

Teledyne Relays Newsletter

October 2005



Teledyne Relays, a Unit of Teledyne Electronics and Communications, has been the world's innovative leader in manufacturing ultraminiature, hermetically sealed, electro-mechanical and solid-state switching products for more than 40 years. The company's comprehensive product line meets a wide range of requirements for industrial, commercial, military and aerospace applications.



Teledyne Relays' small package C3P Series of industrial solid state relays (SSRs) has the performance capability to replace 3 phase mechanical power relays or large 3 pole hockey pucks.

With a footprint of 8.3 x 81.3 mm it occupies very little space on a printed circuit board (PCB) and its height measures 27.7 mm.

The C3P Series' compact size, combined with its low EMI and excellent thermal management characteristics has made this component an excellent fit switching 3 phase loads in Mil/Aviation, Medical, Traffic or other high end industrial applications.

This part has also proven to be highly effective replacing mechanical relays, where high switching sequences or high inrush currents have limited lifetime of the used switching devices, e.g. in heating or lighting scenarios or where inductive surges require overrated mechanical contact size.

The space effectiveness of this solid state relay and its PCB orientation allows the integration of the load switching functionality close to the control circuit on the PCB, or integrated within the switched load. The C3P can be easily positioned within the case of an electric motor saving space and cost of cabling and control cabinets used for multi-pole contactors or chassis mount, screw terminal solid state relays.

The C3P handles loads up to 25A RMS per phase at voltages up to 280VAC and can withstand inrush events up to 250Amps. The SSR has control ranges of either 3.5 to 10VDC or 9 to 30VDC and a very tight zero cross window of 12V minimises noise creation on the power lines.

If you like to have more information please contact your local Teledyne representative at www.teledynereleys.com/salesreps.asp or download a data sheet www.teledynereleys.com/industrial/c3p.asp

New Standardized Hi-Rel Coaxial Switch Acceptance Test Procedure (ATP)

Continuing our efforts to be responsive to our Hi-Rel customers' demanding requirements, while maintaining our program of standardization, Teledyne Relays is pleased to announce the development of a comprehensive Acceptance Test Procedure (ATP) for High Reliability coaxial switches due 4Q 2005. Drawing from our 40 years of experience in providing Hi-Rel switches to our European,

Asian and North American customers we will be able to offer a single ATP which will allow our customers the ability to customise the test and inspection process to meet their program requirements, while eliminating the need to generate a Source Control Drawing.

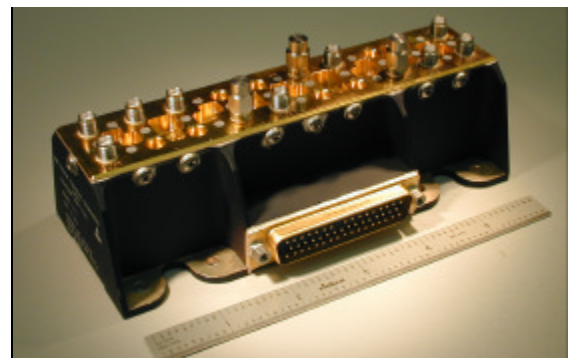
Teledyne Relays' is fully equipped to manufacture and perform the various test and inspection associated with Hi-Rel switch applications. This equipment includes:

- Class 100 Laminar flow work stations
- RF test equipment, including Network Analyzers and ultra – wide band sweep test sets covering frequencies from 10 MHz to 40 GHz
- Computer controlled sine and random vibration tables
- Thermal Vacuum chambers
- High power and multipaction RF Test Stations
- Mechanical shock equipment

With this equipment we will be able to include the following tests as part of the ATP:

- Thermal shock
- High power testing
- Thermal vacuum testing
- Multipaction test
- Corona test
- Hot switching
- Mechanical shock test

The standard Hi-Rel ATP will be suitable for use with any of the Coaxial Switches advertised in our Data Book. We plan to have the Hi-Rel Coaxial Switch ATP available for review by the end of September 2005.



If you would like to receive a copy please contact your local Teledyne representative at www.teledynereleys.com/salesreps.asp

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New Product Catalog

The continuing introduction of so many new products across the entire range of Teledyne Relays switching solutions has meant developing effective ways of making this important information easily available to all our customers and potential customers. The Teledyne Relays web site is your passport to the most up to date information.

latest information on all our products. A more difficult task is to keep hard copy data books up to date, and so with this in mind, Teledyne Relays have introduced the New Products Catalog (NPC) which is featured in press releases, mail shots and, of course, on our web site at www.teledynereleays.com.

