

# ELFA-INFO

New products from ELFA • Edition 1/2003

# 1

**Connector for WLAN**


**A quality tool at the right price**

**Versatile 15" TFT display**

**Get a warning in time with DR X**

**New manufacturer – Torex**

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SE-175 80 Järfälla  
Phone: +46 8-580 941 00  
Fax: +46 8-580 943 00  
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Prices are approximate. Local deviations may occur. Prices listed in euro, excl. VAT.

### International deliveries

ELFA AB, SE-175 80 Järfälla  
Order phone: +46 8 580 941 30  
Order fax: +46 8 580 941 11  
E-mail: [order@elfa.se](mailto:order@elfa.se)  
Internet: [www.elfa.se](http://www.elfa.se)

## Convenient

The dimmer can be used as a touch dimmer and can also be controlled by any IR dimmer by means of simply programming any buttons to control the dimmer. Max. 300 W filament lamp or conventional 40–400 VA transformer. Can also be used to simulate presence.



Manufactured by Eljo

| Model         | Colour      | Stock no. | Price each |
|---------------|-------------|-----------|------------|
| E19 916 11 IR | Polar white | 36-017-70 | 56,80      |

## Halogen-free

Halogen-free cable channels from Thorsman in sizes 20x10, 20x17 mm, and in lengths of 2.5 metres. Stamped holes every 100 mm for fastening. The channels and accessories do not emit any noxious or corrosive gases in the event of fire.



Manufactured by Thorsman

| Model    | Dimensions            | Stock no. | Price each |
|----------|-----------------------|-----------|------------|
| 5400 110 | Channel 20x10 mm      | 36-490-01 | 5,09       |
| 5400 120 | Channel 20x17 mm      | 36-490-19 | 7,37       |
| 5401 011 | Inner corner 20x10 mm | 36-490-43 | 2,07       |
| 5401 021 | Inner corner 20x17 mm | 36-490-50 | 2,40       |
| 5401 111 | Outer corner 20x10 mm | 36-490-84 | 2,17       |
| 5401 121 | Outer corner 20x17 mm | 36-490-92 | 2,51       |
| 5401 211 | L-piece 20x10 mm      | 36-491-26 | 1,89       |
| 5401 221 | L-piece 20x17 mm      | 36-491-34 | 2,33       |
| 5401 311 | End piece 20x10 mm    | 36-491-67 | 0,84       |
| 5401 321 | End piece 20x17 mm    | 36-491-75 | 0,95       |

## Same but in reverse

A serial coaxial connector with reverse polarity. Male plugs have socket contacts, female plugs and female panel sockets have pin plugs. For use in WLAN applications, for example. All devices have a crimp connection and 50 Ohm impedance.



Manufactured by Amphenol

| Model                   | Cable Type     | Stock number | Price each |
|-------------------------|----------------|--------------|------------|
| BNC male plug           | RG58C/U        | 46-450-08    | 5,00       |
| BNC female plug         | RG58C/U        | 46-450-16    | 3,93       |
| BNC female panel socket | RG58C/U        | 46-450-24    | 4,96       |
| TNC male plug           | RG58C/U        | 46-450-57    | 5,00       |
|                         | RG213          | 46-450-65    | 8,18       |
|                         | RG58C/U/angled | 46-450-73    | 5,99       |
| TNC female plug         | RG58C/U        | 46-450-81    | 3,93       |
| TNC female panel socket | RG58C/U        | 46-450-99    | 4,67       |
|                         | RG178          | 46-451-07    | 7,85       |
| SMA male plug           | RG58C/U        | 46-451-49    | 8,18       |
|                         | RG58C/U/angled | 46-451-56    | 8,18       |
|                         | RG174          | 46-451-64    | 8,18       |
| SMA female panel socket | RG174          | 46-451-72    | 7,56       |
| N male plug             | RG58C/U        | 46-452-22    | 7,27       |
| N female plug           | RG58C/U        | 46-452-30    | 5,66       |

### When 1 becomes 3

Eurotriplex tap contact for connecting 3 Eurostick plugs to one socket. S, N and FI-labelled, 16 A, 250 V.



| Stock no. | Price each |
|-----------|------------|
| 43-317-32 | 11,34      |

### Maintenance-free

LED lamp with telephone slide lamp socket type T5.5 and T1¼ Midget Groove. Made up of a single LED. Low current consumption, long life. Non-polarity dependent. Can be used for both AC and DC.



Manufactured by EAO

| Technical data     |           |        |       |      |       |
|--------------------|-----------|--------|-------|------|-------|
| DC voltage:        | 14 mA     |        |       |      |       |
| AC voltage:        | 7 mA      |        |       |      |       |
| Size:              | 5.8x30 mm |        |       |      |       |
| Colour:            | Red       | Yellow | Green | Blue | White |
| Luminous flux mcd: | 330       | 280    | 910   | 350  | 350   |

| Voltage     | Colour | Stock no. | Price each |
|-------------|--------|-----------|------------|
| Socket T5.5 |        |           |            |
| 12 V        | Red    | 33-594-29 | 5,12       |
| 12 V        | Yellow | 33-594-45 | 5,75       |
| 12 V        | Green  | 33-594-52 | 5,11       |
| 12 V        | Blue   | 33-594-60 | 7,67       |
| 12 V        | White  | 33-594-94 | 7,67       |
| 24 V        | Red    | 33-595-28 | 5,12       |
| 24 V        | Yellow | 33-595-44 | 5,75       |
| 24 V        | Green  | 33-595-51 | 5,11       |
| 24 V        | Blue   | 33-595-69 | 7,67       |
| 24 V        | White  | 33-595-93 | 7,67       |

| Voltage                  | Colour | Stock no. | Price each |
|--------------------------|--------|-----------|------------|
| Socket T1¼ Midget Groove |        |           |            |
| 12 V                     | Red    | 33-596-27 | 4,75       |
| 12 V                     | Yellow | 33-596-43 | 5,39       |
| 12 V                     | Green  | 33-596-50 | 5,26       |
| 12 V                     | Blue   | 33-596-68 | 6,57       |
| 12 V                     | White  | 33-596-92 | 6,57       |
| 24 V                     | Red    | 33-597-26 | 4,75       |
| 24 V                     | Yellow | 33-597-42 | 5,39       |
| 24 V                     | Green  | 33-597-59 | 5,26       |
| 24 V                     | Blue   | 33-597-67 | 6,57       |
| 24 V                     | White  | 33-597-91 | 6,57       |

### Test pins for 2 mm system

Test pin with finely ground tip suitable for 2 mm laboratory plugs.



Manufactured by Hirschmann

| Technical data     |               |
|--------------------|---------------|
| Rated voltage:     | 60 Vdc        |
| Temperature range: | -25 to +60 °C |
| Total length:      | 86 mm         |

| Colour | Stock no. | Price each |
|--------|-----------|------------|
| Black  | 40-401-01 | 4,34       |
| Red    | 40-401-19 | 4,34       |

### Set of measurement cables for 2 mm system



Manufactured by Hirschmann

| Contains: |   |
|-----------|---|
| -         | 2 measurement cables model MVL 2/100 with PVC cable and with 2-mm laboratory plugs, length 1 m. |
| -         | 2 insulated crocodile clips, model MA 1 for 2-mm laboratory plug.                               |
| -         | 2 test pins with grab hook model KLEPS 2BU for 2-mm laboratory plugs                            |
| -         | 2 test pins model MPS 1 with finely ground tip for 2-mm laboratory plugs                        |

| Stock no. | Price each |
|-----------|------------|
| 40-444-00 | 39,10      |

### 230 V~ motion detector

The Luxomat LC140 IR detector for automatic activation of lighting, both indoors and outdoors. Activated when people, animals, cars or other moving heat sources pass through the detector's detection range. The detector switches off the lighting after a preset period of time. Adjustable light sensitivity means that

the detector can also be used during the daytime. The detection area can be limited with the aid of blinds (supplied).

