

MEASURING, POWER & PROTECTION SOLUTIONS

tvr
Instruments Ltd



SHORTFORM BROCHURE

FRER

ADELSYSTEM

ZIEHL

ALFA ELECTRIC

EMKO



Frer manufacture a range of analogue and digital meters with supporting current transformers, voltage transformers and transducers. The product lines cover standard measuring applications; .5%-1%, high accuracy applications; .2 .2S and protection class 5P10 to 5P20.

From their manufacturing facility outside Milan, Frer manufacture a comprehensive range of current transformers for measuring, high accuracy and protection class applications. Being a European manufacturer Frer offer fast efficient and convenient service for the smallest order to meeting the demands of large projects. Frer are ISO9001 approved and carry market specific approval for Russia and the Ukraine. All products carry the CE for compliance to the LVD and EMC directives.

Frer can offer a simple analogue meter through to a remotely monitored installation via any internet enabled device or from a server/PC inside the customer's firewall.

Their data capture package has no monthly or annual repeat fee. The Frerlogger suite of data capture software is designed to capture any data a client can have on a serial network.

Frer's range of multifunction meters have options for many standard communications including, MODbus RTU, Profibus, Johnson Controls and the options for internal web servers with and without memory. The IEC61850 compatible communication interface can be built-in or as a separate DIN rail unit.



Multifunction Meters , CTs, VTs and Shunts, Transducers class .2, .5, 1%, Energy Meters – MID, Earth Leakage Relays Types A and B, Serial Communication and LAN modules
TVR Instruments Limited has been appointed the SOLE AGENTS for the UK and Ireland on behalf of Frer Srl of Italy.



Solutions for power supply continuity

Adel Systems are based in Italy and are a leading developer and manufacturer of industrial switchmode power supplies, 'DC UPS' and intelligent battery chargers.

DC UPS - CBI Series

The CBI DC UPS combine the functions of a power supply, a back up module and of a battery charger in one unit. They use switching technology with microcontrollers and optimise the supply to the DC load either when the AC mains is present or when on battery backup. The CBI units do not allow for deep discharge of the batteries. The CBI units switch from the mains to the battery in the event of a mains failure without interruption.

There is automatic protection without fuse against the reserve polarity, short circuit and overload and overvoltage. They carry out diagnostic checks on the connected battery through the Life Test, every 90 minutes, enabling the users to select the most appropriate charging curve to maximise the efficiency of the system and to support a life battery.

They are equipped with two relays; one to operate to indicate the status of the mains or battery backup and another to indicate any of the eight battery protection functions that the unit monitors.

The primary function of the CBI unit is to optimise the battery condition so when it is required the battery is as good as its life cycle will allow for. There are options for communication via CANbus and MODbus on certain modules, and the DYP351 displays allows on the CBI500W and the CBI280 series an option for a door mounted display for battery status updates locally. All units are DIN rail mounted and there is a range of battery carriers available to safely and easily fit the battery packs into the enclosure or panel.

BATTERY CHARGERS - CB Range

The Adel System CB battery chargers are a range of microprocessors controlled chargers. Based on switch mode technology, they produce an output voltage stabilised at a pre-set value, even when not charging the battery.

These battery chargers have three charging levels - recovery, boost and trickle charge. All the chargers have a relay output for a range of battery bank protection functions: replace battery or flat battery; fault in the main; high voltage at the battery ends; open or sulphated battery; reverse polarity, short-circuited element and wrong battery voltage. The CB battery charger checks the battery every 90 minutes. All of the modes are automatic and other than selecting the battery type and charge current level no other set up is required.



Power Supplies for Mains Connection - DFlex & FLEX SERIES

The Adel system offers a truly complete range of industrial power supply units for different applications. The wide range of input voltages enables them to operate in any part of the world. The range is available with UL and CSA type-approved, with design based on experience gained over the years.

The FLEX range of products is characterised from 1, 2 and 3-phase input up to 700W with current rating ranging to 25A and a power flexibility that reaches 50% of the rated current. They are characterised by their flexibility of use that allows them to satisfy the most varied applications and requirements, according to the existing norms. The declared ambient temperature operations field start from 40 to 60°C.



