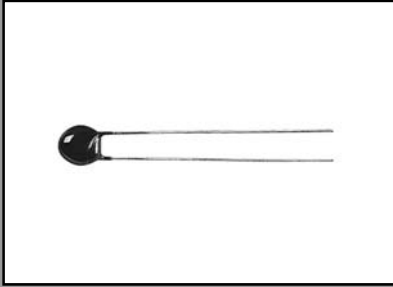


SENSORS

THERMISTORS



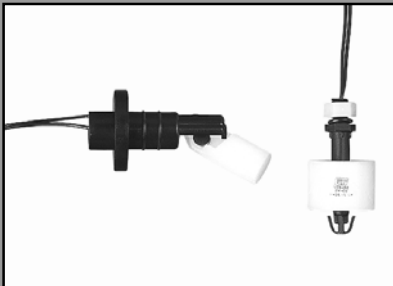
THERMAL SWITCHES



MOVEMENT SENSORS



FLOAT SWITCHES



HUMIDITY SENSORS



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CONTENTS

SQUIRES MODEL & CRAFT TOOLS

THERMISTOR PROBE

IP RATED THERMISTOR PROBE WITH LEAD a high precision thermal sensing device that features an extremely small B-value tolerance and resistance. When the device is used as a temperature gauge there is no requirement for adjustment between control circuit, ensuring good temperature precision. Small B-value tolerance and high temperature precision $\pm 0.3^{\circ}\text{C}$.



CODE	TYPE	PRICE
27-0168	IP Rated 10.0K Ntc Thermistor Probe with Lead..	£9.99

THERMISTORS

NTC THERMISTORS a range of miniature disc thermistors for general purpose applications including temperature measurement and circuit compensation. Tolerance 10%. Dissipation 500mW max.

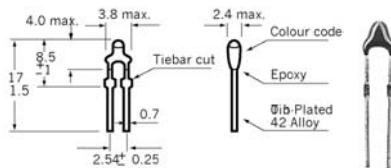


Technical Specification

Code	R @25°C	R @100°C	Max I. @25°C	B Constant	Thermal time constant
740-000	300Ω	24Ω	115mA	3000°K	22s
740-005	1KΩ	90Ω	70mA	3800°K	22s
740-010	5KΩ	300Ω	30mA	3950°K	21s
740-015	20KΩ	1KΩ	20mA	4250°K	23s
740-020	100KΩ	5KΩ	10mA	4400°K	24s

CODE	TYPE	PRICE
740-000	NTC Disk Thermistor 300Ω.....	£0.49
740-005	NTC Disk Thermistor 1KΩ.....	£0.49
740-010	NTC Disk Thermistor 5KΩ.....	£0.49
740-015	NTC Disk Thermistor 20KΩ.....	£0.49
740-020	NTC Disk Thermistor 100KΩ.....	£0.49

PRECISION NTC THERMISTORS high precision thermal sensing devices featuring an extremely small B-value tolerance and resistance. When used in temperature measurements the thermistor requires no adjustment between control circuit and sensor. This ensures a temperature precision of $\pm 0.3^{\circ}\text{C}$. Rated power 10mW at 25°C.



Technical Specification	Dissipation	Thermal	Operating	
R(Ω) at 25°C	B-value	25°-85°C factor	Time constant(s)	temp range °C
1.0K ± 1%	3100K ± 1%	2	15	-50 to +90°C
2.0K ± 1%	3182K ± 1%	2	15	-50 to +90°C
5.0K ± 1%	3324K ± 1%	2	15	-50 to +110°C
10.0K ± 1%	3435K ± 1%	2	15	-50 to +110°C
20.0K ± 1%	4013K ± 1%	2	15	-50 to +110°C
50.0K ± 1%	4060K ± 1%	2	15	-50 to +110°C
100.0K ± 1%	4665K ± 1%	2	15	-50 to +110°C

CODE	TYPE	PRICE
740-247	Precision NTC Thermistor 1.0K.....	£1.69
740-249	Precision NTC Thermistor 2.0K.....	£1.69
740-250	Precision NTC Thermistor 5.0K.....	£1.69
740-252	Precision NTC Thermistor 10.0K.....	£1.69
740-254	Precision NTC Thermistor 20.0K.....	£1.69
740-255	Precision NTC Thermistor 50.0K.....	£1.69
740-286	Precision NTC Thermistor 100.0K.....	£1.69

ULTRA-THIN FLEXIBLE NTC THERMISTORS these very flexible and ultra thin (just 0.5mm thick) thermistors have a superior insulating film. They can be bent into the smallest of spaces and have a fast-response making them ideal for surface-sensing applications. Highly accurate $\pm 1\%$ tolerances and choice of R25 values and lengths.



CODE	TYPE	PRICE
27-0170	JT Thermistor 10K 025 Shape.....	£1.69
27-0174	JT Thermistor 100K 025 Shape.....	£1.69
27-0176	JT Thermistor 100K 50 Shape.....	£1.89

MINIATURE GLASS-ENCAPSULATED THERMISTORS these hermetically sealed thermistors offer excellent long-term stability. The small glass coating ensures a fast response, moisture-proofing and use up to 300°C. Highly accurate, R25 values from 1kΩ to 1MΩ.



CODE	TYPE	PRICE
27-0148	GT Thermistor 3% - 1K.....	£1.89
27-0150	GT Thermistor 3% - 2K.....	£1.89
27-0152	GT Thermistor 3% - 5K.....	£1.89
27-0154	GT Thermistor 3% - 10K.....	£1.89
27-0156	GT Thermistor 3% - 20K.....	£1.89
27-0158	GT Thermistor 3% - 50K.....	£1.89
27-0160	GT Thermistor 3% - 100K.....	£1.89
27-0162	GT Thermistor 3% - 200K.....	£1.89
27-0164	GT Thermistor 3% - 500K.....	£1.89
27-0166	GT Thermistor 3% - 1.0M.....	£1.89

PIPE CLIP SENSORS

PIPE CLIP SENSORS a range of pipe-clip temperature sensors that have been designed for the measurement and control of hot and cold water systems. Its integral spring steel clip can be used to mount the sensor onto metal pipes, ensuring the sensing portion is held tight against the pipe wall enabling quick and accurate temperature measurement of the liquid inside the pipe thus eliminating the need for any invasive holes. Applications include air-conditioning systems, domestic gas boilers, water saving devices for hotels, pubs, etc.,. Quick, simple and accurate temperature measurement and high moisture resistance. It is a fast response sensor within a PBT housing, push on terminals and simple to install. For pipes with a diameter from 12 to 22mm.



