

New manufacturer - Uni-Ohm resistors

The megger of the future

GPS-module for recessing

The world's most powerful LED

The christmas tree that doesn't shed its needles

-(' % < .0%../(
+ 4 66 0 / 4 66 0 6
4 ;;& & 4 = &

(' #A\$ >
** &> "B+* 7%)) .% . A
+ 4 676160 4 616 07
4 ;;& & &"
4)) = & &"

- (' % % \$: % . 7
+ 4 / 0 6 / 4 / 1 0 / 1
4 ;;& & 4 = &

&% C " :&0% 7 A"
+ 4 ? / @ //.. 4 ? / @ ..
4 ;;& & 4 = &

C : < &% " & , + ! " + < ! . %
.7/..-4 ** :
+ 4 ? 1 . @ 1 7 4 ? 1 . @ 0 7
4 ;;&) & * & " 4) =) & * & "

-D (8 !
B < ! .6% / C <
+ 4 ./ 76 / 4 ./ .07
4 ;;& + & 4 + = + &

8 < < & - &
' > < ! 8 & 4 0.
6/ E & & & F <
+ 4 ? . @ 6 1 . // 4 ? . @ 6 7 / 7
4 ;;& & &
4 = & &

E A) &% AG + HB " 6% 7 C : ! G H
+ 4 6 06 11 4 6 76 .
4 ;;& : & + " 4 : = : & + "

\$ 18 C (- & & & % 2 / % 1.. ,
+ 4 6 0 7 . . 4 6 1 0 / 6
4 ;;& & < 4) = & <

!
- & & & % > + " < H . %
+
+ 4 / / 0 1 4 / / . 1
4 ;;& + & B 4 = + & B

1 # ,----

1 - , 4

1 *

1 3 #

5

"

1 #
66

! "

Fluke installation tester



The installation tester of the future has arrived

The Fluke 1650 range consists of three totally new multi-functional installation testers. All models, which have a three-year guarantee, comply with the European standards EN61557*/VDE 0413 and the Swedish SS 4364661 and ELSÄK-FS 1995:5 standards. * (models 1651 and 1652: sections 1, 2, 3, 4, 6 and 10. Model 1653: sections 1, 2, 3, 4, 5, 6, 7 and 10). Dimensions: 394×211×274 mm. Weight: 3.53 kg.

Model 1651

Performs all basic installation tests, including testing of voltage, frequency, polarity check, insulation resistance, loop impedance, expected fault current/flash current and trip time for earth fault switches.

Model 1653

Like the 1652, but also including earth plate and phase sequence measurement. Has an internal memory and the facility to connect to a PC via an IR port for documentation and reporting. Earth rod and software are available as accessories.

Model 1652

Like the 1651, but also includes a test of the earth fault switch's interrupt level as well as automatic earth fault switch testing.



Model	Stock no.	Price each
1651	76-482-07	634.00
1652	76-482-15	875.00
1653	76-482-23	1 168.00
ES165 Earth spit	76-482-56	96.70
FVF-SV2 Software	76-482-98	170.00

Fluke 43B power quality analyser in three versions

The Fluke 43B is the ideal instrument for anyone who works with power systems. This instrument helps you to trace problems and monitor relevant power quality parameters. With functions that display present current and power waves, calculate output parameters and register power reductions and increases, transient current and input currents, the Fluke 43B is the complete power quality analyser.

Model	Stock no.	Price each
Fluke 43B basic	76-243-23	1 824.00
Fluke 43B standard	76-243-64	2 697.00
Fluke 43B Kit	76-243-72	3 043.00



Open clamp meter for direct and alternating current, 100 A

Kyoritsu has succeeded in creating an extremely smart, reliable clamp meter with open jaws for maximum accessibility. The KEW2033R is a true root mean square clamp meter (TRMS) with open jaws that measures direct and alternating current. Contact-free voltage indicator that emits an acoustic signal when the meter comes close to voltage that exceeds approx. 80 VAC. Hold function to lock readings. Reset function with a simple press of a button. Auto Shutoff. Supplied with batteries, wrist strap and case. English user manual.



Manufactured by Kyoritsu

Technical data	
Ranges DC:	0–100 A
Max resolution:	0.1 A
Max. cond. diam.:	diam 10 mm
Safety:	Complies with EN 61010-1 cat III, 300 V
Battery:	2x1.5 V type R03
Dimensions:	161×40×30 mm
Weight:	Approx. 110 g incl. batteries

Type	Stock no.	Price each
KEW 2033R	76-409-07	190.00

New 250 MHz digital oscilloscope

This successful range has now been augmented by a model with 250 MHz bandwidth. They have a long memory that facilitates the analysis of signals that are difficult to capture and the identification of disruption and spikes. They can be connected to a computer via the USB port, and in contrast to most others you can also view the signal in real time on the computer. The software is free. No communication card is required, USB and RS232 interface are supplied. Dimensions and weight 254×142×310 mm, 4.1 kg.



Model	Stock no.	Price each
GDS-820S 150 MHz black & white	76-254-11	1 119.00
GDS-820C 150 MHz colour	76-254-29	1 334.00
GDS-840C 250 MHz colour	76-254-45	1 819.00

Programmable milliohm meter 1 μΩ–3 MΩ

The GW Instek GOM-802 is a programmable milliohm meter with very high accuracy and resolution. It is ideal for measurements of contact resistances in relays, switches, contacts, PCB patterns, motor and transformer windings, etc. With a maximum error display of 0.05% and 1 uOhm resolution and four-pole Kelvin measurement cables, the GOM-802 is one of the best instruments for measuring low resistance. Finesses for Hi-Lo percentage selection and Hi-Lo comparator make the GOM-802 suitable for so-called Go/No-Go tests. It also indicates this with a faulty/correct tone signal. For automatic tests there is also a model with RS-232 and GPIB interface. Recommended Kelvin measurement cables 40-609-27.



Type	Stock no.	Price each
GOM-802	76-525-22	619.00
GOM-802 GRS232/GPIB	76-525-30	778.00
Kelvin measurement cables	40-609-27	74.00

Programmable 15 MHz function generator

The GW-Instek GFG-3015 is a programmable function generator with a very stable, accurate signal, and is equipped with an RS-232 interface. You can generate signals with a frequency accuracy with a max error view of 0.02% and a maximum resolution of 10 MHz. LED display with large, clear figures AM/FM, Lin/Log sweep, Gate, Burst, Trigger mode and five standard wave forms. Built-in 150 MHz frequency counter, VCF control and SYNC/TTL/GCV outputs. Together this produces a function generator that is suitable for schools and as basic equipment for most people working in service, production and development labs.



Type	Stock no.	Price each
GFG-3015	76-311-46	922.00

Shielded jack for straight PCB assembly

Shielded jack for straight PCB assembly with screen connection directly in the PCB. Solder connection.