#### PLEASE NOTE

Only for permanent installation by an authorised electrician. As the relay contacts are not potential-free, the motion detector cannot be used when connected to extra-low voltage.

| Technical data             |   |
|----------------------------|---|
| Range:                     | 12 m  |
| Angle of detection:        | 140°  |
| Operating voltage:         | 230 Vac (+6, -10%) 50-60 Hz                                   |
| Contact function:          | Unipolar, closing   |
| Circuit-breaking capacity: | 10 A 230 V~, 2300 VA (cos=1)<br>5 A 230 V~, 1150 VA (cos=0.5) |
| Housing:                   | UV-resistant polycarbonate                                    |
| Enclosure class:           | IP44 / class II   |
| Temperature range:         | -20 to +50 °C   |
| Dimensions:                | 67x80x91 mm   |



Manufactured by B.E.G

| Model         | Stock no. | Price each |       |
|---------------|-----------|------------|-------|
|               |           | 1-         | 10-   |
| Luxomat LC140 | 37-799-15 | 35,10      | 31,60 |

### For flexible solutions

Cable protection hoses that can be opened, for applications where you want to be able to add a cable shield to an existing cable stem or to be able to make changes at a later date. The hose is manufactured in black polypropylene and is halogen-free.

| Size NW                             | Stock no. | Price/m |
|-------------------------------------|-----------|---------|
| 10 mm                               | 55-135-02 | 2,74    |
| 14 mm                               | 55-135-10 | 5,03    |
| 20 mm                               | 55-135-28 | 7,08    |
| 23 mm                               | 55-135-36 | 9,57    |
| Straight screw connection for above |           |         |
| 10 mm                               | 55-135-51 | 6,16    |
| 14 mm                               | 55-135-69 | 6,63    |
| 20 mm                               | 55-135-77 | 9,81    |
| 23 mm                               | 55-135-85 | 13,30   |



## Classic shape, new technique

Type Dulux EL Classic Longlife. Bulb-shaped fluorescent lamp with E27 socket. Suitable for fittings where the lamp is visible. Produces an agreeable, warm-toned light. High light yield in relation to power makes it possible to replace a regular filament lamp with a

Classic whose power is about 4 times as low. Can be switched on at temperatures as low as -30 °C. Light colour: 2700 K (827 incandescent light, resembling light from a filament lamp)



Manufactured by Osram

| Technical data            |              |      |      |
|---------------------------|--------------|------|------|
| Socket:                   | E27          |      |      |
| Voltage:                  | 230 Vac      |      |      |
| Service life:             | 10 000 hours |      |      |
| Dulux-EL Classic:         | 5 W          | 7 W  | 10 W |
| Corresponding light bulb: | 20 W         | 35 W | 50 W |

| Power W           | Luminous flux | Diameter | Length | Stock no. | Price each |      |
|-------------------|---------------|----------|--------|-----------|------------|------|
|                   |               |          |        |           | 1-         | 10-  |
| 5                 | 150 lm        | 60 mm    | 111 mm | 33-544-04 | 10,60      | 9,33 |
| 7                 | 350 lm        | 70 mm    | 147 mm | 33-544-46 | 10,60      | 9,33 |
| 10 *              | 500 lm        | 60 mm    | 124 mm | 33-544-61 | 10,60      | 9,33 |
| Plastic lamp bulb |               |          |        |           |            |      |

## The place for bright ideas

LED illuminated sign comprising 4 LEDs. High luminance, evenly lit surface, low power consumption, low heat generation and long service life. Used for back-

ground lighting of text (e.g. in portable illuminated name signs), to provide guidance or information in premises, etc. Supplied with battery.



Manufactured by Osram

| Technical data          |                         |
|-------------------------|-------------------------|
| Operating voltage:      | 9-12 Vdc                |
| Power consumption (9 V) |                         |
| red, orange:            | 20 mA                   |
| green, blue, white:     | 40 mA                   |
| Temperature range:      | -10 to +45 °C           |
| Dimensions:             | 71.5x38.5x9.5 (13.3) mm |
| Windows:                | 52.0x22.0 mm            |

| Model      | Colour | Luminance cd/m <sup>2</sup> | Wavelength nm | Stock no. | Price each |       |       |
|------------|--------|-----------------------------|---------------|-----------|------------|-------|-------|
|            |        |                             |               |           | 1-         | 5-    | 10-   |
| OS-ML90A-S | Red    | 185                         | 633           | 33-634-21 | 29,00      | 26,90 | 24,20 |
| OS-ML90A-O | Orange | 420                         | 606           | 33-634-39 | 29,00      | 26,90 | 24,20 |
| OS-ML90A-T | Green  | 290                         | 528           | 33-634-54 | 29,00      | 26,90 | 24,20 |
| OS-ML90A-B | Blue   | 290                         | 470           | 33-634-62 | 29,00      | 26,90 | 24,20 |
| OS-ML90-W  | White  | 420                         | -             | 33-634-96 | 29,00      | 26,90 | 24,20 |

## Dust-free chalkliner

Electronic laser line generator that projects a 10 metres long, visible laser line on most surfaces, also uneven surfaces. Twin levellers for wave or vertical setting. Easily attached to gypsum wallboards and wood by an attachment pin which can be extended on the underside. Cover of impact-proof ABS plastic with rubber inserts for good grip. Powered by 2 LR6 batteries (ordered separately).



Manufactured by Strait-Line

| Technical data         |                 |
|------------------------|-----------------|
| Optical power:         | 1 mW, class 2   |
| Laser diode:           | Red, 635 nm     |
| Batteries:             | 2 1.5 V LR6     |
| Operating time:        | 60 h continuous |
| Operating temperature: | -1 to +40 °C    |
| Dimensions:            | 120x42x78 mm    |
| Weight:                | 180 g           |

| Type        | Stock no. | Price each | 5-    |
|-------------|-----------|------------|-------|
| Strait-Line | 80-772-57 | 68,40      | 64,30 |

## Watertight lead charger

The Mascot 2140 is a watertight (IP67), sturdy, heat-resistant three-stage charger, suitable for installation in vehicles or other applications where the charger is subjected to mechanical stress. The charging characteristic makes the charger suitable for both cyclical operation and maintenance charging.



| Technical data     |                        |
|--------------------|------------------------|
| Input voltage:     | 90-264 Vac             |
| Temperature range: | -10 to +40 °C          |
| Medical approval:  | complies with EN 60601 |

| Model   | Voltage/current | Stock no. | Price each |
|---------|-----------------|-----------|------------|
| 2140/12 | 12 V/4 A        | 69-414-70 | 84,30      |
| 2140/24 | 24 V/2 A        | 69-414-88 | 84,30      |

## Gilt video cable assembly

Scart – video cable assembly of very high quality. Metal covers on all connectors. Gilt contacts. Conductor and screen are silver-plated for optimum performance.



Manufactured by QED

| Length        | Stock no. | Price each |
|---------------|-----------|------------|
| S-video-scart |           |            |
| 2.0 m         | 42-640-65 | 82,10      |
| 5.0 m         | 42-640-73 | 115,00     |
| Scart-scart   |           |            |
| 0.5 m         | 42-640-08 | 65,70      |
| 1.0 m         | 42-640-16 | 82,10      |
| 2.0 m         | 42-640-24 | 98,50      |
| 3.0 m         | 42-640-32 | 115,00     |
| 5.0 m         | 42-640-40 | 140,00     |



Manufactured by Weller

## From 0 to 350 in 12 seconds!

### New miniature soldering pen from Weller

A new, small, handy, fast soldering pen that is compatible with all Weller digital 80 W transformers, and of course with all large repair stations such as the WMD 3.

The heating element is very close to the tip of the pen. Provides extremely fast heat transfer. The tip's casing also goes into the handle, and a conical mount guarantees optimal heat transfer between element and tip.

The element is a new type, wire-wound with silver wires, providing a faster power transfer to the tip than is possible with conventional elements.

In a nutshell, the new WMP pen from Weller is faster, safer and simpler than anything that Weller has previously produced.

The pen is manufactured in an ESD-proof design.

Supplied with WPHM stand with cleaning sponge and standard NT1 tip.

The soldering pen can be bought separately with a stand to match your existing digital transformer, or there are two complete soldering stations.

### Complete stations

The WSL is a digital display soldering station complete with the new WMP soldering pen.

Supplied with PUD 81 digital display transformer and WMP soldering pen, NT1 tip, WPHM stand and cleaning sponge.

WSL2, a digital display soldering station with 2 soldering pens that can both be used simultaneously.

Supplied with PUD 161 digital display transformer and WMP soldering pen, NT1 tip, WPHM stand and WSP 80 with LT-B tip and WPH 80 stand; includes cleaning sponges.

| Technical data                 |                  |
|--------------------------------|------------------|
| WSL                            |                  |
| Temperature range, adjustable: | 50 to 450 °C     |
| PUD 81 transformer:            | 230 V/24 V/80 W  |
| Dimensions (w×l×h):            | 166x115x101 mm   |
| weight:                        | 2.6 kg           |
| WSL2                           |                  |
| Temperature range, adjustable: | 50 to 450 °C     |
| Transformer: PUD 161:          | 230 V/24 V/160 W |
| Dimensions (w×l×h):            | 166x115x101 mm   |
| weight:                        | 2.9 kg           |

| Technical data |           |
|----------------|-----------|
| Soldering pen: | 24 V/65 W |
| Total length:  | 160 mm    |
| weight:        | 39 grams  |

| Model | Description      | Stock no. | Price each |
|-------|------------------|-----------|------------|
| WMP   | Soldering pen    | 82-206-26 | 180,00     |
| WSL   | Complete station | 82-206-00 | 366,00     |
| WSL 2 | Double station   | 82-206-18 | 592,00     |

A large range of soldering tips suitable for the WMP pen may be found on our website.

## Give your old lamp a new look

Do you have an old Petzl Duo head lamp?

Upgrade it with a new LED module!

