

Sfere720C Sfere720



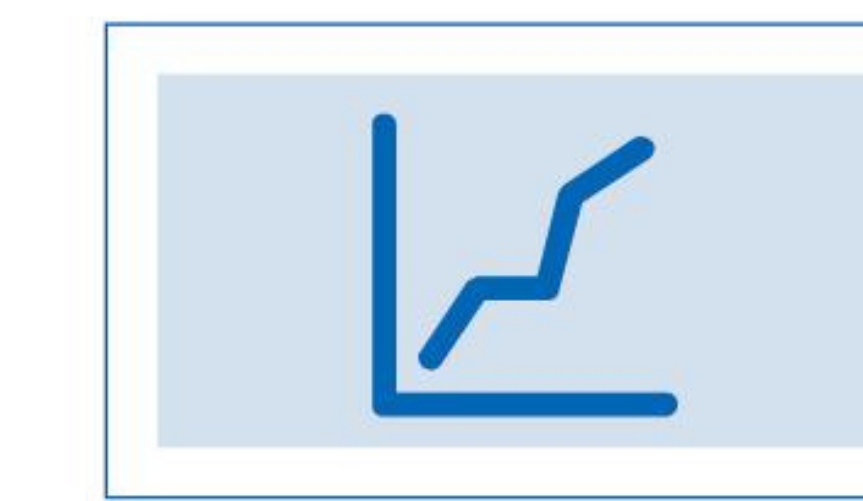
Memory 8MB
Energy Accuracy 0.2S
Harmonics
Neutral Current Input
4 Tariffs
Optional Modules
Capacitive Buttons



APPLICATIONS



Data Acquisition



Energy Management



Remote Power Monitoring

MAIN FEATURES

Measuring

- Fundamental V/A/P/Q/S
- Demand
- Max./Min. Value
- Load profile

Power Quality

- Harmonics up to 63rd
- Sequence component
- Unbalance
- Crest factor and K factor
- Phasor diagram

Energy Metering

- Bi-directional energy
- Four-quadrant reactive energy
- Tariff energy
- Fundamental energy



