

# NEMO 96 3DSH-SV

## DESCRIPTION

The NEMO 96 3DSH-SV is housed in a flush mounting enclosure of 96x96mm, and will measure and display three phase voltage, current, power (kW, kVA, kVar), frequency, power factor and energy (kWh), maximum/peak demand (kW & phase current), neutral current and resettable hours run. Parameters are displayed by 7mm high red LED's. A pulsed output is provided for remote kWh signalling. The unit is suitable for unbalanced loads, 3 or 4 wire connection.

Current inputs must be from dedicated current transformers, a choice of 38 selectable ranges is provided.

RS485 serial communication is NOT available on this model.

## SELECTION TABLE

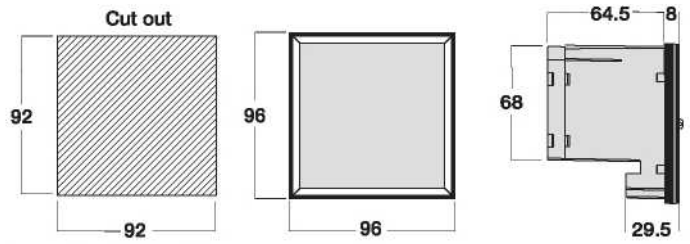
| Parameter                  | Model | NEMO 96 3DSH-SV |
|----------------------------|-------|-----------------|
| Current - per phase        |       | •               |
| Voltage - phase to phase   |       | •               |
| Voltage - phase to neutral |       | •               |
| Neutral Current            |       | •               |
| Frequency                  |       | •               |
| Power Factor               |       | •               |
| Power (kW, kVA, kVar)      |       | •               |
| Power (kW) per phase       |       | •               |
| Max. Demand (kW, A)        |       | •               |
| Peak Demand (kW, A)        |       | •               |
| Energy (kWh)               |       | •               |
| Energy Pulsed Output (kWh) |       | •               |
| Hours Run                  |       | •               |



NEMO 96 3DSH-SV

Simple selection of parameter via front push buttons with indication LED's.

## DIMENSIONS

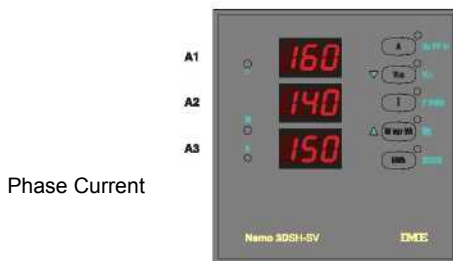


## CT RATIOS

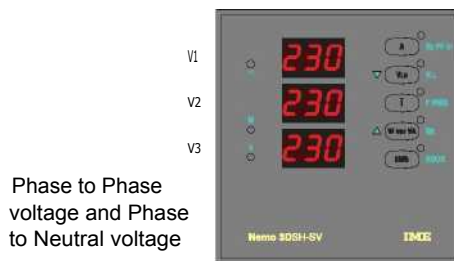
| CT Primary (A)  | Pulse Ratio   |
|---|---------------|
| 5   | 1 pulse/Wh    |
| 20, 25, 30, 40, 50, 60, 70, 75, 80, 100, 120, 125, 150                    | 1 pulse/10 Wh |
| 200, 250, 300, 400, 500, 600, 700, 750, 800, 1000, 1200, 1250, 1500, 1600 | 1 pulse/100Wh |
| 2000, 2500, 3000, 3200, 4000, 5000, 6000, 7000, 7500, 8000                | 1 pulse/kWh   |

Pulse ratio may also be set to 1 pulse/Wh regardless of ratio.

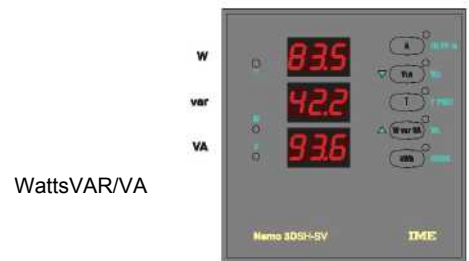
## DISPLAY MODE



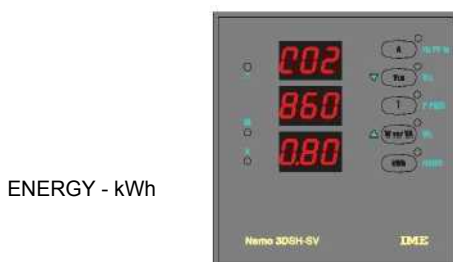
Phase Current



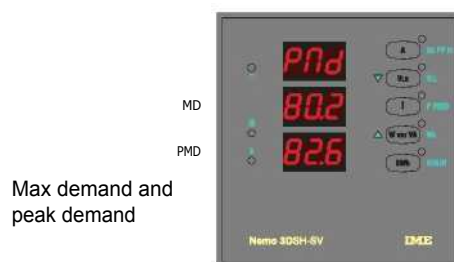
Phase to Phase voltage and Phase to Neutral voltage



