

Zymax - Key Features



KEY FEATURES - unique and innovative

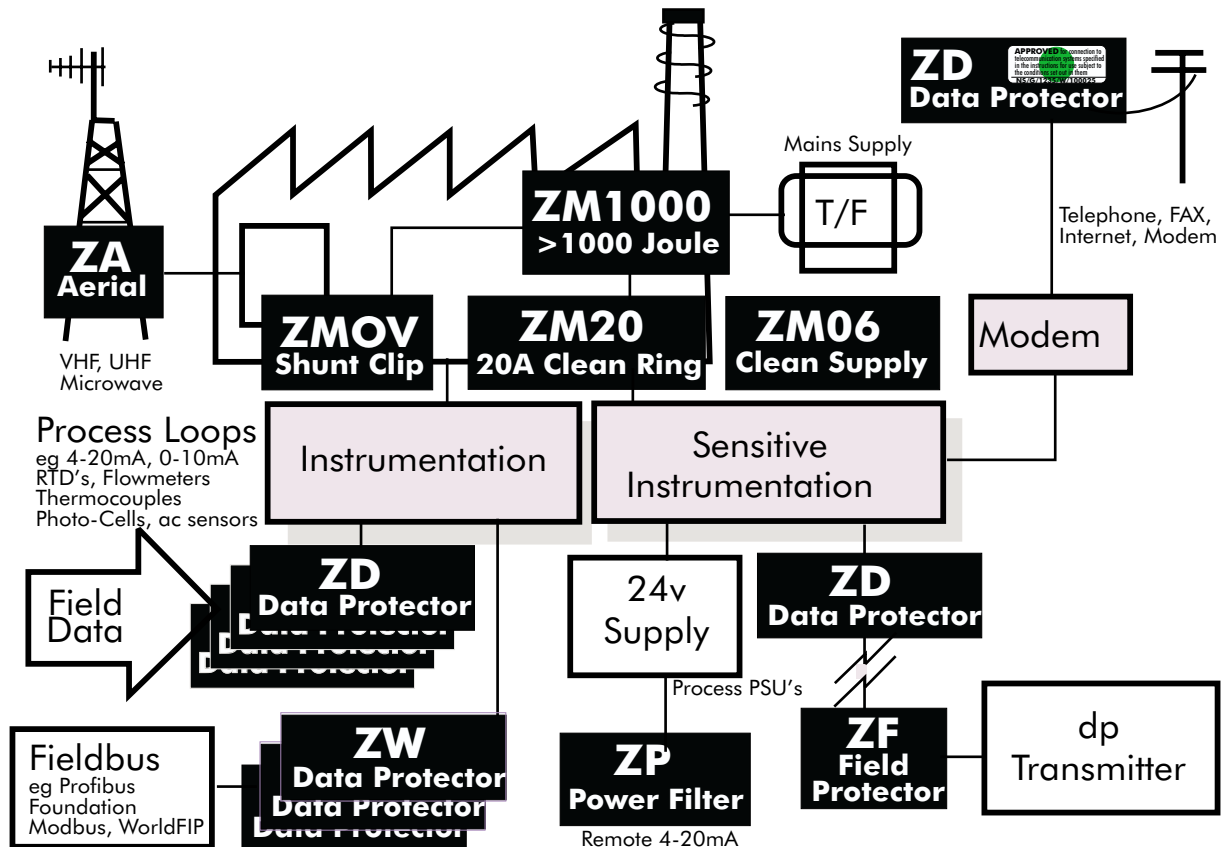
Applications

Domain

	<ul style="list-style-type: none"> Unique Self Test Low Cost DIN rail Mount Small Footprint 	<p>Thermocouples CMOS Volt Free Contacts Logic Inputs Analogue Inputs Current Loops eg 4-20mA RTD's 2 wire and 3 wire</p> <p>PSTN phone and BT Private Wire circuits</p>	<p>ZD Process Signal</p> <p><small>APPROVED for connection to telecommunication systems specified in the instructions for use subject to the conditions set out in them NS/G/1235Z/W/100025</small></p>
	<ul style="list-style-type: none"> Wide Bandwidth Low Loss, Low Resistance Low capacitance 	<p>RS232, RS422, RS485 Fieldbus eg Data Highway Plus, Modbus, Foundation, WorldFIP and also when a Low resistance or low capacitance is required.</p>	<p>ZW Data Hi-Speed</p>
	<ul style="list-style-type: none"> Continually monitors aging (Patented MMOV™) Checks wiring integrity DIN rail Mount Thermally Fused High Specification Can be supplied IP rated 	<p>Mains Filtering Mains Shunt Protection Clean Power Supplies Ring Mains & Spur Wiring Complete BU enclosures fitted with integral Fuse and Isolator - ultra low di/dt overhead! Back of Panel Supplies EMC Filtering CE Compliance Hi-Density Protection where space is at a premium</p>	<p>ZM Mains</p> <p>230v/110v & 3 phase</p>





























Zymax Innovation

more on next page...



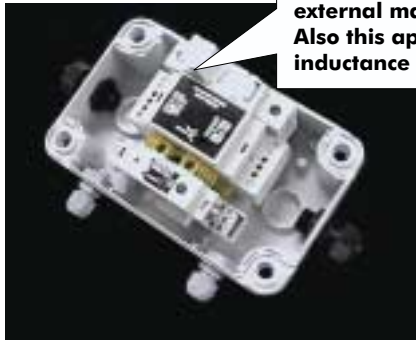
Total Protection - High Energy Low Cost Failsafe Design Any Application!

KEY FEATURES - unique bullet features ...
Applications
Domain

