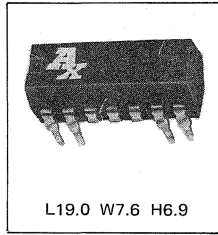


**Astralux 120 & 130 Series**



**GENERAL DESCRIPTION**

Epoxy moulded magnetically shielded in I.C. style package. Maximum switching voltage 100 VDC.  
Schematics: refer to page 268

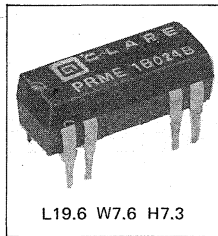
L19.0 W7.6 H6.9

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each		
						1+	25+	50+
<b>8 PIN 130 SERIES</b>								
131A-3	33290B	5	500	0.50	1-A	2.130	1.700	1.470
131A-4	33291X	5	500	0.50	1-A	2.180	1.740	1.510
131A-5	69436D	12-24	2900	0.50	1-A	2.430	1.910	1.650
131A-6	69437B	12-24	2900	0.50	1-A	2.490	1.990	1.720
131B-4	33293G	5	500	0.50	1-B	3.590	2.860	2.470
131C-1	45148E*	5	80	0.25	1-C	4.760	3.760	3.230
131C-3	33295C*	12	450	0.25	1-C	4.830	3.840	3.290
131C-6	45150F*	24	1750	0.25	1-C	5.000	3.960	3.430
135C-1	33300H	5	150	0.20	1-C	5.930	4.670	4.020
<b>14 PIN 120 SERIES</b>								
121A-3	33277G	5	500	0.50	1-A	2.130	1.700	1.470
121A-4	33278E	5	500	0.50	1-A	2.180	1.740	1.510
121A-6	69435F	12-24	2900	0.50	1-A	2.490	1.990	1.720
121B-4	33280F	5	500	0.50	1-B	3.590	2.860	2.470
121B-6	45139G	12	2900	0.50	1-B	3.730	2.990	2.600
121C-3	33282B*	12	450	0.25	1-C	4.830	3.840	3.290
122A-1	33284R*	5	200	0.11	2-A	4.190	3.430	2.840
125C-1	33287C	5	150	0.20	1-C	5.930	4.670	4.020
125C-2	45145X	5	150	0.20	1-C	6.070	4.800	4.150

\* Maximum switching voltage 28VDC

**C. P. Clare PRMA High Profile Series**



**GENERAL DESCRIPTION**

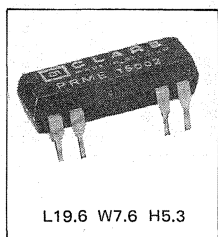
High profile moulded relays in I.C. style package. Max. switching voltage 100 VAC/DC.  
Schematics: refer to page 268

L19.6 W7.6 H7.3

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each		
						1+	25+	50+
<b>PRMA</b>								
1A05	46902H	5	500	0.5	1-A	1.240	1.150	0.960
1A05B	46905B	5	500	0.5	1-A	1.470	1.350	1.200
1A12	46903F	12	1000	0.5	1-A	1.240	1.150	0.960
1A12C	46909E	12	1000	0.5	1-A	1.930	1.790	1.510
1A24B	46907R	24	2150	0.5	1-A	1.470	1.350	1.200
1B05	46911F	5	500	0.5	1-B	2.280	2.100	1.870
1B05B	46914X	5	500	0.5	1-B	3.130	2.880	2.560
1B24B	46916G	24	2150	0.5	1-B	3.130	2.880	2.560
2A05B	46929H	5	140	0.5	2-A	3.130	2.880	2.560
2A05C	46923R	5	140	0.5	2-A	3.130	2.880	2.560
2A24	46919A	24	2150	0.5	2-A	2.280	2.100	1.870
2A24B	46922X	24	2150	0.5	2-A	3.130	2.880	2.560

**C. P. Clare PRME Low Profile Series**



**GENERAL DESCRIPTION**

Low profile moulded relays in I.C. style package. Max. switching voltage 100 VAC/DC.  
Schematics: refer to page 268

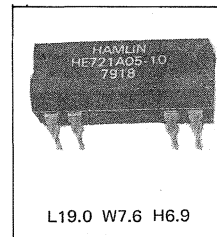
L19.6 W7.6 H5.3

**C.P. Clare PRME Low Profile Series (cont)**

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each		
						1+	25+	50+
<b>PRME</b>								
15002	44584C	12	530	0.5	1-A	1.240	1.150	0.960
15002B	46926C	12	530	0.5	1-A	1.430	1.320	1.090
15003	44585A	24	2000	0.5	1-A	1.240	1.150	0.960
15003B	46927A	24	2000	0.5	1-A	1.430	1.320	1.090
15005	44581R	5	380	0.5	1-A	1.240	1.150	0.960
15005AB	44583E	5	380	0.5	1-A	1.540	1.420	1.170
15005B	44582G	5	380	0.5	1-A	1.430	1.320	1.090

**Hamlin 700 Series**



**GENERAL DESCRIPTION**

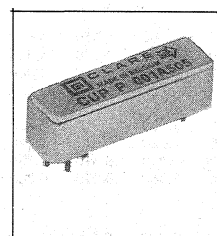
Epoxy moulded relays in I.C. style package. Max. switching voltage 200 VAC/DC.  
Schematics: refer to page 268

