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First electrotechnical cinema on the web! page 7

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SOS solutions **catalogue**

THE BROADLINE DISTRIBUTOR
OF ELECTRONIC COMPONENTS

2012
2013

New design

/ Content

Dear friends,

what real predictive value forecasts have? Last year demonstrated us that it is like with the snow. Once it is there, once it is not there, although winter lasts from December to February. It had to be year of growth, according to prediction of economists. And suddenly there came the first disaster in Fukushima and its connected supply fluctuations, then the Arabian spring and recaution, strengthening of dollar, on which electronic components depend and not least the Greece and the debt crisis with the daily alert from bankers and politicians that economics is going to fall and that good times have passed.

Based on this facts this year seems to be more "exciting" for all of us. The uncertainties and various interpretations of the debt crisis, often with a hint of speculation, produce very different views of economists, analysts, different associations. Making forecasts, plans in this situation is very complicated. Fortunately, we have good news. Your orders in Czech Republic, Slovakia, Hungary and in Germany are continuously growing. Book to bill ratio is still above the value 1.This situation in our industry is confirmed by a number of manufacturers and distributors with whom we communicate across Europe. So keep smiling and let´s be optimists!

What do we prepare for you in SOS electronic for this year? We started immediately after the inventory with optimization of minimal order according to packing quantities. For you it will mean faster preparation of your order, and faster delivery. At the same time we are working on the next catalogue, but it will be radically different from previous one of «Quelle» type. The new SOS solution catalogue will be clearer and will be directed in line with our strategy to offer solutions for you. We are convinced that today, at the time of acceleration of the development cycle and shortening the life cycle of products, you – developers and manufactures, need to respond quickly. And of course, we will involve a lot of news, especially from the ready-made modules. In March we met at Amper exhibition in Brno, but at the same time you could meet with us in Warsaw on Automaticon. We are upgrading our web site with e-shop and it will include a new function that simplify your life and our work together. We will add a lot of information and images, datasheets to prefered about 40 brands. Our goal is to increase and to complete the stock and add another modern technology. We are dealing with several new producers on their representation in our markets. This year we are planning for your personal visit with representatives of the world´s leading manufacturers and our product managers.

Now you are holding the first issue of SOS news of the year 2012. During the year we are planning more issues. For those who want to protect the environment, of course we will continue with an electronic newsletter. You can get samples of new components and development tools among the first. We are also preparing a small games, gifts, because the life we have to diversify, we cannot always act so seriously: =).

On behalf of my 72 colleagues who currently work in our company in five European countries, we wish you a successful year "regardless from economists prognosis'. And also a lot of ideas during reading SOS news. If you have any idea, feel free to ask for samples …

Ing. Jan Sesztak
CEO of SOS electronic europe Group

P.S: We grew up with you based on your needs and suggestions. Write to us what would you pleased with and what we have to improve this year.

Alpha
Read your SOS news with phone!
This SOS news issue can be read through technological innovations - via QR codes.
Each article contains a picture in which is encrypted web site address to this article.

SOS electronic – it´s not just components

In our previous issue of SOS news, we introduced you our colleagues with whom you day by day in touch whether by phone, in person or electronically - our sales department. In this article we want to introduce departments which are an integral and inseparable part of SOS electronic, and provide for you everything from "A" as the purchase to the "Z" as a storage and shipping...

What all can the marketing department does over 20 years?

Marketing certainly belongs among the most dynamically developing areas. Therefore, although the marketing department is one of the youngest department in our company, it has gone through biggest changes. Although the initial marketing efforts as paid advertisements herein are from the establishment of company, the departments was set up in 1997, when first marketing employer was recruited to marketing. So this year can be consider as the turning point for marketing activities. Before we distributed to you, our customers, cataloques of distributors, after esteablishment of marketing department we have prepared our own first printed catalog. In the same year we were among the first decades of Slovak companies that have registered national domain ".sk" and launched our website www.sos.sk. We began to implement targeted marketing campaigns under a defined marketing plan, introduce elements of direct marketing and addressed the active and targeted prospects, we continued with well proven activities such as participation at trade fairs or advertisements, we have significantly improved.

Gradually, as the number of our customers increased, we began to realize that some customer groups have relatively different needs. So, we have successfully applied the principles of segmentation, that means the segmentation of customers into groups for which we have implemented different marketing activities.

We would say that we are among the first ones who implement to our strategy the elements of online marketing, on web launch our interactive online store, establish a regular electronic newsletter.

At the beginning of the new millennium, we realized that not only products that we offer is very important, but also the image of SOS electronic brand itself. Therefore, we started working on corporate identity, image of our brand. The current design of our marketing materials and logo are defined by design manual from the year 2007.

Another important milestone in the recognition of our company and SOS electronic brand was undoubtedly our exhibitors premiere at the prestigious and the largest electronic exhibition in Europe - Electronica 2006 in Munich. It is this participation and the establishment of electronic trading group SOS in 2007 in Košice, we finally confirmed our transformation from a local distributor to a wholesaler on a European scale.

With the growing range of marketing activities have grown also the need for increased staffing. Today, marketing department consist of 10 permanent employees and several part-time employees. Besides marketers are part of the department product managers, who are responsible for strategic perspective of our product asortment and main responsibility is provide you with advice and necessary technical support. During last year 2011 we streamlined and automated processes that have the same number of people able to bring you more product articles of high quality, more meetings at exhibitions, seminars and roadshows, the new "different" printed catalogue, better web, simply to be closer to you.

We always tried, and we will try to be within our sphere of influence marketing leaders in the industry. Because only one who thinks along the lines to be close to the customers, understand them and meet their needs, can be successful on the market. And we add originality and experience for you also :)

Finally we would like to thank all of you, our customer. Without your feedback, we would not be able to increase, to improve, we would not be able to be closer to you!

Purchasing department – where everything begins

The one of the department in the SOS electronic is purchasing department, which also grew over the years. Initially, at the beginning there were 4 people. They made offers, orders, revenue and customs.
Number of orders and applications grow, along with new countries where they are purchased. We started with a new brands of goods, new producers.

Meanwhile, people at the department exchanged. Changed and streamlined the business practices, some are automated, we introduced new software, we centralized Hungarian and Czech stock. All this automatically lead to the need to expand capacity at existing department of 7 people who deal with almost the whole world.

We care about the stock for all branches. We solve their price offers and potential problems and needs.

Economic and HR Department

In the beginning of the company the accounting was outsourced. But time has brought the need of the economics department at the company directly. The accounting software has changed and process got more modern and effective. With the growth of the company grew, the number of invoices, vouchers and entries in the journal, nowadays they handle over thousands of them.

The role of girls is not only flawless accounting, but also controlling, taxes, payroll and human resources, communication with banks, insurance companies and tax authorities in Slovakia and even in Europe, recovery, monitoring and management of the building but also many other activities …

Everything goes trough their hands

Expedition itself has undergone during its twenty years history trough a major change. Each branch had its own storage space, we have decided to unite and build a central warehouse, which is in Košice.

In Slovakia, we have started with two people who were in charge of everything from A to Z. We picked up goods from suppliers once per week and its weight was in kilograms. Fully loaded truck with the delivery of goods was just a beautiful dream, which is now an absolute reality. Today we get the goods by transport companies several times daily and monthly passes through our hands several tons of goods.
Regarding this, it was necessary to expand storage facilities, which are now 15 times greater than at the beginning, we employed new colleagues and currently there are 13 people, who take care about the reliable delivery of your order. Number of packages to leave the gates of SOS electronic warehouse increased by more than 400% with comparision to the past.
We have significantly streamlined the system of work. Stock is clearly organized by sector, to designate the goods descriptions we use stickers with the names and number instead of the original markers and hand description. We are also equipped by semi cart, which facilitates the preparation of our goods to customers. For better and safer packaging strapping machine ht. Our employees are systematically trained to make sure our customers is provided by the highest quality in every respect.

IT Department

At the beginning the company started with the information system consisting of one server and 5 computers. The IT department was one person whose responsibility was cumulated with other business responsibility. Economic system supplied by our mother company was German, so in our vocabulary were very quickly established terms as Rechnung, Besstellung, articel nummer and so. Although it was successfully overcome the pitfalls of 2000, gradually did not meet our requirements for a dynamic growth company. As a successor was chosen EIS K2, whose biggest strength is that it can keep up with thoughts and ideas of our employees who are very actively involved in refining and improving to provide you our highest quality services. Currently, we have 2 IT guys, who take care of an information system consisting of 7 servers, 70 computers and more than hundreds of other facilities located in five countries. Our goal is to take to the technology as much activities as possible so our employees have space for insertion of the human dimension to our business.

Welcome to the world of electronic components solutions!

In September 2012 we issue 10th edition of our catalog. Maybe it's symbolic, but this release just want to confirm our strategy to shift from product to solutions.

In today's electronic age are the most current information of the highest quality online, not on paper. Therefore, the purpose of this catalog is not as yet to introduce you to all the stock components, but rather to outline solutions for the delivery of your electronic applications manufacturing. Specific components then can be found on our web site by using QR codes and keywords for web search.

This catalog should further underline the fact that in reality we are able to help you with our solutions to design your applications. We believe that it will be an important tool of all hardware developers.

So in September we will begin distributing the first copies directly to you. However, the first electronic catalog views could be seen back in March at Amper exhibition in Brno.

2011 - so we were...

This year was dedicated to our 20th anniversary. By all of our activities, we tried to get closer to you and your needs. We brought you the combination of tradition and novelties.

At the beginning of the year, we threw our marketing strength in traditional exhibitions. The first exhibit stop we had a in the Czech Republic in Brno, where after long years moved Amper exhibition. Immediately after the Brno we loaded suitcases and cars hit the road to Poland, where it directly in Warsaw held another of our traditional exhibitions Automaticon.

Even after end of the Automaticon we did not stop in meetings with you and we continued on. This time we decided to open our doors wide open and show you our company from the inside. The motto "better to see once than to hear 100 times" we prepare Open Days for our Hungarian customers and in humorous and entertaining way showed the backstage of our kitchen.

Our journey to our customers continued in June, when we bring you further news - the great international Roadshow, held in Bratislava, Brno, Budapest and Kosice. The aim of this event was to provide all the information to you personally and first hand directly from our suppliers, all with the comfort, fun and informal atmosphere of the film world.

The Final of International SOS electronic exhibition season 2011 was traditionally held in Slovakia in Trencin at exhibition Elosys. We are very pleased that despite the hectic period you have in your busy schedule found time for a personal meeting with us on this show. Thanks to you our meetings were marked by a pleasant and open atmosphere, which was also enhanced by your performance in professional SOS golf tournament. Tiger Woods should reflect the strength of competition, that it grows in your ranks: o).

But this year was not just about personal meeting, but also about a unique gift that we have kept getting ready for you during the year. Among the gifts that you might find this year were more often issued and better product articles, we began to send you through our improved newsletter system according to your requirements and frequency content. There was also gifts for monthly special offers. We have expanded our loyalty program to the customers from the Czech Republic, Hungary and Poland, where, also together with Slovak customers could choose from a wide range of gifts as a reward for purchases. As an absolute news we launched online SOS cinema. Through video we bring you information about our products, their advantages and efficiency of use, but also about what is happening in our company. All of this quickly and conveniently. We hope that all our activities are for you and your business benefit, because your satisfaction is most important for us.

In 2011 we wanted to be closer to you. We believe we succeeded. Your positive replies reflect to it and this is obligation for us. That's why we want to be in 2012 even more closer to you!

Event calendar for 2012

Amper fair in Brno, Czech Republic – 20.-23.3.2012

Automaticon fair in Warsaw, Poland Poľsko – 20.-23.3.2012

International Roadshow – June 2012

Elosys fair in Trenčín, Slovak Republic – 9.-12.10.2012

Electronica Fair in Munich, Germany – 13.-.16.11.2012

AMPER 2012

AUTOMATICON WARSZAWA АВТОМАТИКА ПОМИАРЫ ЕЛЕКТРОНИКА

ELO SOS

electronica 2012 inside tomorrow

GET SAMPLES FOR YOUR PROJECTS

Design new industrial hardware applications and we help you with samples of components for test series.

