

Landis+Gyr domestic single phase meter for residential AMR/AMM applications



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**Mini-Flex Meter ⇒
ZCF100**



Mini-Flex Meter \Rightarrow ZCF100 Device Concept

Proven Technology

The Device Concept bases on the proven and successful Modular Approach of the poly phase Flex Meter ZxF100



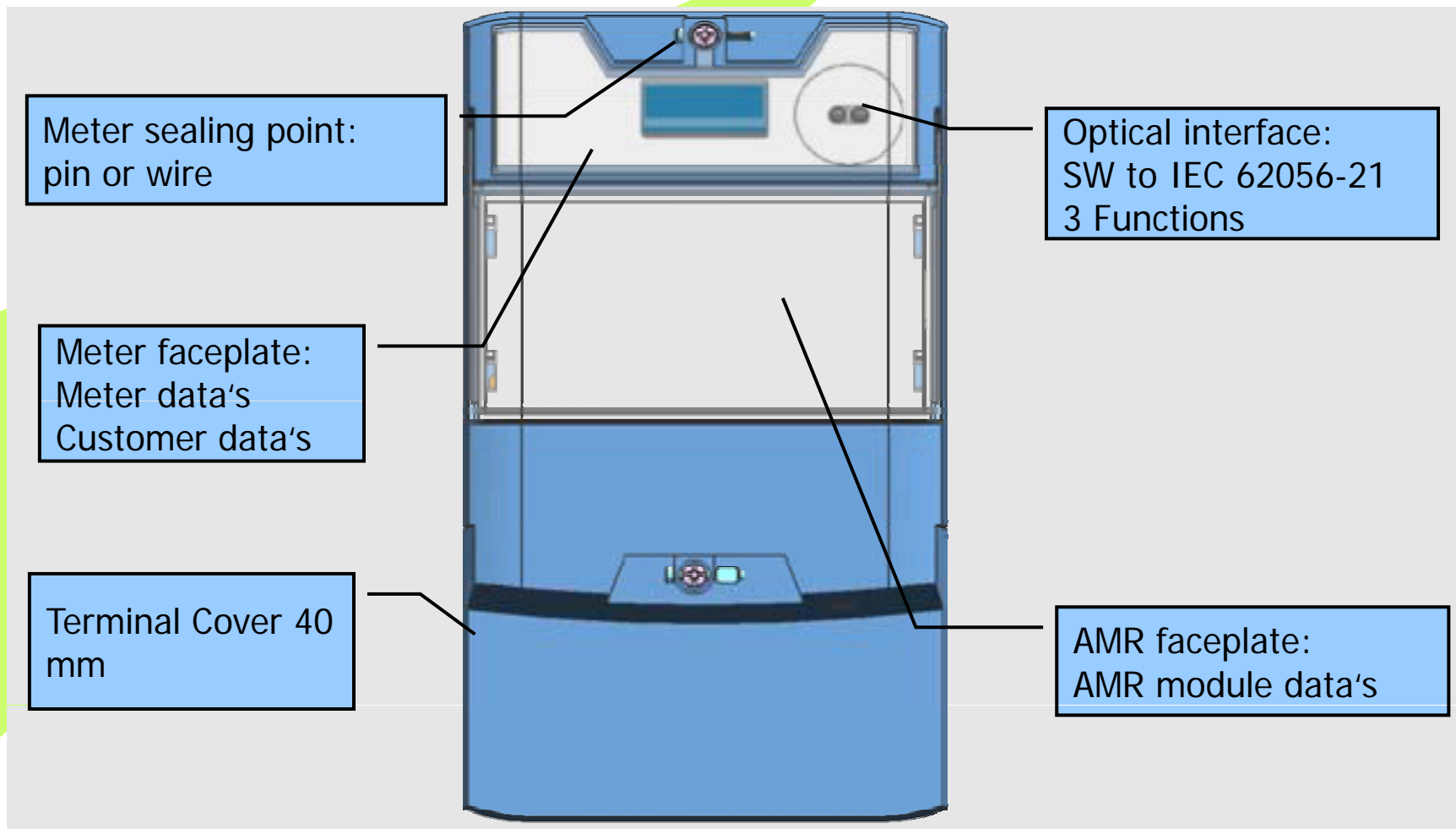
Re-Use of existing Components

Possible reuse of the PCBA of the poly phase Flex Meter ZxF100 modules.