L19.0 W7.6 H6.9

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each		
						1+	25+	50+
<b>HE721</b>								
A0500	21065G	5	500	0.5	1-A	1.630	1.350	1.150
A0510	21066E	5	500	0.5	1-A	1.690	1.410	1.210
A5025	21067C	12-24	2900	0.5	1-A	1.850	1.540	1.320
A5026	75354G	12-24	2900	0.5	1-A	1.790	1.480	1.260
A1210	75355E	12	1000	0.5	1-A	1.690	1.410	1.210
B0510	21076A	5	200	0.25	1-B	2.520	2.100	1.790
C0500	75358X	5	200	0.25	1-C	3.650	3.020	2.570
C0510	21068A	5	200	0.25	1-C	3.710	3.080	2.630
C1200	75359H	12	500	0.25	1-C	3.650	3.020	2.570
C1210	21069X	12	500	0.25	1-C	3.710	3.080	2.630
C2410	21070B	24	2000	0.25	1-C	4.220	3.510	2.990
E0500	75363E	5	200	0.25	1-C	4.480	3.710	3.150
E0510	21071X	5	200	0.25	1-C	4.540	3.770	3.210
E2410	21072R	24	200	0.25	1-C	4.860	4.040	3.440
<b>HE722</b>								
A0500	75356G	5	200	0.5	2-A	3.140	2.600	2.210
A0510	21073G	5	200	0.5	2-A	3.200	2.660	2.270
A1200	75357A	12	500	0.5	2-A	3.140	2.600	2.210
A1210	21074E	12	500	0.5	2-A	3.200	2.660	2.270
A2410	21075C	24	2150	0.5	2-A	3.320	2.760	2.360
<b>HE751</b>								
A0510	75360X	5	500	0.5	1-A	2.170	1.810	1.550
A1210	75361R	12	1000	0.5	1-A	2.170	1.810	1.550
A2410	75362G	24	2150	0.5	1-A	2.360	1.970	1.680

**C. P. Clare CUP Series**



**GENERAL DESCRIPTION**

Available in open frame (SOO), potted with metal cover (POO), or metal cover only (COO). Max. switching voltage 200 VAC/DC.

**Dimensions**

S 1-A, 1-B	L31.2	W 8.7	H 9.5
S 2-A	L31.2	W11.2	H 9.5
C,P 1-A	L32.4	W 9.5	H10
C,P 2-A	L32.4	W12	H10

Schematics: refer to page 268

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each		
						1+	25+	50+
<b>METAL COVER COO</b>								
1A105	46705G	5	345	0.75	1-A	1.580	1.480	1.310
1A112	46707C	12	2145	0.75	1-A	1.580	1.480	1.310
1A124	46708A	24	7485	0.75	1-A	1.580	1.480	1.310
2A112	46711X	12	1100	0.75	2-A	1.910	1.790	1.590
2A124	46712R	24	4240	0.75	2-A	1.910	1.790	1.590
<b>POTTED POO</b>								
1A112	46717X	12	2145	0.75	1-A	1.370	1.260	1.120
1A124	46718H	24	7845	0.75	1-A	1.370	1.260	1.120
1B124	46722E	24	4240	0.75	1-B	1.950	1.800	1.600

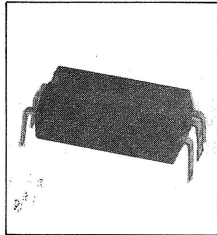
(cont)

**C. P. Clare Cup Series (cont)**

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact		Prices £ each			
				Amps	Form	1+	25+	50+	100+
OPEN SOO									
1A112	46701D	12	855	0.75	1-A	1.420	1.330	1.190	1.070
1A124	46702B	24	3285	0.75	1-A	1.420	1.330	1.190	1.070

**C. P. Clare PRMG Sealed Contact Series**



**GENERAL DESCRIPTION**

Epoxy moulded relay with low level switching characteristics. Max. switching voltage 150 VAC/DC.

**Dimensions**

PRMG	1-A	L21.5	W 8.4	H8.9
	1-B	L21.5	W10.9	H8.9
	2-A	L21.5	W10.9	H8.9
	4-A	L21.5	W16	H8.9
	5-A	L21.5	W18.5	H8.9

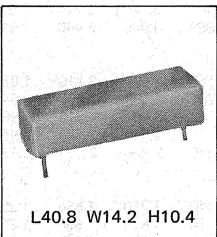
Schematics: refer to page 268

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	1+	25+	50+	100+
PRMG951									
A05B2A	44609F	5	105	0.75	2-A	1.950	1.800	1.600	1.440
A05B4A	44614A	5	60	0.75	4-A	5.210	4.800	4.220	3.830
A05B5A	44615X	5	43	0.75	5-A	6.190	5.710	5.200	4.550
A12B1A	44602R	12	1150	0.75	1-A	1.270	1.170	1.040	0.940
A12B2A	44610R	12	630	0.75	2-A	1.950	1.800	1.600	1.440
A24B1A	44603G	24	4200	0.75	1-A	1.270	1.170	1.040	0.940
A24B1B	44607X	24	3500	0.75	1-B	2.250	2.070	1.840	1.660
A24B2A	44611G	24	2300	0.75	2-A	1.950	1.800	1.600	1.440

**MERCURY WETTED**

**C. P. Clare HGRM HGR2M, HGSM Series**



**GENERAL DESCRIPTION**

Mercury wetted contact relays offering multibillion operation reliability in a moulded package. Max. switching voltage 500 VAC/DC.

