



Connection via CT for single and three-phase network, 3 or 4-wires. Phase sequence correction, diagnostic. Can be accessorised with an additional module. It makes available active or reactive energy counting of the pulse output to integration of consumption supervision systems. For supervision systems, through the model with output RS485 communication ModbusRTU, you can transmitted on the network main electrical parameters in addition to the energy consumption.

### Functions

- Phase and linked voltage
- Min. and max. phase voltage
- THDV
- Voltage Harmonic analysis
- Voltage crest factor
- Neutral and phase current
- Current demand and current max. demand
- Average current
- THDI
- Current Harmonic analysis
- Current crest factor
- Active, reactive phase power
- Power demand and power max. demand
- Positive and negative active and reactive energy
- Power factor
- Frequency
- Run hour meter, count start with voltage or power present

Cat. Nos.	Nemo 96HDLe			
	Input (A)	Input* (V)	Auxiliary supply	Output
MF96411	1 + 5	80...500	80...265Vac 100...300Vdc	Pulse + 1 additional modules
MF96412	1 + 5	80...500	16...60Vdc	Pulse + 1 additional modules
MF96421	1 + 5	80...500	80...265Vac 100...300Vdc	Pulse + RS485 ModBus RTU/TCP + 1 additional modules
MF96422	1 + 5	80...500	16...60Vdc	Pulse + RS485 ModBus RTU/TCP + 1 additional modules

\* Three-phase input 80...500V, Single -phase input 50...290V

Cat. Nos.	Additional modules
	Descriptions
IF96001	Module RS485 Modbus RTU/TCP
IF96012	Module RS485 Modbus RTU/TCP + memory
IF96002	Module RS232 Modbus RTU/TCP
IF96007A	Module Profibus EN50170 - DP0
IF96009	Module LonWorks
IF96013	Module M-Bus EN1434-3
IF96014	Module RS485 BACnet MS-TP
IF96015	Module Ethernet

### Technical features

TECHNICAL NOTES	NT854
<b>INPUT</b>	
Three-phase voltage (V)	80...500 (phase-phase)
Single-phase voltage (V)	50...290V
Current rating	1A - 5A
External CT ratio	max 50kA/5A - max 10kA/1A
External VT ratio	primary voltage max 1200V
Continuous overload	1,2In
Istantaneous overload	20Imax/0,5s
Reference frequency	50Hz – 400Hz (automatic selection)
Frequency tolerance	45...65Hz (fn 50Hz) – 360...440Hz (fn 400Hz)
Type of measurement	true RMS
Harmonic content	up to the 50th harmonics
Voltage rated burden (VA)	≤ 0,1VA (phase-neutra)
Current rated burden (VA)	≤ 1VA (for phase)
<b>AUXILIARY SUPPLY</b>	
Rated value Uaux	80...265Vac
Reference frequency	50 or 400Hz (automatic selection)
Frequency tolerance	45...65Hz (fn 50Hz) or 360...440Hz (fn 400Hz)
Rated burden	≤ 2,5VA (230Vac backlight 30% without external modules)
Rated value Uaux	100...300Vdc
Rated burden	≤ 3,5W (without modules, 110Vdc)

ACCURACY	
CONFORMITY ACCURACY WITH EN/IEC 61557-12	<ul style="list-style-type: none"> <li>- voltage: cl.0,5</li> <li>- Current: cl. 0,5</li> <li>- Active energy: cl.0,5</li> <li>- Reactive energy cl.1</li> <li>- Active power cl.0,5</li> <li>- Reactive power cl.1</li> <li>- Apparent power cl.1</li> <li>- Frequency ± 0,1Hz</li> <li>- THD cl.2</li> </ul>

DISPLAY	
Type of display	LCD backlighted
Digit height	8/12mm
Energy resolution	depending on the CT/VT ratio**
MECHANICAL FEATURES	
Housing	flush mounting (panel cutout 92x92mm)
Front frame	96x96mm
Housing material	self-extinguishing polycarbonate
Protection degree	IP20 terminals/ IP54 front frame
Connections type	screw terminals
Rigid cable	max 4,5mm <sup>2</sup>
Flexible cable	max 2,5mm <sup>2</sup>

ENVIRONMENTAL CONDITIONS	
Nominal temperature range	-5...55°C
Limit range for storage and transport	-25...70°C
Suitable for tropical climates	yes
Max.power dissipation*	≤5W

\* for switchboard thermal calculation

** kCT*kVT	MAXIMUM DISPLAY
1...9	999999,99kWh/kvarh
10...99	9999999,9kWh/kvarh
100...999	99999999kWh/kvarh
1000...9999	999999,99MWh/Mvarh
10000...99999	9999999,9MWh/Mvarh

