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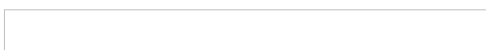
EloTrain - نظام التوصيل

Fundamentals of electrical engineering and electronics

A comprehensive education in the fundamentals of electrical engineering is essential to the understanding of more complex relationships in the various applied sectors in both electrical engineering and electronics.

The freedom to experiment is backed up by formal experiment literature and the use of safety extra-low voltage means that the system is even safe for complete laymen. It leads to in-depth knowledge and eventually to the kind of practical skills that form an essential basis for further education and training.

2-mm plug-in system for UniTrain



2-mm plug-in system for UniTrain

The multimedia experiment and training system

The EloTrain 2-mm plug-in system combines with the multimedia experiment and training system UniTrain to create a modern and powerful learning environment for well grounded training in the fundamentals of electrical engineering and electronics. Students are guided through experiments by clearly structured course software aided by text, graphics, animations and tests of knowledge. The experiments themselves are carried out on a 2-mm Experimenter unit specially developed for UniTrain. A wide variety of virtual instruments is available so that students can make real-time measurements. The plug-in modules contain both passive and active electronic components connected via 2-mm laminated plugs featuring gold-plated contacts. When inserted into the plug-in board, the laminated plugs clip the components into place mechanically as well as providing an electrical connection to the plug-in board's nodes. Cables or jumpers can be used to make connections to other nodes, components or measuring instruments. As a rule the 2-mm components are available in two sizes, one for two-pole components and the other for four poles. If a component requires more terminals, these are generally provided in the form of sockets on top of the component. The housings are comprised of two plastic parts clipped together. The upper part features a scratch-proof, high-contrast print of the component's circuit diagram or symbol along with a type name for the component. The transparent body is made of extremely tough see-through plastic allowing the inside of the component to be seen. The base plate is also made of containing 2-mm laminated plugs and joined to the body via an easy-to-open ratchet clip for repair purposes.

EloTrain courses

EloTrain courses

Special multimedia courses are specifically designed for basic education in various applied topics in electrical engineering and electronics. Complex relationships are illustrated at a level entirely comprehensible for schoolchildren using numerous images and illustrations. Students are continually encouraged to apply the knowledge they have learned in experiments using the plug-in components. Experiment instructions and virtual instruments are available for this purpose. Experiments are always safe, even for uninitiated laymen, thanks to the use of non-hazardous safety extra-low voltage.

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

1

Course, EloTrain 1: DC technology

SO4206-1A

1

2

Course, EloTrain 2: AC and three-phase technology

SO4206-1B

1

3

Course, EloTrain 3: Semiconductors

SO4206-1C

1

4

Course, EloTrain 4: Basic electronic circuits

SO4206-1D

1

5

Course, EloTrain 5: Optoelectronics

SO4206-1E

1

6

Course, EloTrain 6: Introduction to digital technology

SO4206-1F

1

7

Course, EloTrain 7: Sequential circuits

SO4206-1G

Course, EloTrain 8: Fundamentals of automotive electronics

SO4206-1J

: ومطلوب بصفة إضافية

UniTrain System:

- Computer-based training and experimentation system for vocational and further training and education
- Multimedia combines cognitive and hands-on (haptic) training units into a comprehensive unified concept
- Areas of basic and advanced electrical engineering, electronics and automotive technology
- Enabling students to acquire skills in the handling of equipment
- Wide range of multimedia courses available for study in school or in professional and advanced training
- Self-contained and usable anywhere at any time
- Multimedia learning environment with high degrees of motivation
- Maximum learning effectiveness in laboratories, at work or at home
- Guarantor for effective and efficient study
- Virtual instruments with experiment hardware
- LabSoft, an open experiment platform
- Courses teach the theoretical building blocks and provide experiments
- Intelligent measurement interface supplies analog and digital measuring and control I/O
- High quality item of laboratory equipment with virtual instruments
- Students' progress monitored and electronically documented on the basis of fault finding experiments
- Faults simulated by the hardware as well as tests of knowledge

Pos.

اسم المنتج

Bestell-Nr.

Anz.

9

البيني مع UniTrain من : جهاز UniTrain تتكون مجموعة الأجهزة الأساسية لنظام الأجهزة الافتراضية (أساسي

CO4203-2A

1

10

EloTrain Experimenter

SO4203-3B

EloTrain set of connection cables and plugs for 2mm system
SO5146-1N

Max 10 digital multimeter
LM2332

Individual EloTrain components (2mm plugs)



Individual EloTrain components (2mm plugs)

You can put together a set of components tailored specifically to your own needs or select individual components from our extensive range of modules.

- Extensive range of modules featuring both active and passive components
- Wide variety of plug-in boards for various needs
- Multi-function power supplies and measuring instruments
- UniTrain-I courses conveying knowledge of electrical fundamentals as well as more complex experiments and everything in between
- Storage systems to keep components safe

Plug-in components



Plug-in components

The EloTrain plug-in system includes an extensive range of plug-in modules featuring both active and passive components. All components and jumpers are equipped with gold-plated contacts, preventing oxidation and ensuring that the contact resistance remains low for the entire life-time of the module.

Rheostats

Rheostats

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

13

Variable resistor, 1kilohm, housing PS2-1

PS2120-9D

1

14

Variable resistor, 5kilohm, housing PS2-1

PS2120-9F

1

15

Variable resistor, 10kilohm, housing PS2-1

PS2120-9G

1

16

Variable resistor, 50kilohm, housing PS2-1

PS2120-9J

1

17

Variable resistor, 100kilohm, housing PS2-1

PS2120-9K

1

18

Variable resistor, 500kilohm, housing PS2-1

PS2120-9M

1

Resistors

Resistors

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

19

Resistor, 0.1ohm, 1W, housing PS2-1

PS2121-1A

1

20

Resistor, 0.22ohm, 1W, housing PS2-1
PS2121-1B

1
21

Resistor, 0.47ohm, 1W, housing PS2-1
PS2121-1C

1
22

Resistor, 1ohm, 1W, housing PS2-1
PS2121-1D

1
23

Resistor, 2ohm, 1W, housing PS2-1
PS2121-1S

1
24

Resistor, 2.7ohm, 1W, housing PS2-1
PS2121-1E

1
25

Resistor, 4.7ohm, 1W, housing PS2-1
PS2121-1F

1
26

Resistor, 8.2ohm, 1W, housing PS2-1
PS2121-1G

1
27

Resistor, 10ohm, 1W, housing PS2-1
PS2121-2A

1
28

Resistor, 12ohm, 1W, housing PS2-1
PS2121-2B

1
29

Resistor, 15ohm, 1W, housing PS2-1
PS2121-2C

1
30

Resistor, 18ohm, 1W, housing PS2-1
PS2121-2D

1
31

Resistor, 22ohm, 1W, housing PS2-1

| | | |
|---|---|----|
| PS2121-2E | 1 | 32 |
| Resistor, 27ohm, 1W, housing PS2-1 PS2121-2F | 1 | 33 |
| Resistor, 33ohm, 1W, housing PS2-1 PS2121-2G | 1 | 34 |
| Resistor, 39ohm, 1W, housing PS2-1 PS2121-2H | 1 | 35 |
| Resistor, 47ohm, 1W, housing PS2-1 PS2121-2J | 1 | 36 |
| Resistor, 56ohm, 1W, housing PS2-1 PS2121-2K | 1 | 37 |
| Resistor, 68ohm, 1W, housing PS2-1 PS2121-2L | 1 | 38 |
| Resistor, 82ohm, 1W, housing PS2-1 PS2121-2M | 1 | 39 |
| Resistor, 100ohm, 1W, housing PS2-1 PS2121-2N | 1 | 40 |
| Resistor, 120ohm, 1W, housing PS2-1 PS2121-2P | 1 | 41 |
| Resistor, 150ohm, 1W, housing PS2-1 PS2121-2Q | 1 | 42 |
| Resistor, 180ohm, 1W, housing PS2-1 PS2121-2R | | |