Manufactured by AMP

No. of poles, type	AMP type no.	Stock no.	Price each		
			1-	25-	100-
8/8, RJ45	0-0100616-1	42-687-93	1.94	1.19	0.98

Free socket for panel mounting

Device for splicing two cable assemblies with modular connectors through a panel. Snap-in mounting.



Manufactured by AMP

No. of poles, type	AMP type no.	Stock no.	Price each		
			1-	25-	100-
6/6, RJ12	0-0555050-1	42-692-88	5.02	4.52	3.61
8/8, RJ45	0-0555052-1	42-692-96	5.49	4.93	3.95

DrDAQ, data logger for training

Data logger with comprehensive software for experiments and laboratory work in the fields of electronics, physics, chemistry, biology and general science. Ideal for use in training new technicians. Built-in transmitter for light, sound and temperature. Inputs for external transmitter, e.g. for pH measurement. Can also measure voltage and current. Has digital outputs for control signals. Connects to the parallel port in a PC. Requires no external power supply. We also recommend Roger Frost's book "Data logging in practice", which contains a number of examples of experiments, ideas and applications in the field of measurement data collection. DrDAQ is supplied with PC cabling, PicoLog and PicoScope software and drivers. External transmitters are ordered separately. Screen texts and description in Swedish/English. Dimensions: 55×70×20 mm.

A complete description and demo software can be downloaded from the Internet (www.drdaq.com). Experiments and collections of examples can be downloaded from (www.picotech.com/experiments).



Manufactured by Pico Technology

Type	Stock no.	Price each
DrDAQ Data Logger incl. PC software	76-741-04	110.00
External transmitters		
DrDAQ Temperature Probe, 10 to +105 °C	76-741-46	30.20
DrDAQ pH Electrode, 0–14 pH	76-741-53	65.30
DrDAQ Humidity Sensor, 20–90 % RH	76-741-61	98.30
Book: "Data logging in practice" (English)	84-351-74	36.10

- Data logging in training
- Can be used from the age of 10
- Increases understanding of technology
- Results are displayed graphically in real time
- Connected via parallel port
- Software, cabling, laboratory experiments and collections of examples are included

Vehicle diagnostics with PC oscilloscope

Concept for diagnosis and troubleshooting of vehicle electronics Based on the ADC-212 PC oscilloscope and the PicoScope software program. This set can be used to conduct tests on most electrical and electronic functions in modern vehicles, such as:

- Ignition (primary and secondary)
- Fuel injection and fuel pumps
- Start and charge currents
- Transmitters for cam shafts and crank shafts
- Lambda probes, air flow sensors and knock sensors
- ABS brakes, etc.



Manufactured by Pico Technology

PicoScope: Software used to create virtual instruments in a PC: oscilloscope, spectrum analyser, digital voltmeter and digital frequency meter. Measurement data can be stored and printed. PicoScope has a separate section that manages tests of vehicle electronics, with references and a number of curve forms for transmitters and electrical circuits. The set includes: ADC-212 PC oscilloscope, 600 A clamp meter, 20:1 attenuator, measurement cables, 2 standard coupling probes, 2 standard clamps, 2 crocodile clamps, 2 measurement clips, ignition pickup, PC software on CD, quick guide and strong, fitted case. A free demo version that does not require any Pico hardware can be downloaded from the Internet (www.picotech.com/auto/automotive_kit.html).

Type	Stock no.	Price each
Basic Automotive Kit	76-207-01	1 116.00

For Car and Boat

Fully plastic outlet suitable for 21 mm cigarette lighter contacts. Available in version for single-hole assembly or flange fitting, both supplied with protective cover. Suitable as power output, e.g. in cars, boats or caravans.



Technical data

Max current:	8 A	
Max. voltage:	24 V	
Flat pin connection:	6.3×0.8 mm	
Dimensions	Type 1	Type 2
Depth behind panel:	45 mm	47 mm
Sleeve diameter:	30 mm	27 mm
Hole spacing c-c:	40 mm	

Type	Stock no.	Price each
1	42-012-32	7.18
2	42-012-40	5.75

LAN Pinger Plus network tester

- Simulates actual traffic using the PING command
- Verifies LAN connection by transmitting and receiving a so-called Ping signal at 10 or 100 Mbps speed.
- PINGs with variable package sizes.
- Can repeat the PING up to 99 times.
- Can store up to 8 pre-programmed profiles, including IP address, Gateway address and 8 IP addresses, which can be Pinged separately or automatically one by one.
- Verifies LAN network function via the Internet

The Pinger Plus is a hand-held instrument for the installation and maintenance of TCP/IP-based networks. It uses the PING function to verify the connection from point to point. A Ping is a test message that is transmitted to a destination address and then comes back. In the same way, other computers in the network can transmit a Ping to the instrument. This provides a true test that the connection is working correctly. With Pinger Plus you can also measure so-called round trip time, i.e. the time it takes to send and receive a data package. This provides a good indication of the quality of the network. Supplied with batteries, mains adapter and English user instructions.



Type	Stock no.	Price each
Pinger Plus PNG65	76-510-03	433.00

PMR license-free communication radio

Type-approved in Sweden, Norway, Denmark, Finland and Poland. 4 x LR03 batteries are supplied.



Technical data	
Number of channels:	8 channels x 38 group codes produces 304 combinations
Frequency range:	446 MHz
Power:	0.5 W
Range:	Approx. 3 km
Battery:	4 x LR03
Dimensions:	Approx. 57x110x32 mm
Weight:	154 g incl. batteries

Type	Description	Stock no.	Price/pair
VC901	PMR hand-held device	78-738-21	53.10

Portable fan heater

Portable fan heater for temporary, quick heating of small rooms. Adjustable thermostat. Adjustable between half and full effect. Compact design, light weight. For connection to earthed wall output via 2 m cable. Approval: S.



Manufactured by Pyrox

Technical data	
Voltage:	230 Vac
Max power:	2 kW
Max. power consumption:	8.9 A
Sealed to:	IP21
Dimensions:	156x220x189 mm
Weight:	2.5 kg

Type	Stock no.	Price each
EK-2010	54-072-00	106.00

IP44 portable fan heater

Portable fan heater for temporary heating of premises such as garages, washing & drying rooms, storage premises, workshops, etc. Fitted with adjustable thermostat, 0-40 degrees and re-settable overheat protection. Enclosed, heating element and anti-corrosive casing in steel plate. Low sound level. The fan heater can be used as a free-standing unit or wall-mounted. Sealed to IP44. Joint Nordic approval: D, Fi, N, S.