Schematics: refer to page 268

L40.8 W14.2 H10.4

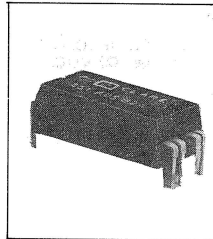
**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	1+	25+	50+	100+
HGRM									
55211ICO	44634D	5	335	2	1-C	6.140	5.560	4.970	4.480
55211POO	44635B	12	680	2	1-C	6.140	5.560	4.970	4.480
55211TOO	44636X	24	2650	2	1-C	6.140	5.560	4.970	4.480
HGSM									
51111ICO	44637R	5	335	2	1-C	7.750	7.020	6.310	5.720
51111POO	44638G	12	940	2	1-C	7.750	7.020	6.310	5.720
51111TOO	44639E	24	3620	2	1-C	7.750	7.020	6.310	5.720
52112ICO	44640H	5	335/	2	1-C	8.120	7.360	6.610	6.000
HGR2M									
53221ICO	65856F	5	335	2	2-C	10.050	9.090	8.130	7.320
53221MOO	65857D	12	780	2	2-C	10.050	9.090	8.130	7.320
53221QOO	65858B	24	2900	2	2-C	10.050	9.090	8.130	7.320
53221TOO	65859X	48	12000	2	2-C	11.810	10.670	9.570	8.540

★ ★ ★ ★ ★ **TELEX** ★ ★ ★ ★ ★

For really fast hard copy quotations ask for a telex.

**CP Clare MHMG Series**



**GENERAL DESCRIPTION**

P.C.B. mounting moulded mercury wetted contact relays. Max. switching voltage 350 VAC/DC.

**Dimensions**

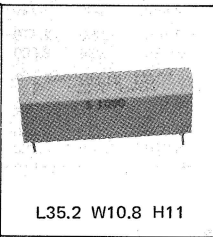
MHMG	1-A	L28.5	W11	H10.8
	1-B	L28.5	W16	H10.8
	2-A	L28.5	W16	H10.8
	3-A	L28.5	W20.5	H10.8
	4-A	L28.5	W25.7	H10.8

Schematics: refer to page 268

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	1+	25+	50+	
MHMG851									
A05B1A	44617F	5	77	1	1-A	2.700	2.490	2.220	
A05B2A	44624H	5	32	1	2-A	4.200	3.870	3.440	
A05B3A	44628X	5	25	1	3-A	7.510	6.920	6.090	
A05B4A	44629R	5	20	1	4-A	9.850	9.080	7.980	
A12B1A	44618D	12	490	1	1-A	2.700	2.490	2.220	
A12B2A	44625F	12	184	1	2-A	4.200	3.870	3.440	
A24B1A	44626D	24	744	1	2-A	4.200	3.870	3.440	
A48B1A	44620E	48	7130	1	1-A	3.570	3.290	2.900	
MHMG852									
A05B1A	44616H	5	120	1	1-A	2.990	2.760	2.460	

**Hamlin S Series**



**GENERAL DESCRIPTION**

Single pole normally open mercury wetted relay in moulded plastic case designed for PCB mounting. Max. switching voltage 500 VDC, 350 VAC.

Schematics: refer to page 268

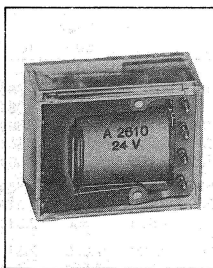
L35.2 W10.8 H11

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	1+	25+	50+
S1090-5V	76551C	5	77	2	1-A	3.050	2.260	2.160
S1090-12V	76552A	12	490	2	1-A	3.050	2.260	2.160
S1090-24V	76553X	24	1870	2	1-A	3.130	2.320	2.220
S1090-48V	76554H	48	7130	2	1-A	3.540	2.590	2.440

**LOW PROFILE**

**ITT PZ Series**



**GENERAL DESCRIPTION**

PCB mounting low profile general purpose DC relays, for low voltage control and switching. Max. switching voltage 100 VAC/DC.

**Dimensions**

P22	L29	W17.2	H15
P24	L29	W24.8	H15
P26	L30	W35.2	H20

Schematics: refer to page 269

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	1+	25+	100+	250+
PZ2A									
2400	18657X	6	60	1	2-C	3.830	3.240	2.790	2.510
2410	18658R	12	210	1	2-C	3.830	3.240	2.790	2.510
2412	18659G	18	500	1	2-C	3.830	3.240	2.790	2.510
2420	18660X	24	850	1	2-C	3.830	3.240	2.790	2.510
2425	44932F	24	850	1	2-C	5.360	4.530	3.900	3.510
2430	18661H	36	1600	1	2-C	3.830	3.240	2.790	2.510
2440	18662F	48	3000	1	2-C	3.830	3.240	2.790	2.510
2445	97117A	48	3000	1	2-C	5.360	4.530	3.900	3.510

(cont)

ITT PZ Series (cont)

