

Model FD 115 |

BENEFITS

- Excellent temporal and spatial temperature accuracy
- High energy efficiency
- USB connection for recording data
- Temperature range up to 300 °C



Model 115

MAIN FEATURES

- Temperature range: ambient temperature plus 10 °C to 300 °C
- High temperature accuracy thanks to APT.line™ technology
- Forced convection
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- 2 chrome-plated racks
- Stackable
- Class 2 independent temperature safety device (DIN 12880) with visual temperature alarm
- Ergonomic handle design
- USB port for recording data

ORDERING INFORMATION

Interior volume [cu.ft.]	Voltage	Option model	Version	Art.-No.
Model FD 115				
4.1	230 V 1 ph 50/60 Hz	Standard	FD115-230V	9010-0305
	120 V 1 ph 60 Hz	Standard	FD115UL-120V	9010-0306

TECHNICAL DATA

Description	FD115-230V ¹	FD115UL-120V ¹
Article Number	9010-0305	9010-0306
Performance Data Temperature		
Temperature range 10 °C above ambient temperature to [°C]	300	300
Temperature variation at 150 °C [± K]	1.7	1.7
Temperature fluctuation at 150 °C [± K]	0.3	0.3
Heating-up time to 150 °C [min]	19	19

¹ All technical data is specified for unloaded units with standard equipment at an ambient temperature of +22 °C ±3 °C and a power supply voltage fluctuation of ±10 %. The temperature data is determined to BINDER factory standard following DIN 12880, observing the recommended wall clearances of 10 % of the height, width, and depth of the inner chamber. Technical data refers to 100 % fan speed. All indications are average values, typical for units produced in series. We reserve the right to change technical specifications at any time.

Description	FD115-230V ¹	FD115UL-120V ¹
Article Number	9010-0305	9010-0306
Recovery time after 30 seconds door open at 150 °C [min]	5	5
Electrical data		
Rated Voltage [V]	230	120
Power frequency [Hz]	50/60	60
Nominal power [kW]	1.3	1.4
Unit fuse [A]	6.3	12.5
Phase (Nominal voltage) [ph]	1	1
Measures - Outer dimensions		
Width net [mm]	710	710
Height net [mm]	735	735
Depth net [mm]	605	605
Wall clearance back [mm]	160	160
Wall clearance sideways [mm]	100	100
Measures - Doors		
Unit doors	1	1
Measures - Internal Dimensions		
Width [mm]	550	550
Height [mm]	550	550
Depth [mm]	385	385
Measures		
Interior volume [L]	116	116
Net weight of the unit (empty) [kg]	50	50
permitted load [kg]	150	150
Load per rack [kg]	30	30
Environment-specific data		
Energy consumption at 150 °C	340 Wh/h	340 Wh/h
Sound-pressure level [dB(A)]	43	43
Fixtures		
Number of shelves (std./max.)	2/5	2/5

1 All technical data is specified for unloaded units with standard equipment at an ambient temperature of +22 °C ±3 °C and a power supply voltage fluctuation of ±10 %. The temperature data is determined to BINDER factory standard following DIN 12880, observing the recommended wall clearances of 10 % of the height, width, and depth of the inner chamber. Technical data refers to 100 % fan speed. All indications are average values, typical for units produced in series. We reserve the right to change technical specifications at any time.

OPTIONS AND ACCESSORIES

Designation	Description	*	Art.-No.
Access port with silicone plug	10 mm, left	01	8012-0388
	10 mm, right	01	8012-0387
	10 mm, top	01	8012-0386
	30 mm, left	01	8012-1016
	30 mm, right	01	8012-1015
	30 mm, top	01	8012-0539
	50 mm, left	01	8012-1020
	50 mm, right	01	8012-1019
	50 mm, top	01	8012-0545
	100 mm, left	01	8012-1027
	100 mm, right	01	8012-1028
	100 mm, top	01, 10	8012-1029

