



# Cross currents

DECEMBER, 2005

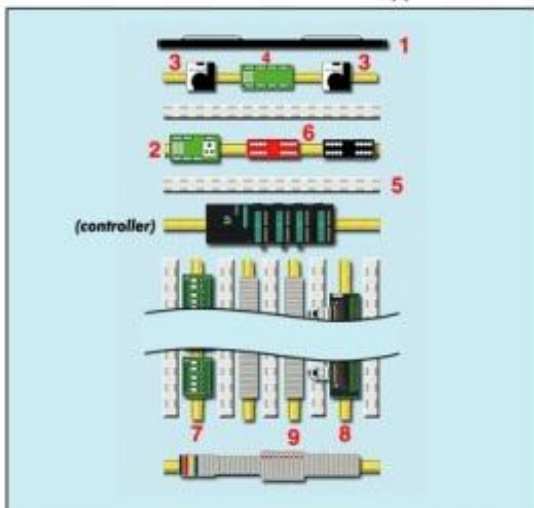
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## INNOVATIVE SOLUTIONS FOR AUTOMATION & CONTROLS INDUSTRY FROM ELMEX & ECONIX!

### Part I - econix

**econix** can supply large number of universal DIN-rail mounted system components for Automation and Controls Application, as evident from the following (ref: block diagram)



**A Typical Block Diagram of an Automation & Controls System**

1. **econix** customized fan rack system for internal cooling and ventilation in control Panel.
2. **econix** Interface Module for Fan-Fault detection, and for panel utilities like: Panel lighting, supply to protective devices for the control panel (fire, smoke) and annunciation circuits.
3. **econix** switching mode power supply - SMPS: INPUT: 90-264 V AC; OUTPUT: 5, 12, 24, 48 V DC; POWER : 35 to 240 Watts. APPROVALS: UL508, UL-60950-1, COMPLIANCES: EN61000-3-2 (Harmonics Attenuator), EN 55022, (Electromagnetic Interference), CE Marking (IEC).
4. **econix** SMPS O-Ring and 10-Feeder Modules for 100% redundancy with 10-Switch isolated feeders.
5. **elmex** Mounting Rails - DIN EN 50035, 50022, 50045.
6. **elmex** Distribution Blocks for control power distribution or for centralized earthing.
7. **econix** Relay Modules : Controller-specific Modules, standard relay modules with or without fuse and specially designed Low Consumption Relay Modules (LCRM)
8. **econix** Passive Interface Modules.
9. **elmex** Terminal Blocks : A wide variety for Automation and Controls Application, in forthcoming issue (Part - 2).

VISIT US AT

## ELECRAMA-2006

**elmex** and **econix** will participate in the 7th International Exhibition of Electrical and Industrial Electronics Industry between 18-22 January 2006 at Mumbai, STALL No. H 5 B 38, HALL No.5.

At ELECRAMA-2006, **elmex** and **econix** will introduce a whole new range of innovative products for the ever increasing demand from the Electrical and Industrial Electronics industry.



**3D view of our stall at ELECRAMA 2006**

## econix SMPS SWITCHING MODE POWER SUPPLY



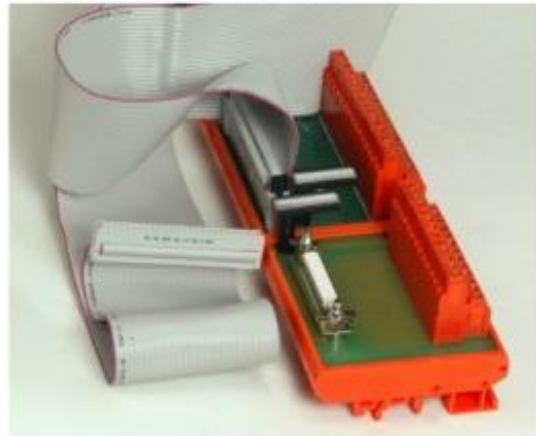
These highly reliable SMPS from **econix** come with following salient Features : ✓ **Unique inbuilt Attenuator** for excellent control of **Harmonics**. ✓ Compatible, by design, for **redundancy mode** and **parallel operation** with unique **current sharing** feature ; ✓ **very Low Ripple DC**. ✓ **Protections** for over voltage, over loads, short circuits. ✓ Unique **power factor correction (PFC)** circuit; (better than 0.97 lag possible). ✓ **Unique zero voltage** circuit for **control of inrush currents**. ✓ Successfully passes **100% full load burn-in test** and other tests such as line regulation & load regulation tests, drift test and efficiency test.

## econix O-RING AND 10-FEEDER MODULES



These Modules provide solution for achieving **100 % redundancy** in parallel operation of SMPS. Both inputs from SMPS are controlled by power relays and it provides **10 switch isolated feeders**.

## econix PASSIVE INTERFACE MODULES



They are used with various controllers like PLC, SCADA, DCS, CNC. **Multicore flat ribbon cable** or **round shielded cable** can be supplied as required for **IDC/FRC** connectors or **D-sub male** and **female** connectors.

## econix Low Consumption Relay Modules



**LCRM** offers tremendous advantage in drastically **reducing control-supply power ratings** required in modern Automation and control Systems, since the **actuating current** for a relay of LCRM is **less than 2mA**, as compared to 15-20 mA for traditional relay.



