Sales Information

ABB i-bus® EIB
EIB Delta-Meter
Electricity Meters

Intelligent Installation Systems

EIB Delta-Meter
Electricity meters

General Description

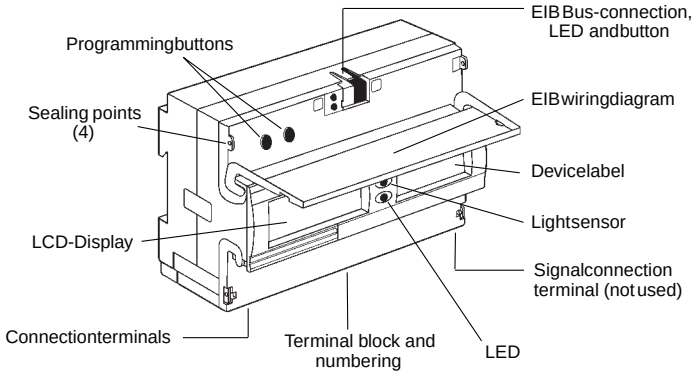
The EIB Delta-Meters are a new generation of certified, digital electronic electricity meters with integrated ABB i-bus® EIB communication interface for the measurement of electrical energy consumption.

The EIB Delta-Meters are compact, highly reliable with substantial immunity to EM disturbances and are suitable for use in single and polyphase voltage networks. The meters have no mechanical moving parts and thus can be easily mounted in any orientation onto DIN rails according to EN 50022 or panel mounted using the panel mounting kit.

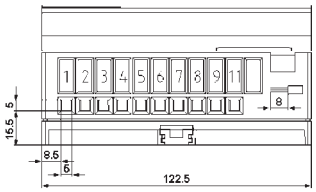
The EIB-communication interface allows remote reading of the meter data over ABB i-bus® EIB for billing, energy optimisation, visualisation or installation monitoring purposes. The EIB Delta-Meter can be universally employed for sub-metering applications in industrial installations, commercial buildings, offices complexes, leisure facilities or private housing.

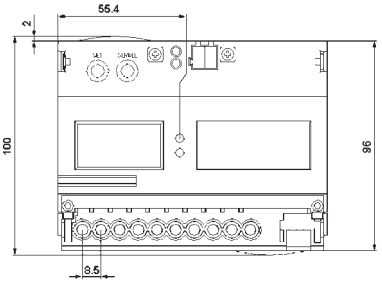
Special Features

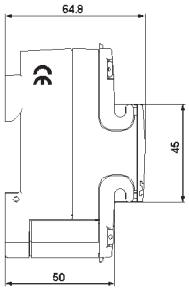
- Precise measurement of energy consumption (kWh, also kvarh with Combi-meters)
- For 2, 3 and 4 wire voltage networks with symmetric or asymmetric loading (50/60 Hz)
- Integrated EIB-bus connection for remote reading of meter data
- Network monitoring function: registration and display of up to 24 electrical measurement values
- Automatic control of the meter installation with „Installation self-test“
- PTB-approved
- Easy to read LCD-Display, LED-display for energy consumption
- Direct connection up to 65 A (Measurement range 0,05 A to 65 A)
- Transformer connection (/1A and /5A secondary) with transformer meter, also for I_n > 65 A
- Accuracy class 1 or 2
- Tariff meters with 4 tariffs
- Meters fulfil standards IEC 1036/1268
- System pro *M* Design with sealable housing for snap fixing on 35 mm DIN rails



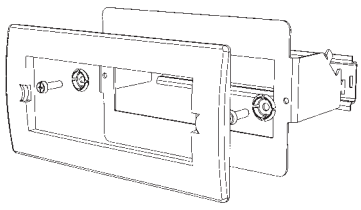
Dimensions (in mm)