Technical Specification

Time constant:	<1s
R25 value:	10kΩ
B25/85 value:	3969K ±1%
R85 accuracy:	±1K (°C)
Operating temperature range:	-20°C to +120°C
Dielectric strength:	500V AC for 1 minute

CODE	TYPE	PRICE
27-0124	Pipe Clip Sensor 12 - 14mm.....	£3.99
27-0122	Pipe Clip Sensor 16 - 18mm.....	£3.99
27-0120	Pipe Clip Sensor 20 - 22mm.....	£4.40

**FREE PARKING FOR 2 HOURS
OUTSIDE OF OUR SHOP**

SQUIRES ELECTRONIC COMPONENTS

THERMAL SWITCHES

LOW TEMPERATURE BI-METALLIC AUTO RESET SWITCHES

a range of normally closed (opening on temperature rise) and normally open (closing on temperature rise) bi-metallic switches which automatically reset within a close tolerance band. Contacts are isolated from the mounting base and connection is via 1/4" (6.35 x 0.8mm) fast-on terminals. Temperature setting is clearly marked on the base of the switch. Switches are mounted via two screws through a rotating collar to assist with installation. UL, CSA and VDE approved. (Open = Off. Closed = On)



Technical specification
 contact rating (100,000 cycles) 15A resistive, 10A inductive 250V AC
 Operating temperature tolerance ±4°C
 Dimensions 21(h) x 31(w) x 19(d)
 fixing centres 24mm (M3 holes)

CODE	TYPE	PRICE
621-993	Thermal Switch NC - Opens 40°/Recloses 25°C.	£2.79
621-994	Thermal Switch NC - Opens 50°/Recloses 35°C.	£2.79
740-290	Thermal Switch NC - Opens 70°/Recloses 55°C.	£2.79
740-292	Thermal Switch NC - Opens 80°/Recloses 65°C.	£2.79
740-294	Thermal Switch NC - Opens 90°/Recloses 75°C.	£2.79
740-296	Thermal Switch NC - Opens 100°/Recloses 85°C.	£2.79
621-997	Thermal Switch NO - Closes 40°/Reopen 25°C...	£2.79
740-298	Thermal Switch NO - Closes 50°/Reopen 35°C...	£2.79
740-300	Thermal Switch NO - Closes 50°/Reopen 45°C...	£2.79
740-301	Thermal Switch NO - Closes 60°/Reopen 45°C...	£2.75
740-302	Thermal Switch NO - Closes 70°/Reopen 55°C...	£2.79
740-306	Thermal Switch NO - Closes 90°/Reopen 70°C...	£2.79
740-308	Thermal Switch NO - Closes 100°/Reopen 85°C.	£2.79

THERMAL SENSORS

SOLID STATE MOXIE THERMAL SENSORS a range of solid state moxie thermal sensors which comprise an NTC thermistor with a highly specific transition region. When the sensor is heated the normally high resistance (100K Ω) falls rapidly once the transition temperature is reached (for a 10°C change in temp resistance falls to 100 Ω). On cooling the device reverts back to its original high resistance with little hysteresis. The sensor is housed in a TO18 package which is available in either vertical or horizontal tab mounting the devices are extremely sensitive and offer the user high levels of reliability.

Technical Specification
 Nominal Cold Resistance 100K Ω
 Nominal Hot Resistance 100 Ω
 Temp. Tolerance @10°C.



CODE	TYPE	PRICE
740-100	Moxie Thermal Sensor 57°C Horizontal.....	£7.99
740-105	Moxie Thermal Sensor 75°C Horizontal.....	£7.99
740-110	Moxie Thermal Sensor 85°C Horizontal.....	£7.99
740-115	Moxie Thermal Sensor 57°C Vertical.....	£7.99
740-125	Moxie Thermal Sensor 85°C Vertical.....	£7.99

**WHEN PLACING AN ORDER PLEASE
 USE THE FULL ORDER CODE
 INCLUDING ANY PUNCTUATION**

THERMAL FUSES

THERMAL FUSES a range of miniature radial lead non-resettable thermal fuses fully approved to JEANML, UL, CSA and VDE, designed to provide high temperature protection on all domestic and industrial appliances. The case is completely isolated from either of the connecting leads. Compact size (6.3 x 7.0 x 2.5mm) makes them ideal for high density mounting.

Lead length 65mm,
 lead pitch 5.0mm.
 Rated at 2A 250V AC.



CODE	TYPE	PRICE
27-0004	Thermal Fuse 81°C.....	£0.79
740-257	Thermal Fuse 100°C.....	£0.79
740-259	Thermal Fuse 117°C.....	£0.79
740-260	Thermal Fuse 127°C.....	£0.79
27-0126	Thermal Fuse 131°C.....	£0.79
27-0128	Thermal Fuse 134°C.....	£0.79
27-0130	Thermal Fuse 140°C.....	£0.79

MINIATURE THERMAL FUSES a range of non-resettable axial lead fuses, approved to BEAB, VDE, SEMKO, FEMKO, and UL specifically designed to provide temperature protection on a wide range of appliances. The metal case of the fuses is NOT ISOLATED from the supply. A heat shunt must be used when soldering thermal fuses.



Technical Specification
 Dimensions 14.7mm x 4.0 mm
 Lead Dia. 1.0 mm
 Rating 10A @250V AC
 Breakdown 1200V AC
 Opening Temp. Tolerance +0°C to -4°C
 Max rupture current resistive 40A inductive 20A

CODE	TYPE	PRICE
740-150	Miniature Thermal Fuse 72°C.....	£0.89
740-160	Miniature Thermal Fuse 98°C.....	£0.89
740-165	Miniature Thermal Fuse 121°C.....	£0.89
740-170	Miniature Thermal Fuse 167°C.....	£0.89
740-175	Miniature Thermal Fuse 184°C.....	£0.89
740-180	Miniature Thermal Fuse 228°C.....	£0.89

SEFUSE THERMAL FUSE these thermal fuses use an organic thermosensitive pellet inside a metal case. They feature a large cutoff (rated) current of up to 15 A 250v AC. The devices contain a sliding contact, springs, and a thermal pellet inside a metal case. When the spring is compressed, firm contact between one lead and the sliding contact occurs. At normal temperatures, current flows from the lead to the sliding contact and then through the metal case to the other lead. When the ambient temperature rises to the SEFUSE operating temperature, the heat transferred through the metal case melts the thermal pellet. When the thermal pellet melts, two springs expand, moving the sliding contact away from the lead. The electrical circuit is opened by breaking contact between the sliding contact and the lead. An axial package, long lead type. Rated current up to 15A 250V AC. Rated to UL, CSA, VDE, BEAB, CCC.

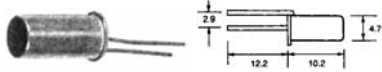


CODE	TYPE	PRICE
27-0132	SEFUSE Axial Thermal Fuse 73°C.....	£0.90
27-0134	SEFUSE Axial Thermal Fuse 99°C.....	£0.90
27-0136	SEFUSE Axial Thermal Fuse 121°C.....	£0.90
27-0138	SEFUSE Axial Thermal Fuse 142°C.....	£0.90
27-0140	SEFUSE Axial Thermal Fuse 172°C.....	£0.90
27-0142	SEFUSE Axial Thermal Fuse 184°C.....	£0.90
27-0144	SEFUSE Axial Thermal Fuse 227°C.....	£0.90

SQUIRES MODEL & CRAFT TOOLS

TILT SWITCHES

NON-MERCURY TILT SWITCH a gas filled hermetically sealed tilt switch employing non toxic materials in a miniature metal package. Normally open contacts which will close when tilted more than 10° either side of horizontal. Suited to a wide range of applications including automotive, toys, games, modelling, engineering etc.



Specification
 Contacts.....SP normally open
 Contact rating.....3VA max
 Switching current....0.25A
 Switching voltage....60V ac/dc max

CODE	TYPE	PRICE
TSW760	Non-mercury Tilt Switch SP.....	£2.29

MICRO MINIATURE TILT SWITCH this micro-miniature tilt switch from is probably the smallest metal cased, hermetically sealed tilt switch available today. The switch is gold plated inside and out to ensure good contact performance and ease of mounting. It measures just 6.35 x 1.98mm (dia.) and is ideal where size is a major element in design. Suitable for high volume applications such as telecommunications, hand-held equipment etc. in security, medical, industrial markets etc.



