-2KS	1371340000	1371370000	C.21
16 analogue voltage input	SAV144	KS								TBY-RS-AIO-2KS	1371130000	1371140000	C.18
		KS								TBY-SAV144-2KS	1371180000	1371190000	C.18
		KS			↔					TBY-RS-AIO4-2KS	1371220000	1371230000	C.20
		KS				Y				TBY-RS-UNIV-SP-2KS	1371340000	1371370000	C.21
16 digital input	SDV144	AKB	2 A							TBY-SDV144-PS-2KB	1371390000	1371410000	C.24
		AKB	2 A	100 mA						TBY-SDV144-F-PS-2KB	1395370000	1395380000	C.25
		AKB								TBY-RS-DIO-2KB	1371540000	1371570000	C.23
4 digital output	SDV521	AKB							TBY-RS-DIO-2KB	1371540000	1371570000	C.23	
8 digital output	SDV531	AKB							TBY-RS-DIO-2KB	1371540000	1371570000	C.23	
16 digital output	SDV541	AKB							TBY-RS-DIO-2KB	1371540000	1371570000	C.23	

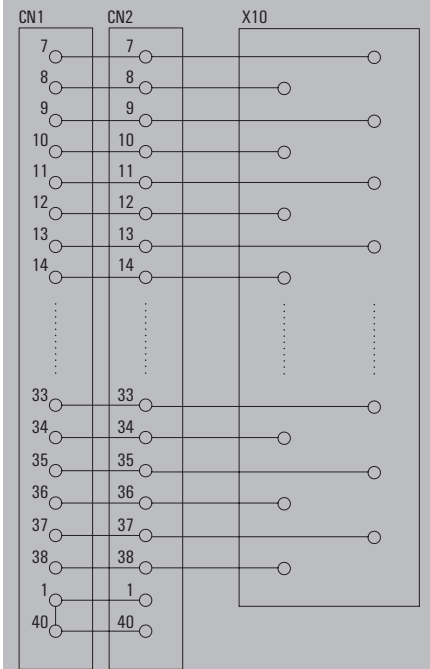
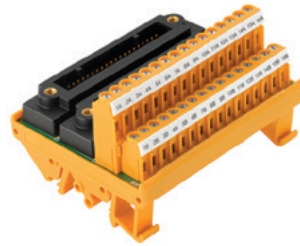
Note:

TBY-RS Input/output interfaces for ProSafe analogue cards

Interface for 8 or 16 analogue signals (depend on marking)

- 2 KS connectors (40 poles) for redundancy
- Direct connection between the Yokogawa card and the field connectors.
- Basic modul also without marking available and markers as accessory for customer flexibility
- Complete modules with marking available
- Screw and tension clamp connection

TBY-



Schematic 1371130000/1371140000

Technical data

Connected to	Connection to the card
Connection data and functionality	Connection on control side LED status display per channel LED status of the supply voltage Fuse per channel Power supply fuse Disconnection per channel Type of test point
Rated data	Operating voltage Max. current per channel Operating voltage (supply) Operating current (supply)
General data	Ambient temperature (operational) Storage temperature
Insulation coordination (EN 50178)	Rated insulation voltage Surge voltage category Pollution severity level Insulation test voltage Pulse voltage test (1,2/50µs)
Dimensions	Clamping range, min./max. (field) Clamping range, min./max. (supply) Mounting rail Length x width
Note	

SAI143, SAV144, SAI553	
2 x KS (40P)	
No	
No	
No	
No	
No	
50 V AC / 70 V DC	
1 A	
50 V AC / 70 V DC	
1 A	
-25...70°C	
-40...85 °C	
< 50 V AC	
III	
2	
0.35 kVAC	
0.8 kV	
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
90 mm / 70 mm	90 mm / 70 mm

Ordering data

Terminal block for:	SAI143, SAV144, SAI533 without marking (S)
	SAI143, SAV144, SAI533 without marking (Z)
	SAI143 (S)
	SAI143 (Z)
	SAV144 (S)
	SAV144 (Z)
	SAI553 (S)
	SAI553 (Z)
Note	

Type	Height	Order No.
TBY-RS-AIQ-2KS-S	56 mm	1371130000
TBY-RS-AIQ-2KS-Z	52 mm	1371140000
TBY-SAI143-2KS-S	56 mm	1371150000
TBY-SAI143-2KS-Z	52 mm	1371170000
TBY-SAV144-2KS-S	56 mm	1371180000
TBY-SAV144-2KS-Z	52 mm	1371190000
TBY-SAI533-2KS-S	56 mm	1371200000
TBY-SAI533-2KS-Z	52 mm	1371210000