  	<ul style="list-style-type: none">  Failsafe design - thermally fused and self monitoring  Continually checks aging  Very High Energy >1000 Joule  Surge Counter  Remote Annunciation  Low Cost  Single and Three Phase  Plug in Plug Out Replaceable 	<p>Cat C protection (BS6651) Incoming Supply High Energy Shunt Protect Surge Monitoring Lightning Elimination Single Phase Primary Three Phase Entry Office/Factory/Site primary surge protection</p> <p>Can be used in an "integrated" solution. Ideal with a ZM20 for the "ultimate" protection - simply the best.</p>	<p>ZM1000</p> <p>mains power supplies 230V 110 or 415v single and three phase</p>
	<ul style="list-style-type: none">  Thermally Fused  Fail Safe Annunciation  High Spec Filtering 	<p>dc Power Supplies eg 12V, 24v, 48v EMC filtering Network psu Protection Zero Line Loss Circuits Current Loop Power Supply Protection eg 4-20 mA</p>	<p>ZP</p> <p>dc power supplies</p>
	<ul style="list-style-type: none">  Remote non-contacting  Data Reader for ZM's - reads product data including date of manufacture, firmware, Aging and surge count for ZM1000  Breakdown Tester for All SPD's 	<p>Preventative and Pro-Active field maintenance Point and Read Status SPD testing- test the breakdown of all lightning barriers Driver for ZD and ZM barriers that are not in a loop to provide power</p>	<p>ZT</p> <p>Universal Tester</p>
	<ul style="list-style-type: none">  Wide Band Protection  Co-Ax or Aerial  Multi Connector Options 	<p>Aerial Protection NEMP Barrier Co-Axial Data Protection Network Shunt Lightning Shunt Gender Change</p>	<p>ZA</p> <p>Aerial & Co-Ax</p>
	<ul style="list-style-type: none">  Easy to Fit - no polarity  Low Price  Screw Adaptors 	<p>Remote Transmitters Integral Case Mount Shunt Barrier Applications</p>	<p>ZF</p> <p>Field Mounted Transmitters</p>
	<ul style="list-style-type: none">  Ultra High Packing Density  Plug Isolate for test  Metal Case for low cross-mod 	<p>Ultra High Density Applications - less than 2mm of DIN rail used per protected wire! eg 500 line protection takes less than 1 metre of DIN rail</p>	<p>ZX</p> <p>Data-High Density Pack</p>

Mounting Options ...

meet the family!