Technical Specification

Contact form/style: non-mercury
 Switch voltage: 50V AC
 Switching current: 0.15A
 Switching capacity: 2.0VA
 Contact resistance: 30? max.
 Operating temperature: -37°C to +125°C
 Case material: Gold-plated steel
 Differential angle: 15° between open closed

CODE	TYPE	PRICE
27-0194	Micro Miniature Tilt Switch.....	£5.99

NON MERCURY TILT SWITCHES a range of economical, non mercury tilt switches, which operate when tilted approximately 10° from the horizontal. Contact is made by gold plated ball bearings which roll onto the internal contact. 740-276 has a single gold plated centre pin, the case being the second contact with a lead attached to the case, 740-278 has two nickel plated leads.



Technical specification
 Voltage range: 1.2 to 14V
 Rating: 30mA to 1A
 Life: 100,000 operations
 Contact resistance: 0.04? @1.5V DC
 Operating angle: 10° from horizontal
 Body dimensions:
 740-274 & 740-276: 12x4mm dia
 740-278: 13x5mm dia

CODE	TYPE	PRICE
740-276	Non Mercury Tilt Switch Gold Pin & Lead.....	£1.40
740-278	Non Mercury Tilt Switch 2 Nickel Leads.....	£1.40

COMPACT NON-MERCURY TILT SWITCH a very sensitive, compact non-mercury tilt switch that uses a gold plated contact ball and gold plated terminals for improved life and stability. The tilt switch is designed to trigger a suitable IC and is suitable for non-hazardous applications. Requires suitable cut-out on PCB.

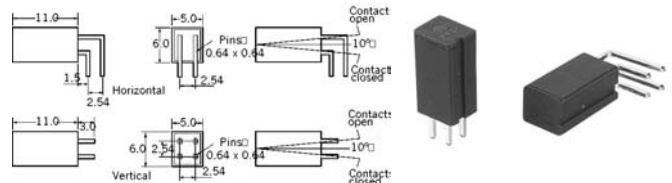


Technical Specification

Contact: 78-0762 Normally open 78-0970 changeover
 Switching voltage: 24V DC max
 Switching current: 25mA max
 Operating angle: 15° from horizontal
 Contact resistance: 200? max
 Operating temperature: -25°C to +85°C
 Case material: copper alloy, gold plated
 Termination: copper alloy, gold plated pins
 Dimensions: 78-0762 8.6 x 4.0mm
 78-0970 13.6 x 4.00mm

CODE	TYPE	PRICE
27-0182	Non Mercury Tilt Switch.....	£1.49
27-0184	Non Mercury Tilt Switch.....	£1.69

LOW COST NON-MERCURY TILT SWITCHES Low cost PCB mounting non-mercury tilt switches fitted with gold contacts. Available with straight or right angle pins for direct mounting to a PCB. Supplied in a polyamide case with UL94V-0 rating. Ideal low cost solution in alarm systems and general angle sensing.



Technical Specification

Contact rating: 25mA at 240V dc
 Contact resistance: 10 ohms
 Differential angle: 10°
 Operating temperature: -25° to +70°C

CODE	TYPE	PRICE
740-264	Non-Mercury Tilt Switch Horizontal.....	£0.99
740-265	Non-Mercury Tilt Switch Vertical.....	£1.10

MINIATURE NON-MERCURY TIP-OVER SWITCHES a sensitive hermetically sealed tip-over switch with non-mercury contacts. Switch contacts are closed when switch is vertical and open when tilted in any direction.



Technical Specification

CW1725-1
 Contact arrangement: Normally closed
 Switching capacity: 3VA
 Switching current: 0.25A
 Operating angle: 25°±15°
 Operating temperature: -37°to+100°C
 Case material: steel tin plated

CODE	TYPE	PRICE
740-269	Tip-over Switch CW1725-1.....	£9.99

SQUIRES ELECTRONIC COMPONENTS

MOULDED TIP-OVER SWITCH a fully enclosed non-mercury tip-over switch fitted with a flanged base for easy fitting to equipment. Switch contacts are closed when switch is vertical and open when tilted in any other direction. Fitted with 150mm flying leads for easy connection. The housing is sealed to IP65.



Technical Specification

Switching capacity: 3VA
 Switching current: 0.25A
 Operating angle: 40° to ±15°
 Operating temperature: -20°C to +70°C
 Case material: Polypropylene
 Fixing centre: 25 x 3.5mm dia.

CODE	TYPE	PRICE
27-0196	Moulded Non-Mercury Tilt Switch.....	£16.99

MERCURY FREE TILT SWITCH MODULE a robust, fully sealed tilt switch, manufactured using non-toxic materials in an ABS case. Switch operates when tilted from the horizontal position. Suitable for a wide range of applications. 15° differential angle and it can be used for AC and DC applications (for DC voltages reduce AC rating to 70%). Fully sealed to give maximum mechanical protection and minimise the ingress of dust and moisture. With ring terminals for secure connection and supplied with mounting clip.



Technical Specification

Switching voltage (max.): 120V AC rms
 Switching current (max.): 1A
 Switching capacity (max.): 25VA
 Contact resistance (max.): 3Ω
 Differential angle: 15°
 (about horizontal) (max.)
 Operating temperature: -20°C to +70°C
 Storage temperature: -25°C to +70°C
 Cable/termination: 2x 0.52mm round silicone rubber insulated.
 Tag hole 4.3mm dia.

CODE	TYPE	PRICE
27-0188	Mercury Free Tilt Switch Module.....	£18.99

L/C COMPACT TIP OVER SWITCH a compact tip over switch designed to trigger an I.C. Suitable for alarm and non-hazardous applications. With gold plated contact ball and gold plated terminals for improved life and stability.



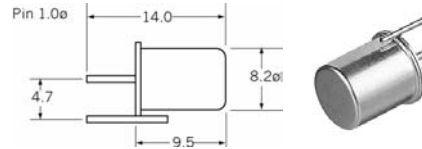
Technical Specification

Contact form: Closed
 Switching voltage: 24V DC max.
 Switching current: 25mA max.
 Operating angle: 45 ± 15 from vertical
 Contact resistance: 10Ω
 Operating temperature: -25°C to +70°C
 Case material: Polyamide 6,6
 Termination: Copper alloy, gold plated pins

CODE	TYPE	PRICE
27-0024	L/C Tip Over Switch.....	£1.39

VIBRATION SWITCHES

NON-MERCURY VIBRATION SWITCH a hermetically sealed, high sensitivity vibration switch employing non toxic materials which will change state when disturbed and is not position sensitive. Can easily be used with analogue or digital circuitry the sensor will react when disturbed by giving a fleeting change of state (i.e n/o to n/c or vice versa.) Time taken to settle depends on the amount of energy absorbed by the device.

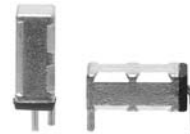


Technical Specification

Contact arrangement: change of state
 Switching voltage max.: 24V
 Switching current max.: 25mA
 Switching capacity max.: 5VA
 Contact resistance initial: 2Ω
 Operating temperature: -37° to +100°C

CODE	TYPE	PRICE
740-270	Non Mercury Vibration Switch.....	£4.99

NON MERCURY SHOCK/MOVEMENT SENSOR this miniature shock/movement detector uses gold plated contact ball and gold plated terminals, and is suitable for alarm systems and non-hazardous applications etc. The sensor detects a shock or movement at a right-angle to its main body, and is sensitive to less than 1g. The output is designed to trigger a suitable IC. Available in vertical and horizontal mounting.



