

YDS60-80 Smart Energy Meter

YDS60-80 is a DIN rail energy meter for three phase measuring.

With integrated RS-485 interface, it allows real-time reading of all relevant data, such as energy (total and partial), current, voltage, frequency, active and reactive power.



General Network System 3 P3W / 3P4W Nominal Voltage 3 × 230 / 400 VAC, 50 / 60 Hz Current Measurement Range Direct Connected: from 0A to 80A, CT Connected: Fom 500 V to 1000 V Power Comsumption 4 1.5 W Mounting On 35mm DIN rail Measurement Category Category III Pollution Degree 2 Current (Direct Connected) 0.5% from 8 A to 80 A, ±0.4 A from 0.4 A to 8 A Current (CT Connected) 0.5% from 0.5 A to 5 A, ±0.025 A from 0.025 A to 0.5 A Phase Voltage Class 0.5 Line Voltage Class 0.5 Frequency 40.02 Hz from 45 Hz to 65 Hz Power Class 1 Power Factor 2.022 from -1 to 1 Active Energy Class 2 Environmental Conditions Class 2 Environmental Conditions Voltage Impereture 4-0°C to 85°C Humidity Humidity 5% to 95% RH (non-condensing) Altitude < 2000 m Voltage Input (Ph-N) Constant (ph) Operating Voltage 3 × 230 / 400 VAC, 50 / 60 Hz	MODEL	YDS60-80
Nominal Voltage 3 × 230 / 400 VAC, 50 / 60 Hz Current Measurement Range Direct Connected: from 0A to 80A, CT Connected: >80 A Voltage Measurement Range Direct Connected: from 90V to 500V, PT Connected: from 500 V to 1000 V Power Comsumption ≤ 1.5 W Mounting On 35mm DIN rail Measurement Category Category III Pollution Degree 2 Measurement Accuracy Current (Direct Connected) Current (CT Connected) 0.5% from 8 A to 80 A, ±0.4 A from 0.4 A to 8 A Current (CT Connected) 0.5% from 0.5 A to 5 A, ±0.025 A from 0.025 A to 0.5 A Phase Voltage Class 0.5 Line Voltage Class 0.5 Frequency ±0.02 Hz from 45 Hz to 65 Hz Power Class 1 Power Factor ±0.02 from -1 to 1 Active Energy Class 2 Environmental Conditions Class 1 Operating Temperature -25°C to 60°C Storage Temperature -25°C to 60°C Storage Temperature -3 × 230 / 400 VAC, 50 / 60 Hz Power Dissipation Voltage Circuits < 0.5 VA per phase	General	
Current Measurement Range Direct Connected: from 0A to 80A, CT Connected: >80 A Voltage Measurement Range Direct Connected: from 90V to 500V, PT Connected: from 500 V to 1000 V Power Comsumption < 1.5 W	Network System	3P3W / 3P4W
Voltage Measurement Range Direct Connected: from 90V to 500V, PT Connected: from 500 V to 1000 V Power Comsumption ≤ 1.5 W Mounting Q n 35mm DIN rail Measurement Category Category III Pollution Degree 2 Measurement Accuracy Current (Direct Connected) 0.5% from 8 A to 80 A, ±0.4 A from 0.4 A to 8 A Current (CT Connected) 0.5% from 0.5 A to 5 A, ±0.025 A from 0.025 A to 0.5 A Phase Voltage Class 0.5 Frequency ±0.02 Hz from 45 Hz to 65 Hz Power Class 1 Reactive Energy Class 1 Power Eactor ±0.02 from -1 to 1 Active Energy Class 1 Reactive Energy Class 2 Environmental Conditions Operating Temperature Operating Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude < 2000 m Voltage Input (Ph-N) 3 × 250 / 400 VAC, 50 / 60 Hz Operating Voltage 3 × 250 / 400 VAC, 50 / 60 Hz Readed Current 3 × 1.5(6) A	Nominal Voltage	3 × 230 / 400 VAC, 50 / 60 Hz
Power Comsumption ≤ 1.5 W Mounting On 35mm DIN rail Measurement Category Category III Pollution Degree 2 Measurement Accuracy Current (Direct Connected) 0.5% from 8 A to 80 A, ±0.4 A from 0.4 A to 8 A Current (CT Connected) 0.5% from 0.5 A to 5 A, ±0.025 A from 0.025 A to 0.5 A Phase Voltage Class 0.5 Line Voltage Class 0.5 Frequency ±0.02 Hz from 45 Hz to 65 Hz Power Class 1 Power Factor ±0.02 from -1 to 1 Active Energy Class 1 Reactive Energy Class 2 Environmental Conditions Colss 2 Operating Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude < 2000 m	Current Measurement Range	Direct Connected: from 0A to 80A, CT Connected: >80 A
