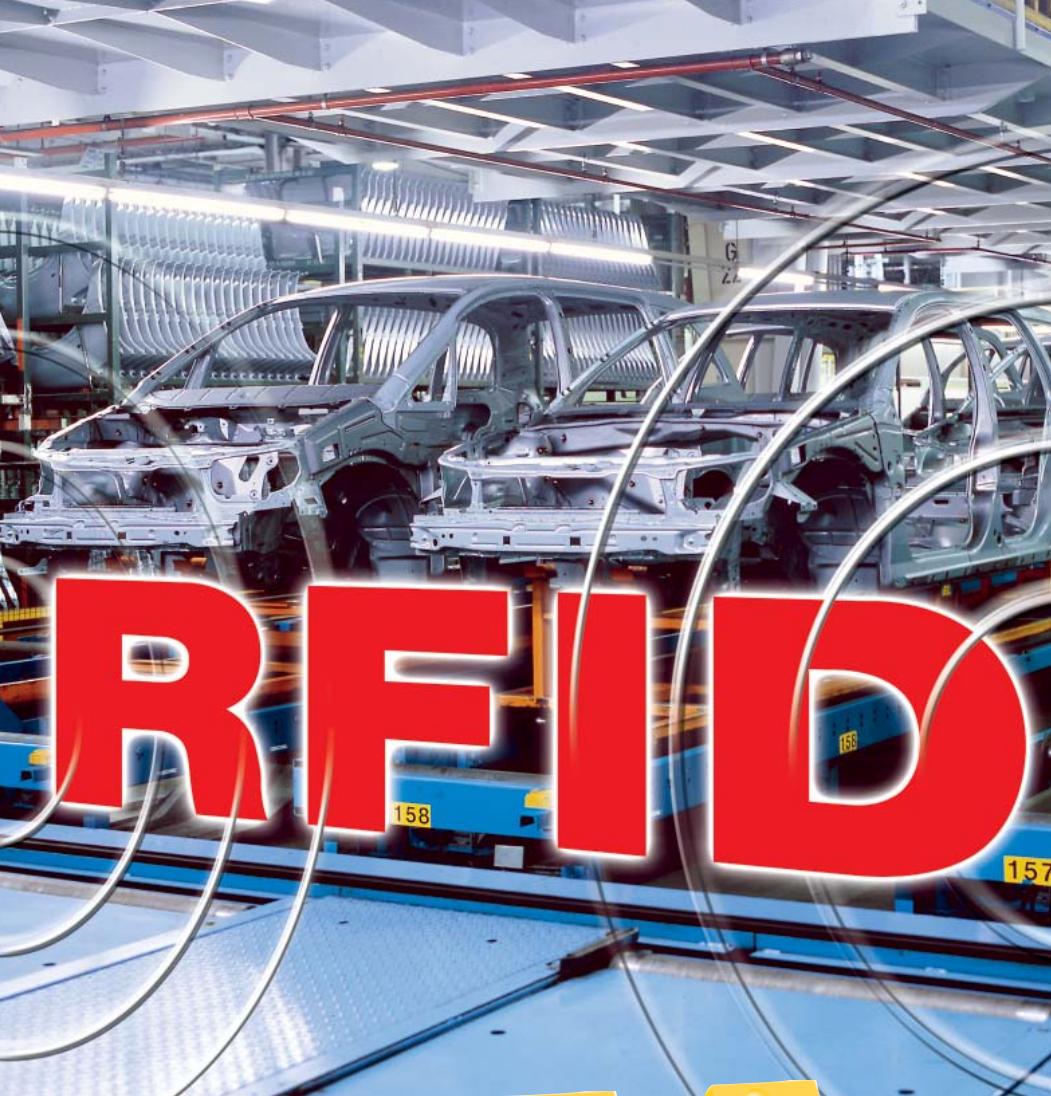


TURCK

Industrial
Automation

**MODULAR
RFID SYSTEM
HF**

***BL
ident***®



Sense it! Connect it! Bus it! Solve it!

BL ident® – modular RFID system

Make use of the advantages!



BL ident® is an all-in-one RFID system, designed for industrial applications, thus unfolding its strengths priorly there.

It is based on the modular I/O systems BL67 (field application), BL20 (cabinet mounting), the compact fieldbus modules *BL compact* (field application) and consists of data carriers (tags), read/write heads, connection technology and interface sets (gateway and RFID electronic modules).

The data carriers are also suited for industrial applications.

BL ident® – make use of the advantages - HF and UHF – One solution!

Whether applied in production control systems, in logistics or automation processes, interference immune HF and long range UHF are now combined in one solution.

BL ident® by TURCK makes it possible.

Longer operating distances are achieved, even in harsh industrial environments and with data exchange on-the-fly.

Furthermore, the product channelfolio comprises extremely quick and almost infinitely re-writeable FRAM data carriers as well as a high temperature resistant versions (up to 210 °C) for application in coating lines. Moreover, *BL ident®* can be integrated in existing system configurations without any problems.

Make use of the new advantages for industrial applications with RFID solutions made by TURCK.



BL ident® – significant potentials for cost-saving:

- Easy integration in the existing control world
- Efficient production and increased system availability

The short period of amortisation and a quick ROI (Return on Investment) of the system are a considerable contribution to the success of your company.



BL ident® works efficiently – clock rate and speed of production are increased:

- Fast FRAM technology (0.5 ms/Byte)
- Parallel processing of data with up to 16 channels per interface
- Read and write on-the-fly



BL ident® – maximum freedom and highest flexibility for system integration. Quick implementation of your projects:

- Read/write heads are available in industrial conform housings (M18, M30, CK40, Q14, Q80, Q80L400, S32XL, Q350), protection class IP67/IP69K and read/write distances of up to 500 mm – suited for very fast applications and roller conveyors!
- Robust tags in IP69K – also available in miniature designs of Ø 7.5 x 1 mm
- Corresponding data carriers can be mounted directly on metal without additional mounting aids
- Modular mounted interfaces – additional I/O modules can be integrated (BL20, BL67)



Source: Volkswagen Sachsen GmbH

- BL compact – compact fieldbus connections in IP67 combine RFID with integrated I/Os.
- Up to 50 m connection cable between read/write head and interface
- Comprehensive mounting set
- Multiple fieldbus standards such as PROFIBUS-DP, EtherNet/IP™, Modbus TCP, DeviceNet™, PROFINET IO and CANopen, protection class IP20 and IP67
- No matter which control system you use: *BL ident*® electronic modules (BL20-2RFID-S, BL67-2RFID-S resp. sets with the letter S in the type code) are easy to integrate in existing systems. As no function module is needed, the control unit and the periphery are thus relieved.
- Programmable gateways with periferal pre-processing function also relieve the higher-level control and bus system.



***BL ident*® – extended service intervals and increased system availability:**

- Increased safety level due to long data storage period (10 years if operated at prescribed temperature)
- Nearly infinitely re-writing of the FRAM data carriers (10^{10}), EEPROM: 10^5
- Extremely resistant
- The materials used for the read/write heads of the WD-series are resistant to all acid and alkaline detergents and disinfectants. Any damages caused by the aggressive cleaning agents are thus prevented.
- The data carriers TW-SPP18x1-B128 and TW-R4-22-B128 meet the requirements of autoclaves (approx. 121 °C hot steam under pressure).



***BL ident*® - easy maintenance ensures more safety and reduction of costs:**

- No system down-times through simple plugging/pulling of the electronic modules during operation
- Locally displayed fieldbus diagnostics directly in the field via LEDs on the read/write heads and on the interface
- The interface is easily connected to other fieldbus nodes by replacing the gateway – the remaining configuration is left unchanged
- Same mounting accessories as for inductive sensors – less mounting accessories are needed



For more information on RFID please see D101759 and D101803!



BL ident® modular RFID system

Key benefits for your economic success!

BL ident® – flexibility for your application, security of investment!

The RFID system *BL ident®* is easy to integrate, from the data carrier, over read/write heads, up to simple and quick connection of the system to the control level. You will be able to configure your system comfortably to your needs.

BL ident® is a future-proof technology and interoperable due to internationally valid standards. Profit from these benefits and gain highest investment security!