Manufactured by Pyrox

Technical data			
Type:	PROFF 2	PROFF 5	PROFF 9
Dimensions including stand:	285x340x405 mm	285x340x405 mm	345x410x490 mm
ΔT air through flow full output:	+14,5 °C	+32,4 °C	+40,1 °C
Air flow:	280 m ³	480 m ³	720 m ³
Weight:	5,7 kg	6,7 kg	10,2 kg

Type	Output kW	Max current A	Stock no.	Price each
230 Vac, 1-phase PROFF 2	2	8,8	54-073-09	123.00
400 Vac, 3-phase PROFF 5	2,5/5	7,2	54-073-17	184.00
PROFF 9	4,5/9	13,0	54-073-25	212.00

1455 range box/section



Extruded aluminium section with anodised surface. Fitted on the inside with longitudinal tracks for PCBs. Top side with detachable aluminium panel. Two loose 'aluminium end sections with collar/frame in black plastic, which is fitted as required. Supplied with four rubber feet.



Manufactured by Hammond Manufacturing

Dimensions in mm. Only denotes section's outer dimensions

Type	A	B	C	Stock no.	Price each		
					1-	10-	50-
1455C801	54	23	80	50-438-07	9.32	8.47	7.40
1455C1201	54	23	120	50-438-15	11.30	10.20	8.90
1455J1201	78	27	120	50-438-23	12.90	11.80	10.30
1455K1201	78	43	120	50-438-31	13.70	12.50	10.90
1455L1201	103	30,5	120	50-438-49	12.20	11.10	9.63
1455N1201	103	53	120	50-438-56	15.30	13.90	12.10
1455J1601	78	27	160	50-438-64	13.70	12.50	10.90
1455K1601	78	43	160	50-438-72	14.70	13.30	11.70
1455L1601	103	30,5	160	50-438-80	13.10	12.00	10.40
1455N1601	103	53	160	50-438-98	16.50	15.00	13.10
1455L2201	103	30,5	220	50-439-06	14.60	13.30	11.60
1455N2201	103	53	220	50-439-14	18.40	16.70	14.60

1551 range plastic box



Small box in ABS plastic with finely structured surface. Dustproof, damp-proof design, Sealed to IP54. Bushings for fitting PCBs. Fitted with two diagonally placed screws.



Manufactured by Hammond Manufacturing

Dimensions in mm. Only denotes section's outer dimensions

Type	Colour	A	B	C	Stock no.	Price each		
						1-	10-	50-
1551GGY	Light grey	50	35	20	50-346-08	1.42	1.20	1.07
1551GBK	Black	50	35	20	50-347-07	1.42	1.20	1.07
1551HGY	Light grey	60	35	20	50-346-16	1.53	1.30	1.17
1551HBK	Black	60	35	20	50-347-15	1.53	1.30	1.17
1551KGY	Light grey	80	35	20	50-346-24	1.72	1.46	1.29
1551KBK	Black	80	35	20	50-347-23	1.72	1.46	1.29

1599 range instrument box



Box with two sections in self-extinguishing ABS plastic Top section with recessed surface for membrane keyboard. Fitted with tracks and bushings on the inside for PCBs. Battery compartment with room for 2 x 1.5 V (R6) or 1 x 9 V (6F22). Fitted by means of four screws.



Manufactured by Hammond Manufacturing

Dimensions in mm. Only denotes section's outer dimensions

Type	Colour	A	B	C	Stock no.	Price each		
						1-	10-	50-
1599BGYBAT	Light grey	65	130	25	50-256-06	5.47	5.16	4.56
1599EGYBAT	Light grey	85	170	34	50-256-14	6.30	5.94	5.25
1599HGYBAT	Light grey	110	220	44	50-256-22	8.81	8.32	7.34

1590 range aluminium box



Electronic boxes in cast aluminium. Provides excellent EMC protection. Totally flat inside. Cover with bevelled edge for maximum possible tightness, complies with enclosure class IP54. Cover fitted with recessed screws (6-32x1/2"). Supplied unvarnished.



Manufactured by Hammond Manufacturing

Dimensions in mm. Only denotes section's outer dimensions

Type	A	B	C	Stock no.	Price each		
					1-	10-	50-
1590LB	50,5	50,5	31	50-117-05	7.14	6.74	5.95
1590A	92,5	38,5	31	50-117-13	6.30	5.94	5.25
1590G	100	50	25	50-117-21	7.14	6.74	5.95
1590B	111,5	59,5	31	50-117-39	8.08	7.61	6.73
1590BB	118,5	93,5	34	50-117-47	9.78	9.22	8.15
1590C	120	94	56,5	50-117-54	10.50	9.86	8.71
1590D	187,5	119,5	56	50-117-62	19.80	18.70	16.50
1590E	187,5	119,5	82	50-117-70	18.80	17.70	15.70
1590F	187,5	187,5	67	50-117-88	24.20	22.90	20.20
1590DD	188	119,5	37	50-117-96	19.80	18.70	16.50

1593 range plastic box



ABS plastic box in two sections for a wide range of applications. Recessed surface on the top side for membrane keyboard, display, etc. With or without battery compartment. One or two detachable panels in the end sections. Bushings for assembly of PCBs in both top and bottom section. Fitted by means of four screws from beneath.



Manufactured by Hammond Manufacturing

Dimensions in mm. Only denotes section's outer dimensions

Type	Colour	A	B	C	Stock no.	Price each		
						1-	10-	50-
Without battery compartment, 2 panels								
1593DBK	Black	36	114	25	50-362-15	3.78	3.58	3.15
1593DGY	Light grey	36	114	25	50-364-13	3.78	3.58	3.15
1593KBK	Black	66	66	28	50-362-07	2.68	2.53	2.23
1593KGY	Light grey	66	66	28	50-364-05	2.68	2.53	2.23
1593LBK	Black	66	112	28	50-362-23	2.99	2.81	2.49
1593LGY	Light grey	66	112	28	50-364-21	2.99	2.81	2.49
1593XBK	Black	66	140	28	50-362-31	4.50	4.24	3.74
1593XGY	Light grey	66	140	28	50-364-39	4.50	4.24	3.74
With battery compartment, 1 panel								
1593PBK	Black	66	92	28	50-363-06	4.36	4.11	3.63
1593PGY	Light grey	66	92	28	50-365-04	4.36	4.11	3.63
1593QBK	Black	66	112	28	50-363-14	4.36	4.11	3.63
1593QGY	Light grey	66	112	28	50-365-12	4.36	4.11	3.63
1593YBK	Black	66	140	28	50-363-22	4.90	4.62	4.08
1593YGY	Light grey	66	140	28	50-365-20	4.90	4.62	4.08

Uni-Ohm

ELFA has entered into an agreement with Uniroyal Electronics, manufacturer of resistors under the Uni-Ohm brand. The company was founded in Taiwan in 1978, but moved its production to Jiangsu Province in China in 1992. Since January 2000 Uniroyal Electronics has been certified in accordance with both QS9000 and ISO9001. The company's biggest customers include LG Electronics, Logitech, Acer and Samsung. Production capacity is more than 30 billion resistors a year, with surface-mounted models accounting for around 70 % of volume.

