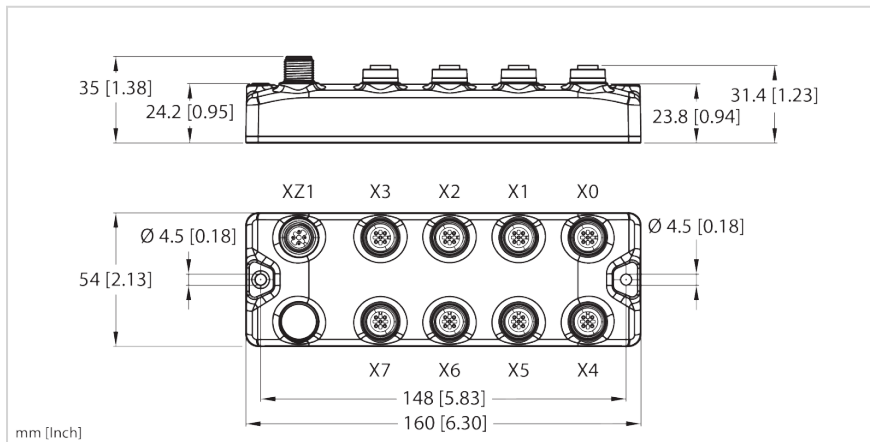


TBIL-EMN-16DXP

I/O Hub for Connecting Digital Signals to IO-Link Master

16 Universal Digital Channels, PNP



Typ	TBIL-EMN-16DXP
Ident-No.	100051094

Technical data

Power supply	
Supply voltage	24 VDC
Admissible range	18...30 VDC V1 max. 4 A Total output current max. 3.8 A UL rating: SELV/PELV power supply
Voltage supply connection	M12
Operating current	< 200 mA
Sensor/actuator supply	Class-A supply from V1 Short-circuit proof, max. 120 mA per port
Digital inputs	
Number of channels	16 digital PNP inputs (EN 61131-2)
Connectivity inputs	M12
Type of input diagnostics	Group 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)
Electrical isolation	Inputs to FE Voltage proof up to 500 VDC
Digital outputs	

Features

- IO-Link V1.1 Class A
- Shock- and vibration-tested
- Protection class IP67
- 2 universal digital channels per port
- I&M datasets support installation and maintenance
- IO-Link diagnostics for short circuit and supply voltage

Technical data

Number of channels	16 digital PNP outputs
Connectivity outputs	M12
Output type	PNP
Type of output diagnostics	Group diagnostics
Output voltage	24 VDC from supply voltage
Output current per channel	0.35 A, short-circuit proof
Load type	Ohmic, inductive, capacitive UL: resistive, general use, pilot duty
Electrical isolation	Outputs to FE Voltage proof up to 500 VDC

IO-Link

Prozessdatenbreite Ausgang	16 bit
Prozessdatenbreite Eingang	16 bit
IO-Link specification	V 1.1
IO-Link port type	Class A
Transmission physics	corresponds to 3-wire physics (PHY2)
Transmission rate	COM 2 / 38.4 kbps
Minimum cycle time	3,2 ms
Connectivity IO-Link	1 × M12
Function Pin 2	No function
Function pin 4	IO-Link
Maximum cable length	20 m
Programming	FDT/DTM, TBEN IOL master
Profile support	Identification and diagnosis

Mechanical data

Dimensions	160 mm x 54 mm x 35 mm
Housing material	Polycarbonate
Output connectivity	8 x M12
Input connectivity	8 x M12
Mounting	2 mounting holes Ø 4.5 mm

Environmental conditions

Ambient temperature	-25...+60 °C
Storage temperature	-40...+85 °C
Electromagnetic compatibility	Acc. to EN 61131-2:2007
Shock test	Acc. to EN 60068-2-27
Vibration test	Acc. to EN 60068-2-6, acceleration up to 15 g
Protection class	IP67, Not assessed by UL

Technical data

Standards/directives	
Drop and topple	Acc. to IEC 60068-2-31/IEC 60068-2-32
Tests/approvals	
Approvals and certificates	CE UKCA cULus UV resistant
Approvals	CE, cULus
MTTF	314 Jahre acc. to SN 29500 (Ed. 99) 20 °C
Comments	
Packaging unit	1

Module LED status

LED	Color	Status	Description
IO-Link	Green	Off	No power supply
		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 diagnostics available

I/O status LED

DXP channel LEDs X0 ... X7, LED 0 ... 15	Meaning (input)
Off	No input signal
Green	Input signal present
	Meaning (output)
Off	Output not active
Green	Output active

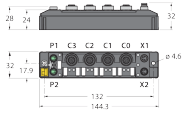
Process Data Mapping

Details can be found in the manual.