| | |
|--|----|
| | 1 |
| | 43 |
| Resistor, 220ohm, 1W, housing PS2-1 PS2121-2S | |
| | 1 |
| | 44 |
| Resistor, 270ohm, 1W, housing PS2-1 PS2121-2T | |
| | 1 |
| | 45 |
| Resistor, 330ohm, 1W, housing PS2-1 PS2121-2U | |
| | 1 |
| | 46 |
| Resistor, 390ohm, 1W, housing PS2-1 PS2121-2V | |
| | 1 |
| | 47 |
| Resistor, 470ohm, 1W, housing PS2-1 PS2121-2W | |
| | 1 |
| | 48 |
| Resistor, 560ohm, 1W, housing PS2-1 PS2121-2X | |
| | 1 |
| | 49 |
| Resistor, 680ohm, 1W, housing PS2-1 PS2121-3A | |
| | 1 |
| | 50 |
| Resistor, 820ohm, 1W, housing PS2-1 PS2121-3B | |
| | 1 |
| | 51 |
| Resistor, 1kilohm, 1W, housing PS2-1 PS2121-3C | |
| | 1 |
| | 52 |
| Resistor, 1.2kilohm, 1W, housing PS2-1 PS2121-3D | |
| | 1 |
| | 53 |
| Resistor, 1.5kilohm, 1W, housing PS2-1 PS2121-3E | |
| | 1 |

Resistor, 1.8kilohm, 1W, housing PS2-1
PS2121-3F

1

Resistor, 2.2kilohm, 1W, housing PS2-1
PS2121-3G

1

Resistor, 2.7kilohm, 1W, housing PS2-1
PS2121-3H

1

Resistor, 3.3kilohm, 1W, housing PS2-1
PS2121-3J

1

Resistor, 3.9kilohm, 1W, housing PS2-1
PS2121-3K

1

Resistor, 4.7kilohm, 1W, housing PS2-1
PS2121-3L

1

Resistor, 5.6kilohm, 1W, housing PS2-1
PS2121-3M

1

Resistor, 6.8kilohm, 1W, housing PS2-1
PS2121-3N

1

Resistor, 8.2kilohm, 1W, housing PS2-1
PS2121-3P

1

Resistor, 10kilohm,0.5W, housing PS2-1
PS2121-3Q

1

Resistor, 12kilohm,0.5W, housing PS2-1
PS2121-3R

1

| | |
|--|---------|
| Resistor, 15kilohm,0.5W, housing PS2-1 PS2121-3S | 1 66 |
| Resistor, 18kilohm,0.5W, housing PS2-1 PS2121-3T | 1 67 |
| Resistor, 22kilohm,0.5W, housing PS2-1 PS2121-3U | 1 68 |
| Resistor, 27kilohm,0.5W, housing PS2-1 PS2121-3V | 1 |

Potentiometers

Potentiometers

فائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

| | |
|--|-------------------|
| Potentiometer, 100ohm, 0.5W lin., housing PS2-3 PS2121-8A | 91 1 92 |
| Potentiometer, 250ohm, 0.5W lin., housing PS2-2 PS2121-8B | 1 93 |
| Potentiometer, 470ohm, 0.5W lin., housing PS2-2 PS2121-8C | 1 94 |
| Potentiometer, 1kilohm, 0.5W lin., housing PS2-2 PS2121-8D | 1 95 |
| Potentiometer, 2kilohm, 0.5W lin., housing PS2-2 PS2121-8E | 1 95 |

1
96

Potentiometer, 4.7kilohm, 0.5W lin., housing PS2-2
PS2121-8F

1
97

Potentiometer, 10kilohm, 0.5W lin., housing PS2-2
PS2121-8G

1
98

Potentiometer, 22kilohm, 0.5W lin., housing PS2-2
PS2121-8H

1
99

Potentiometer, 47kilohm, 0.5W lin., housing PS2-2
PS2121-8J

1
100

Potentiometer, 100kilohm, 0.5W lin., housing PS2-2
PS2121-8K

1
101

Potentiometer, 220kilohm, 0.5W lin., housing PS2-2
PS2121-8L

1
102

Potentiometer, 470kilohm, 0.5W lin., housing PS2-2
PS2121-8M

1

Non-linear resistors

Non-linear resistors

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
103

VDR resistor, 40E/12V/10mA, housing PS2-1
PS2122-9A

1
104

| | |
|--|----------|
| VDR resistor, 800E/8V/10mA, housing PS2-1 PS2122-9B | 1 105 |
| PTC resistor, 30E/40V/70mA, housing PS2-1 PS2122-9C | 1 106 |
| PTC resistor, 160E/30V/40mA, housing PS2-1 PS2122-9D | 1 107 |
| PTC resistor, vehicle-technology, with heating resistor, housing PS2-3 PS2122-9E | 1 108 |
| PTC resistor, with heating resistor, housing PS2-3 PS2122-9F | 1 109 |
| NTC resistor, 150E/0.75W/K164, housing PS2-1 PS2122-9G | 1 110 |
| NTC resistor, 1K/0.75W/K164, housing PS2-1 PS2122-9H | 1 111 |
| PTC resistor, 270 ohm, with heating resistor, housing PS2-3 PS2122-9J | 1 112 |
| LDR resistor, housing PS2-2 PS2123-5L | 1 |