ELFA is stocking a selection of Uni-Ohm's products, including cemented power resistors in four sizes from 3 W to 20 W. These represent a very competitive alternative to Yageo-Vitrohm. We have also included a range of resistor networks that are direct replacements of BI Technologies' SIL networks, as well as surface-mounted thick-film resistors in sizes 0402, 0603, 0805 and 1206. To see the full range that ELFA holds in stock, visit ELFA's website at www.elfa.se and search for "uni-ohm".



Lumiled lights up

Luxeon, the most powerful LEDs in the world, have arrived at ELFA. Up to 20 times more powerful than standard LEDs, and has a service life that is ten times longer than traditional lighting. Especially suitable for applications in which you need brightness, long service life and impact resistance. The diodes

are available in various versions, depending on the application. Note that the diodes require extra cooling in most applications. The datasheet contains extensive technical data. Further information and notes on applications may be found on the manufacturer's website.



Emitter

Non-mounted diode that is suitable if you want to create small, cost-efficient solutions. Note that the diode requires extra cooling in most applications. See the datasheet for extensive technical data.

Star

The diode is fitted on a star-shaped aluminium panel, and is suitable if you want a finished solution quickly and easily.

Type	Colour	Lumen	Beam angle	Stock no.	Price each		
					1-	10-	100-
Batwing, low lens							
LXHL-BD01	Red	27	±55°	75-110-33	8.20	7.38	6.70
LXHL-BM01	Green	30	±55°	75-110-17	11.10	9.97	9.06
LXHL-BR02	Blue	150 mW*	±55°	75-110-25	11.10	9.97	9.06
LXHL-BW01	White	25	±55°	75-110-09	11.10	9.97	9.06
Lambertian, high lens							
LXHL-PD01	Red	44	±70°	75-111-32	11.10	9.97	9.06
LXHL-PM01	Green	30	±70°	75-111-16	11.10	9.97	9.06
LXHL-PR03	Blue	150 mW*	±70°	75-111-24	11.10	9.97	9.06
LXHL-BW01	White	25	±70°	75-111-08	11.10	9.97	9.06

Type	Colour	Lumen	Beam angle	Stock no.	Price each		
					1-	10-	32-
Batwing, low lens							
LXHL-MD1C	Red	27	±55°	75-112-31	8.64	7.77	7.37
LXHL-MM1C	Green	30	±55°	75-112-15	11.50	10.40	9.83
LXHL-MRRC	Blue	150 mW*	±55°	75-112-23	11.50	10.40	9.83
LXHL-MW1C	White	25	±55°	75-112-07	11.50	10.40	9.83
Lambertian, high lens							
LXHL-MD1D	Red	44	±70°	75-113-30	11.50	10.40	9.83
LXHL-MM1D	Green	30	±70°	75-113-14	11.50	10.40	9.83
LXHL-MRRD	Blue	150 mW*	±70°	75-113-22	11.50	10.40	9.83
LXHL-MW1D	White	25	±70°	75-113-06	11.50	10.40	9.83

*Radiometric power.



Star with lens

Complete module with lens. Ideal when you want strong spotlighting.

Type	Färg	Candela	Beam angle	Stock no.	Price each		
					1-	24-	96-
LXHL-ND98	Red	750	±5°	75-114-39	13.00	11.70	10.60
LXHL-NM98	Green	500	±5°	75-114-13	15.90	14.30	13.00
LXHL-NRR8	Blue	80	±5°	75-114-21	15.90	14.30	13.00
LXHL-NW98	White	180	±5°	75-114-05	15.90	14.30	13.00

Connector spacing 1.25 mm

Connector system with 1.25 mm spacing for cable-to-cable and cable-to-card applications. Fitted with friction lock. The cable guard is fitted with a contact element or cabling (AWG28) with pre-crimped contact elements at both ends.

Technical data	
Max. voltage:	125 V
Max current	
AWG26-28:	1,0 A
AWG32:	0,8 A
Contact material:	Phosphor bronze
Plating:	Tin
Contact resistance:	20 mΩ max
Insulation resistance:	100 mΩ
Temperature range:	-40 to +85 °C
Flame class:	UL94V-0
Approvals:	CSA, UL



Manufactured by Molex

Cable casing

Not fitted with contact element.

Type	No. of poles	Stock no.	Price each		
			1-	100-	500-
51021-0300	2	43-543-61	0.14	0.11	0.10
51021-0400	3	43-543-79	0.15	0.12	0.11
51021-0400	4	43-543-87	0.18	0.14	0.13
51021-0500	5	43-543-95	0.20	0.16	0.14
51021-0600	6	43-544-03	0.22	0.17	0.15
51021-0700	7	43-544-11	0.25	0.19	0.17
51021-0800	8	43-544-29	0.27	0.21	0.19
51021-0900	9	43-544-37	0.29	0.22	0.20
51021-1000	10	43-544-45	0.31	0.24	0.22

Contact element suitable for range 51021

For cable with max. outer diameter 1.00 mm.

Type	Suitable cable area	Stock no.	Price each		
			1-	100-	500-
50079-8100	AWG26-28	43-544-52	0.16	0.13	0.12
50058-8100	AWG28-32	43-544-60	0.16	0.13	0.12

Cables

Pre-crimped cabling (AWG28) with 50058 contact element at each end.

Type	Length mm	Stock no.	Price each		
			1-	100-	500-
CLL-3306	200	43-544-78	1.02	0.78	0.72
CLL-3307	400	43-544-86	1.05	0.80	0.72

Tag strip for PCB assembly, spacing 1.25 mm.