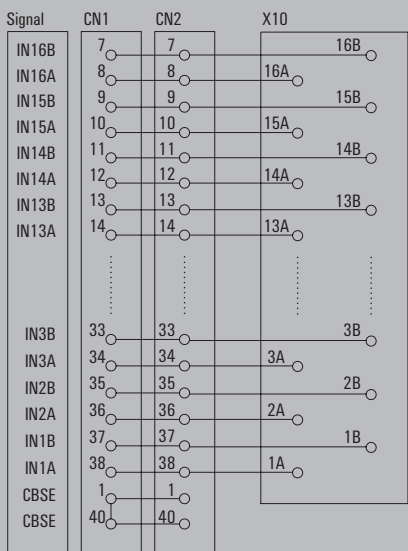
S (screw connection), Z (tension-clamp connection)

Accessories

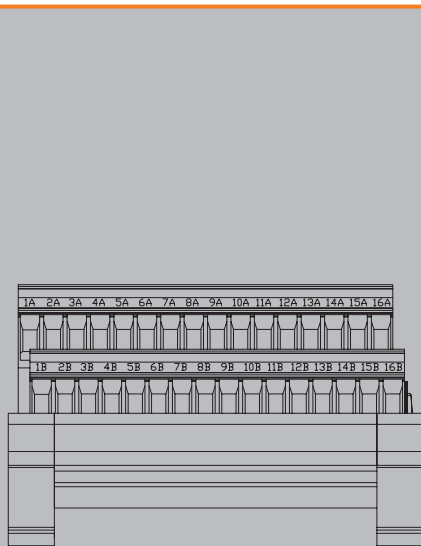
	DEK for SAI143 (S)
	DEK for SAV144 (S)
	DEK for SAI533 (S)
	KSW for SAI143 (Z)
	KSW for SAV144 (Z)
	KSW for SAI533 (Z)
Note	

Type	Units x TBY	Order No.
DEK 5 TB-V1	40	1379120000
DEK 5 TB-V2	40	1379110000
DEK 5 TB-V3	40	1371120000
KSW 4 TB-V1	0.1	1390700000
KSW 4 TB-V2	0.1	1394320000
KSW 4 TB-V3	0.1	1394330000

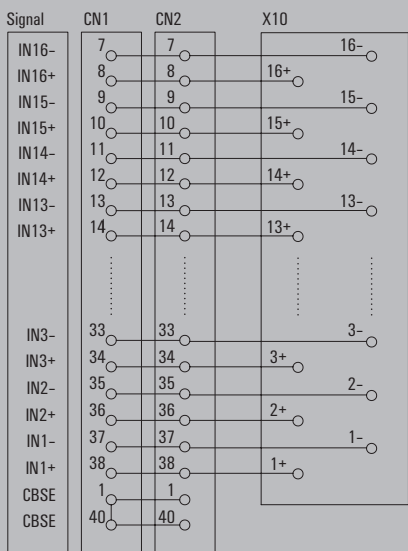
S (screw connection), Z (tension-clamp connection)



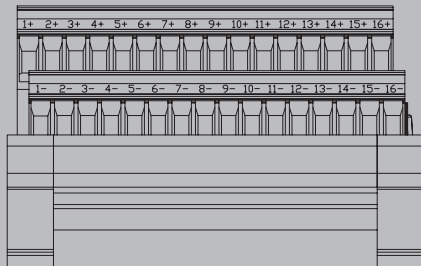
Schematic 1371150000/1371170000 (SAI143)



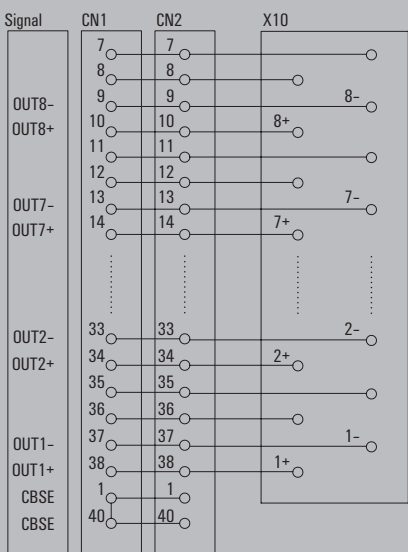
Field terminal view 1371150000



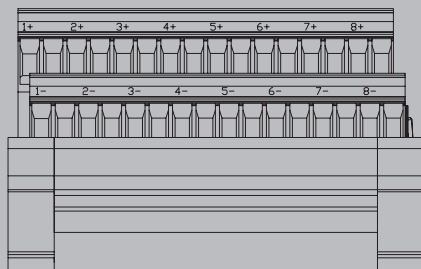
Schematic 1371180000/1371190000 (SAV144)