BL ident® – data carriers

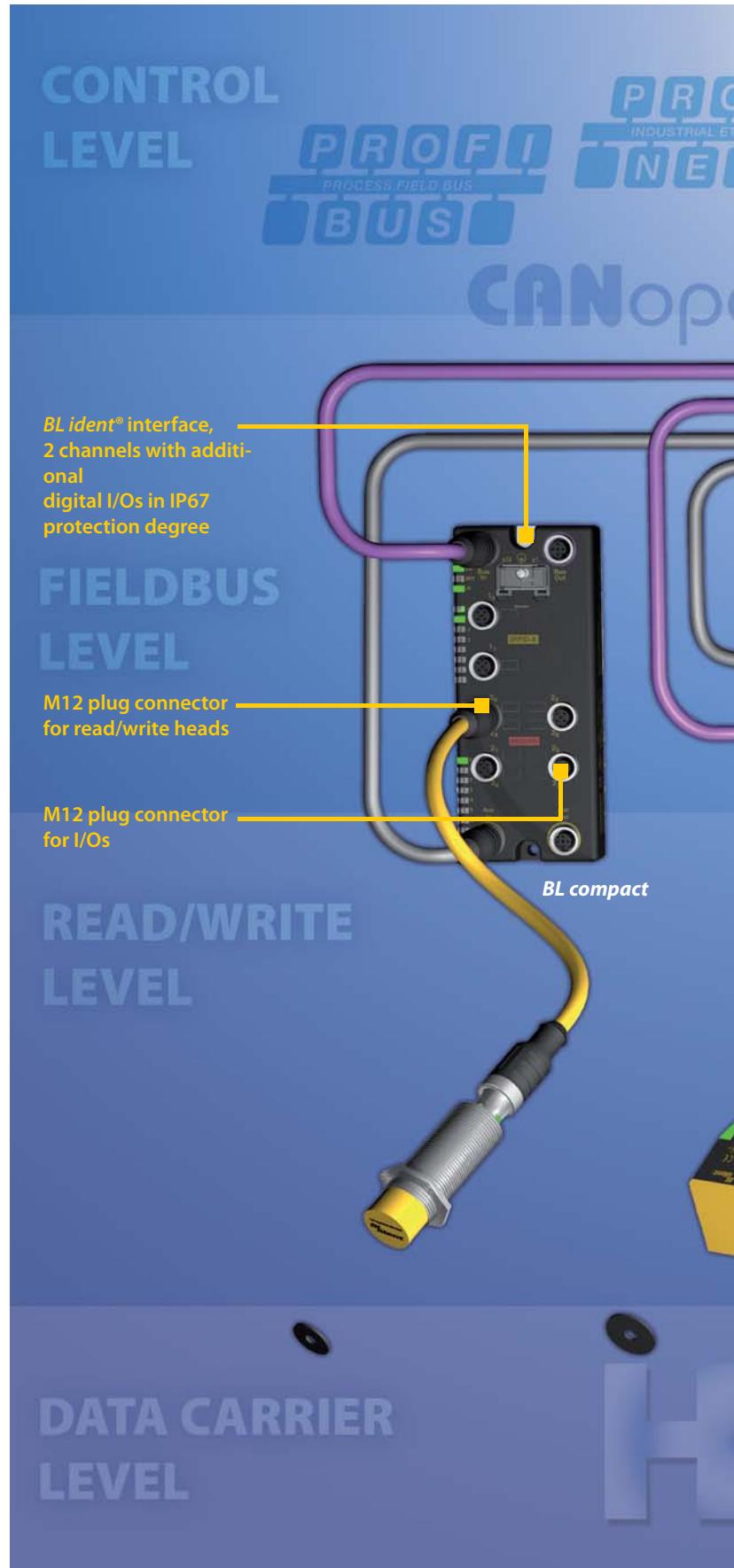
- Especially small versions 7.5 mm
- EEPROM data carrier for large quantities
- FRAM data carrier for high-speed transmission and many write cycles
- High temperature data carriers for overall process control, -40...+210 °C
- Data carriers for autoclaves, water-vapor tight up to +121 °C
- Direct mounting on metal
- Customer specific solutions based on open and internationally valid standards (ISO 15693 and ISO 18000-6C)
- Data carriers for the Ex area

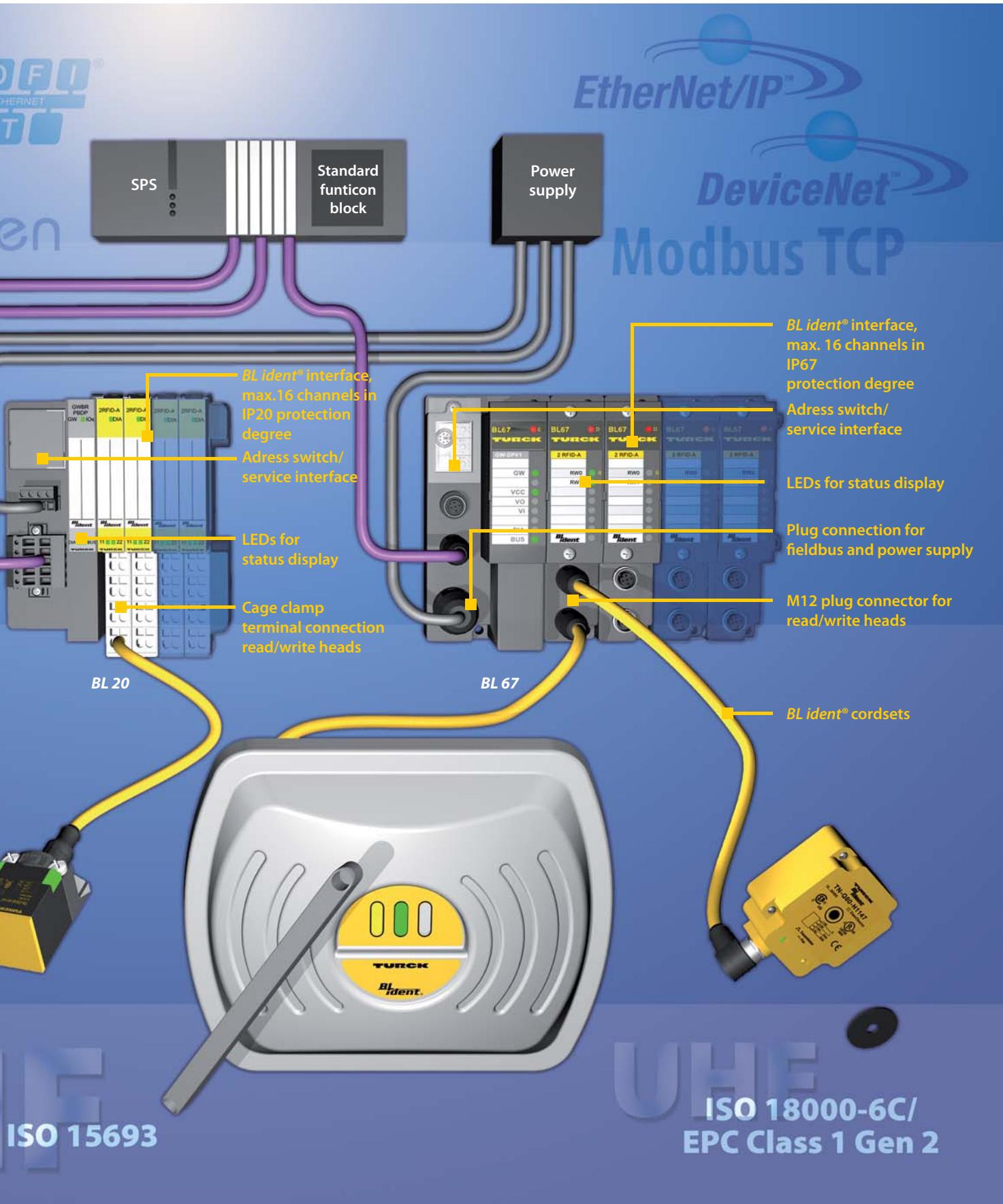
BL ident® – read/write heads

- Robust industrial design
- Fully encapsulated read/write heads
- Read/write distances up to 500 mm
- Suited for food industry applications, Wash-Down (IP69K)
- Read/write heads for the Ex area

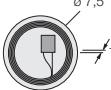
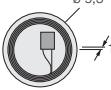
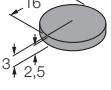
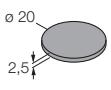
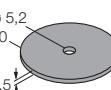
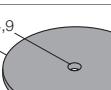
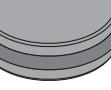
BL ident® – interfaces

- Modular concept (BL20 and BL67) with up to 16 channels per gateway
- BL20 for cabinet mounting
- BL67 for direct mounting in the field
- Cable length to the read/write head up to 50 m
- Versatile and simple fieldbus connection (PROFIBUS-DP, DeviceNet™, CANopen, PROFINET IO, Ethernet Modbus TCP, EtherNet/IP™)
- Programmable gateways for peripheral and independent control tasks
- Additional integration of I/O modules on the same gateway resp. bus node
- Modules for space-saving integration in the field (*BL compact*)
- Interfaces for the Ex area





BL ident® – data carriers

Dimensions/ housing lengths	Memory size	Memory organiz.	Operating temperature	Features	Type
	128 byte	EEPROM	-25...+70 °C	small housing	TW-R7.5-B128
	128 byte	EEPROM	-25...+70 °C	small housing	TW-R9.5-B128
	64 byte	EEPROM	-25...+85 °C	extended storage temperature range	TW-R16-B64
	128 byte	EEPROM	-25...+85 °C	extended storage temperature range ATEX ⁴	TW-R16-B128
	128 byte	EEPROM	-25...+85 °C	standard ATEX ⁴	TW-R20-B128
	2 kbyte	FRAM	-20...+85 °C	standard ATEX ⁴	TW-R20-K2 TW-R20-K2-Ex
	128 byte	EEPROM	-25...+85 °C	standard ATEX ⁴	TW-R30-B128 TW-R30-B128-Ex
	2 kbyte	FRAM	-20...+85 °C	standard ATEX ⁴	TW-R30-K2 TW-R30-K2-Ex
	128 byte	EEPROM	-25...+85 °C	standard ATEX ⁴	TW-R50-B128 TW-R50-B128-Ex
	2 kbyte	FRAM	-20...+85 °C	standard standard ATEX ⁴ ATEX ⁴	TW-R50-K2 TW-R50-K8 TW-R50-K2-Ex TW-R50-K8-Ex
	128 byte	EEPROM	-25...+85 °C	direct mounting on/in metal	TW-R30-M-B128 ¹
	2 kbyte	FRAM	-25...+85 °C	direct mounting on/in metal	TW-R30-M-K2 ¹
	128 byte	EEPROM	-25 ...+85 °C	direct mounting on/in metal	TW-R50-M-B128 ¹
	2 kbyte	FRAM	-25...+85 °C	direct mounting on/in metal	TW-R50-M-K2 ¹
	128 byte	EEPROM	-25...+85 °C	direct mounting on/in metal	TW-R80-M-B128 ¹
	2 kbyte	FRAM	-25...+85 °C	direct mounting on/in metal	TW-R80-M-K2 ¹
	2 kbyte	FRAM	-25...+85 °C	direct mounting on/in metal ATEX ⁴	TW-R50-MF-K2 ¹ TW-R50-MF-K2-Ex

