

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(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)



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

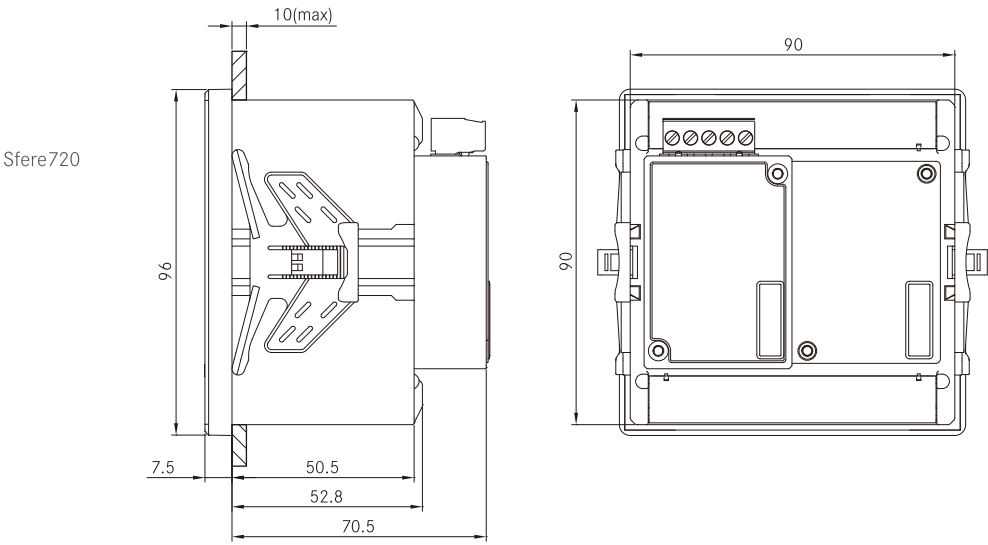
Energy Metering

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

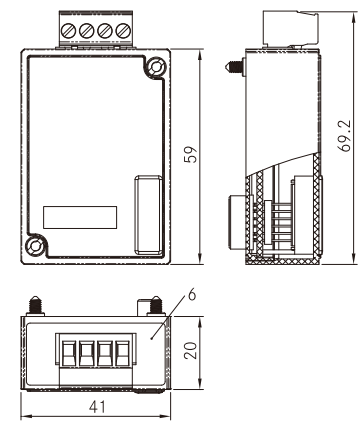
Extension Functions				
GPRS	M-Bus	WiFi	BACnet/IP	RS232
Modbus-TCP	Modbus-RTU	2 relay outputs	BACnet/MSTP	Profibus-DP
2 analog outputs	4 DC digital inputs	2 AC digital inputs	2 analog inputs (4-20mA)	2 analog inputs (PT100)



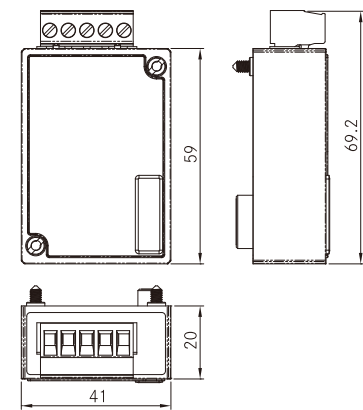
DIMENSIONS



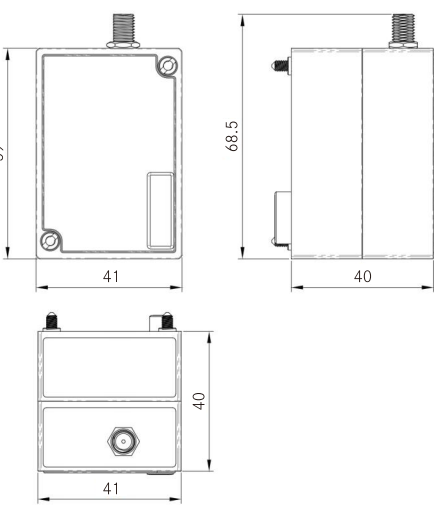
FM1/FM3/FM4/FM6/FM11/FM12/FM13



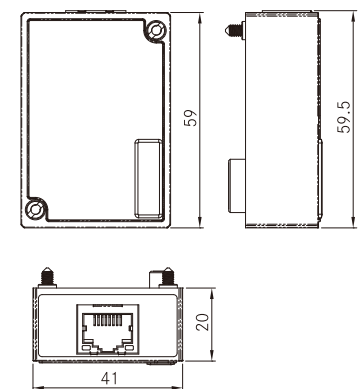
FM2/FM5



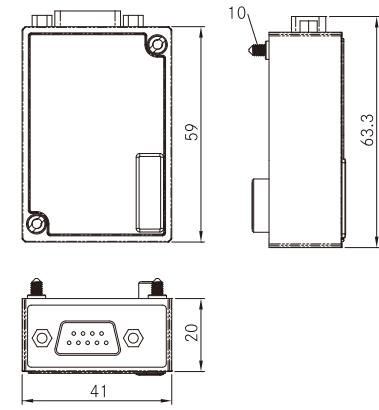
FM9/FM10



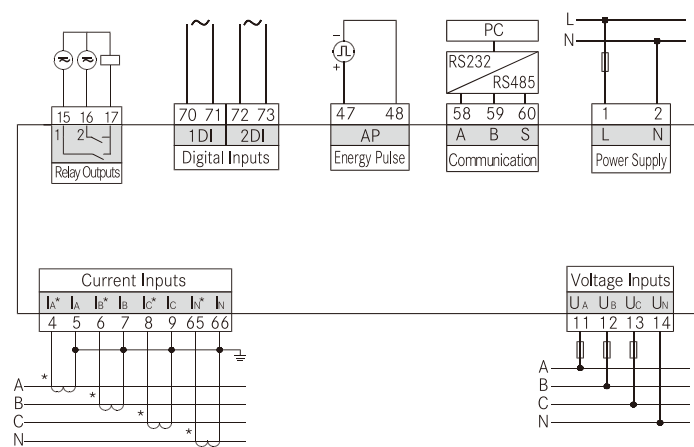
FM7/FM14



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

Sfere720A Sfere720B



Modbus Interface
Energy Accuracy 0.5S
Pulse Output
Harmonics (Only Sfere720B)
Neutral Current Input (Only Sfere720B)
4 Tariffs (Only Sfere720B)
Data Record (Only Sfere720B)



