

Connectivity for BL ident® RFID System



BL ident® is a complete RFID system that offers particular benefits particularly in industrial environments. Whether deployed in production control, logistics or automation processes: Turck's BL ident® enables you to use the tried and tested HF technology (13.56 MHz, acc. to ISO 15693) and the wide range UHF technology (865...928 MHz, acc. to ISO 18000-6C/EPCglobal Class 1 Gen 2) simultaneously in an RFID system. Even under industrial conditions and for the data exchange of fast moving tags, considerably greater ranges are now possible.

Each BL ident system can be flexibly composed from data carriers (tags), read/write heads, connectivity products and interfaces (gateway and RFID modules) to form a custom-made RFID solution. The selection not only includes extremely fast, FRAM data carriers with a virtually unlimited write capacity, but also high-temperature variants up to +240 °C, that can be used for example in painting lines. Gateways are available for all typical fieldbus protocols and enable

BL ident® to be integrated in existing plant configurations without any problem.

BL ident® operation is wear-free and contactless. It is also insensitive to temperature fluctuations, dirt, water and oils, and thus ensures an exceptionally long lifespan. Thanks to its compliance with international standards BL ident® is future-proof and interoperable.

Pre-assembled BL ident® connection cables are available for reliable communication between interface and read/write head. The connection cables are optimally designed for the individual components and ensure interference-free operation for the entire system. Furthermore, the Turck connectivity program also offers pre-assembled bus and supply cables. The use of the ready-to-connect cables enables the user to considerably reduce the risk of wiring errors.

Connectivity for BL ident® RFID System – Overview

Extension cables**Page**

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**Field-Wireable Connectors****Page**

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Type Code

RK4.5T - **5** / **S2503**

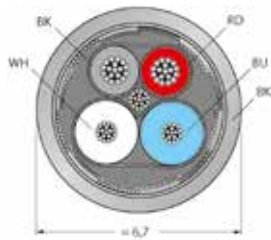
RK4.5T	Connector type	-	5	Cable length	/	S2503	Connector quality
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Connector type
RK4.5T female straight; 5-pin
WK4.5T female angled; 5-pin

Cable length
0.3 0.3 m
2 2 m
5 5 m
10 10 m
25 25 m
50 50 m

Connector quality
S2503 economic version:
 cable: UL 20549; cable jacket:
 PUR, black; qualified for drag
 chain use, oil-resistant, flexible

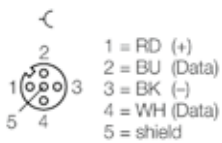
PUR Cable – Black



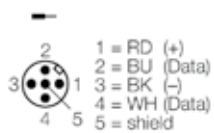
- 4-pin, AWG 19/24 (data cable), AWG 19/22 (supply cable)
- Jacket material: PUR, color: black
- Halogen and LABS free
- Shield: Aluminum foil, tinned copper braid
- Jacket diameter: 6.7 mm
- Suitable for drag chain use, oil-resistant, highly flexible
- Cable UL Style 20549



Female connector



Male connector



Connector	
Number of pins	5
Grip	Plastic, TPU, Black
Contacts	Metal, CuZn, Gold-plated
Contact carriers	TPU, Black
Coupling nut/screw	Brass, CuZn-Ni, Nickel-plated
Protection class	IP67 (only when screwed tight)
Mechanical Lifespan	> 100 mating cycles
Pollution degree	3
General data	
Cable quality	PUR (Black)
Core cross-section	2 x 0.25 mm ²
Electrical properties at +20 °C	
Rated voltage	300 V
Mechanical and chemical properties	
Bending cycles	> 1 mil.
Bending radius (flexible use)	> 10 x Ø
Storage temperature	-50...+80 °C
Ambient temperature	-25...+80 °C

Types and Features — Selection Table

	Cable length [m]	ID number	Type
	100	7030351	KABEL-E-BLIDENT-100M
	2	7030341	RK4.5T-2/S2503
	5	7030342	RK4.5T-5/S2503
	10	7030343	RK4.5T-10/S2503
	25	7030344	RK4.5T-25/S2503
	50	7030345	RK4.5T-50/S2503
	2	7030331	RK4.5T-2-RS4.5T/S2503
	5	7030332	RK4.5T-5-RS4.5T/S2503
	10	7030333	RK4.5T-10-RS4.5T/S2503
	25	7030334	RK4.5T-25-RS4.5T/S2503
	50	7030335	RK4.5T-50-RS4.5T/S2503
	2	7030346	WK4.5T-2/S2503
	5	7030347	WK4.5T-5/S2503
	10	7030348	WK4.5T-10/S2503
	25	7030349	WK4.5T-25/S2503
	50	7030350	WK4.5T-50/S2503
	2	7030336	WK4.5T-2-RS4.5T/S2503
	5	7030337	WK4.5T-5-RS4.5T/S2503
	10	7030338	WK4.5T-10-RS4.5T/S2503
	25	7030339	WK4.5T-25-RS4.5T/S2503
	50	7030340	WK4.5T-50-RS4.5T/S2503

Connectivity for BL ident® RFID System

Field-Wireable Connectors – M12 × 1

	Female connector				Male connector			
	Number of pins	Rated voltage [V]	ID number	Type	Number of pins	Rated voltage	ID number	Type
Female connector, straight	5	125	6904604	B8151-0/9				
Female connector, angled	5	125	6904603	B8251-0/9				
Male connector, straight	5	125	6904613	B8151-0/9				
Male connector, angled					5	125	6904615	BS8251-0/9
Connection mode	Screw/clamp connection				Screw/clamp connection			
Grip	Plastic, PA, Black				Plastic, PA, Black			
Coupling nut/screw	Plastic, PA, Black				Die-cast zinc, GD-Zn, Anodized			
Contacts	Brass, CuZn, Optalloy-coated				Brass, CuZn, Optalloy-coated			
Contact carriers	PA, Black				PA, Black			
Protection class	IP67				IP67			
Current load	4 A				4 A			
Terminal cross-section	0.14...0.75 mm ²				0.14...0.75 mm ²			
Cable external diameter	min. 6...8 mm				min. 6...8 mm			
Storage temperature	-40...+85 °C				-40...+85 °C			

Female connector

Male connector