Technical Specification

Contact: NO
 Operating temperature: -25°C to +70°C
 Case material: Zinc alloy/GF Polyamide 6,6 UL94V-0
 Dimensions: 12.5 x 5 x 5mm

CODE	TYPE	PRICE
27-0026	Non-Mercury Shock/Movement Sensor Vertical...	£2.90
27-0028	Non-Mercury Shock/Movement Sensor Horiz.....	£2.99

MOVEMENT SENSOR a switch with two contact balls for extra sensitivity to detect vibration. Ideal for anti-tamper detection in security systems and operates in all positions although sensitivity may vary. The circuit is normally closed but switches should be used in a change of state mode.



Technical Specification

	78-2088 (Horizontal)	78-2104 (Vertical)
Contact form:	Normally closed	Normally closed
Contact rating:	25mA at 25V DC	25mA at 25V DC
Operating temperature:	-25°C to +70°C	-25°C to +70°C
Case material:	Zinc alloy	Zinc alloy
Termination:	Gold plated over nickel	Gold plated over nickel
Solderability:	230 max. for 5s	230 max. for 5s
Operating life:	1,000,000 cycles	1,000,000 cycles

CODE	TYPE	PRICE
27-0030	L/C Movement Switch Horizontal.....	£1.69
27-0032	L/C Movement Switch Vertical.....	£1.69

SQUIRES MODEL & CRAFT TOOLS

SENSOLUTE VIBRATION ONMIDIRECTIONAL SENSOR this sensor is used to detect very slight movements and vibrations using a 0.8mm micro sphere. The sphere bridges two contacts, reducing the resistance between the two contacts. The design of this sensor makes it ideal for use in converting systems to more environmentally friendly devices by utilising wake-up and power-down logic to reduce power consumption. Typical uses for this device include front and rear bicycle lights, bike computers, remote controls, electronic lock systems, transponders, mobile GPS systems, bluetooth-car-kits, wireless sensor networks, wireless PC mice and headsets, digital multimeters and tools provided with digital displays that are only switched on when in motion. Fully automatically SMD-mountable with gilded sphere and contact areas. Mercury-free and silent sphere motion.



Technical Specification

RON: <100Ω
 ROFF: >30MΩ
 Response level approx.: 50mG
 Temperature range: -20°C to +70°C
 Dimensions (L x W x H): 2.8 x 2.4 x 1.6mm

CODE	TYPE	PRICE
27-0192	Sensolute Micro Vibration Sensor.....	£5.99

LINEAR ACCELERATION SWITCH

LINEAR ACCELERATION SWITCH a normally open spring loaded contact switch housed in a sealed tin plated steel case. The contact will close under conditions of shock or acceleration in excess of activation level. As the activation level decreases the contact will open again.



Technical Specification

Activation level 5.0 ± 1.5G
 Contact resistance 10Ω max
 Switching voltage 24V AC max
 Switching current 0.25A max
 Switching capacity 5VA max (resistive)
 Operating temperature -20°C to + 85°C

CODE	TYPE	PRICE
820-336	Linear Acceleration Switch.....	£8.99

PENDULUM SWITCH

PENDULUM SWITCH a very simple pendulum switch with mechanical contacts. This switch offers a cost-effective alternative to heavy duty mercury switches. Fully approved to CSA, VDE and UR for use in domestic heaters and safety systems up to 15A at 240V AC.



Technical Specification

Contact form: normally closed
 Switch rating: 240V AC @ 15A
 Operating angle: min. 15°
 max. 60°
 Contacts: mercury free
 Connections: 6.3 x 0.8mm spades
 Operating temperature: -25°C to +150°C

CODE	TYPE	PRICE
740-324	Pendulum Switch.....	£6.99

REED SWITCHES

DRY CONTACT RHODIUM REED SWITCHES these low-cost, long-life glass sealed reed switches feature rhodium contacts. They have been designed to cover a wide range of demanding applications including: liquid level sensors, security systems, reed relays, proximity sensors, counting devices etc. Tested to one billion operations.



Technical Specification

	27-0050	27-0052	27-0054
Length:	20.3mm	14.2mm	12.7mm
Contact:	NO	NO	NO
Contact rating:	10VA	10VA	10VA
Switching current:	1A	1A	0.5A
Carry current:	1.5A	1.5A	1A
DC switching voltage:	100V	100V	100V
AC switching voltage:	150V rms	125V rms	100V rms
Breakdown voltage:	250V DC	250V DC	200V DC
Contact resistance:	100mΩ	100mΩ	150mΩ

CODE	TYPE	PRICE
27-0050	Dry Contact Reed Switch Standard.....	£1.69
27-0052	Dry Contact Reed Switch Miniature.....	£1.40
27-0054	Dry Contact Reed Switch Sub-Miniature.....	£1.40

REED SWITCHES a range of dry reed switches with rhodium plated contacts for long life. When a magnet or electromagnet is brought near the reed, magnetism is induced which causes the switch to close. When the operating magnet is removed, the springiness of the reed reverses the action. 8 types are available for a wide range of applications. Sold individually.

Case

code	A	B	C	D
1	36	10	2.0	0.4
1A	46	15	2.54	0.6
2	55	14	2.3	0.5
3	52	14	2.6	0.5
4	55	14	2.2	0.35
6	55	18.5	2.6	0.7
8	79	52	5.4	2.5



A = Overall length, B = Glass length
 C = Diameter, D = Lead diameter

Type	Case	Contact Rating VA Max	Switching Current A Max	Switching Voltage AC max	Switching Pull in range (AT)	Code
Micro SPST	1	1.0	0.1	24	10-30	820-800
Sub SPST	2	10.0	0.5	100	15-35	820-805
Sub SPDT	3	3.0	0.2	30	15-30	820-810
Sub SPST	4	10.0	1.0	250	10-30	820-815
Mini SPST	1A	10.0	0.5	140	14-23	820-820
Mini SPST	6	40.0	2.0	440	14-23	820-825
Comp SPST	8	120.0	3.0	1500	75-95	820-835

CODE	TYPE	PRICE
820-800	Micro Reed Switch SPST.....	£1.55
820-805	Sub-miniature Reed Switch SPST.....	£1.05
820-810	Sub-miniature Reed Switch SPDT.....	£4.79
820-815	Sub-miniature Reed Switch SPST.....	£1.99
820-820	Miniature Reed Switch SPST.....	£1.35
820-825	Miniature Reed Switch SPST.....	£2.35
820-835	Compact Reed Switch SPST.....	£5.25

**FREE PARKING FOR 2 HOURS
 OUTSIDE OF OUR SHOP**

SQUIRES ELECTRONIC COMPONENTS

REED SWITCH a low cost dry reed switch with rhodium plated contacts for long life. When a magnet or electromagnet is brought near the reed, magnetism is induced which causes the switch to close. When the operating magnet is removed, the springiness of the reed breaks the contact. Contact rating 0.5A ac or dc, switching voltage 200V dc or 125V c max. Glass length 27mm x 3.5mm.