We at SOS electronic realize that the design of new high-quality applications as efficiently as possible with no real testing of components is almost impossible. That's why we offer the possibility to obtain samples parts supplied by us free.

How you can get it?

Send us more specific information about your project to marketing@soselectronic.com and we choose the most interesting one, in which we will be glad to help in selection and testing of components!

SOS cinema
welcome to the first electrotechnic webcinema

You do not have time to read the text of articles or you simply do not want to? Would you prefer demonstrations? Then our new web project SOS cinema is made just for you!

These days we've launched our online SOS Cinema. Through videos, we'd like to get closer and through realistic video demonstrations to bring information about our products but also about what is happening in our company.

Here you can also save time when instead of reading a long article we illustrate a fundamental benefits of the product and advise how to effectively use a particular component in short videos.

Currently, you can already see the first video. Next one will be prepared continuously. So feel free to sit back, because it is better to see once than to read a hundred times :)

http://www.soselectronic.com/cinema

# Hammond enclosures will attract more attention

Regular octagon and a trapezoid are two new shapes of aluminium enclosures from Hammond. Serie 1590 offers a way how to increase attractivity and originality of your products.

Enclosures Hammond 1590 TRP a 1590 STPC from aluminium alloy offer unusual shapes. With their trapezoidal and octagonal shape they stand out of the line of usual rectangular enclosures. Trapezoidal 1590TRP series is produced in 2 versions – with the base on the shorter side (TRPB) and on the longer side (TRPC).

Enclosures are available without surface treatment (natural finish) or also painted with a smooth gloss polyester powder paint, in six colours – black, cobalt blue (RAL 5013), green (RAL 6024), light-grey (RAL 7035), orange (RAL 2009) and red (RAL 3011). Joints between both parts of enclosures are of a lap construction, what increases resistance against access of dust and a splash water – IP54. At the same time this solution improves shielding properties and decreases radiation of electron-

ics placed into the enclosure (EMI/ RFI). Aluminium material makes enclosures sufficiently tough, yet easy to machine (drilling, milling,…). Machining is usable even at painted versions.
Hammond 1590 STPC and TRP offer an elegant way how to give your devices an anusual shape. In some cases enclosures offer a possibility to better use the inner space or to place connectors, switches etc. more conveniently. STPC and TRP enclosures are suitable for portable devices but also for peripheries with control elements, displays etc..
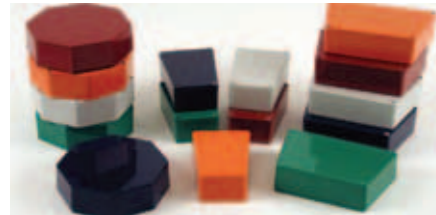
Advantages / features:

1. unusual trapezoidal and octagonal shape
2. robust aluminium concept
3. ingress protection IP54
4. joint lap construction – improved EMI properties
5. version without coating as well as in 6 colours
6. resistant polyester powder paint
7. easy PCB mounting thanks to a low side wall draft angle
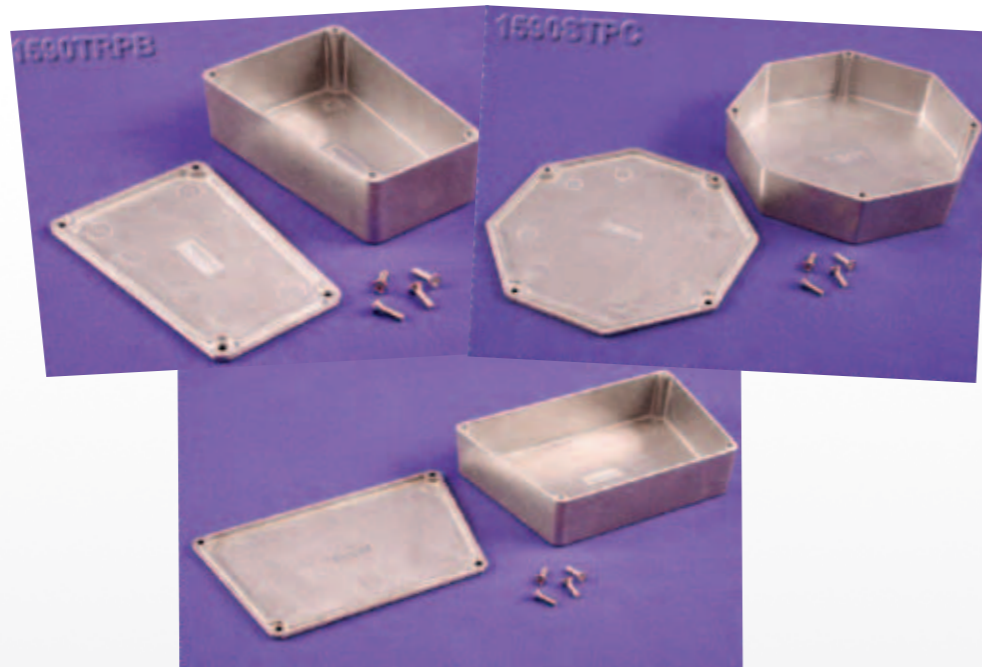
Order no.	Type	Description	Guide price
113836	1590TRPB	Diecast AL enclosure 112x61,5x79mm natural IP54	5,24 €
113840	1590TRPBRD	Diecast AL enclosure 112x61,5x79mm red IP54	6,82 €
113850	1590STPC	Diecast AL enclosure 132,8x132,8x35,2mm natural IP54	6,53 €

The article with more information can be found at our website. Decode the link by QR code.

Friwo PP12 – when 9 Watts is not enough

Friwo power supplies PP12 series extend the PP series family about a variant with a higher maximum power – 12 Watts.

Premium adapters Friwo meet stringent demands for safety, efficiency, EMC and a low power consumption in a standby mode. PP series represents small switch-mode power supplies – adapters, usable practically with any device with an appropriate power consumption. So far, versions with maximum power 3, 6 and 9 Watts were available. Novelty are the PP12 types, which further extend possibilities of usage of these adapters even for devices with a higher power consumption. Beside a usage for a full rated power they can be convenient also for creation of a power reserve for a possible future functionality extension of your device thus probably

increasing of power consumption. Friwo power supplies are designed for a continuous full load current and they feature a continuous shortcut protection acting at about 20% overcurrent.

New PP12 types are available in 3 versions – with the 5.5/2.5 mm, 5.5/2.1 mm output DC connector and without an output connector, allowing to use various separately available secondary connectors (adaptors). Secondary connectors have a safety lock preventing an accidental disconnection.

Advantages / Features:

1. wide input voltage range 100-240V/50-60Hz
2. standby consumption below 0.3W (EuP 2)
3. efficiency over 78%
4. constant voltage, current limited
5. continuous shortcut protection
6. 5.5/2.5mm, 5.5/2.1mm output connector or exchangeable adapters
7. ambient temperature -5 to +45°C

Order no.	Type	Description	Guide price
81521	PP12/12V/EU21	SMPS PlugIn 12V/1000mA Euro, Fix Output 5,5/2,1/11,5+	4,31 €
81524	PP12/12V/EU25	SMPS PlugIn 12V/1000mA Euro, Fix Output 5,5/2,5/11,5+	4,31 €
81530	PP12/12V/EU	SMPS PlugIn 12V/1000mA Euro	4,31 €

The article with more information can be found at our website. Decode the link by QR code.

Complete miniature GSM/GPRS platform – M80

QUECTEL

Company Quectel launches on the market a miniature quad-band GSM/GPRS module featuring reach functionality and extremely low power consumption.

M80 has all features, which we usually require from a modern GSM/GPRS module: GSM/GPRS performance for data, voice, sms and multimedia, powerful Internet service protocols, multiple Sockets & IP addresses. M80 provides a high performance at a very low power consumption and an extended specified temperature range from -35 to +80 °C (with restrictions -45 to +85°C). With the extremely low power consumption and only 2,6mm high LGA package it is suitable even for miniature mobile devices.

Advantages / Features:

1. high performance quad-band GSM/GPRS module

2. abundant functional interfaces (SD card, 0.3 MPx camera, USB)

3. powerful internet services protocols (TCP/IP, UDP, FTP, PPP)

4. DUAL SIM function (both SIM cards can be logged-in at the same time)

5. OpenCPU support (option)

6. extended temperature range -35 to 80 °C

7. low power consumption (1,1 mA in a sleep mode, DRX=5)

8. dimensions only 23x25x2,6mm

9. inovative LGA package
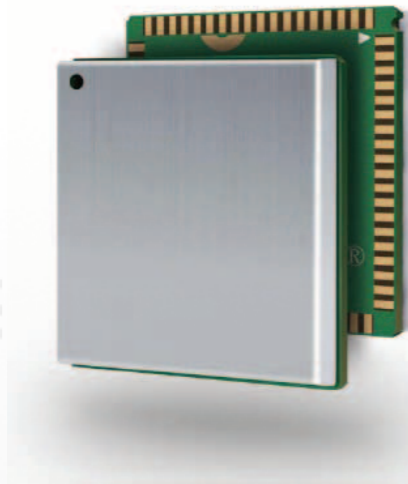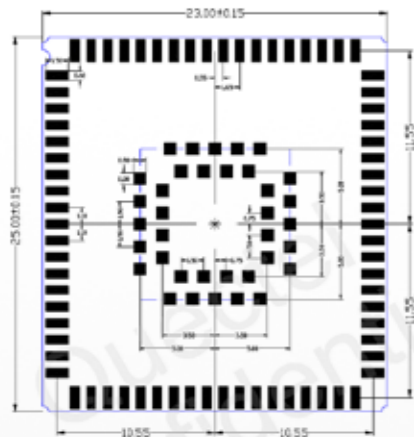
Order no.	Type	Description	Guide price
113579	M80	Quad-band GSM/GPRS SMD module, Dual	12,80 €
115207	M80EVB DGT	EVB KIT for M80 Quad-band GSM/GPRS	Available in July 2012

The article with more information can be found at our website. Decode the link by QR code.

Surprisingly small and powerful LED OSRAM OSLON SSL

OSRAM
Opto Semiconductors

OSRAM as one of leaders in LED development, brings many innovative products, among which also OSLON SSL belongs.
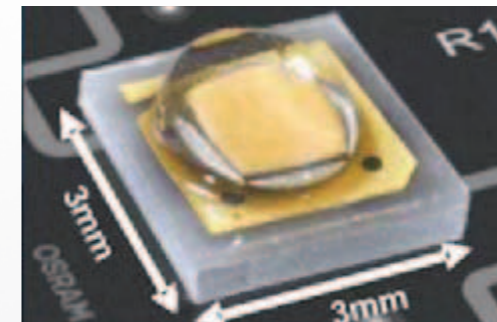**It offers a top level of light output/ dimensions ratio, thus enabling to design high power LED arrays.**

OSLON SSL series features compact dimensions, maximum power approx. 2W and a sophisticated lens which creates symetrical radiation pattern of 80° or 150° width. Version with 80° radiation angle is suitable for direct lighting or for use with colimator and a version with 150° radiation angle is suitable for direct lighting or for reflectors designs, where it provides better efficiencym than other LED with 120° radiation angle.

OSLON SSL is produced in various versions, with a focus on color fidelity - CRI (color rendition index) or on a light output power. Ceramic SMT package contributes to great thermal characteristics and simple cooling via PCB. PCB design is further simplified thanks to electrically insulated thermal pad.
With miniature dimensions only 3x3mm and a maximum current up to 800 mA it offers very high optical output on a small area. When you will have this LED in hands, you will be probably surprised by really miniature dimensions of this LED, with respect to its 2W power. For a high reliability LED contains also a protection ESD diode.