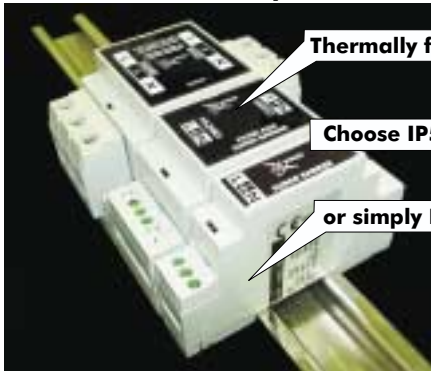
INTEGRAL ISOLATING SWITCH
Saves time and cost in fitting an external mandatory isolating box
Also this approach limits the line inductance - A market first!

ZD and ZM in BU enclosure



Mix Barriers for optimum protection

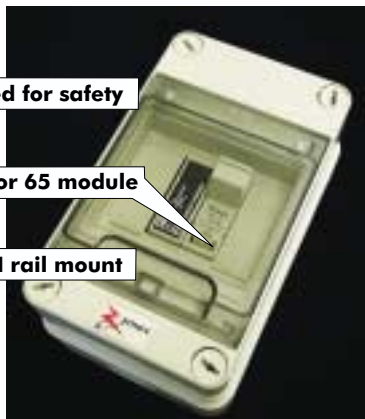
DIN Rail back of panel



Thermally fused for safety

Choose IP55 or 65 module

or simply DIN rail mount



Mix and Match- now you can have a fully integrated solution. Choose the barrier for the application then choose the mounting options -IP55 or IP65.

Because they have a DIN rail mount, they can be easily mixed to suit any application. We call this the fully "integrated" range.

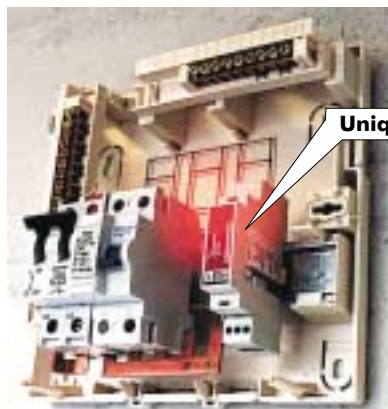
Shown here is a PSTN data barrier for a modem and a high spec mains protector and filter in one box. An isolating fuse and switch is incorporated for safety and together with an integral earth connection.

The enclosures are remarkably low cost and because they have a translucent front, the status of any barrier can be easily read manually or remotely using the unique ZT infra-red Tester

Also the lid is hinged so that the test buttons on the ZD barriers can be readily checked for SPD (barrier) integrity.

All Zymax Barriers can also be DIN rail mounted in other supplier enclosures or simply on back of panel/cubicle systems. Because of their shape they can also be mounted in a consumer unit. It is easy to shunt protect an incoming supply or provide a clean and filtered supply to sensitive equipment.

Shown bottom left is the ZEB bus bar that enables easy earth wiring to multiple barriers. Shown bottom right is the G rail adaptor that converts G to C rail mounting.



Consumer Unit mounting



Complete ZM in Enclosure

Unique self test - even does a wiring check!



ZEB Earth Bus to easily connect multiple barriers



"G" to "C"

Shown right is the new IT12 dual BT and 4 gang mains protector-ideal for the internet!



Protection you can see - for surges you can't

Why not try our risk analysis on your project to BS6651 ?