¹ accessories possibly required

² for more information see data sheet

³ optional printing

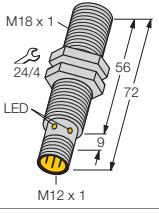
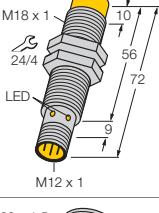
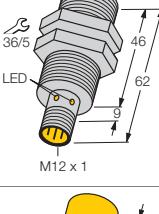
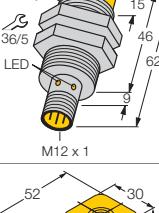
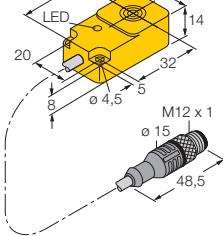
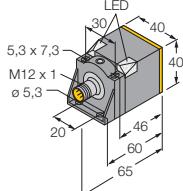
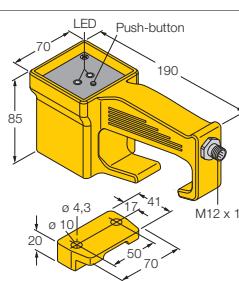
⁴ II 2 G Ex ia IIC T4/T6

II 2 D Ex ia D21 T110 °C

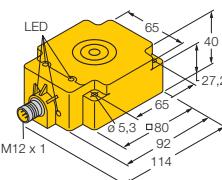
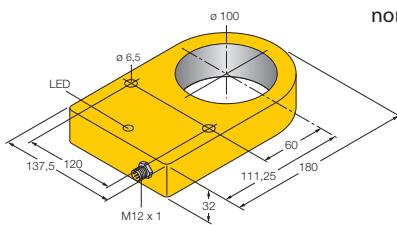
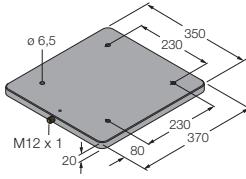
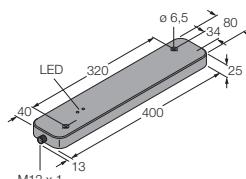
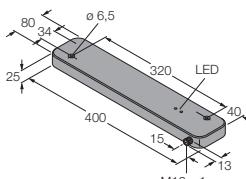
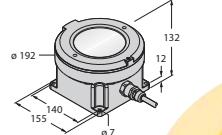
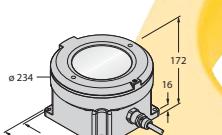
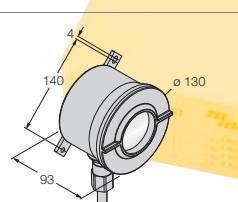


Dimensions/ housing lengths	Memory size	Memory organiz.	Operating temperature	Features	Type
	64 byte	EEPROM	-40...+210 °C 30 min.	high temperature range	TW-R22-HT-B64 ²
	128 byte 2 kbyte	EEPROM FRAM	-40...+210 °C 30 min.	high temperature range	TW-R50-90-HT-B128 ² TW-R50-90-HT-K2 ²
	128 byte	EEPROM	-20...+85 °C	inlay	TW-I14-B128
	128 byte	EEPROM	-20...+70 °C	Smart-Label	TW-L80-50-P-B128
	128 byte	EEPROM	-20...+70 °C	Smart-Label	TW-L49-46-F-B128
	128 byte 2 kbyte 128 byte 2 kbyte 128 byte 2 kbyte	EEPROM FRAM EEPROM FRAM EEPROM FRAM	-20...+85 °C	screw housing	TW-BD10X1.5-19-B128 TW-BD10X1.5-19-K2 TW-BS10X1.5-19-B128 TW-BS10X1.5-19-K2 TW-BV10X1.5-19-B128 TW-BV10X1.5-19-K2
	128 byte	EEPROM	-25...+85 °C	suited for autoclaves	TW-SPP18x1-B128
	128 byte	EEPROM	-25...+85 °C	fiber-glass data carrier, suited for autoclaves	TW-R4-22-B128
	128 byte	EEPROM	-25...+85 °C	check card housing	TW-L86-54-C-B128

BL ident® – read/write heads

Dimensions/ housing lengths	Installation conditions	Features	Connection	Type
	flush	standard	only with BL ident® cordset (see page 16)	TB-M18-H1147 TB-M18-H1147/S1126
		wash-down, (IP69K)		TB-EM18WD-H1147 ¹ TB-EM18WD-H1147/S1126 ¹
		ATEX II 3 G Ex nA II T4 Gc II 3 D Ex t III B T135°C Dc		TB-EM18WD-H1147-Ex TB-EM18WD-H1147/S1126-Ex
	non-flush	standard	only with BL ident® cordset (see page 16)	TN-M18-H1147 TN-M18-H1147/S1126
		wash-down, (IP69K)		TN-EM18WD-H1147 ¹ TN-EM18WD-H1147/S1126 ¹
		ATEX II 3 G Ex nA II T4 Gc II 3 D Ex t III B T135°C Dc		TN-EM18WD-H1147-Ex TN-EM18WD-H1147/S1126-Ex
	flush	standard	only with BL ident® cordset (see page 16)	TB-M30-H1147 TB-M30-H1147/S1126
		wash-down, (IP69K)		TB-EM30WD-H1147 ¹ TB-EM30WD-H1147/S1126 ¹
		ATEX II 3 G Ex nA II T4 Gc II 3 D Ex t III B T135°C Dc		TB-EM30WD-H1147-Ex TB-EM30WD-H1147/S1126-Ex
	non-flush	standard	only with BL ident® cordset (see page 16)	TN-M30-H1147 TN-M30-H1147/S1126
		wash-down, (IP69K)		TN-EM30WD-H1147 ¹ TN-EM30WD-H1147/S1126 ¹
		ATEX II 3 G Ex nA II T4 Gc II 3 D Ex t III B T135°C Dc		TN-EM30WD-H1147-Ex TN-EM30WD-H1147/S1126-Ex
	non-flush	flat housing	only with BL ident® cordset (see page 16)	TN-Q14-0.15-RS4.47T
	partially embeddable	standard	only with BL ident® cordset (see page 16)	TN-CK40-H1147 TN-CK40-H1147/S1126
	non-flush	flexible operation	only with BL ident® cordset (see page 16)	HT-Ident-H1147 read/write head
				HT-Ident-H1187 read/write head with pushbutton, LED and audible alert

¹ WD series (wash-down) is resistant to all common acid and alkaline detergents and disinfectants, thread material: V4A (1.4404/316L); front cap: LCP Vectra 140

Dimensions/ housing lengths	Installation conditions	Features	Connection	Type
	non-flush	standard large read/write distance	only with <i>BL ident</i> ® cordset (see page 16)	TN-Q80-H1147 TN-Q80-H1147/S1126 TNER-Q80-H1147 TNLR-Q80-H1147/S1126 TNLR-Q80-H1147
		ATEX II 3 G Ex nA II T4 II 3 D Ex tD A22 IP67 T135 °C		TN-Q80-H1147-Ex TNLR-Q80-H1147-Ex
	non-flush	standard	only with <i>BL ident</i> ® cordset (see page 16)	TN-S32XL-H1147
	non-flush	large read/write distance	only with <i>BL ident</i> ® cordset (see page 16)	TNLR-Q350-H1147 TNLR-Q350-H1147-S1126
	non-flush	suited for mounting in roller conveyors (lengths and crosswise alignment possible)	only with <i>BL ident</i> ® cordset (see page 16)	TNLR-Q80L400-H1147 TNLR-Q80L400-H1147-S1126
	non-flush	suited for mounting in roller conveyors (lengths and crosswise alignment possible)	only with <i>BL ident</i> ® cordset (see page 16)	TNLR-Q80L400-H1147L TNLR-Q80L400-H1147L-S1126
 	non-flush	ATEX II 2 G Ex D II B ...	only with <i>BL ident</i> ® cordset (see page 16)	TNLR-Q80-R192H132-2M-Ex TNLR-Q80-R234H172-2M-Ex
	partially embedded	ATEX II 2 G Ex D II B ...	only with <i>BL ident</i> ® cordset (see page 16)	TN-CK40-R130H93-2M-Ex

***BL ident®* – combinations of read/write heads and data carriers**

The table shows the combination possibilities of read/write heads and data carriers:

E = recommended read/write distance (x = not defined)

M = max. read/write distance

M = max. read/write distance
L = Length of the transmission zone with recommended distance

**Read/write distances up to
500 mm**

Each read/write head is able to communicate with a number of data carriers from the TURCK product channelfolio. The ranges achieved may vary according to the combination of read/write heads and data carriers.

Read/write heads
[green box] = also for:
– Texas Instruments EEPROM
– Infineon EEPROM

Data carrier

 = PHILIPS I-Code SLI (SL2)
 Fujitsu FRAM

 Fujitsu FRAM
 PHILIPS I-Code SI 1

The read/write heads with the type code **S1126** are optimized for different data carriers.