Advantages/ Features of OSLON SSL family:

1. high ratio of light output/ dimensions

2. maximum continuous current up to 800 mA

3. SMT ceramic package 3x3mm

4. temperature range -40 to 110°C

5. RthJS only 7K/W, insulated thermal pad

6. homogenous symetrical radiation pattern 80° or 150°

7. various versions according to CRI (color rendition index) and light output

8. low-profile lens, no internal shading effects even in tight clusters

9. contains protection ESD diode

10. lifetime more than 50 000 hours

Properties of the offered type:

1. radiation angle 150° at 50% lv
2. colour temperature 4500K
3. CRI (color rendition index) 82
4. light output 89,2-112,0 lm/350 mA

Novelty in our offer is LED OSLON SSL 150, type LCW CQDP.EC-KSKU-5J7K-1 with a colour temperature 4500K, so a neutral white. This subgroup – EC offers a balanced ratio between a high colour rendition index (CRI 82) and a high light output approximately 100lm/350 mA. It has a 150° wide homogenous radiation pattern, while thanks to a low profile of the silicone lens, no internal shading effects occur even in tight clusters .

We offer you LED LCWCQDP.PC-KULQ-5J7K-1 from our stock. Order number is 109644 and guide price is 2,80 EUR without VAT.

The article with more information can be found at our website. Decode the link by QR code. The article contains also related video.

Focus at the main subject – application itself and the 4D ViSi will take care about its look

Programming of a graphic interface perhaps cannot be any simpler. Company 4D Systems brings to developers a new powerful graphic editor, which further shifts borders of simplicity and speed at a creation of a graphic output.

4D ViSi tool enables to very easily and intuitively arrange graphic control and displaying elements into the layout which we wish to achieve on the 4D Systems display modules. As a result, this way you will create the graphic interface very quickly and you can fully focus on the main – the application itself. In other words – you can put your effort to what the application "has to do" and not "how it should look".

4D ViSi tool is a part of the 4D Workshop3 IDE – Alpha program, which is free to download. 4D ViSi is a powerful SW tool, which

enables an immediate overview of your desired graphic layout for 4D Systems display modules. 4D ViSi contains a set of various dials, gauges and meters, which can be simply dragged and dropped onto the desired place. Every item has wide possibilities of adjustment. Without necessity to always reload the source code to a display module, you have a possibility to see every change on a monitor of your computer and all relevant code is inserted into the program at one click. In the enclosed video you can gain a closer view of the work in this program.

The article with more information can be found at our website. Decode the link by QR code. The article contains also related video.

Don´t be limited by a memory space!

If you have a micro-controller based application and you face the problem with insufficient memory space, the micro-drive uSD-G1 may be an ideal solution for you.

The micro-DRIVE uSD-G1 is an extremely compact high performance "Embedded Disk Drive" module that can be easily added to anymicro-controller design that requires a DOS-compatible file and data storage system.
Most micro-controllers have small and limited on-chip memory. For those applications that require large volumes of data, the uSD-G1 with the GOLDELOX-DOS chip is a simple solution in a form of a tiny ,drop-in- module'. A simple serial interface is all that is required to take away the burden of low level design that would otherwise be required for the host controller. The micro-DRIVE module utilises common microSD memory cards of up to

2GB of capacity as its medium. A handful of straightforward commands provide direct access to the onboard memory card or storing and retrieving any size or type of data. Access to the card can be at (FAT based) file levels or at raw disk byte levels.
You can use the micro drive uSD-G1 in applications like data logging (GPS, medical, industrial, security), program storage, music files, image and video files or any type of general purpose data storage. So next time your host micro-controller application requires a file/data storage, the micro-DRIVE maybe the ideal solution. Detailed information will provide you the uSD-G1 datasheet.

Advantages / Features:

1. general purpose data storage device
2. simple serial interface
3. can be added to any design with a micro controller
4. DOS compatible file access (FAT16) as well as low level access to card memory
5. accomodates common microSD memory cards up to 2GB capacity
6. simple serial commands provide full access to the card
7. easy 5-pin interface
8. serial interface (TTL levels) with auto-baud feature from 300 to 256K baud rates
9. 2 onboard Status LEDs
10. 3.6V to 5.5V range operation
11. dimensions only 14.9 x 18.9 x 3.5mm

Order no.	Type	Description	Guide price
86949	KESDC 2GB	MicroSD card 2GB, Read-Write 8,8-6,5MB/sec+adapter	7,22 €
112457	uDRIVE-USD-G1	Tiny µSD card drive module	23,00 €
112458	uUSB-CE5	Slim USB to Serial UART Converter with FT232RQ	16,00 €
112515	4D PROGRAMMING CABLE	USB to Serial-TTL Programmer for 4D Modules	18,00 €

The article with more information can be found at our website. Decode the link by QR code.

You can read DIP122-5 displays even at the direct sunlight

New graphic displays EA DIP122-5 series with efficient LED backlight are optimized for good legibility even in demanding light conditions like for example at the direct sunlight.

Graphic displays EA DIP1222-5 with a 122x32 pixels resolution feature an excellent contrast and an efficient LED backlight offers great legibility even in a low ambient light environment. They are equipped with a temperature compensation for an increased working temperatures range from -20 to +70°C, without necessity of contrast adjustment. Displays also feature a „superfast

liquid technology", ensuring a sufficiently quick response time even at extremely low temperatures (average 2 sec at -20°C).

Three colour versions are available: yellow/green, amber and blue-white. Yellow-green and amber variant is particularly suitable for outdoor usage and extreme light conditions, while an effective LED backlight enables their usage even in a low ambient light environment. Blue-white veriant is optimized with respect to contrast and is ideally suitable for indoor usage with or without artificial light and when low energy consumption is vital.

Displays contain 2 built-in controllers (PT6250 compatible), while every controller is assigned to 61 col-

umns. For external communication an 8-bit interface is used. An external series resistor or constant current source is all that is needed for the LED background illumination. The displays are easily soldered to the printed circuit board or socket connectors can be used if desired. New graphic displays offer for a customer also a high flexibility in a possibility to use a graphic or a character display module for various versions of a given device. As a character display modules types EA DIP081-CHNLED (1x8), EA DIP162-DHNLED (2x16) a EA DIP204-4HNLED (4x20) with the same casing and pinout can be used.

Advantages / Features:

1. 122x32 pixels graphic module
2. excellent legibility even in demanding light conditions
3. efficient LED background illumination
4. 3 colour variants
5. simple assembly to PCB bo soldering pins – no screws required
6. built-in temperature compensation
7. -20 to +70°C temperature range
8. character displays with the same pinout also available

The article with more information can be found at our website. Decode the link by QR code.

Order no.	Type	Description	Sort	Guide price
9503	EA DIP122-5NLED	LCD122x32 DIP module ,yellow/green, LED backlight	O	16,90 €
49292	EA DIP122B-5NLW	LCD122x32 DIP module,blue-white,LED,-20~+70°C	O	19,10 €
49375	EA DIP122-5HNLED	LCD122x32 DIP module,yellow/green,LED,-20~+70°C	O	17,40 €
64167	EA DIP122J-5NLA	LCD122x32 DIP module,amber,LED,-20~+70°C	O	21,60 €

*O= on request (delivery time approx. 1-2 weeks)

Display eDIPTFT32 from Electronic Assembly understands your commands

New intelligent display eDIPTFT32 from Electronic Assembly will display all what you will command it. It is like a good servant, understands commands, doesn't need details, switches on immediately, isn't power demanding and understands up to three languages. New display eliminates a need of demanding and time-consuming programming at pixels level.

Display eDIPTFT32 represents a world novelty in its class. High quality TFT display with brightness of 500-700 cd/m2, with 320x240 dots and a LED backlight, is, thanks to a built in intelligent driver, able to display text, graphics, various bar graphs and many other only by means of commands. That is way, where is no need for demanding and time-consuming programming at pixels level, thus substantially simplifying and accelerating development of graphic interface for a new device. Display is delivered with many predefined functions – 8 fonts scalable as required, contains graphic sym-

bols and geometric functions, bar graphs, frames and many other. Thanks to inner 4MB memory, it is possible to add many other symbols and fonts, pictures, animations and macros. It is also possible to easily visualize analog instruments. For this purpose, display contains 2 analog inputs with a 10 bit AD converter.
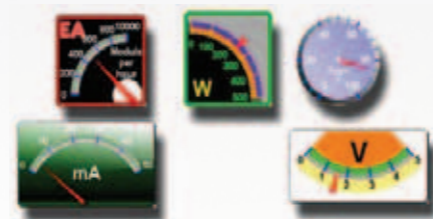
Display can be ordered with or without a resistive touch panel, controller is already built-in in the TFT module. Up to 40 buttons, switches, or bar graphs can be defined and changed by software. Thanks to 8 input and 8 output ports it is possible to connect external keyboard up to 8x8 matrix.

The module is mechanically designed for a maximum space usage and optimal viewing area. Assembly to PCB is very simple, by means of a pin header on the bottom side, without screws, distance pads or cables – only insert into PCB and solder in place.

Advantages / Features:

1. intelligent 3,2" TFT display module
2. 320x240 dots, 65536 colors
3. extremely simple implementation into a device
4. no PC or embedded system required
5. full function right after start
6. RS232, I2C and SPI interface
7. 4 MB RAM for user defined fonts, symbols, macros, pictures or animations

Order no.	Type	Description	Sort*	Guide price
69265	EA eDIPTFT43-ATP	LCM 480x2720 TFT, white LED B/L, TP	S	187 €
69266	EA START-eDIPTFT4	LCM TFT Evaluation Kit 4,3" 480x272	S	212 €
75116	EA eDIPTFT43-A	LCM 480x272 TFT, white LED B/L, RS232,I2C,SPI	O	192 €
100378	EA eDIPTFT32-A	LCM 320x240 TFT, white LED B/L, RS232,I2C,SPI	O	126 €
100379	EA eDIPTFT32-ATP	LCM 320x240 TFT, white LED B/L, RS232,I2C,SPI	S	141 €
100381	EA START-eDIPTFT3	LCM TFT Evaluation Kit 3,2" 320x240	O	190 €

*S = stock item, O= on request (delivery time approx. 2-3 weeks)

Industrial loudspeakers Visaton FR resist even to seawater!

From loudspeakers intended for industrial use, we naturally expect stable parameters even in more demanding conditions with variable temperature and humidity. FR series loudspeakers from German company Visaton meet stringent criteria, and in a WP version, they are resistant even to seawater.

Series FR contains loudspeakers for universal use in buildings, industry and vehicles. They are made of durable materials and all loudspeakers from this series are usable in a wide temperature range, type FR13 up to +100°C. Inspite of small dimensions, they have a relatively high efficiency , they feature balanced frequency characteristics. In the FR series we can find FR8, FR10, FR10HM and

FR13 types.

FRxx WP is a special variant, suitable for moisty environment and for outdoor use. With an enclosed magnet and silicone-coated leads, they are absolutely corrosion- resistant. Used materials enable their utilization also at very low temperatures down to -40°C. FRxxWP are available in a black or white version.

Advantages / Features:

1. universal loudspeakers for buildings, industry and vehicles
2. temperature range -25 to +70°C, resp. +100°C (FR13)
3. temperature range -40 to +80°C (FRxxWP)
4. resistant to seawater, IP65 (FRxxWP)

Order no.	Type	Description	Guide price
46332	FR 10 HM/4	Full-range speaker 20/30W 95-22000Hz D100H46	3,80 €
46323	FR 10 WP/4 WH	Full-range speaker 20/30W 80-16000Hz D132H41 IP65	11,60 €
59515	FR 13/4	Full-range loudspeaker 30/50W 65-20000Hz D115H43	8,50 €
46342	FR 8/8	Full-range speaker 10/15W 130-20000Hz D86H37	5,20 €

The article with more information can be found at our website. Decode the link by QR code.

USB interface in a cable – a high speed solution for many devices

USB solutions specialist Future Technology Devices International Limited (FTDI) has added two new cables to its USB to digital level serial interface portfolio. The new C232HM-DDHSL-0 and C232HM-EDHSL-0 USB 2.0 Hi-Speed to Digital Level cables - offer a fast, simple way to connect devices with 3.3 V logic level interfaces to USB.