## econix CONTROLLER SPECIFIC MODULES



Customised CNC Interface Modules

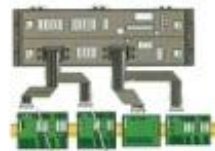


Modules with high speed switching Opto Coupler



Customised Modules for Machine Tools industry

**econix** provides large variety of controls-solutions using DIN-rail mounted modules, starting from simple Static Relay Modules, for interfacing controller and field signals **upto sophisticated intelligent modules incorporating micro processors/micro controllers**, which form a part of Control System. These solutions reduce wiring and assembly time and simplify controls considerably besides providing flexibility for future additions/alterations and system cost-economy.



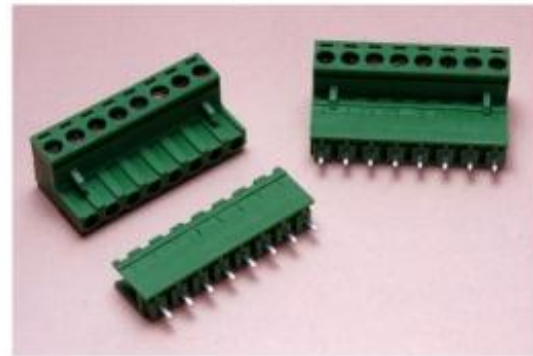
Traditional Modules



Innovation with econix  
single module

**Traditionally Controller Specific Modules have three parts, wired together** : control-Module, Relay Module and Passive Modules. **econix provides an innovative solution by customizing a single module**, comprising of all these three parts without need for any interconnecting wiring. This eliminates wiring errors, reduces complexity, improves aesthetics and reduces cost.

## econix COMBICON TYPE PCB CONNECTORS



**econix offers a variety of plug in type PCB-connectors** allowing unplugging of PCB from control and signal wires. UL-approved, confirming to IEC, VDE specifications, they are available in 3.5/5/5.08 mm pitch with **2 to 24 no. of pins**.



**elmex** and **econix** presented several innovative solutions for all types of industries including Automation and Controls.

The presentation was a great success generating considerable interest in **elmex** and **econix** innovations.





**TECEX 2005**  
 2<sup>nd</sup> International Seminar on Ex Equipments & Related Aspects  
 Concurrent Exhibition of Ex Equipments & Related Services

**VENUE : VADODARA**  
**DATE : 19th & 20th DECEMBER 2005**

Meet us at **TECEX** Stall No A-3 where we are presenting various **ATEX-approved Terminal blocks**, and a paper covering requirements of **ATEX approval** for products to be used in certain type of hazardous areas.



**elmex Terminal blocks exceed the ATEX requirement of safety criteria** for clearances and creepage distances, temperature rise and dielectric strength.

# FAQ

## Frequently Asked Questions

**Q : Can you supply controller - dedicated modules?**

**A :** Yes, **Econix Hi-Tech Components Pvt. Ltd.**, have developed modules for specific controllers like Fanuc Oi Controller, Siemens Sinumerik and Powermate O Controllers. We have been providing all configuration like 24 I/P and 8 or 16 Output, with and without fuse. We have also developed modules for Telemecanique Twido Controllers. We are coming up with controller dedicated module series for Omron PLCs. **Moreover we can develop modules from ladder diagram for CNC machines to go with client requirements.**

**Q : Why do your modules always have stackable base?**

**A :** The stackable design offers free hand in customer - specific product development. Our stackable modules are injection moulded, using plastic material, which is free of Halogen/various Polycarbonates, and therefore complies with RoHS requirements.

**Q : Do you supply Modules in colours other than Orange?**

**A :** Yes, we can supply Modules in **Green, Grey and Black** colours besides the Orange colour. All these pigments also comply with RoHS requirements.

## OUR PRODUCT RANGE

**≡ Insulation Housings in Melamine, Polyamide (Nylon) 6.6, FRPP ≡ Conductor Clamping with Screw Clamps (MS & Brass), Spring Clamps, Bolted Connection, Anti-Vibration Spring-loaded Clamps ≡ Mounting on Standard DIN-rails TS 35, TS 32 and TS 15**

<b>Feed-through Terminals</b> 	<b>Power Terminals</b> 	<b>Distribution Blocks</b> 	<b>Earth Terminals</b> 	<b>Micro Terminals</b> 
<b>Double Deck Terminals</b> 	<b>Triple Deck Terminals</b> 	<b>Disconnecting Type Terminals</b> 	<b>Fuse Disconnection Terminal</b> 	<b>Lighting Pole Terminals</b> 
<b>PCB Connectors</b> 	<b>Special Application Terminals</b> 	<b>Component Housing</b> 	<b>Twin Terminals</b> 	<b>Plug &amp; Socket type Terminals</b> 
<b>Passive Interface Modules</b> 	<b>Relay Boards</b> 	<b>Special Application Modules</b> 	<b>Switching Mode Power Supplies (SMPS)</b> 	<b>Custom-made Special Application Switches</b> 

We welcome your suggestions and queries regarding our products and feedback about **CROSS CURRENTS**. Write to us at [ask@elmex.net](mailto:ask@elmex.net)



**Elmex Controls Pvt. Ltd.**  
**Econix Hi-Tech Components Pvt. Ltd.**

12 GIDC Estate, Makarpura Road, Vadodara 390 010, India  
 Telephones : +91-265-2642021, 2642023 ♦ Facsimile : +91-265-2638646  
 e-mail : [marketing@elmex.net](mailto:marketing@elmex.net) ♦ URL : [www.elmex.net](http://www.elmex.net)

TECHNICAL SPECIFICATIONS MAY CHANGE IN LINE WITH TECHNICAL ADVANCES AND INDUSTRY STANDARDS.