



Lloyd's
Register

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER Pepperl+Fuchs GmbH

PLACE OF PRODUCTION Lilienthalstrasse 200
68307 Mannheim
Germany

DESCRIPTION Remote I/O System LB, FB
Multi-functional terminal MFT

TYPE

LB Modules

Stations / Backplanes

BP LB 9022 xxxxx ⁽¹⁾

LB-Backplane with 2 BUS coupler slots, 22 I/O slots and 3 supply slots.

BP LB 9023 xxxxx ⁽¹⁾

LB-Backplane with 1 BUS coupler slot, 8 I/O slots and 1 sup slot.

BP LB 9024 xxxxx ⁽¹⁾

LB-Backplane with 24 I/O slots and 3 supply slots.

BP LB 9025 xxxxx ⁽¹⁾

LB-Backplane with 8 I/O slots and 1 supply slot.

BP LB 9026 xxxxx ⁽¹⁾

LB-Backplane with 1 BUS coupler slot, 16 I/O slots and 2 supply slots.

BP LB 9027 xxxxx ⁽¹⁾

LB-Backplane with 16 I/O slots and 2 supply slots.

BP LB 9029 xxxxx ⁽¹⁾

LB-Backplane with 2 BUS coupler slot, 12 I/O slots and 3 supply slots.

Certificate No. 15/20021

Issue Date 03 March 2015

Expiry Date 02 March 2020

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TYPE continued

BP	LB 9035 xxxxx ⁽¹⁾	LB-Backplane with 1 Bus coupler slot. 5 I/O slots and 1 supply slot
S	LB 94 xxxxx ⁽³⁾	LB-Station with 8 to 68 slots installation in Zone 2
S	LB 95 xxxxx ⁽³⁾	LB-Station with 8 to 68 slots installation in Zone 2 + 22
S	LB 96 xxxxx ⁽³⁾	LB-Station with 8 to 68 slots installation in Safe Area
S	LB 97 xxxxx ⁽³⁾	LB-Station with 8 to 68 slots installation in Zone 22

Power supply

PS	LB 9006 xxxxx ⁽¹⁾	24 VDC Power supply
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Communications unit

BK	LB 8#05 xxxxx ⁽¹⁾	PROFIBUS ComUnit (Standard)
BK	LB 8#06 xxxxx ⁽¹⁾	EasyCOM ComUnit (PROFIBUS)
BK	LB 8#07 xxxxx ⁽¹⁾	MODBUS ComUnit
BK	LB 8#08 xxxxx ⁽¹⁾	PROFIBUS ComUnit (Timestamp)
BK	LB 8#09 xxxxx ⁽¹⁾	PROFIBUS ComUnit (UniCom)
BK	LB 8#10 xxxxx ⁽¹⁾	FF ComUnit
BK	LB 8#11 xxxxx ⁽¹⁾	MODBUS TCP/IP ComUnit
BK	ISCM 8100 xxxxx ⁽¹⁾	HDLC Fieldbus ComUnit

Digital input

BI	LB 1#01 xxxxx ⁽¹⁾	Digital inputs
BI	LB 1#02 xxxxx ⁽¹⁾	Digital inputs
BI	LB 1#03 xxxxx ⁽¹⁾	Digital inputs
BI	LB 1#04 xxxxx ⁽¹⁾	Digital inputs
BI	LB 1#07 xxxxx ⁽¹⁾	Digital inputs
BI	LB 1#08 xxxxx ⁽¹⁾	Digital inputs
BI	LB 1#09 xxxxx ⁽¹⁾	Digital inputs
BI	LB 1#15 xxxxx ⁽¹⁾	Digital inputs

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TYPE continued

Digital output with feedback

BO/BI LB 2#01 xxxxx ⁽¹⁾
 BO/BI LB 2#02 xxxxx ⁽¹⁾
 BO/BI LB 2#03 xxxxx ⁽¹⁾
 BO/BI LB 2#04 xxxxx ⁽¹⁾
 BO/BI LB 2#05 xxxxx ⁽¹⁾
 BO/BI LB 2#12 xxxxx ⁽¹⁾
 BO/BI LB 2#13 xxxxx ⁽¹⁾