		TNLR-Q80L400-H1147 crosswise alignment	TNLR-Q80L400-H1147/ crosswise alignment	TNLR-Q350-H1147	TNLR-Q80L400-H1147/ lengthwise alignment	TNLR-Q80L400-H1147/ lengthwise alignment	TNLR-Q80L400-H1147L-S1126	TNLR-Q80L400-H1147/ crosswise alignment	TNLR-Q80L400-H1147/ crosswise alignment	TNLR-Q350-H1147-S1126	TB-M18-H1147/S1126	TB-EM18WD-H1147/S1126	TB-EM18WD-H1147/S1126-Ex	TN-M18-H1147/S1126	TN-EM18WD-H1147/S1126	TN-EM18WD-H1147/S1126-Ex	TB-M30-H1147/S1126	TB-EM30WD-H1147/S1126	TB-EM30WD-H1147/S1126-Ex	TN-M30-H1147/S1126	TN-EM30WD-H1147/S1126	TN-EM30WD-H1147/S1126-Ex	TN-CK40-H1147/S1126	TN-Q80-H1147/S1126	TNLR-Q80-H1147/S1126	HT-Ident-H1147	HT-Ident-H1187
		50	50	60	30	30	50	50	60	10	10	10	12	12	12	12	12	12	20	20	28	13	10	20	13	10	
		95	95	203	105	105	95	95	203	17	17	17	23	23	23	23	23	23	38	38	30	30	34	41	30	30	
		74	74	360	410	410	74	74	360	14	14	14	26	26	26	20	20	20	44	44	44	42	62	60	66	42	
		60	60	100	40	40	60	60	100	8	8	8	10	10	10	15	15	15	22	22	20	11	14	11	22	14	
		102	102	215	110	110	102	102	215	15	15	15	22	22	22	27	27	27	40	40	40	33	37	45	33	33	
		86	86	350	404	404	86	86	350	12	12	12	26	26	26	20	20	20	34	34	34	54	68	66	66	46	
		15	15	80																							
		64	64	155																							
		70	70	310																							
		90	90	80	60	60	90	90	80	8	8	8	10	10	10	13	13	13	22	22	30	30	35	60	30	30	
		152	152	218	158	158	152	152	218	17	17	17	25	25	30	30	30	30	43	43	53	53	72	115	53	53	
		132	132	350	434	434	132	132	350	22	22	22	34	34	32	32	32	32	56	56	62	80	80	116	62	62	
		70	70	100																							
		122	122	250																							
		100	100	380																							
		150	150	200	100	100	150	150	200				20	20	20	20	20	20	40	40	45	65	65	80	45	45	
		256	256	462	268	268	256	256	462				41	41	43	43	43	43	72	72	85	118	118	165	85	85	
		230	230	530	484	484	230	230	530				70	70	46	46	46	46	76	76	96	120	120	168	96	96	
		120	120	200																							
		216	216	405																							
		190	190	480																							
		120	120	170	70	70	120	120	170				1	1	1	1	1	9	9	17	9	39	39	39	38	38	
		226	226	432	238	238	226	226	432				12	12	12	12	12	27	27	39	41	74	74	74	81	81	
		230	230	530	484	484	230	230	530				26	26	20	20	20	44	44	54	60	90	90	90	82	82	
		120	120	170	70	70	120	120	170				x	x	x	x	x	10	10	15	35	50	50	55	15	15	
		226	226	432	238	238	226	226	432				13	13	13	13	13	42	42	55	88	135	135	155	55	55	
		230	230	530	484	484	230	230	530				46	46	46	46	46	76	76	96	120	120	168	168	96	96	
		90	90	170																							
		186	186	375																							
		190	190	480																							

Note:

The maximum read/write distance (M) and the length of the transmission zone (L) only represent standard values determined under laboratory test conditions.

Deviation of read/write distances up to 30 % are possible due to component tolerances, mounting and ambient conditions and materials used (especially metal).

Therefore a test under real application conditions is recommended, especially with regard to read/write on-the-fly!

Moreover the recommended distance between data carrier and read/write head should be observed, in order to obtain correct read/write processes.



***BL ident®* – combinations read/write heads and data carriers**

The table shows the combination possibilities of read/write heads and data carriers:

E = recommended read/write distance (x = not defined)

M = max. read/write distance

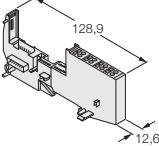
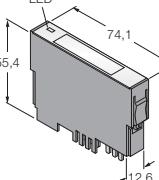
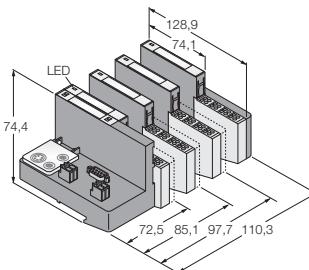
- M** = Max. read/write distance
- L** = Length of the transmission zone with recommended distance

¹ Measured values: Data carrier on metal (St37) with plastic screws

² Measured values: Data carrier flush-mounted in metal (St37)

TNLR-Q80L400-H1147														
crosswise alignment														
TNLR-Q80L400-H1147L														
TNLR-Q350-H1147														
lengthwise alignment														
TNLR-Q80L400-H1147-L-S1126														
50	50	60	30	30	50	50	60	10	10	12	12	12	12	12
95	95	203	105	105	95	95	203	17	17	23	23	23	23	23
74	74	360	410	410	74	74	360	14	14	26	26	26	26	26
88	88	200	80	80	88	88	200	15	15	25	25	25	25	25
207	207	416	222	222	207	207	416	30	30	45	45	42	42	64
176	176	458	464	464	176	176	458	34	34	44	44	44	44	68
160	160	240	100	100	160	160	240	15	15	20	20	20	20	30
270	270	500	270	270	270	270	500	23	23	40	40	43	43	65
240	240	518	488	488	240	240	518	64	64	72	72	76	76	84
5	5	5	5	5	5	5	5	10	10	10	10	10	10	10
11	11	11	16	16	14	14	16	17	17	24	24	34	34	34
14	14	14	22	22	22	22	22	26	26	34	34	46	46	60
8	8	8	6	6	8	8	6	10	10	15	15	20	20	23
12	12	12	14	14	12	12	14	22	22	27	27	36	36	46
16	16	16	16	16	16	16	16	22	22	22	34	34	48	64
8	8	8	10	10	8	8	10	10	10	15	15	20	20	25
18	18	18	22	22	18	18	22	22	22	27	27	36	36	53
22	22	22	22	22	22	22	22	22	22	34	34	48	66	64
40	40	30	30	40	40	40	50	3	3	5	5	5	5	5
77	77	77	77	77	77	77	77	9	9	13	13	16	16	28
56	56	398	398	56	56	56	56	12	12	20	20	22	22	38
40	40	50	20	20	40	40	50	3	3	5	5	5	5	5
78	78	197	80	80	78	78	197	9	9	13	13	16	16	28
68	68	328	368	368	68	68	328	12	12	20	20	22	22	38
200	200	360	120	120	200	200	360	10	10	15	15	20	20	30
345	345	662	360	360	345	345	662	21	21	39	39	45	45	77
306	306	660	484	484	306	306	660	70	70	74	74	80	80	92
10	10	10	10	10	10	10	10	15	15	20	20	20	20	20
20	20	20	20	20	20	20	20	28	28	38	38	40	40	40
40	40	40	40	40	40	40	40	48	48	50	50	50	50	50
73	73	73	73	73	73	73	73	86	86	90	90	90	90	90
53	53	53	53	53	53	53	53	68	68	76	76	76	76	76
68	68	68	68	68	68	68	68	76	76	90	90	90	90	90
15	15	15	15	15	15	15	15	34	34	44	44	44	44	44
37	37	37	37	37	37	37	37	52	52	62	62	62	62	62
46	46	46	46	46	46	46	46	64	64	74	74	74	74	74
15	15	15	15	15	15	15	15	33	33	43	43	43	43	43
47	47	47	47	47	47	47	47	54	54	64	64	64	64	64
54	54	54	54	54	54	54	54	64	64	74	74	74	74	74

BL ident® – extensions and interface sets in IP20

Dimensions/ housing lengths	Protection class	Modules/Interface sets	Number of channels	Type
	IP20	BL20 base modul	2	BL20-S4T-SBBS
	IP20	RFID electronic module for use with function module or programmable gateway for PROFIBUS-DPV1, DeviceNet™, PROFINET IO, Ethernet Modbus TCP, EtherNet/IP™	2	BL20-2RFID-A
	IP20	Interface sets PROFIBUS-DPV1 PROFIBUS-DPV1 PROFIBUS-DPV1 PROFIBUS-DPV1 PROFINET IO PROFINET IO PROFINET IO PROFINET IO	2 4 6 8 2 4 6 8	TI-BL20-DPV1-2 TI-BL20-DPV1-4 TI-BL20-DPV1-6 TI-BL20-DPV1-8 TI-BL20-EN-PN-2 TI-BL20-EN-PN-4 TI-BL20-EN-PN-6 TI-BL20-EN-PN-8
	IP20	Interface sets – ECONOMY PROFIBUS-DPV1 PROFIBUS-DPV1 PROFIBUS-DPV1 PROFIBUS-DPV1	2 4 6 8	TI-BL20-E-DPV1-2 TI-BL20-E-DPV1-4 TI-BL20-E-DPV1-6 TI-BL20-E-DPV1-8
	IP20	Interface sets – programmable Ethernet Modbus TCP Ethernet Modbus TCP Ethernet Modbus TCP Ethernet Modbus TCP EtherNet/IP™ EtherNet/IP™ EtherNet/IP™ EtherNet/IP™	2 4 6 8 2 4 6 8	TI-BL20-PG-EN-2 TI-BL20-PG-EN-4 TI-BL20-PG-EN-6 TI-BL20-PG-EN-8 TI-BL20-PG-EIP-2 TI-BL20-PG-EIP-4 TI-BL20-PG-EIP-6 TI-BL20-PG-EIP-8

Note

No matter which control system you use, *BL ident®* electronic modules are easy to integrate in existing systems (BL20-2RFID-S, BL67-2RFID-S resp. sets with the letter S in the type code). The control unit as well as the periphery are relieved because you don't need function modules any more.