Type	No. of poles	Stock no.	Price each		
			1-	100-	500-
Straight tag strip					
building height in version supplied 5.2 mm					
53047-0210	2	43-540-07	0.20	0.15	0.14
53047-0310	3	43-540-15	0.29	0.23	0.20
53047-0410	4	43-540-23	0.38	0.29	0.26
53047-0510	5	43-540-31	0.41	0.31	0.28
53047-0610	6	43-540-49	0.47	0.36	0.31
53047-0710	7	43-540-56	0.52	0.41	0.36
53047-0810	8	43-540-64	0.58	0.45	0.40
53047-0910	9	43-540-72	0.73	0.56	0.49
53047-1000	10	43-541-63	0.80	0.61	0.54
Angled tag strip					
building height in version supplied 3.5 mm					
53048-0210	2	43-540-80	0.28	0.22	0.19
53048-0310	3	43-540-98	0.33	0.25	0.22
53048-0410	4	43-541-06	0.39	0.30	0.26
53048-0510	5	43-541-14	0.49	0.38	0.34
53048-0610	6	43-541-22	0.52	0.41	0.36
53048-0710	7	43-541-30	0.58	0.45	0.40
53048-0810	8	43-541-48	0.66	0.50	0.45
53048-0910	9	43-541-55	0.73	0.56	0.49
53048-1000	10	43-541-71	0.78	0.60	0.53
Straight tag strip for surface assembly Y					
building height in version supplied: 5.7 mm					
53398-0290	2	43-541-89	0.71	0.55	0.49
53398-0390	3	43-541-97	0.83	0.65	0.57
53398-0490	4	43-542-05	0.94	0.73	0.65
53398-0590	5	43-542-13	1.06	0.81	0.72
53398-0690	6	43-542-21	1.18	0.90	0.80
53398-0790	7	43-542-39	1.29	1.00	0.88
53398-0890	8	43-542-47	1.41	1.09	0.97
53398-0990	9	43-542-54	1.52	1.17	1.04
53398-1090	10	43-542-62	1.63	1.25	1.11
Angled tag strip					
building height in version supplied: 3.4 mm					
53261-0290	2	43-542-70	0.89	0.70	0.61
53261-0390	3	43-542-88	0.91	0.70	0.62
53261-0490	4	43-542-96	1.01	0.77	0.69
53261-0590	5	43-543-04	1.1	0.84	0.75
53261-0690	6	43-543-12	1.18	0.91	0.81
53261-0790	7	43-543-20	1.29	0.99	0.87
53261-0890	8	43-543-38	1.37	1.06	0.93
53261-0990	9	43-543-46	1.46	1.12	1.00
53261-1090	10	43-543-53	1.55	1.19	1.06

Hand-held tool

Type	For contact element	Stock no.	Price each
63811-0300 Press tool	50079	80-491-32	327.00
63811-0200 Press tool	50058	80-492-49	327.00
57072-6000 Extraction tool	50058, 50079	80-492-56	134.00

For further information see www.elfa.se.

MMCX miniature coaxial connector

Miniature coaxial connector for use in applications such as wireless communication and civil/military radio/telecommunication. Complies with CECC 22220 and can be used up to approx. 6 GHz. For further information see www.elfa.se.

Type	Fig.	Stock no.	Price each
Straight male plugs for RG cable			
178B/U, 196A/U	1	46-344-08	3.24
174A/U, 188A/U, 316U	1	46-344-16	3.24
Angled male plugs for RG cable			
178B/U, 196A/U	2	46-344-40	4.83
174A/U, 188A/U, 316U	2	46-344-57	4.83
Female panel socket for PCB assembly			
	3	46-344-81	3.69
	4	46-344-99	3.79
	5	46-345-23	4.10
Female panel socket for surface assembly			
	6	46-345-56	6.20



Manufactured by Amphenol

Picoflex PF-50 miniature connector, 1.27 mm spacing

Connector system, low-profile for card-to-card and cable-to-card applications. The range consists of sockets for flat cables, plugs for PCB assembly and surface assembly, as well as pre-crimped cabling in various lengths with sockets at each end. UL and CSA approved.



Technical data	
Max. voltage:	250 V
Max current:	1,2 A
Insulation material:	Polyester (UL94 V-0)
Spacing:	1,27 mm
Contact material:	Phosphor bronze
Contact plating:	Tin
Contact resistance:	15 mΩ max
Insulation resistance:	1 GΩ min
Temperature range:	-40 to +105 °C

For a complete list of articles held in stock, see www.elfa.se under stock no. 43-550-04.

Unipolar pressure toggle switch, dustproof and damp-proof

Small unipolar pressure toggle switch Dustproof and damp-proof design. With 230 V~ lighting. Snap-on fastening. Flat pin connection.

Authorisations: UL, VDE.



Manufactured by APEM



Technical data	
Circuit-breaking capacity:	10 (4) A 250 Vac () = motor load
Front dimension:	21x15 mm

Type	Function	Stock no.	Price each		
			1-	10-	50-
Red lighting					
FML18A226A000	to-from	35-020-28	3.10	2.64	2.11
Yellow lighting					
FML18A225A000	to-from	35-020-10	3.10	2.64	2.11
Green lighting					
FML18A223B000	to-from	35-020-02	3.10	2.64	2.11

MultiMediaCard holder

Holder for MMC (MultiMediaCard Connector) manufactured in accordance with MMCA specifications. Self-cleaning contacts. 7-polar. Surface-mounted.

Technical data	
Contact resistance:	=30 mΩ (card)
Mechanical service life:	1x10 ⁴ operations min
Temperature range:	-25 to +85 °C

Fan control from UAL

Fan control with integrated RFI filter designed for heating/ventilation applications. Simple installation connected in series with the load.



Manufactured by UAL

Technical data	
Mains voltage:	230 V ±10% 50/60 Hz
Max load current:	2A rms
Minimum load current:	200 mA
Insulation voltage:	2000 V
Leak current:	10 mA
Max working temperature:	65 °C

Type	Stock no.	Price each
VAC2-2RFI	72-058-34	49.10

Toggle switch, gold-plated toggle arm

Switch with gold-plated toggle arm. The appearance makes the switch particularly suitable in settings with traditional wood furnishings, such as hotels, wooden boats, etc.

The same sturdy design as other switches in the 600 range also makes it suitable for industrial use.

Supplied with 1 decorative nut.



Manufactured by APEM

Technical data	
Circuit-breaking capacity:	15 A 125/250 Vac (CSA, UL) 20 A 50 Vac (EU), 10 A 24 Vdc
Connections:	Screw connection
Dimensions	
Unipolar:	L30xW14xH26 mm
Bipolar:	L30xW22xH43 mm
Panel holes:	Ø 12.2 mm

Type	No. of poles	Function	Stock no.	Price each		
				1-	10-	25-
636H/2X2042	1	to-to	35-239-75	11.80	10.00	7.99
641H/3X2042	2	to-from	35-239-80	14.10	12.00	9.54
Decorative nut, gold-plated						
U1862			35-239-90	2.16	1.83	1.47



Type	Stock no.	Price each
C709 10A007 100 1	48-115-92	2.35 1.87

Construction kits from Velleman

De Luxe Christmas tree

- Supplied with 16 flashing LEDs in three different colours (Red, Green, Yellow)
- Optional decoration
- Can be hung up or placed on the floor



Technical data

Power consumption:	8 mA
Operating voltage:	9–12 V
Dimensions:	80x88x102 mm

Type	Stock no.	Price each
MK130	85-210-07	12.70

Traffic lights

Free-standing, four-way traffic lights suitable for model railways or bars. Realistic function with adjustable delay.