Field terminal view 1371180000



Schematic 1371200000/1371210000 (SAI533)



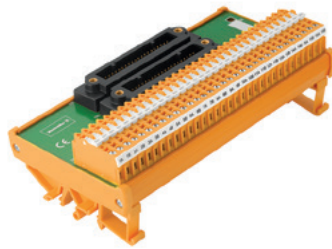
Field terminal view 1371200000

TBY-RS Input/output interfaces for ProSafe analogue cards

Interface for 8 or 16 analogue signals

- 2 KS connectors (40 poles) for redundancy
- Disconnecting plugs and test points (2 mm diameter) for voltage or current measurement.
- The TBY is delivered with the marking for SAI143 and it's compatible with cards SAV144 and SAI533. Marker available as accessory.
- Screw and tension clamp connection

TBY-RS-AIO-I-2KS



Technical data

Connected to	Connection to the card	
Connection data and functionality	Connection on control side	
	LED status display per channel	
	LED status of the supply voltage	
	Fuse per channel	
	Power supply fuse	
	Disconnection per channel	
	Type of test point	
Rated data	Operating voltage	
	Max. current per channel	
	Operating voltage (supply)	
	Operating current (supply)	
General data	Ambient temperature (operational)	
	Storage temperature	
Insulation coordination (EN 50178)	Rated insulation voltage	
	Surge voltage category	
	Pollution severity level	
	Insulation test voltage	
	Pulse voltage test (1,2/50µs)	
Dimensions	Clamping range, min./max. (field)	
	Clamping range, min./max. (supply)	
	Mounting rail	
	Length x width	
Note		

SAI143, SAV144, SAI533	
2 x KS (40P)	
No	
No	
No	
No	
Yes	
Diameter: 2 mm	
50 V AC / 70 V DC	
1 A	
50 V AC / 70 V DC	
1 A	
-25...70°C	
-40...85 °C	
< 50 V AC	
III	
2	
0.35 kVAC	
0.8 kV	
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
170 mm / 87 mm	170 mm / 87 mm

Ordering data

Screw connection
Tension-clamp connection
Note

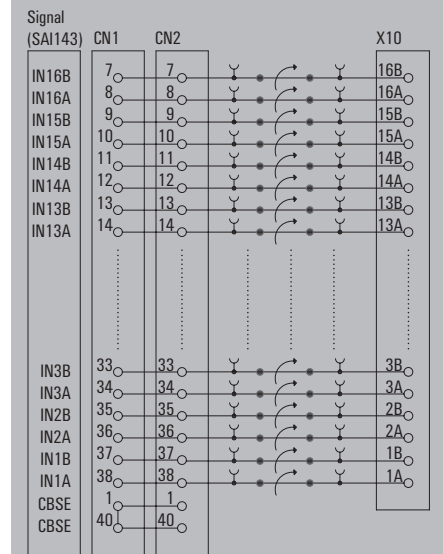
Type	Height	Order No.
TBY-RS-AIO-I-2KS-S	56 mm	1371220000
TBY-RS-AIO-I-2KS-Z	59.2 mm	1371230000

Accessories

Dekafix for SAV144 (S)
Dekafix for SAI533 (S)
KSW for SAV144 (Z)
KSW for SAI533 (Z)
Test plug
Note

Type	Units x TBY	Order No.
DEK 5/5 TB-V15	40	1404320000
DEK 5/5 TB-V16	40	1404330000
KSW 5 TB-V15	0.1	1404550000
KSW 5 TB-V16	0.1	1404540000
PS 2.0 MC	1	0310000000

S (screw connection), Z (tension-clamp connection)