Mini-Flex Meter ⇒ ZCF100

Meter overview (I)



Mini-Flex Meter \Rightarrow ZCF100

Main Functionality

Main Electrical Specification/ Technology

- Direct connected, Class 1.0/2.0, acc. EN 62052-11, EN 62053-11
- Base current 5, 10, 20, 40 A; max. current 80A
- Nominal voltage U_n 220..240Vac; line frequency 50 Hz.
- 12kV impulse voltage acc. SP-method 1618
- operating temperature range $-40^{\circ}\text{C} \dots +70^{\circ}\text{C}$

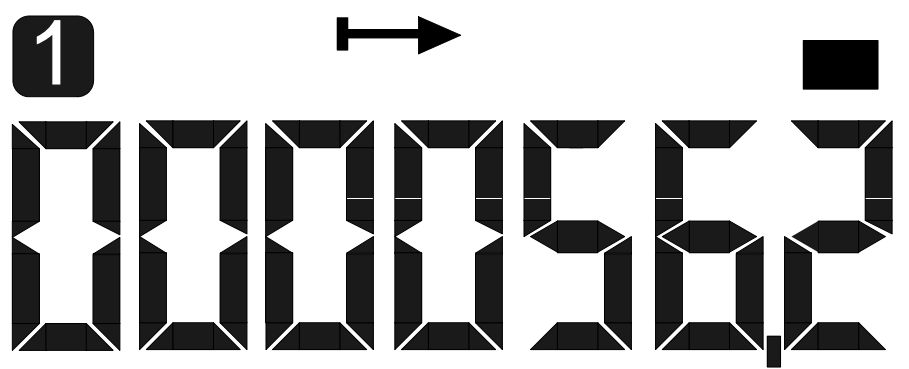
Metering/ Registration

- 2 tariff (HT/LT) registers
3 total registers (forward total, reverse total, combined total)
Internal register resolution 6.3 (888888.888) [kWh], also available at the AMR Interface

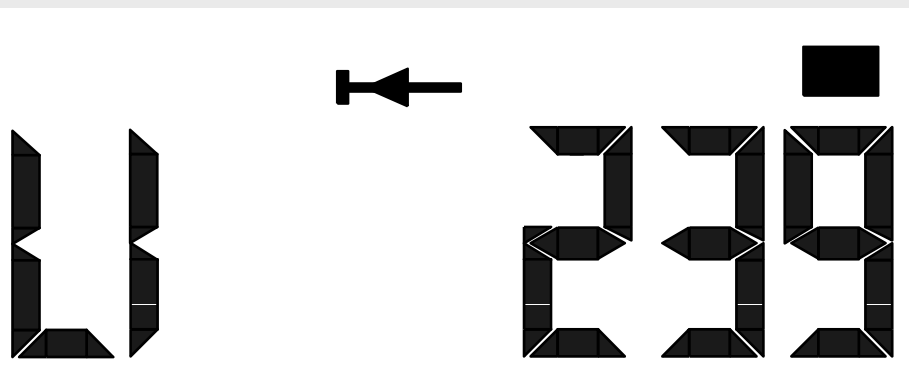


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Display Layout / Definitions



This display shows the value of the Rate 1 register, value of 56.2 kWh. Rate 2 is active and the net energy flow is import (energy consumption).



This display shows the line voltage L. Rate 2 is active and the net energy flow is export (energy delivery).

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Display Settings

Start-up Mode

Duration

30 min. 60min.