Both cable interfaces are USB2.0 Hi Speed compatible (480Mb/s), based on the widely used FT232H USB to UART/FIFO interface chip from FTDI. Cables are 0.5m long and contain a compact PCB with all necessary components encapsulated into the USB connector. They offer the same convenient way to connect devices to USB like if you used the FT232H chip in the device, but moreover without a need to add any components into the existing device. For new designs, they offer a possibility to spare a space in the device, as a complete interface is in the USB connector. With these cables you can easily connect to USB port devices with industry standard protocols like I2C, SPI or JTAG or also MCU, PLD, FPGA based designs.

FT232H used in cables feature the Multi-Protocol Synchronous Serial Engine (MPSSE) – a hardware command processor, which makes communication with serial protocols (JTAG, SPI, I2C) more efficient, thus sparing USB bandwidth. The MPSSE also enables design engineers to implement their own proprietary synchronous serial bus protocols. The cables support data transfer rates of up to 30 Mb/s in MPSSE mode. Cables are available in 2 versions – C232HM-DDHSL-0 with a 3.3V/200mA and C232HM-EDHSL-0 with a 5V/200mA output power. Cables are terminated by ten individual wires which are single pole connectors that can be interfaced to a 0.1" pitch male header.

Cables can be easily configured into various interface options using freely available application software from FTDI website.

Advantages /Features:

1. complete USB interface in a cable
2. USB 2.0 Hi-speed (480 Mb/S) and Full speed compatible
3. rapid and easy connection of JTAG, SPI, I2C or MCU/PLD/FPGA based devices to USB
4. synchronous Serial (MPSSE) data rates of up to 30Mbps at JTAG, SPI and I2C
5. 1kByte receive and transmit buffers for high data throughput
6. transmit and receive LED drive signals
7. support for USB suspend and resume
8. low operating and USB suspend current
9. low USB bandwidth consumption

Order no.	Type	Description	Guide price
112576	C232HM-DDHSL-0	USB/MPSSE Interface Cable for SPI, I2C, JTAG 3.3V	21,40 €
112578	C232HM-EDHSL-0	USB/MPSSE Interface Cable for SPI, I2C, JTAG 5.0V	22,40 €

Connect your USB applications to devices with Android OS!

Company Future Technology Devices International Limited (FTDI) extended support of its USB components even for connection to products with the Android operating system.

The first contribution is the release of the Application note AN_181 about accessing the „Android Open Accessory Mode" with Vinculum-II chips. Open Accessory Mode is a new feature in of Android OS 3.1. whereby a USB host device can connect to the Android device to allow data transfer to and from the Android device over USB. FTDI chip VNC-II as a powerful 16 bit chip enables to add USB HOST capabilities to many devices thus enabling to use also this Android OS mode. AN181 document shows the access to the Open Accessory Mode on an example of a development board V2EVAL and the Motorola Xoom tablet combination. FTDI provides a full source code as well as precompiled ROM files.

The second contribution is the release of new D2XX drivers for FTxxxx chips usable for Android OS. D2XX API is common for all usual OS-es, namely Windows, Windows CE, Linux and Mac OS X. FTDI has now developed the port of D2XX drivers for Android OS including native JAVA interface code and a JAVA class. This enable an easy access to the driver from an Android application. FTDI releases these drivers as a beta-version and if necessary, you can contact the technical support at support1@ftdichip.com. Detailed description is in the Technical note TN_134. Supplementary information about Adding FTDI Devices VCP Driver Support to Android is in the technical note TN_132.

The article with more information can be found at our website. Decode the link by QR code.

Don´t you use the RFID technology yet?

RFID technology offers wide possibilities of usage, it can make the production or logistics more effective and is able to increase safety.

Maybe you think the RFID technology is demanding or expensive technology, suitable more for some top safety systems or top industry technologies. In fact usage of RFID (radio-frequency identification) technology is relatively simple and price-affordable. Thanks to the global expansion of RFID technology, the price of components is relatively low and also available are complete ready-made modules, which you can incorporate into your device with a minimum effort. RFID technology offers a simple and cost-effective solution for example for checking and evidence of entry into objects (admission rights), marking and control of

goods (tracking), safety systems and many other. In our offer you can find all components necessary for creation of simple but even more complex RFID applications.

For purposes of control and evidence of admission into some objects, very suitable are the HD9911 series keyfobs. They are available in more colours, what allows to assign some selected admission rights to a certain colour version. For example an employee can get an e-TAG in a selected colour, what allows for very simple visual check, whether he received an e-TAG with the desired admission rights.

Advantages/ Features of RFID technology:

1. globally used technology
2. easy availability and a wide offer of components
3. wide field of usage
4. affordable price of components

Order no.	Type	Description	Guide price
9356	EM 4095 HMSO16A+	RFID transceiver circuit 125kHz SOIC16	1,95 €
77425	WR 8860ABU-EM7	RFID Silicone Wristband R/O 125kHz blue EM4102	3,80 €
83213	EM 4200C-CU - NN	Clamshell card RFID R/O 125kHz EM4200	0,40 €
86686	HD 9911BU-PCB-EM2	RFID Key Fob R/O 125kHz, blue Heavy Duty	2,05 €
105641	ACM08E	PIN Keyboard RF ID Unique 125kHz Reader,Wiegand 26bit int.	21,10 €

The article with more information can be found at our website. Decode the link by QR code.

100V for power LED strings from just any input

LINEAR TECHNOLOGY

LED driver and controller - LT3756 from Linear Technology offers a possibility to use input voltage from 6 up to 100V at an excellent efficiency.
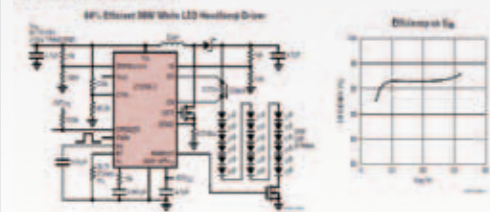
Advantages / Features:
1. universal IC for power LEDs driving and other power applications
2. wide input voltage range 6 to 100V
3. up to 100V output voltage
4. constant current and constant voltage regulation
5. 3000:1 True color PWM dimming
6. 100 mV floating current sensing
7. open LED protection
8. operation in buck, boost and buck-boost modes, in a SEPIC or flyback topology
9. 100 kHz až 1MHz adjustable frequency
10. up to 97% efficiency
11. CTRL pin providing analog dimming
12. low power-down current <1u
13. programmable soft-start
14. thermaly enhnanced QFN-16 package 3x3mm or MSOP-16E

TYPICAL APPLICATION

High-voltage LED driver LT3756 provides a constant voltage current limitting regulation. It features an exceptional versatility – it can be used in a boost, buck as well as in buck-boost mode, in a SEPIC or flyback topology, at the up to 97% efficiency. Its 100V floating current sensing enables an exact LED current control. Precise dimming through PWM enables to reach dimming ranges up to

3000:1. Soft start prevents spiking inrush currents. A big advantage is, that it is possible to program the frequency of the circuit from 100 kHz to 1 MHz thus optimizing efficiency while minimizing external components size and cost.
LT3756 provides all this in a miniature 16-pin QFN package with dimensions only 3x3mm or in a MSOP-16E package. The circuit is available in three versions – LT3576 and LT3756-2 contains an Open LED status pin, while LT3576-1 has the same pin in a function of frequency synchronization.
Beside the power LED driving, you can also use the LT3756 in virtually any power applications where constant voltage current-limitting regulation is required, for example at battery charging. You can find the examples of application in the Design Note 461 as well as in the LT3756 Design Ideas.
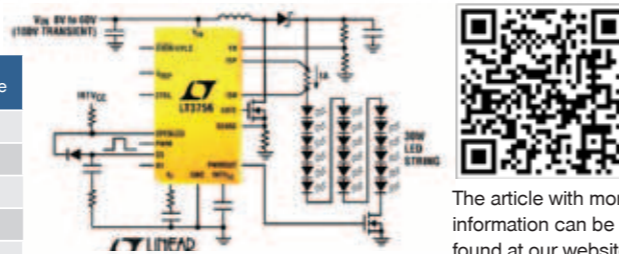
The article with more information can be found at our website. Decode the link by QR code.

Order no.	Type	Description	Guide price
94835	LT3756EMSE-1#PBF	100V High Voltage Full-Featured LED Cotroller	4,10 €
94836	LT3756EMSE-2#PBF	100Vin, 100Vout LED Cotroller	4,80 €
94838	LT3756EUD-1#PBF	100V High Voltage Full-Featured LED Cotroller	4,60 €
94841	LT3756IMSE#PBF	100V High Voltage Full-Featured LED Cotroller	5,40 €
94846	LT3756IUD-2#PBF	100Vin, 100Vout LED Cotroller	5,20 €

Switch-mode power supply within few minutes, with the L5973D switched regulator

You may have already had an application, where it would have been suitable to use a switched power supply, but when you saw a datasheet, you rather used a classic proven linear stabilizer. With the integrated circuit L5973D it is possible to design in a short time a reliable and powerful power source, at a low cost

Advantages/Features:
1. 2.5A switch-mode regulator with the inner switching transistor
2. minimum external components are necessary
3. simple usage
4. 4 to 36V input voltage
5. output voltage adjustable from 1.235 to 35V
6. possibility to work as an LDO – 100% duty cycle
7. 250 kHz working frequency
8. works also without a load
9. inner current limitation and a thermal protection

Switch-mode power supplies (SMPS) are being more and more used because of their undoubted advantage – much higher efficiency than classic linear stabilisers For many applications, the best solution is to use a ready-made DC/DC module or to use switch-mode stabilisers which directly replace stabilisers of 78xx series. However, for many applications a solution from discrete components is more suitable. From our offer of switch-mode regulators, we would like to introduce you a perspective circuit L5973D from ST Microelectronics. L5973D is a switch-mode buck regulator (step down) with the integrated 2.5A output transistor P-FET D-MOS, working at 250kHz frequency, in a HSOP-8 package. Input voltage can be 4-36V and an output voltage can be from 1,235 to 35V. For a construction of power source, only minimum of external components are necessary. A big advantage

is, thet the circuit is able to work even with the low drop-out (LDO) and the duty cycle 100%, i.e. if the input voltage is getting closer to the output voltage (for example a discharging accumulator), L5973D can carry over to the output practically the same voltage as it has on the input (voltage feedforward). This is especially useful at battery applications, when we need to ensure functionality of the device even in critical conditions.
To design a working power source, it is necessary only to choose the value of inductance and output capacitor, and naturally to use appropriate resistors in the feedback divider, to reach the desired output voltage. As a recuperative diode, almost every sufficiently dimensioned schottky diode is sufficient. For inductors, relatively small SMD types are sufficient, with inductance of tens of uH, and their choice is not critical. As an output capacitor, many electrolythic and tantalum capacitors can be used, also a parallel combination of few electrolythic capacitors is suitable, when their lower overall ESR and thus lower output ripple can be reached at the same time. With ceramic capacitors on the input and a tantalum capacitor at the output, it is possible to create with L5973D a powerful switch-mode source at a minimum space of few cm2.Also available is the version L5973AD with somewhat lower switching current - 2A, but with the higher working frequency of 500 kHz.
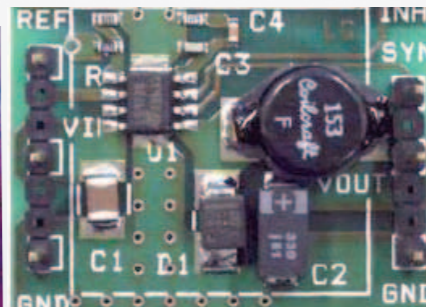
We offer you switch mode power supply L5973D from our stock. Order number is 53146 and guide price is 1,60 EUR without VAT.

The article with more information can be found at our website. Decode the link by QR code.

New sensors Sensirion will take you only 3x3mm on PCB!

Calibrated humidity and temperature sensors Sensirion SHT21, SHT25 and STS21 excel by very small dimensions. Thanks to their miniature size and a very low power consumption, you can use them even in small portable devices.

