Micro Instruments price list | All pricing excludes VAT @ 15% - **2019** | Pricing subjected to change -R$ exchange

REMOTE MONITORING PRODUCTS

Product	Description	Cost	Optional extras	Cost	
		Cost	**Optional extras**	**Cost**	
Solar Monitor -New	**Remote Solar monitor**		Mi SNMP Monitor	**FREE**	Windows monitoring software
	Works with any existing Solar regulator on 12V to 24V systems	**R1 849.00**			
	Ethernet port with Embedded web pages and SNMP support				
	for remote monitoring of parameters				
	Monitors Solar panel input current , battery charging current		5 Way Relay board	**R360.00**	
	Load current, Battery voltage 12V or 24V, Temperature and				
	output to a 5 way external relay board to control via web page				
		Cost	**Optional extras**	**Cost**	
Solar Smart R1	**Solar MPPT regulator 12/24V - 20Amp with:**	**R2 799.00**	Mi SNMP Monitor	**FREE**	Windows monitoring software
	Ethernet + SNMP support for remote				
	monitoring with embedded web pages				
	MAX input from PV: 50VDC		5 Way Relay board	**R360.00**	
	Alarm input				
	Internal hall effect isolated current sensors				
	Output for 5 way relay board,control relays via web page		Solar Smart GSM	**R1 265.00**	
	Output for Solar Smart GSM module to get SMS messages		module		
	and control relays via SMS				
		Cost	**Optional extras**	**Cost**	
NPM-R10-Lite-New	**Network Power monitor - remotely monitors:**		Mi SNMP Monitor	**FREE**	Windows monitoring software
	Ethernet Port with SNMP support for remote monitoring	**R1 849.00**			
	with embedded web pages , **No** LCD Display				
	Mains AC , Battery voltages(12V to 24V only) , Load and Charge				
	Currents , Temperature , Alarm input				
	Internal 50 Amp hall effect current sensors		5 Way Relay board	**R360.00**	
	I/O Output for 5 way Relay board				
	NO GSM module interface				

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		Cost	Optional extras	Cost	
NPM-R10	**Network Power monitor - remotely monitors:** Ethernet Port with SNMP support for remote monitoring with embedded web pages , Local LCD Display Mains AC , Battery voltages(12V to 48V) , Load and Charge Currents , Temperature , Alarm input Internal 50 Amp hall effect current sensors Output for 5 way Relay board and NPM-GSM interface Receive notificications via SMS - control relay via SMS	**R2 165.00**	Mi SNMP Monitor	**FREE**	Windows monitoring software
			5 Way Relay board	**R360.00**	
			NPM-GSM module	**R1 265.00**	

		Cost	Optional extras	Cost	
NPM-R10-ISO	**Network Power monitor - remotely monitors:** Ethernet Port with SNMP support for remote monitoring with embedded web pages **Mains AC power with ISOLATED external sensor** Battery voltages(12V to 48V) , Load and Charge Currents , Temperature , Alarm input Internal 50Amp hall effect current sensors Output for 5 way Relay board and NPM-GSM interface Receive notificications via SMS - control relay via SMS	**R2 445.00**	Mi SNMP Monitor	**FREE**	Windows monitoring software
			5 Way Relay board	**R360.00**	
			NPM-GSM module	**R1 265.00**	

		Cost	Optional extras	Cost	
NPM-R10 - RM (19" Rack mount)	**Network Power monitor - remotely monitors:** Ethernet Port with SNMP support for remote monitoring with embedded web pages Mains AC , Battery voltages (12V to 48V), Load and Charge Temperature , Alarm input **Build in 5 Way relay board** Internal 50Amp hall effect current sensors output for NPM-GSM module Receive notificications via SMS - control relay via SMS if optional GSM module installed	**R2 599.00**	Mi SNMP Monitor	**FREE**	Windows monitoring software
			NPM-GSM module	**R1 265.00**	