Digital output with feedback
 Digital output with feedback
 Digital output with feedback
 Digital output with feedback
 Digital output with feedback
 Digital output with feedback
 Digital output with feedback

Digital output (Relay)

BO LB 6#01 xxxxx ⁽¹⁾
 BO LB 6#05 xxxxx ⁽¹⁾
 BO LB 6#06 xxxxx ⁽¹⁾

Digital outputs
 Digital outputs
 Digital outputs

Digital output, active

BO LB 6#08 xxxxx ⁽¹⁾
 BO LB 6#10 xxxxx ⁽¹⁾
 BO LB 6#11 xxxxx ⁽¹⁾
 BO LB 6#12 xxxxx ⁽¹⁾
 BO LB 6#13 xxxxx ⁽¹⁾
 BO LB 6#14 xxxxx ⁽¹⁾
 BO LB 6#15 xxxxx ⁽¹⁾

Digital outputs
 Digital outputs
 Digital outputs
 Digital outputs
 Digital outputs
 Digital outputs

Analogue input (current)

AI LB 3#01 xxxxx ⁽¹⁾
 AI LB 3#02 xxxxx ⁽¹⁾
 AI LB 3#02 xxxxx ⁽¹⁾
 AI LB 3#03 xxxxx ⁽¹⁾
 AI LB 3#04 xxxxx ⁽¹⁾
 AI LB 3#05 xxxxx ⁽¹⁾
 AI LB 3#06 xxxxx ⁽¹⁾

Analogue input (successor A2)
 Analogue input (successor A1)
 Analogue input (successor A2)
 Analogue input (successor A2)
 Analogue inputs (successor A2)
 Analogue inputs (successor A2)
 Analogue inputs

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TYPE continued

Analogue output

AO LB 4#01 xxxxx ⁽¹⁾
 AO LB 4#02 xxxxx ⁽¹⁾
 AO LB 4#04 xxxxx ⁽¹⁾
 AO LB 4#05 xxxxx ⁽¹⁾
 AO LB 4#06 xxxxx ⁽¹⁾

Analogue output
 Analogue output
 Analogue outputs
 Analogue outputs
 Analogue outputs

Analogue input (Voltage/RDT)

AI LB 5#01 xxxxx ⁽¹⁾
 AI LB 5#02 xxxxx ⁽¹⁾
 AI LB 5#04 xxxxx ⁽¹⁾
 AI LB 5#05 xxxxx ⁽¹⁾
 AI LB 5#06 xxxxx ⁽¹⁾

Analogue input (RTD)
 Analogue input (mV / thermocouple)
 Analogue inputs (RTD)
 Analogue inputs (mV / thermocouple)
 Analogue inputs (mV)

Universal input / output

AI/AO LB 7#04 xxxxx ⁽¹⁾

Universal I/O with 4 channels

- ⁽¹⁾ The "#" (if applicable) in the module type labelling is a placeholder for classification regarding Ex - features and product lines (LB: no Ex, Ex- i). The "xxxxx" at the end of the module type labelling are placeholders for additional specifications regarding module variants with very less differences to the standard modules e.g.:
- product line classification LB
 - identification marker for additional functions (z. B. shutdown input, LFD)
 - ComUnit firmware version
 - classification regarding input filter,
 - classification regarding output values (V/mA).

- ⁽³⁾ The "xxxxx" at the end of the module type labelling are placeholders for additional specifications regarding module variants with very less differences to the standard modules e.g.:
- Number of slots
 - product line classification LB
 - identification marker for additional functions (z. B. shutdown input, LFD)

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TYPE continued

- ComUnit firmware version,
- classification regarding input filter,
- classification regarding output values (V/mA).