Capacitors

Capacitors

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

Capacitor, 10pF, housing PS2-1
PS2122-1A

113

1

114

Capacitor, 22pF, housing PS2-1
PS2122-2A

1

115

Capacitor, 33pF, housing PS2-1
PS2122-1B

1

116

Capacitor, 47pF, housing PS2-1
PS2122-1C

1

117

Capacitor, 68pF, housing PS2-1
PS2122-1D

1

118

Capacitor, 100pF, housing PS2-1
PS2122-1E

1

119

Capacitor, 220pF, housing PS2-1
PS2122-1F

1

120

Capacitor, 330pF, housing PS2-1
PS2122-1G

1

121

Capacitor, 470pF, housing PS2-1
PS2122-1H

1

122

Capacitor, 560pF, housing PS2-1
PS2122-1J

1

Capacitor, 680pF, housing PS2-1
PS2122-1K

1

Capacitor, 1nF, housing PS2-1
PS2122-1L

1

Capacitor, 2.2nF, housing PS2-1
PS2122-1N

1

Capacitor, 3.3nF, housing PS2-1
PS2122-1P

1

Capacitor, 4.7nF, housing PS2-1
PS2122-1Q

1

Capacitor, 6.8nF, housing PS2-1
PS2122-1R

1

Capacitor, 10nF, housing PS2-1
PS2122-1S

1

Capacitor, 22nF, housing PS2-1
PS2122-1T

1

Capacitor, 33nF, housing PS2-1
PS2122-1U

1

Capacitor, 47nF, housing PS2-1
PS2122-1V

1

Capacitor, 68nF, housing PS2-1
PS2122-2B

1

Capacitor, 0.1 μ F, housing PS2-1
 PS2122-1W

1
 135

Capacitor, 0.22 μ F, housing PS2-1
 PS2122-1X

1
 136

Capacitor, 0.47 μ F, housing PS2-1
 PS2122-2C

1
 137

Capacitor, 1 μ F, housing PS2-1
 PS2122-2E

1
 138

Capacitor, 2.2 μ F, housing PS2-1
 PS2122-2F

1

Electrolyte capacitors

Electrolyte capacitors

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
 139

Capacitor, 1 μ F electrolytic, housing PS2-1
 PS2122-4A

1
 140

Capacitor, 2.2 μ F electrolytic, housing PS2-1
 PS2122-4B

1
 141

Capacitor, 4.7 μ F electrolytic, housing PS2-1
 PS2122-4C

1
 142

Capacitor, 10 μ F electrolytic, housing PS2-1
 PS2122-4D

1
143

Capacitor, 22 μ F electrolytic, housing PS2-1
PS2122-4E

1
144

Capacitor, 47 μ F electrolytic, housing PS2-1
PS2122-4F

1
145

Capacitor, 100 μ F electrolytic, housing PS2-1
PS2122-4G

1
146

Capacitor, 220 μ F electrolytic, housing PS2-2
PS2122-4H

1
147

Capacitor, 470 μ F electrolytic, housing PS2-2
PS2122-4J

1
148

Capacitor, 1000 μ F electrolytic, housing PS2-2
PS2122-4K

1

Coils, transformer

Coils, transformer

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
149

Coil, 0.1mH (ferrite core), housing PS2-2
PS2124-1A

1
150

Coil, 0.33mH (ferrite core), housing PS2-2
PS2124-1B

1
151

Coil, 1mH (ferrite core), housing PS2-2
PS2124-1C

1
152

Coil, 3.3mH (ferrite core), housing PS2-2
PS2124-1D

1
153

Coil, 10mH (ferrite core), housing PS2-2
PS2124-1E

1
154

Coil, 33mH (ferrite core), housing PS2-2
PS2124-1F

1
155

Coil, 100mH (ferrite core), housing PS2-2
PS2124-1G

1
156

Transformer, housing PS2-3
PS2124-2B

1
157

Coil, N = 100, housing PS2-1
PS2124-2C

1
158

Coil, N = 300, housing PS2-1
PS2124-2D

1
159

Coil, N = 900, housing PS2-1
PS2124-2E

1
160

Cut strip-wound core for transformer
PS4124-2N

1

Diodes, Z-diodes

Diodes, Z-diodes

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

Diode 1 N 4148, housing PS2-1
PS2122-7A

161

1

162

Diode 1 N 4007, housing PS2-1
PS2122-7C

1

163

Diode, Ge AA 118, housing PS2-1
PS2122-7D

1

164

Zener diode ZPD 3.3, housing PS2-1
PS2122-7X

1

165

Zener diode ZPD 3.9, housing PS2-1
PS2122-7Y

1

166

Zener diode ZPD 4.7, housing PS2-1
PS2122-8A

1

167

Zener diode ZPD 6.2, housing PS2-1
PS2122-8B

1

168

Zener diode ZPD 10, housing PS2-1
PS2122-8C

1

169

Zener diode ZPD 12, housing PS2-1
PS2122-8E

1

LEDs

LEDs

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

170

LED, red, housing PS2-1

PS2123-5B

1

171

LED, orange, housing PS2-1

PS2123-5C

1

172

LED, yellow, housing PS2-1

PS2123-5D

1

173

LED, green, housing PS2-1

PS2123-5E

1

174

LED, infrared, housing PS2-1

PS2123-5H

1

175

LED, green, 2-15V, housing PS2-2

PS2123-8J

1

176

LED, red, 2-15V, housing PS2-2

PS2123-8K

1

177

LED, yellow, 2-15V, housing PS2-2

PS2123-8L

1

Transistors

Transistors

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

178

Transistor, Ge, PNP, 3AX81, base left, housing PS2-2

PS2123-1A

1

179

Transistor, Si, NPN, BC547, base left, housing PS2-2

PS2123-1C

1

180

Transistor, Si, NPN, BC547, base right, housing PS2-2

PS2123-1D

1

181

Transistor, Si, PNP, BC558, base right, housing PS2-2

PS2123-1F

1

182

Transistor, Si, PNP, BC558, base left, housing PS2-2

PS2123-1E

1

183

Transistor, Si, NPN, BC237, base left, housing PS2-2

PS2123-1G

1

184

Transistor, Si, NPN, BD237, base right, housing PS2-2

PS2123-1H

1

185

Transistor, Si, PNP, BD238, base left, housing PS2-2

PS2123-1J

1

186

Transistor, Si, PNP, BC238, base right, housing PS2-2

PS2123-1K

1

187

Darlington transistor TIP 162, base left, housing PSA2-2

PS2123-2C

1

188

P-channel depletion mode MOSFET, PS2-2 casing
PS2123-2F

1

189

N-channel enhancement mode MOSFET, PS2-2 casing
PS2123-2G

1

190

Field-effect transistor 2 N 3819, housing PS2-2
PS2123-2H

1

191

Field-effect transistor 2 N 3820, housing PS2-2
PS2123-2J

1

192

Si dual gate BF 900, housing PS2-2
PS2123-2K

1

Thyristors, Triacs

Thyristors, Triacs

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

193

Diac, 30V/300 μ A, housing PS2-1
PS2123-3B

1

194

Unijunction transistor, 30V, housing PS2-2
PS2123-3E

1

195

Thyristor, 200V/1A, housing PS2-2
PS2123-3F

1

196

Triac, 200V/1A, housing PS2-2

PS2123-3G

1

Operational amplifiers

Operational amplifiers

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

197

Operational amplifier TL 071 C, housing PS2-2

PS2123-2V

1

Optoelectronics

Optoelectronics

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

198

LED, infrared, housing PS2-1

PS2123-5H

1

199

LDR resistor, housing PS2-2

PS2123-5L

1

200

Si photoelement, housing PS2-2

PS2123-5P

1

201

Si photodiode, housing PS2-1

PS2123-5S

1

202

Si phototransistor, housing PS2-1

PS2123-5T

1
203

Optocoupler, housing PS2-2

PS2123-6G

1

Quartz

Quartz

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
204

Quartz crystal, 1MHz, housing PS2-1

PS2122-9U

1

Electro-mechanical components, lamps