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		Cost	Optional extras	Cost	
NPM-R10-RM-ISO (19" Rack mount)	**Network Power monitor - remotely monitors:**	**R2 899.00**	Mi SNMP Monitor	**FREE**	Windows monitoring software
	Ethernet Port with SNMP support for remote monitoring				
	with embedded web pages				
	Mains AC power with ISOLATED external sensor				
	Battery voltages (12V to 48V)		NPM-GSM module	**R1 265.00**	
	Charge and Load Currents 50Amp sensors , Temperature,				
	Alarm input **, Build in 5 way relay board**				
	Internal 50Amp hall effect current sensors				
	output for NPM-GSM module				
	Receive notificications via SMS - control relay via SMS-if installed				
		Cost	**Optional extras**	**Cost**	
TCPIP V/A meter	**Network Power monitor - remotely monitors:**	**R1 365.00**			
	Ethernet Port with SNMP support for remote monitoring		Mi SNMP Monitor	**FREE**	Windows monitoring software
	with embedded web pages				
	Battery voltages(12V to 48V) and Charge Current port				
	Internal 50Amp hall effect current sensor				
		Cost	**Optional extras**	**Cost**	
Ethernet DUAL AC Monitor	**Ethernet Dual AC monitor**		Mi SNMP Monitor	**FREE**	Windows monitoring software
	Ethernet poprt with embedded web pages with SNMP				
	1 x Relay to control on board	**R1 345.00**			
	Monitors 2 x 220Vac mains inputs				
	Ideal to see if Eskom on and pre-paid depleted				
	or if mains is on and UPS output is on				
	Measure 12VDC to 24VDC supply to unit and the status of				
	the 2 x AC 220V inputs via SNMP				
		Cost	**Optional extras**	**Cost**	
Ethernet AC Monitor + Email	**Ethernet AC monitor + Email**		Mi SNMP Monitor	**FREE**	Windows monitoring software
	1 x Relay to control on board				
	Monitors 1 x 220VAC input	**R1 325.00**			
	Send a email to user if mains changes state				
	Measure 12VDC to 24VDC supply to unit and the relay				
	status via SNMP				

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		Cost	Optional extras	Cost	
Ethernet DUAL Relay module	**Ethernet Dual Relay**		Mi SNMP Monitor	**FREE**	Windows monitoring software
	Controls 2 x Relays on board with latch or pulse function via web page or SNMP SET commands	**R1 345.00**			
	Support SNMP over Ethernet -embedded web pages				
	Measure 12VDC to 24VDC supply to unit via SNMP and web pages				

		Cost	Optional extras	Cost	
Ping Whatchdog	**Ping whatchdog unit**				
	12-24Vdc power supply	**R1 295.00**			
	Sends a ICMP request (Ping) to a Ethernet device and reset the units power if unresponsive to the ping command				
	User configurable ping times and amount of ping failures				
	User can see supply voltage and relay status in web pages				

		Cost	Optional extras	Cost	
Network Io board	**8 Channel Network Io board - supply 12Vdc**				
	Check status of 220Vac input	**R1 685.00**			
	Control 8 Relays to on/off / 4 of 8 relays can toggle for a reset function if jumpers installed on board				
	8 x Digital Inputs - potential free				

GSM Relay Rev C SMS module

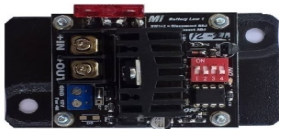
	Cost
GSM Relay Rev C	
Standalone GSM -SMS module + Antenna	**R1 365.00**
Monitors Battery voltage - 1 x Relay on board	
User can control relay and get low battery volts SMS	
Unit SMS if any one of the 2 inputs changes state	
Input 1 for Mains status on/off via 220VAC interface module	
Input 2 for ALARM on/off - normally closed potential free in	
12Vdc to 24Vdc supply voltage	
FREE Android App	
Download APK from www.microinstruments.co.za	

Optional extras	Cost	
ANDROID APP	**FREE**	**Android application**
Download APK from www.microinstruments.co.za		
5 Way Relay board	**R360.00**	
220Vac relay	**R220.00**	
Interface		
12VDC relay	**R220.00**	
24VDC relay	**R220.00**	
interface		