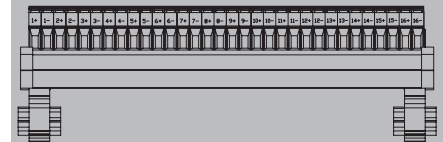


Connection for SAI143

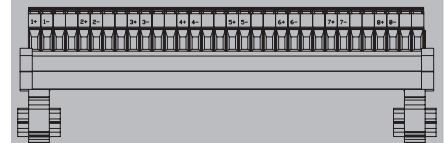


Field terminals view 1371220000

Application note: With the markers showed as accessories, is possible to configure the TBY for other cards



Field terminals view for SAV144

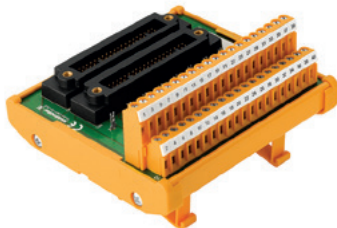


Field terminals view for SAI533

TBY-RS Input/output interfaces for ProSafe analogue cards

- Interface for analogue signals
- 2 KS connectors (40 poles) for redundancy
- Direct connection between the Yokogawa card and the field connectors.
- The soldering tags allows the mounting of external components: voltage conversion or monitorization of the current loop.
- Screw and tension clamp connection

TBY-RS-UNIV-SP-2KS



Technical data

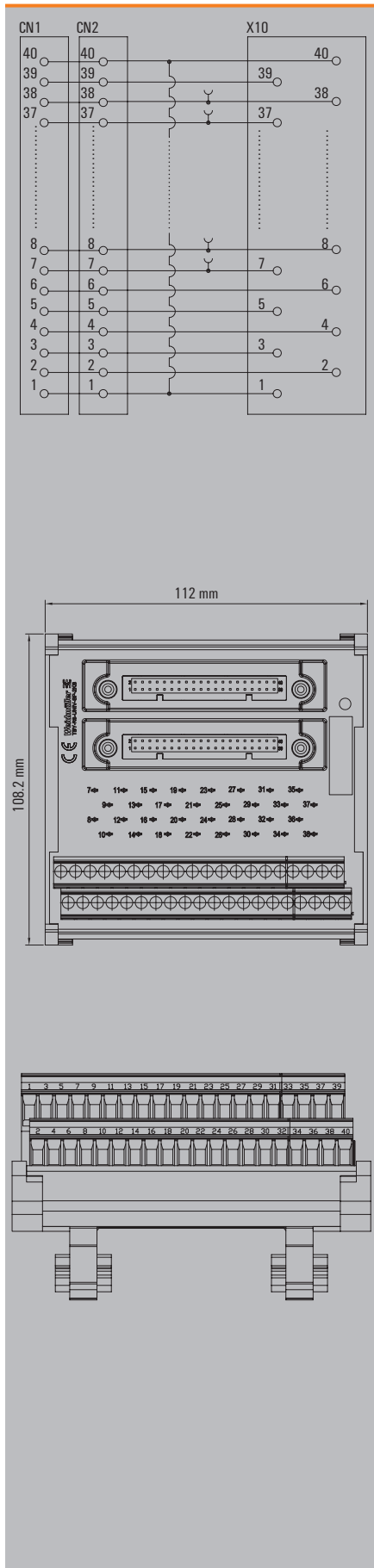
Connected to	Connection to the card
Connection data and functionality	Connection on control side LED status display per channel LED status of the supply voltage Fuse per channel Power supply fuse Disconnection per channel Type of test point
Rated data	Operating voltage Max. current per channel Operating voltage (supply) Operating current (supply)
General data	Ambient temperature (operational) Storage temperature
Insulation coordination (EN 50178)	Rated insulation voltage Surge voltage category Pollution severity level Insulation test voltage Pulse voltage test (1,2/50µs)
Dimensions	Clamping range, min./max. (field) Clamping range, min./max. (supply) Mounting rail Length x width
Note	

SAI143, SAV144, SAI553	
2 x KS (40P)	
No	
No	
No	
No	
No	
Soldering tags	
50 V AC / 70 V DC	
1 A	
50 V AC / 70 V DC	
1 A	
-25...70°C	
-40...85 °C	
< 50 V AC	
III	
2	
0.35 kVAC	
0.8 kV	
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
112 mm / 109 mm	112 mm / 109 mm