Using a printed brochure to keep our data up to date may seem an old fashioned way of getting information to our customers, but there is no slowing of demand for our data books, so we have decided, in between updates of our full data books, to issue an NPC when we have new product, data updates and application notes which we believe will be of value and interest to our customers

The current edition includes feature products from the Coaxial Switch range with the inclusion of the 6 pole 26.5GHz CCR-58, Smith Charts for the CCR-33 18GHz switch and the RF522 10GHz relay, and a microwave switch selection guide. New product from the Industrial Solid State range includes the brand new HIPak Series data and a selection guide, with revised data for the 30 amp & 100 amp DC solid state relays.

Last, but by no means least, is the revised data for five miniature plastic relays from the Military Solid State Range, including the dual switch LPD70 and the 6 pin DIP packaged ZD Series with short circuit protection, status options & COTS screening.

Teledyne Relays and Richardson Electronics have entered into a **Global Distribution Agreement** for Richardson to sell Teledyne Relays products from National and Regional Offices around the world. The sales effort is supported by an in depth stock profile held at the Richardson central stocking location in La Fox, USA.

The agreement has brought together the ever broadening range of switching solutions, applications experience and technical knowledge from Teledyne Relays and Richardson. This unique blend of engineering skills and in-depth knowledge of markets provides key customer support second to none.

Concentrating mainly on RF, Microwave & Wireless applications, Richardson provide a primary contact point with customers, offering design support and commercial expertise, both essential elements in the effective marketing of technology based products to fast growing market sectors.

To access your local Richardson office, please go to our web site at www.teledynereleays.com, and follow the distribution links, where you will find all the location and contact information you will need to take advantage of the partnership of Teledyne Relays and Richardson Electronics.



Teledyne Launches New Online Product Search Engines offering a broad selection for electro-mechanical and solid state switching solutions. The search engines allow engineers to reduce the time taken to locate a product suitable for their needs, while ensuring all available

solutions are offered from existing and new parts.

Teledyne has launched two online product search engines, one for electro-mechanical and one for solid state products with ease of use in mind. The search process is short, simple and effective.

To use the search engines, visit our home page www.teledynereleays.com. The first selection is to choose electro-mechanical (EMR) or solid state (SSR) technology. Following the initial technology selection, the users will select the parameters they require. The search engine provides a count on the number of products that match the selected requirements. Engineers who know exactly what they're looking for, may opt to select all the search parameters available resulting in minimum number of possible solutions. Engineers, who are a little uncertain about what they need, may opt to view more results at anytime and browse through all their options.

The online search engine database covering solid state relays covers our full SSR offerings from hermetically sealed military SSRs to plastic industrial hockey puck SSRs. This allows the engineer to view COTs and military solutions for the same application. The mechanical search engine database covers our hermetically sealed military TO-5 relays, up to our connectorised microwave coaxial switches.



For the last 3 years, at least 4 business units exhibited at the European Microwave Show under the umbrella of **Teledyne**

Technologies Incorporated. After 5 acquisitions in 2004, Teledyne Technologies Incorporated acquired another competent leader in the RF and microwave market. **Teledyne Cougar**, Sunnyvale, California, manufactures catalog and custom RF and microwave components and subassemblies for aerospace, defense and commercial applications.

Press News:

Since 2003, Teledyne Relays released over 25 new products and continues to introduce new items in 2005. Through the circulation of press releases to magazines servicing the electronics industry, Teledyne Relays has provided customers with valuable information ranging from new products to solutions for specific applications. Here is a brief selection of our recently circulated press releases:

- Application Notes for 10 GHz RF522 Relay
- Multi-Pole CCR-39 Broadband Coaxial Switch
- Two Mil-Aero Relays Enter 15th Year of Continuous Testing without a Single Failure

For more information and additional press news visit our website www.teledynereleays.com/newsrelease.asp

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What are your wishes in terms of product improvement for the future? Teledyne Relays would like to learn more about your design challenges and applications.

Please advise via fax to **(323)241-1287**, or via e-mail to relays@teledyne.com or simply fill out a request form on our website www.teledynere relays.com/requestinfo.asp

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