Display resolution

5+2: 88888,88

6: 888888

6+1: 888888,8

Display list

| Display list | Time [s] | Sequence |
|------------------|----------|----------|
| Rate register 1 | 5 | 1 |
| Rate register 2 | 5 | 2 |
| Forward total | | |
| Reverse total | 10 | 4 |
| Combined total | | |
| Segment ON test | 2 | 3 |
| Segment OFF test | | |
| Dial test (1+3) | | |
| Line voltage L1 | 5 | 5 |

Normal Mode

Display resolution

5+2: 88888,88

6: 888888

6+1: 888888,8

Display list

| Display list | Time [s] | Sequence |
|------------------|----------|----------|
| Energy Tariff 1 | 10 | 1 |
| Energy Tariff 2 | 10 | 2 |
| Forward total | | |
| Reverse total | | |
| Combined total | | |
| Segment ON test | 2 | 3 |
| Segment OFF test | | |
| Dial test (1+3) | | |

Mini-Flex Meter ⇒ ZCF100

Data Readout 62056-21 mode C according IEC

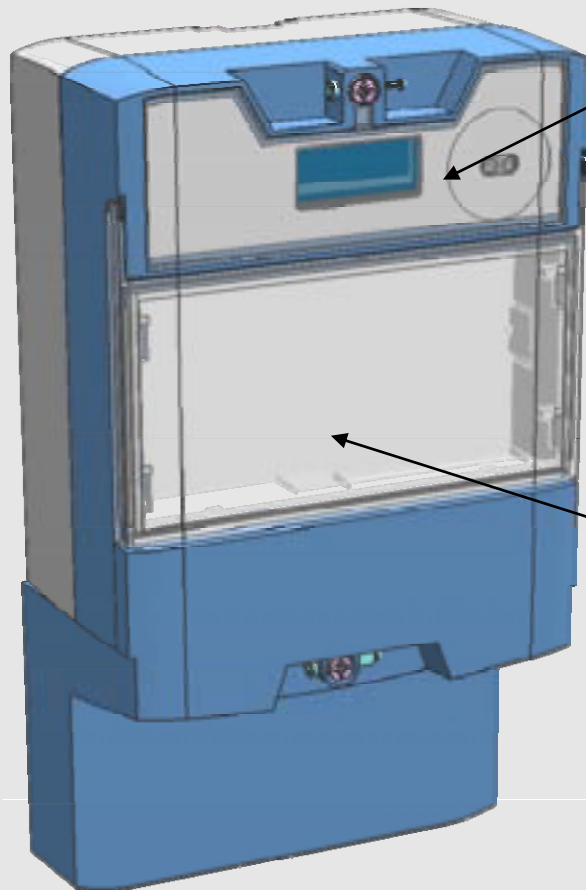
| OBIS | Data readout List | Pos. |
|--------|-----------------------------|------|
| F.F | Error code | 1 |
| C.1.0 | Meter ID | 2 |
| 0.0 | Customer ID | |
| C.1.1 | Manufacturer ID | |
| 1.8.1 | Rate Register 1 | |
| 1.8.2 | Rate Register 2 | |
| 1.8.0 | Forward total | |
| 2.8.0 | Reverse total | |
| 15.8.0 | Combined total | |
| C.7.0 | Nbre of tot losses of power | |
| 32.7 | Line voltage L1 | |
| C.5.0 | Status flag ¹⁾ | n |
| | End of list | |

| Data Readout | |
|--|------------|
| <i>Identified by OBIS codes</i> | |
| Register resolution | |
| <input type="checkbox"/> 6: | 888888 |
| <input type="checkbox"/> 6.1: | 888888,8 |
| <input type="checkbox"/> 6.2: | 888888,88 |
| <input checked="" type="checkbox"/> 6.3: | 888888,888 |

| Bit | ¹⁾ Status flag |
|-----|---------------------------|
| 1 | Reverse Detect |
| 2 | Creep flag |
| 3 | L1 phase fail flag |
| 4 | reserve |
| 4 | reserve |
| 5 | Active rate |
| 6 | (Rate setting test bit) |
| 7 | Factory test mode |