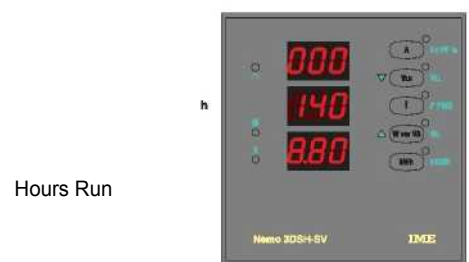
WattsVAR/VA



ENERGY - kWh



Max demand and peak demand



Hours Run

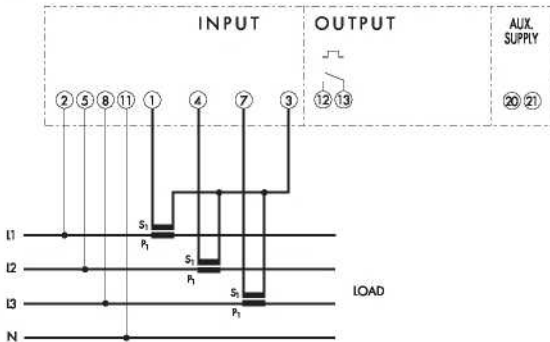
# 96 3DSH-SV - continued

## SPECIFICATIONS

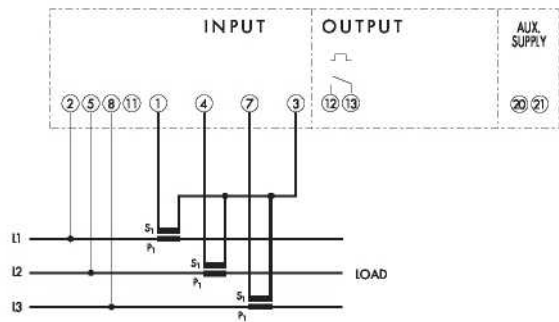
|                         |   |                               |  |
|-------------------------|---|-------------------------------|--|
| System                  | 3 Phase, 3 or 4 wire Unbalanced   | Power factor range            | cos $\phi$ 0.5 ind ... 0.5 cap   |
| Type of measurement     | True RMS for circuits up to the 8th harmonic  | Start time (energy)           | < 5 seconds  |
| Measured voltage        | 100 ... 450V ac (phase to phase)  | Start current                 | $\leq$ 0.5% In   |
| Nominal current (In)    | 5A  | Energy pulse output           | Volt-free SPST NO<br>110V dc/ac 50mA   |
| Current Overload        | 1.2 In Continuous, 20 In/5 secs   | Pulse duration                | > 100 ms   |
| Rated burden            | Voltage $\leq$ 0.5 VA per phase<br>Current $\leq$ 0.75 VA per phase   | Data retention                | EEPROM memory  |
| Frequency               | 50 ... 60 Hz $\pm$ 5%   | Auxiliary supply              | 230V ac (195 ... 253V) 50/60Hz<br>( $\leq$ 6 VA)   |
| Display                 | Red LED   | Insulation                    | Impulse voltage 5 kV 1.2/5 $\mu$ s<br>0.5J (IEC 255-4)   |
| No. of digits           | Current, Voltages, Powers,<br>Frequency, Power Factor,<br>Max. Demand – 3 digit<br>Energy, Hours Run – 9 digit  | Electromagnetic compatibility | Input/Aux/Outputs<br>-min 2kV 50Hz/1 min<br>Fast transient burst (IEC801-4)<br>Severity level 4<br>Immunity to electrostatic<br>discharge (IEC801-2)<br>Severity level 4 |
| Digit height            | 7mm   | Reference temperature         | 23°C   |
| Resolution              | Automatic, to highest possible<br>no. of decimal places   | Operating temperature         | -10 to 60°C  |
| Programmable parameters |   | Storage temperature           | -25 to 70°C  |
| Current ratio           | See table   |                               |  |
| Max. demand             | Reset<br>Delay – 5, 8, 10, 15, 20, 30, 60 min   |                               |  |
| Hours Run               | Reset   |                               |  |
| Energy pulse ratio      | See table   |                               |  |
| Decimal point           | automatic   |                               |  |
| Accuracy                | Active energy: Class 2 (EN61036)<br>Voltage: $\pm$ 0.5%<br>Current: $\pm$ 0.5% (10–120% In)<br>Powers: $\pm$ 1.5% (10–120%)<br>Power factor: $\pm$ 2%<br>Frequency: $\pm$ 0.15% |                               |  |

## WIRING DIAGRAMS

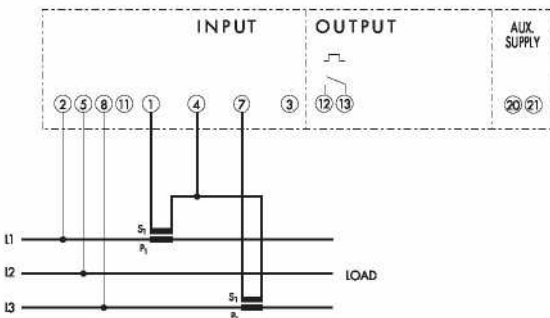
S 1000/156



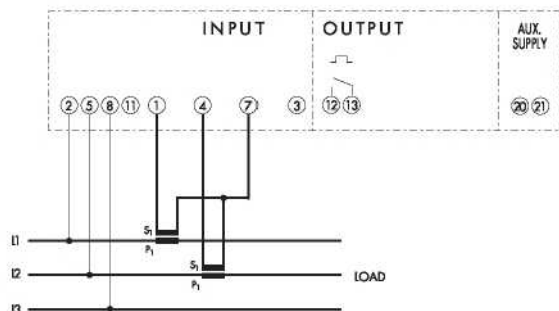
S 1000/157



S 1000/158



S 1000/159



**Important Note:** Current transformer secondary terminals must not be earthed. Dedicated CT's are required.