CODE	TYPE	PRICE
RES430	Reed Switch 10 Pack.....	£1.50
MPM120	Reed Switch Operating Magnets 10 Pack.....	£1.50

ENCAPSULATED REED SWITCHES a range of low cost reed switches which have been encapsulated in compact ABS housings enabling easy PCB mounting. With Rhodium contacts for low contact resistance and fully sealed to give maximum mechanical protection and minimise the ingress of dust and moisture, ideal for harsh environments.



Technical Specification

Order code	27-0072	27-0074	27-0076	27-0078	27-0080
Type	Normally open	Normally open	Normally open	Normally open	Changeover
Switching voltage (max.)	24V AC	140V AC	150V AC	470V AC	100V AC
Switching current (max.)	0.1A	0.5A	0.5A	0.5A	0.5A
Switching capacity (max.)	1VA	10VA	10VA	10VA	5VA
Contact resistance (max.)	200mΩ	120mΩ	150mΩ	150mΩ	150mΩ
Pitch (mm)	12	22	20	22	20
Dimensions (L x W x H) (mm)	15 x 3.2 x 3.2	25 x 3.7 x 3.7	23 x 4.2 x 4.2	25 x 3.7 x 3.7	

CODE	TYPE	PRICE
27-0072	Encapsulated Reed Switch PPS24.....	£2.70
27-0074	Encapsulated Reed Switch PPSRI-03A.....	£2.15
27-0076	PCB Reed Switch N/O.....	£1.70
27-0078	Encapsulated Reed Switch PPS470.....	£2.25
27-0080	PCB Reed Switch C/O.....	£3.45

MAGNETS

MAGNETS a range of disc magnets manufactured from Neodymium iron Boron which is up to 5 times more powerful than Alnico. All magnets are nickel plated to reduce the onset of corrosion when used under normal circumstances. Ideally suited to proximity switch triggering or biasing where space is at a premium.



Technical Specification

	Distance at which magnets measure 1000 gauss		Surface flux (gauss)
	Dims		
M1219-1	4.1mm	3 x 1mm	1500
M1219-2	2.2mm	3 x 2mm	2500
M1219-3	1.8mm	4 x 3mm	3200
M1219-4	1.2mm	6 x 2mm	2500
M1219-5	0.6mm	10 x 5mm	3500

Operating temperature 120°C max.

NB M1219-4 has north seeking identified with a dimple.

CODE	TYPE	PRICE
820-507	Magnet 3 x 1mm M1219-1.....	£0.79
820-509	Magnet 3 x 2mm M1219-2.....	£0.80
820-510	Magnet 4 x 3mm M1219-3.....	£0.89
820-512	Magnet 6 x 2mm M1219-4.....	£0.99
820-514	Magnet 10 x 5mm M1219-5.....	£1.39

MINIATURE OPERATING MAGNET a hermetically sealed proximity switch housed in a round profile polystyrene case. With a single pole changeover contact arrangement. Ideally suited to position sensing and safety systems and fitted with a flying lead of overall length 300mm.



CODE	TYPE	PRICE
27-0090	Operating Magnet.....	£1.29

MINIATURE MAGNETS a range of select miniature magnets suitable for use with above reed switches. Supplied individually.

Code	Length	Width	Depth
820-850	12.7 x	3.2 x	1.6mm
820-855	19.0 x	3.2 x	3.2mm
820-860	28.0 x	4.8 x	4.8mm
820-865	25.4 x	6.4 x	6.4mm



CODE	TYPE	PRICE
820-850	Miniature Magnet 12.7 x 3.2 x 1.6mm.....	£0.45
820-855	Miniature Magnet 19.0 x 3.2 x 3.2mm.....	£0.99
820-860	Miniature Magnet 28.0 x 4.8 x 4.8mm.....	£1.80
820-865	Miniature Magnet 25.4 x 6.4 x 6.4mm.....	£2.90

PROXIMITY SWITCHES

PROXIMITY REED SWITCH ABS BODY a compact proximity reed switch housed in an ABS epoxy resin enclosure. Available with either normal open or normal closed contacts when magnet is not present. A matching magnet is available separately.



Technical Specification

	27-0034	27-0036
Contact:	NO	NC
Switching voltage:	100V AC	100V AC
Switching current:	0.5A	0.5A
Switching capacity:	10VA	10VA
Contact resistance:	200mΩ	200mΩ
Switching distance:	12-15mm	8-12mm
Operating temperature:	-20°C to +65°C	-20°C to +65°C
Case material:	ABS epoxy resin	
Lead length:	300mm	300mm

CODE	TYPE	PRICE
27-0034	ABS Housed Proximity Switch Normally Open.....	£2.99
27-0036	ABS Housed Proximity Switch Normally Closed..	£6.99
27-0040	Proximity Magnet.....	£1.99

LC/ PLASTIC PROXIMITY SWITCH these switches have a side exit cable and a snap-off flange, which offers flexibility in fitting by choosing to either use the two screw locating holes in the switch housing or the adhesive pad fitted to the switch body. If screws are used the adhesive strip can be left in place as a useful insulator against excessive shock or vibration. Fitted with 100V DC, 0.5A reed switch and fully encapsulated in a strong plastic case with 450mm twin cable. Designed for simple control or security applications and offering high reliability.



Technical Specification

Order code:	78-2070	78-2072
Contacts:	A normally open	A normally open
Switching voltage:	100V AC	100V AC
Switching current:	0.5A	0.5A
Contact resistance:	0.15Ω	0.15Ω
Switching distance:	20mm	20mm
Operating temperature:	-25°C to +70°C	
Cable:	PVC covered 17/0.16 O/D 1.6mm by 450mm	
Case material:	White plastic	
Approvals:	UL	

CODE	TYPE	PRICE
27-0082	L/C Proximity Switch - Side Cable Entry.....	£3.90
27-0084	Magnet Side Entry - FM102MW.....	£2.55
27-0086	L/C Proximity Switch - Rear Cable Entry.....	£3.99
27-0084	Magnet Rear Entry - FM106MW.....	£2.49

SQUIRES MODEL & CRAFT TOOLS

MICRO REED PROXIMITY SWITCH this micro proximity reed switch has been designed to be as inconspicuous as possible. With a body of only 17mm and 4mm wide it will fit onto a flat surface with either the two locating holes or the supplied high strength adhesive strip. Operating distance of 10mm and usually used to close circuits. It can be operated by a magnet or coil and it is powered by a low voltage circuit. Low contact resistance and a life exceeding 20 million operations.

Technical Specification

Contacts: Normally open
 Switching voltage: 24V AC/DC max.
 Switching current: 0.1A max.
 Switching capacity: 1W max.
 Contact resistance: 0.15Ω
 Switching distance: 10mm with specified magnet
 Operating temperature: -25°C to +70°C
 Storage temperature: -40°C to +75°C
 Case material: White plastic
 Cable: Twin core insulated
 Approvals: UL



CODE	TYPE	PRICE
27-0110	Micro Reed Proximity Switch.....	£4.35
27-0112	Magnet for Micro Reed Proximity Switch.....	£3.15

MINIATURE POSITION SENSOR a single-pole, single-throw, normally open, miniature position sensor that is reliable and robust. Suitable for dirty, oily, greasy, wet and similarly harsh environments. When operated by a suitable magnet, the combination is suitable for direct magnet or shunt operation. The reed switch is encapsulated in a moulded POCAN (PBT) housing and meets the needs for security and safety systems, office equipment and metering. Fitted with 2x 0.5m of UL1007, 22AWG 7/0.2mm stranded cable with PVC insulation.