Ordering data

	Screw connection
	Tension-clamp connection
Note	

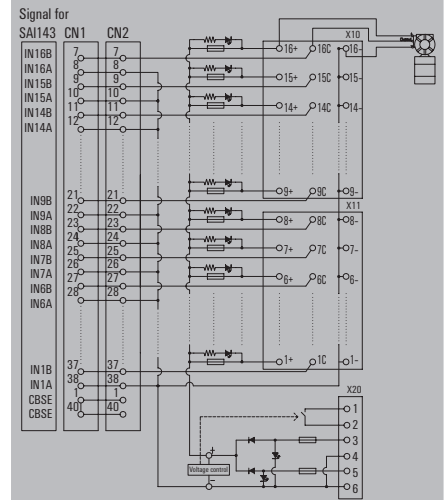
Type	Height	Order No.
TBY-RS-UNIV-SP-2KS-S	70 mm	1371340000
TBY-RS-UNIV-SP-2KS-Z	65 mm	1371370000



TBY-RS Input/output interfaces for ProSafe analogue cards

- Interface for Pro-safe SA143 analogue input Card
- 2 KS connectors (40 poles) for redundancy
 - The input sensors are connected to the card with fuses.
 - Red LED show fuses status
 - Dual power supply can be connected to the TBY to supply sensors and Yokogawa Card.
 - Monotorization of the Power supply status with green LED and alarm contact (24 V DC / 2...100 mA); close contact and led shinning means no supply fault.
 - Screw and tension clamp connection

TBY-SAI143-F-L-PS-2KS



Technical data

Connected to	Connection to the card
Connection data and functionality	Connection on control side LED status display per channel LED status of the supply voltage Fuse per channel Power supply fuse Disconnection per channel Type of test point
Rated data	Operating voltage Max. current per channel Operating voltage (supply) Operating current (supply)
General data	Ambient temperature (operational) Storage temperature
Insulation coordination (EN 50178)	Rated insulation voltage Surge voltage category Pollution severity level Insulation test voltage Pulse voltage test (1,2/50µs)
Dimensions	Clamping range, min./max. (field) Clamping range, min./max. (supply) Mounting rail Length x width
Note	

SAI143	
2 x KS (40P)	
red	
green	
1 A	
6.3 A	
No	
No	
24 V DC	
1 A	
24 V DC	
6.3 A	
-25...70°C	
-40...85 °C	
< 50 V AC	
III	
2	
0.35 kVAC	
0.8 kV	
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
133 mm / 131 mm	133 mm / 131 mm

Ordering data

	Screw connection
	Tension-clamp connection
Note	

Type	Height	Order No.
TBY-SAI143-F-L-PS-2KS-S	107 mm	1371240000
TBY-SAI143-F-L-PS-2KS-Z	107 mm	1371250000

Accessories

	Fuse per channel
	Supply fuse
Note	

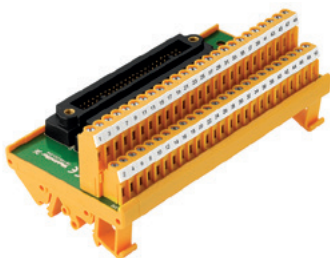
Type	Units x TBY	Order No.
FUSE MST250 1A TR5	16	1391770000
FUSE G 25/6.30A/F GN	2	4007550000

TBY-RS Input/output interfaces for ProSafe digital cards

Interface for Pro-safe digital Cards

- AKB connectors (50 poles) for redundancy
- Direct connection between the Yokogawa card and the field connectors.
- Screw and tension clamp connection