See www.zymax.com



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PUNCH

INFORMATION

TITLE

Selecting SPD Barriers

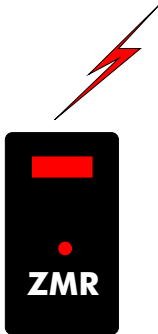
ZIP02

ZYMAX INFORMATION PAGE

	Generic	Device	Nominal Voltage	Max Current Surge (kA)	Max Load	Resistance (Ω per line)	Attenuation (max dB)	Module size n=17,5 mm	Leakage Current (mA)	Let Through Voltage	Band-width	Capacitance Line to Line	Typical Applications - Check the voltage Headroom of the source. e.g. For a 4-20mA transmitter powered from a 24v PSU choose a 33v rated SPD.
DATA	STANDARD High Energy	ZD06	6	20	200mA	33	n/a	1	500	8	17MHz	70pF	Thermocouples and circuits with less than 6 volts
		ZD16	16	20	200mA	33	n/a	1	5	18	17MHz	70pF	CMOS, Volt-Free Circuits, RS232, RS422, RS485
		ZD33	33	20	200mA	33	n/a	1	5	35	17MHz	70pF	Current Loops (4-20mA, 0-10mA, etc.), RTD's
		ZD51	51	20	200mA	33	n/a	1	5	55	17MHz	70pF	Rising Volt Current Loops and Controllers
		ZD75	75	20	200mA	33	n/a	1	5	79	17MHz	70pF	Special 75v max. headroom circuits
	Phone & Modem	ZD200	200	20	500mA	4,7	n/a	1	5	220	33MHz	70pF	PSTN, FAX, Modem, ADSL, Telemetry
		ZD200 BT	200	20	500mA	4,7	n/a	2	5	220	33MHz	70pF	FAX, ADSL, BT 2 wire and 4 wire circuits
		ZD200 SRJ	200	20	500mA	4,7	n/a	2	5	220	33MHz	70pF	Screw Terminal option with RJ11 output
		ZD200 IRJ	200	20	500mA	4,7	n/a	2	5	220	33MHz	70pF	BT IDC input termination option
	WIDE BAND low Resistance	ZW06	6	20	600mA	3,3	n/a	1	500	8	65MHz	40pF	Use these barriers for low R and wide Band-Width
		ZW16	16	20	600mA	3,3	n/a	1	5	18	65MHz	40pF	RS232, RS422, RS423, RS485, Data Highway Plus, Modbus
		ZW33	33	20	600mA	3,3	n/a	1	5	35	65MHz	40pF	Fieldbus- Foundation 31,25kb/s & Modbus+
		ZW51	51	20	600mA	3,3	n/a	1	5	55	65MHz	40pF	Fieldbus-Foundation 2,5Mb/s, WorldFIP
		ZW75	75	20	600mA	3,3	n/a	1	5	79	65MHz	40pF	Miscellaneous
		ZW400	400	20	600mA	3.3	n/a	1	5	420	65MHz	40pF	Milltronics EnviroRanger, HydroRanger & HydroRanger Plus
dc 12v to 36v	ZP18	18	19	10A	0	50	2	1mA	25	100kHz	100nF	Power Systems - dc. 6v to 38 v Suppress and Filter.	
	ZP28	28	19	10A	0	50	2	1mA	36	100kHz	100nF	Also network power line protection	
	ZP38	38	19	10A	0	50	2	1mA	45	100kHz	100nF		
POWER	SHUNT 110/230v	ZMOV-1	110	19	Shunt Device	n/a	n/a	1	1mA	220	n/a	n/a	Mains Supply Shunt Barrier 420J. Use them in IPU option complete with isolating fuse for integrated protection High Energy Shunt Barrier > 1100J (Use 3 off for 3 Phase)
		ZMOV-2	230	19		n/a	n/a	1	1mA	650	n/a	n/a	
		ZM1000-1	110	40		n/a	n/a	3	1mA	220	n/a	n/a	
		ZM1000-2	230	40		n/a	n/a	3	1mA	650	n/a	n/a	
	SHUNT and FILTERED 110/230v	ZM06-1	110	19	6 A	n/a	60	2	1mA	220	100kHz	n/a	Mains Supply Barrier and Hi Spec Filter - Provides a clean supply. Choose ZM06 for 6 A max line current and ZM20 for 20 Amp. Again, ideal in a BU enclosure option as they are supplied pre-wired complete with isolating fuse
		ZM06-2	230	19	6 A	n/a	60	2	1mA	650	100kHz	n/a	
		ZM20-1	110	19	20 A	n/a	55	3	1mA	220	100kHz	n/a	
		ZM20-2	230	19	20 A	n/a	55	3	1mA	650	100kHz	n/a	
AERIAL and Co-Ax	ZA90	90	40	50W	n/a	n/a	n/a	n/a	90	3GHz	5pF	Aerial, Co-Ax, PACNET, SCADA , Networks Choose ZA350 for higher power throughput	
	ZA350	350	40	800W	n/a	n/a	n/a	n/a	350	2GHz	4pF		