Mini-Flex Meter ⇒ ZCF100

Deliverable



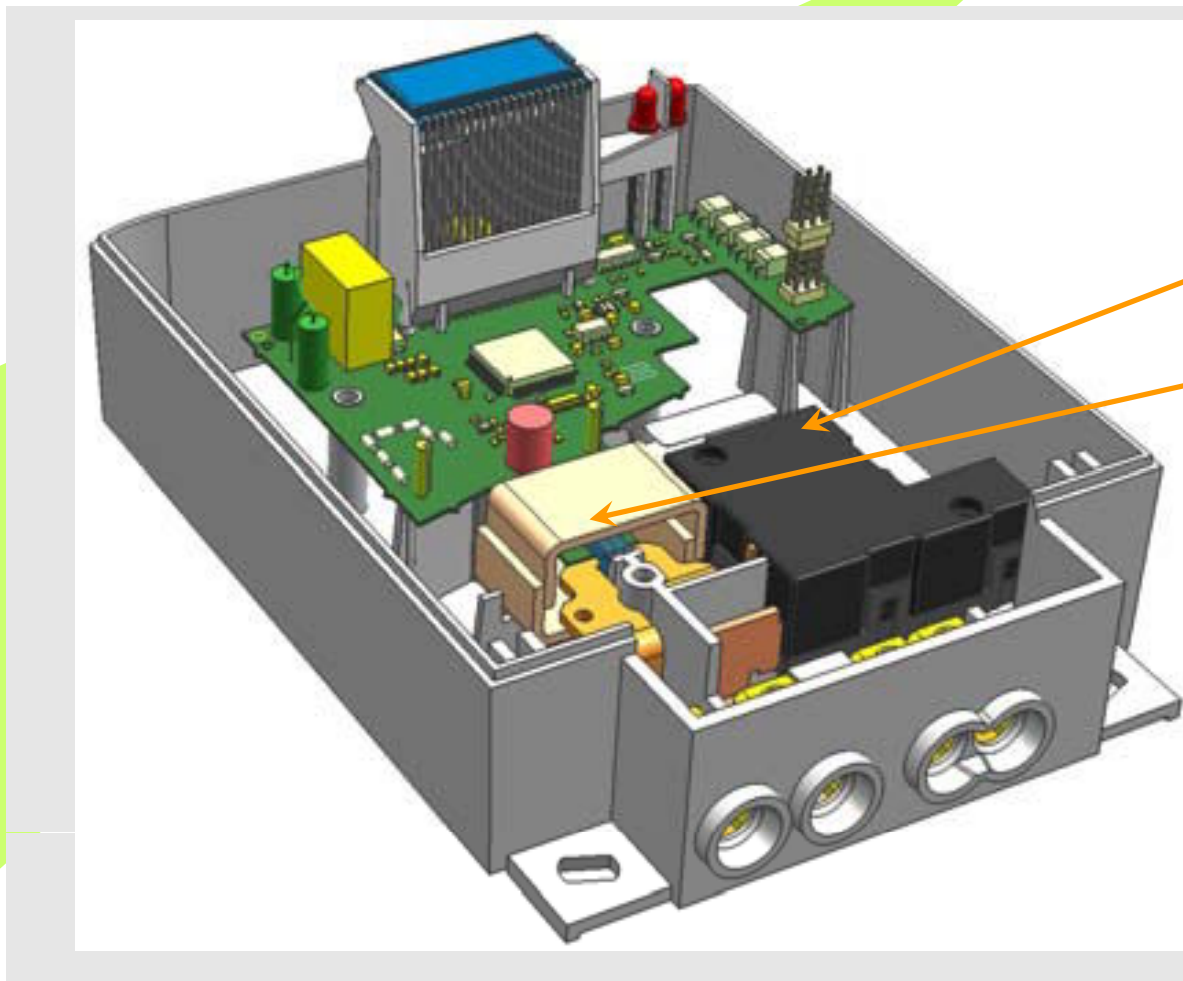
Mass product for DIN markets

- Metrologically approved
- Delivers:
 - configured data for standard application
 - Raw data's for future applications

