

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)
-FM9(WiFi)
-FM10(GPRS)
-FM11(RS485, Modbus-RTU)
-FM12 (M-Bus communication)
-FM13 (BACnet/MSTP communication)
-FM14 (BACnet/IP communication)
-FM15 (RS232, Modbus-RTU)



AREAS OF APPLICATION



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

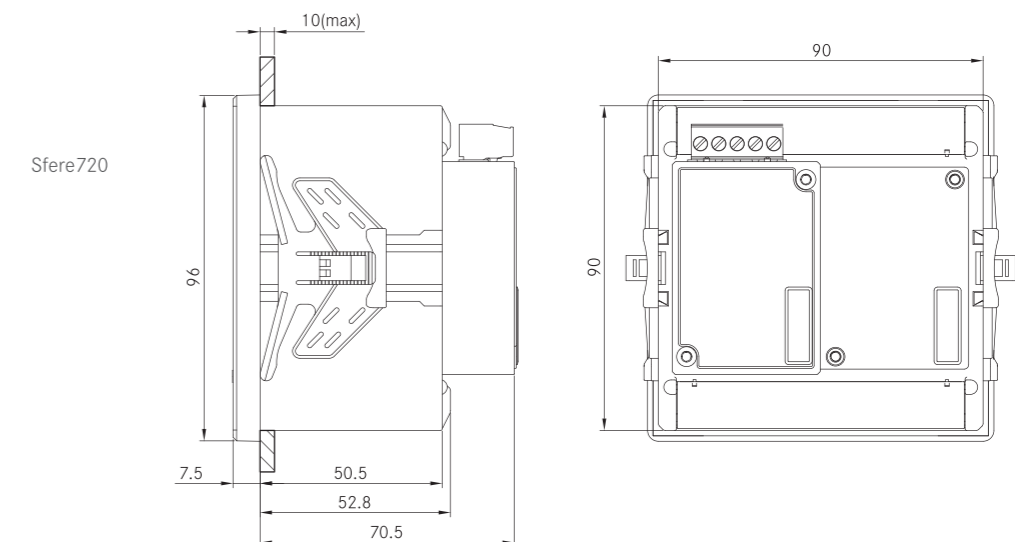
-Bi-directional energy
-Four-quadrant reactive energy
-Tariff energy
-Fundamental energy

Extension Functions

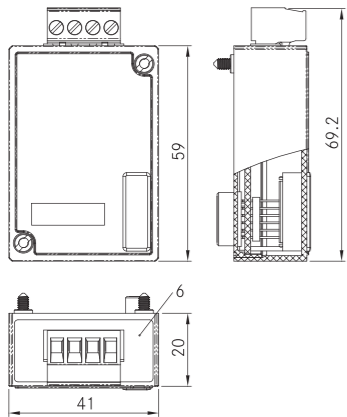
GPRS	M-Bus	WIFI	BACnet/IP	RS232
Modbus-TCP	Modbus-RTU	2relay outputs	BACnet/MSTP	Profibus-DP
2 analog outputs	4DC digital inputs	2AC digital inputs	2 analog inputs (4-20mA)	2 analog inputs (PT100)



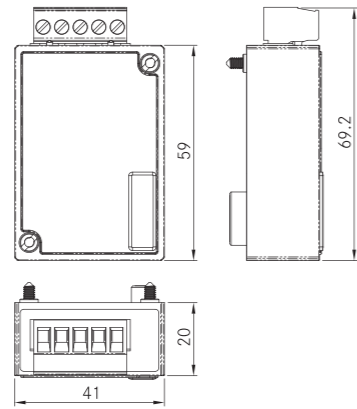
DIMENSIONS



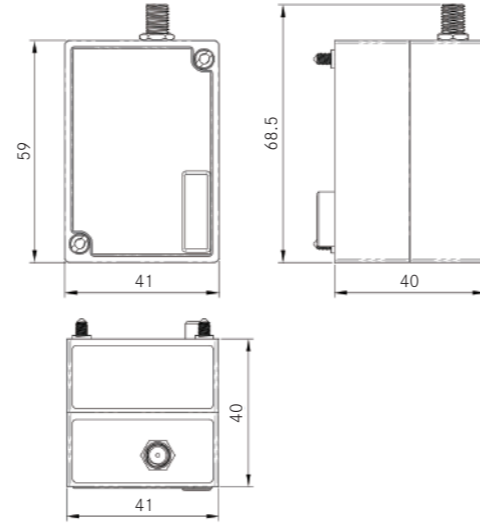
FM1/FM3/FM4/FM6/FM11/FM12/FM13



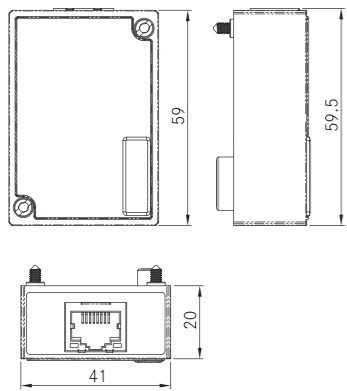
FM2/FM5



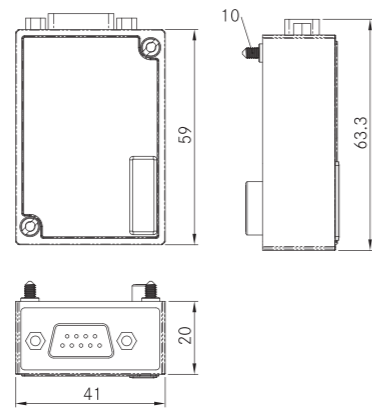
FM9/FM10



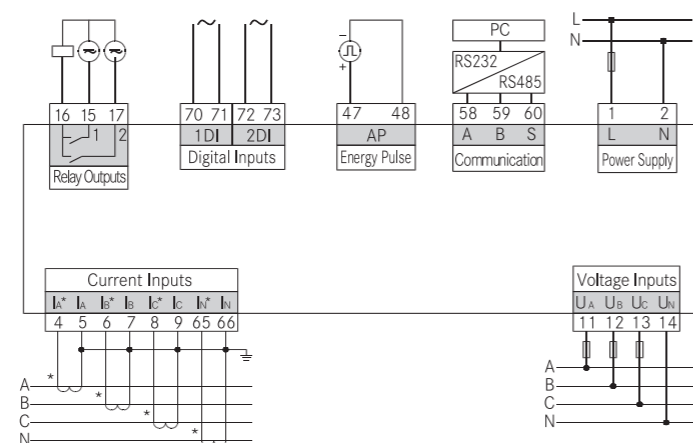
FM7/FM14



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~65 Hz
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