Technical Specification

Contact configuration: SPST normally open
 Maximum switching voltage: AC 110V
 Contact rating: 0.25A
 Max. switching load: 5W
 Dimensions (exclude cables): 20.3 x 3.7 x 14mm
 Fixing hole: 3.8mm dia.

CODE	TYPE	PRICE
27-0060	Position Sensor PS701.....	£5.99

PROXIMITY REED SWITCH ALUMINIUM BODY a robust proximity reed switch housed in a light weight aluminium sealed housing. Designed for use in control circuits and security systems etc. All fixing holes are countersunk for a neat finish when secured to a surface. Termination is a twin 280mm long PVC insulated lead and a matching magnet is available separately, please see below.



Technical Specification

Contact: NO
 Switching voltage: 200V AC max
 Switching current: 0.5A max.
 Switching capacity: 10VA resistive
 Contact resistance: 300mΩ
 Switching distance: 10mm min.
 Operating temperature: -20°C to +85°C
 Case material: Aluminium
 Dimensions: 32mm x 15 x 8mm

CODE	TYPE	PRICE
27-0068	Aluminium Body Reed Switch.....	£5.99
27-0070	Aluminium Body Proximity Magnet.....	£2.49

REED PROXIMITY SWITCH a range of magnetically operated reed proximity switches encapsulated in blue polystyrene housings. Supplied with 300mm flying leads and suited to a wide range of applications including intruder alarm systems. Suitable for harsh operating environments and available in single pole and single pole changeover switching options. An operating magnet is also available housed in an identical polystyrene housing



Technical Specification

	SPNO	SPCO
Contact rating:	200V DC 250V AC	175V DC 200V AC
Maximum load:	10W	5W
Maximum switching current:	0.5A	0.25A
Magnet operating distance:	8mm min.	
Dimensions:	30 x 20 x 7mm	
Fixing centres:	18mm	

CODE	TYPE	PRICE
27-0092	Reed Proximity Switch SPNO.....	£6.99
27-0094	Reed Proximity Switch SPCO.....	£8.29
27-0096	Reed Operating Magnet.....	£4.65

PROXIMITY SWITCH a compact proximity switch comprising a permanent magnet moulded into a flush housing and a single pole N/O reed switch moulded into a similar flush housing. Switch housing 26.5mm long, 8.5mm dia. With 280mm flying leads. Magnet housing 26.5mm long, 8.5mm diameter.



CODE	TYPE	PRICE
740-272	Proximity Switch.....	£2.99

SECURITY PROXIMITY SWITCH a standard recessed proximity switch designed to be recessed into door or window frames. A Sealed magnetic reed switch unit with 4 wire, 2 anti-tamper and matching magnet in an ABS housing suitable for wooden or aluminium frames. 260mm flying leads. Sold as a set.



CODE	TYPE	PRICE
27-0066	Security Proximity Switch.....	£5.29

PROXIMITY SWITCH a hermetically sealed proximity switch housed in a round profile polystyrene case. With a single pole changeover contact arrangement. Ideally suited to position sensing and safety systems and fitted with a flying lead of overall length 300mm. A miniature actuating magnet with round profile is also available – see below.



Technical Specification

Contact arrangement: SPCO
 Switching voltage max.: Vac175
 Switching current max.A: 0.25
 Switching capacity max.VA: 5
 Contact resistance mΩ: 150
 Switching distance min. (mm): 5
 Operating temperature: -20°C to +70°C
 Dimensions: 20 x 6mm

CODE	TYPE	PRICE
27-0062	Proximity Switch 175V SPCO.....	£6.49
27-0090	Operating Magnet.....	£1.29

SQUIRES ELECTRONIC COMPONENTS

BRASS PROXIMITY SWITCH this brass proximity switch is strongly constructed and fitted with a long life reed switch. Designed for use in demanding applications such as control circuits and security systems. Supplied with locking nut.



Technical Specification

Contact:	NO
Switching voltage:	48V DC max.
Switching current:	0.5A max.
Switching capacity:	10VA resistive
Contact resistance:	200mΩ
Switching distance:	10mm min
Operating temperature:	-20°C to +85°C
Case material:	Brass
Dimensions:	28mm x M8 x 0.8 thread

CODE	TYPE	PRICE
27-0098	Brass Proximity Switch.....	£6.49
27-0100	Magnet CT1302M.....	£3.60

SURFACE MOUNTING PROXIMITY SWITCH Surface mounting security switch with sealed magnetic reed 4 wire, 2 anti-tamper and matching magnet. ABS housing suitable for wooden or aluminium frames. Secured by two screws on 25mm centres.



CODE	TYPE	PRICE
740-280	Surface Mounting Proximity Switch.....	£4.99

MINI SURFACE PROXIMITY SWITCH a miniature aluminium housed, surface mounting low voltage security reed switch. With 4 wires, 2 anti tamper and matching magnet. Suitable for aluminium frames.



CODE	TYPE	PRICE
27-0190	Mini Surface Proximity Switch.....	£6.99

HEAVY DUTY SURFACE PROXIMITY SWITCH a heavy duty proximity switch housed in a robust polycarbonate housing specifically designed for use with shutter and garage doors. Switch and magnet are supplied complete with screw covers to provide a clean, flush finish to the switch. Sealed magnet reed switch unit with four wire, two anti-tamper with matching magnet.



CODE	TYPE	PRICE
27-0186	H/Duty Surface Proximity Switch.....	£15.99

PIR SENSORS

FRESNEL LENS FOR PIR SENSORS a spherical Fresnel lens that is suitable for use with PIR sensors. Manufactured from high density polyethylene.



Technical Specification

Detection zones:	17
Focal length:	12.9mm
Field of view:	±50° (horizontal), ±30° (vertical)
Dimensions:	24 x 24mm

CODE	TYPE	PRICE
27-0208	Fresnel Lens for PIR Sensors.....	£2.99

PIR MODULE a low cost passive infrared module in a package measuring just 25 x 35mm. It features a ball lens with a viewing angle of 60°, a viewing range of 5m and high sensitivity. It has a three-lead connection. Designed for indoor use only. Operating range -20°C to +50°C.



Technical Specification

	Min	Typ	Max	Unit
Operating voltage:	4.7	5	12	V
Standby current (no load):		300		µA
Output pulse width:	0.5			s
Output high voltage:		5		V
Detection range:		5		m

CODE	TYPE	PRICE
27-0210	PIR Module KC7783R.....	£12.99

PIR MODULE WITH LENS this sensor module consists of a dual element PIR sensor, Fresnel lens and associated circuitry, mounted on a PCB. The module operates by detecting a change in detected infrared energy, from humans or other source. Wide detection area.



Technical Specification

Sensitivity	
Install height:	1m
Heat source differential:	3° to 5° difference from background
Heat source moving speed:	1m/s
Heat source movement direction:	90°
Characteristics	
Operating voltage:	4.75V to 10V
Breakdown voltage:	12V DC
Supply current max.:	2mA
Stability time max.:	30s
Operating temperature:	-20°C to +50°C

CODE	TYPE	PRICE
27-0212	PIR Module with Lens.....	£17.99

PYROELECTRIC PIR SENSOR UNIT this PIR module works on the pyroelectric principle, where a change in detected temperature produces an increase or decrease in generated electric potential. The module consists of a quad element passive infrared sensor, a lens and associated circuitry, mounted on a PCB. Having a wide field of view in the horizontal and vertical planes as well as 12 detection zones make this module suitable for a wide range of applications. Designed for human body detection, with a high density polyethylene lens and wide field of view 97.7° in both planes. An associated connecting cable assembly is also available.