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ZIEHL

The Ziehl range of protection and measuring devices for industrial systems are innovative, future-oriented and renowned for top quality. Working to the highest technical benchmarks, they have developed and are produced using state-of-the-art systems under a demanding quality management system.

They are pioneers in producing electronic devices for modern and reliable measurement, control and meeting demanding statutory regulation requirements – be it in industrial applications, companies, private homes or rented buildings. Goals such as sustainability, energy efficiency and maximum economic efficiency can be achieved using their products. The quality of product manufacture and product features means Ziehl parts have global approvals to meet local market demands.

The production facility in Germany is covered by ISO 9001:2015 and ATEX directive 2014/34/EU certification and several product carry approval for UL-approved applications.

The Ziehl product range covers:

Temperature monitoring

Ziehl manufacture a range of temperature monitoring relays with corresponding temperature sensors to protect the winding temperature of electronic motors against heat. The product line covers a range of extended monitoring applications for transformers, storage and other installations. Temperature sensors such as PTC thermistor temperature sensors or all types of resistance thermometers and thermocouples are available to match the monitoring device.

Grid Monitoring- Loss of Mains and energy efficiency

The increase in self generation and feed into the local grid has lead to strict regulatory requirements for protection relays. Ziehl's UFR1001E is accepted across many countries as the unit for Loss of Mains protection and to prevent feeding an islanded part of the grid.

With phase, voltage, frequency and ROCOF protection compliant to the local market regulations. The UFR1001E, certified for grid and plant protection and approved for Germany, Austria, Great Britain, France, Belgium, Ireland, Australia, Japan and South Africa as well as the SPI1021 for Italy. The New EFR range of energy efficiency relays help assist in energy efficiency and protects against back feeding or exceeding maximum demand.

Measuring Transducers for Temperature and Electrical Quantities

A range of field programmable transducers for the measurement of AC and DC current, voltage or resistance, isolating amplifiers and measuring point changeover switches round off the Ziehl product line. At only 22mm wide this range offers a powerful compact modern device.





Alfa Electric manufacture a range of enclosure fans and air-conditioning units for use in the switchboard industry. Alfa manufacture all their parts in Italy. Over 30 years' experience in the industrial enclosure temperature environment industry has lead to a comprehensive line of products which offer technical excellence and reliability.

The main product groups they cover are:

Air conditioning units for containers and panels, fans for the control of ambient temperatures within a panel, heaters, large and small from 10W to 2000W, control thermostats and hydrostats, lighting for the enclosure and accessories to complete a panel.

The Alfa Electric range carry approvals for UL, LVD and CE.

The Italian manufacturing facility is modern and controlled to ensure the highest quality standards and adherence to the demands of the market for service support and competitive pricing. Alfa Electric can deliver and support products and projects on short lead times to exacting requirements.



Since 1986 EMKO ELEKTRONIK A.S. has designed, manufactured measurement and control instruments, temperature sensors and generator set controllers for over 40 years from their modern vertically integrated manufacturing facility in Bursa Turkey.

A customer-oriented approach to product features and quality has lead to the design and manufacture of a range of multifunction process control instruments, counters, time-relays, thermocouples and thermoresistance, control and protection generating systems; genset controls, automatic transfer switching, manual keystarts.

The product range and services meet the needs of the process control application in many industries as well as the requirement for genset controllers.

Thanks to the quality policy and procedures issued by the management of Emko Elektronik, Emko operate to TS ISO EN 9001 Quality System. All manufactured parts conform to the directives covered by the CE mark meeting the requirements of EMI, ESD, EFT, PQF, Surge, LVD directives. Environmental Conditions tests on all products are supported by their inhouse test laboratory.



The EMKO Products Cover:

- Process measurement and control instruments which conform to the industry standards
- The measurement, conversion and control of process parameters: temperature, pressure, weight, flow, level, speed, humidity, number, time, voltage and current etc.
- Temperature sensors, thermocouples and thermoresistance
- Control and protection generating systems; Genset Controllers, Automatic Transfer, Switching, Manual Keystarts, set to mains and set to set.



**Multifunction Meters | CTs, VTs and Shunts | Transducers | Energy Meters - MID | Bargraphs | Earth Leakage Relays | Protection Relays
Battery Chargers | Power Supplies | DC UPS | Generator Controllers | Remote Monitoring | Ventilation Control**

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