Mounting On 35mm DIN rail Measurement Category Category III Pollution Degree 2 Measurement Accuracy Current (Direct Connected) 0.5% from 8 A to 80 A, ±0.4 A from 0.4 A to 8 A Current (CT Connected) 0.5% from 0.5 A to 5 A, ±0.025 A from 0.025 A to 0.5 A Phase Voltage Class 0.5 Line Voltage 2 class 0.5 Frequency ±0.02 Hz from 45 Hz to 65 Hz Power Class 1 Power Factor ±0.02 from -1 to 1 Active Energy Class 1 Reactive Energy Class 2 Environmental Conditions Environmental Conditions Operating Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude > 2000 m Voltage Input (Ph-N) Voltage Input (Ph-N) Operating Voltage 3 × 250 / 400 VAC, 50 / 60 Hz Power Dissipation Voltage Circuits < 0.5 VA per phase Measurement Range AC 30 V to 265 V Current Input AC 30 V to 265 V M	Voltage Measurement Range	Direct Connected: from 90V to 500V, PT Connected: from 500 V to 1000 V
Measurement Category Category III Pollution Degree 2 Measurement Accuracy Current (Direct Connected) 0.5% from 8 A to 80 A, ±0.4 A from 0.4 A to 8 A Current (CT Connected) 0.5% from 0.5 A to 5 A, ±0.025 A from 0.025 A to 0.5 A Phase Voltage Class 0.5 Frequency ±0.02 Hz from 45 Hz to 65 Hz Power Class 1 Power Factor ±0.02 from -1 to 1 Active Energy Class 2 Environmental Conditions Class 2 Storage Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude < 2000 m	Power Comsumption	≤ 1.5 W
Pollution Degree 2 Measurement Accuracy Current (Direct Connected) 0.5% from 8 A to 80 A, ±0.4 A from 0.4 A to 8 A Current (CT Connected) 0.5% from 0.5 A to 5 A, ±0.025 A from 0.025 A to 0.5 A Phase Voltage Class 0.5 Line Voltage Class 0.5 Frequency ±0.02 Hz from 45 Hz to 65 Hz Power Class 1 Power Factor ±0.02 from -1 to 1 Active Energy Class 1 Reactive Energy Class 2 Environmental Conditions Coperating Temperature Operating Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude < 2000 m	Mounting	On 35mm DIN rail
Measurement Accuracy Current (Direct Connected) 0.5% from 8 A to 80 A, ±0.4 A from 0.4 A to 8 A Current (CT Connected) 0.5% from 0.5 A to 5 A, ±0.025 A from 0.025 A to 0.5 A Phase Voltage Class 0.5 Line Voltage Class 0.5 Frequency ±0.02 Hz from 45 Hz to 65 Hz Power Class 1 Power Factor ±0.02 from -1 to 1 Active Energy Class 1 Reactive Energy Class 2 Environmental Conditions Class 2 Operating Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude < 2000 m	Measurement Category	Category III
Current (Direct Connected) 0.5% from 8 A to 80 A, ±0.4 A from 0.4 A to 8 A Current (CT Connected) 0.5% from 0.5 A to 5 A, ±0.025 A from 0.025 A to 0.5 A Phase Voltage Class 0.5 Line Voltage ±0.02 Hz from 45 Hz to 65 Hz Power ±0.02 Hz from 45 Hz to 65 Hz Power Rator ±0.02 from -1 to 1 Active Energy Class 1 Power Beactive Energy Class 2 Environmental Conditions Class 2 Storage Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude < 2000 m	Pollution Degree	2
Current (CT Connected) 0.5% from 0.5 A to 5 A, ±0.025 A from 0.025 A to 0.5 A Phase Voltage Class 0.5 Line Voltage ±0.02 Hz from 45 Hz to 65 Hz Power ±0.02 from -1 to 1 Active Energy Class 1 Peactive Energy Class 2 Environmental Conditions Class 2 Operating Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude < 2000 m	Measurement Accuracy	
Phase Voltage Class 0.5 Line Voltage Class 0.5 Frequency ±0.02 Hz from 45 Hz to 65 Hz Power Class 1 Power Factor ±0.02 from -1 to 1 Active Energy Class 1 Reactive Energy Class 2 Environmental Conditions Class 2 Operating Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude < 2000 m	Current (Direct Connected)	0.5% from 8 A to 80 A, ±0.4 A from 0.4 A to 8 A