Electro-mechanical components, lamps

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
205

Off switch/single-pole, housing PS2-2

PS2123-7A

1
206

On-off push-button/single-pole, housing PS2-2

PS2123-7B

1
207

Changeover switch/single-pole, housing PS2-2

PS2123-7G

1

208

Lamp, green 6.3V, housing PS2-2
PS2123-8B

1

209

Lamp, red, 6.3V, housing PS2-2
PS2123-8C

1

210

Lamp socket, E10, housing PS2-2
PS2123-8P

1

211

DC Motor 12V / 2W, housing PS4-3
PS2124-3L

1

212

DC Motor 12V / 2W, housing PS4-3
PS2124-3M

1

Digital technology



Digital technology

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

213

Driver/NOT gate, housing PS2-3
PS2125-2N

1

214

IC adapter, 16 pins, housing PS2-3
PS2125-2Y

1

215

4-bit input, housing PS2-3
PS2125-3A

1

216

AND/NAND gates, 4 inputs, 2-fold, housing PS2-3
PS2125-3C

1

217

OR/NOR gates, 4 inputs, 2-fold, housing PS2-3
PS2125-3D

1

218

AND/NAND gate, 2 inputs, 4-fold, housing PS2-3
PS2125-3E

1

219

OR/NOR gate, 2 inputs, 4-fold, housing PS2-3
PS2125-3H

1

220

XOR/XNOR gate, 2 inputs, 4-fold, housing PS2-3
PS2125-3J

1

221

JK master-slave flip-flop, 2-fold, housing PS2-3
PS2125-3M

1

222

JK flip-flop, 2-fold, housing PS2-3
PS2125-3N

1

223

Counter, 4-bit, housing PS2-3
PS2125-3P

1

224

AND/OR/NOT gates, housing PS2-3
PS2125-3Q

1

225

Multiplexer, 1 of 4, housing PS2-3
PS2125-3T

1

226

Shift register, 4-bit, 2-fold, housing PS2-3
PS2125-3U

1

227

Latch, 4-bit, housing PS2-3

PS2125-3V

1
228

Adder, 4-bit, housing PS2-3

PS2125-3W

1
229

Buffer, 4-bit, tri-state, housing PS4-3

PS4125-3Y

1
230

Display, 7-segment, housing PS2-3

PS2125-4A

1
231

Monoflop, 2-fold, housing PS2-3

PS2125-4B

1
232

Clock generator, housing PS2-3

PS2125-4G

1

Leergehäuse

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
233

Assembling set of empty housings PS2-1

PS2124-6A

1
234

Assembling set of empty housings PS2-2

PS2124-6B

1
235

Assembling set of empty housings PS2-3

PS2124-6C

1
236

Assembling set of empty PSA4-2 housings
PS2124-6D

1
237

Assembling set of empty PSA4-2 housings
PS2124-6E

1

All EloTrain plug-in boards

All EloTrain plug-in boards

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
238

EloTrain Experimenter
SO4203-3B

1

EloTrain Accessories:

EloTrain Accessories:

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
239

Max 10 digital multimeter
LM2332

2
240

Digital dual trace storage oscilloscope w. colour display, incl. probes 30MHz
LM6210

1
241

Test lead, BNC/2x 4mm plug, 1.5m

LM9032

2
242

EloTrain set of connection cables and plugs for 2mm system

SO5146-1N

1
243

Connection plugs 2mm/7,5mm, black, gold plated

SO5124-6F

1

4-mm plug-in system



4-mm plug-in system

A tried and trusted plug-in system for fundamental education

The EloTrain plug-in is a comprehensive set of components for performing experiments in the fields of electrical engineering, electronics and digital technology. The 4-mm plug-in components can be assembled in any way on an EloTrain plug-in board so that electronic circuits of any size can be set up, operated and tested.

The plug-in modules include both passive and active electronic components with contacts formed by 4-mm laminated plugs. When inserted into the plug-in board, the plugs hold the components firmly in place, while simultaneously making electrical connections between the board's nodes. Leads and jumpers can then be used to form links to other nodes on the board as well as other components or measuring instruments.

The 4mm plug-in components are available in three sizes with two, four or six terminals.

For components requiring more terminals than this, additional sockets are provided on top of the module.

The housings are comprised of three plastic parts clipped together. The white top part features a scratch-proof, high-contrast print of the component's circuit diagram or symbol along with a type name for the component. The transparent body is made of extremely tough see-through plastic allowing the inside of the component to be seen. The base plate is also made containing 4-mm laminated plugs and joined to the body via an easy-to-open ratchet clip for repair purposes.

High-power elements are contained in open, light-metal housings for improved heat dissipation.

The components designed for digital technology experiments are provided with power via 4 laminated plugs. Digital inputs and outputs are made available on the top of the modules and can be linked together by means of leads tipped with 2-mm plugs.

Experiment equipment

Experiment equipment

A set of components specially designed for educational purposes covering a wide variety of topics in electrical engineering and electronics. The freedom to experiment is backed up by formal experiment literature and the use of safety extra-low voltage means that the system is even safe for complete laymen.

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
244

EloTrain basic set: Electrical engineering/electronics 4mm, with storage board
PS4200-1C

1
245

Manual, EloTrain: Direct Current
SH5002-7B

1
246

Manual, EloTrain: AC and three-phase current
SH5002-7D

1
247

Manual, EloTrain: Semiconductor components
SH5002-7H

1
248

Manual, EloTrain: Basic electronic circuits
SH5002-7J

1
249

EloTrain extension set: Optoelectronics, 4mm plug-in components
PS4200-1P

1
250

Manual, EloTrain: Optoelectronics
SH5002-7K

1
251

EloTrain digital technology set, 4mm plug-in components

PS4300-1A

1
252

Manual, EloTrain Introduction to digital technology

SH5002-8B

1
253

Manual, EloTrain: Sequential circuits

SH5002-8D

1

: ومطلوب بصفة إضافية

Pos.

اسم المنتج

Bestell-Nr.

Anz.
254

EloTrain plug-in board 2/4mm, 120 nodes

CO3535-5H

1

: مكملات

Pos.

اسم المنتج

Bestell-Nr.

Anz.
255

EloTrain set of connection cables and plugs for 4mm system

SO5146-1M

1

منبع التغذية بالقدرة :

منبع التغذية بالقدرة:

Alternative electric power supply for power duct or table top housing

Pos.

اسم المنتج

Bestell-Nr.

Anz.