FUNCTION

Networks

- TN,TT, IT networks

Communication

- Modbus-RTU -Modbus-TCP -Profibus-DP

Accuracy

- Active energy: 0.2S
- Voltage: 0.1%
- Current: 0.1%

Data Log

- Demand record
- Max./Min. value record
- Off-limit record
- SOE record

Power Quality

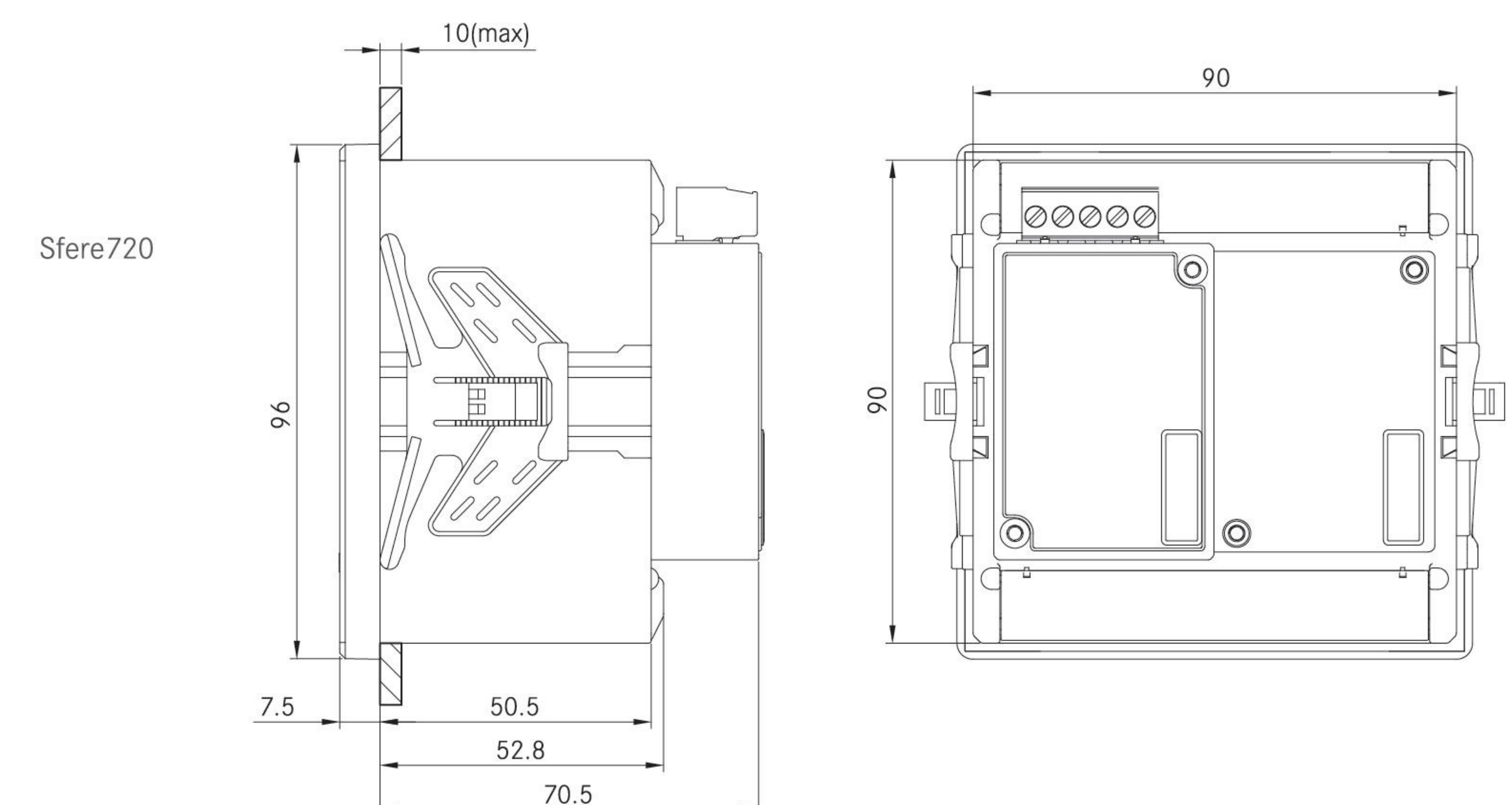
- THD
- Harmonics up to 63rd
- Unbalance
- Sequence component
- Crest factor and K factor
- Waveform display
- Flicker
- Transient (Only Sfere720)