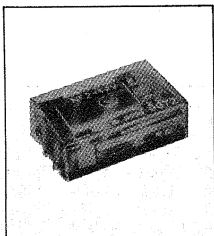
REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each					
PZ4A											
2600	14866B	12	210	1	4-C	PRICES ON APPLICATION					
2605	67942X	12	210	1	4-C						
2610	14867X	24	850	1	4-C						
2615	44826X	24	850	1	4-C						
2620	14868R	36	1600	1	4-C						
2630	14869G	48	3000	1	4-C						
2635	45474X	48	3000	1	4-C						
2640	14865D	6	40	1	4-C						
2650	44825A	60	4800	1	4-C						
PZ6A											
2800	14870X	6	66	1	6-C						
2810	14871H	12	270	1	6-C						
2815	44827H	12	270	1	6-C						
2820	14872F	24	900	1	6-C						
2825	44888D	24	900	1	6-C						
2840	14874B	48	3600	1	6-C						
PZ6FA low profile											
46400	70070A	6	55	1	6-C						
46410	70071X	12	210	1	6-C						
46420	70072H	24	870	1	6-C						
46440	70073F	48	3250	1	6-C						

Toplifts for the PZ relays should be purchased separately

Type No.	Stock No.	Description
PZ2A 2306	44927X	PZ2 LID
PZ4A 2506	44928R	PZ4 LID
PZ6A 2706	44929G	PZ6 LID

National NF and NFE Series



GENERAL DESCRIPTION

Standard 0.1" pitch PCB mounting. For Signal or power switching. Max. switching voltage 110VDC, 240VAC.

Dimensions

NF2/NF2E L29.6 W19.4 H10.4  
NF4/NF4E L29.6 W24 H10.4

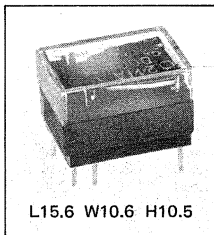
Schematics:refer to page 269

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each		
NF2-6V	30416X	6	137	2	2-C	2.480	2.090	1.920
NF2-12V	30417H	12	500	2	2-C	2.480	2.090	1.920
NF2-24V	30418F	24	2000	2	2-C	2.480	2.090	1.920
NF4-6V	30419D	6	90	2	4-C	3.220	2.870	2.620
NF4-12V	30420G	12	330	2	4-C	3.220	2.870	2.620
NF4-24V	30421E	24	1200	2	4-C	3.220	2.870	2.620
SEALED VERSION - NFE								
NF2E-12V	26033R	12	500	2	2-C	2.850	2.430	2.270
NF2E-24V	26034G	24	2000	2	2-C	2.850	2.430	2.270
NF4E-12V	26035E	12	330	2	4-C	3.600	3.220	3.010
NF4E-24V	26036C	24	1200	2	4-C	3.600	3.220	3.010

SUBMINIATURE

Fujitsu FBR 211 Series



GENERAL DESCRIPTION

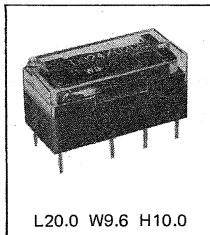
Ultra miniature P.C.B. mounting SPDT relay, designed to offer flux contamination immunity. Max. switching voltage 24VDC, 100 VAC. Sealed versions available on request.

Schematics:refer to page 269

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each		
FBR211								
AD006-M	20989A	6	80	1	1-C	0.970	0.770	0.700
AD012-M	45681G	12	320	1	1-C	0.970	0.770	0.700
AD024-M	20990D	24	1280	1	1-C	1.020	0.810	0.780
BD012-M	20987E	12	320	1	1-C	0.970	0.770	0.700
BD024-M	20988C	24	1280	1	1-C	1.020	0.830	0.780
CD012-M	20991B	12	700	1	1-C	1.080	0.860	0.800

Fujitsu FBR 244 Series



GENERAL DESCRIPTION

Dual in line relay suitable for printed circuit board mounting with 0.1" grid terminal pin spacing. Max. switching voltage 28 VDC, 100 VAC.

Schematics:refer to page 269

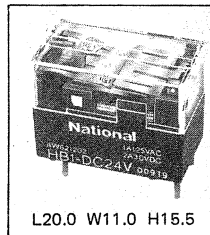
Note: This series carries Post Office Type 47 approval. Sealed versions available on request.

L20.0 W9.6 H10.0

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each		
FBR244								
D005-02CE	58408E	5	50	2	2-C	2.110	1.670	1.510
D012-02CE	58409C	12	290	2	2-C	2.110	1.670	1.510
D024-02CE	58410F	24	1150	2	2-C	2.210	1.760	1.590

National HB Series



GENERAL DESCRIPTION

PCB or Dual in-line socket mounting relay, with low operating power. Max. switching voltage 30 VDC, 125 VAC.

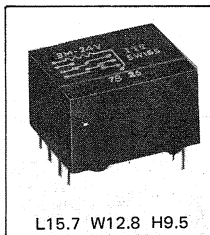
Schematics: refer to page 269

L20.0 W11.0 H15.5

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each		
HB1DC12V	26019E	12	400	2	1-C	1.120	0.970	0.850
HB1DC24V	26020H	24	1600	2	1-C	1.120	0.970	0.850
HB2DC12V	26021F	12	250	2	2-C	1.590	1.390	1.190
HB2DC24V	26022D	24	1000	2	2-C	1.590	1.390	1.190

ITT SM Series



GENERAL DESCRIPTION

PCB mounting, low power, short operate time relay, sealed construction, TTL compatible. Max. switching voltage 100 VDC.