DC-DC Boost Converters

	Cost
DC-DC BOOST Converter modules for Wi-Fi equipment	
12-24V @ 150 W // 6Amp output @ 24V	**R1 015.00**
12-24V @ 250W // 10Amp output @ 24V	**R1 085.00**
12-48V(56V) @ 90 W // 1.90 Amps output @ 48V	**R1 015.00**
12-48V(56V) @ 180 W // 3.75 Amps output @ 48V	**R1 225.00**
24-48V(56V) @ 250 W // 5.20 Amps output @ 48V	**R1 085.00**
24-48V(56V) @ 350 W // 7.30 Amps output @ 48V	**R1 185.00**
DC converters rated at continious output power	
The Converters can hndle much higher current bursts	

Optional extras	Cost	

		Cost	Optional extras	Cost	
DC-DC Step down converter 24-20	Constant voltage step down converter				
	Input 22-30 VDC - **output 20V constant**	**R545.00**			
	24V to 20V constant @ 100W				
	Ideal to power low power radios with constant voltage				
	at 20VDC from a fluctuating 24V battery system				
		Cost	**Optional extras**	**Cost**	
DC-DC Step down converter 24-12	**DC-DC step down converter**				
	Constant voltage step down converter	**R545.00**			
	Input 15-30 VDC - **output 12V constant**				
	24V to 12V constant @ 100W				
	Ideal to power routers and other 12V equipment from a				
	24VDC Battery system				
		Cost	**Optional extras**	**Cost**	
Battery Low voltage protector	Battery low voltage protector **BLOW 1**				
		**R515.00**			
	Protect Batteries from deep level discharge				
	Auto 12V / 24V Battery protector -15Amp current				
	Set disconnect and re-connect voltage via DIP switch on pcb				
		Cost	**Optional extras**	**Cost**	
Battery Low Voltage protector with Display	Battery low voltage protector **BLOW 2**				
	Programmable battery low cut-off voltage				
	Automatically detects 12V/24V battery systems	**R820.00**			
	Mosfet Power switch - 20AMP continious				
	Blow 2 + can handle 40Amp continious				
	Large 16mm input and output terminals				
		Cost	**Optional extras**	**Cost**	
AB 80 LED MAST LIGHT	**LED MAST LIGHT for towers**				
	Alluminium + temperred glass outdoor housing	**R2 140.00**			
	10-32 VDC supply voltage - 100 milli-amp current				

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		Cost	Optional extras	Cost	
POE- Passive GB PHANTOM	**POE Injector**				
	Passive POE injector Gigabit	**R295.00**			
	MODE : **PHANTOM** power over all 4 pairs				
	Fuse + over voltage protection				
	70W POE+ LAN transformer				

		Cost	Optional extras	Cost	
POE - Passive GB MODE B	**POE Injector**				
	Passive POE injector Gigabit	**R295.00**			
	MODE : **MODE B** power over 2 pairs				
	Fuse + over voltage protection				
	70W POE+ LAN transformer				

		Cost			
Cambium force 300 Reverse polarity POE	**POE Injector**				
	Reverse polarity for Cambium radios	**R295.00**			
	Passive POE injector Gigabit				
	MODE : **MODE B** power over 2 pairs				
	Fuse + over voltage protection				
	70W POE+ LAN transformer				

		Cost			
POE + Surge protection	**POE Injector + protection**				
	70Watt POE+ Gigabit LAN transformer	**R625.00**			
	Passive Gigabit POE injector with surge protection				
	12V to 60Vdc power supply input				
	Tranzorbtion diodes and Gas tube arrestors for protection				
	Use 2 x Fuses fast blow 2Amp 5x25mm glas fuses				
	User can set the POE to **MODE B** or **Phantom power** output				
	User can set polarity of power to each pair of the POE output				