Zymax reserve the right to alter specifications without notice. These figures are given in good faith and verified as necessary. No legal responsibility can be accepted in conjunction with these figures. They are merely figure of merit that will help in making the final choice of barrier and issued as a guide only. Specifications can also improve so the user is recommended to consult the factory for more information from time to time - see zymax.com. All products though are fully tested and Warranted.

Designed to meet and tested where appropriate to EN60950, EN55022, BS6651, EN410003, EN61000-4-5. These barriers will fit onto DIN rail, Consumer Unit and IP enclosures.

SPD	Self Test	Status Information	ZMR MMOV Reader
DATA ZD06 ZD16 ZD33 ZD51 ZD75 ZD200 ZDxxx/p	yes yes yes yes yes yes yes	<p style="text-align: center;">PUNCH</p> <p>● Green = Working</p> <p>Push "Test Button" momentarily and the Green LED will illuminate if:</p> <ul style="list-style-type: none"> (a) Loop power exists (b) SPD barrier is working OK (c) LED is OK and working <p>Hence this unique test feature on all Zymax Barriers is totally "Fail-Safe". This is a desirable function in the process industries.</p>	<div style="border: 1px solid blue; padding: 5px; margin-bottom: 10px;"> <p>IMPORTANT NOTE:- All Zymax barriers have been designed to be failsafe, have a long service life and where appropriate self test</p> </div> <p>ZM MMOV AC Mains Power SPDs</p>  <p>The ZMR Reader can be used with all ZM AC mains power products which incorporate the Zymax patented MMOV technology.</p> <p>Simply point the ZMR at the SPD (non contacting) and it will display the following:-</p> <ul style="list-style-type: none"> Product id Device Firmware Version Date of Manufacture Device Protection Status(Ageing of Protectors) - useful for preventative maintenance. <p>The ZM1000 also tells the ZMR how many surges it has taken.</p>
DATA - Wide Band ZWxx/p ZW06 ZW16 ZW33 ZW51 ZW75	yes no no no no no	<p>PP3</p> <p>Note : If insufficient loop power is available then use a PP3 9volt battery for testing in series with a 1k Ohm series current limiting resistor.</p> <p>Self Powered Testing Option :</p> <p>Choose the /p option and then ALL SPD barriers can self test regardless of whether sufficient loop power exists. If the SPD has a /p suffix then the SPD barrier is self powered by a button cell that is replaceable and has been designed to last more than 3 years- typically 5 years.</p> <p>●</p>	
MAINS AC POWER ZMOV ZM1000 ZM06 ZM20	yes yes yes yes	<ul style="list-style-type: none"> ● Red Led ON = System Working and Protected ● OFF= No Power / Broken LED / Broken SPD ● FLASHING= Primary Protectors beginning to age ● FLASHING + AUDIBLE = SPD aged but working ● LED OFF + Two Tone = Thermal Fuse Blown ● LED OFF + Warble = No Earth/Poor Earth or Live/Neutral reversal 	
DC POWER Supply ZPxx	yes	<ul style="list-style-type: none"> ● Red Led ON = System Working and Protected ● OFF = No protection or No power 	
AERIAL ZAxx	no	<p>The ZA is an extremely rugged device and will either exhibit a simple short or open circuit on failure.</p>	

TITLE

Testing SPD Barriers

ZYMAX INFORMATION PAGE ZIP03