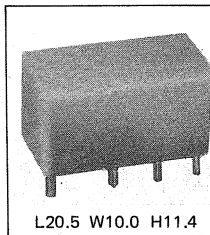
Schematics: refer to page 269

L15.7 W12.8 H9.5

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each					
SMD											
1005	69590F	5	135	0.5	2-C	PRICES ON APPLICATION					
1012	69591D	12	724	0.5	2-C						
1024	69592B	24	2760	0.5	2-C						
1048	69593X	48	11,100	0.5	2-C						
SMID											
1101	75121H	5	148	0.5	1-C						
1102	75122F	12	852	0.5	1-C						
1103	75123D	24	3350	0.5	1-C						
1104	75124B	48	13,830	0.5	1-C						

STC 47 Series



GENERAL DESCRIPTION

Dual in line two changeover relay for all switching and control applications from low level up to 30W. Suitable for direct pcb mounting. Flux resistant. Max. switching voltage 150VDC.

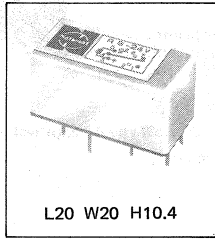
Note: This series carries Post Office Type 47 approval. Schematics: refer to page 269

L20.5 W10.0 H11.4

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each		
47/5	02365R	5	36	1.25	2-C	1.930	1.700	1.360
47/6	02366G	12	280	1.25	2-C	1.930	1.700	1.360
47/7	02367E	24	1050	1.25	2-C	1.930	1.700	1.360
47/8	02368C	48	4000	1.25	2-C	1.930	1.700	1.360

**National RS Series**



L20 W20 H10.4

**GENERAL DESCRIPTION**

Polarised Reed Relays with single side stable SPDT or bistable (latching) SPDT contacts operated by a single or double wound coil. Max. switching voltage 30 VDC, 110 VAC.

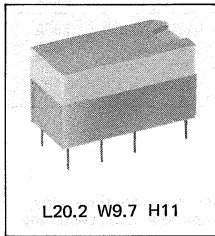
Schematics: refer to page 269

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	25+	250+
<b>SINGLE SIDE STABLE (RS)</b>								
RS5	30446R	5	170	1.0	1-C	3.910	2.850	2.620
RS6	16630X	6	220	1.0	1-C	3.910	2.850	2.620
RS12	16631H	12	890	1.0	1-C	3.910	2.850	2.620
RS24	16632F	24	2000	1.0	1-C	4.200	3.060	2.840
<b>1 COIL BISTABLE (LATCHING) (RSL)</b>								
RSL6	30347D	6	450	1.0	1-C	4.200	3.060	2.840
RSL12	30348B	12	1500	1.0	1-C	4.380	3.170	2.910
RSL24	30349X	24	6000	1.0	1-C	5.790	4.220	3.860
<b>2 COIL BISTABLE (LATCHING) (RSL2)</b>								
RSL2-6	30350C	6	225†	1.0	1-C	4.870	3.550	3.230
RSL2-12	30351A	12	650†	1.0	1-C	5.050	3.680	3.380
RSL2-24	30352X	24	2700†	1.0	1-C	6.520	4.740	4.310
<b>SOCKET FOR PCB WITH RETAINING CLIP</b>								
RPS	44439X					0.840	0.620	0.500

† for each coil

**Pye 21 Series**



L20.2 W9.7 H11

**GENERAL DESCRIPTION**

Dual in-line relay suitable for printed circuit mounting or with a D.I.P. socket. Flux resistant. Max. switching voltage 150 VDC.

Schematics: refer to page 269

Note. This series carries Post Office Type 47 approval.

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	10+	50+
<b>21-730-231</b>								
-460	75382X	5	36	1.25	2-C	1.970	1.560	1.490
-620	75383H	12	280	1.25	2-C	1.970	1.560	1.490
-740	75384F	24	1050	1.25	2-C	1.970	1.560	1.490

**National S Series**



L28 W12 H10.1

**GENERAL DESCRIPTION**

Miniature polarised card relay, with single side stable (neutral) or bi-stable double coil forms, bifurcated contacts, PC mounting. Sealed construction. Max. switching voltage 25 VDC, 250 VAC.

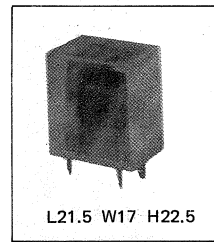
Schematics: refer to page 269

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	25+	100+
S2-12V	26027E	12	720	5	2-A+2-B	4.690	3.800	3.260
S2-24V	26028C	24	2850	5	2-A+2-B	5.160	4.190	3.590
S2L2-12V	26031B	12	720	5	2-A+2-B	5.380	4.360	3.740
S2L2-24V	26032X	24	2850	5	2-A+2-B	6.920	5.600	4.800

**MINIATURE PCB**

**Fujitsu FBR111 Series**



L21.5 W17 H22.5

**GENERAL DESCRIPTION**

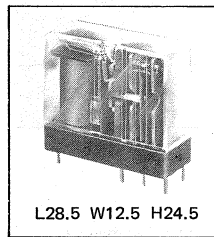
SPDT relays designed for PCB mounting, with exceptionally low power dissipation. Max. switching voltage 24 VDC, 100 VAC.

Schematics: refer to page 269

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each			
						1+	25+	100+	250+
<b>FBR111</b>									
CD012	20985R	12	400	3	1-C	1.070	0.860	0.810	0.770
CD024	20986G	24	1600	3	1-C	1.100	0.900	0.830	0.800

**Fujitsu FBR 600 Power Series**



L28.5 W12.5 H24.5

**GENERAL DESCRIPTION**

PCB mounting high power relays with a switching capability of 10A. Max. switching voltage 30 VDC, 240 VAC.