Technical Specification

Supply voltage:	5V ± 0.25V
Current consumption max.:	3mA
Output voltage (detection):	+VS - 0.5V
Waiting time max.:	50s
Detection zones:	12
Field of view:	97.7° in horizontal and vertical planes
Sensor type:	Balanced differential
Dimensions (mm):	34.7 x 20

CODE	TYPE	PRICE
27-0216	Pyroelectric PIR Sensor Unit.....	£17.99
27-0218	Cable Assembly for Pyroelectric PIR Sensor.....	£1.35

SQUIRES MODEL & CRAFT TOOLS

FLOW SWITCH

FLOW SWITCH - COPPER a range of flow switches that are available in two flow rates. Sturdily constructed from 15mm copper pipe with reliable reed switch technology these units are easy to install and provide excellent performance making them suitable for a wide range of water or air flow switching applications. Ideal components for use in mains water control, leak detection, cooling systems, flow sensing, central heating systems, circulating pump protection and power showers. Minimal pressure drop and suitable for hot and cold potable water. Operates from a small head of water and meets UL94-HB flammability rating.



Technical Specification

Material: Copper
 Fitting: Flow switch 15mm pipe size
 Contact form: Form A - SPST
 Contact material: Ruthenium
 Switching volts max.: 300V DC
 Switching current max.: 1A
 Power max.: 15W
 Cable type: 2x 16/0.2mm PVC insulated, 1m length
 Cable colour: Black/black
 Operating temperature: 85°C
 Operating pressure: 10 Bar
 Mounting shock: 50G for 11ms duration
 Mounting vibration: 35G up to 500Hz

CODE	TYPE	PRICE
27-0046	Copper Bodied Flow Switch 0.5L/Min.....	£14.99
27-0048	Copper Bodied Flow Switch 3.0L/Min.....	£14.99

FLOAT SWITCHES

COMPACT FLOAT SWITCHES Compact, economically priced float switches in horizontal and vertical mounting styles, suitable for both high or low level sensing. The switching element is a sealed reed relay which is actuated via a float mounted magnet, which moves in relation to the liquid level in the vessel. The horizontal switch is an external fitting type featuring rapid push fit installation and providing sealing up to 0.34 bar (5psi). Switch operation can be N.O or N.C by simply rotating the sensor through 180°. The vertical mounting switch is an internal mounting type secured by an O ring and M8 fixing nut. Suitable for top or bottom tank mounting with the float rising or falling to actuate. Both types are terminated in 10cm flying leads.



Technical specification	Horizontal	Vertical
Contact configuration	SPST	SPST
Max current	1A	1A
Max voltage	100V DC/250V AC	100V DC/250V AC
Contact rating	15W	15W
Material body	Acetal copolymer	Polypropylene
float	Foamed polypropylene	Foamed polypropylene
Operating temperature	-30° to +60°C	-30° to +70°C
Min liquid S.G.	0.80	0.70
Overall length	85.5	59.0
Float diameter	15.5	30.0

CODE	TYPE	PRICE
740-282	Compact Float Switch Horizontal.....	£8.99
740-284	Compact Float Switch Vertical.....	£8.99

LIQUID LEVEL SENSOR a side entry, horizontally mounted float switch type liquid level sensor that is manufactured in polypropylene and is suitable for potable water. Can be used for sensing rising or falling liquid levels (switch normally open or normally closed) simply by rotating mounting by 180°. It can be externally or internally fitted. Easily installed with reliable reed switch operation. Typical applications include drinking water level, coolant level indication, cooling systems, high or low level water and waste water level. Silicone sealing components and normally closed with float horizontal. WRc potable water approved, UL E98428 listed model.



Technical Specification

Contact form: Form A SPST
 Contact material: Ruthenium
 Switching volts max.: 250V AC
 Switching current max.: 1A
 Power max.: 15W
 Cable type: 2x 18AWG 32/0.2mm PVC insulated, 0.5m length
 Cable colour: Black
 Operating temperature: 80°C
 Minimum specific gravity: 0.65
 Operating pressure: 4 Bar
 Mounting shock: 50G for 11ms duration
 Mounting vibration: 35G up to 500Hz

CODE	TYPE	PRICE
27-0202	Liquid Level Sensor - Horizontal PP.....	£14.99

LIQUID LEVEL SENSOR - FUEL AND OILS a side entry, horizontally mounted float switch type liquid level sensor that is manufactured in Nylon 6.6 and is suitable for fuels and oils. Can be used for sensing rising or falling liquid levels (switch normally open or normally closed) simply by rotating mounting by 180°. External or internal fitting, easy installation and with reliable reed switch operation. Normally closed with float horizontal. Typical applications include level sensing of cooking oil, fuel, alcohol, sump level. With silicone sealing components. UL E98428 listed model.



Technical Specification

Contact form: Form A SPST
 Contact material: Ruthenium
 Switching volts max.: 250V AC
 Switching current max.: 1A
 Power max.: 15W
 Cable type: 2x 18AWG 32/0.2mm PVC insulated, 0.5m length
 Cable colour: Black
 Operating temperature: 110°C
 Minimum specific gravity: 0.85
 Operating pressure: 4 Bar
 Mounting shock: 50G for 11ms duration
 Mounting vibration: 35G up to 500Hz

CODE	TYPE	PRICE
27-0206	Liquid Level Sensor. Horizontal.....	£15.99

SQUIRES ELECTRONIC COMPONENTS

FLOAT SWITCH a float switch suitable for vertical mounting and both falling or rising fluid levels. It consists of a sealed SPST reed switch and a float-mounted magnet, which actuates the reed switch depending on the level of liquid in the vessel. Typical applications include high or low level sensing in reservoirs, overflow prevention, etc. Supplied with mounting kit permitting either internal or external fitting. Terminated in 0.5m flying leads.



Technical Specification

Contact configuration: SPST
 Max. current: 1A
 Max. voltage: 100V DC/120V AC
 Contact rating: 15W
 Body material: UL listed glass-filled polypropylene
 Operating temperature: -30°C to +110°C (continuous hot water 80°C max.)
 (non continuous hot water 100°C max.)
 Min. liquid S.G.: 0.65
 Overall length: 89mm
 Float diameter: 22.2mm

CODE	TYPE	PRICE
27-0204	Float Switch - Vertical.....	£15.99

LIQUID SENSOR this sensor has two gold plated metal probes fitted close to the body of the sensor. When the probes detect the presence of liquids the change in resistance will activate the internal reed switch contacts and cause the contact to close and the circuit to be made. When liquid drains away from the probes and resistance drops the switch contacts will open. Liquids of very poor viscosity may not drain away from the probes and will cause the switch contacts to remain closed.



Technical Specification

Contact form: Form A normally open
 Switching voltage: 100V DC max.
 Switching current: 0.5A max.
 Switching capacity: 10W max.
 Contact resistance: 0.5Ω
 Operating temperature: -5°C to +80°C
 Case material: White plastic
 Liquids: Non corrosive. Not heavy oils
 Cable: Twin core insulated. 1.8m

CODE	TYPE	PRICE
27-0042	Liquid Sensor.....	£6.99

HUMIDITY SENSORS

HUMIDITY SENSOR a humidity sensor that will measure up to 90% RH. Suitable for use as a component in a wide range of end products such as air conditioning systems, humidifiers/dehumidifiers, hygrometer and dataloggers. Packaged in a 2-pin in-line package. Dimensions 15 x 9 x 4mm (body), lead spacing 2.54mm.