The highly successful Duo lamps are now available with new LED technology. They

now have LED modules with 5 or 8 modules and a halogen lamp. You can easily upgrade your existing Duo with an LED module; just replace the reflector insert with a new module, screw it together and it's finished. The diodes have a service life of 100,000 hours. Total operating time up to 240 hours, depending on choice of batteries and type of lamp. The lamp is well balanced between the lamp housing at the front and the battery compartment at the back of the head.

DuoBelt is supplied with a larger battery compartment, which is secured to the belt. Batteries are ordered separately.



Manufactured by Petzl

### Technical data

|                         |  |
|-------------------------|--|
| Light sources:          | 6.0 V halogen, 6.0 V 5/8 LED           |
| Batteries:              | DUO LED 5/8, 4xLR6. Dual LED 5, 4xLR14 |
| Halogen range:          | 100 m, LED: 10 m                       |
| Halogen operating time: | 3 hours, LED: 100,000 hours.           |
| Weight:                 | 200 grams excl. batteries.             |
| Guarantee:              | 3 years                                |

| Model  | Designation   | Stock no. | Price each |
|--------|---------------|-----------|------------|
| E69    | Duo LED 5     | 80-958-82 | 81,40      |
| E73    | DuoBelt LED 5 | 80-958-87 | 81,40      |
| E71    | Duo LED 8     | 80-957-96 | 97,00      |
| E60220 | LED module 5  | 80-958-90 | 35,60      |
| E60900 | LED module 8  | 80-958-95 | 55,70      |

For other Petzl lamps and accessories, search under "Petzl" at [www.elfa.se](http://www.elfa.se).

## Mobile lighting

Defender Uplight is a new kind of work lighting with a very robust design for mobile lighting. Suitable for when lighting is required when working on building sites, in car workshops or for certain outdoor activities. Uplight provides a powerful, reliable light. It is very easy to transport, handle and store.

The lamp is extremely difficult to tip over, thanks to the sturdy base. It has self-righting properties, as the base can be filled with dry sand. Outer casing in impact-resistance polycarbonate plastic, which guarantees a high level of protection.

The lamp has an integrated, detachable aluminium reflector, which when installed provides light with an angle of 180°, and when detached the angle is 360°.

Each lamp has a socket connected in series and is supplied with 5 m cable.

Several lamps can be connected in series: up to 69.

### Technical data

|  |
|--|
| Withstands temperatures between -25° and +50 °C. |
| IP-44 classified.                                |
| Operating voltage 120 to 277 Vac 50/60 Hz.       |

| Height/output | Stock no. | Price each |
|---------------|-----------|------------|
| 60 cm/18 W    | 80-963-07 | 143,00     |
| 120 cm/36 W   | 80-963-15 | 151,00     |



## Quality tools at excellent prices

ELFA is very proud to be able to present an effective range of what we call machined fixed torsion tools. Designed to meet the high demands on reliability in the specialist sector for service and maintenance. The guarantor of this high level of quality is the manufacturer, the Kabo Tool Company, with 27 years' experience of the development and manufacture of tools, with more than 100 international patents and strict quality control standards.

To prove this high quality, ELFA issues lifetime Guarantee on all tools from the Kabo Tool Company.

ELFA's range of fixed spanners includes combination spanners, both short and long, with and without ratchet function and a number of catches. All spanners are

available individually, and there are also some sets.

All tools are highly polished and manufactured in chrome molybdenum steel, and the fixed spanners are fitted with a Round Corner® grip for the best possible hold. The non-slip models are ideal when working on damaged or round-edged bolts/nuts with up to 75 % rounding. All spanners with a ratchet function have an integrated 72-step ratchet which only requires a 5-degree opening to work. A unique range of articulated ratchet spanners are also available, and these only require 3-degree opening. For the complete range, search our catalogue on the Internet under the manufacturer's name, Kabo.

### Lifetime guarantee

ELFA's lifetime guarantee on tools supplied that are manufactured by the Kabo Tool Company covers any faults that make a tool unusable for the user and that are caused by faults in the material, manufacturing or design. The guarantee does not cover faults caused by normal wear, neglect, improper use, changes to or other misuse of the tool. A faulty tool must be returned to ELFA for inspection before any replacement is made.



Manufactured by Kabo



Manufactured by Sundove

### New, value-for-money range of screwdrivers

Includes the most common sizes of slotted, Phillips and Torx® screwdrivers. Also held in stock is a range of the most common insulated screwdrivers for work with voltage up to 1000 V.

All screwdrivers have ergonomically correct shafts and easy-grip handles.

Durable labelling with colour codes makes it easy to choose the right tip.

Manufactured in twin-component ABS plastic and neoprene rubber. Resistant to various oils and acids. The blades are manufactured in chrome molybdenum-vanadium steel with a hardened black matt chrome-plated magnetic tip.

All tips comply in form and strength with national and international standard requirements as defined by ISO 2380.



Manufactured by Solomon

## Soldering station SR-976 ESD

Soldering station with electronic temperature control and continuous temperature regulation 250 to 480 °C. A LED indicates set/reached temperature. The soldering pen has a ceramic heating element which provides quick heating of the tip. The soldering tip is surface-treated (aluminium blasted) for long life. The soldering station is manufactured in an ESD-proof design.

The station is supplied with a soldering pen with a 0.5 mm tinned conical tip, stand and cleaning sponge.

### Technical data

|                    |                  |
|--------------------|------------------|
| Power:             | 50 W             |
| Operating voltage: | 230 Vac/50 Hz    |
| Dimensions:        | W175xD103xH90 mm |
| Weight:            | 870 g            |

### Soldering tip

| Type       | Shape       | Tip width | Stock no. | Price each |
|------------|-------------|-----------|-----------|------------|
| 976T-B-AB  | Conical     | 0.5 mm    | 82-422-10 | 3,21       |
| 976T-BC-AB | Oblique cut | 1.0 mm    | 82-422-12 | 3,21       |
| 976T-3D-AB | Conical     | 3.0 mm    | 82-422-14 | 3,21       |
| 976T-4C-AB | Oblique cut | 4.0 mm    | 82-422-16 | 3,21       |

| Type       | Stock no. | Price each |
|------------|-----------|------------|
| SR-976 ESD | 82-422-08 | 66,40      |

### Spare parts

| Type     | Description             | Stock no. | Price each |
|----------|-------------------------|-----------|------------|
| 976ESD-I | Soldering pen 50 W      | 82-422-24 | 24,10      |
| 976H     | Ceramic heating element | 82-422-26 | 18,80      |
| 976S     | Cleaning sponge         | 82-422-28 | 1,14       |

## Industrial modules for measurement, control and monitoring via a local network

The ADAM-6000 is a range of industrially adapted measurement and control modules that can be simply connected to a computer via an existing network (Ethernet). This means that installation is simple and cost-efficient, as local networks are often well developed in factories or office buildings.

- Mounted on DIN rail or directly to the wall.
- Standard Ethernet 10/100 BaseT interface
- "Plug & play" connection direct to computer or via hub/switch.
- Supply voltage: 10 to 30 Vdc

The ADAM-600 is very easy to operate:

1. Install network cabling, power supply and software supplied
  2. Set suitable IP address and sub-network mask for the ADAM module
  3. Communicate via demo program or your own program
- Supplied with CD containing manual in English, software and ActiveX control



| Designation | Function             | Stock no. | Price each |
|-------------|----------------------|-----------|------------|
| ADAM-6017   | 8 analogue in/2 DO   | 25-791-18 | 431,00     |
| ADAM-6050   | 12 DI/6 DO           | 25-791-34 | 221,00     |
| ADAM-6051   | 12 DI/2 DO insulated | 25-791-42 | 221,00     |
| ADAM-6060   | 6 relay/6 DI         | 25-791-67 | 240,00     |

Suitable accessories

| Designation | Function                  | Stock no. | Price each |
|-------------|---------------------------|-----------|------------|
| ADAM-6510   | Hub 4-port 10 Mbps        | 25-792-09 | 109,00     |
| ADAM-6520   | Switch 5-port 10/100 MBPS | 25-792-17 | 173,00     |

Suitable network cabling is cat 5 UTP. When connecting directly to a computer crossed cabling is used, and straight cabling when connected to a hub/switch.

## 15" TFT display with data and video input

Compact TFT display. The display is only 18 mm thick and has an input for data (XGA resolution), composite video and s-video. The display's dimensions make it suitable for recessing into a wall, panel, machine or other equipment with a limited fitting depth. Display parameters are set by means of the "On screen display"(OSD).

| Technical data         |                       |
|------------------------|-----------------------|
| Resolution:            | max 1024x768 pixel    |
| Contrast:              | 300: 1                |
| Refresh rate:          | 25 ms                 |
| Brightness:            | 250 cd/m <sup>2</sup> |
| Display area:          | 304x228 mm            |
| Outer dimensions:      | 332x256x18 mm         |
| Operating temperature: | 0 to +50 °C           |
| Viewing angle:         | H 65, V 50 degrees    |
| Assembly holes:        | 4x3.2 mm              |

Manufactured by Samsung



| Model        | Description                                | Stock no. | Price each |
|--------------|--|-----------|------------|
| LTM150XI-V01 | Samsung 15" TFT                            | 25-309-05 | 558,00     |
| DB 09 003    | Cable assembly LTM150XI-V01 for adaptation | 25-309-21 | 45,10      |
| AD 4512      | Mains adapter for LTM150XI                 | 25-309-39 | 35,40      |

## Wireless

The GD-01 is a transparent GSM modem that enables the user to operate, monitor and control equipment without a wire-based connection. The modem is ideal for communication with equipment located in remote places.