256

Multi Power Supply 4x DC, 2x AC, 3-phase, function generator

CO3538-8M

1

257

Multi-function power supply: DC, AC, 3-phase, function generator, 60PU

ST8008-6K

1

258

Table-top housing for 60 PU inserts incl. connection for non-heating components

ST8008-7K

1

أجهزة القياس :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

259

Max 10 digital multimeter

LM2332

2

260

Digital dual trace storage oscilloscope w. colour display, incl. probes 30MHz

LM6210

1

261

Test lead, BNC/2x 4mm plug, 1.5m

LM9032

2

Experiment equipment specifically for case

Experiment equipment specifically for case

A set of components specially designed for educational purposes covering a wide variety of topics in electrical engineering and electronics. The freedom to experiment is backed up by formal experiment literature and the use of safety extra-low voltage means that the system is even safe for complete laymen.

قائمة الأصناف :

Alternative case

Pos.

اسم المنتج

Bestell-Nr.

Anz.
262

EloTrain basic set without board: Electrical engineering/electronics, 4mm

PS4200-1D

1

263

EloTrain case to hold DIN A4 board, multi power supply and for storing plug-in components

SO5127-3L

1

264

EloTrain case to hold 2 DIN A4 boards, multi power supply and for storing plug-in components

SO5127-3U

1

265

Manual, EloTrain: Direct Current

SH5002-7B

1

266

Manual, EloTrain: AC and three-phase current

SH5002-7D

1

267

Manual, EloTrain: Semiconductor components

SH5002-7H

1

Manual, EloTrain: Basic electronic circuits

SH5002-7J

1

269

EloTrain extension set: Optoelectronics, 4mm plug-in components

PS4200-1P

1

270

Manual, EloTrain: Optoelectronics

SH5002-7K

1

271

EloTrain digital technology set, 4mm plug-in components

PS4300-1A

1

272

Manual, EloTrain Introduction to digital technology

SH5002-8B

1

273

Manual, EloTrain: Sequential circuits

SH5002-8D

1

: ومطلوب بصفة إضافية

Pos.

اسم المنتج

Bestell-Nr.

Anz.

274

EloTrain plug-in board 2/4mm, 120 nodes

CO3535-5H

1

: مكملات

Pos.

اسم المنتج

Bestell-Nr.

Anz.

275

EloTrain set of connection cables and plugs for 4mm system

SO5146-1M

1

منبع التغذية بالقدرة :

منبع التغذية بالقدرة:

Alternative electric power supply for power duct or table top housing

Pos.

اسم المنتج

Bestell-Nr.

Anz.

276

Multi Power Supply 4x DC, 2x AC, 3-phase, function generator

CO3538-8M

1

277

Multi-function power supply: DC, AC, 3-phase, function generator, 60PU

ST8008-6K

1

278

Table-top housing for 60 PU inserts incl. connection for non-heating components

ST8008-7K

1

أجهزة القياس :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

279

Max 10 digital multimeter

LM2332

2

280

Digital dual trace storage oscilloscope w. colour display, incl. probes 30MHz

LM6210

1

281

Test lead, BNC/2x 4mm plug, 1.5m

LM9032

2

Individual EloTrain components (4mm plugs)



Individual EloTrain components (4mm plugs)

You can put together a set of components tailored specifically to your own needs or select individual components from our extensive range of modules.

- Extensive range of modules featuring both active and passive components
- Wide variety of plug-in boards for various needs
- Multi-function power supplies and measuring instruments
- Manuals conveying knowledge of electrical fundamentals as well as more complex experiments and everything in between
- Storage systems to keep components safe

Plug-in components



Plug-in components

The EloTrain plug-in system includes an extensive range of plug-in modules featuring both active and passive components. All components and jumpers are equipped with gold-plated contacts, preventing oxidation and ensuring that the contact resistance remains low for the entire life-time of the module.

Rheostats



Rheostats

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

282

Variable resistor, 1kilohm, housing PS4-1

PS4120-9D

1

283

Variable resistor, 5kilohm, housing PS4-1

PS4120-9F

1

284

Variable resistor, 10kilohm, housing PS4-1

PS4120-9G

1

285

Variable resistor, 47kilohm, housing PS4-1

PS4120-9J

1

286

Variable resistor, 100kilohm, housing PS4-1

PS4120-9K

1

287

Variable resistor, 500kilohm, housing PS4-1

PS4120-9M

1

Resistors



Resistors

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

288

Resistor, 0.1ohm, 2W, housing PS4-1

PS4121-1A

1

289

Resistor, 0.22ohm, 2W, housing PS4-1

PS4121-1B

1

290

Resistor, 0.47ohm, 2W, housing PS4-1

PS4121-1C

1

291

Resistor, 1ohm, 2W, housing PS4-1

PS4121-1D

1

292

Resistor, 2ohm, 2W, housing PS4-1

PS4121-1S

1

293

Resistor, 2.7ohm, 2W, housing PS4-1

PS4121-1E

1

294

Resistor, 4.7ohm, 2W, housing PS4-1

PS4121-1F

1

295

Resistor, 8.2ohm, 2W, housing PS4-2

PS4121-1G

1

296

Resistor, 10ohm, 2W, housing PS4-1

PS4121-2A

1

297

Resistor, 12ohm, 2W, housing PS4-1

PS4121-2B

1

298

Resistor, 15ohm, 2W, housing PS4-1
PS4121-2C

1

299

Resistor, 18ohm, 2W, housing PS4-1
PS4121-2D

1

300

Resistor, 22ohm, 2W, housing PS4-1
PS4121-2E

1

301

Resistor, 27ohm, 2W, housing PS4-1
PS4121-2F

1

302

Resistor, 33ohm, 2W, housing PS4-1
PS4121-2G

1

303

Resistor, 39ohm, 2W, housing PS4-1
PS4121-2H

1

304

Resistor, 47ohm, 2W, housing PS4-1
PS4121-2J

1

305

Resistor, 56ohm, 2W, housing PS4-1
PS4121-2K

1

306

Resistor, 68ohm, 2W, housing PS4-1
PS4121-2L

1

307

Resistor, 82ohm, 2W, housing PS4-1
PS4121-2M

1

308

Resistor, 100ohm, 2W, housing PS4-1
PS4121-2N

1

309

| | |
|---|----------|
| Resistor, 120ohm, 2W, housing PS4-1 PS4121-2P | 1 310 |
| Resistor, 150ohm, 2W, housing PS4-1 PS4121-2Q | 1 311 |
| Resistor, 180ohm, 2W, housing PS4-1 PS4121-2R | 1 312 |
| Resistor, 220ohm, 2W, housing PS4-1 PS4121-2S | 1 313 |
| Resistor, 270ohm, 2W, housing PS4-1 PS4121-2T | 1 314 |
| Resistor, 330ohm, 2W, housing PS4-1 PS4121-2U | 1 315 |
| Resistor, 390ohm, 2W, housing PS4-1 PS4121-2V | 1 316 |
| Resistor, 470ohm, 2W, housing PS4-1 PS4121-2W | 1 317 |
| Resistor, 560ohm, 2W, housing PS4-1 PS4121-2X | 1 318 |
| Resistor, 680ohm, 2W, housing PS4-1 PS4121-3A | 1 319 |
| Resistor, 820ohm, 2W, housing PS4-1 PS4121-3B | 1 320 |
| Resistor, 1kilohm, 1W, housing PS4-1 | |