Technical Specification

Rated voltage: 1V rms
 Rated current: 0.2mA
 Operating frequency range: 0.5 to 2kHz
 Operating temperature range: 0°C to +60°C
 Operating humidity range: 90% RH
 Impedance range @ 60% RH 25°C: 14.2 to 38.5kΩ
 Humidity accuracy: -5 to +5% RH
 Hysteresis @ 40 to 80% RH: 2% RH
 Temperature dependence (ref.): 0.6% RH/°C

CODE	TYPE	PRICE
27-0180	Humidity Sensor HCZ-J3A.....	£1.69

RESISTIVE HUMIDITY SENSOR a miniature sensor consisting of a RH sensitive material deposited on a ceramic substrate. The AC resistance (impedance) of the sensor decreases as relative humidity increases. Providing high sensitivity and reliability in a small package. Fast response time and high resistance to chemicals and contaminants. Enclosed in a moulded, cream coloured body with 5mm pitch terminations.



Technical Specification

AC resistance value 25°C:

RH %	Value kΩ
30	920
40	220
50	66
60	23
70	9.6
80	4.2
90	1.9

Humidity range: 30 to 90% RH
 Rated voltage: 1.4 V AC pk
 Rated power: 0.26 mW pk
 Frequency range: 50Hz to 1kHz
 Accuracy: ±3% RH 60% RH, 25°C
 Hysteresis: -3% RH 40-80% RH
 Temperature dependence: 0.5% RH/°C
 Response time: 60s
 Operating temperature: 0°C to +60°C
 Dimensions H x W x D (mm): 18.6 x 14 x 6

CODE	TYPE	PRICE
27-0044	Resistive Humidity Sensor.....	£6.69

CAPACITIVE HUMIDITY SENSOR a humidity sensor which operates on a capacitance change with change in relative humidity.



Technical Specification

Humidity range: 10% to 90% RH
 Capacitance @ 25°C, 43% RH, 100 kHz: 122pF ± 15%
 Typical sensitivity: 0.4pF/% RH
 Frequency range: 1kHz to 1MHz
 Supply voltage: 15V AC/DC max.

CODE	TYPE	PRICE
27-0178	Capacitive Humidity Sensor.....	£17.99

ULTRASONIC TRANSDUCERS

ULTRASONIC TRANSDUCERS an ultrasonic transmitter and high sensitivity receiver designed for sending and receiving continuous or modulated waves in the 40kHz region through air. Applications include remote control, data transmission, etc. These units are not watertight.

Technical Specification

	Transmitter	Receiver
Sensitivity	106dB	-65dB
Resonant frequency	40kHz ± 1kHz	
Directional angle	Approx 20°	
Max. input voltage	20V rms	
Impedance	500Ω	30KΩ
Capacitance	1100pF±20%	



CODE	TYPE	PRICE
800-272	Ultrasonic Transducer Transmitter.....	£3.79
800-274	Ultrasonic Transducer Receiver.....	£3.79

SQUIRES MODEL & CRAFT TOOLS

ULTRASONIC TRANSDUCERS

SEALED ULTRASONIC TRANSDUCER a pair of standard 18mm diameter Tx/Rx 40kHz ultrasonic transducers sealed for external use. Supplied in a metal housing and sealed in with a resin to protect from the environment. These rugged and moisture proof transducers feature high sensitivity and sound pressure level with excellent temperature and humidity durability. Suitable for a wide range of applications such as remote control devices, robotics, intrusion alarms, energy saving equipment etc.



CODE	TYPE	PRICE
29-0228	Sealed Ultrasonic Transducer TX.....	£7.99
29-0230	Sealed Ultrasonic Transducer RX.....	£7.99

PYROELECTRIC PIR SENSOR

GP PYROELECTRIC PIR SENSOR a general purpose dual element PIR sensor, packaged in a TO-5 metal can. Featuring a balanced differential sensor with a wide field of view in X and Y plane.

Technical Specification

Operating voltage:	3V to 10V DC
Source voltage:	0.3V to 1.5V
Signal output typ.:	4V p-p
Noise output typ.:	90mV p-p
Balance output max.:	15%
Frequency response:	0.3Hz to 3Hz ±10dB
Field of view X-axis:	138°
Field of view Y-axis:	125°
Operating temperature:	-30°C to +70°C



CODE	TYPE	PRICE
27-0220	GP Pyroelectric PIR Sensor TO-5 RE200b-P.....	£8.99

STRAIN GAUGES

STRAIN GAUGES a pair of general purpose foil material polyester backed strain gauges. Type 11 (red colour) is temperature compensated for use with steel and type 23 (blue colour) is compensated for aluminium. Supplied fitted with 30mm flying leads and two self adhesive terminal pads to facilitate connection to the gauge without the risk of damage caused by applying undue heat or mechanical stress.



Technical Specification

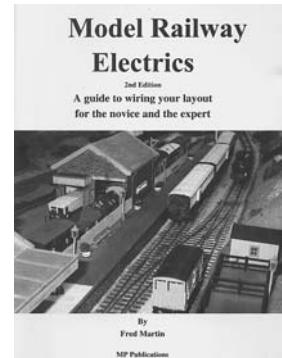
Gauge dimensions	08 x 2.0mm
Package dimensions	13 x 4.0mm
Gauge resistance	120Ω ±0.5%
Gauge factor	2.1 ±1% (temp coeff. <5%/100°C)
Fatigue	>10 ⁶ reversals at 1000μ strain
Foil material	Copper nickel alloy
Base material	Polyester
Linear expansion factor	Type 11 mild steel 10.8 x 10 ⁻⁶ /°C Type 23 aluminium 23.4 x 10 ⁻⁶ /°C

CODE	TYPE	PRICE
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MODEL RAILWAY ELECTRIC'S

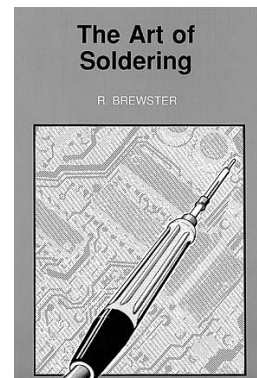
MODEL RAILWAY ELECTRIC'S BOOK by Fred Martin, a guide to wiring a model railway for the novice and experienced modeller alike. The book covers wiring for cab control, points, point motors, layout planning, wiring multiple baseboards, passive sections, fiddle yards and reversing.



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THE ART OF SOLDERING

THE ART OF SOLDERING by R. Brewster. Soldering is a subject that worries a great many people, mainly because they do not understand it or have little or no experience. Many have heard that it is very difficult to achieve good results and indeed that it is very easy to make serious mistakes. As soldering is now part of many hobbies, especially electronics and modelling, it is essential that this myth be destroyed. In this book, the author has tried to dissolve the mysteries that surround the subject so that it can be enjoyed and become more a part of the individual hobby and not be regarded as a problem. The author has covered most hobbies that involve soldering, including electronics, model railways and stained glass. Included are sections on choosing the correct soldering iron, solder, materials and tools so as to be able to get the best results from your efforts. Many illustrations are included to help demonstrate the correct procedures and also some practical exercises are detailed so as to help you learn to solder.



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