The modem can also send SMS messages to a pre-programmed number when it is "triggered" by an external signal (DTR). It can be used, for example, to transmit a buzzer alarm from unmanned stations.

- GSM network: 900/1800 MHz
  - Data speed up to 14.4 kbit/s
  - RS-232 connection via DB9 or screw block
  - Configured by AT commands
  - Fitted to DIN rail
  - Supply voltage: 12 to 36 V=
- Supplied with manual in English, CD and aerial with magnetic base and 2.5 m cable.



### PLEASE NOTE!

The modem must be complemented by a GSM subscription for data communication, e.g. Telia DOF, not regular cash cards.

| Model | Stock no. | Price each |
|-------|-----------|------------|
| GD-01 | 25-617-02 | 372,00     |

## Inverter with sinusoidal output voltage

Inverter that converts 12 V or 24 V direct voltage (e.g. car battery) into 230 V sinusoidal alternating voltage.

Suitable for powering TV/video, computers, electrical tools or other devices connected to the power supply in vehicles, for example.

Sinusoidal output voltage provides the facility to connect equipment that is sensitive to modified square waves that occur in normal inverters.

The inverter is fitted with temperature protection as well as protection against short circuits and low battery voltage.



| Model | Input voltage  | Stock no. | Price each |
|-------|----------------|-----------|------------|
| 2284  | 12 V (10–15 V) | 69-715-01 | 178,00     |
| 2284  | 24 V (20–30 V) | 69-715-19 | 178,00     |
| 2285  | 12 V (10–15 V) | 69-715-27 | 231,00     |
| 2285  | 24 V (20–30 V) | 69-715-35 | 231,00     |
| 2286  | 12 V (10–15 V) | 69-715-43 | 366,00     |
| 2286  | 24 V (20–30 V) | 69-715-50 | 366,00     |
| 2287  | 12 V (10–15 V) | 69-715-68 | 716,00     |
| 2287  | 24 V (20–30 V) | 69-715-76 | 716,00     |

### Technical data

| Model | Output, continuous | Output, intermittent | Dimension     | Connection                              |
|-------|--------------------|----------------------|---------------|---|
| 2284  | 150 W              | 300 W                | 190x150x65 mm | Battery clip + cigarette lighter outlet |
| 2285  | 300 W              | 500 W                | 285x150x65 mm | Battery clip                            |
| 2286  | 600 W              | 1000 W               | 335x263x83 mm | Screw block                             |
| 2287  | 1000 W             | 2000 W               | 395x263x83 mm | Screw block                             |



## Dr X – warns you before it's too late

Dr X is a range of transmitters that respond to changes in processes from the normal status. For example, you can install Dr X on a machine, set the sensitivity rate so that the signal lamp just goes out. After a while, perhaps a bearing in the machine will start to become worn, and the machine will vibrate a little more. Dr X senses the change and warns that it is time to service the machine before a total breakdown occurs.

It is a cheap means of insuring against unexpected breakdowns.

The range consists of a number of models for various applications. It emits a signal via a red LED, and there is a closing contact to feed the signal to a central control panel if required.

### Dr Hiss

Gives an early warning of leaking liquids, gas under pressure or vacuum. Can provide an early indication that a washer is starting to wear out. Detects the ultrasound or high-frequency hiss that a leak causes in such applications. It can also detect the special sound generated in small high-voltage short-circuit, which can give an early warning of poor insulation in a high-voltage station.

### Dr Vibe

Gives an early warning of increasing low-frequency vibration, e.g. in conveyors, compressors, turbines, motors, etc. Can give a clear indication that rubber bushings or other shock-absorbent units are getting worn. The measurement range is 0.6 to 2.7 g up to 300 Hz.

### Dr Knock

Gives an early warning of parts coming loose in machines and making a knocking sound, e.g. screws and nuts that are coming loose.



### Dr Cool

Detects and warns of a sudden reduction in temperature. Measurement range –25 to +85°C.

### Dr Heat

Detects and warns of a sudden increase in temperature. Measurement range –25 to +85°C.

### Dr Rumble

Gives an early warning of worn bearings in rotating machines. Detects the special high-frequency hiss generated by worn bearings.

### Common data:

|                    |   |
|--------------------|---|
| Visible indicator: | Green/red LED                               |
| Power supply:      | 10 to 32 Vdc, 20 mA                         |
| Enclosure class:   | IP65  |
| Output:            | Insulated closing contact max. 48 V, 100 mA |
| Assembly:          | screw fastening 2xM4                        |
| Size:              | 18x53x97                                    |

| Model     | Stock no. | Price each |
|-----------|-----------|------------|
| Dr Rumble | 76-735-02 | 210,00     |
| Dr Knock  | 76-735-10 | 210,00     |
| Dr Vibe   | 76-735-28 | 253,00     |
| Dr Cool   | 76-735-36 | 210,00     |
| Dr Heat   | 76-735-44 | 210,00     |
| Dr Hiss   | 76-735-51 | 210,00     |

## Remote control and monitoring via SIKOMS GSM products

You can use these in all areas with coverage for the current GSM network to control and monitor, e.g.

- computers (ideal for "rebooting")
- measuring and testing equipment
- intruder alarms, heating control, etc.
- general monitoring/control of items such as pumps, refrigeration/heating.

eration/heating.

Programming, control and status readout are performed from a fixed-line phone/mobile phone. The alarm is sent as an SMS to a predefined GSM phone.

The products are supplied with an indoor aerial but without SIM card.



### SIKOM GSM AC Alarm Controller

GSM terminal for remote control, alarm monitoring and temperature monitoring, for mounting on a DIN rail.

- 4 alarm inputs, e.g. for infrared, smoke or humidity detectors. Alarms sent in the form of SMS messages.
- Local siren output, activated by 2 of the alarm inputs at the same time as the SMS is sent.
- Temperature monitoring; current temperature can be read off, upper and lower alarm levels can be set.
- Inbuilt frost monitoring function.
- 3 control outputs, potential-free relay contacts, (16 A 230 Vac, 1 alternating, 2 closing)
- Inbuilt battery for operation in event of loss of power (alarm as SMS 1 hour after loss of power)
- Power supply with 230 Vac or 12–15 Vdc

**SIKOM GSM AC-1** is a package consisting of a GSM AC terminal, 1 x infrared detector, 1 x alarm siren, 1 x control panel, internal aerial and temperature transmitter.

**SIKOM GSM AC-2**, same as the AC-1 but excluding infrared detector, alarm siren, and control panel.

### SIKOM GSM AC-4 12/24 V Alarm Controller

GSM terminal for remote control, alarm monitoring and temperature monitoring.

- 4 alarm inputs, e.g. for infrared, smoke or humidity detectors.
- Temperature monitoring; current temperature can be read off, upper and lower alarm levels can be set.
- 2 x control outputs, potential-free relay contacts (1 alternating 16 A 230 Vac, 1 closing 16 A 230 Vac)
- Power supply with 12 or 24 Vdc

### SIKOM GSM FIXI

GSM terminal in DIN housing for control and temperature monitoring.

- 2 x control outputs, 1 x alternating and 1 x closing potential-free relay contact (16 A 230 Vac)
- Temperature monitoring; current temperature can be read off, upper and lower alarm levels can be set.
- GS-33 slave module, provides an additional 3 x alternating potential-free relay contacts (16 A 230 Vac)
- Power supply 230 Vac or 12–15 Vdc. Logs the number of power failures.

### SIKOM GSM MAXI

Remote-controlled switch via the GSM network.

- Easy to install. Connects directly to a wall socket. The device that is to be remote-controlled is connected by a plug to the GSM MAXI. Max 10 A
- Timer function, can be switched on at intervals of one hour (1-99 hours)
- Temperature monitoring; current temperature can be read off, upper and lower alarm levels can be set.

| Model             | Stock no. | Price each |
|-------------------|-----------|------------|
| GSM AC-1          | 30-902-48 | 770,00     |
| GSM AC-2          | 30-902-55 | 697,00     |
| GSM AC-4          | 30-902-71 | 607,00     |
| GSM FIXI          | 30-902-06 | 607,00     |
| GS-33 slave relay | 30-902-14 | 87,50      |
| GSM MAXI          | 30-902-97 | 519,00     |

## Lithium batteries new sizes

Button-cell lithium batteries. If there is no markings, compare battery sizes.