S = Station; BP = Backplane; PS = Power supply; BI = Digital input;
BO = Digital output; AI = Analogue input; AO = Analogue output;
Z = Accessories

FB Modules

Stations / Backplane

S	FB 9224 xxxxx (2)	Field station 24 I/O slots
S	FB 9225 xxxxx (2)	Field station 24 I/O slots
S	FB 9226 xxxxx (2)	Field station 10 I/O slots
S	FB 9248 xxxxx (2)	Field station 48 I/O slots
S	FB 9249 xxxxx (2)	Field station 48 I/O slots
S	FB 9251 xxxxx (2)	Field station 5 I/O slots in different cabinets
S	FB 9252 xxxxx (2)	Field station 5 I/O slots in different cabinets
S	FB9202 xxxxx (2)	Field station for max 2PSUs
S	FB9210 xxxxx (2)	Field station 10 slots for I/O-modules
S	FB9211 xxxxx (2)	Field station 10 slots for I/O-modules
S	FB9220 xxxxx (2)	Field station 20 slots for I/O-modules
S	FB9240 xxxxx (2)	Field station 40 slots for I/O-modules
BP	FB9255 xxxxx (2)	Backplane for FB9205C
BP	FB9256 xxxxx (2)	Backplane for FB9215 or FB9216
S	FB9258 xxxxx (2)	Field station 58 slots for I/O-modules
BP	FB9261 xxxxx (2)	Backplane 10 slots
BP	FB9262 xxxxx (2)	Backplane 20 slots
S	FB92EU xxxxx (2)	Field station 24 slots for I/O-modules
S	FB9324 xxxxx (2)	Field station 24 slots for I/O-modules
S	FB9325 xxxxx (2)	Field station 24 slots for I/O-modules
S	FB9348 xxxxx (2)	Field station 48 slots for I/O-modules
S	FB9349 xxxxx (2)	Field station 48 slots for I/O-modules
S	FB9358 xxxxx (2)	Field station 58 slots for I/O-modules

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TYPE continued

Power supplies

PS FB 9206 xxxxx (2)
PS FB 9215 xxxxx (2)
PS FB 9205 xxxxx (2)

Power supply 24 V DC
Power supply 110/230 V AC
Power supply 95-230 V AC

Bus termination modules

BT FB 9293 xxxxx (2)
BT FB 9294 xxxxx (2)
BT FB 9295 xxxxx (2)

Bus termination module for service bus
Bus termination module for field bus
Bus termination module for field- and service bus

Communication units

BK FB 8#05 xxxxx (2)
BK FB 8#06 xxxxx (2)
BK FB 8#07 xxxxx (2)
BK FB 8#08 xxxxx (2)
BK FB 8#09 xxxxx (2)
BK FB 8#10 xxxxx (2)
BK FB 8#11 xxxxx (2)
BK ISCM 8200 xxxxx (2)

PROFIBUS ComUnit (Standard)
EasyCOM ComUnit (PROFIBUS)
MODBUS ComUnit
PROFIBUS ComUnit (Timestamp)
PROFIBUS ComUnit (UniCom)
FF ComUnit
MODBUS TCP/IP ComUnit
HDLC Fieldbus ComUnit

Digital input

BI FB 1#01 xxxxx(2)
BI FB 1#02 xxxxx(2)
BI FB 1#03 xxxxx(2)
BI FB 1#04 xxxxx(2)
BI FB 1#08 xxxxx(2)

Digital inputs
Digital inputs
Digital inputs
Digital inputs
Digital inputs

Digital output with feedback

BO/BI FB 2#01 xxxxx(2)
BO/BI FB 2#02 xxxxx(2)
BO/BI FB 2#03 xxxxx(2)
BO/BI FB 2#04 xxxxx(2)
BO/BI FB 2#05 xxxxx(2)
BO/BI FB 2#12 xxxxx(2)
BO/BI FB 2#13 xxxxx(2)

Digital output with feedback
Digital output with feedback
Digital output with feedback
Digital output with feedback
Digital output with feedback
Digital output with feedback
Digital output with feedback

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TYPE continued

Digital output (relay) / active (low power source)
 BO FB 6#01 xxxxx⁽²⁾ Digital outputs
 BO FB 6#05 xxxxx⁽²⁾ Digital outputs
 BO FB 6#06 xxxxx⁽²⁾ Digital outputs

