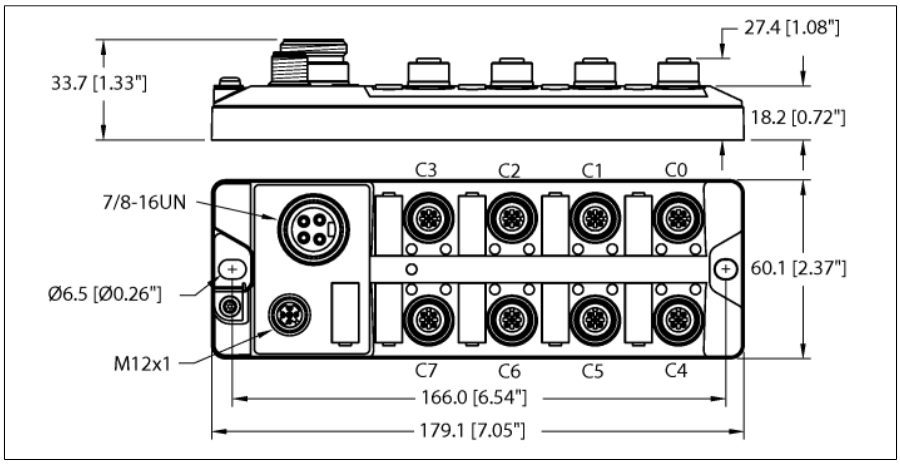
I/O Hub for connection of digital signals to IO-Link Master
16 Universal Digital Channels, PNP
TBIL-L4-16DXP-AUX



- **Rugged, fully potted I/O hub in IP67**
- **IO-Link diagnostics for short-circuit and supply voltage**
- **2 universal digital channels per port**
- **Metal connector**
- **7/8” connector for aux power supply, 4-pin**

Type designation	TBIL-L4-16DXP-AUX
Ident-No.	100000883

Supply	
Supply voltage	24
Admissible range	18...30 VDC V1 max 9 A V2 max 9 A V1+V2 max 11 A
Voltage supply connection	4-pin male 7/8" connector
Operating current	120 mA
Sensor/Actuator supply V_{AUX1}	Supply from V1, C0...C3, short-circuit protected, 2.0 A max. per pin.
Sensor/Actuator supply V_{AUX2}	Supply from V2, C4...C7, short-circuit protected, 2.0 A max. per pin.
Electrical isolation	Possible isolation of voltage groups V1, V2 and Viol Voltage proof up 500 VDC

Digital inputs	
Number of channels	16
Connectivity inputs	M12
Type of input diagnostics	Channel diagnostics
Low level signal voltage	-3...5 VDC (EN 61131-2, type 1 and 3)
High level signal voltage	11...30 VDC (EN 61131-2, type 1 and 3)
Input delay	0.010 ms
Max. input current	15 mA

Digital outputs	
Number of channels	16
Connectivity outputs	M12
Output type	PNP
Type of output diagnostics	Channel diagnostics
Output current per channel	2.0 A max. per pin. 2.5 A max. per connector.
Output delay	0.35 ms
Load type	resistive, inductive, lamp load
Short-circuit protection	yes
Electrical isolation	500 VDC

IO-Link	
Connectivity IO-Link	1 × M12
IO-Link specification	Specified acc. to version 1.1
IO-Link port type	Class A
Frame type	2.6
Transmission rate	COM 2 / 38.4 kbps, COM 3 / 230.4 kbps
Programming	FDT/DTM

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General Information	
Dimensions (W x L x H)	60.1 x 179.1 x 33.7mm
Operating temperature	-40...60 °C
Storage temperature	-40...85 °C
Protection class	IP65 IP67 IP69K
Housing material	PA6-GF30
Housing color	Black
Mounting	2 mounting holes Ø 6.5 mm