TBY-RS-DIO-2KB



Technical data

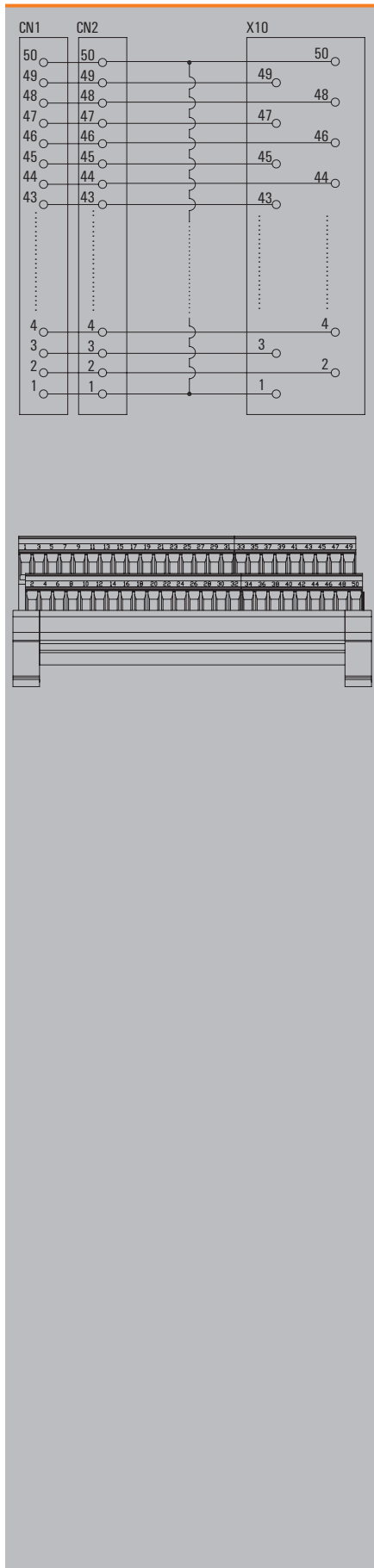
Connected to	Connection to the card
Connection data and functionality	Connection on control side LED status display per channel LED status of the supply voltage Fuse per channel Power supply fuse Disconnection per channel Type of test point
Rated data	Operating voltage Max. current per channel Operating voltage (supply) Operating current (supply)
General data	Ambient temperature (operational) Storage temperature
Insulation coordination (EN 50178)	Rated insulation voltage Surge voltage category Pollution severity level Insulation test voltage Pulse voltage test (1,2/50µs)
Dimensions	Clamping range, min./max. (field) Clamping range, min./max. (supply) Mounting rail Length x width
Note	

SDV144, SDV521, SDV531, SDV541	
2 x AKB (50P)	
No	
No	
No	
No	
No	
No	
50 V AC / 70 V DC	
1 A	
50 V AC / 70 V DC	
1 A	
-25...70°C	
-40...85 °C	
< 50 V AC	
III	
2	
0.35 kVAC	
0.8 kV	
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
135 mm / 70 mm	135 mm / 70 mm

Ordering data

	Screw connection
	Tension-clamp connection
Note	

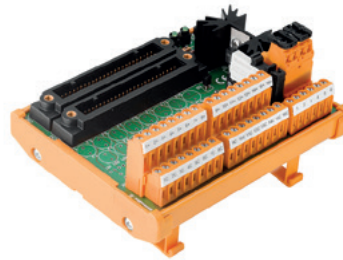
Type	Height	Order No.
TBY-RS-DIO-2KB-S	56 mm	1371540000
TBY-RS-DIO-2KB-Z	52 mm	1371570000



TBY-RS Input/output interfaces for ProSafe digital cards

- Interface for Pro-safe SDV144 digital input Card
- 2 AKB connectors (50 poles) for redundancy
 - Dual power supply can be connected to the TBY to supply sensors and Yokogawa Card.
 - Monotorization of the Power supply status with green LED and alarm contact (24 V DC / 2...100 mA); close contact and led shining means no supply fault.
 - Screw and tension clamp connection

TBY-SDV144-PS-2KB



Technical data

Connected to	Connection to the card
Connection data and functionality	Connection on control side
	LED status display per channel
	LED status of the supply voltage
	Fuse per channel
	Power supply fuse
	Disconnection per channel
	Type of test point
Rated data	Operating voltage
	Max. current per channel
	Operating voltage (supply)
	Operating current (supply)
General data	Ambient temperature (operational)
	Storage temperature
Insulation coordination (EN 50178)	Rated insulation voltage
	Surge voltage category
	Pollution severity level
	Insulation test voltage
	Pulse voltage test (1,2/50µs)
Dimensions	Clamping range, min./max. (field)
	Clamping range, min./max. (supply)
	Mounting rail
	Length x width
Note	

SDV144	
2 x AKB (50P)	
No	
green	
No	
2 A	
No	
No	
24 V DC	
1 A	
24 V DC	
2 A	
-25...70°C	
-40...85 °C	
< 50 V AC	
III	
2	
0.35 kVAC	
0.8 kV	
Screw connection	Tension-clamp connection
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
0.13 mm ² / 6 mm ²	0.13 mm ² / 2.5 mm ²
TS 32, TS 35	TS 32, TS 35
134 mm / 109 mm	134 mm / 109 mm