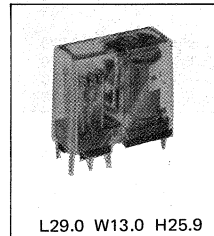
Schematics: refer to page 269

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each			
						1+	25+	100+	250+
<b>FBR611</b>									
D006	25915A	6	72	10	1-C	1.730	1.400	1.300	1.230
D012	25916X	12	285	10	1-C	1.730	1.400	1.300	1.230
D024	25917H	24	1150	10	1-C	1.800	1.480	1.370	1.300
D048	25918F	48	4600	10	1-C	1.850	1.640	1.570	1.440
<b>FBR621</b>									
D006	25919D	6	72	5	2-C	2.080	1.780	1.560	1.390
D012	25920G	12	285	5	2-C	2.080	1.780	1.560	1.390
D024	25921E	24	1150	5	2-C	2.160	1.860	1.630	1.450
D048	25922C	48	4600	5	2-C	2.370	2.130	1.850	1.700

Sealed versions available on request.

**Pye 26 & 65 Series**



L29.0 W13.0 H25.9

**GENERAL DESCRIPTION**

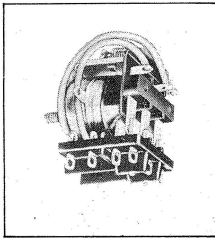
General purpose single-pole or double-pole changeover relays. Max. switching voltage 30 VDC, 250 VAC.

Schematics: refer to page 269

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	10+	100+
<b>65-740</b>								
132-560	75377D	6	43	5	1-C	1.630	1.300	1.090
132-620	75378B	12	205	5	1-C	1.630	1.300	1.090
132-740	75379X	24	740	5	1-C	1.630	1.300	1.090
<b>26-750</b>								
232-620	75380C	12	170	5	2-C	1.830	1.570	1.210
232-740	75381A	24	740	5	2-C	1.830	1.570	1.210

**Potter and Brumfield KA and KAP Series**



**GENERAL DESCRIPTION**

Miniature industrial relays in open or enclosed form. KA = Open, KAP = Enclosed. Max. switching voltage 28 VDC, 240 VAC.

**Dimensions**

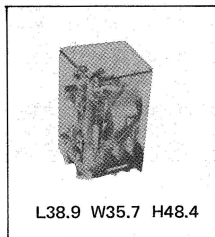
KAP L34.9 W37.3 H16.9  
KAP L35.7 W38.9 H57.9

Schematics: refer to page 269

**REFERENCE TABLE**

Type No.	Stock No.	Nom V	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	10+	50+
<b>KA11</b>								
AG	27935E	240AC	9110	10	2-C	5.360	5.000	4.640
DG	27941R	12DC	120	10	2-C	4.700	4.380	4.070
DY	27937A	12DC	120	5	2-C	4.430	4.150	3.840
<b>KAP11</b>								
AG	27969G	24AC	75	10	2-C	5.450	5.080	4.720
AG	27971H	240AC	9110	10	2-C	5.620	5.230	4.870
AY	27965D	120AC	2250	5	2-C	5.360	5.000	4.640
DG	27896R	12DC	120	10	2-C	5.380	5.030	4.670
DG	27897G	24DC	472	10	2-C	5.380	5.030	4.670
DY	27973D	12DC	120	5	2-C	5.290	4.930	4.590
DY	27974B	24DC	472	5	2-C	5.290	4.930	4.590
<b>KA14</b>								
AG	27953A	240AC	9110	10	3-C	6.440	6.010	5.570
<b>KAP14</b>								
AG	27906D	24AC	75	10	3-C	6.660	6.220	5.770
AG	27907B	120AC	2250	10	3-C	6.660	6.220	5.770
AG	27908X	240AC	9110	10	3-C	6.830	6.380	5.920
AY	27902A	120AC	2250	5	3-C	6.580	6.140	5.700
AY	27903X	240AC	9110	5	3-C	6.830	6.380	5.920
DG	27914D	12DC	120	10	3-C	6.830	6.380	5.920
DG	27915B	24DC	472	10	3-C	4.470	4.330	4.190
DY	27911X	24DC	472	5	3-C	6.510	6.070	5.640

**Potter and Brumfield KU & KUP Series**



**GENERAL DESCRIPTION**

The KU series is a basic open relay while the KUP series are plug-in relays with plain or bracket mountings. Max. switching voltage 28 VDC, 240 VAC.

Schematics: refer to page 270

L38.9 W35.7 H48.4

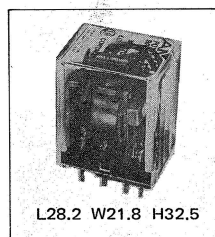
**REFERENCE TABLE**

Type No.	Stock No.	Nom. V	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	10+	50+
<b>KUP14</b>								
A-55	27894B	240AC	7200	10	3-C	4.620	4.310	4.000
D-15	27889G	12DC	120	10	3-C	4.370	4.080	3.790
D-15	27890X	24DC	472	10	3-C	4.370	4.080	3.790

**SOCKETS**

Type No.	Stock No.	Description	Prices £ each		
			1+	25+	50+
20C228	19766G	Hold down spring	0.240	0.210	0.200
27E043	16842H	Solder term base	1.010	0.940	0.870
27E046	16841X	PCB mounted base	1.210	1.110	1.040

**Potter and Brumfield KHU Series**



**GENERAL DESCRIPTION**

Plug in stud mounting industrial relay. Max. switching voltage 30 VDC 120 VAC.