* Notes › See last page

Designation	Description	*	Art.-No.
Analog output, 4 – 20 mA	for temperature values (output not adjustable)	02	8012-0941
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	–	8012-0030
	temperature measurement incl. certificate and 27 measuring points at specified temperature	–	8012-0921
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	–	8012-0918
	temperature measurement incl. certificate, 9 measuring points at specified temperature	–	8012-0915
Cart	Cart – stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm	–	9051-0018
Class 3.1 independent temperature safety device	with visual alarm (DIN 12880)	04, 12	8012-0985
Door gasket	made of FKM, silicone-free	03	8012-1009
Door lock	lockable door handle	–	8012-1025
Ethernet interface	for communication software	–	8012-0988
Gas-tight option model	Incl. additional measures for the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	09	8012-1045
Heating output, reinforced	For faster heating up time and improved recovery time; max. 300 °C; not in conjunction with load management option		
	230 V option model	–	8012-1057
Inert gas connection	With gas inlet and outlet, Ø 10 mm, incl. additional measures for the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	–	8012-1048
Measurement of air exchange rate	in accordance with ASTM D5374, definition and protocol according to ambient temperature	–	8012-0195
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	1002-0016
Rack	chrome plated	–	6004-0167
	stainless steel	–	6004-0151
Rack, heavy load	Stainless steel (1.4301/AISI 304), max. load per rack 70 kg, max. total load 150 kg	–	6004-0199
Shelf, perforated	stainless steel	–	6004-0183
Software	APT-COM™ communications software		
	version 2 to 3, GLP edition	19	9053-0016
	version 3, BASIC edition	19	9053-0014
	version 3, GLP edition	19	9053-0015
	version 3, STANDARD edition	19	9053-0013
	APT-COM™ communications software, price: for free		
Viewing window and interior lighting	viewing window (triple insulating glass) in door, 370 x 370 mm, and 15 W interior		
	120 V option model	–	8012-1063
	230 V option model	–	8012-1060

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Installation services			
Data Logger Kit installation service	unit function instructions for operation and programming of the controller	18	DL100400
Installation	and set up of unit at operating location, connect to existing connections	13, 18	DL100100
Preventive maintenance			
Preventive maintenance	Executive of equipment inspection according to maintenance plan	14, 18	DL200200
Calibration services			
Data Logger Kit calibration service	including certificate, one measuring point in center of chamber at specified temperature	14, 16, 17, 18	DL300101
Measurement of air exchange rate	including certificate (in accordance with ASTM D5374)	14, 16, 17, 18	DL330000

* Notes › See last page

Designation	Description	*	Art.-No.
Temperature measurement 18 measuring points	including certificate, 18 measuring points at specified temperature	14, 16, 17, 18	DL300118
Temperature measurement 27 measuring points	including certificate, 27 measuring points at specified temperature	14, 16, 17, 18	DL300127
Temperature measurement 9 measuring points	including certificate, 9 measuring points at specified temperature	14, 16, 17, 18	DL300109
Validation services			
Data Logger Kit validation service	in accordance with qualification folder	15, 18, 20	DL400100
Execution of IQ/OQ/PQ	in accordance with customer's requirement, price: on request	15, 18	DL440500
Qualification folder IQ/OQ	supporting documents for validation performed by customer, consisting of: IQ/OQ checklists, unit schematics, QM certificate in accordance with ISO 9001	15, 18, 20	8012-0792
Qualification folder IQ/OQ/PQ	supporting documents for validation performed by customer, in accordance with customer's requirement, extension of Qualification folder IQ/OQ by chapter PQ	15, 18	8012-0943
Warranty service			
Extension of the warranty from 2 to 3 years	beginning with the date of delivery, wearing parts are not included	–	DL003041
Extension of the warranty from 2 to 5 years	beginning with the date of delivery, wearing parts are not included	–	DL003042

* Notes › See last page

NOTES

- 01 Condensation may occur in the area around the access port. Access ports may be placed in custom locations for an additional charge.
- 02 UL mark is not granted when this option is used.
- 03 Heat resistant only to max. 200 °C.
- 04 Only available on units rated for 230 V.
- 06 Heating-up time may increase as a result of the lower heat conductivity.
- 09 Not in conjunction with the optional access port, door with window and interior lighting.
- 10 Not available on 23-liter units.
- 11 Not available on 23- or 53-liter units.
- 12 Only available on units rated for 230 V or 400 V.
- 13 Installation and connections take place at unit location; transport within the company only upon consultation.
- 14 We recommend a BINDER service contract (see the chapter on BINDER Service) to cover unit inspections, calibrations and validations.
- 15 OQ according to Yellow Paper = completed factory validation documentation of all OQ checklists.
- 16 Sensor calibration is performed in an accredited calibration laboratory.
- 17 Calibration is performed according to the BINDER factory standard.
- 18 Quoted prices do not include travel costs. Please refer to the chapter on BINDER Service for travel costs for your region. Quoted prices for services performed in Switzerland do not include a country-specific added fee (available on request).
- 19 For additional accessories, refer to the Process documentation chapter.
- 20 When ordering IQ/OQ qualification folders and associated IQ/OQ execution on one order, we offer a 15 % discount for both items.
When ordering IQ/OQ/PQ qualification folders and associated IQ/OQ/PQ execution on one order, we offer a 15 % discount for the item of the IQ/OQ/PQ folder.