Pole voltage: 3 V



| Type   | Dim.(dxh) mm | Stock no. | Price each |
|--------|--------------|-----------|------------|
| CR1025 | 10x2.5       | 69-271-98 | 3,42       |
| BR1225 | 12x2.5       | 69-272-14 | 2,82       |
| CR1632 | 16x3.2       | 69-272-97 | 2,82       |
| CR2012 | 20x1.2       | 69-272-89 | 3,42       |
| CR2477 | 24x7.7       | 69-274-87 | 3,42       |

## New mobile phone batteries



| Suitable for   | Type   | Capacity mAh | Stock no. | Price each |
|----------------|--------|--------------|-----------|------------|
| Siemens SL45   | Li-Ion | 500          | 69-148-24 | 35,60      |
| Ericsson T68   | Li-Ion | 600          | 69-148-32 | 38,20      |
| Ericsson R310s | Li-Ion | 1200         | 69-148-40 | 34,10      |

## Lithium batteries, vertical mounting

Button-cell lithium batteries for PCB mounting.

Pole voltage: 3 V



| Type        | Type no. pins | Stock no. | Price each | 1- | 10-  |
|-------------|---------------|-----------|------------|----|------|
| CR2032-VE1H | 3             | 69-271-23 | 3,28       |    | 2,82 |
| CR2032-VJ2H | 2             | 69-271-49 | 3,21       |    | 2,77 |

## Wireless Surround Sound Headphones gives you an amazing effect and freedom

The Hearo 777 Quadra is a technically and visually optimised set of headphones that uses Logic 7 in combination with AKG's IVA technology, which reproduces up to 8 simulated loudspeakers! It creates an amazing effect and experience for films or computer games. The cube-shaped transmitter has optional functions for Dolby Surround Pro Logic Decoder, Logic 7 Decoder, AKG IVA technology and stereo. It automatically registers analogue and digital signals (TV, video, DVD, DVD audio, SADC). The headphones have an adjustable headband for maximum comfort, and the headset is rechargeable, with a capacity of approx. 20 hours.



| Model                      | Stock no. | Price each |
|----------------------------|-----------|------------|
| AKG Hearo 777 Quadra delux | 30-194-29 | 344,00     |

## AKG Microphones, Emotion range

AKG is a well-known microphone manufacturer. Below are a number of professional models for instruments, speech, choirs and solo vocalists. The microphones are supplied with a microphone holder and storage case excluding cable. Connection via standard 3-P XLR contact.



The D880S is the microphone for solo vocals or other contexts requiring clearly enunciated sound. Fitted with on/off switch.



The D660S is a value-for-money, all-round microphone for speech and singing. Robust design that withstands rough treatment. Fitted with on/off switch.



The D770 is an all-round microphone that is suitable for singing, brass, guitar, bass or drums. It has no on/off switch, as the main purpose of this microphone is to connect to instruments.



| Model | Stock no. | Price each |
|-------|-----------|------------|
| D880S | 30-132-73 | 112,00     |
| D660S | 30-132-32 | 55,80      |
| D770  | 30-132-40 | 94,10      |

## 7" widescreen TFT display

A 7" widescreen display intended for mobile use. Has a very clear, sharp picture. For composite video signal.

| Model   | Stock no. | Price each |
|---------|-----------|------------|
| FD-7369 | 30-640-60 | 521,00     |

### Technical data

|                                |                           |
|--------------------------------|---------------------------|
| Monitor:                       | 7" LCD, TFT active matrix |
| System:                        | PAL/NTSC (switchable)     |
| Resolution:                    | 1440(W)x234(H) pixels     |
| Display format (Aspect ratio): | 16:9                      |
| Supply voltage:                | 12 V                      |
| Temperature range:             | 0 to +60 °C               |
| Dimensions:                    | 182x110x29 mm             |



## Oscilloscope with spectrum analysers

Pico Technology supplies a large number of professional PC-based instruments that offer the same functionality as conventional test equipment (DSO – digital memory oscilloscope, spectrum analyser and DMM) as well as several facilities that are not usually provided in this price range.

A PC-based oscilloscope replaces bulky, expensive test equipment, and saves money and workspace. The user can switch quickly and easily between different instruments. An oscillo-

scope from Pico Technology is easier to use than traditional instruments: user-friendly software and "on screen" help makes you an expert within a few minutes.

The integration of several instruments in one unit makes a PC-based oscilloscope easy to take along and operate together with your laptop. Connects to the parallel port.

Unsure which oscilloscope to choose? Visit [www.picotech.com/applications.html](http://www.picotech.com/applications.html)

### Basic oscilloscopes

For low-frequency signals, these one and two-channel products offer all functions that conventional oscilloscopes have, as well as many new functions, at a fraction of the price of traditional bench top instruments.

These oscilloscopes do not require an external power supply. They are powered directly from the PC's parallel port. This provides ultimate portability when used with a laptop.



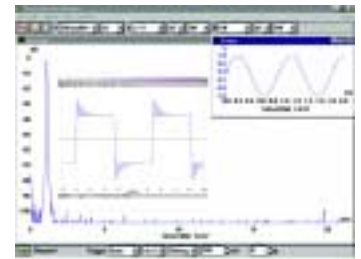
### High-resolution oscilloscopes

The ADC-212 and ADC-216 are high-resolution, high-precision oscilloscopes. In contrast to traditional bench top DSOs, which normally have 8-bit resolution and poor DC accuracy, these units have an error indication of max. 1% and either 12-bit or 16-bit resolution.

This makes them ideal for measuring sound/audio, hiss and vibration. The spectrum analyser's tremendous dynamics also make the ADC-212 and ADC-216 ideal tools for tracing hiss in analogue circuits.

Used as a sound/audio spectrum analyser, the ADC-216 is hard to beat. It has a 96-dB dynamic measurement range, so you can test the output signals in output stages, CD players and MP3 players, for example.

We recommend the ADC-212 model for measurements in vehicles.



| Product | Description                 | Stock no. | Price each |
|---------|-----------------------------|-----------|------------|
| ADC-40  | 20 kS/s 8 bits              | 76-204-04 | 135,00     |
| ADC-42  | 15 kS/s 12 bits             | 76-204-14 | 173,00     |
| ADC-100 | 100 kS/s 12 bits 2 channels | 25-777-32 | 432,00     |

### Fast and high-resolution oscilloscopes

ADC-212/50 and ADC 212/100 are the best oscilloscopes from Pico. They have an analogue bandwidth of 25 and 50 MHz respectively. Now you do not have to compromise between high resolution and high bandwidth – these products can handle both! 50 or 100 Msa/s, 5 Gsa/s for repetitive signals. 50 MHz spectrum analyser, 12-bit resolution, 128 memory depth, 80 dB dynamics.



| Product   | Description      | Stock no. | Price each |
|-----------|------------------|-----------|------------|
| ADC-216   | 333 kS/s 16 bits | 76-205-86 | 907,00     |
| ADC-212/3 | 3 MS/s 12 bits   | 76-205-45 | 547,00     |

### High-speed oscilloscopes

High-performance oscilloscopes, ideal replacements for the traditional bench top oscilloscope. With all the usual oscilloscope functions plus many new functions that are made possible by the connection to the PC and an advanced software program. A deep memory and advanced trigger functions make it possible to measure and capture large amounts of complex data at relatively high speeds.

| Product     | Description                  | Stock no. | Price each |
|-------------|------------------------------|-----------|------------|
| ADC-212/50  | 50 MSa/s 12 bits 2 channels  | 76-205-52 | 907,00     |
| ADC-212/100 | 100 MSa/s 12 bits 2 channels | 76-205-60 | 1 267,00   |

| Product     | Description                | Stock no. | Price each |
|-------------|----------------------------|-----------|------------|
| ADC-200/20  | 20 MS/s 8 bits 2 channels  | 25-777-57 | 592,00     |
| ADC-200/50  | 50 MS/s 8 bits 2 channels  | 76-205-29 | 725,00     |
| ADC-200/100 | 100 MS/s 8 bits 2 channels | 76-205-37 | 907,00     |

## Testo 605-H1 miniature humidity sensor

Long-term stable sensor that is not affected by condensation. Flexible, adjustable "head" for best reading. Also measures temperature and can perform dew point calculation.



| Technical data     |                             |
|--------------------|-----------------------------|
| Measurement range: | 5 to 95 % RH<br>0 to +50 °C |
| Accuracy:          | +/-3 % RH<br>+/-0.5 °C      |
| Resolution:        | 0.1 % RH<br>0.1 °C          |

| Model        | Stock no. | Price each |
|--------------|-----------|------------|
| Testo 605-H1 | 76-610-51 | 83,70      |

## Thermohygrometer with large display

Accurate thermohygrometer for continuous measurement of humidity, temperature and dew point calculation. The humidity sensor is not affected by condensation.



| Technical data     |                              |
|--------------------|------------------------------|
| Measurement range: | 10 to 95 % RH<br>0 to +50 °C |
| Accuracy:          | +/-3 % RH<br>+/-0.5 °C       |
| Resolution:        | 0.1 % RH<br>0.1 °C           |
| Size:              | 111x90x40 mm                 |

| Model        | Stock no. | Price each |
|--------------|-----------|------------|
| Testo 608-H1 | 76-608-48 | 64,20      |