Schematics: refer to page 270

L28.2 W21.8 H32.5

**Potter and Brumfield KHU Series (cont)**

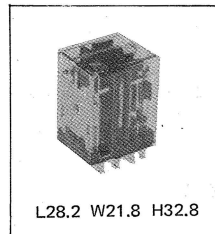
**REFERENCE TABLE**

Type No.	Stock No.	Nom. V	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	10+	50+
<b>KHU</b>								
17A11W	27917R	24AC	160	3	4-C	5.500	5.130	4.770
17A11W	27918G	120AC	3900	3	4-C	5.500	5.130	4.770
17D11W	27920H	12DC	160	3	4-C	4.700	4.380	4.070
17D11W	27921F	24DC	650	3	4-C	4.700	4.380	4.070
17D12W	27924X	24DC	650	3	4-C	4.700	4.380	4.070

**SOCKETS**

Type No.	Stock No.	Description	Prices £ each		
			1+	25+	50+
27E006/24A032	16837B	Solder socket	0.810	0.750	0.700
27E007	16838X	PC socket	0.830	0.770	0.730
20C217	16839R	Hold down spring	0.170	0.160	0.150

**Fujitsu FRL 260 Series**



**GENERAL DESCRIPTION**

Available with PCB terminations (264) or solder/plug in (263). Max. switching voltage 30 VDC, 120 VAC, (4C) 30 VDC, 240 VAC (2C).

Schematics: refer to page 270

L28.2 W21.8 H32.8

**REFERENCE TABLE**

Type No.	Stock No.	Nom. V	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	25+	100+
<b>FRL263</b>								
A024-02CV	20999H	24 AC		5	2-C	2.260	1.780	1.620
A024-04CS	20994G	24 AC		3	4-C	2.320	1.840	1.670
A120-02CV	21000H	120 AC		5	2-C	2.350	1.890	1.730
A120-04CS	20995E	120 AC		3	4-C	2.430	1.940	1.780
A240-02CV	21001F	240 AC		5	2-C	2.880	2.310	2.100
A240-04CS	20996C	240 AC		3	4-C	2.970	2.380	2.160
D012-02CV	20997A	12	160	5	2-C	2.260	1.780	1.620
D012-04CS	20992X	12	160	3	4-C	2.320	1.840	1.670
D024-02CV	20998X	24	650	5	2-C	2.260	1.780	1.623
D024-04CS	20993R	24	650	3	4-C	2.320	1.840	1.670
<b>FLR264</b>								
D012-02CV	21004X	12	160	5	2-C	2.260	1.780	1.620
D012-04CS	21002D	12	160	3	4-C	2.320	1.840	1.670
D024-02CV	21005R	24	650	5	2-C	2.260	1.780	1.620
D024-04CS	21003B	24	650	3	4-C	2.320	1.840	1.670

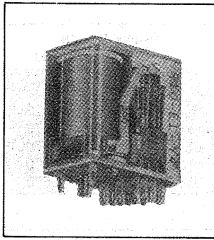
**SOCKETS**

Type No.	Stock No.	Relay Type	Prices £ each		
			1+	25+	50+
263 H204-S (solder)	21006G	04CS	0.450	0.430	0.420
263 H222-S (solder)	21007E	02CS	0.410	0.390	0.370
263 P204-PC	21008C	04CS	0.450	0.430	0.420
263 P222-PC	21009A	02CS	0.410	0.390	0.370

Note: A hold down spring is attached to each socket underneath.

**★ ★ PERSONAL CONTACT ★ ★**  
**FIELD SALES ...**  
Our Field Sales personnel cover the whole of the UK and The Republic of Ireland. Contact us and your local Sales Engineer will call.

Potter & Brumfield R10 Series



GENERAL DESCRIPTION

Standard medium duty relays interchangeable with other British and continental types. Max. switching voltage 28 VDC, 115 VAC.

Dimensions

2-C L24 W19 H30  
4-C L30 W19 H30

Schematics: refer to page 270

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC.	Coil Ω	Contact Amps	Contact Form	Prices £ each		
						1+	10+	50+
<b>R10-E1</b>								
-Y2-V185	28323A	12	185	3	2-C	2.270	1.890	1.760
-Y2-V700	28324X	24	700	3	2-C	2.270	1.890	1.760
-Y4-V700	28327D	24	700	3	4-C	2.690	2.250	2.090

STC 24/25 Series



GENERAL DESCRIPTION

Commercial medium duty cradle or continental relays. Fully interchangeable with other British and continental types.