Interface sets and single components for fieldbus connection

We offer interfaces as complete sets. You can extend an existing set with additional channels any time you like. You need one electronic module and one base module for two channels. You can connect maximally 8 channels to the interfaces and 16 channels to interfaces with simple I/O communication.

Ordering example:

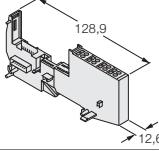
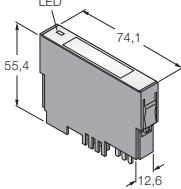
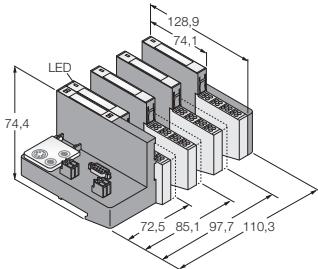
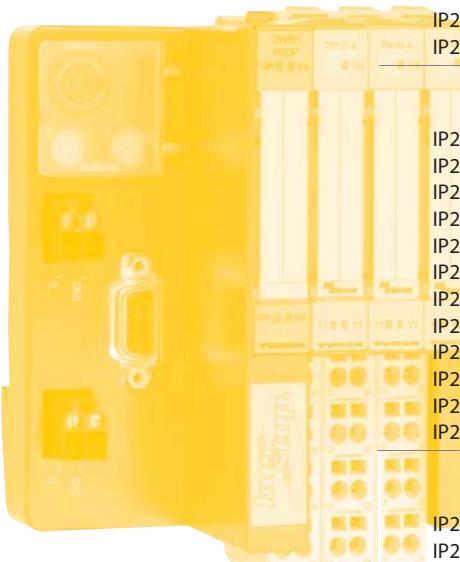
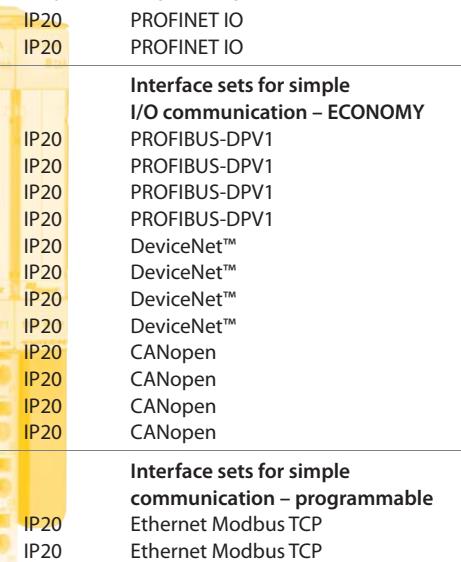
You need two more channels for the connection to DeviceNet™? In this case you have to order one BL20-2RFID-A electronic module and one BL20-S4T-SBBS base module. You need one BL20-2RFID-S electronic module and one BL20-S4T-SBBS base module for simple I/O communication.

Function modules for interfaces and programmable interfaces are available on the *BL ident®* CD, ident no.1545052. The CD is included in the set.

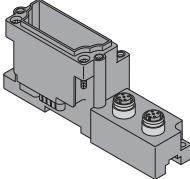
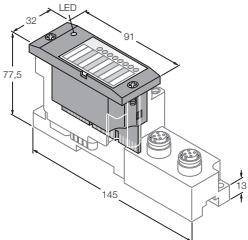
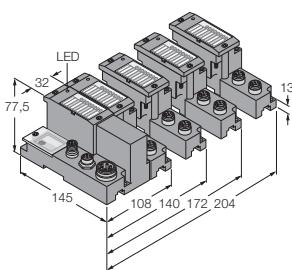
BL ident® – extensions and interface sets in IP20 for simple I/O communication

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Dimensions/ housing lengths	Protection class	Modules/Interface sets	Number of channels	Type	
	IP20	BL20 base module	2	BL20-S4T-SBBS	
	IP20	RFID electronic module for simple I/O communication	2	BL20-2RFID-S	
	IP20	Interface sets for simple I/O communication			
	IP20	PROFIBUS-DPV1	2	TI-BL20-DPV1-S-2	
	IP20	PROFIBUS-DPV1	4	TI-BL20-DPV1-S-4	
	IP20	PROFIBUS-DPV1	6	TI-BL20-DPV1-S-6	
	IP20	PROFIBUS-DPV1	8	TI-BL20-DPV1-S-8	
	IP20	DeviceNet™	2	TI-BL20-DN-S-2	
	IP20	DeviceNet™	4	TI-BL20-DN-S-4	
	IP20	DeviceNet™	6	TI-BL20-DN-S-6	
	IP20	DeviceNet™	8	TI-BL20-DN-S-8	
	P20	EtherNet/IP™	2	TI-BL20-EIP-S-2	
	IP20	EtherNet/IP™	4	TI-BL20-EIP-S-4	
	IP20	EtherNet/IP™	6	TI-BL20-EIP-S-6	
	IP20	EtherNet/IP™	8	TI-BL20-EIP-S-8	
	IP20	Ethernet Modbus TCP	2	TI-BL20-EN-S-2	
	IP20	Ethernet Modbus TCP	4	TI-BL20-EN-S-4	
	IP20	Ethernet Modbus TCP	6	TI-BL20-EN-S-6	
	IP20	Ethernet Modbus TCP	8	TI-BL20-EN-S-8	
	IP20	PROFINET IO	2	TI-BL20-EN-PN-S-2	
	IP20	PROFINET IO	4	TI-BL20-EN-PN-S-4	
	IP20	PROFINET IO	6	TI-BL20-EN-PN-S-6	
	IP20	PROFINET IO	8	TI-BL20-EN-PN-S-8	
	IP20	Interface sets for simple I/O communication – ECONOMY			
	IP20	PROFIBUS-DPV1	2	TI-BL20-E-DPV1-S-2	
	IP20	PROFIBUS-DPV1	4	TI-BL20-E-DPV1-S-4	
	IP20	PROFIBUS-DPV1	6	TI-BL20-E-DPV1-S-6	
	IP20	PROFIBUS-DPV1	8	TI-BL20-E-DPV1-S-8	
	IP20	DeviceNet™	2	TI-BL20-E-DN-S-2	
	IP20	DeviceNet™	4	TI-BL20-E-DN-S-4	
	IP20	DeviceNet™	6	TI-BL20-E-DN-S-6	
	IP20	DeviceNet™	8	TI-BL20-E-DN-S-8	
	IP20	CANopen	2	TI-BL20-E-CO-S-2	
	IP20	CANopen	4	TI-BL20-E-CO-S-4	
	IP20	CANopen	6	TI-BL20-E-CO-S-6	
	IP20	CANopen	8	TI-BL20-E-CO-S-8	
	IP20	Interface sets for simple communication – programmable			
	IP20	Ethernet Modbus TCP	2	TI-BL20-PG-EN-S-2	
	IP20	Ethernet Modbus TCP	4	TI-BL20-PG-EN-S-4	
	IP20	Ethernet Modbus TCP	6	TI-BL20-PG-EN-S-6	
	IP20	Ethernet Modbus TCP	8	TI-BL20-PG-EN-S-8	
	IP20	EtherNet/IP™	2	TI-BL20-PG-EIP-S-2	
	IP20	EtherNet/IP™	4	TI-BL20-PG-EIP-S-4	
	IP20	EtherNet/IP™	6	TI-BL20-PG-EIP-S-6	
	IP20	EtherNet/IP™	8	TI-BL20-PG-EIP-S-8	

BL ident® – extensions and interface sets in IP67

Dimensions/ housing lengths	Protection class	Modules/Interface sets	Number of channels	Type
	IP67	BL67 base module	2	BL67-B-2M12
	IP67	RFID electronic module for use with function module or programmable gateway for PROFIBUS-DPV1, DeviceNet™, PROFINET IO, Ethernet Modbus TCP, EtherNet/IP™	2	BL67-2RFID-A
	IP67	Interface sets PROFIBUS-DPV1 PROFIBUS-DPV1 PROFIBUS-DPV1 PROFIBUS-DPV1 PROFINET IO PROFINET IO PROFINET IO PROFINET IO	2 4 6 8 2 4 6 8	TI-BL67-DPV1-2 TI-BL67-DPV1-4 TI-BL67-DPV1-6 TI-BL67-DPV1-8 TI-BL67-EN-PN-2 TI-BL67-EN-PN-4 TI-BL67-EN-PN-6 TI-BL67-EN-PN-8
	IP67	Interface sets – programmable PROFIBUS-DP PROFIBUS-DP PROFIBUS-DP PROFIBUS-DP Ethernet Modbus TCP Ethernet Modbus TCP Ethernet Modbus TCP Ethernet Modbus TCP EtherNet/IP™ EtherNet/IP™ EtherNet/IP™ EtherNet/IP™	2 4 6 8 2 4 6 8 2 4 6 8	TI-BL67-PG-DP-2 TI-BL67-PG-DP-4 TI-BL67-PG-DP-6 TI-BL67-PG-DP-8 TI-BL67-PG-EN-2 TI-BL67-PG-EN-4 TI-BL67-PG-EN-6 TI-BL67-PG-EN-8 TI-BL67-PG-EIP-2 TI-BL67-PG-EIP-4 TI-BL67-PG-EIP-6 TI-BL67-PG-EIP-8

Interface sets and single components for fieldbus connection

We offer interfaces as complete sets. You can extend an existing set with additional channels any time you like. You need one electronic module and one base module for two channels. You can connect maximally 8 channels to the interfaces and

16 channels to interfaces with simple I/O communication.