## Log, save, print and analyse on site, quickly and efficiently

Compact, accurate data loggers for temperature, humidity, voltage and current. All models with displays can provide quick, direct information on the current measurement value, the most recently saved measurement value, minimum and maximum values and the number of times that the limit has been exceeded. They are ideal for long-term measurements in all applications where it is important to check temperature, humidity or other process signals. The Testo 580 data collector and the Testo 575 fast printer provide a whole range of new facilities to handle and process measurement data out in the field. You can stop, program and empty several data loggers out in the field. Compatible with all models in the 175 and 177 ranges. All models can be calibrated.



| Model                    | Description   | Stock no. | Price each |
|--------------------------|---|-----------|------------|
| Testo 175-T1             | Temperature logger, one channel, -35 to +70 °C, 7800 measurement values, IP68   | 76-725-04 | 121,00     |
| Testo 175-T3             | Temperature logger, two channels, external transmitter model T/K, -200 to +1000 °C (model K), 16000 measurement values, IP54      | 76-725-12 | 210,00     |
| Testo 177-T4             | Temperature logger with four channels, external transmitter model T/K, -100 to +1000 °C (model K), 48000 measurement values, IP43 | 76-725-38 | 414,00     |
| Testo 175-H2             | Humidity and temperature logger, 0 to 100% RH, -20 to +70 °C, 16000 measurement values  | 76-725-46 | 306,00     |
| Testo 175-S1             | Logger with one channel for current/voltage, 0 to 1V/0 to 10 V or 0 to 20 mA/4 to 20 mA, 16000 measurement values                 | 76-725-53 | 207,00     |
| Testo 575 fast printer   |   | 76-726-45 | 441,00     |
| Testo 580 data collector | Data collector, memory capacity 500,000 measurement values  | 76-726-52 | 242,00     |
|                          | Includes Comsoft 3 Basic software, interface and table holder.  |           |            |
|                          | Comsoft 3 suitable for Testo 175  | 76-726-60 | 91,30      |
|                          | Comsoft 3 suitable for Testo 177  | 76-726-78 | 91,30      |

## Testo 174 miniature data logger for temperature

Efficient, compact and economical Watertight (IP65), wall mount including a lock, easy-to-read display, easy to empty with docking station.

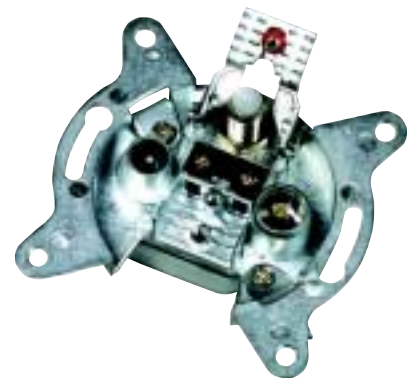
| Technical data    |                |
|-------------------|----------------|
| Measurement range | -30 to +70 °C. |
|                   | 3900 readings  |

| Model                                | Stock no. | Price each |
|--------------------------------------|-----------|------------|
| Testo 174 data logger                | 76-724-05 | 67,10      |
| Testo 174 data logger incl. software | 76-724-13 | 159,00     |



## Multimedia output for data/TV/radio

Multimedia output compatible with, for example, Comhem's cable TV network with broadband connection.



| Technical data      |                           |
|---------------------|---------------------------|
| Frequency range     | 5-862 MHz                 |
| Input, output, Data | 5-862 MHz                 |
| TV out              | 47-68 MHz and 125-862 MHz |
| Radio out           | 87-110 MHz                |
| Return channel      | 5-65 MHz                  |

| Model       | Stock no. | Price each |
|-------------|-----------|------------|
| MMCTV 8 dB  | 78-034-06 | 12,90      |
| MMCTV 10 dB | 78-034-14 | 12,90      |
| MMCTV 13 dB | 78-034-22 | 12,90      |
| MMCTV 15 dB | 78-034-30 | 12,90      |
| MMCTV 17 dB | 78-034-48 | 12,90      |

## Satellite TV instruments for all requirements

Emitor is a Swedish company that designs and manufactures simple, advanced measurement instruments, mainly for satellite and cable TV installations. Emitor's instruments are characterised by the fact that they are designed on the basis of

### Satlook Digital 950–2150 MHz

Satlook Digital is designed for users who install and adjust satellite systems.



- Full spectrum, normal or expanded
- QPSK constellation diagram
- 4.5" b/w monitor for PAL/NTSC/SECAM
- Satellite identification
- RS232 for PC connection and software
- Integrated rechargeable battery. Charger included.
- Only 5 kg with carrying case.



| Model           | Stock no. | Price each |
|-----------------|-----------|------------|
| Satlook Digital | 76-376-97 | 751,00     |

### Satbeeper

A simple tool for adjusting satellite dishes that generates a sound signal whose frequency varies with the strength of the signal. Connected between satellite dish and receiver, with power supplied from the satellite receiver.



| Model     | Stock no. | Price each |
|-----------|-----------|------------|
| Satbeeper | 76-375-23 | 10,50      |

the user's needs and working methods. The following new models have been added to ELFA's product range, with some further models in ELFA catalogue 51.

### TVlook 2–900 MHz

TVlook is designed mainly for users who install and adjust cable TV systems. TVlook is characterised by its high level of accuracy and the fact that it can also process signals in the return channel (6-65 MHz).



- Full spectrum
- Very high level of accuracy +/- 1 dB (at 20°C)
- Text TV
- 4.5" b/w monitor and 64x128 LCD screen
- RS232 for PC connection and software
- Integrated rechargeable battery. Charger included.
- Only 6 kg with carrying case.



| Model  | Stock no. | Price each |
|--------|-----------|------------|
| TVlook | 76-375-98 | 858,00     |

### Digisat LCD 950-2150 MHz

A so-called "Satfinder" with a number of extra features.

- DiSEqC, 22 kHz, 13/18 V and mA view in the display
- Inbuilt tone indicator for signal strength
- External power can be connected using the battery pack to power LNB without receiver
- Also available in twin-port version for double-head applications, Digisat Pro



| Model       | Stock no. | Price each |
|-------------|-----------|------------|
| Digisat LCD | 76-377-21 | 64,10      |
| Digisat Pro | 76-377-05 | 91,50      |

## Precision laboratory unit

QL is a range of laboratory units for users looking for a laboratory unit that is out of the ordinary. It has extremely good resolution (setting accuracy 1 mV/1 mA) and accuracy, and is



Manufactured by TTI

| Model    | Max V/ Max A                  | Max output | Stock no. | Price each |
|----------|-------------------------------|------------|-----------|------------|
| QL355    | 35 V/5 A                      | 105 W      | 69-854-28 | 607,00     |
| QL355-P  | 35 V/5 A                      | 105 W      | 69-854-36 | 858,00     |
| QL564    | 56 V/4 A                      | 112 W      | 69-854-44 | 607,00     |
| QL564-P  | 56 V/4 A                      | 112 W      | 69-854-51 | 858,00     |
| QL355T   | 2 X 35 V/5 A plus 2.7/3.3/5 V | 215 W      | 69-854-69 | 1 176,00   |
| QL355T-P | 2 X 35 V/5 A plus 2.7/3.3/5 V | 215 W      | 69-854-77 | 1 390,00   |

available in versions with remote control via GPIB, RS232 or USB (P model). Rack mounting angles are also available as accessories. There are models for single voltage and triple voltage.





## Extend the range of your wireless network



Aerials for 2.4 GHz WLAN, developed and produced in Sweden, which you can use to extend the range of wireless networks, e.g. in a warehouse or for point-to-point connections between two buildings, etc. Cabling and accessories

that are compatible with equipment including the following: Orinoco, Avaya, BreezeCom, Cisco, Symbol, Linksys, D-Link, and many more. See our PDF data sheet 78-999-99 for further information.