FUNCTION

Networks

-TN, TT, IT networks

Communication

-Interface: RS485
-Protocol: Modbus-RTU

Accuracy

-Energy: 0.5S
-Voltage: 0.2%
-Current: 0.2%

Power Quality(Sfere720B)

-THD
-Harmonics up to 51st
-Unbalance
-Sequence component
-Crest factor and K factor

Data Log (Sfere720B)

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



APPLICATIONS



Data Acquisition



Energy Management



Remote Power Monitoring



MAIN FEATURES

Measuring

-Demand -Max./Min. Value

Energy Metering

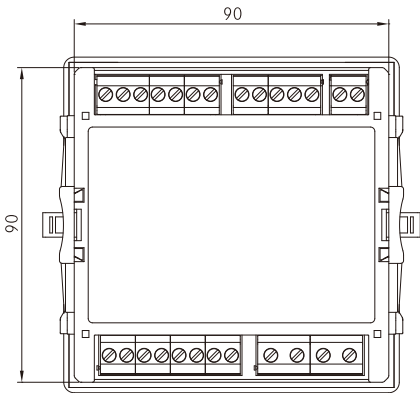
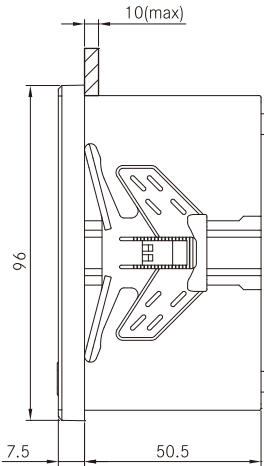
-Bi-directional energy
-Four-quadrant reactive energy
-Tariff energy (Sfere720B)

Power Quality (Sfere720B)

-Harmonics up to 51st
-Sequence component
-Unbalance
-Crest factor and K factor

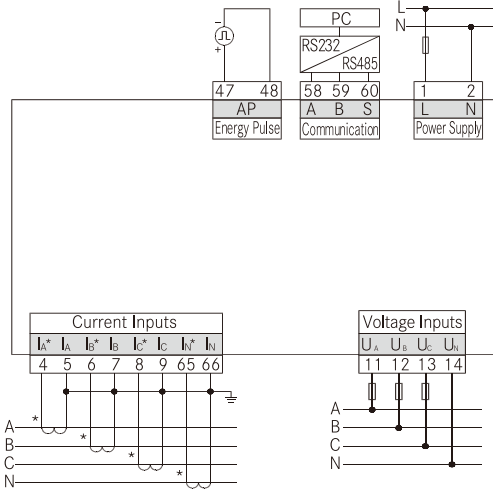


DIMENSIONS

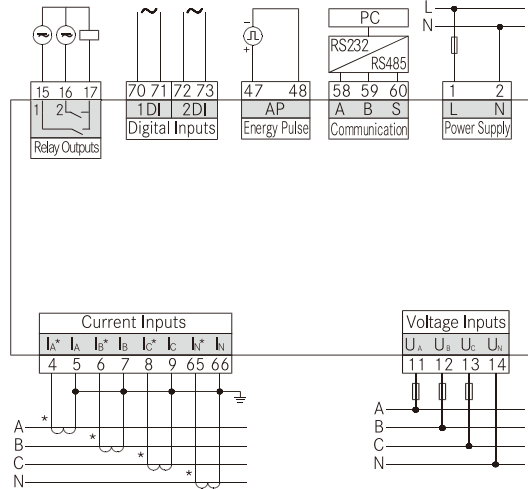


TYPICAL WIRING

Sfere720A



Sfere720B





TECHNICAL SPECIFICATION

Display Mode		LCD
Accuracy	V/A	0.2%
	P/Q/S/PF	0.5%
	F	±0.01Hz
	±kWh	Class 0.5S
	±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~65 Hz
Current Input	Rated value	AC 1A, AC 5A
	Overload	Continuous: 1.2In Instantaneous: 2In/5s
	Burden	≤0.2VA (per phase)
	Impedance	≤20mΩ
Power Supply	Working range	AC 80~270V 50/60Hz, DC 100~350V
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Communication Port		RS485, Modbus-RTU, 2-wire, up to 38.4kbps
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Environment Conditions	Operating temperature	-25 °C ~70 °C
	Storage temperature	-30 °C ~80 °C
	Relative humidity	≤93%
	Altitude	≤2500m
Insulation		≥ 2kVAC
IP Degree		Front IP54, Rear IP20

PD194Z-9HY



Harmonics
Energy Accuracy 0.5S
Pulse Output



FUNCTION

Networks

-TN, TT, IT networks

Accuracy

-Energy: 0.5S
-Voltage: 0.2%
-Current: 0.2%

Communication

-Interface: RS485
-Protocol: Modbus-RTU
Profibus-DP (Optional)



MAIN FEATURES

Measuring

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

Energy Metering

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

Power Quality

-Harmonics up to 31st
-Unbalance