Calibrated humidity and temperature sensors Sensirion SHT21, SHT25 and STS21 excel by very small dimensions. Thanks to their miniature size and a very low power consumption, you can use them even in small portable devices.
Sensors SHT21, SHT25 and STS21 with I2C digital output belong to the SHT product line, with the CMOSens technology of swiss company Sensirion. SHT21 and SHT25 measure relative humdity and temperature, STS21 measure only temperature. With a new CMOSens chip, reworked capacitive type humidity sensor and the improved band-gap temperature sensor they feature excellent properties. Also these sensors belong to high quality CMOS sensors, which contain all elements of the measuring chain on one chipInspite of very compact dimensions also SHT21 and 25 sensors remain resolution of 12 bits for relative humidity and 14 bits for temperature. Temperature sensor STS21 has also a 14 bit resolution and a user can choose by a command the resolution of 14, 13, 12 or 11 bits.
I2C interface enables a very simple communication with a host microcontroller. Defaultly sensors have the same I2C adress set from production. Upon request it is possible to provide sensors with various adresses from producer. STS21 is fully compatible with SHT2x but it has a different I2C address. This enables to use sensor STS21 in applications where humidity measurment is optional and enables to use the same hardware.
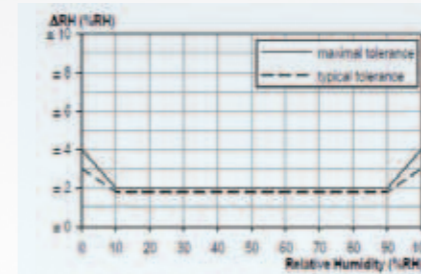
SHT25 keeps its outstanding accuracy of relative humidity measurment also in a wide temperature range. STS21 offers excellent accuracy of temperature measurment at a very competitive price.
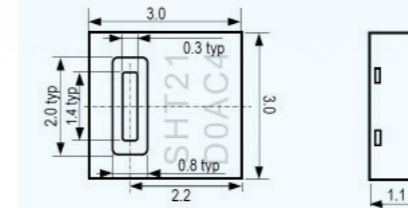
In the DFN package with dimensions only 3,0 x 3,0 x 1,1mm they belong to the world-wide smallest complete solutions for humidity and temperature measurment in one component.

SENSIRION THE SENSOR COMPANY

Advantages/ Features:
1. relative humidity and temperature measurment in one component
2. individually calibrated in a precise humidity chamber
3. extremely compact dimensions 3 x 3 x 1,1 mm
4. digital outpt with I2C interface (Hold/ No Hold Master)
5. outstanding reliability and long-term stability
6. 12 bit resolution for relative humidity and 14 bits for temperature
7. measuring range 0-100% RH,-40 to +125 °C
8. average consumption only 3.2 uW at 1 measurement per sec/8 bit/RH (SHT2x)
9. insensitivity to external disturbances

The article with more information can be found at our website. Decode the link by QR code.

Order	Type	Description	Sort*	Guide price
87917	SHT 21	IC thermal, humidity sensor I2C DFN6	S	17,00 €
101769	SHT 25	IC thermal, humidity sensor I2C DFN6	S	20,45 €
101772	SF2 Filter Cap	Filter for Humidity Sensor SHT2x	O	4,40 €
113285	STS 21	IC thermal sensor 0,2% I2C DFN8	O	5,90 €

*S = stock item, O= on request (delivery time approx. 6 weeks)

Keep your data safe on an industrial CF card Apacer

For a safe storage of valued data in demanding industrial conditions, a reliable medium is necessary. APACER comes with the fifth generation of Compact Flash cards Industrial CF5 and CF5 Plus

A card is designed to meet stringent demands for a data reliability and a write protection. Simple locking of lock switch on a bottom side allows data to be read only, thus protected from an accidental deletion and/or tampering of confidential information.

APACER CF 5 and CF 5 Plus are compliant with a CFA 4.1 specification. Used SLC chip (single level chip) and an intelligent power failure recovery system contribute to a card reliability. To keep data correct, CFC 5 supports 24 bit hardware ECC function (er-

ror checking and correction), advanced wear-leveling and block management, and S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology). They are available in a standard working temperatures range 0 to +70°C and also in extended range -40 to +85°C. Among outstanding features of cards CFC 5 belongs also a high resistance to humidity, shocks and vibrations. All these advantages make memory cards APACER CFC 5 a CFC 5 Plus ideal for embedded devices in a medical, military and automotive segments, as well as there, where the highest level of reliability and data safety is required.

Apacer Access the best

Advantages / Features:
1. SLC chip
2. lock switch for a write protection
3. data transfer up to PIO-6, Multi-Word DMA-4, Ultra DMA-5
4. sequential read/ write - 40/30 MB/ sec
5. 24 bit ECC and Advanced wear-leveling and block management

Order no.	Type	Description	Sort*	Guide price
115597	AP-CF001GK7FS-NDNR	CF5 1GB Card, Hi Speed,Non-DMA	O	22,50 €
115605	AP-CF001GK7FS-ETNDNR	CF5 1GB Card, Hi Speed,Non-DMA,Ext.Temp	O	24,20 €

* O= on request (delivery time approx. 1-3 weeks)

The article with more information can be found at our website. Decode the link by QR code.

ES1x diode – fast, superfast, ..., superfast efficient!

New superfast and at the same time efficient diodes Diotec ES1x series enable to further decrease power losses even in very quick circuits.

When using diodes in power circuits working at high frequencies – like switch-mode power supplies, except forward losses also switching losses appear. Switching losses are directly commensurable to the working frequency and for the usual diodes (1N400x) these losses are unacceptably high already from frequencies of few kHz.

As overall losses are the sum of forward and switching losses, at selecting of a suitable type it is always necessary to consider both parameters – VF and trr.. Naturally, it is ideal if a diode features a low VF and a short trr at the same time.

Both these demands are met in new ES1x series diodes Diotec, marked as „superfast efficient". Diodes ES1x are manufactured by more global

producers (similarly like for example 1N400x) and they are available with a 50-600V reverse voltage (ES1A...ES1J). ES1x from company Diotec belong to the top products in this diode series, for example ES1D feature VF=0,92V/1A and trr max 15 ns.

We offer you Diods DIOTEC ES1x from our stock. Order number is 57613 and guide price is je 0,040 EUR without VAT. Minimum order is 20 pcs.
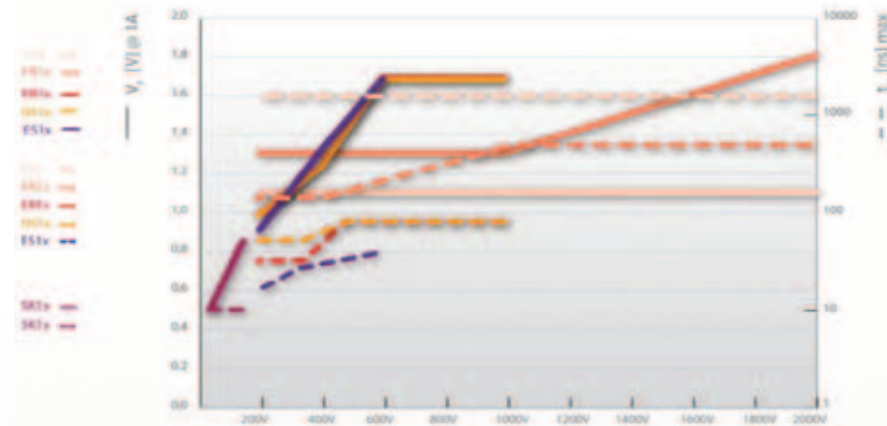
Diotec Semiconductor

Advantages / Features:

1. very low overall losses
2. extremely short recovery time 15-35 ns according to version
3. very low forward voltage - VF
4. SMA smt package (DO-214AC)
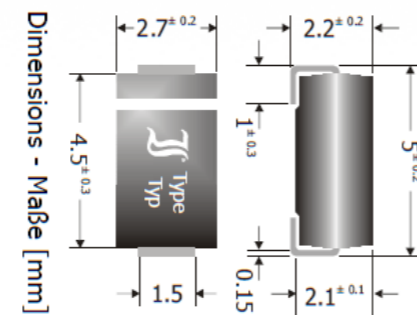
VF and t_rr versus V_R

Dimensions - Maße [mm]

The article with more information can be found at our website. Decode the link by

Prevent a gas explosion by means of the Figaro TGS6812 sensor

A protection against explosive gases doesn´t have to be expensive. With the sensor Figaro TGS6812 with a linear output, you can design a quality and price-affordable device, detecting a wide variety of explosive gases.

Advantages / Features:

1. high sensitivity to explosive gases like methane, propane, iso-butane and hydrogen
2. linear output
3. bridge topology, almost independent to ambient temperature
4. detection range 0-100% LEL
5. low sensitivity to alcohol vapours
6. simple application
7. high lifetime

EA protection against explosive gases doesn´t have to be expensive. With the sensor Figaro TGS6812 with a linear output, you can design a quality and price-affordable device, detecting a wide variety of explosive gases.

Destructing effects of gas explosion are very frequent. In many cases, already a simple detector would be sufficient to warn in time about a possible danger. For this purpose, but also for more demanding applications, it is very suitable the Figaro TGS6812 detector of explosive (combustible) gases, with a high sensitivity to methane, propane, iso-butane and hydrogen.

that the sensor contains an adsorbent in the sensor cover, it is much less sensitive to alcohol vapours, than traditional catalytic sensors. A big advantage of the sensor is, that it comprises of two elements: one element is sensitive to combustible gases, second one – reference, is not sensitive to gases. These elements are connected into a „Wheaston Bridge". By this topology, a much better linearity and almost independence from ambient temperature was reached.

FIGARO
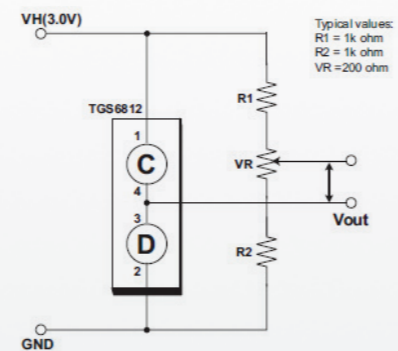
We offer you detector of explosive gases TGS6812 from our stock. Order number is 76571 and guide price is je 26,20 EUR without VAT.

The article with more information can be found at our website. Decode the link by QR code.

Save costs at selected OSRAM LED types!

Thanks to an increasing interest about LEDs OSRAM from our offer, we can now offer you selected types for lower prices.

As we all see, LED light sources experience a global „boom". Their usage thereby also their sale grows. Thanks to it, we are taking on stock still bigger ammount and we managed to gain notably lower prices. And as your those, for which we do our work, we automatically reflected these lower purchase prices to your favour – into sale prices. Namely, we decreased prices at selected types of Advanced Power Topled Plus, Golden Dragon oval Plus and Golden DRAGON Plus series, listed in the product list

under this article.

LEDs OSRAM have a very quality and thin luminophor layer. Also thanks to this, LEDs OSRAM provide a very colour-uniform luminous flux even in corner angles of the radiation pattern – unlike various no-name power LEDs, which often provide significantly more yellowish light at the corners of the radiation pattern.
Detailed description of all types you can find on the OSRAM website.

Order no.	Type	Description	Guide price
103153	LW W5PM-KXKZ-6K8L-Z	Power LED Cool White 5600K 120° 107lm/W	2,77 €
103173	LW W5AM-KXLX-5K8L-Z	Power LED Cool White 5600K 170° 130lm/W	0,99 €
103175	LCW W5AM-JZKY-4R9T-Z	Power LED Warm White 3000K 170° 102lm/W	1,03 €
106148	LUW G5GP-GXHY-5F8G-Z	Power LED ultra white 6500K135°81lm/W PLCC-4	0,89 €
106150	LCW G5GP-FZHX-5L8N-Z	Power LED neut.white 4000K 135°58lm/W PLCC-4	0,89 €

OSRAM
Opto Semiconductors

Advantages / Features of LEDs offered:

1. high ratio of light output / dimensions
2. integrated lens
3. uniform radiation pattern
4. SMT package
5. equipped with ESD protection diode

The article with more information can be found at our website. Decode the link by QR code.
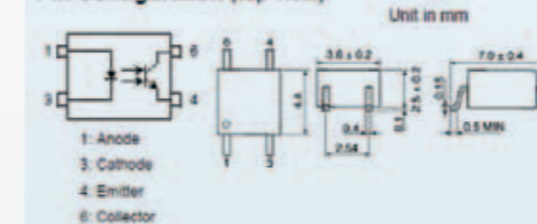
Galvanic isolation with Toshiba TLP181 optocouplers even more convenient

If you have an application, where high differences of potentials are, you will probably use an optocoupler. Optocoupler Toshiba TLP181 in the SMT package you can use almost universally in many devices.