Line Voltage Class 0.5 Frequency ±0.02 Hz from 45 Hz to 65 Hz Power Class 1 Power Factor ±0.02 from -1 to 1 Active Energy Class 2 Environmental Conditions Operating Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude ≥2000 m Voltage Input (Ph-N) Operating Voltage 3 × 230 / 400 VAC, 50 / 60 Hz Power Dissipation Voltage Circuits <0.5 VA per phase Measurement Range AC 30 V to 265 V Current Input Rated Current Says A 2000 SA to 6 A Communication Communication Communication Protocol Modbus Communication Protocol Modbus Communication Protocol RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Current (CT Connected)	0.5% from 0.5 A to 5 A, ±0.025 A from 0.025 A to 0.5 A
Frequency	Phase Voltage	Class 0.5
Power Class 1 Power Factor ±0.02 from -1 to 1 Active Energy Class 1 Reactive Energy Class 2 Environmental Conditions • -25°C to 60°C Storage Temperature -25°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude < 2000 m	Line Voltage	Class 0.5
Power Factor ±0.02 from -1 to 1 Active Energy Class 1 Reactive Energy Class 2 Environmental Conditions — Operating Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude < 2000 m	Frequency	±0.02 Hz from 45 Hz to 65 Hz
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Environmental Conditions Operating Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude ≤2000 m Voltage Input (Ph-N) Operating Voltage 3 × 230 / 400 VAC, 50 / 60 Hz Power Dissipation Voltage Circuits <0.5 VA per phase Measurement Range AC 30 V to 265 V Current Input Rated Current 3 × 1.5(6) A Power Dissipation Current Circuits <0.2 VA per phase Measurement Range AC 0.05 A to 6 A Communication Communication Protocol Modbus Communication Port RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Active Energy	Class 1
Operating Temperature -25°C to 60°C Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude <2000 m Voltage Input (Ph-N) Operating Voltage 3 × 230 / 400 VAC, 50 / 60 Hz Power Dissipation Voltage Circuits Measurement Range AC 30 V to 265 V Current Input Rated Current Power Dissipation Current Circuits 4 0.2 VA per phase Measurement Range AC 0.05 A to 6 A Communication Communication Communication Protocol Modbus Communication Protocol Modbus Stop Bit 1 (default) / 2	Reactive Energy	Class 2
Storage Temperature -40°C to 85°C Humidity 5% to 95% RH (non-condensing) Altitude < 2000 m Voltage Input (Ph-N) Operating Voltage 3 × 230 / 400 VAC, 50 / 60 Hz Power Dissipation Voltage Circuits < 0.5 VA per phase Measurement Range AC 30 V to 265 V Current Input Rated Current 3 x 1.5(6) A Power Dissipation Current Circuits < 0.2 VA per phase Measurement Range AC 0.05 A to 6 A Communication Communication Protocol Modbus Communication Port RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Environmental Conditions	
Humidity 5% to 95% RH (non-condensing) Altitude ≤ 2000 m Voltage Input (Ph-N) Operating Voltage 3 × 230 / 400 VAC, 50 / 60 Hz Power Dissipation Voltage Circuits < 0.5 VA per phase Measurement Range AC 30 V to 265 V Current Input Rated Current 3 x 1.5(6) A Power Dissipation Current Circuits < 0.2 VA per phase Measurement Range AC 0.05 A to 6 A Communication Communication Protocol Modbus Communication Port RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Operating Temperature	-25°C to 60°C
Altitude < 2000 m Voltage Input (Ph-N) Operating Voltage 3 × 230 / 400 VAC, 50 / 60 Hz Power Dissipation Voltage Circuits < 0.5 VA per phase Measurement Range AC 30 V to 265 V Current Input Rated Current 3 × 1.5(6) A Power Dissipation Current Circuits < 0.2 VA per phase Measurement Range AC 0.05 A to 6 A Communication Communication Protocol Modbus Communication Port RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Storage Temperature	-40°C to 85°C
