

# Sfere720C Sfere720



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



## 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(Modbus-TCP)
- FM8(Profibus-DP V0)
- FM11 (RS485, Modbus-RTU)
- FM12 (M-Bus communication)
- FM13 (BACnet/MSTP communication)
- FM14 (BACnet/IP communication)
- FM15 (RS232,Modbus-RTU)



## 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

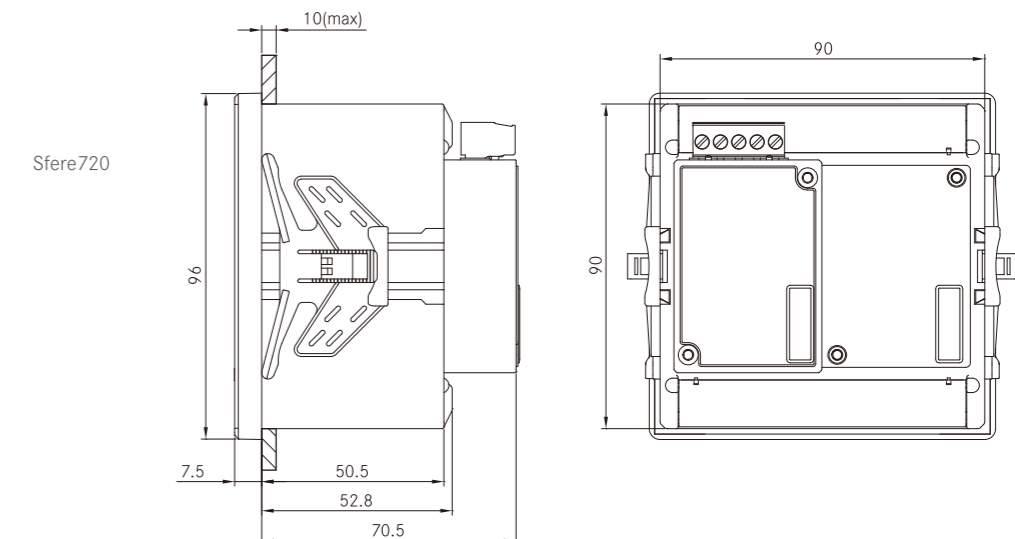
**Energy Metering**

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

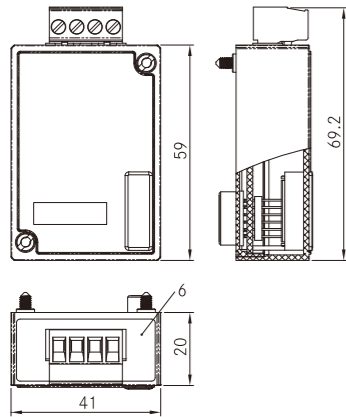
Extension Functions				
GPRS	M-Bus	WiFi	BACnet/IP	RS232
Modbus-TCP	Modbus-RTU	2 relay outputs	BACnet/MSTP	Profibus-DP
2 analog outputs	4 DC digital inputs	2 AC digital inputs	2 analog inputs (4-20mA)	2 analog inputs (PT100)



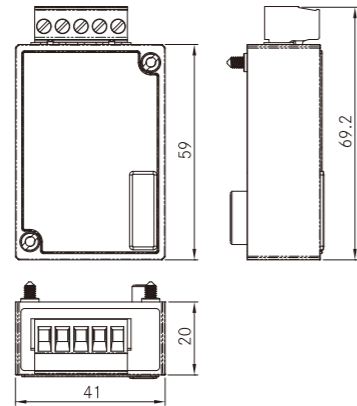
## DIMENSIONS



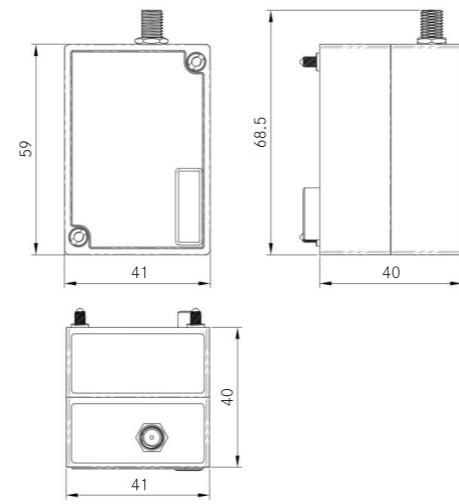
FM1/FM3/FM4/FM6/FM11/FM12/FM13



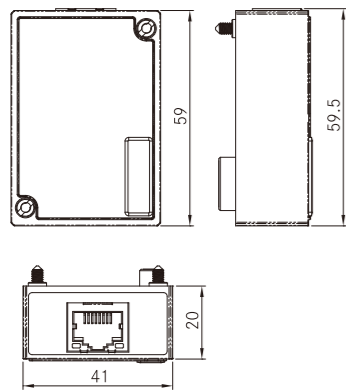
FM2/FM5



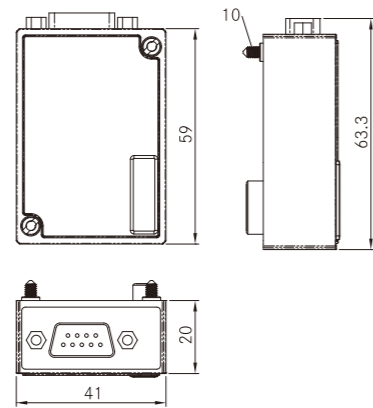
FM9/FM10



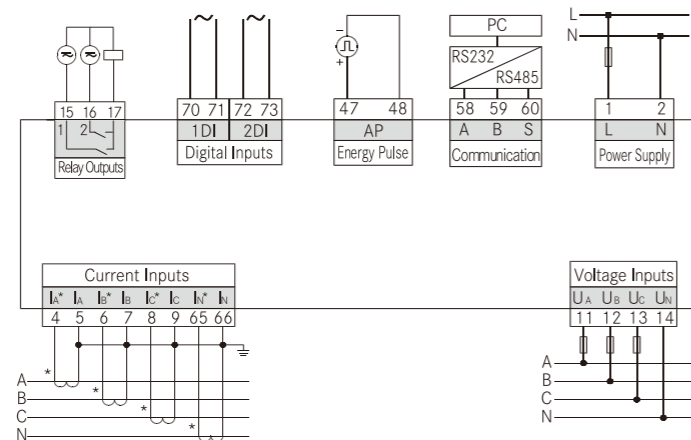
FM7/FM14



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: 5kVAC
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		≥ 2kVAC
IP Degree		Front IP64, Rear IP20