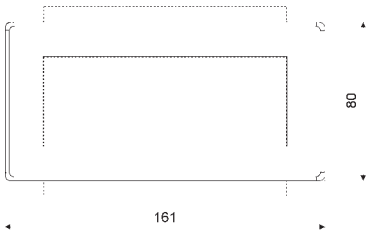


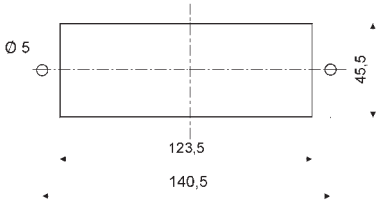




Panel mounting kit







EIB Delta-Meter
Electricity meters

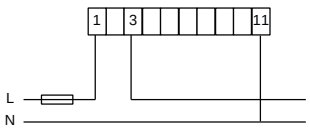
Technical Data

Accuracy:	Active energy meters:	Class 1 and 2 according to IEC1036
	Reactive energy meters:	Class 2 according to IEC1268
Voltage:	Voltage (– 20% ... +15%):	see selection table
Rated current I_b (maximum current I_{max}):	Transformer rated meters: (/1 A or /5 A secondary)	1(6) A for class 1, 2(6) A for class 2
	Direct connected meters:	5(65) A for class 1 and 2
Staring current:	Transformer rated meters: (/1 A or /5 A secondary)	< 2 mA for class 1, < 4 mA for class 2
	Direct connected meters:	< 25 mA
Power consumption:	Voltage path:	< 2 VA, 1,5 W per phase
	Current path:	< 0.01 VA at $I_{bTransformer}$ = 2 A and at $I_{b\ Direct}$ = 5 A
Frequency:	Rated (Range):	50 Hz (45 Hz ... 65 Hz)
Electromagnetic compatibility (EMC):	Surge voltage:	6 kV, 1,2/50 µs (IEC 255-4)
	Burst:	4 kV, 5/50 ns (IEC 801-4)
	Radio frequency immunity:	10 V/m, 150 kHz – 1 GHz (IEC 1000-4-3)
	Electrostatic discharge:	15 kV (IEC 801-2)
Circuit protection:	Transformer rated meters:	max. 6 A gl
	Direct connected meters:	max. 65 A gl (63 A)
Environmental conditions:	Operating temperature range:	– 5 °C ... + 45 °C
Mechanical data:	Dimensions (H x B x T):	96 x 122.5 x 64.8 mm
	Protection class	II
	Cable cross section: – Transformer rated meters – Direct connected meters	max. 10 mm² max. 25 mm²
Display:	LCD-display:	7 digits, height 7 mm
	LED-display: – Direct connected meters – Transformer rated meters	red LED, 1000 Imp/kWh (kvarh) red LED, 5000 Imp/kWh (kvarh)
EIB-connection:	Current supply:	via ABB i-bus®, EIB
	EMV: – Impulse voltage – Burst	6 kV, 1.2/50 µs (IEC 255-4) 4 kV, 5/50 ns (IEC 801-4)
	Operating- and display elements: – ABB i-bus® – LED red and button	Bus connection terminal (included) for programming the physical address
Standards:	Meter	IEC 1036, IEC 1268, PTB-number 20.15 98.80

Connection Diagrams

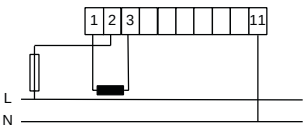
Single phase

Direct connected meters



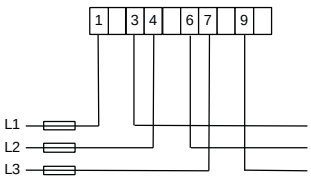
DZ 2200

Transformer rated meters

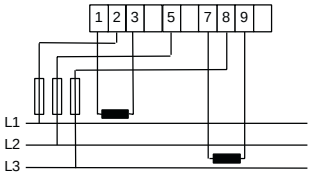


DZ 2210

3-phase without neutral

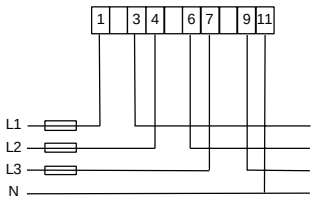


DZ 3100, DZ 3400, DZ 3500

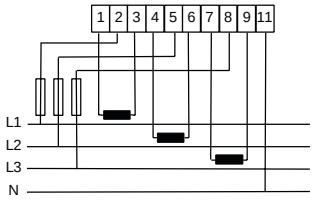


DZ 3110, DZ 3410, DZ 3510

3-phase with neutral



DZ 4000/1



DZ 4010/1

EIB Delta-Meter
Electricity meters

EIB Delta-Meter Program with network monitoring function

Voltage V	Current A	Class	Ordering info. Short Code	Product Code	bbn 40 16779 EAN	Price 1 Pc.	Price groupe	Weight 1 Pc. (kg)	Pack. (Pc.)
Transformer rated meters for /1 A or /5 A current transformer									
Active energy meters									
1 x 230	2(6)	2	**DZ 2210 W E**	GH V782 2100 R0100	**51128 5**		26	0,6	1
3 x 110	2(6)	2	**DZ 3110 W E**	GH V783 1100 R0100	**51129 2**		26	0,6	1
3 x 400	2(6)	2	**DZ 3410 W E**	GH V783 4100 R0100	**51130 8**		26	0,6	1
3 x 500	2(6)	2	**DZ 3510 W E**	GH V783 5100 R0100	**51131 5**		26	0,6	1
3 x 230/400	1(6)	1	**DZ 4011 W E**	GH V784 0101 R0100	**51132 2**		26	0,6	1
3 x 230/400	2(6)	2	**DZ 4010 W E**	GH V784 0100 R0100	**51133 9**		26	0,6	1
Combi meters (active and reactive energy)									
3 x 230/400	2(6)	2	**DZ 4010 K E**	GH V784 0100 R2100	**51134 6**		26	0,6	1
Tariff meter (4 Tariff)									
3 x 230/400	2(6)	2	**DZ 4010 WT E**	GH V784 0100 R0140	**51135 3**		26	0,6	1

Direct connected meters

Active energy meters									
1 x 230	5(65)	2	**DZ 2200 W E**	GH V782 2000 R0100	**51143 8**		26	0,6	1
3 x 400	5(65)	2	**DZ 3400 W E**	GH V783 4000 R0100	**51144 5**		26	0,6	1
3 x 230/400	5(65)	1	**DZ 4001 W E**	GH V784 0001 R0100	**51145 2**		26	0,6	1
3 x 230/400	5(65)	2	**DZ 4000 W E**	GH V784 0000 R0100	**51146 9**		26	0,6	1
Combi meters (active and reactive energy)									
3 x 230/400	5(65)	2	**DZ 4000 K E**	GH V784 0000 R2100	**51147 6**		26	0,6	1
Tariff meter (4 Tariff)									
3 x 230/400	5(65)	2	**DZ 4000 WT E**	GH V784 0000 R0140	**51148 3**		26	0,6	1

Accessories

Description	Ordering Info. Short Code	Product Code	bbn 40 16779 EAN	Price 1 Pc.	Price groupe	Weight 1 Pc. [kg]	Pack. [Pc.]
Flush-mount kit for Delta-Meter	**DZ-FTB**	GH V780 0000 R0000	**48120 5**		16	0,21	1

Note: Transformer rated EIB Delta-Meters do not have a programmable transformer ratio. Therefore all displayed and transmitted measurement values are secondary values. The EIB Delta-Meters do not possess an S0 impulse output.