Ordering data

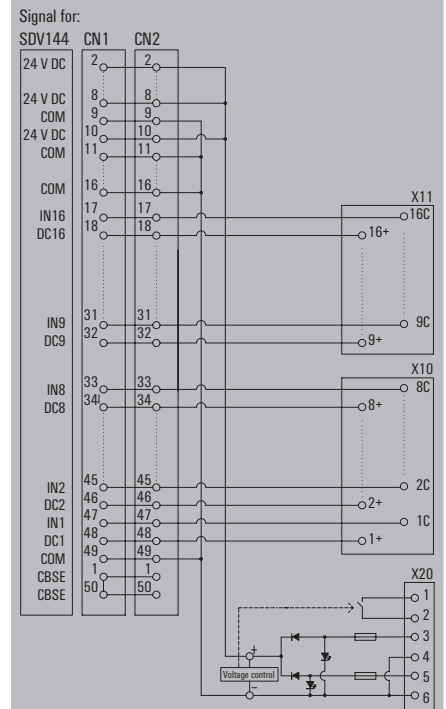
	Screw connection
	Tension-clamp connection
Note	

Type	Height	Order No.
TBY-SDV144-PS-2KB-S	80 mm	1371390000
TBY-SDV144-PS-2KB-Z	80 mm	1371410000

Accessories

	Supply fuse
Note	

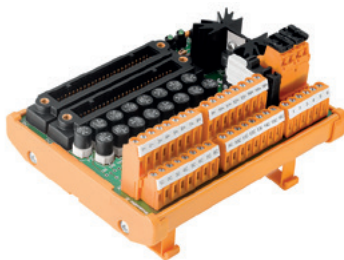
Type	Units x TBY	Order No.
FUSE G 25/2A/F BL	2	4007530000



TBY-RS Input/output interfaces for ProSafe digital cards

- Interface for Pro-safe SDV144 digital input Card
- 2 AKB connectors (50 poles) for redundancy
- The input sensors are connected to the card with fuses.
- Dual power supply can be connected to the TBY to supply sensors and Yokogawa Card.
- Monotorization of the Power supply status with green LED and alarm contact (24 V DC / 2...100 mA).

TBY-SDV144-F-PS-2KB



Technical data

Connected to	Connection to the card
Connection data and functionality	Connection on control side
	LED status display per channel
	LED status of the supply voltage
	Fuse per channel
	Power supply fuse
	Disconnection per channel
	Type of test point
Rated data	Operating voltage
	Max. current per channel
	Operating voltage (supply)
	Operating current (supply)
General data	Ambient temperature (operational)
	Storage temperature
Insulation coordination (EN 50178)	Rated insulation voltage
	Surge voltage category
	Pollution severity level
	Insulation test voltage
	Pulse voltage test (1,2/50µs)
Dimensions	Clamping range, min./max. (field)
	Clamping range, min./max. (supply)
	Mounting rail
	Length x width
Note	

	SDV144, SDV521, SDV531, SDV541
	2 x AKB (50P)
	No
	No
	100 mA
	2 A
	No
	No
	50 V AC / 70 V DC
	1 A
	50 V AC / 70 V DC
	1 A
General data	
	-25...70°C
	-40...85 °C
	< 50 V AC
	III
	2
	0.35 kVAC
	0.8 kV
	Screw connection
	0.13 mm ² / 6 mm ²
	Tension-clamp connection
	0.13 mm ² / 2.5 mm ²
	0.13 mm ² / 6 mm ²
	0.13 mm ² / 2.5 mm ²
	TS 32, TS 35
	TS 32, TS 35
	134 mm / 109 mm
	134 mm / 109 mm

Ordering data

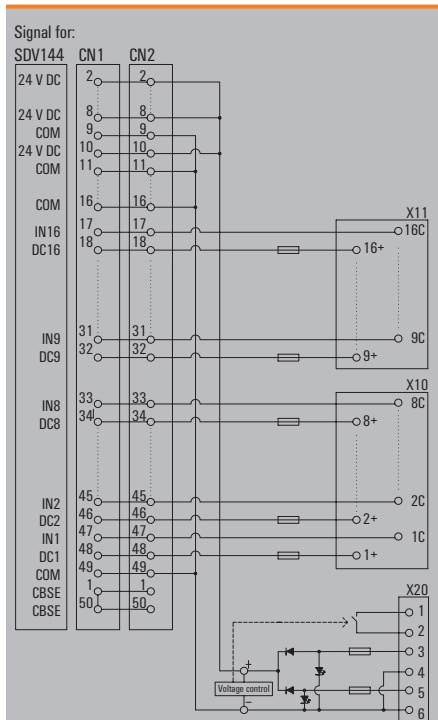
	Screw connection
	Tension-clamp connection
Note	