Technical data

Power consumption:	15 mA
Switch	
Operating voltage:	9 V battery (not included)
Dimensions:	50x35x115 mm

Type	Stock no.	Price each
MK131	85-210-15	12.60

Karaoke

- Sing along to your favourite songs.
- Connect the karaoke machine between the signal source and the amplifier.
- RCA contacts for inputs/outputs.
- 6.35 mm tele-jack for mix c input.
- Adjustable mic level
- Voice reduction converter



Type	Stock no.	Price each
MK140	85-225-34	15.50

SmartCard holder

Amphenol®

8-polar for ISO 7816 placed contacts. The holder has soft landing contacts to ensure a long service life for cards and the holder. Built-in switch to indicate inserted cards. Snap-in clips, according to EMV standard, to secure to base. Connection via 10-polar flex strip.



Technical data

Contact resistance:	=30 mΩ (card) =40 mΩ (switch)
Mechanical service life:	3x10 ⁵ operations min
Temperature range:	-25 to +65 °C

Type	Stock no.	Price each	
		1-	5-
C702 10M008 066 4	48-115-76	13.10	10.50

16-polar for ISO 7816 and AFNOR placed contacts. The holder has soft landing contacts to ensure a long service life for cards and the holder. Built-in switch to indicate inserted cards.



Technical data

Contact resistance:	=35 mΩ (card) =70 mΩ (switch)
Mechanical service life:	3x10 ⁵ operations min
Temperature range:	-25 to +85 °C

Type	Stock no.	Price each	
		1-	10-
C702 10M008 123 4	48-115-50	9.08	7.27

SIMLOCK® SmartCard holder, 6-polar for SIM/SAM cards. Switch that indicates inserted cards when the lid is closed. Low total height, only 2.5 mm. Surface-mounted.



Technical data

Contact resistance:	=30 mΩ (card) =60 mΩ (switch)
Mechanical service life:	5000 operations min
Temperature range:	-40 to +85 °C

Type	Stock no.	Price each	
		1-	50-
C707 10M006 522 2	48-115-68	2.55	2.05
Original packing, 800 units in a roll			

SmartCard holder, 8-polar for ISO 7816 placed contacts. The holder has self-cleaning "wiping contacts". Built-in self-cleaning switch in accordance with EMV standard (Europay MasterCard Visa).



Technical data

Contact resistance:	=30 mΩ (card) =50 mΩ (switch)
Mechanical service life:	1x10 ⁵ operations min
Temperature range:	-25 to +70 °C

Type	Stock no.	Price each	
		1-	27-
C702 10M008 272 4	48-115-84	2.28	1.82

More LiYCY cable options

We have a wide range of screened/armoured LiYCY pair cables and LiYCY pair cables. Several new area sizes and numbers of conductors/pair. See our website under 55-778-12 and 55-781-09 respectively.



Zero voltage breaker

Breaker with pushbutton and electrically controlled contacts. The pushbutton controls a coil, which in turn activates the contacts. If power is lost, the contacts are broken. The breaker must be reactivated when the circuit is live once more, thus preventing machines, etc. from being started unintentionally. Available as an accessory is a seal frame, which provides panel tightness IP65. Authorisations: UL, VDE.



Technical data

Contact function: Bipolar, closing
Circuit-breaking capacity: 14.5 A 230 Vac, 50 Hz
Temperature range: -20 to +60 °C
Front dimension: 78x39 mm

Manufactured by APEM

Type	Stock no.	Price each	
		1-	10-
Switch E3251-20-01	35-865-00	13.70	12.00
Seal frame with cover AAE003-251/Z037 Black	35-865-18	4.87	
AAE003-251/Z037-01 Yellow	35-865-42	4.87	

Illuminated metal pushbutton switch, IP66, vandal-proof

Pushbutton switch, instantly closing, with LED illumination around the button. The button's low height makes it harder to sabotage the switch, even if tools are used. Stainless steel casing. Complies with enclosure class IP66 (front only). Separate connection of LED, external serial resistance for current limitation must be used. Screw connection.



Manufactured by Bulgin

Technical data

Contact function: Unipolar connection, instant
Circuit-breaking capacity: 50 mA 24 Vdc
Front dimension: Ø 22 mm
Panel holes: 19.2 mm

Type	Colour lighting	Front drop-out V _F	Stock no.	Price each		
				1-	10-	20-
MP1002/RD	Red	1,85 V	35-072-25	20.80	18.70	16.70
MP1002/GN	Green	2,2 V	35-072-41	20.80	18.70	16.70
MP1002/BL	Blue	3,6 V	35-072-66	24.20	21.80	19.60

GP Ultra alkaline high-current batteries

For power-hungry devices such as digital cameras, PDAs, etc.

Type	Size IEC	Stock no.	Price each		
			1-	10-	40-
GP24AU	LR03	69-250-10	0.95	0.71	0.49
GP15AU	LR6	69-250-36	0.95	0.71	0.49
GP14AU	LR14	69-250-44	2.12	1.77	1.21
GP13AU	LR20	69-250-51	2.72	2.30	1.98
GP1604AU	6LR61	69-250-93	3.26	2.79	2.44



Buzzers from Kingstate



Type	Operating voltage	Current consumption	Sound pressure	Dimensions	Stock no.	Price each			
						1-	10-	50-	
Piezo, PCB assembly									
KPE-207	3-20 Vdc	Max 13 mA at 12 Vdc	(30 cm): 83 dB at 12 Vdc	Ø 24x16 mm (excl leg)	37-872-31	3.49	3.15	2.83	
Piezo, with pulsing sound									
KPE-251	4-28 Vdc	Max 5 mA at 12 Vdc	(30 cm): 82 dB at 12 Vdc	Ø 28x25,4 mm (excl. angle brackets) 39,5 mm inkl fästvinklar, c/c=33,5 mm	37-872-64	6.59	6.10	5.50	
Electromagnetic									
KX-1205C	5 (4,0-7,0) V		(10 cm): 85 dB min	Ø 12x9,5 mm (excl leg)	37-871-24	2.46	2.21	1.99	
KX-1212C	12 (8,0-16,0) V		(10 cm): 85 dB min	Ø 12x9,5 mm (excl leg)	37-871-32	2.46	2.21	1.99	
Piezo, panel assembly									
KPE-850S	6-28 Vdc	4-22 mA (6-28 V)	(60 cm): 68-80 dB (6-28 V)	Ø 42,5x32,5 mm	37-874-05		1- 17.60	10- 15.90	50- 14.30

Thermal printer



Compact printer for thermal paper. Suitable for battery operation in mobile applications. Metal chassis and enclosed gearbox provide high reliability and a long service life. Operates in wide temperature range maintaining print speed. Approvals: UL. FTP-628 driver card is ordered separately.