| Model  | Designation   | Stock no. | Price each |
|--|---|-----------|------------|
| VO5/24   | Omni-directional aerial with radome, 5 dBi, SMA female      | 78-150-04 | 59,50      |
| VO6/24   | Omni-directional aerial for outdoor use, 6 dBi, N female    | 78-150-20 | 120,00     |
| VP165/24   | Panel aerial for client, 9 dBi, SMA female                  | 78-150-46 | 59,50      |
| VP470/24   | Panel aerial for access point, 70 degrees, 14 dBi, N female | 78-150-61 | 197,00     |
| CA27/24  | Directional aerial 270 mm, 14 dBi, SMA female               | 78-150-87 | 108,00     |
| SP45/24  | Satellite dish 450 mm, 18 dBi, N female                     | 78-152-02 | 120,00     |
| SP60/24  | Satellite dish 600 mm, 21 dBi, N female                     | 78-152-28 | 144,00     |
| CA27, SP45, SP60 can be fitted with both vertical and horizontal polarity. Other aerials have vertical polarity. |   |           |            |
| Cabling for SMA male – SMA male, LowLoss, 5 m  |   | 78-160-02 | 26,90      |
| Cabling for SMA male – SMA male, LowLoss, 10 m   |   | 78-160-10 | 32,20      |
| Cabling for SMA male – SMA male, LowLoss, 14 m   |   | 78-160-28 | 36,50      |
| Cabling for SMA male – N male, LowLoss, 10 m   |   | 78-160-36 | 34,90      |
| Cabling for SMA male – N male, LowLoss, 20 m   |   | 78-160-44 | 45,60      |
| Cabling for RP-SMA male – SMA male, LowLoss, 3 m   |   | 78-160-51 | 32,20      |
| Cabling for RP-SMA male – SMA male, LowLoss, 10 m  |   | 78-160-69 | 39,80      |
| Adapter cabling for MCcard – SMA chassis female, RGD316, 0.3 m (compatible with Orinoco, Avaya, etc.)            |   | 78-161-01 | 30,40      |
| Adapter cabling for MCcard – N chassis female, RGD316, 0.3 m (compatible with Orinoco, Avaya, etc.)              |   | 78-161-19 | 36,30      |
| Adapter cabling for RP-TNC – N chassis female, RG58, 0.3 m (compatible with Cisco, etc.)                         |   | 78-161-27 | 25,50      |
| Adapter cabling for RP-SMA – N chassis female, RG58, 0.3 m (compatible with D-Link, etc.)                        |   | 78-161-35 | 29,80      |

## GPS-receivers at introductory price

Valid through 03-31-2003

Convert your portable computer into an advanced navigation and position instrument. Both USB and RS232 models are available. Complete support for the NMEA 0183 V2.2 protocol. Watertight (IP67). Integral magnetic foot for easy mounting.



| Type     | Connection | Stock no. | Campaign price | Regular price |
|----------|------------|-----------|----------------|---------------|
| GM-305WP | RS232      | 78-430-14 | 73,00          | 97,00         |
| GM-307WP | USB        | 78-430-22 | 87,00          | 136,00        |

A complete 12-channel GPS module specially designed for navigation purposes in cars, position finding of vehicles and similar tracking applications. In forests and in built-up areas where the GPS signal may be attenuated or completely blocked, the module uses an advanced algorithm to produce very accurate position data.



| Type    | Stock no. | Campaign price | Regular price |
|---------|-----------|----------------|---------------|
| EB-X305 | 78-430-06 | 67,00          | 97,00         |

## Compete with SumoBot



Robot approved for mini-sumo competitions. The robot is built on a robust aluminium chassis. The wheels are powered by two modified standard servos. Control is provided by a Basic Stamp 2, which is pre-fitted to the PCB. Two reflex detectors to ensure that the robot stays on the mat. The set, which is very easy to assemble, is supplied complete with all mechanical parts, PCB with prototype area, 2 x servos, battery holder, component set, manual in English, software and serial cabling. The robot is powered by 4 x R6 batteries.

| Model   | Stock no. | Price each |        |
|---------|-----------|------------|--------|
|         |           | 1-         | 2-     |
| SumoBot | 73-193-61 | 143,00     | 131,00 |

## Sharpened tools for Atmel's single-chip computers



### ATSTK501

An expansion board for the STK500-kit that makes it possible to connect 64-pin packages like e.g. ATmega 128.



### AVR ISP

An economical ISP programmer (In-System Programmer) that can be used together with all AVR processors that are designed to be ISP programmed. Cable assembly, documentation and the development programme AVR Studio are enclosed.



### AVR JTAG ICE

Real time emulator capable of operating together with all AVR processors with JTAG interface. Emulates all on-chip functions, analogue and digital, and is also able to programme ISP (In-System Prog) prepared AVR models.

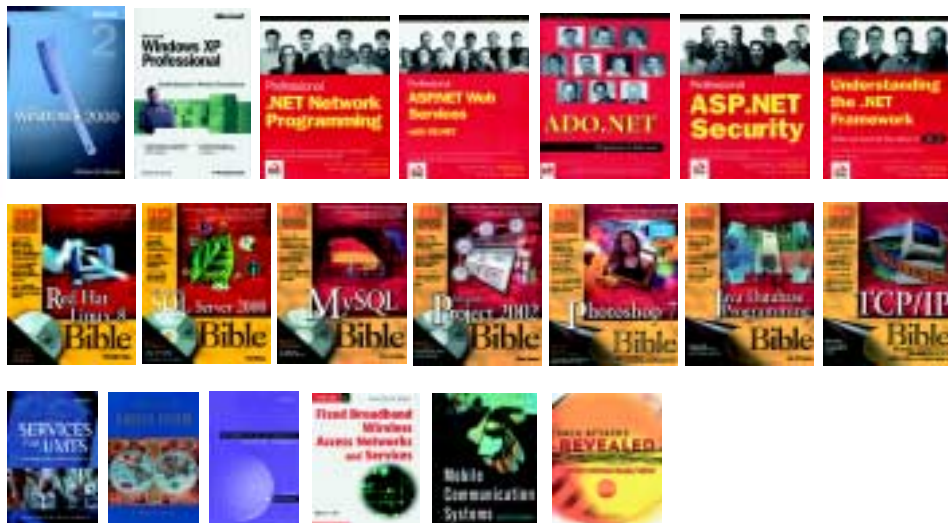


### ICE50

A very advanced development tool with complete ICE (In-Circuit Emul) real time emulation of all newer AVR processors. Trace buffer of 128K x 144 bit.

| Type         | Stock no. | Price each |
|--------------|-----------|------------|
| ATSTK501     | 73-666-85 | 111,00     |
| AVR ISP      | 73-680-04 | 51,90      |
| AVR JTAG ICE | 73-680-12 | 439,00     |
| ICE50        | 73-678-08 | 4 087,00   |

## New items on the ELFA bookshelf



| Title                              | Language | No. pages | Stock no. | Price each |
|------------------------------------|----------|-----------|-----------|------------|
| Fixed B b Wireless Access Networks | English  | 304       | 84-432-10 | 91,70      |
| Hack Attacks Revealed              | English  | 928       | 84-432-28 | 99,70      |
| Handbook of Wireless Networks      | English  | 664       | 84-432-36 | 183,00     |
| Introduct to Wireless Systems      | English  | 352       | 84-432-44 | 68,50      |
| Mobile Communication Systems       | English  | 466       | 84-432-51 | 121,00     |
| Services for UTMS                  | English  | 392       | 84-432-69 | 97,00      |
| Pro .Net networking progr          | English  | 600       | 84-335-75 | 81,20      |
| Pro ASP .NET 1.0 web servi         | English  | 800       | 84-335-83 | 97,60      |
| ADO .NET Programmers ref           | English  | 700       | 84-335-91 | 65,10      |
| ASP.NET Security                   | English  | 400       | 84-336-09 | 81,20      |
| Understanding the .net framework   | English  | 250       | 84-336-17 | 48,80      |
| Java database programming bible    | English  | 750       | 84-432-77 | 76,80      |
| Microsoft project 2002 bible       | English  | 816       | 84-432-85 | 61,40      |
| Microsoft SQL server 2000 bible    | English  | 1008      | 84-432-93 | 76,80      |
| My SQL bible                       | English  | 720       | 84-433-01 | 76,80      |
| Photoshop 7 bible                  | English  | 1080      | 84-433-19 | 61,40      |
| Red Hat linux 8 bible              | English  | 1082      | 84-433-27 | 76,80      |
| TCP/IP bible                       | English  | 624       | 84-433-35 | 76,80      |
| MS Win 2000 Adm. Pocket            | English  | 560       | 84-291-10 | 46,50      |
| MS Win XP professional adm         | English  | 354       | 84-291-28 | 46,50      |

## LCD modules at competitive prices

The LCD modules are available with or without LED backlit display and in TN technology. The modules are available with characters from 8x1 to 40x4. For more data sheets and more information about the displays, see [www.elfa.se](http://www.elfa.se)