Optocouplers find their usage everywhere, where it is necessary to galvanically isolate 2 parts of the circuit, to reach a conversion of voltage levels, but even in places, where we want to reach an increased protection against possible overvoltage (ESD).

Optocoupler TLP181 consists of GaAs LED and the optically coupled photo transistor. With the

Pin Configuration (top view)

1: Anode
3: Cathode
4: Emitter
6: Collector

insulation voltage 3750Vrms it meets requirements for safe and reliable isolation of circuits. High cut-off voltage Vceo of transistor – 80V, is suitable also for applications with higher voltages, or for reaching a higher reliability. For this category, relatively short switching times tON and tOFF enable usage of TLP181 even in higher speed circuits. In stock we have a rank „GB", i.e. TL181 (GB) with a current transfer ratio of 100-600%.

With respect to a relatively stable interest about these optocouplers, we took to our stock a higher ammount, that´s why we are able to offer them to you for even more convenient price than so far.

We offer you optocoupler TLP181 from our stock. Order number is 3329 and guide price is je 0,90 EUR without VAT.

TOSHIBA
Leading Innovation »»»

Advantages / Features:

1. optocoupler with the transistor outpout
2. cut-off voltage VCEO=80V, Ic=50mA
3. isolation voltage 3750Vrms
4. current transfer ratio 100-600%
5. specified temperature range -55 to +100°C

The article with more information can be found at our website. Decode the link by QR code.

Solder like real professionals with Weller WX2 soldering station

New generation of intelligent soldering stations WX2 series from Weller brings improvements based on customers demands.

The base of the versatile repair device is the WX 2 station with a possibility to connect two 120W tools or one 200W tool. Control interface is done via a touch panel display. WX2 enables communication with other devices like control of WFE fume extracting station and a WHP preheating device. The digital control electronics together with superior temperature sensor and heat-transfer technology guarantee precise temperature control at the soldering tip. This also ensures careful soldering of temperature sensitive components - now even more important at lead-free soldering. Intuitive multi-lingual menu and user friendly interface make WX2 series an ultimate choice for professional usage at any production or repairing workplace.

Weller®

New repair stations are available in 2 versions:
• WX 2020 (1x WX 2 station, 2x 120W iron tool WXP 120, 2x WDH 10 stand)
• WX 2021 (1x WX 2 station, 1x 80W micro tool WXMP + WDH 50 stand, 1x 80W WXMT de soldering tweezers + WDH 60 stand)

Advantages / Features:

1. two independent 120W tools or 1x200W tool can be used
2. intelligent power-save mode
3. antistatic ESD safe design/ connector for potentials equalization
4. robust capacitive touch display / intuitive control and multi-lingual menu
5. no calibration needed
6. automatic tool detection
7. WX port / possibility to control more accessory devices
8. USB port for firmware updates, configuration and monitoring

Order no.	Type	Description	Sort*	Guide price
92248	WX 2020	Soldering Station WELLER 240W 2x Soldering Iron WXP120	O	740 €
92249	WX 2021	Soldering Station WELLER 240W Soldering Iron WXMP+WXMTP+WXMT	O	750 €

*O = on request (delivery time approx. 4 weeks)
The article with more information can be found at our website. Decode the link by QR code. The article contains also related video.

Gas soldering tool DREMEL VersaTip will provide you a freedom

Multifunctional gas soldering tool will help you at many various applications like: soldering, melting, hot-cutting, welding and woodburning (pyrography)...

DREMEL®

This quality gas soldering tool provides a freedom of usage for example outdoor and everywhere where no electricity is available. But DREMEL VersaTip isn´t only a gas soldering tool with adjustable temperature. It is a multifunctional tool, which you can use, thanks to 6 exchangeable tips, for technical and also creative works like: soldering, melting, hot-cutting, welding and woodburning (pyrography), bending of metals, application of heat shrinkable insulations, releasing of junctions locked by an anaerobic sealant (bearings and screws) and many other.
DREMEL VersaTip can be easily and quickly refilled by a widely available liquid butane (the same as used in lighters) and it has a safety lock mechanism against an accidental turn-on. Detailed description will provide you the VersaTip Instruction Manual.

Contents
• DREMEL® VersaTip
• Soldering Tip
• Cutting Knife
• Hot Knife
• Flat Wide Flame Head
• Reflector
• Hot Blower Head
• Soldering Tin with Blue Cap
• Soldering Sponge + sponge box
• Wrenches: 1 x 7 mm, 1 x 8 mm

Technical specification
• Weight: 0,135 kg
• Ignition: Piezo
• Burn time: up to 90 min

Advantages / Features:

1. multifunctional tool, 6 various tips
2. always ready to use
3. very quick heat-up
4. allows for detailed and intricate work
5. long lifetime

Order no.	Type	Description	Guide price
20009	PYROPEN REFILL (WE1616099)	Gas Accessory 75ml	4,44 €
69068	0805AS-082J-01	Gas Soldering VersaTip + Accessories	40,40 €
69220	0805AS-R47J-01	Butane Tool Accessories	8,92 €

The article with more information can be found at our website. Decode the link by QR code. The article contains also related video.

Charge them conveniently!

Today perhaps nobody doubts about convenience and an ecological benefit of NiMH accumulators. With charger from our offer you can keep them fit and in a good condition for a long time.

MP3 players, portable devices, LED headlamps, backup supply of various industrial devices, security systems, hand tools, cameras – this is only a small selection of devices, where it is usually worth to use rechargeable NiMH accumulators in common AA and AAA sizes. They are also available with leads, which are usually more suitable for industrial use. With appearance of low self-discharge technology for NiMH accumulators, which producers reffer to as RTU, AR, Eneloop, ReCyKo etc. have properties of NiMH accumulators further significantly improved. Thanks to this they maintain up to 80% of energy after a year of storage.

Order no.	Type	Description	Guide price
110409	MW 1268(A)UGS	Battery Charger 2-4 AAA/AA dV, refresh, EuP	6,30 €
70395	MW 3279	Battery Charger 30min.NiCd,NiMH 1-4AA/3A,AAA/ 1,2A dV, Fan	22,00 €
55545	MW 333	Battery Condition Checker with LCD - AAA/AA/C/D/9V	4,10 €
70396	MW 6288GS	2Ch-9V Battery Charger NiCd, NiMH dV, 70mA/7mA, disch.	6,07 €
70393	MW L 2111(1)	Battery Charger NiCd, NiMH 1-4AAA/AA 800mA LCD, dV	14,30 €

The article with more information can be found at our website. Decode the link by QR code.

The first aid spray – CRC 5-56 in the promo offer!

Protection against humidity, corrosion, weather influence, loosing of locked mechanisms – these are only some of many possible segments of usage of a new CRC 5-56 spray.

CRC®

Advantages / Features:

1. multi-purpose lubricating and protective spray
2. made of high quality substancies
3. excellently penetrates into finest pores
4. loosens locked parts and protects against corrosion
5. fabulous lubrication properties
6. displaces humidity and protects from corrosion atmospheres
7. suitable also for electric contacts
8. safe for all metals and most of painted and plastic surfaces
9. up to 97% active product in the can
10. special 360° valve functioning even upside down
11. promo – 300ml for the price of 200 ml

The article with more information can be found at our website. Decode the link by QR code.

There are many multi-purpose sprays on the market from various producers and in a various quality. In the promo offer, we offer to you a high quality agent CRC 5-56 from the global producer of chemical agents for industry – company CRC Industries. You may already know products of company CRC from the proven agents of Kontakt-Chemie (a member of CRC group).

From some aspect, in many applications it is more suitable to use a specialised spray intended for a given concrete use. However it is often desired to reach a wide-spectrum effect in one application (protection against corrosion and humidity at the same time, protection against weather influence …). In such cases, a multi-purpose spray is an irreplacable helper. It is based on highly clean substancies and the special mixture gives it really multi-functional properties. It can be said, that CRC 5-56 provides almost all, what a man could wish from a multi-purpose spray – very efficiently protects from corrosion, displaces humidity and protects from humidity, cleans, excellently lubricates and restores a smooth action, protects from corrosive atmospheres, penetrates very quickly even through thick layers and into the finest pores, thus loosing locked parts, eliminates annoying squeaks.

You can use the CRC 5-56 literally as a first-aid spray, or as a basic spray for preventive treatment of various components like for example:

• Electronic components– plugs and sockets, switches, coils, leads,…
• Automotive industry – ignition system, distributors, battery terminals, starters, screws and nuts,

chrome parts, seats slides, door latches, spark plugs,…
• Home – door locks and hinges, sliding doors and windows, drills, locks, various DIY tools, scissors, toys, ….
• Leisure – fishing gear, bicycles, garden tools, roller blades and skates, ski fittings, marine,…

Automotive relay handling 70 Ampers

Currents, at which it is possible to weld, usual thin wires are melting,... this is the environment, which appears in the automotive industry and other low-voltage applications very often. Automotive relay V23071-A1009-A132 from TE Connectivity is designed for these purposes.

Relay V23071-A1009-A132, marked also as 1393276-3, is a 12V relay with 1 contact (NO) handling continuous current up to 70A/23°C. Moreover a switching current can be up to 300A/13,5V. Inspite of a big power rating the relay has relatively small dimensions. This relay is, thanks to a very high continuous current, suitable for usage in automotive industry at places with very high current demands like: ABS, cooling fan, rear window heating, heating systems and main switch. Another suitable field of use is also in solar energy applications, backup power supplies and other.
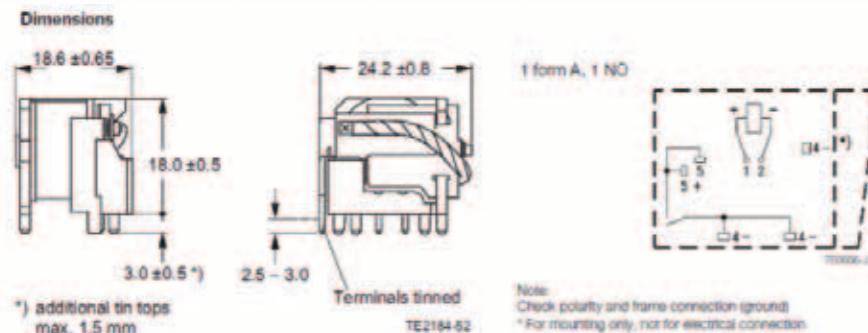
Advantages / Features:

1. 1 pole (NO) relay for PCB with up to 70A continuous current
2. specified temperatures -40 to +85°C
3. wide operating voltage range - from 6.9V
4. high shock and vibration resistance
5. dimensions 24.2 x 18,6 x 18.0 mm (LxWxH)

The article with more information can be found at our website. Decode the link by QR code.

Order no.	Type	Description	Guide price
5118	V 23071-A 1009-A 132	Relay automotive 12V/64R 70A 1a	5,25 €
109537	V 23084-C 2001-A 303	Automotive relay Twin 2x1c 30A 12VDC 178R PCB	4,18 €

With the stripping tool Wago Quickstrip you will save 2-times

Everyone who often connects a bigger ammount of wire leads, knows well, how important it is to have a good stripping tool. Wago Quickstrip 10 meets all demands for such a tool.

If, after many thousands of usage, the blades will become dull, it is sufficient to exchange them without necessity to buy a new whole tool. Second cost saving is, that it is also possible to buy a blade cassette with „V" blade, suitable mainly for thinner wires with PTFE or similar insulation, thus avoiding a purchase of another specialized tool.