Optional Modules

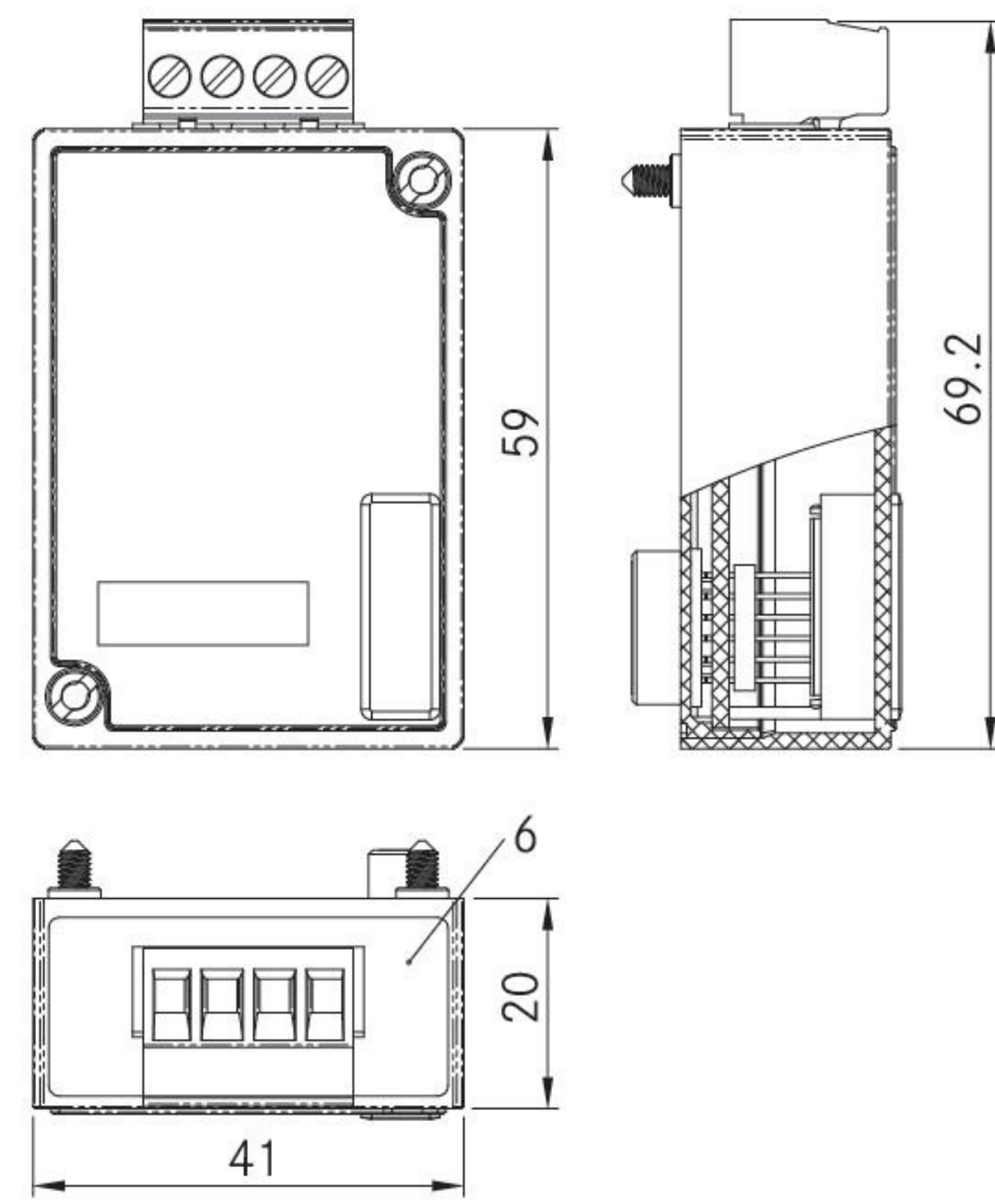
- FM1(2 AC digital inputs)
- FM2(4 dry digital inputs)
- FM3(2 relay outputs)
- FM4(2 analog inputs)
- FM5(2 temperature inputs)
- FM6(2 analog outputs)
- FM7(Modus-TCP)
- FM8(Profibus-DP V0)
- FM9(WiFi)
- FM10(GPRS)
- FM11(RS485, Modbus-RTU)
- FM12 (M-Bus communication)
- FM13 (BACnet/MSTP communication)
- FM14 (BACnet/IP communication)
- FM15 (RS232,Modbus-RTU)

| Extension Functions | | | | |
|---------------------|---------------------|---------------------|--------------------------|-------------------------|
| GPRS | M-Bus | WiFi | BACnet/IP | RS232 |
| Modbus-TCP | Modbus-RTU | 2 relay outputs | BACnet/MSTP | Profibus-DP |
| 2 analog outputs | 4 DC digital inputs | 2 AC digital inputs | 2 analog inputs (4-20mA) | 2 analog inputs (PT100) |