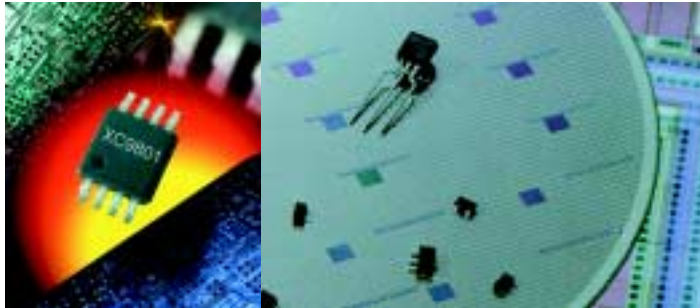


| Char. | Size (mm)   | TN/STN | Backlit lighting | Stock no. | Price each |       |
|-------|-------------|--------|------------------|-----------|------------|-------|
|       |             |        |                  |           | 1-         | 100-  |
| 8x1   | 84x44x10    | TN     | No               | 75-511-12 | 15,20      | 8,66  |
| 8x1   | 84x44x14.5  | TN     | Yes              | 75-511-20 | 20,70      | 12,10 |
| 8x2   | 58x32x10    | TN     | No               | 75-511-38 | 12,20      | 7,09  |
| 8x2   | 58x32x14.5  | TN     | Yes              | 75-511-46 | 17,00      | 9,82  |
| 16x1  | 80x36x10.5  | TN     | No               | 75-511-53 | 10,70      | 6,20  |
| 16x1  | 80x36x14.5  | TN     | Yes              | 75-511-61 | 14,90      | 8,68  |
| 16x2  | 80x36x11    | TN     | No               | 75-511-79 | 12,80      | 7,44  |
| 16x2  | 80x36x14.5  | TN     | Yes              | 75-511-87 | 18,80      | 11,00 |
| 16x2  | 122x44x10   | TN     | No               | 75-511-95 | 18,20      | 10,70 |
| 16x2  | 122x44x14.5 | TN     | Yes              | 75-512-03 | 36,70      | 21,50 |
| 16x4  | 87x60x10    | TN     | No               | 75-512-11 | 20,70      | 12,10 |
| 16x4  | 87x60x14.5  | TN     | Yes              | 75-512-29 | 18,60      | 16,70 |
| 20x2  | 116x37x10   | TN     | No               | 75-512-37 | 16,40      | 9,56  |
| 20x2  | 116x37x14.5 | TN     | Yes              | 75-512-45 | 24,60      | 14,40 |
| 20x4  | 98x60x11    | TN     | No               | 75-512-60 | 24,60      | 14,40 |
| 20x4  | 98x60x14.5  | TN     | Yes              | 75-512-78 | 35,80      | 20,90 |
| 40x2  | 182x35x10.5 | TN     | No               | 75-512-86 | 27,30      | 16,00 |
| 40x2  | 182x35x14.5 | TN     | Yes              | 75-512-94 | 37,60      | 22,00 |
| 40x4  | 190x55x10.5 | STN    | No               | 75-513-10 | 55,50      | 32,50 |
| 40x4  | 190x55x14.5 | STN    | Yes              | 75-513-28 | 75,90      | 44,30 |



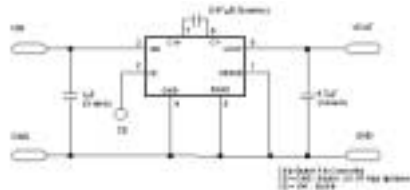
## Torex is a Japanese manufacturer of power management circuits

Torex products are characterised by low power consumption and small housings. They are ideal in battery-powered applications where physical size and low power consumption are extremely important.



### XC9802 Step-up charging pump/converter

With the XC9802 you only need two condensers to increase voltage (step-up) in a very simple way. Typical applications for this circuit include power supply to white LED displays. Also suitable for voltage doubling.



| Technical data     |                                    |
|--------------------|------------------------------------|
| Input voltage:     | 1.8–5.5 V                          |
| Switch frequency:  | 300 kHz                            |
| Output current:    | 100 mA (max)                       |
| Power consumption: | 80 µA, in standby mode: 2 µA (max) |

| Model        | Output voltage | Housing | Stock no. | 1–   | 100– |
|--------------|----------------|---------|-----------|------|------|
| XC9802B303KR | 3.0 V          | MSOP-8A | 73-499-54 | 5,35 | 3,76 |
| XC9802B503KR | 5.0 V          | MSOP-8A | 73-499-62 | 5,35 | 3,76 |

### Linear voltage regulator, XC6201

Regulator in small housing with very low power consumption. Can be used with both tantalum and/or ceramic condensers.



| Technical data     |                      |
|--------------------|----------------------|
| Input voltage:     | 10 V (max)           |
| Output voltage:    | See item in question |
| Output current:    | 250 mA (type)        |
| Power consumption: | 2.0 µA (type)        |
| Drop-out           | 160 mV at 100 mA     |

| Model        | Output voltage | Housing | Stock no. | 1–   | 100– |
|--------------|----------------|---------|-----------|------|------|
| XC6201P182MR | 1.8 V          | SOT-25  | 73-496-08 | 1,27 | 0,77 |
| XC6201P182PR | 1.8 V          | SOT-89  | 73-496-16 | 1,27 | 0,77 |
| XC6201P252MR | 2.5 V          | SOT-25  | 73-496-24 | 1,27 | 0,77 |
| XC6201P252PR | 2.5 V          | SOT-89  | 73-496-32 | 1,27 | 0,77 |
| XC6201P282MR | 2.8 V          | SOT-25  | 73-496-40 | 1,27 | 0,77 |
| XC6201P282PR | 2.8 V          | SOT-89  | 73-496-57 | 1,27 | 0,77 |
| XC6201P302MR | 3 V            | SOT-25  | 73-496-65 | 1,27 | 0,77 |
| XC6201P302PR | 3 V            | SOT-89  | 73-496-73 | 1,27 | 0,77 |
| XC6201P332MR | 3.3 V          | SOT-25  | 73-496-81 | 1,27 | 0,77 |
| XC6201P332PR | 3.3 V          | SOT-89  | 73-496-99 | 1,27 | 0,77 |
| XC6201P502MR | 5 V            | SOT-25  | 73-497-15 | 1,27 | 0,77 |
| XC6201P502PR | 5 V            | SOT-89  | 73-497-23 | 1,27 | 0,77 |

Torex has been developing and manufacturing IC circuits since 1968, and is currently one of Japan's largest manufacturers of circuits using CMOS technology.

### Linear voltage regulator, XC6202

Regulator for input voltages up to 20 V.



| Technical data     |                      |
|--------------------|----------------------|
| Input voltage:     | 20 V (max)           |
| Output voltage:    | See item in question |
| Output current:    | 150 mA (type)        |
| Power consumption: | 10.0 µA (type)       |
| Drop-out:          | 200 mV at 30 mA      |



| Model        | Output voltage | Housing | Stock no. | 1–   | 100– |
|--------------|----------------|---------|-----------|------|------|
| XC6202P302MR | 3 V            | SOT-23  | 73-497-31 | 1,27 | 0,77 |
| XC6202P302PR | 3 V            | SOT-89  | 73-497-49 | 1,27 | 0,77 |
| XC6202P332MR | 3.3 V          | SOT-23  | 73-497-56 | 1,27 | 0,77 |
| XC6202P332PR | 3.3 V          | SOT-89  | 73-497-64 | 1,27 | 0,77 |
| XC6202P502MR | 5 V            | SOT-23  | 73-497-72 | 1,27 | 0,77 |
| XC6202P502PR | 5 V            | SOT-89  | 73-497-80 | 1,27 | 0,77 |

### Linear voltage regulator, XC6203

Regulator for currents up to 400 mA.



| Technical data     |                      |
|--------------------|----------------------|
| Input voltage:     | 8 V (max)            |
| Output voltage:    | See item in question |
| Output current:    | 400 mA               |
| Power consumption: | 8.0 µA (type)        |
| Drop-out:          | 150 mV at 100 mA     |

| Model        | Output voltage | Housing | Stock no. | 1–   | 100– |
|--------------|----------------|---------|-----------|------|------|
| XC6203E332FR | 3.3 V          | SOT-223 | 73-497-98 | 1,27 | 0,77 |
| XC6203E502FR | 5 V            | SOT-223 | 73-498-06 | 1,27 | 0,77 |

### Linear voltage regulator, XC6204

Very good hiss properties and low drop-out. Does not require a by-pass condenser.



| Technical data     |  |
|--------------------|--|
| Input voltage:     | 10 V (max)                             |
| Output voltage:    | See item in question                   |
| Output current:    | 150 mA                                 |
| Power consumption: | 70.0 µA active, 0.1 µA in standby mode |
| Drop-out:          | 60 mV at 30 mA                         |
| Hiss:              | 30 µrms                                |
| Ripple:            | 70 µA (type)                           |
| Housing:           | SOT-25                                 |



| Model        | Output voltage | Housing | Stock no. | 1–   | 100– |
|--------------|----------------|---------|-----------|------|------|
| XC6204B182MR | 1.8 V          | SOT-25  | 73-498-14 | 1,27 | 0,77 |
| XC6204B252MR | 2.5 V          | SOT-25  | 73-498-22 | 1,27 | 0,77 |
| XC6204B282MR | 2.8 V          | SOT-25  | 73-498-30 | 1,27 | 0,77 |
| XC6204B302MR | 3 V            | SOT-25  | 73-498-48 | 1,27 | 0,77 |
| XC6204B332MR | 3.3 V          | SOT-25  | 73-498-55 | 1,27 | 0,77 |
| XC6204B502MR | 5 V            | SOT-25  | 73-498-63 | 1,27 | 0,77 |

## More semi-conductors

We have extended our range of semi-conductors with about 60 pieces of new voltage regulating circuits, voltage regulators, voltage references and supervisory integrated circuits. The complete list is available at [www.elfa.se/elfainfo/spreg.xls](http://www.elfa.se/elfainfo/spreg.xls)