Functional accessories

TBEN-S2-4IOL

6814024



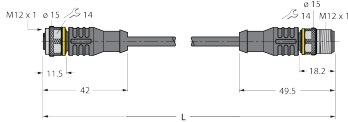
Compact multiprotocol I/O module, 4 IO-Link Master 1.1 Class A, 4 universal PNP digital channels 0.5 A

Connectivity accessories — I/O

RKC4T-2-RSC4T/TXL

6625604

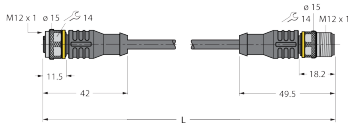
Extension cable, M12 female connector, straight, 3-pin to M12 male connector, straight, 3-pin; cable length: 2 m, jacket material: PUR, black; cULus approval



RKC4.4T-2-RSC4.4T/TXL

6625608

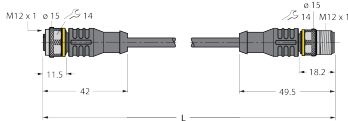
Extension cable, M12 female connector, straight, 4-pin to M12 male connector, straight, 4-pin; cable length: 2 m, jacket material: PUR, black; cULus approval



RKC4.5T-2-RSC4.5T/TXL

6625612

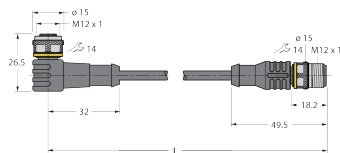
Extension cable, M12 female connector, straight, 5-pin to M12 male connector, straight, 5-pin; cable length: 2 m, jacket material: PUR, black; cULus approval



WKC4T-2-RSC4T/TXL

6625636

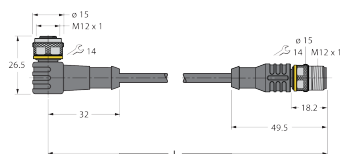
Extension cable, M12 female connector, angled, 3-pin to M12 male connector, straight, 3-pin; cable length: 2 m, jacket material: PUR, black; cULus approval



WKC4.4T-2-RSC4.4T/TXL

6625640

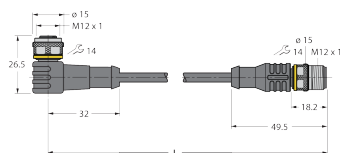
Extension cable, M12 female connector, angled, 4-pin to M12 male connector, straight, 4-pin; cable length: 2 m, jacket material: PUR, black; cULus approval



WKC4.5T-2-RSC4.5T/TXL

6625644

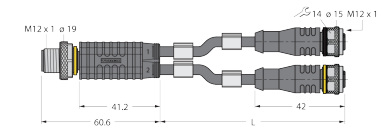
Extension cable, M12 female connector, angled, 5-pin to M12 male connector, straight, 5-pin; cable length: 2 m, jacket material: PUR, black; cULus approval



VBRS4.4-2RKC4T-1/1/TXL

6628112

Connectivity accessories — I/O

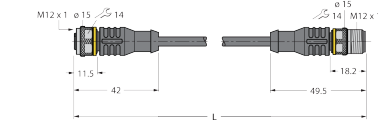


2-port junction systems — Y-splitter with cable, M12 male connector, straight, 4-pin — 2 × M12 female connector, straight, 3-pin, cable length: 1 m, jacket material: PUR, black

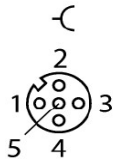
Connectivity accessories — Network

RKC4T-2-RSC4T/TXL	6625604
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Extension cable, M12 female connector, straight, 3-pin to M12 male connector, straight, 3-pin; cable length: 2 m, jacket material: PUR, black; cULus approval



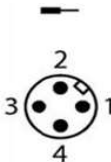
IO port
M12x1, a-coded



X0 ... X7

- 1 V_{AUX1}
- 2 Signal In/Out
- 3 GND
- 4 Signal In/Out
- 5 FE

IO-Link port
M12x1, a-coded



XZ1

- 1 24 VDC
- 2 n.c.
- 3 GND
- 4 C/Q (IO-Link)