Manufactured by Fujitsu

Technical data		
	628	638
Paper width:	58 mm	80 mm
Print width:	50 mm	70 mm
Resolution:	8 points/mm	8 points/mm
Number of points/row:	384	576
Print speed:	60 mm/s	60 mm/s
Power supply:	4.2-8.5 V=	4.2-8.5 V=
Working temperature:	-25 to +70 °C	-25 to +70 °C
Dimensions:	70x43x15.5 mm	92.4x33x15.5 mm
Weight:	46 g	52 g

Type	Stock no.	Price each	
		1-	5-
FTP-628MCL054	25-790-19	65.70	59.70
FTP-638MCL103	25-790-27	92.00	83.60
Driver card			
PRN-608-S	25-790-35	124.00	113.00

Thermal paper: see www.elfa.se.

Battery-powered receipt printer



Battery-powered receipt printer that can also print labels. Prints on thermal paper, 58 mm wide. Printouts can be set with normal, reduced, height and/or width. Choice of upright text, 90° or 180°. Handles the 11 most common barcodes. 128 B character buffer and 32 KB Flash memory for logotypes or company symbols. Facility to extend character set and load special fonts, as well as user-defined characters. The RS232 serial interface and IrDA provide wireless printing from PDAs/laptops and mobile phones. Very easy paper change. Built-in self-test. Supplied with 1 roll of paper, NiMH batteries, mains adapter/charger, RS232 cabling, belt holder and CD with English user guide and drivers for Windows.



Manufactured by Custom

Technical data	
Print mechanism:	Fixed thermal head, 8 points/mm
Number of characters/row:	24 columns
Print speed:	Up to 50 mm/s
Character buffer:	1 KB
Flash memory:	32 KB
Graphic memory:	1 x logotype 384x85 points
Paper width:	58 mm (Ø 50 mm)
Interface:	RS232 + IrDA
Power supply:	Battery, 5 x 1.5 V type R6
Dimensions:	88x146x65 mm
Weight:	465 g

Type	Stock no.	Price each
Sprint-I	25-790-92	351.00

Thermal paper: see www.elfa.se.

Charger for 2/6/12/24 Volts

Charger from Ansmann that automatically adjusts the charge voltage to the lead battery.

- Charge voltage indicated by LED
- Suitable for lead batteries with a capacity of 2-24 Ah
- Protected against short-circuit and incorrect polarisation
- Supplied with crocodile clip



Technical data		
Rated voltage	Charge voltage	Charge current
2 V	2,3 V	900 mA
6 V	6,9 V	700 mA
12 V	13,8 V	600 mA
24 V	27,6 V	300 mA

Type	Stock no.	Price each
ALCS 2-24A	69-388-56	34.90

Charger, 12 V/20 A and 24 V/10 A respectively

Fully automatic three-stage charger with high output for large lead batteries.

- Suitable for both cyclical operation and maintenance charging
- Protected against short-circuit and incorrect polarisation
- Supplied with battery clips



Type	Rated voltage	Charge current	Stock no.	Price each
2045/12	12 V	20 A	69-415-20	263.00
2045/24	24 V	10 A	69-415-38	263.00

CD-R LP

A black 80 min/700 MB 1-48xCD-R, with extra protection against UV radiation and with improved resistance to scratches compared to regular CD-Rs. Sold in packs of 7.



Type	Stock no.	Price/package
LP-CD-R 80min	25-417-79	8.42

CD-R Pocket

CD-R in compact format 86x61 mm. The disc has a capacity of 40.5 min/40 MB, and is sold in packs of 6.



Type	Stock no.	Price/package
CD-R pocket	25-417-87	9.67

DVD and CD case



Type	Stock no.	Pris/pac.
DVD 5-pack box, black	25-418-29	3.35
Jewel case 5-pack, black	25-418-60	2.18
DVD double, transparent	25-418-45	0.89
Jewel case double, transparent	25-418-78	0.45

54 Mbps wireless CardBus, PCI



- For high-speed transfer of video and multimedia
- 54 Mbps data speed
- 64/128-bit encryption
- "EZ Installation Wizard"
- Comprehensive drivers

Supplied with drivers (3.5") and aerial. English user instructions. Driver updates and complete product information can be obtained from the manufacturer's website (www.smc-europe.com).



Manufactured by SMC Networks

Type	Stock no.	Price each
SMC2802W	25-281-31	79.60

54 Mbps wireless CardBus, PCMCIA



- For high-speed transfer of video and multimedia
- 54 Mbps data speed
- 64/128-bit encryption
- "EZ Installation Wizard"
- Comprehensive drivers

Supplied with drivers (3.5"). English user instructions. Driver updates and complete product information can be obtained from the manufacturer's website (www.smc-europe.com).



Manufactured by SMC Networks

Type	Stock no.	Price each
EZ Wireless 54 Mbps CardBus Adapter SMC2835W	25-281-56	73.40

Wireless broadband router

- Switch, Internet access and SPI firewall
- Works with PC, Mac and Linux
- 1-54 Mbps data speed
- 4 LAN ports, auto MDIX, 10/100 MBit (RJ-45)
- 1 WAN port for xDSL or cable modem, 10/100 MBit (RJ-45)
- "EZ 3-Click Installation Wizard"
- Comprehensive drivers

Supplied with drivers (CD), 2 aeriels and mains adapter. English/multilingual user instructions. Driver updates and complete product information can be obtained from the manufacturer's website (www.smc-europe.com).



Manufactured by SMC Networks



Type	Stock no.	Price each
SMC2804WBR	25-281-49	162.00

Optical wireless mini-mouse

Small, wireless optical mouse for portable computers, ideal when you're on the move. The mouse uses 27 MHz radio technology, has an optical sensor with 800 dpi resolution and works on most surfaces. Supplied with USB receiver, 2 x R03 batteries, drivers for Win 98/2000/Me/XP, manual and carrying case.



Type	Stock no.	Price each
OPM 602	25-430-07	40.60

MouseTrapper Classic PC

Control device that complements the PC mouse. The pointer and click buttons are controlled by simple finger actions, which creates an ergonomically correct working position, with the arms held close to the body and the wrists resting on the wrist support. Switching between the MouseTrapper and regular mouse work prevents and eases the problem of RSI. Built-in scroll and zoom function via simple key commands. Connection to PS/2 computers. The MouseTrapper Classic PC is supplied with a mouse (Microsoft IntelliMouse) and a CD containing a "Mini-Break" gymnastics program – a training program for computer users.

Accessories

Black, moulded wrist support with extra wide (12 cm) rest area for maximum ergonomic benefit. Whole base plate under keyboard. Dimensions: 560x300 mm.