Ordering example:

You need two more channels for the connection to DeviceNet™? In this case you have to order one electronic module BL67-2RFID-A and one BL67-B-2M12 base module. You need one BL67-2RFID-S electronic module and one BL67-B-2M12

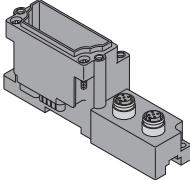
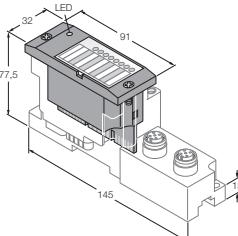
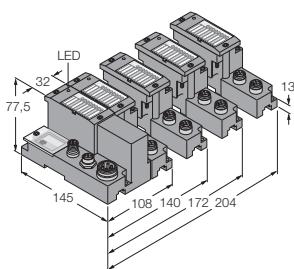
base module for simple I/O communication.

Function modules for interfaces and programmable interfaces are available on the *BL ident®* CD, ident no.1545052. The CD is included in the set.

BL ident® – extensions and interface sets in IP67 for simple I/O communication

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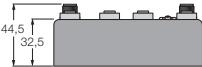
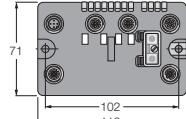
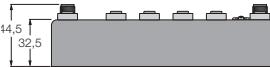
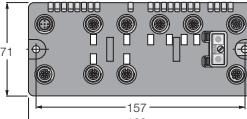
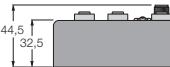
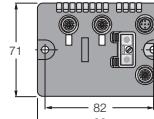
Dimensions/ housing lengths	Protection class	Modules/Interface sets	Number of channels	Type	
	IP67	BL67 base module	2	BL67-B-2M12	
	IP67	RFID electronic module for simple I/O communication	2	BL67-2RFID-S	
	IP67	Interface sets for simple I/O communication			
		PROFIBUS-DPV1	2	TI-BL67-DPV1-S-2	
		PROFIBUS-DPV1	4	TI-BL67-DPV1-S-4	
		PROFIBUS-DPV1	6	TI-BL67-DPV1-S-6	
		PROFIBUS-DPV1	8	TI-BL67-DPV1-S-8	
		DeviceNet™	2	TI-BL67-DN-S-2	
		DeviceNet™	4	TI-BL67-DN-S-4	
		DeviceNet™	6	TI-BL67-DN-S-6	
		DeviceNet™	8	TI-BL67-DN-S-8	
		EtherNet/IP™	2	TI-BL67-EIP-S-2	
		EtherNet/IP™	4	TI-BL67-EIP-S-4	
		EtherNet/IP™	6	TI-BL67-EIP-S-6	
		EtherNet/IP™	8	TI-BL67-EIP-S-8	
		Ethernet Modbus TCP	2	TI-BL67-EN-S-2	
		Ethernet Modbus TCP	4	TI-BL67-EN-S-4	
		Ethernet Modbus TCP	6	TI-BL67-EN-S-6	
		Ethernet Modbus TCP	8	TI-BL67-EN-S-8	
		PROFINET IO	2	TI-BL67-EN-PN-S-2	
		PROFINET IO	4	TI-BL67-EN-PN-S-4	
		PROFINET IO	6	TI-BL67-EN-PN-S-6	
		PROFINET IO	8	TI-BL67-EN-PN-S-8	
Interface sets for simple I/O communication –programmable					
	IP67	PROFIBUS-DP	2	TI-BL67-PG-DP-S-2	
	IP67	PROFIBUS-DP	4	TI-BL67-PG-DP-S-4	
	IP67	PROFIBUS-DP	6	TI-BL67-PG-DP-S-6	
	IP67	PROFIBUS-DP	8	TI-BL67-PG-DP-S-8	
	IP67	Ethernet Modbus TCP	2	TI-BL67-PG-EN-S-2	
	IP67	Ethernet Modbus TCP	4	TI-BL67-PG-EN-S-4	
	IP67	Ethernet Modbus TCP	6	TI-BL67-PG-EN-S-6	
	IP67	Ethernet Modbus TCP	8	TI-BL67-PG-EN-S-8	
	IP67	EtherNet/IP™	2	TI-BL67-PG-EIP-S-2	
	IP67	EtherNet/IP™	4	TI-BL67-PG-EIP-S-4	
	IP67	EtherNet/IP™	6	TI-BL67-PG-EIP-S-6	
	IP67	EtherNet/IP™	8	TI-BL67-PG-EIP-S-8	

Note

No matter which control system you use, BL ident® electronic modules are easy to integrate in existing systems (BL20-2RFID-S, BL67-2RFID-S resp. sets with the

letter S in the type code) . The control unit as well as the periphery are relieved because you don't need function modules any more.

BL compact – compact fieldbus stations with RFID interface in IP67

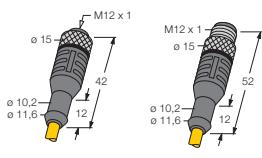
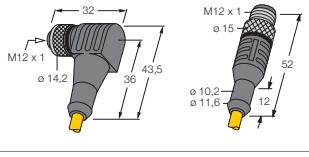
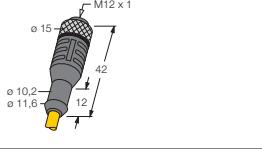
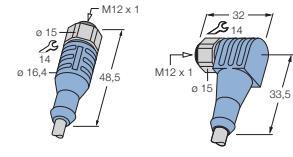
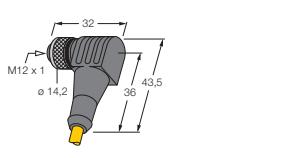
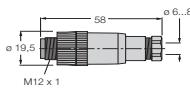
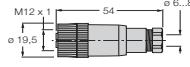
Dimensions/ housing lengths	Protection class	Module	Number of chan- nels	Type
	IP67	Compact fieldbus station for PROFI-BUS-DP (<i>BL compact</i> , advanced RFID interface = acyclic data exchange)	2	BLCDP-2M12MT-2RFID-A
	IP67	Compact fieldbus station for PROFI-BUS-DP (<i>BL compact</i> , simple RFID interface = simple I/O communication)	2	BLCDP-2M12MT-2RFID-S
	IP67	Compact fieldbus station for EtherNet/IP™ (<i>BL compact</i> , simple RFID interface = simple I/O communication)	2	BLCEN-IP-2M12MT-2RFID-S
	IP67	Compact fieldbus station for PROFI-BUS-DP (<i>BL compact</i> , simple RFID interface = simple I/O communication and 8 digital I/Os, configurable, PNP, with diagnostic function)	2	BLCDP-6M12LT-2RFID-S-8XSG-PD
	IP67	Compact fieldbus station for DeviceNet™ (<i>BL compact</i> , simple RFID Interface = simple I/O communication) 8 digital inputs/ outputs, configurable, PNP, with diagnostic function)	2	BLCDN-6M12LT-2RFID-S-8XSG-PD
	IP67	Compact fieldbus station for DeviceNet™ (<i>BL compact</i> , advanced RFID interface = acyclic data exchange) 8 digital inputs, PNP, with diagnostic function)	2	BLCDP-6M12LT-2RFID-A-8DI-PD
	IP67	Compact fieldbus station for DeviceNet™ (<i>BL compact</i> , advanced RFID interface = acyclic data exchange) 8 digital inputs/ outputs, configurable, PNP, with diagnostic function)	2	BLCDP-6M12LT-2RFID-A-8XSG-PD
	IP67	Compact fieldbus station for DeviceNet™ (<i>BL compact</i> , simple RFID interface = simple I/O communication) 8 digital inputs, PNP, with diagnostic function)	2	BLCDP-6M12LT-2RFID-S-8DI-PD
	IP67	Compact fieldbus station for CANopen (<i>BL compact</i> , simple RFID interface = simple I/O communication) 8 digital inputs/ outputs, configurable, PNP, with diagnostic function)	2	BLCCO-6M12LT-2RFID-S-8XSG-PD
	IP67	Compact fieldbus station for EtherNet/IP™ (<i>BL compact</i> , simple RFID interface = simple I/O communication)	2	BLCEN-IP-4M12LT-2RFID-S-2RFID-S
	IP67	Compact fieldbus station for EtherNet/IP™ (<i>BL compact</i> , simple RFID Interface = simple I/O communication) 8 digital inputs/ outputs, configurable, PNP, with diagnostic function)	2	BLCEN-IP-6M12LT-2RFID-S-8XSG-P
	IP67	Compact fieldbus station for EtherNet/IP™ (<i>BL compact</i> , simple RFID interface = simple I/O communication)	2	BLCDN-4M12L-2RFID-S-RFID-S
	IP67	Compact fieldbus station for DeviceNet™ (<i>BL compact</i> , simple RFID interface = simple I/O communication)	2	BLCDN-2M12S-2RFID-S
	IP67	Compact fieldbus station for CANopen (<i>BL compact</i> , simple RFID interface = simple I/O communication)	2	BLCCO-2M12S-2RFID-S