Digital output, active (high power source)
 BO FB 6#10 xxxxx⁽²⁾ Digital outputs
 BO FB 6#11 xxxxx⁽²⁾ Digital outputs
 BO FB 6#12 xxxxx⁽²⁾ Digital outputs
 BO FB 6#13 xxxxx⁽²⁾ Digital outputs
 BO FB 6#14 xxxxx⁽²⁾ Digital outputs
 BO FB 6#15 xxxxx⁽²⁾ Digital outputs

Analogue input (current)
 AI FB 3#01 xxxxx⁽²⁾ Analogue input
 AI FB 3#02 xxxxx⁽²⁾ Analogue input
 AI FB 3#03 xxxxx⁽²⁾ Analogue input
 AI FB 3#04 xxxxx⁽²⁾ Analogue inputs
 AI FB 3#05 xxxxx⁽²⁾ Analogue inputs
 AI FB 3#01/2/3 xxxxx⁽²⁾ Analogue inputs
 AI FB 3#04/5 xxxxx⁽²⁾ Analogue inputs

Analogue input (voltage/thermocouple)
 AI FB 5#01 xxxxx⁽²⁾ Analogue input (resistor)
 AI FB 5#02 xxxxx⁽²⁾ Analogue input (mV /thermocouple)
 AI FB 5#04 xxxxx⁽²⁾ Analogue inputs (resistor)
 AI FB 5#05 xxxxx⁽²⁾ Analogue inputs (mV /thermocouple)
 AI FB 5#06 xxxxx⁽²⁾ Analogue input (mV)

Analogue output (current)
 AO FB 4#01 xxxxx⁽²⁾ Analogue output
 AO FB 4#02 xxxxx⁽²⁾ Analogue output
 AO FB 4#04 xxxxx⁽²⁾ Analogue outputs
 AO FB 4#05 xxxxx⁽²⁾ Analogue outputs

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TYPE continued

- (2) The "#" (if applicable) in the module type labelling is a placeholder for classification regarding Ex - features and product lines (FB: Ex- i, Ex- e). The "xxxxx" at the end of the module type labelling are placeholders for additional specifications regarding module variants with very less differences to the standard modules e.g.:
- product line classification FB,
 - definition regarding connecting leads by Ex- e modules (length of lead, shielded/unshielded),
 - identification marker for additional functions (z.B. shutdown input, LFD),
 - ComUnit firmware version,
 - classification regarding input filter,
 - classification regarding output values (V/mA).

BP = Backplane; PS = Power supply; BT = Bus termination; BI = Digital input; BO = Digital output; AI = Analogue input; AO = Analogue output; Z = Accessories

Accessories

LB/FB- accessories

Z	LB 9007 A	Screw terminals connector, 6- pole, green
Z	LB 9107 A	Screw terminals connector, 6- pole, blue
Z	LB 9013 A	Screw terminals connector, 8- pole, green
Z	LB 9113 A	Screw terminals connector, 8- pole, blue
Z	LB 9125 A	Screw terminals connector, 8- pole, blue
Z	LB 9014 A	Screw terminals connector, 2 x 8- pole, green
Z	LB 9124 A	Screw terminals connector, 2 x 8- pole, blue
Z	LB 9008 A	Cover for connector, 6-pole, green
Z	LB 9108 A	Cover for connector, 6-pole, blue
Z	LB 9010 A	Cover for connector, 8-pole, green
Z	LB 9120 A	Cover for connector, 8-pole, blue
Z	LB 9011A	Cold junction module with hood, green
Z	LB 9111 A	Cold junction module with hood, blue
Z	LB 9012 A	Screw terminals connector with voltage divider