Wago Quickstrip 10 are designed in such a way, that you can strip with them wires of various diameters. Before stripping it is only necessary to adjust a desired length of stripped part (up to 18mm) and the laminated, spring loaded blade will automatically fit a wire diameter. To reach the best results, it is possible to adjust a blade pressure (+-) according to an insulation thickness. A big advantage of Quickstrip 10 is, that a blade cassette is exchangeable, that´s why when after a time the blade will become dull, it is possible to replace them for a significantly lower price, in comparison to a price of the whole tool.

With defaultly equipped 206-126 blade cassette, can the tool strip wires 0,02-10 mm2. In case, you need to often strip mainly thin wire strands, or thin wires with a tough (PTFE and similar) insulation, the 206-127 cassette with a „V" blade is the best choice

Advantages / Features:

1. stripping tool for wires 0,02 to 10 mm2
2. wire cutter up to 10 mm2
3. excellent quality of stripping
4. automatic adjustment according to a wire diameter
5. fine adjustment of blades pressure according to an insulation thickness
6. replaceable blade casssette
7. „V" blade cassette for PTFE insulated wires available

The article with more information can be found at our website. Decode the link by QR code.

Order no.	Type	Description	Guide price
48714	206-124 QUICKSTRIP 10	Stripping pliers 0,02-10mm2	70,40 €
65618	206-126	Spare cassette for Quickstrip 0,02-10mm2	20,20 €
112993	206-127	Spare cassette "V" for Quickstrip 0,1-4mm2	25,80 €

Elegant, miniature, powerful – Marquardt 1858 double switch

If you´re searching for a rocker switch with small dimensions and a great design, then you shouldn´t overlook the Marquardt 1858.

Marquardt 1858 is a miniature 2-pole switch with 10A/250VAC rating, made of immediately self-extinguishing material (UL-94V0). Inspite of small dimensions it handles up to 100A inrush (capacitive) currents. Ambient temperature on the terminals side can be up to 100°C, what enables to use the switch even in pent conditions of power applications. For an increased dust and water protection you can use the 203.089.011 transparent cover.

Small dimensions and an elegant design make the Marquardt 1858 switch suitable for applications like for example a main power switch of various devices, as well as for a control of peripherials. In the 1858 series there are available switches in various versions, in stock we keep 1858.1103 type

**Advantages / features:**

1. 2-pole rocker switch 10 (4)A/ 250V AC, 6(4)A 5E4
2. inrush (capacitive) current up to 100A
3. T100/55 ambient temperature
4. silk matt surface with abrasion-proof marking
5. UL 94 V-0 flammability – immediately self-extinguishing
6. 4.8mm quick-connect terminals, PCB or solder terminals

Order no.	Type	Description	Guide price
514	1858.1103	Rocker Switch 0-1 DPST 10(4)A 250VAC Black - O F4,8	1,30 €
572	203.089.011	Transparent PVC - Protection Cap for 19x13mm	0,45 €

The article with more information can be found at our website. Decode the link by QR code.

Polarized latching relay Fujitsu with a minimal power consumption

Do you know, that a relay can have a zero power consumption in a relaxed state? Latching (bistable) relays have these feature. In the era, when it is a general effort to decrease power requirements of devices, is the usage of these relays even more actual.
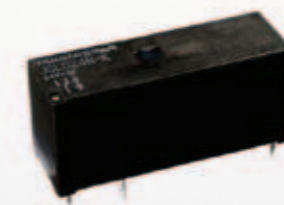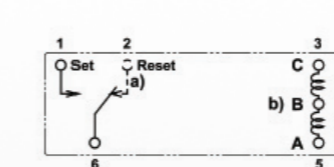
Electromagnetic relay, as a switching element, is one of the oldest electronic components. Inspite of a strong rival in the form of SSR (solid state relay), has an electromagnetic relay some convenient properties, for which is its usage more convenient in many cases. Let´s mention for example a high dielectric strength coil/contacts as well as between contacts, minimal power losses on contatcs and a linear transmision of small signals without a distortion. Inspite of, that the coil of the relay is always optimized for a minimal power consumption, still it is not neglible, especially at relay arrays or at battery powered devices. a solution is to use a polarized latching (bistable) relay. As already a name says, a latching relay is designed so, that it has two relaxed states, i.e. it needs power supply only for a change of state, in a relaxed state (on or off) it has a zero power consumption.

Usually the coil of a latching relay is constructed as double, one serves for setting, secound one for resetting. Latching relay is suitable everewhere, where a usual relay, except circuits, where it is necessary to ensure switched off contacts after power disconnection

From our offer of latching relays, we would like to introduce you a relay Fujitsu JSL. It is a power relay with one change-over contact. Maximal carrying current 10A, continuous current 8A and a high dielectric strength of 5000V AC (coil/contacts) enable its usage in many power applications. Gold plated, silver based contacts ensure a low contacts resistance and a long lifetime. Relay JSL is Cadmium free, sealed, wash tight.

Advantages / Features:

1. polarized latcing relay – zero power consumption in a relaxed state
2. 1 change-over contact, THT technology for PCB mounting
3. gold plated contacts from AgSnO2
4. carrying/ continuous current 10/8A
5. specified temperature -40 to +70°C
6. versions with 3V, 5V, 6V, 9V, 12V and 24V coil
7. dimensions 29x10x12,5 mm (L x W x H)
8. sealed type, wash tight

Order no.	Type	Description	Guide price
70158	JSL-D5N-K	Power relay Latching 5V 10A 1c 114R without Cadmium	1,65 €
70159	JSL-D12N-K	Power relay Latching 12V 10A 1c 655R without Cadmium	1,66 €
70160	JSL-D24N-K	Power relay Latching 24V 10A 1c 1200R without Cadmium	1,71 €

The article with more information can be found at our website. Decode the link by QR code.

Control devices from a DIN rail reliably and safely

With a powerful relay interface module Finder 48 series you can control devices reliably and digestedly directly from a distribution box.

Very often used centralized control of devices from a distribution box via relay interface modules offers several benefits. This solution enables for example a transparent and quick installation, simple functionality test and easy changes in configuration if necessary. To place switching elements to a DIN rail can in many cases substantially increase the immunity to disturbances

Finder 48 are powerful relay interface modules in versions with one or two changeover contacts. From our stock we offer you 2 versions - 48.52 and 48.61 with a sensitive DC coil with only a 0.5 W power consumption. Interface modules already contain components protecting against wrong voltage polarity, for EMC suppression as well as indication circuit with a LED.
Besides high 16/8A switching currents offer Finder 48 also a high level of safety thanks to an up to 6 kV insulation voltage (coil/contacts). Finder 48 enable instant relay rejection by means of a plastic retaining clip, what makes an inspection or exchange of a relay easier. Also available is the jumper link for a mutual interconnection of several interface modules.

Advantages / Features:

1. relay interface module for a DIN rail
2. versions with 1 or 2 changeover contacts
3. 8/16A 250V AC rated current
4. ambient temperature range -40 to +70°C
5. only 0.5W power consumption (DC versions)

Order no.	Type	Description	Guide price
54461	095.18	Jumper link 8way 10A/250V for 95.03, 95.05, 48.52,48.61	1,45 €
69900	48.52.7.024.0050	Relay interface module 24VDC 8A	7,16 €
71234	48.61.7.024.0050	Relay interface module 24VDC	7,33 €

The article with more information can be found at our website. Decode the link by QR code.

Vandals don´t have any chance against Schurter MCS19 push-buttons!

If your control panels can be exposed also to a rough handling, then Schurter MCS19 series switches are a hot candidate for this position.

Advantages / Features:

1. resistant „anti-vandal" construction
2. >1E6 electrical and mechanical lifetime
3. -20 to +60°C operating temperature range
4. IP 40/65

As we know, there are still a lot of people, who like to "test" the longevity of switches used at various control panels. Schurter MCS19 series are suitable just for such places. It is a series with a robust metal construction, specially designed for a long lifetime even at rough handling. MCS19 switches are available in a stainless steel version suitable for outdoor use, as well as in a nickel plated zinc diecasting version suitable for indoor use. Also available are switches with various markings, LED backlight as well as with a colour varnished surface.

From our stock we offer you the 1241.2800 type from a nickel-plated aluminium diecasting and with silver. Order number is 61965 and guide price is je 3,72 EUR without VAT.

The article with more information can be found at our website. Decode the link by QR code.

Get familiar with SMD electrolytic capacitors advantages

Both types are supplied on a carrier tape in a reel, that´s why they are suitable for automatic machine assembly.

Electrolytic capacitors in an SMT package offer the same properties as their leaded familes (THT version), but they are much easier to assemble on a PCB. If you have a device, where most of components are in an SMT version, you probably proceed the way that SMT components are machine-assembled to PCB with a following reflow soldering. Leaded THT components (through hole technology) are then soldered in the 2-nd technological step – by a solder wave or manually. In a device containing many various THT components this 2-nd technological step is inavoidable. But in devices where only few THT components are, it is often possible to minimize their count or totally eliminate. This makes a production of the device significantly cheaper and quicker. Moreover in comparison to manual soldering, reflow soldering is much more consistent, ensuring a stable quality of soldering in various production batches. Saving of a space is the second essential advantage. SMT electrolytic capacitors are available even with a very low profile. Thanks to the fact, that pads of SMT capacitors don´t require holes drilling into a PCB, like it is at THT technology, in many applications they can significantly simplify design of multilayer PCBs. Another advantage at HF circuits can be the fact, that integrity of the ground layer on the PCB won´t be corrupted by their usage.
From our stock we offer to you Samwha SC and Samwha CK. These are general usage aluminium electrolytic capacitors.

SC series is a standard type for usage up to +85°C. SC is available in a wide range of values 0.1uF to 2200 uF with a working voltage 4 to 450V.

CK series is a low-impedance type with a wide specified temperature range from -55 to +105°C.

Advantages/ Features:

1. universal SMT electrolytic capacitors
2. standard and also a low-impedance version
3. they simplify a device assembly
4. full replacement for a THT version
5. PCB space saving

CK is available in capacities 10 uF to 1500 uF with a working voltage 6.3 to 100V. In comparison to SC type, it has a higher specified ripple current, what makes them suitable even for switch-mode power supplies.

Order no.	Type	Description	Guide price	Min. order
69615	ES 100uF/16V SC	Capacitor electrolytic SMD 85°C D6,3xL5,3mm	0,040 €	20ks
69957	ESR 100uF/16V CK	Capacitor elyt SMD 105°C Low Impedance 6,3x5,8	0,079 €	10ks

The article with more information can be found at our website. Decode the link by QR code.

To design your own transformer? – No!

With transformers for switch-mode power supplies from company Myrra you can avoid a demanding high frequency transformer design and you can focus only on a design of an SMPS according to your own specific demands.

For a power supply solution it is often more effective to use ready-made DC/DC or AC/DC modules. However if you need a power source with non-standard output voltage or if you decide from any reason for your own design of an switch- mode power supply (SMPS) like flyback or push-pull, you will need a suitable high frequency transformer.

Transformers of the 740xx series from company Myrra offer advantage in a fact, that they are optimized directly for usage with a certain control circuit (chip). All you need is to choose a transformer of desired power rating and in its datasheet you will find a recommended SMPS control circuit. Transformers provide a high level of safety – they are made of exclusively UL94-V0 listed materials and they feature a high primary/secondary insulation of more than 4000V.

Advantages / Features:

1. transformers for switch-mode power supplies usable with various SMPS controllers
2. recommended SMPS controllers are listed in datasheets
3. eliminate a demanding custom transformer design
4. rated power from 5 to 90 Watts

Order no.	Type	Description	Guide price
48842	74000 E16 5W 5V/12V	Transformer for switch power supplies	1,42 €
48852	74023 EL19 16W 3,3+5+12+18+30V	Transformer for switch power supplies	1,89 €
48857	74050 ETD34 90W 5V+12V/5V+12V	Transformer for switch power supplies	4,76 €

The article with more information can be found at our website. Decode the link by QR code.

Excellent results even in high frequencies with Fastron SMT inductors

Fine Inductors
Fastron

For the growing interest about miniature SMT inductors, we bring you series of Fastron SMT inductors 0805AS and 0805F. These are quality wire-wound components, suitable even for very high frequencies.