Technical data

Colour:	Grey
Connection:	6-polar mini DIN
Dimensions:	545x68x25 mm

Type	Stock no.	Price each
MouseTrapper Classic PC	25-443-02	185.00
Accessories		
Wrist support	25-443-36	55.40

MouseTrapper Electronic



Technical data

Colour:	Grey
Connection:	6-polar mini DIN/USB contact

Type	Stock no.	Price each
MouseTrapper Electronic	25-443-10	218.00

Bipolar 1 A relay

Bipolar relay with gold-plated twin contacts. Excellent low-level properties make this relay ideal for use in the fields of measurement technology, telecommunication, audio/video, etc. Fully sealed design.



Manufactured by Omron

Technical data

Contact function:	Bipolar switching (form 2C)
Circuit-breaking capacity:	0.5 A 50 Vac, 1 A 30 Vdc
Min contact load:	10 µA 10 mVdc
Dimension (LxWxH):	16.0x9.9x8.4 mm

Type G5A-	Coil voltage nom (min-max)	Coil resistance Ω	Stock no.	Price each		
				1-	25-	100-
-234P-5 VDC	5 Vdc (3,5-10,0)	125	37-026-02	4.63	4.15	3.76
-234P-12 VDC	12 Vdc (8,4-24,0)	720	37-026-10	4.63	4.15	3.76
-234P-24 VDC	24 Vdc (16,8-48,0)	2880	37-026-28	4.82	4.32	3.92

Tikka/Zipka Plus Head Lamp

Small, ultra-light head lamp with 4 LEDs as a source of light. Three different light levels and flashing light. Provides an excellent flow of light, with a range of up to 15 m. The Tikka Plus lamp head can be adjusted 45° vertically, and has an adjustable elastic headband. The Zipka Plus has an extendible cord behind the lamp housing instead of a traditional headband. Damp-resistant. Supplied with 3 x LR03 batteries.



Manufactured by Petzl

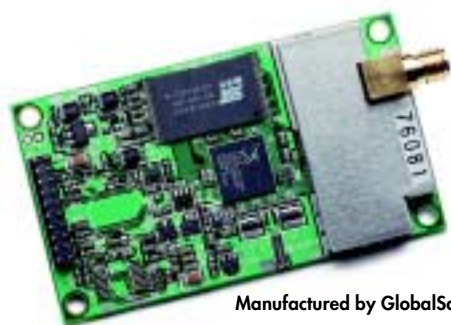
Technical data

Light sources:	LED
Batteries:	3 x LR03
Range:	15 m
Operating time:	150 hours with alkaline batteries
Weight:	78 g incl. batteries
Guarantee:	3 years

Type	Description	Stock no.	Price each	
			1-	5-
E47P	Tikka Plus	80-957-07	37.60	33.40
E48P	Zipka Plus	80-957-49	43.00	38.30
E44950	Leather case to Zipka Plus	80-957-88	10.10	9.03

GPS module ET-102/ ET-202

Complete 12-channel GPS module for integration. Specially designed for use when navigating in cars, determining the position of vehicles and similar tracking applications. Based on SiRF Star II/LP chip set. In forests and densely populated areas where the GPS signal might be muffled or even totally blocked, the module uses an algorithm to provide extremely precise positional data.



Manufactured by GlobalSat



Technical data	
Technology:	12-channel parallel receiver
Protocol:	NMEA 0183 v2.2, SiRF
Commands:	GGA, GSA, GSV, RMC, GLL and VTG
Max speed:	515 m/s
Max acceleration:	±4 G
Update:	Every second
Accuracy position:	25 m CEP
Speed:	0.1 m/s
Working temperature:	-20 to +75°C
Supply voltage:	3.3 V ±10%
Power consumption normal:	60 mA type
saver mode:	25 mA type
Aerial contact type ET-102:	SMA
type ET-202:	MMCX
Dimensions/weight type ET-102:	71x41x9 mm/20 g
type ET-202:	31x31x7.6 mm/7 g

Type	Stock no.	Price each	
		1-	5-
ET-102	78-429-09	82.40	73.00
ET-202	78-429-17	82.40	73.00

For suitable connectors, see www.elfa.se.

Coupling plinth for PCB, 5 mm



Stackable coupling plinth for horizontal or vertical PCB assembly. With wire protection. M2 screw connection, 6x5 mm. Mounted on tag strip. UL and CSA approved.

Technical data	
Max current:	10 A
Max. voltage:	380 V
Cable area:	2.5 mm ² max
Contact material	Beryllium copper
coupling plinth:	5µ tin-coated, nickel-plated brass
tag strip:	Glass fibre-reinforced polyamide (UL94V-0)
Insulation material:	
Max temp:	120 °C
Drill hole for PCB:	Ø 1.5 mm (tag strip)
Pole lead spacing:	5.0 mm
Colour:	Black



Type/coupling plinth	No. of poles	Length mm	Stock no.	Price each		
				1-	30-	100-
CTB1301/2BK	2	10	48-399-08	0.46	0.26	0.25
CTB1301/3BK	3	15	48-399-16	0.71	0.41	0.38
CTB1301/4BK	4	20	48-399-24	0.95	0.54	0.51
CTB1301/5BK	5	25	48-399-32	1.17	0.68	0.62
CTB1301/6BK	6	30	48-399-40	1.41	0.81	0.76
Tag strip (divisible to required no. of poles)						
CTB1301/PS24	24		48-399-57	1.16	0.67	0.62

Clock relay 1/2 channels

Clock relay, 1 or 2 channels, with daily or weekly programme. Menu-based programming in 6 languages: Swedish, English, Finnish, Danish/Norwegian, Polish and German. With 28 or 42 (TR612) memory options, free block formation, days with same connection time can be programmed simultaneously and thus use only 1 memory option. Pre-programmed date and time. Automatic switching between summertime and wintertime. Built-in lithium battery provides 6 years' operational reserve. A PIN code can be programmed to prevent unauthorised access to the clock relay. Authorisations: S, UL, VDE.

Technical data	
Operating voltage:	230 Vac 50 Hz or 12-24 V
Output relay:	Unipolar alternating, 16 (10) A
	250 Vac
Shortest activation time:	1 minute
Operational reserve:	4 years
Display:	LCD
Temperature range:	-10 to +50 °C
Dimensions (WxHxD):	35 (= 2 modules)x86x66 mm



Type	Number of channels	No. of memory options	Stock no.	Price each	
				1-	5-
For 230 V					
TR610 Top	1	28	36-615-50	79.60	71.20
TR612 Top	2	42	36-615-68	96.40	86.80
For 12-24 V					
TR610 TOP UVC	1	28	36-615-76	111.00	97.00

Resonators from Kingstate

We now have resonators that are compatible with Murata at a competitive price. Available with integrated condensers in both hole-mounted and surface-mounted versions. For the full range, see 75-700-08 at www.elfa.se.