Description	Type
Mounting clip for read/write heads Ø 18 mm	BS18
Mounting clip for read/write heads Ø 18 mm	BSN18
Mounting clips with limit stop for read/write heads Ø 18 mm	BST-18B
Mounting clips with limit stop for read/write heads Ø 18 mm	BST-18N
Quick-mount for read/write heads Ø 18 mm	QM-18
Teflon cover cap for read/write heads Ø 18 mm	SKN/M18
Mounting clip with limit stop for read/write heads Ø 30 mm	BST-30B
Mounting clip without limit stop for read/write heads Ø 30 mm	BST-30N
Quick-mount for read/write heads Ø 30 mm	QM-30
Teflon cover cap for read/write heads Ø 30 mm	SKN/M30
Mounting aid for BST mounting clips	BST-UH
Mounting aid for BST mounting clips	BST-UV
Inscription labels for BST mounting clips	BST-BS
Protective mounting for read/write head CK40 (single-sided)	MF-CK40-1S
Protective mounting for read/write head CK40 (angled)	MF-CK40-2S
Protective mounting for read/write head CK40 (U-shaped)	MF-CK40-3S
Protective mounting for read/write head CK40	SG40
Teflon cover cap for read/write head CK40	T-CK40-T-FC
Protective mounting, temperature resistant, for read/write head CK40	SG40/2
Adjustable DIN rail for read/write head CK40	FS025/037
Spacer, plastic, for data carrier Ø 30 mm	DS-R30
Spacer, plastic, for data carrier Ø 50 mm	DS-R50
Mounting flange for data carrier TW-R30-M-...	MF-R30
Mounting flange for data carrier TW-R50-M-...	MF-R50
Mounting flange for data carrier TW-R80-M-...	MF-R80



BL ident® – cordsets

Prefabricated cables for connection of interfaces and read/write heads

Dimensions/housing lengths	Description	Type	
		Standard	Economy
	BL ident® cordsets Female straight, Male straight, 0.3 m Female straight, Male straight, 2 m Female straight, Male straight, 5 m Female straight, Male straight, 10 m Female straight, Male straight, 25 m Female straight, Male straight, 50 m	RK4.5T-0,3-RS4.5T/S2500 RK4.5T-2-RS4.5T/S2500 RK4.5T-5-RS4.5T/S2500 RK4.5T-10-RS4.5T/S2500 RK4.5T-25-RS4.5T/S2500 RK4.5T-50-RS4.5T/S2500	RK4.5T-0,3-RS4.5T/S2503 RK4.5T-2-RS4.5T/S2503 RK4.5T-5-RS4.5T/S2503 RK4.5T-10-RS4.5T/S2503 RK4.5T-25-RS4.5T/S2503 RK4.5T-50-RS4.5T/S2503
	BL ident® cordsets: Female angled, Male straight, 2 m Female angled, Male straight, 5 m Female angled, Male straight, 10 m Female angled, Male straight, 25 m Female angled, Male straight, 50 m	WK4.5T-2-RS4.5T/S2500 WK4.5T-5-RS4.5T/S2500 WK4.5T-10-RS4.5T/S2500 WK4.5T-25-RS4.5T/S2500 WK4.5T-50-RS4.5T/S2500	WK4.5T-2-RS4.5T/S2503 WK4.5T-5-RS4.5T/S2503 WK4.5T-10-RS4.5T/S2503 WK4.5T-25-RS4.5T/S2503 WK4.5T-50-RS4.5T/S2503
	BL ident® cordsets Female straight, 2 m Female straight, 5 m Female straight, 10 m Female straight, 25 m Female straight, 50 m	RK4.5T-2/S2500 RK4.5T-5/S2500 RK4.5T-10/S2500 RK4.5T-25/S2500 RK4.5T-50/S2500	RK4.5T-2/S2503 RK4.5T-5/S2503 RK4.5T-10/S2503 RK4.5T-25/S2503 RK4.5T-50/S2503
	For the food industry: Female straight, 5 m Female straight, 10 m Female straight, 25 m Female straight, 50 m Female angled, 5 m Female angled, 10 m Female angled, 25 m Female angled, 50 m	FB-RK4.5T-5/S2500 FB-RK4.5T-10/S2500 FB-RK4.5T-25/S2500 FB-RK4.5T-50/S2500 FB-WK4.5T-5/S2500 FB-WK4.5T-10/S2500 FB-WK4.5T-25/S2500 FB-WK4.5T-50/S2500	
	BL ident® cordsets Female angled, 2 m Female angled, 5 m Female angled, 10 m Female angled, 25 m Female angled, 50 m	WK4.5T-2/S2500 WK4.5T-5/S2500 WK4.5T-10/S2500 WK4.5T-25/S2500 WK4.5T-50/S2500	WK4.5T-2/S2503 WK4.5T-5/S2503 WK4.5T-10/S2503 WK4.5T-25/S2503 WK4.5T-50/S2503
without figure	Bulk cable, 100	KABEL-BLIDENT-100M	KABEL-BLIDENT-100M
	Field-wireable male connector M12, clamping width 6...8 mm, 5-pole, screw terminals	BS8151-0/9	
	Field-wireable female connector M12, clamping width 6...8 mm, 5-pole, screw terminals	B8151-0/9	

Connection aids – the full range

Prefabricated bus and supply cables as well as bus and power supply accessories by TURCK are of course the number one choice.



TURCK also offers a handheld (programming unit) for reading from and writing to data carriers at any required location.

Thanks to the illuminated touchscreen, the data is clearly visible and editable before it is written to the TURCK data carrier, (display in decimal, binary, hexadecimale and ASCII code).

The handheld PD-IDENT operates with Windows CE and withstands even heavy shocks and jolts. It is thus well suited for rough industrial environments.

To line-up data with a database you simply exchange an Excel table.

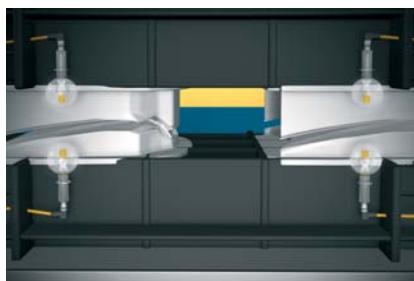
Other features include:

- Automatic read operation
- Automatic comparison of data records
- Definition of password protected areas
- Optional WLAN, Bluetooth and GPRS features



PDA-IDENT with accessories

PD-IDENT



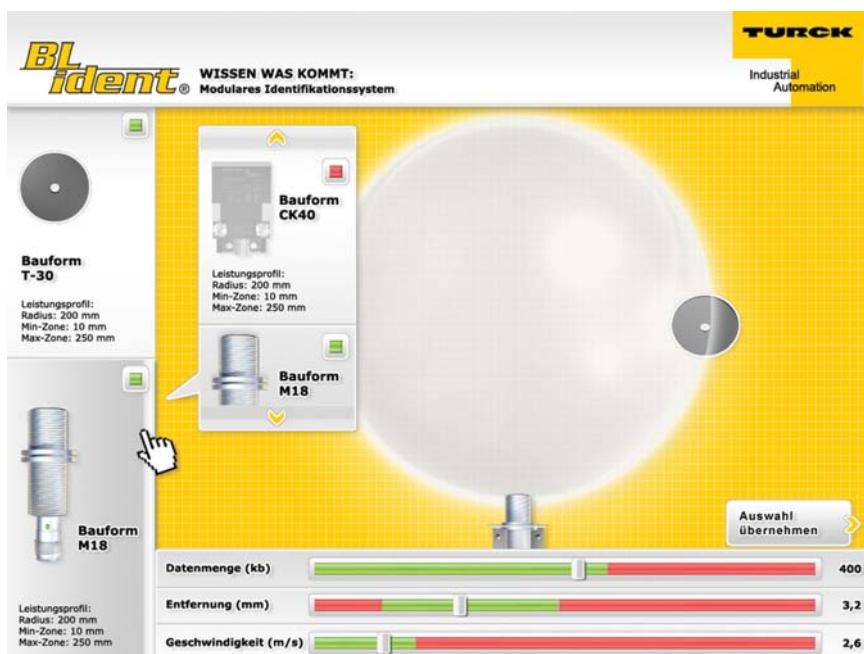
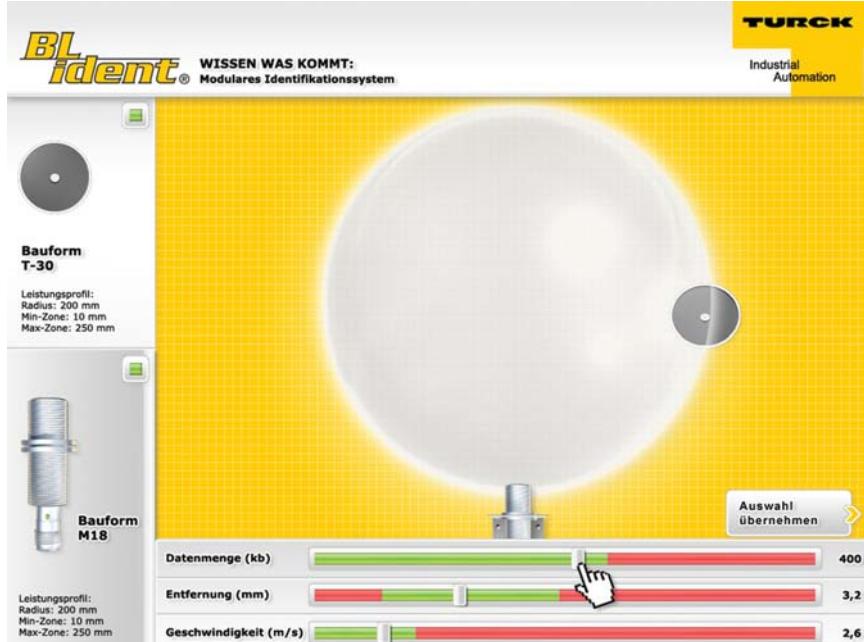
Open

The *BL ident*® handheld PD-IDENT operates with Windows CE and is therefore open for customer-specific applications such as disabling certain functions. Simple user surfaces can be created according to your requirements.