Type	Height	Order No.
TBY-SDV144-F-PS-2KB-S	80 mm	1395370000
TBY-SDV144-F-PS-2KB-Z	80 mm	1395380000

Accessories

	Fuse per channel
	Supply fuse
Note	

Type	Units x TBY	Order No.
FUSE MST250 0.1A TR5	16	1391740000
FUSE G 25/2A/F BL	2	4007530000



MIL cables

PAC-YOK - MIL Pre-made cables

Pre-built cable according:

- MIL connector - MIL connector
- MIL connector - ferrules
- Colour code according DIN47100

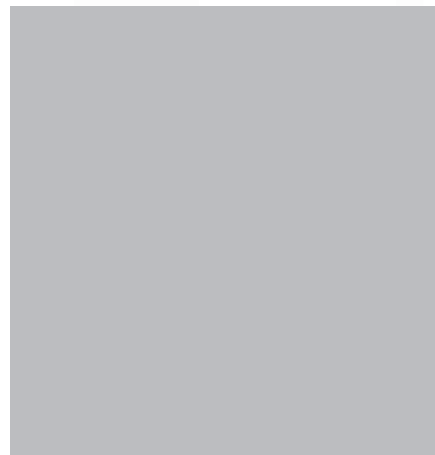
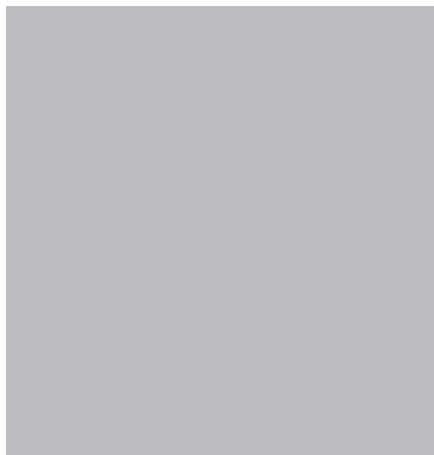
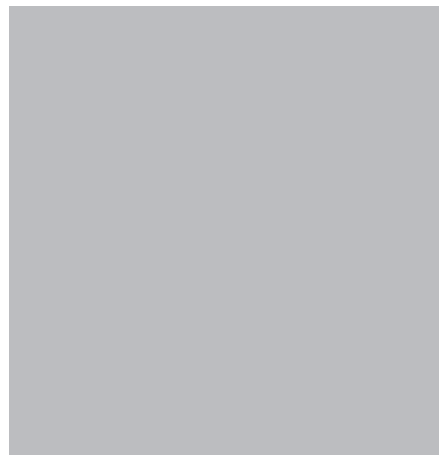
PAC-YOK-MIL-F

MIL connector to ferrules



PAC-YOK-MIL-V0

MIL connector to MIL connector



Technical data

Rated data

Operating voltage
 Permissible current strength per path, max.
 Total current, max.
 Resistance
 Capacity wire / wires
 Capacity wire / shield

Nominal rating, control cable

Cable
 Material
 Wire cross-section

General data

Ambient temperature (operational)
 Storage temperature

1.00 A
 3.00 A
 $\leq 150 \text{ m}\Omega/\text{m}$
 300 pF/m

Cable LiYY
 PVC
 0.14 mm²

-10...50°C
 -10...60 °C

1.00 A
 3.00 A
 $\leq 150 \text{ m}\Omega/\text{m}$
 300 pF/m
 300 pF/m

Cable LiYCY
 PVC
 0.14 mm²

-10...50°C
 -10...60 °C

Note

Ordering data

40-pole connector
 50-pole connector

Type	Qty.	Order No.
PAC-YOK-MIL40-F-1M	1	2420520010
PAC-YOK-MIL50-F-1M	1	2420530010

Type	Qty.	Order No.
PAC-YOK-MIL40-V0-1M	1	1536840010
PAC-YOK-MIL50-V0-1M	1	1536820010

Note

The last 3 digits of the cable code indicate its length. For example, if the code ends in 100, the cable is 10 m long.

The last 3 digits of the cable code indicate its length. For example, if the code ends in 100, the cable is 10 m long.

Accessories

Note