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		Cost	Optional extras	Cost	
POE 4+4 GM passive poe strip injector	**8 PORT POE Injector strip with Ethernet interface**				
	19" Rack mount unit	**R2 399.00**			
	Each of the 4 x Ports can be MODE B or Phantom Power				
	Support 2 x different voltages simultaniousley				
	Passive POE injector 8 Port (4+4) - 70W POE+ LAN TX				
	PTC fuse protection on all 8 ch -over current				
	Management Port to reset power on each port				
	20 to 56Vdc Supply - One voltage one Mode strip				
		Cost	**Optional extras**	**Cost**	
DC SMART 12V	**DC-DC Converter 19" rack mount for 12V Battery system**				
	19" Rack mount DC-DC Converter	**R2 450.00**			
	Easy connect red+black binding posts for connection				
	All voltages fused on front panel , 2 x Fans internal				
	12Vdc input + fused 12Vdc output + 24V @ 140W out +				
	48V(56V) 90W output				
		Cost	**Optional extras**	**Cost**	
DC SMART 24V	**DC-DC Converter 19" rack mount for 24V Battery system**				
	19" Rack mount DC-DC Converter	**R2 299.00**			
	Easy connect red+black binding posts for connection				
	All voltages fused on front panel , 2 x Fans internal				
	24Vdc input + fused 24Vdc output + 20V @ 100W out +				
	48V(56V) 250W output				
			Optional extras	Cost	
Charge Smart R1	**Battery Charge 19" Rack mount**				
	19" Rack mount DC Battery **Charger**	**R4 299.00**			
	Easy connect Red+black binding posts for connections				
	Auto 12/24V Battery voltage detection				
	Charge 12V @ 20Amps and 24V @ 13 Amps				
	Charge from Mains AC input and Solar Panel backup input				
	MPPT charger for Mains and Solar input				
	Ethernet Port with SNMP support and embedded web pages				
	5 way build in Relay outputs can be controlled via web page				
	Alarm input - normally closed potential free				
	Local LCD display for easy on site reading of parameters				

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			Optional extras	Cost	
WISP SOLUTION	**Complete Wisp solution**				
	Through combining the 3 products above an almost compete				
	Wi-Fi tower monitoring and power setup can be deployed	**see different**			
	in minutes - 19" Rack mount units	**pricing of units**			
	Charge Smart R1 - mains + solar charger with Ethernet+SNMP	**above**			
	DC SMART 12V or DC SMART 24V DC-DC Converter				
	POE4+4GM - GB POE injector strip with management LAN				
			Optional extras	Cost	
Stay Awake switch + GSM	**Security Stay awake switch for control rooms+GSM**				
	Keep security guards from falling asleep	**R2 960.00**			
	SMS module to send SMS messages to supervisor				
	Random timer Stay Awake switch for security rooms				
	Random min and max time user adjustable				
	Visual and audio indication warnings to reset				
	Internal battery backup with charger				
	Day night function/ operate at night				
	Disconnect day/night sensor for 24Hr operation				
	Dual buzzers for warnings and alarm				
	Relay output for a alarm condition				
			Optional extras	Cost	
Stay Awake Switch	**Security Stay awake switch for control rooms/no GSM**				
	Keep security guards from falling asleep	**R1 895.00**			
	Random timer Stay Awake switch for security rooms				
	Random min and max time user adjustable				
	Visual and audio indication warnings to reset				
	Internal battery backup with charger				
	Day night function/ operate at night				
	Disconnect day/night sensor for 24Hr operation				
	Dual buzzers for warnings and alarm				
	Relay output for a alarm condition				

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		Cost	Optional extras	Cost	
4-20mA wireless link	**Wireless 4-20mA radio link+ digital -Long range**				
		R6 500.00			
	Wireless 4-20mA transmitter set - 868Mhz -LORA				
	Wirelessly transmits a 4-20mA analogue signal + 1 digital				
	Each unit have 1 x Digital input and one Relay output				
	24VDC power supply , c/w 3m Antenna cable LMR195				
	LORA 868Mhz radios c/w Omni directional 868Mhz antennas				
	Metal enclosures - non waterproof				

		Cost	Optional extras	Cost	
Wireless Digital link	**Wireless Digital link - long range**				
		R4 800.00			
	Wireless digital transmitter set - 868Mhz -LORA				
	Each unit have 1 x Digital input and one Relay output				
	24VDC power supply ,c/w 3m Antenna cable LMR195				
	LORA 868Mhz radios c/w Omni directional 868Mhz antennas				
	Metal enclosures - non waterproof				

		Cost	Optional extras	Cost	
Mi-SNMP Monitor for Windows	**Windows SNMP monitoring software**				
	Mi-SNMP Manager for Windows				
	Graphing of voltages and currents	**FREE *******			
	SNMP monitoring of all Mi SNMP products		Download from www.microinstruments.co.za		
	Email alerts and alarms to user				
	Easy to operate SNMP manager software				