Availability

The optional WLAN connection allows the *BL ident*® handheld to transfer data directly to a PLC or PC regardless of the location. This means that the data is always available even when the automated system is stopped.

BL ident® – configurator



Even limited space conditions are no longer a problem. You can easily integrate the configurator in your system.



In many industrial sectors, the use of sensors and actuators and even fieldbuses is state-of-the-art. However, when RFID systems are applied, questions regarding the air interface always arise, such as "How fast or how close should parts pass by the read/write heads?" In general, a great deal of uncertainty exists regarding the application possibilities of RFID.

General information such as "recommended read/write interval" or „transfer rate = 0.5 ms/byte“ are usually insufficient for evaluating the use of the equipment, because application variables such as data quantity, speed and distance result from complex interaction between the read/write heads and the data carriers.

With the „BL ident® configurator“ it is now possible to simulate the specific application and enables preliminarily selection of the right equipment.

The possibilities and limits of specific combinations are quickly detected by setting the application parameters and "playing" with the values.

The online version of the configurator (freeware available on www.turck.com) is linked to the TURCK product database and therefore provides up-to-date data. With the configurator you can not only simulate applications, you can also generate the corresponding data sheets and documents.



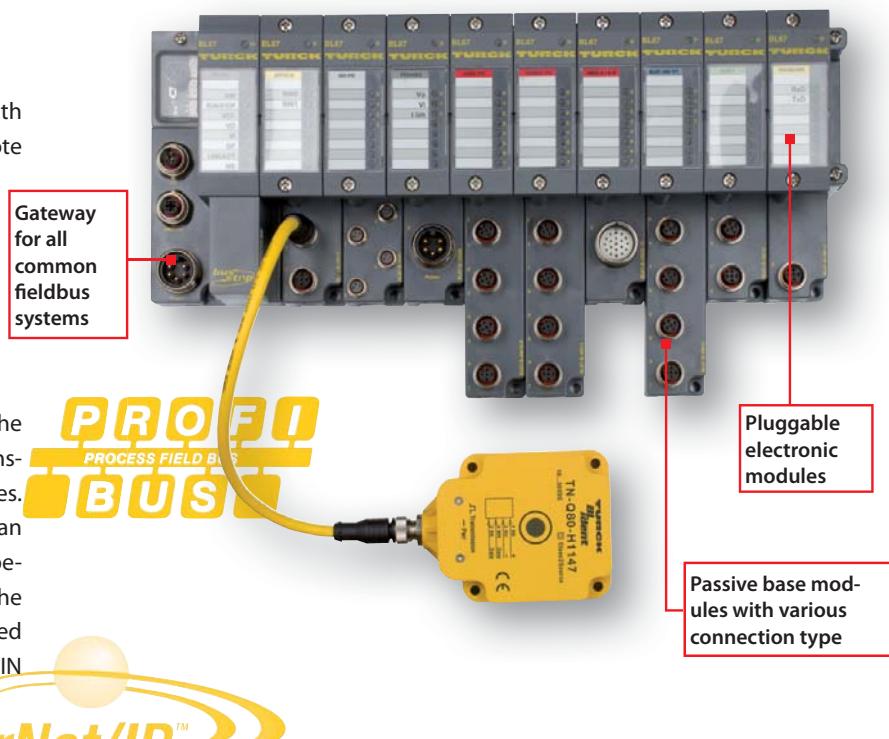
Extension of *BL ident*[®] with standard I/O-modules

TURCK

Industrielle
Automation

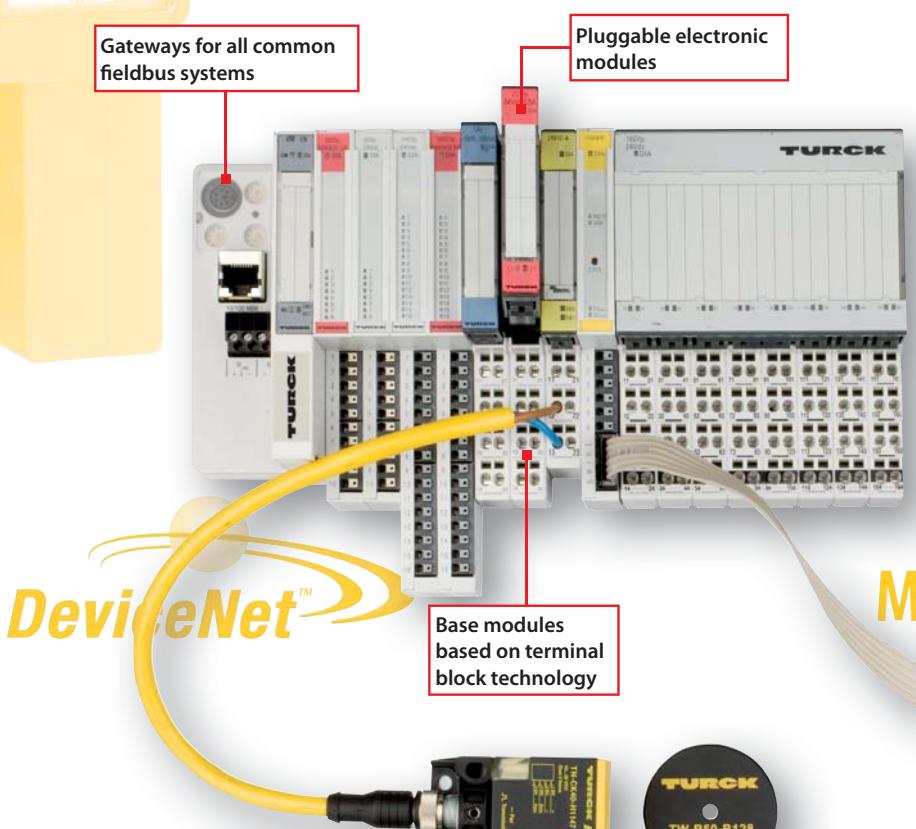
BL ident[®] – IP67 protected

BL ident[®] in IP67 can be extended with standard I/O modules. You get a remote I/O system that incorporates all characteristics and advantages of modern IP20 systems in the rough IP67 environment. Flexibility and planning freedom on all levels is thereby imperative: The I/O modules can be operated independently from field-bus via the BL67 rated gateway. The gateway controls the entire data transfer between fieldbus and I/O modules. Furthermore, the electronic modules can be plugged and unplugged during operation without having to disconnect the field wiring. The system can be mounted directly on the machine as well as on DIN rails.



BL ident[®] – IP20 protected

BL ident[®] in IP20 is designed for the integration in standard I/O modules and suited for all common fieldbus systems. Gateways are the linking element to control the entire data transfer between the fieldbus system and the I/O modules. Each BL20 station consists of a bus coupler, electronic and base modules. The base modules are easily clipped on a DIN rail without tools and the electronic modules are clipped on the base modules. Base and electronic modules are mechanically coded and therefore simply and safely allocated.



Modbus TCP



Simple parameterization via DTM

System parameterization is implemented via a graphical interface on the basis of FDT/DTM technology.

On www.turck.com DTM s are free for download and can be integrated in any FDT frame application for configuration, commissioning and maintenance purposes.

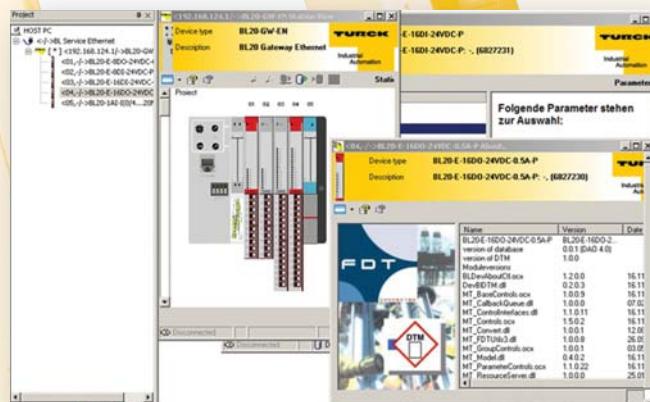
Easy programming with CoDeSys

The programmable gateways become decentral control units through the CoDeSys programming software.

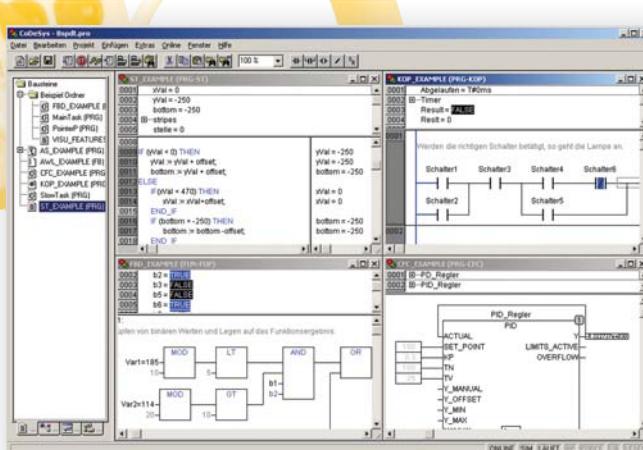
The graphical programming interface supports all IEC-61131-3 programming languages:

- Statement list (STL)
 - Ladder Diagram (LD)
 - Continuous Function Chart (CFC)
 - Structured Text (ST)
 - Sequential Function Chart (SFC)

Numerous diagnostics and commissioning functions as well as prefabricated function modules for the RFID system *BL ident®* make BL20 and BL67 universally applicable I/O systems.



CoDeSys



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