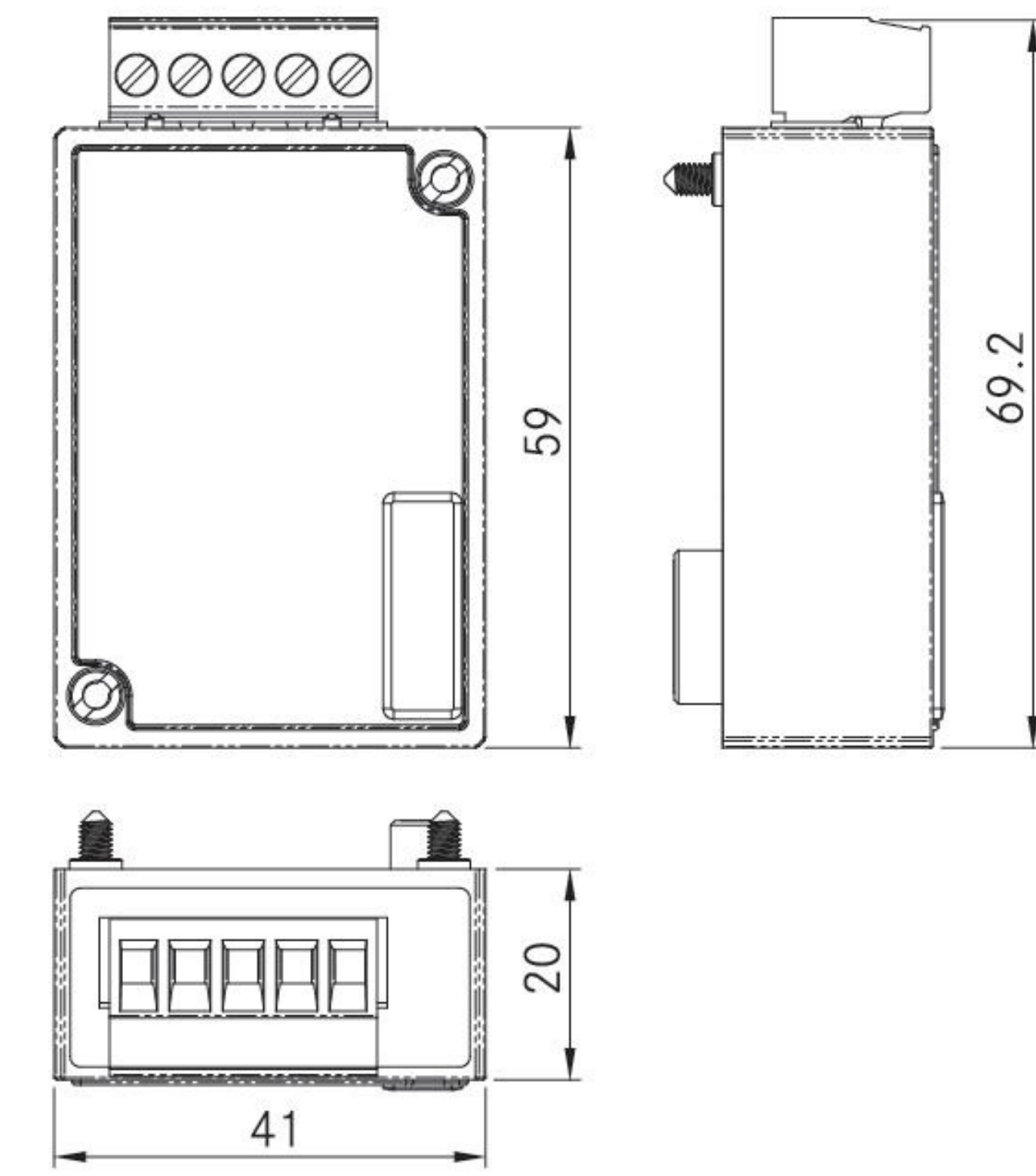
DIMENSIONS



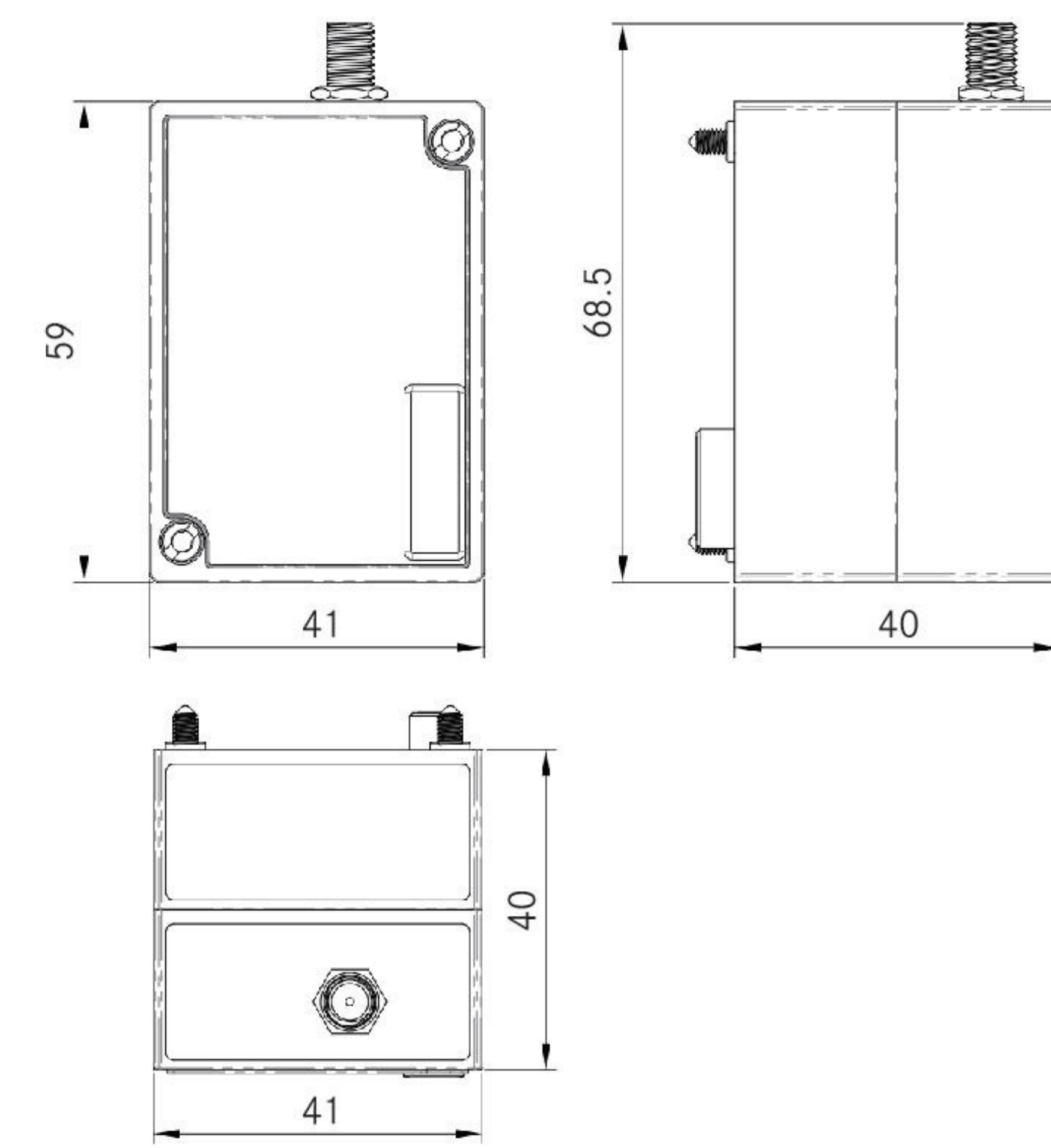
FM1/FM3/FM4/FM6/FM11/FM12/FM13



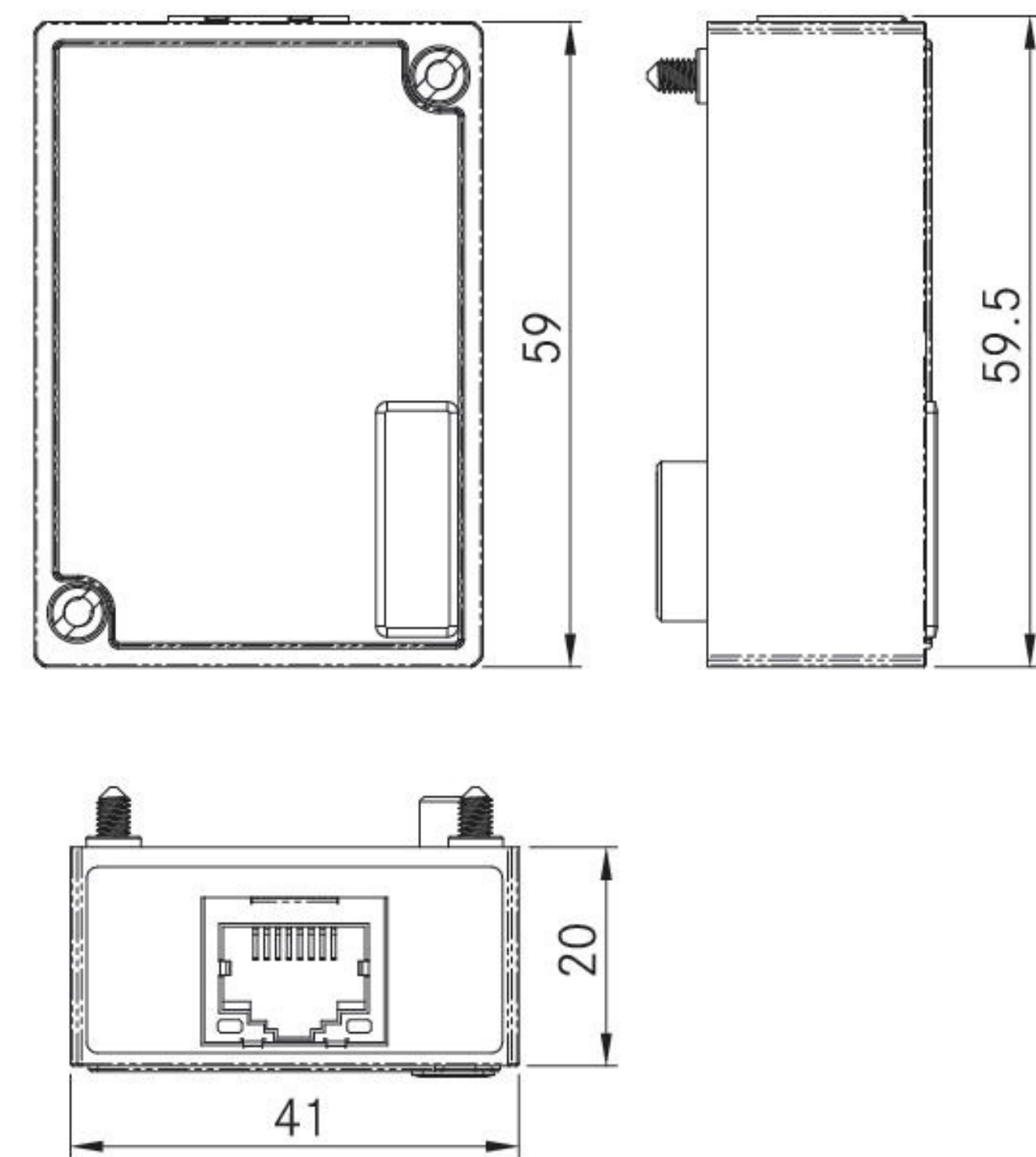
FM2/FM5



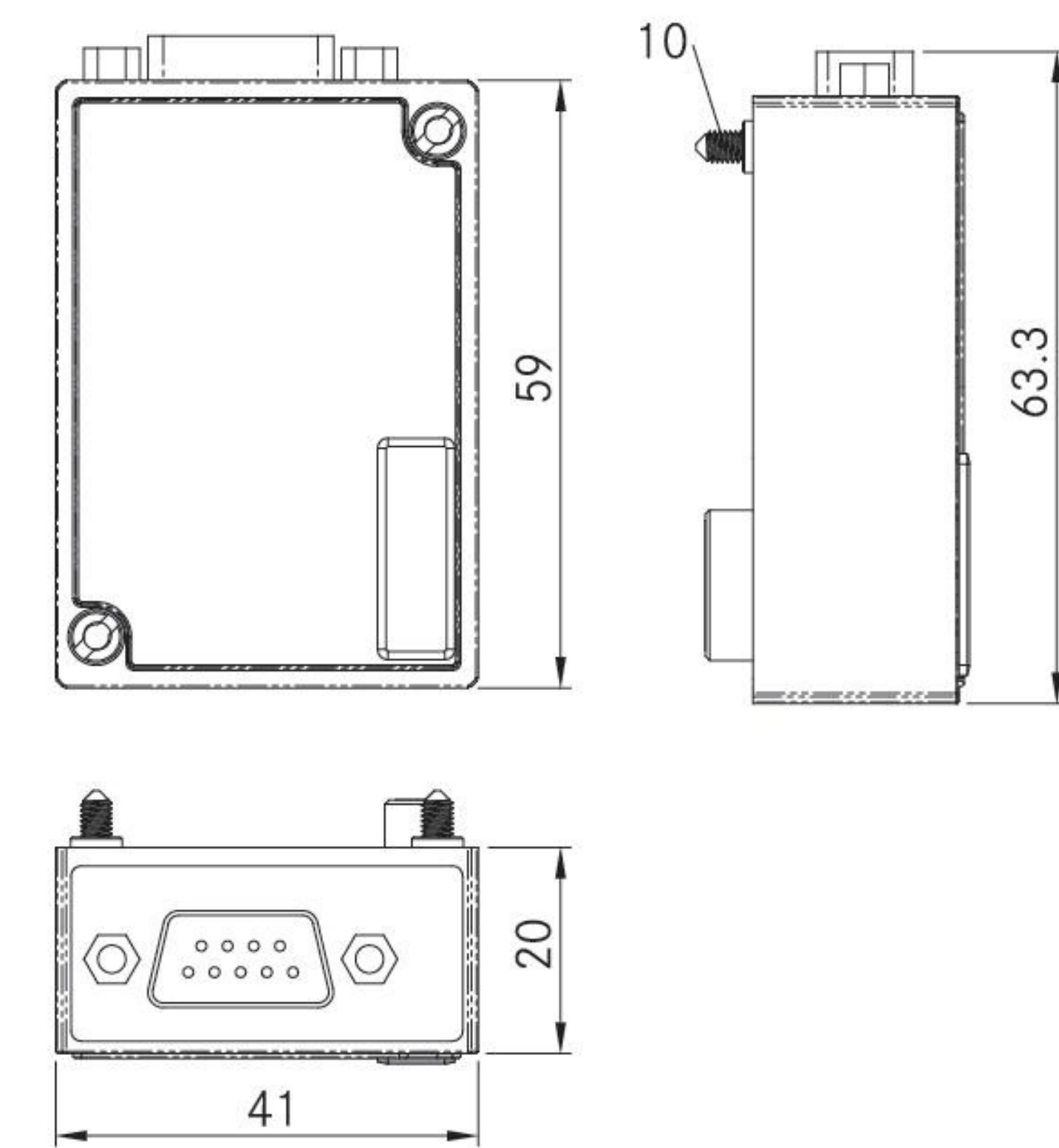
FM9/FM10



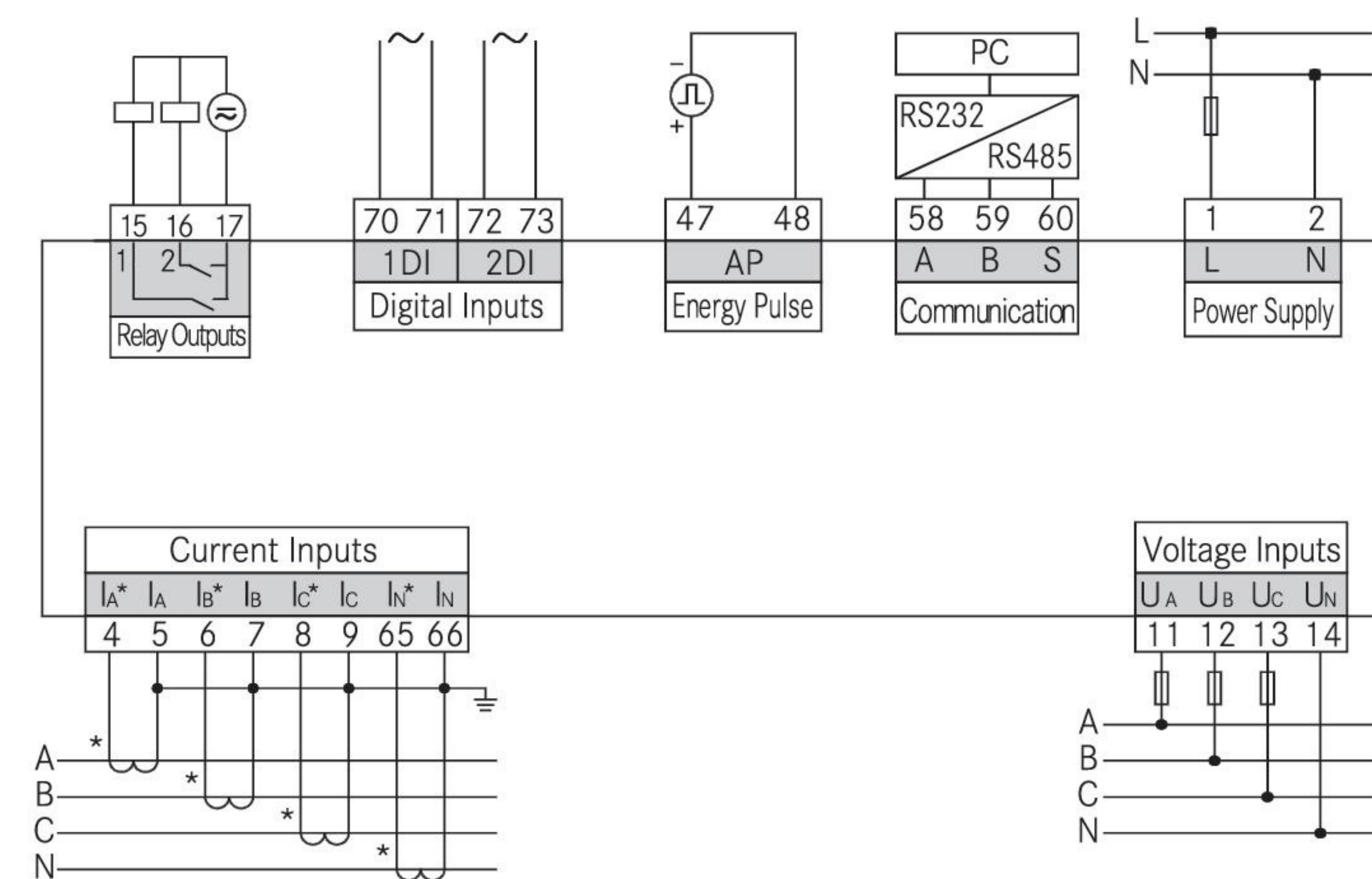
FM7/FM14



FM8/FM15



TYPICAL WIRING