| | | |
|--|---|-----|
| PS4121-3C | 1 | 321 |
| Resistor, 1.2kilohm, 1W, housing PS4-1 PS4121-3D | 1 | 322 |
| Resistor, 1.5kilohm, 1W, housing PS4-1 PS4121-3E | 1 | 323 |
| Resistor, 1.8kilohm, 1W, housing PS4-1 PS4121-3F | 1 | 324 |
| Resistor, 2.2kilohm, 1W, housing PS4-1 PS4121-3G | 1 | 325 |
| Resistor, 2.7kilohm, 1W, housing PS4-1 PS4121-3H | 1 | 326 |
| Resistor, 3.3kilohm, 1W, housing PS4-1 PS4121-3J | 1 | 327 |
| Resistor, 3.9kilohm, 1W, housing PS4-1 PS4121-3K | 1 | 328 |
| Resistor, 4.7kilohm, 1W, housing PS4-1 PS4121-3L | 1 | 329 |
| Resistor, 5.6kilohm, 1W, housing PS4-1 PS4121-3M | 1 | 330 |
| Resistor, 6.8kilohm, 1W, housing PS4-1 PS4121-3N | 1 | 331 |
| Resistor, 8.2kilohm, 1W, housing PS4-1 PS4121-3P | | |

1
332

Resistor, 10kilohm,0.5W, housing PS4-1
PS4121-3Q

1
333

Resistor, 12kilohm,0.5W, housing PS4-1
PS4121-3R

1
334

Resistor, 15kilohm,0.5W, housing PS4-1
PS4121-3S

1
335

Resistor, 18kilohm,0.5W, housing PS4-1
PS4121-3T

1
336

Resistor, 22kilohm,0.5W, housing PS4-1
PS4121-3U

1
337

Resistor, 27kilohm,0.5W, housing PS4-1
PS4121-3V

1

High-power resistors

High-power resistors

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
360

Resistor, 8.2ohm, 10W, housing PSA4-2
PS4121-6T

1
361

Resistor, 22.ohm, 10W, housing PSA4-2
PS4121-6E

Potentiometers

Potentiometers

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

362

Potentiometer, 100ohm, 0.5W lin., housing PS4-2
PS4121-8A

1

363

Potentiometer, 250ohm, 0.5W lin., housing PS4-2
PS4121-8B

1

364

Potentiometer, 470ohm, 0.5W lin., housing PS4-2
PS4121-8C

1

365

Potentiometer, 1kilohm, 0.5W lin., housing PS4-2
PS4121-8D

1

366

Potentiometer, 2.5kilohm, 0.5W lin., housing PS4-2
PS4121-8E

1

367

Potentiometer, 4.7kilohm, 0.5W lin., housing PS4-2
PS4121-8F

1

368

Potentiometer, 10kilohm, 0.5W lin., housing PS4-2
PS4121-8G

1

369

Potentiometer, 25kilohm, 0.5W lin., housing PS4-2
PS4121-8H

1
370

Potentiometer, 47kilohm, 0.5W lin., housing PS4-2
PS4121-8J

1
371

Potentiometer, 100kilohm, 0.5W lin., housing PS4-2
PS4121-8K

1
372

Potentiometer, 250kilohm, 0.5W lin., housing PS4-2
PS4121-8L

1
373

Potentiometer, 470kilohm, 0.5W lin., housing PS4-2
PS4121-8M

1
374

Potentiometer, 1megohm, 0.5W lin., housing PS4-2
PS4121-8N

1
375

Potentiometer, 27ohm, 3W, housing PS4-2
PS4121-9A

1
376

Potentiometer, 470ohm, 3W, housing PS4-2
PS4121-9F

1

Non-linear resistors



Non-linear resistors

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

377

VDR resistor, 40E/12V/10mA, housing PS4-1

PS4122-9A

1

378

VDR resistor, 800E/8V/10mA, housing PS4-1

PS4122-9B

1

379

PTC resistor, 30E/40V/70mA, housing PS4-1

PS4122-9C

1

380

PTC resistor, 160E/30V/40mA, housing PS4-1

PS4122-9D

1

381

NTC resistor, 150E/0.75W/K164, housing PS4-1

PS4122-9G

1

382

NTC resistor, 1K/0.75W/K164, housing PS4-1

PS4122-9H

1

383

LDR resistor, housing PS4-1

PS4123-5L

1

Capacitors

Capacitors

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

384

Capacitor, 10pF, housing PS4-1

PS4122-1A

1

385

Capacitor, 22pF, housing PS4-1

PS4122-2A

1

386

Capacitor, 33pF, housing PS4-1

PS4122-1B

1

387

Capacitor, 47pF, housing PS4-1

PS4122-1C

1

388

Capacitor, 68pF, housing PS4-1

PS4122-1D

1

389

Capacitor, 100pF, housing PS4-1

PS4122-1E

1

390

Capacitor, 220pF, housing PS4-1

PS4122-1F

1

391

Capacitor, 330pF, housing PS4-1

PS4122-1G

1

392

Capacitor, 470pF, housing PS4-1

PS4122-1H

1

393

Capacitor, 560pF, housing PS4-1

PS4122-1J

1

394

Capacitor, 680pF, housing PS4-1
PS4122-1K

1

395

Capacitor, 1nF, housing PS4-1
PS4122-1L

1

396

Capacitor, 2.2nF, housing PS4-1
PS4122-1N

1

397

Capacitor, 3.3nF, housing PS4-1
PS4122-1P

1

398

Capacitor, 4.7nF, housing PS4-1
PS4122-1Q

1

399

Capacitor, 6.8nF, housing PS4-1
PS4122-1R

1

400

Capacitor, 10nF, housing PS4-1
PS4122-1S

1

401

Capacitor, 22nF, housing PS4-1
PS4122-1T

1

402

Capacitor, 33nF, housing PS4-1
PS4122-1U

1

403

Capacitor, 47nF, housing PS4-1
PS4122-1V

1

404

Capacitor, 68nF, housing PS4-1
PS4122-2B

1

405

Capacitor, 0.1μF, housing PS4-1
PS4122-1W

1
406

Capacitor, 0.22μF, housing PS4-1
PS4122-1X

1
407

Capacitor, 0.47μF, housing PS4-1
PS4122-2C

1
408

Capacitor, 1μF, housing PS4-1
PS4122-2E

1
409

Capacitor, 2.2μF, housing PS4-1
PS4122-2F

1
410

Capacitor, 4.7μF, housing PS4-1
PS4122-2H

1
411

Capacitor, 10μF, housing PS4-1
PS4122-2K

1

Electrolyte capacitors

Electrolyte capacitors

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
412

Capacitor, 1μF electrolytic, housing PS4-1
PS4122-4A

1
413

| | |
|---|----------|
| Capacitor, 2.2μF electrolytic, housing PS4-1 PS4122-4B | 1 414 |
| Capacitor, 4.7μF electrolytic, housing PS4-1 PS4122-4C | 1 415 |
| Capacitor, 10μF electrolytic, housing PS4-1 PS4122-4D | 1 416 |
| Capacitor, 22μF electrolytic, housing PS4-1 PS4122-4E | 1 417 |
| Capacitor, 47μF electrolytic, housing PS4-1 PS4122-4F | 1 418 |
| Capacitor, 100μF electrolytic, housing PS4-1 PS4122-4G | 1 419 |
| Capacitor, 220μF electrolytic, housing PS4-1 PS4122-4H | 1 420 |
| Capacitor, 470μF electrolytic, housing PS4-1 PS4122-4J | 1 421 |
| Capacitor, 1000μF electrolytic, housing PS4-2 PS4122-4K | 1 422 |
| Capacitor, 2200μF electrolytic, housing PS4-2 PS4122-4L | 1 423 |
| Capacitor, 4700μF electrolytic, housing PS 4-3 PS4122-4M | 1 |