Nlt isn´t very long ago, when the best high frequency inductor was a relatively big coil with the air core, created only by few turns of the copper wire. Partially it is still true, as the laws of the physics don´t change, but in respect to nowadays miniaturisation requirements, the usage of SMT coils in many applications more convenient. Moreover, miniature coils feature much smaller mutual influence caused by their own magnetic field, what enables to further miniaturize dimensions of a device. Last but not least, an inductor is a very effective, almost lossless filter, on the places we need to eliminate interference, or to prevent its penetration into other parts of a device. That´s why is their usage as an LC filter actual in almost every device with processors, logic gates and similar components.
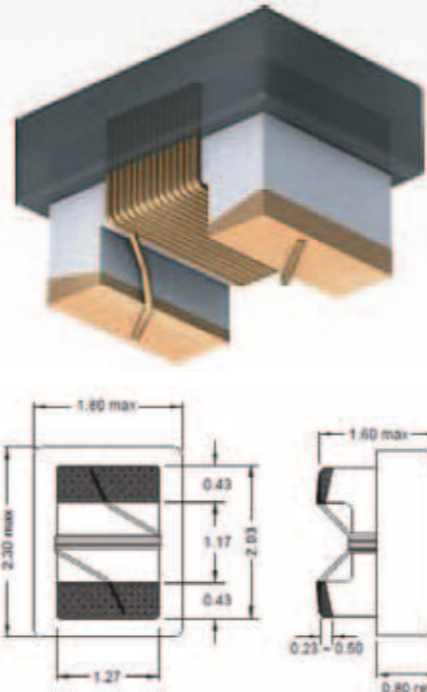
Fastron 0805AS are coils with the ceramic core, which has properties - from a magnetic aspect, very near to the air, that´s why this series has a relatively high Q factor, high self resonant frequency and a high linearity. They are available in inductances from few nH up to 10 uH. Thanks to their very good HF properties, they are also suitable into various HF parts of re-

ceivers, transmitters, circuits for signal processing, input stages of AD converters, HF filters etc., up to frequencies of few GHz.

Fastron 0805F are inductors with the ferrite core, which reach relatively high inductance, at a low turns count. Thanks to a low turns count, have these inductors high SRF even at relatively high inductances and also they have a low DC resistance. They are ideally suitable for noise suppression purposes (decoupling), various filters, for digital circuits and many other.

Thanks to a low value tolerancy of these coils, it is possible to reach a very good repeatability of parameters in mass production of your devices. A big portion of AS series, we can deliver even in only 2% tolerancy, which will meet even very stringent requirements for attunement accuracy of LC circuits, filters, bandpasses etc. Fastron 0805 AS and F have an epoxy moulded flat top side, protecting a winding at manipulation and enabling an exact pick and place assembly. Further information about these inductors will provide you the Fastron - technical data document. Selected values are on stock, upon request we can provide you any other value

Order no.	Type	Description	Guide price	Min. order
69713	0805F-100J-01	Chip Inductor SMD 0805 10uH 5% 150mA	0,178 €	5pcs
73819	0805AS-082J-01	Chip Inductor SMD 0805 82nH 5% 400mA	0,178 €	5pcs
73821	0805AS-R47J-01	Chip InductorSMD 0805 0,47uH 5% 170mA	0,178 €	5pcs
78118	0805AS-047J-01	Chip Inductor SMD 0805 47nH 5% 500mA	0,178 €	5pcs
78289	0805AS-R12J-01	Chip Inductor SMD 0805 0,12uH 5% 400mA	0,178 €	5pcs
78812	0805AS-3R3J-01	Chip Inductor SMD 0805 3,3uH, 5% 120mA	0,178 €	5pcs
84954	0805AS-010J-01	Chip Inductor SMD 0805 10nH 5% 600mA	0,178 €	5pcs
84955	0805AS-022J-0	Chip Inductor SMD 0805 22nH 5% 500mA	0,178 €	5pcs
102119	0805AS-2R2J-01	Chip Inductor SMD 0805 2,2uH 5% 150mA	0,178 €	5pcs
104811	0805AS-1R0J-01	Chip Inductor SMD 0805 1,0uH 5% 180mA	0,076 €	10pcs
104814	0805AS-056J-01	Chip Inductor SMD 0805 56nH 5% 500mA	0,069 €	10pcs
106497	0805AS-4R7J-01	Chip Inductor SMD 0805 4,7uH 5% 100mA	0,178 €	5pcs
106538	0805F-6R8J-01	Chip Inductor SMD 0805 6,8uH 5% 160mA	0,178 €	5pcs

Advantages / Features:

1. SMT inductors in the 0805 package
2. quality wire-wound version
3. high Q and SRF
4. they provide a permanency of parameters and production repeatability even in demanding HF circuits
5. usable also for noise suppression, EMI filters

The article with more information can be found at our website. Decode the link by QR code.

SUZI – system of acquisition, processing and distribution

Company T-Industry, s.r.o. finished in the year 2011 its own development of a unique universal system of acquisition, processing and distribution of information (SUZI), which was introduced to a Slovak market during the „Automated Control Systems for Industry 2011" conference, which took place on 24th - 25th November 2011 in Chateau Krakovany. Development of this system was a result of a need for the system suitable for a Slovak market and market of V4 countries, which would provide functionality of similar systems from world producers while keeping the price acceptable even by small and mid-sized customers in a processing automation system. Works on this system started in September 2009. Whole project was financially support by the Agency for research and development support.

System SUZI consists of these software subsystems, which are in this article described more in detail:
- SuHub – measurements (process parameters) concentrator
- SuQuation – external computing system
- Archer – archive system of measurements (process parameters)
- SuHmiWorkstation – runtime environment of visualization
- SuHmiEmbedded – embedded runtime environment of visualization

1. Block diagram

The part of the system are also HW modules, which were developed with a maximum emphasis on versatility and portability, that´s why they can widely applied in the existing systems and other industrial technologies. Let´s look together closer to the particular SW subsystems.

SuHub

SuHub is the essential part of SUZI. It is responsible for acquisition, processing and distribution of measurements. It serves as a data source for the visualization subsystem, archive subsystem and the external computing subsystem. SuHub is based on the modular architecture, which enables a simple enlarging of functionality. It consists of input modules, measurement processing modules and output modules.
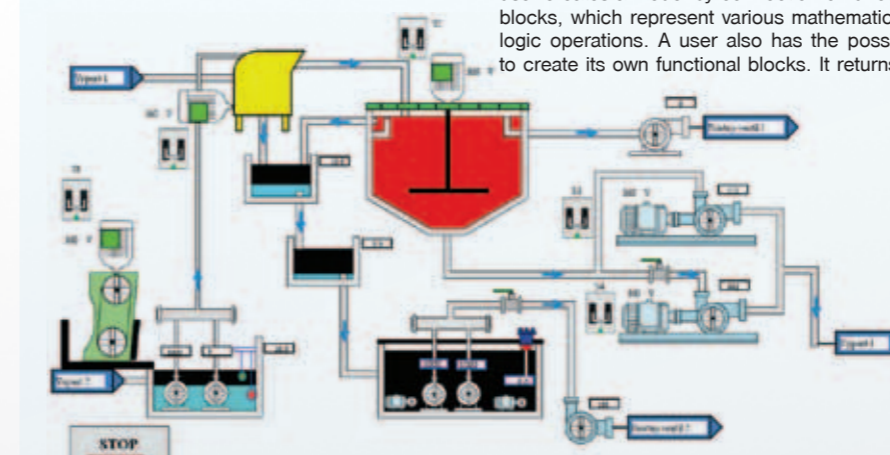
It is possible to run SuHub on the Windows, Linux OS and on more variants of UNIX.

Archer

Archer is the archiving subsystem of SUZI. It is dimensioned for storing of tens of thousands measurements for the period of more months. It provides historical data through the ODBC interface, thus they are available to almost any database application. Thanks to a distributed architecture, the time of SQL requirement processing doesn´t grow with a length of the archive. It takes its configuration from the same configuration database as SuHub. Archer is highly scalable and it is able to effectively utilize multiprocessor 64-bit computers. For its run, it requires Linux or UNIX OS.

SuQuation

SuQuation is the external computing subsystem of SUZI. It is intended for the implementation of more complicated mathematic-logic models. A user creates a model by connection of functional blocks, which represent various mathematic and logic operations. A user also has the possibility to create its own functional blocks. It returns the

calculated values back to SuHubu, from where they are available in the same way like other measurements. SuQuation is able to run on Windows, Linux and more variants of UNIX OS.

Suxplorer, SuHMI Workstation, SuHMI Embedded

SuXplorer is the design subsystem of SUZI, which serves for a simple and intuitive design and creation of SCADA/HMI applications. It is the development environment based on the popular IDE tool Eclipse, which enables to design visualization applications. SuXplorer is able to run on all widely used OS-es – Windows XP/ Vista/7, Linux, or Mac X OS. Module enables to design a visualization by means of basic geometric shapes and consequently to make it work by a lot of mechanisms like scripts, links and events – i.e. to create a visualization, which will immediately reflect a real status of the simulated technology. SuXplorer also contains a various library of pre-created graphic elements (tanks, valves, motors,…), by means of which, a creation of prosionally looking SCADA/HMI applications is the question of minutes. An important part of the SuXplorer module is the intuitive graphic editor of the configuration database. By its means, everyone can configure measurements, linearizations, connections or alarm boundaries for particular visualization applications according to his needs.

Application created by the SuXplorer module can be run in both runtime environments of SUZI system. Runtime environment SuHMI Workstation is built on the Java technology.

Another runtime environment of SUZI os the SuHMI Embedded module. This runtime environment is based upon the Qt technology and it functions similarly like the SuHMI Workstation, but its advantage is low system resources consumption.

2. Visualization created in the SuXplorer module

HW modules

As it was mentioned, for the contact with the outer world, there are readily available SUZI I/O units, offering inputs and outputs, from classic binary, up to industrial analogue current and voltage standards. All modules communicate by means of a widely used ModBus/TCP protocol through Ethernete. This solution predestinates them even for autonomous usage in simpler systems, even without SUZI.

SUZI is the product of one company and one team of developers, what brings the homogenity of the whole product and an excellent integration of particular functional blocks and hardware components. Thanks to the fact, that the whole development team is in Slovakia and it has a long-term practical experience with similar systems in the industrial praxis, a customer will not only receive the product on a CD and a simple manual, but receives also a qualified support, incl. a help on the place of installation.

3. I/O unit for 8 analogue inputs, 4 binary inputs and 2 outputs

We believe that this new product will address you and will provide you a strong and reliable solution of the most demanding industrial applications. Detailed information are available on the product website www.tind.sk/suzi

WEB NEWS

Fast selection using parametric searching

The results of our recent online survey among our customers have confirmed that one of the things you are missing on our web site is parametric searching. In other words to find components faster by using technical specification. We've got good news - we are working on it! Already during the first quarter of 2012 we launch on our website searching using the technical parameters. Now at least a small example of how it will look like…

We strengthen online marketing team

A recent study by Google has brought an interesting finding - 92% of people do research online before buy anything. Together with feedback from you is a fact that has inspired us to create a special team for online marketing. We want you to improve services provided through the internet to save your time and make your „life" easier. After all, time is what we have the least. In 2012, we are preparing for you even more online services and even faster :-).

Buy often the same components?

If so, use the "MyFavorite" in our Online Shop. In the future, save your time when ordering.

What are the main advantages of this function?
- frequently purchased goods you have stored in one place
- know to quickly get them at any time
- there is no search by part number or name
- if you buy parts repeatedly to produce a single PCB you select the appropriate group name and in future will be needed only one click to add to cart
- in the cart can be changed purchased quantities en block - depending on how many pieces you need to make a series of PCB

How do I add a component to Favorites?
Easily. Just click "Add to Favorites". You can find it in the list of products in detail and in a cart. Simultaneously you can set the amount of that goods and target group (set) in which has to be popular component included.

How do I get to my favorite parts?
In the top blue menu has been added item „MyFavorite". After clicking it you will see the current list of favorites groups, which are sorted into your favorite components.
- You can edit components
- You can upload them to your shopping cart
- You can erase them