AMR/AMM Module

- Not part of metrological approval
- Customised communication
- Delivers:
 - Data for customised applications

Mini-Flex Meter \Rightarrow ZCF100 Complete ZCF100AB (with options)

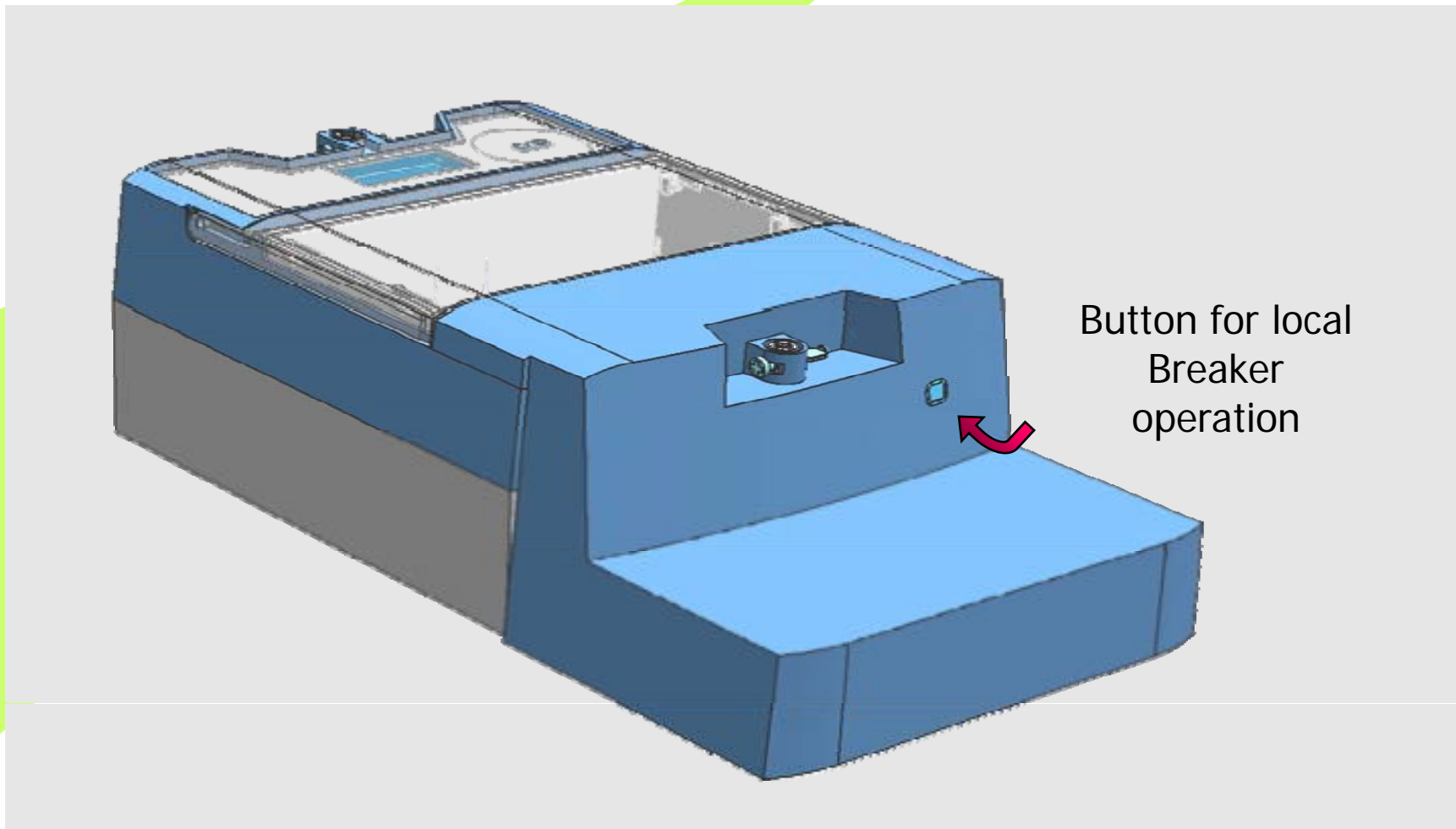


Options:

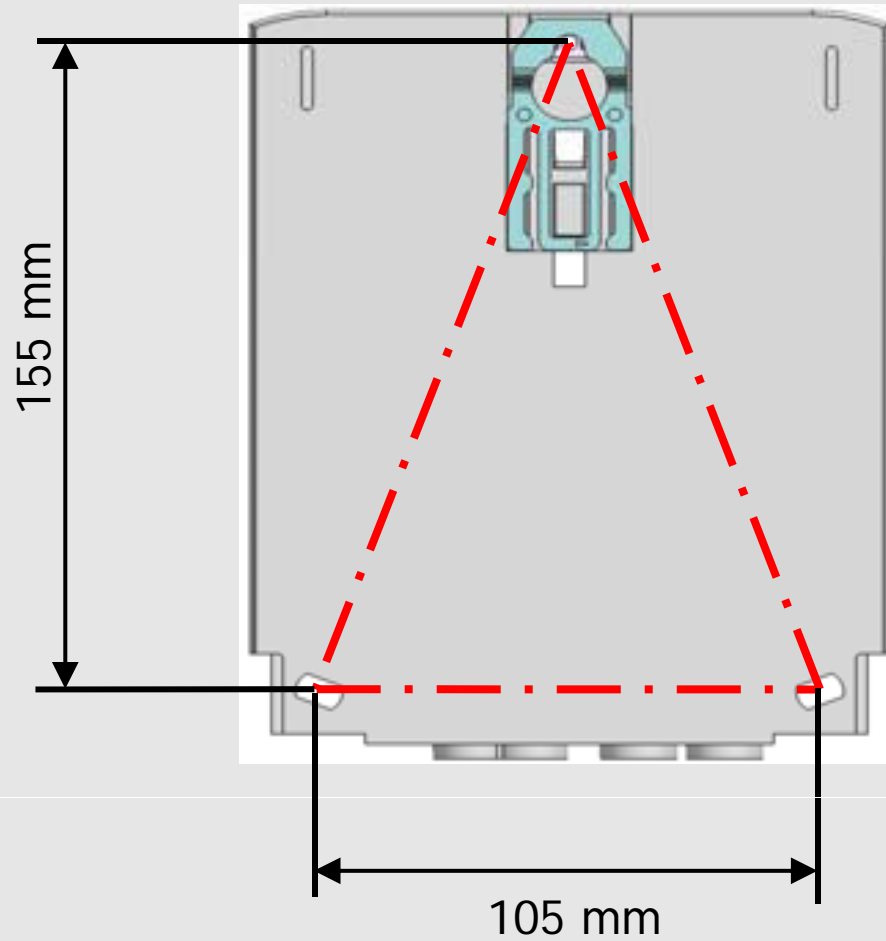
- Breaker
- DC Field shield

Mini-Flex Meter \Rightarrow ZCF100

Push button for local operation



Mini-Flex Meter \Rightarrow ZCF100 Installation - DIN Dimensions



Mini-Flex Meter ⇒ ZCF100 Unique Customer Values

- Integrated AMR unit, pre-tested ready for installation
- Truly manufacturer-independent AMR modules
- Expandable for future communication channels
- Expandable for future applications
- Based on field-proven Landis+Gyr metering technology
- Insurance against stranded investment into AMM/AMR

The ZCF meter is the ideal platform
for your future
AMR/AMM application

Mini-Flex Meter ⇒ ZCF100 Portfolio availability and approval

- ✓ MID approval for the ZCF100AC planned in Q1/07
- ✓ MID approval for the ZCF100AB planned in Q1..Q2/07