Coils, transformer

Coils, transformer

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

424

Coil, 0.1mH (ferrite core), housing PS4-1

PS4124-1A

1

425

Coil, 0.33mH (ferrite core), housing PS4-1

PS4124-1B

1

426

Coil, 1mH (ferrite core), housing PS4-1

PS4124-1C

1

427

Coil, 3.3mH (ferrite core), housing PS4-1

PS4124-1D

1

428

Coil, 10mH (ferrite core), housing PS4-1

PS4124-1E

1

429

Coil, 33mH (ferrite core), housing PS4-1

PS4124-1F

1

430

Coil, 100mH (ferrite core), housing PS4-1

PS4124-1G

1

431

Transformer for push-pull amplifier, housing PS4-3

PS4124-2A

1

432

Transformer, housing PS4-3

PS4124-2B

1
433

Coil, N = 100, housing PS4-1

PS4124-2C

1
434

Coil, N = 300, housing PS4-1

PS4124-2D

1
435

Coil, N = 900, housing PS4-1

PS4124-2E

1
436

Cut strip-wound core for transformer

PS4124-2N

1

Diodes, Z-diodes

Diodes, Z-diodes

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
437

Diode 1 N 4148, housing PS4-1

PS4122-7A

1
438

Diode 1 N 4007, housing PS4-1

PS4122-7C

1
439

Germanium diode AA 118, housing PS4-1

PS4122-7D

1
440

Zener diode ZPD 3.3, housing PS4-1
PS4122-7X

1
441

Zener diode ZPD 3.9, housing PS4-1
PS4122-7Y

1
442

Zener diode ZPD 4.7, housing PS4-1
PS4122-8A

1
443

Zener diode ZPD 6.2, housing PS4-1
PS4122-8B

1
444

Zener diode ZPD 10, housing PS4-1
PS4122-8C

1
445

Zener diode ZPD 12, housing PS4-1
PS4122-8E

1

LEDs



LEDs

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
446

LED, red, housing PS4-1
PS4123-5B

1
447

LED, orange, housing PS4-1
PS4123-5C

1
448

LED, yellow, housing PS4-1

PS4123-5D

1
449

LED, green, housing PS4-1

PS4123-5E

1
450

LED, infrared for use as waveguide transmitter, housing PS4-1

PS4123-5H

1
451

LED, green, 2-15V, housing PS4-1

PS4123-8J

1
452

LED, red, 2-15V, housing PS4-1

PS4123-8K

1
453

LED, yellow, 2-15V, housing PS4-1

PS4123-8L

1

Transistors



Transistors

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
454

Transistor, Ge PNP 3AX81, base left, housing PS4-2

PS4123-1A

1
455

Transistor, Si, NPN, BC547, base left, housing PS4-2

PS4123-1C

1
456

| | |
|--|----------|
| Transistor, Si, NPN, BC547, base right, housing PS4-2 PS4123-1D | 1 457 |
| Transistor, Si, PNP, BC558, base right, housing PS4-2 PS4123-1F | 1 458 |
| Transistor, Si, PNP, BC558, base left, housing PS4-2 PS4123-1E | 1 459 |
| Transistor, Si, NPN, BD237, base left, housing PS4-2 PS4123-1G | 1 460 |
| Transistor, Si, NPN, BD237, base right, housing PS4-2 PS4123-1H | 1 461 |
| Transistor, Si, PNP, BD238, base left, housing PS4-2 PS4123-1J | 1 462 |
| Transistor, Si, PNP, BD238, base right, housing PS4-2 PS4123-1K | 1 463 |
| Transistor, Si, NPN, BD135, base left, housing PSA4-2 PS4123-1U | 1 464 |
| Transistor, Si, NPN, BD135, base right, housing PSA4-2 PS4123-1V | 1 465 |
| Transistor, Si, PNP, BD136, base left, housing PSA4-2 PS4123-1W | 1 466 |
| Transistor, Si, PNP, BD136, base right, housing PSA4-2 PS4123-1X | 1 467 |
| Darlington transistor TIP 162, base left, housing PSA4-2 | |

| | | |
|---|---|-----|
| PS4123-2C | 1 | 468 |
| Power MOSFET, N-Channel, 100V, 10A, housing PS4A-2 PS4123-2D | 1 | 469 |
| Power MOSFET, P-Channel, 100V, 10A, housing PS4A-2 PS4123-2E | 1 | 470 |
| Field-effect transistor, P-Channel, Enhancement , housing PS4-2 PS4123-2F | 1 | 471 |
| Field-effect transistor 2 N 3819, housing PS4-2 PS4123-2H | 1 | 472 |
| Field-effect transistor 2 N 3819, housing PS4-2 PS4123-2H | 1 | 473 |
| Field-effect transistor 2 N 3820, housing PS4-2 PS4123-2J | 1 | 474 |
| Si dual gate BF 900, housing PS4-2 PS4123-2K | 1 | |