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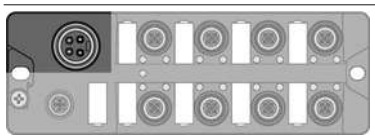
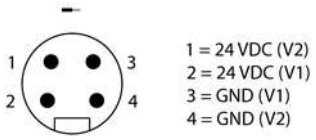
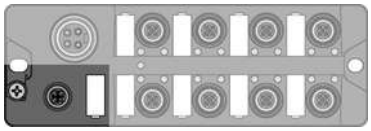
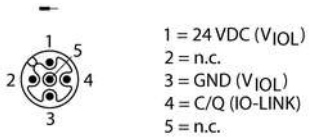
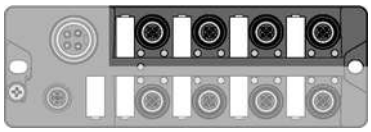
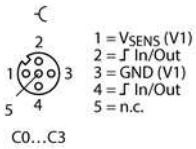
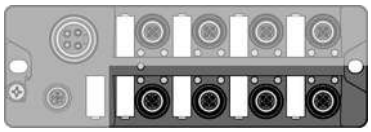
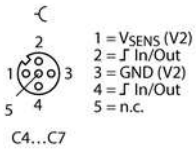
	**Accessories** Power supply cable (example): RSM RKM 40-2M Ident no. U2280-0	7/8" Aux Power 
	**Accessories** Extension cable (example): RK 4.4T-2-RS 4.4T ident-no. U2445 or RKC4.4T-2-RSC4.4T/TEL ident-no. 6625208	M12 IO-Link 
	**Accessories** Extension cable (example): RK 4.4T-2-RS 4.4T ident-no. U2445 or RKC4.4T-2-RSC4.4T/TEL ident-no. 6625208	M12 x 1 I/O Port 
	**Accessories** Extension cable (example): RK 4.4T-2-RS 4.4T ident-no. U2445 or RKC4.4T-2-RSC4.4T/TEL ident-no. 6625208	M12 x 1 I/O Port 

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Module LED status

LED	Color	Status	Description
IO-Link	Green	OFF	Power off
		Flashing	IO-Link communication OK, valid process data is sent or received
	Red	ON	IO-Link communication or module error
		Flashing	IO-Link communication OK, invalid process data or diagnosis enabled, V1 or V2 undervoltage

I/O LED Status

LED	Color	Status	Description
C0 … C7	Green	ON	Input or output active
0 … 15	Red	ON	Output active with overload / short circuit
		Flashing	Power overload at the corresponding port. Both port LEDs are flashing.
		OFF	Input or output inactive

C… = slot number, 0…15 = Signal LED (Even = signal pin 4, Odd = signal pin 2)

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Process Data

INPUT	**BYTE**	**Bit 7**	**Bit 6**	**Bit 5**	**Bit 4**	**Bit 3**	**Bit 2**	**Bit 1**	**Bit 0**
Inputs	0	DI7 C3P2 (B)	DI6 C3P4 (A)	DI5 C2P2 (B)	DI4 C2P4 (A)	DI3 C1P2 (B)	DI2 C1P4 (A)	DI1 C0P2 (B)	DI0 C0P4 (A)
	1	DI15 C7P2 (B)	DI14 C7P4 (A)	DI13 C6P2 (B)	DI12 C6P4 (A)	DI11 C5P2 (B)	DI10 C5P4 (A)	DI9 C4P2 (B)	DI8 C4P4 (A)
Diagnostics	2		Hardware Error						
	3	V2 Aux high	V1 Aux high	V2 high	V1 high	V2 Aux low	V1 Aux low	V2 low	V1 low
	4	Vsens OC C7P1	Vsens OC C6P1	Vsens OC C5P1	Vsens OC C4P1	Vsens OC C3P1	Vsens OC C2P1	Vsens OC C1P1	Vsens OC C0P1
	5	DO7 SC	DO6 SC	DO5 SC	DO4 SC	DO3 SC	DO2 SC	DO1 SC	DO0 SC
	6	DO15 SC	DO14 SC	DO13 SC	DO12 SC	DO11 SC	DO10 SC	DO9 SC	DO8 SC
OUTPUT	**BYTE**	**Bit 7**	**Bit 6**	**Bit 5**	**Bit 4**	**Bit 3**	**Bit 2**	**Bit 1**	**Bit 0**
Outputs	0	DO7 C3P2 (B)	DO6 C3P4 (A)	DO5 C2P2 (B)	DO4 C2P4 (A)	DO3 C1P2 (B)	DO2 C1P4 (A)	DO1 C0P2 (B)	DO0 C0P4 (A)
	1	DO15 C7P2 (B)	DO14 C7P4 (A)	DO13 C6P2 (B)	DO12 C6P4 (A)	DO11 C5P2 (B)	DO10 C5P4 (A)	DO9 C4P2 (B)	DO8 C4P4 (A)

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