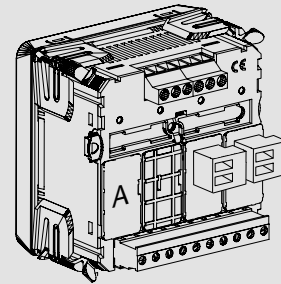
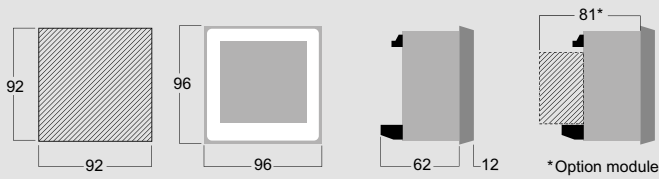
### Output

ENERGY PULSES S0 EN/IEC 62053-31	
Type	Optorelay with potential-free
Contact range	27 Vcc/ca-50mA
Assignable energy	Active or reactive energy
Pulse weight	selectable 10Wh/Varh...10MWh/MVarh
Pulse duration	selectable from 50 to 500ms

RS485 COMMUNICATION	
Protocol	MODBUS RTU/TCP
Standard	RS485-3-wire
Baud rate	selectable 4800...38400 bit/s

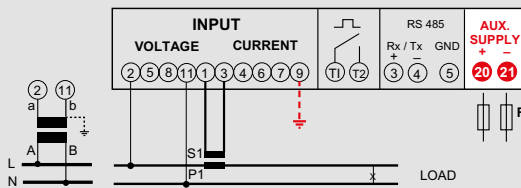
ADDITIONAL MODULES	
N. max installable module	1
Installation position	A

### Dimensions

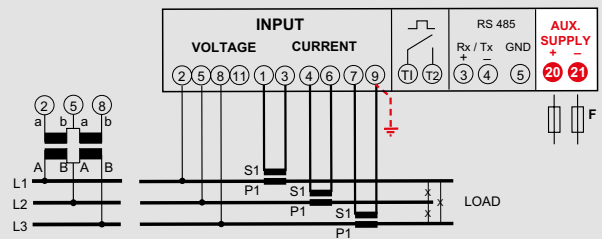


### Wiring diagrams

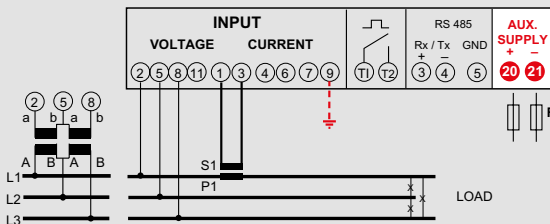
Single phase network



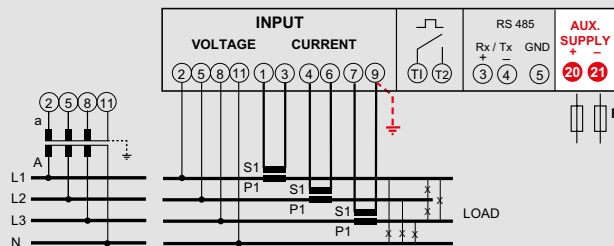
3-phase network, 3 wire



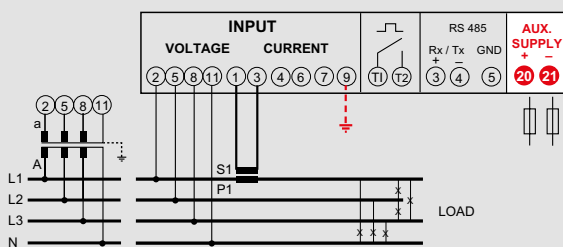
3-phase network, 3 wire, 1 System



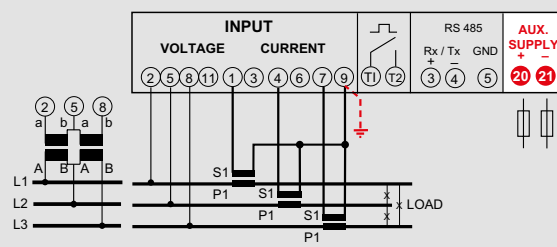
3-phase network, 4 wire



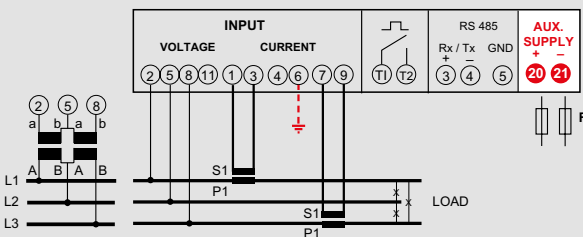
3-phase network, 4 wire, 1 System



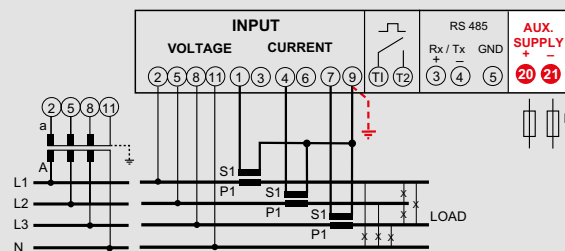
3-phase network, 3 wire



3-phase network, 4 wire (ARON L1-L3)



3-phase network, 4 wire



For pricing or any further information, please contact Omni Instruments Ltd.