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TYPE continued

Z	LB 9107 P	Wire clamp connector, 6-pole, blue
Z	LB 9009 A	Wire clamp connector, 6-pole, green
Z	LB 9015 A	Wire clamp connector, 8-pole, green
Z	LB 9115 A	Wire clamp connector, 8-pole, blue
Z	LB 9126 A	Wire clamp connector, 8- pole, blue
Z	LB 9016 A	Wire clamp connector, 2 x 8- pole, green
Z	LB 9116 A	Wire clamp connector, 2 x 8- pole, blue
Z	LB 9130 A	Wire clamp connector, 2 x 8- pole, blue
Z	LB 9131 A	Wire clamp connector, 2 x 8- pole, green
Z	LB 9017 A	Front screw terminals connector, 6- pole, green
Z	LB 9117 A	Front screw terminals connector, 6- pole, blue
Z	LB 9018 A	Front screw terminals connector, 8- pole, green
Z	LB 9118 A	Front screw terminals connector, 8- pole, blue (Pin: 1-8)
Z	196900	Front screw terminals connector, 8- pole, blue (Pin: 9-16)
Z	LB 9019 A	Front screw terminals connector, 2 x 8- pole, green
Z	LB 9119 A	Front screw terminals connector, 2 x 8- pole, blue
Z	LB 9020 A	Coding strip
Z	LB 9099 A	Dummy I/O module with socket 8-pole, green
Z	LB 9199 A	Dummy I/O module with socket 8-pole, blue
Z	LB 9109 A	DIN A4 label for TAG
Z	LB 9153 A	LB- connecting cable
Z	LB 9001 A	SUB D connector (out left)
Z	LB 9002 A	SUB D connector (out vertical)
Z	LB 9003 A	SUB D connector (out left) with busmonitor
Z	LB 9110 A	SUB D connector (out left)
Z	LTBM8001	Letterbug module with rotary switch (plugs into ISCM8x00)
Z	FB 9271	FB- connecting cable redundancy/basic
Z	FB 9272	FB- connecting cable basic/extension
Z	FB 9273	FB- connecting cable redundancy/extension
Z	FB 9283	FB- connecting cable BK/BK red
Z	542520	NAMUR replacement network for mech. contacts

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TYPE continued

Z	542555	Service bus converter RS232/RS485 inclusive wire set
Z	540233	Service bus converter RS232/RS485 inclusive wire set
Z	540235	Service bus converter RS232/RS485 inclusive wire set
Z	542160	Service bus converter RS232/RS485 inclusive wire set
Z	541037	Service bus converter USB inclusive wire set
Z	541038	Service bus converter USB inclusive wire set
Z	541039	Service bus converter USB inclusive wire set
Z	GHG4171302R0001	EMV line filter

Further products (Ex-Certified)

Z	MFT-Base.2P.xxx ⁽⁴⁾	Socket for Multi-functional terminal 2-pole
Z	MFT-Base.4P.xxx ⁽⁴⁾	Socket for Multi-functional terminal 4-pole
Z	MFT-F.xxxx ⁽⁴⁾	Multi-functional terminal fuse
Z	MFT-2F.xxxx ⁽⁴⁾	Multi-functional terminal dual fuse
Z	MFT-R.xxxx ⁽⁴⁾	Multi-functional terminal resistor
Z	MFT-2R.xxxx ⁽⁴⁾	Multi-functional terminal dual resistor
Z	MFT-D.xxxx ⁽⁴⁾	Multi-functional terminal diode
Z	MFT-2D.xxxx ⁽⁴⁾	Multi-functional terminal dual diode
Z	MFT-2L.xxxx ⁽⁴⁾	Multi-functional terminal jumper
Z	MFT-FT.xxxx ⁽⁴⁾	Multi-functional terminal bus termination
Z	MFT-RNO.xxxx ⁽⁴⁾	Multi-functional terminal relay; contact normal open
Z	MFT-RNC.xxxx ⁽⁴⁾	Multi-functional terminal relay; contact normal closed
Z	MFT-T.xxxx ⁽⁴⁾	Multi-functional terminal semiconductor relay

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TYPE continued

Enclosure

Z FB9349

Remote I/O enclosure

Z FB9358

Remote I/O enclosure

⁽⁴⁾ The "xxxx" are placeholder for identifiers regarding different variants (e.g. value of resistor, value of fuse)

Z = Accessories

APPLICATION

Marine, offshore and industrial applications for use in environmental categories ENV1 and ENV2 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 - 2013.

SPECIFIED STANDARD

EN 50303: 2000

EN 60079-0: 2012

EN 60079-11: 2012

EN 60079-15: 2010

EN 60079-26: 2007

EN 61241-11: 2006

OTHER CONDITIONS

Rating for application in hazardous areas are to be obtained from the relevant Ex Certificates.

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No. HTS/ETS 31233-15 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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