TECHNICAL SPECIFICATION

| | | |
|------------------------|-----------------------|---|
| Display Mode | | Sfere720C: LCD, Sfere720: TFT |
| Accuracy | V/A | 0.2% |
| | P/Q/S/PF | 0.2% |
| | F | ±0.01Hz |
| | ±kWh | Class 0.2S |
| | ±kvarh | Class 2 |
| Voltage Input | Rated value | AC 100V, AC 380V |
| | Overload | Continuous: 1.2Vn Instantaneous: 2Vn/10s |
| | Burden | ≤0.1VA(per phase) |
| | Impedance | ≥1.7MΩ |
| | Frequency | 45Hz~65Hz |
| Current Input | Rated value | AC 1A, AC 5A |
| | Overload | Continuous: 1.2In Instantaneous: 2In/5s |
| | Burden | ≤0.2VA(per phase) |
| | Impedance | ≤20mΩ |
| Auxiliary Supply | Working range | AC 80~270V 50/60Hz, DC 100~350V |
| | Consumption | ≤5VA |
| Communication Port | | RS485, Modbus-RTU, 2-wire, up to 38.4kbps |
| Energy Pulse Output | | 1 photocoupler output, pulse width (80±20%) ms |
| Digital Input | | 2 AC wet contact inputs, Isolation: 2kVAC |
| Relay Output | | 2 relay outputs, contact rated at AC 5A/250V or DC 5A/30V, Isolation: 2kVAC |
| Environment Conditions | Operating temperature | -25°C ~70°C |
| | Storage temperature | -30°C ~80°C |
| | Relative humidity | ≤93% |
| | Altitude | ≤2500m |
| | Insulation | |
| IP Degree | | Front IP64, Rear IP20 |
| Insulation | | IEC61010-1 |
| Certificate | | CE |
| Active energy | | IEC62053-22 |