Voltage Input (Ph-N) Operating Voltage 3 × 230 / 400 VAC, 50 / 60 Hz Power Dissipation Voltage Circuits < 0.5 VA per phase Measurement Range AC 30 V to 265 V Current Input Rated Current 3 x 1.5(6) A Power Dissipation Current Circuits < 0.2 VA per phase Measurement Range AC 0.05 A to 6 A Communication Communication Protocol Modbus Communication Port RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Humidity	5% to 95% RH (non-condensing)
Operating Voltage 3 × 230 / 400 VAC, 50 / 60 Hz Power Dissipation Voltage Circuits < 0.5 VA per phase Measurement Range AC 30 V to 265 V Current Input Rated Current Sispation Current Circuits < 0.2 VA per phase Measurement Range AC 0.05 A to 6 A Communication Communication Protocol Modbus Communication Port RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Altitude	≤ 2000 m
Power Dissipation Voltage Circuits < 0.5 VA per phase Measurement Range AC 30 V to 265 V Current Input Rated Current 3 x 1.5(6) A Power Dissipation Current Circuits < 0.2 VA per phase Measurement Range AC 0.05 A to 6 A Communication Communication Protocol Modbus Communication Port RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Voltage Input (Ph-N)	
Measurement Range AC 30 V to 265 V Current Input Rated Current 3 x 1.5(6) A Power Dissipation Current Circuits < 0.2 VA per phase Measurement Range AC 0.05 A to 6 A Communication Communication Protocol Modbus Communication Port RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Operating Voltage	3 × 230 / 400 VAC, 50 / 60 Hz
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Rated Current 3 x 1.5(6) A Power Dissipation Current Circuits < 0.2 VA per phase Measurement Range AC 0.05 A to 6 A Communication Communication Protocol Modbus Communication Port RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Measurement Range	AC 30 V to 265 V
Power Dissipation Current Circuits < 0.2 VA per phase Measurement Range AC 0.05 A to 6 A Communication Communication Protocol Modbus Communication Port RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Current Input	
Measurement Range AC 0.05 A to 6 A Communication Communication Protocol Modbus Communication Port RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Rated Current	3 x 1.5(6) A
CommunicationCommunication ProtocolModbusCommunication PortRS-485, half-duplexBaud Rate4800 bps / 9600 bps (default) / 19200 bps / 115200 bpsStop Bit1 (default) / 2	Power Dissipation Current Circuits	< 0.2 VA per phase
Communication ProtocolModbusCommunication PortRS-485, half-duplexBaud Rate4800 bps / 9600 bps (default) / 19200 bps / 115200 bpsStop Bit1 (default) / 2	Measurement Range	AC 0.05 A to 6 A
Communication Port RS-485, half-duplex Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Communication	
Baud Rate 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps Stop Bit 1 (default) / 2	Communication Protocol	Modbus
Stop Bit 1 (default) / 2	Communication Port	RS-485, half-duplex
·	Baud Rate	4800 bps / 9600 bps (default) / 19200 bps / 115200 bps
Check Bit None (default) / Odd / Even	Stop Bit	1 (default) / 2
	Check Bit	None (default) / Odd / Even

 $^{^{\}ast}$ YDS60-80 smart energy meter $\,$ is being used along with BluePulse Series C&I ESS.

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^{**} It has not included Current Transformers. For system larger than 50 kW, CT connection is required. Please select the CT that meets the following requirements:

 $^{1.} The selected \ CT's \ primary \ rating \ should \ be \ larger \ than \ the \ maximum \ current \ passing \ through \ the \ system's \ AC \ busbar.$

^{2.} Maximum Current = system capacity / 230 / 3 $\,$

^{***} Please consult KSTAR for more details.