

MAINS DISTRIBUTION UNITS

MDU12i WITH NETWORK CONNECTIVITY



The MDU12i introduces network connectivity to our range of Mains Distribution Units, enabling secure remote monitoring and control of up to 32 units from one network address. The MDU12i allows for comprehensive metering of the mains input while giving flexible control to the outputs.

Features

HOT SWAPPABLE control board to allow for on site hardware upgrades or repair.

POWER ON sequence is programmable to allow a timed start between channels and other units, or to turn on simultaneously. Individual outlet control allows for remote control and resetting of remote devices.

ON BOARD METERING monitors the mains input to ensure continuous supply, with alarms available via GPIO and email to alert if the input goes out of spec. All functions are available through the webpage interface.

GPIO's are available on the rear via a D15 and include monitored inputs, 0-5VDC analogue inputs and 2 voltage free relay outputs.

CLIMATIC MONITORING includes 8 x temperature + humidity sensor port, email and/or SNMP report deviation from the set limits.

Specification

Communication is via 100Base-T Ethernet port supporting IPv4 HTTP, SNMPv2 & v3 with traps, Secure Socket Layer (SSL) and SMTP (email).

Webpage interface for unit configuration with all master and slave measurements.

GPIO's include 8x opto isolated inputs, 2x 0-5VDC analogue inputs, 1X NO/NC & 1x NO voltage free contacts. All accessed via a DB15F on the rear panel.

Front panel mounted USB type A connector for 5VDC (1A) supply.

Daisy chaining of 31 MDU12i slaves via high speed MODBUS to reduce network traffic.

Input metering includes VRMS, IRMS, KW's, KWh, PF, KVA, KGC02, BTU/h's, KJ/h's and HZ.



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Updated:
July 2017

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Electrical	
Input	Via Neutrik Powercon
Voltage	85-264VAC
Frequency	50/60Hz
Max Current	16A
Outputs	12 X C13 IEC
Output Fuses	10A max per channel (not to exceed 16A input)

Environmental Monitoring (Via rear panel mounted RJ11)	
	Up to 8 x temperature sensors (daisy chained) 1 x humidity sensor
	GPIO's (Via rear mounted DB15F)
	8 x opto isolated inputs
	2 x 0-5VDC Analogue Inputs
	1 x NO/NC & 1 x NO voltage free contacts

Meter Interface	
Voltage Range	90-264VAC 50-60Hz
Current range	0-32AMPS
Accuracy	1% typical

Inputs
All inputs ESD and over current protected.

Network	
1 x RJ45	100Base-T Ethernet port supporting IPv4 HTTP, Secure Socket Layer (SSL), SNMPv2 & v3, TELNET
2 x RJ11	High speed MODBUS



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REV 001	1 DATE 03 Jun 2021	ECN NUMBER	2 ECR COMMENT	3	4	5	6	7
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MDU12i-THSB

TEMPERATURE AND HUMIDITY MODULE FOR MDU12I AND VARIANTS

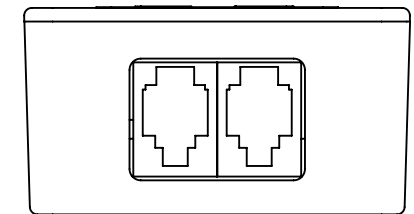
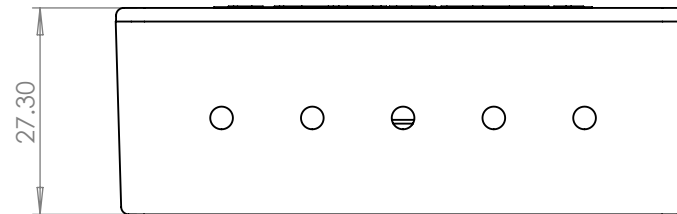
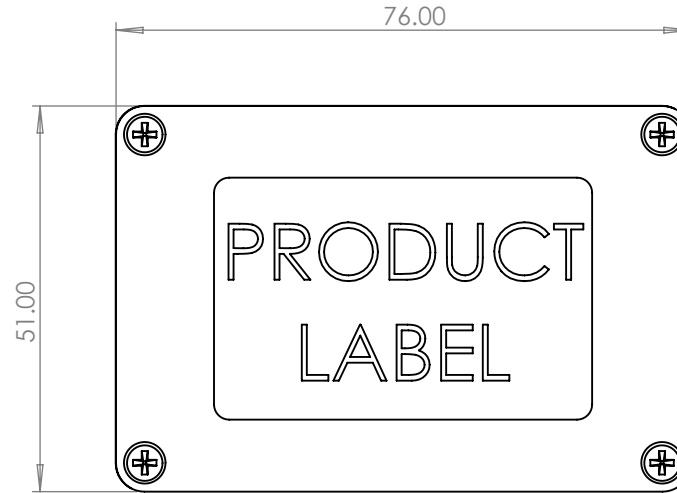
THE MDU12i CAN HAVE 8 DAISY CHAINED MDU12I-THSB MODULES, ONE OF WHICH MUST BE SPECIFIED WHEN ORDERED AND FACTORY SET AS THE TEMPERATURE & HUMIDITY MODULE. CONNECTIONS ARE BETWEEN EACH MODULE AND THE MDU12i BY RG11 4P4C CONNECTORS.

DIGITAL TEMPERATURE SENSOR

TEMPERATURE RANGE 0 TO +125 °C
 ACCURACY (TEMPERATURE ERROR) 0°C TO +85°C = ±0.5 °C NOMINAL
 85°C TO +125°C = ±1.0 °C NOMINAL
 RESOLUTION +0.0625 °C
 SENSOR SUPPLY VOLTAGE 3.3VDC
 SENSOR INTERFACE I2C 3.3V [TTL/CMOS] LOGIC

HUMIDITY SENSOR

HUMIDITY RANGE 0-100% RELATIVE HUMIDITY
 RESPONSE TIME 8 SECONDS IN SLOW MOVING AIR @ 25°C
 STABILITY < 0.5% RH PER YEAR
 ACCURACY ± 2.0% RH, 0-100% RH NON-CONDENSING @ 25°C
 NON-LINEARITY < 1% RH TYPICAL
 REPEATABILITY ± 0.1% RH
 RESOLUTION 0.04 %RH
 TEMPERATURE RANGE 0 TO +125°C (32 TO +254.9°F)
 RESPONSE TIME 5 TO 30 SECONDS
 ACCURACY ±0.4 °C NOMINAL
 REPEATABILITY ± 0.1 °C
 RESOLUTION 0.01 °C
 SENSOR SUPPLY VOLTAGE 3.3VDC
 SENSOR INTERFACE I2C 3.3V [TTL/CMOS] LOGIC



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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES
 LINEAR & RADIAL TOLERANCE:
NO DECIMAL PLACES ±0.5mm
1 DECIMAL PLACE ±0.25mm
2 DECIMAL PLACES ±0.125mm
ANGULAR TOLERANCE: ±1°

IF IN DOUBT ASK! DO NOT SCALE DRAWING!
 FINISH: THE FINISHED PRODUCT SHOULD BE CLEAN AND FREE FROM ALL LIQUIDS AND DEBRIS. SURFACES SHOULD BE OF UNIFORM APPEARANCE FREE FROM SHARP EDGES, BURRS AND CORROSION
 MATERIAL:
 THIRD ANGLE PROJECTION

AUTHOR: NF
 EDITOR: NF
 APPROVER: NF
 SHEET 1 OF 1
 SCALE 1:1 A4

MDU12i TEMP. AND HUMIDITY MODULE
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