Thyristors, Triacs

Thyristors, Triacs

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

475

Diac, 30V/300 μ A, housing PS4-1

PS4123-3B

1

476

Unijunction transistor, 30V, housing PS4-2

PS4123-3E

1

477

Thyristor, 200V/1A, housing PS4-2

PS4123-3F

1

478

Triac, 200V/1A, housing PS4-2

PS4123-3G

1

479

Thyristor, 800V/10A, housing PSA4-2

PS4123-3P

1

Operational amplifiers

Operational amplifiers

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

480

Operational amplifier TL 071 C, housing PS4-3

PS4123-2V

1

Optoelectronics

Optoelectronics

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

481

LED, infrared for use as waveguide transmitter, housing PS4-1

PS4123-5H

1

482

LDR resistor, housing PS4-1

PS4123-5L

1

483

Si photoelement, housing PS4-1

PS4123-5P

1

484

Si photodiode, housing PS4-1

PS4123-5S

1

485

Si phototransistor, housing PS4-1

PS4123-5T

1

486

Optocoupler, housing PS4-2

PS4123-6G

1

487

Waveguide, housing PS4-1

PS4123-6J

1

488

Variable light source, housing PS4-3

PS4123-6M

1

Quartz

Quartz

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
489

Quartz crystal, 1MHz, housing PS4-1
PS4122-9U

1

Digital technology

Digital technology

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.
490

Driver/NOT gate, housing PS4-3
PS4125-2N

1

491

IC adapter, 16 pins, housing PS4-3
PS4125-2Y

1

492

4-bit input, housing PS4-3
PS4125-3A

1

493

AND/NAND gates, 4 inputs, 2-fold, housing PS4-3
PS4125-3C

1

494

| | |
|--|----------|
| OR/NOR gates, 4 inputs, 2-fold, housing PS4-3 PS4125-3D | 1 495 |
| AND/NAND gate, 2 inputs, 4-fold, housing PS4-3 PS4125-3E | 1 496 |
| OR/NOR gate, 2 inputs, 4-fold, housing PS4-3 PS4125-3H | 1 497 |
| XOR/XNOR gate, 2 inputs, 4-fold, housing PS4-3 PS4125-3J | 1 498 |
| JK master-slave flip-flop, 2-fold, housing PS4-3 PS4125-3M | 1 499 |
| JK flip-flop, 2-fold, housing PS4-3 PS4125-3N | 1 500 |
| Counter, 4-bit, housing PS4-3 PS4125-3P | 1 501 |
| AND/OR/NOT gates, housing PS4-3 PS4125-3Q | 1 502 |
| Multiplexer, 1 of 4, housing PS4-3 PS4125-3T | 1 503 |
| Shift register, 4-bit, 2-fold, housing PS4-3 PS4125-3U | 1 504 |
| Latch, 4-bit, housing PS4-3 PS4125-3V | 1 505 |
| Adder, 4-bit, housing PS4-3 | |

| | |
|---|-----|
| PS4125-3W | 1 |
| | 506 |
| Buffer, 4-bit, tri-state, housing PS4-3 | |
| PS4125-3Y | 1 |
| | 507 |
| Display, 7-segment, housing PS4-3 | |
| PS4125-4A | 1 |
| | 508 |
| Monoflop, 2-fold, housing PS4-3 | |
| PS4125-4B | 1 |
| | 509 |
| Clock generator, housing PS4-3 | |
| PS4125-4G | 1 |
| | 510 |
| Multiplexer, 1 of 8, housing PS4-3 | |
| PS4125-5A | 1 |
| | 511 |
| Demultiplexer, 8 of 1, housing PS4-3 | |
| PS4125-5B | 1 |
| | 512 |
| A/D converter with 8-bit resolution, housing PS4-3 | |
| PS4125-5C | 1 |
| | 513 |
| D/A converter with 8-bit resolution, housing PS4-3 | |
| PS4125-5D | 1 |

Electro-mechanical components, lamps

Electro-mechanical components, lamps

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

514

Off switch/single-pole, housing PS4-1

PS4123-7A

1

515

On-off push-button/single-pole, housing PS4-1

PS4123-7B

1

516

Changeover switch/2-pole, housing PS4-3

PS4123-7F

1

517

Changeover switch/single-pole, housing PS4-2

PS4123-7G

1

518

DLR relay, exciter 15V, housing PS4-2

PS4123-7P

1

519

Relay, exciter 8-21V, housing PS4-3

PS4123-7T

1

520

Lamp, green, 6.3V, housing PS4-1

PS4123-8B

1

521

Lamp, red, 6.3V / 100mA, housing PS4-1

PS4123-8C

1

522

Lamp socket E10, top, housing PS4-1

PS4123-8R

1

523

Filament lamp, 6V/180mA, E10

SO5123-8Q

1

524

Filament lamp, 15V/100mA, E10
SO5123-8R

1

525

Filament lamp, 24V/80mA, E10
SO5123-8S

1

526

Speaker, 32ohm, 0.4W, housing PS4-3
PS4124-2M

1

527

Moving coil galvanometer, 1mA, housing PS4-3
PS4124-2U

1

Empty housings

Empty housings

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

528

Set of empty PS4-1 housings
PS4124-6A

1

529

Set of empty PS4-2 housings
PS4124-6B

1

530

Set of empty PS4-3 housings
PS4124-6C

1

531

Set of empty PSA4-2 housings
PS4124-6D

1

532

Set of empty PSA4-3 housings

PS4124-6E

1

EloTrain plug-in boards

EloTrain plug-in boards

Plug-in board for both 4-mm and 2-mm plug-in component systems for building your own experiments in highly compact circuits using plug-in modules. Various sizes of component mean that easily understood circuit layouts can be assembled with components at various distances apart.

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

533

EloTrain plug-in board 2/4mm, 120 nodes

CO3535-5H

1

534

EloTrain storage board for 4-mm plug-in components

PS4200-3A

1

EloTrain power supplies

EloTrain power supplies

Multi-functional, compact power supply plus function generator and three-phase supply for all basic and advanced experiments in the areas of electrical engineering, electronics and digital technology. The equipment is available in the form of a desk-top unit or for mounting in a 3HU power supply duct.

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

535

Multi Power Supply 4x DC, 2x AC, 3-phase, function generator

CO3538-8M

1

536

Multi-function power supply: DC, AC, 3-phase, function generator, 60PU

ST8008-6K

1

537

Table-top housing for 60 PU inserts incl. connection for non-heating components

ST8008-7K

1

EloTrain media



EloTrain media

High-quality, colour-printed manual bound with a strong spine and containing solutions.

Includes:

- High-quality printed teachers' section
- CD-ROM with additional student workbook
- Theoretical background
- Colour CAD drawings for experiment set-ups and circuits
- Exercises and worksheets
- Colour printed on 100-g/m² Color-Copy paper with cover in 210 g/m² glossy paper

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

538

Manual, EloTrain: Direct Current

SH5002-7B

1

539

Manual, EloTrain: AC and three-phase current

SH5002-7D

1

540

Manual, EloTrain: Semiconductor components

SH5002-7H

1

541

Manual, EloTrain: Basic electronic circuits

SH5002-7J

1

542

Manual, EloTrain: Optoelectronics

SH5002-7K

1

543

Manual, EloTrain Introduction to digital technology

SH5002-8B

1

544

Manual, EloTrain: Sequential circuits

SH5002-8D

1

545

Manual, EloTrain: Fundamentals of elec. eng./electronics in vehicles 1

SH5005-1V

1

EloTrain Accessories:

EloTrain Accessories:

قائمة الأصناف :

Pos.

اسم المنتج

Bestell-Nr.

Anz.

Max 10 digital multimeter

LM2332

546

2

547

Digital dual trace storage oscilloscope w. colour display, incl. probes 30MHz

LM6210

1

548

Test lead, BNC/2x 4mm plug, 1.5m

LM9032

2

549

EloTrain case to hold DIN A4 board, multi power supply and for storing plug-in components

SO5127-3L

1

550

EloTrain case to hold 2 DIN A4 boards, power supply and for storing plug-in components

SO5127-3B

1

551

Connection plugs 2mm/7,5mm, black, gold plated

SO5124-6F

1

552

CAT II قابس توصيل الأمان أسود مقاس 4 مم مع سداة، 1000 فلت / 32 أمبير

SO5126-3R

1