Max Switching Voltage

1 AMP - 110 VAC/DC (100VA)  
5 AMP - 250 VAC/DC (250VA)

Schematics: refer to page 270

L24 W19 H30

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each		
						1+	10+	25+
<b>24A02C</b>								
11A	01983F	6	90	1	2-C	3.870	3.000	2.900
14A	01984D	12	185	1	2-C	3.870	3.000	2.900
18A	69652X	12	430	1	2-C	3.870	3.000	2.900
20A	69627A	24	700	1	2-C	3.870	3.000	2.900
22A	01985B	36	1250	1	2-C	3.870	3.000	2.900
24A	97170D	48	2500	1	2-C	3.870	3.000	2.900
26A	02028X	72	5800	1	2-C	3.870	3.000	2.900
<b>24D02C</b>								
09A	30819E	6	52	5	2-C	4.230	3.830	3.140
14A	30820H	12	185	5	2-C	4.230	3.830	3.140
20A	30821F	24	700	5	2-C	4.230	3.830	3.140
24A	30822D	48	2500	5	2-C	4.230	3.830	3.140
14A	69628X	12	185	5	2-C	8.590	6.340	5.840
<b>25A04C</b>								
14A	01978X	12	185	1	4-C	5.030	3.710	3.420
18A	67940D	12	430	1	4-C	5.030	3.710	3.420
20A	01979R	24	700	1	4-C	5.030	3.710	3.420
24A	02030X	48	2500	1	4-C	5.030	3.710	3.420
<b>25D02C</b>								
14A	69628X	12	185	5	2-C	8.590	6.340	5.840
20A	01982H	24	700	5	2-C	8.590	6.340	5.840
<b>25D04C</b>								
09A	44568C	6	52	5	4-C	5.310	3.920	3.620
14A	44567E	12	185	5	4-C	5.310	3.920	3.620
20A	44566G	24	700	5	4-C	5.310	3.920	3.620
24A	30818G	48	2500	5	4-C	5.310	3.920	3.620
Also available but with non-preferred coils								
250 KAC	30816X	12	130	5	4-C	5.310	3.920	3.620
250 KAD	30817R	24	600	5	4-C	5.310	3.920	3.620

CLIPS

Type No.	Stock No.	Description	Prices £ each
LP165889	03509D	Retainer for type 24	0.070
LP165888	03508F	Retainer for type 25	0.070
LP165875	12937C	Earthing clip	0.070

SOCKETS

New Code	Old Code	Stock No.	Description	Prices £ each			
				1+	10+	25+	250+
F010	500 AAC	01974H	For type 24 Solder	1.000	0.890	0.800	0.710
F016	500 ABC	01969B	For type 25 Solder	1.060	0.960	0.890	0.790
FR10	500 AAO	07855C	For type 24 PCB	1.000	0.890	0.800	0.710
FR16	500 ABO	07854E	For type 25 PCB	1.060	0.960	0.890	0.770

STC Type 23 Post Office Series

REFERENCE TABLE

BPO Code	Stock No.	Prices £ each			
		1+	25+	50+	100+
23/1 PW	44907H	4.760	3.820	3.330	3.190
23/2	44892A	6.460	5.030	4.660	4.220
23/7	44895F	4.760	3.820	3.330	3.190
23/7 PW	44913A	4.760	3.820	3.330	3.190
23/9	44897B	4.760	3.820	3.330	3.190
23/10	44898X	6.460	5.030	4.660	4.220
23/10 PW	44915H	6.460	5.030	4.660	4.220
23/12 PW	44917D	4.760	3.820	3.330	3.190
23/16	44901R	6.460	5.030	4.660	4.220
23/16 PW	44919X	6.460	5.030	4.660	4.220
23/18 PW	44920C	4.760	3.820	3.330	3.190
23/20 PW	44922X	4.760	3.820	3.330	3.190

Pye 30 Series



GENERAL DESCRIPTION

Up to 6 changeover contacts interchangeable with other similar British and Continental types.

Max. switching voltage 110V AC/DC.

Schematics: refer to page 270

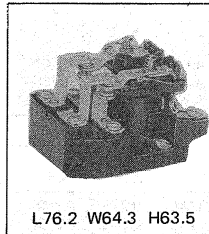
L30 W19 H30

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Contact Form	Prices £ each		
						1+	10+	50+
<b>30-642</b>								
-252-564	75364C	6	52	1	2-C	2.510	2.010	1.810
-252-624	75365A	12	185	1	2-C	2.510	2.010	1.810
-252-774	75366X	27	700	1	2-C	2.510	2.010	1.810
<b>30-644</b>								
-255-564	75367H	6	52	3	2-C	2.920	2.330	2.100
-255-624	75368F	12	185	3	2-C	2.920	2.330	2.100
-255-774	75369D	27	700	3	2-C	2.920	2.330	2.100
-452-564	75370G	6	52	1	4-C	3.010	2.470	2.220
-452-624	75371E	12	185	1	4-C	3.010	2.470	2.220
-452-774	75372C	27	700	1	4-C	3.010	2.470	2.220
-452-884	75373A	48	2500	1	4-C	3.010	2.470	2.220
<b>30-646</b>								
-652-624	75374X	12	185	1	6-C	4.330	3.470	3.120
-652-774	75375H	27	700	1	6-C	4.330	3.470	3.120
-652-884	75376F	48	2500	1	6-C	4.330	3.470	3.120

POWER

Potter & Brumfield PRD Series



GENERAL DESCRIPTION

Heavy duty AC or DC 25 amp, power relays. Max. switching voltage 30 VDC, 240 VAC.

Screw terminal connections.

Schematics: refer to page 270

L76.2 W64.3 H63.5

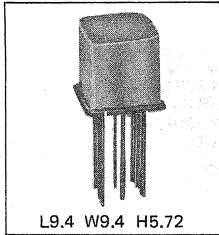
REFERENCE TABLE

Type No.	Stock No.	Nom. V	Coil Ω	Contact Amps	Contact Form	Prices £ each				
						1+	10+	25+	100+	
<b>PRD</b>										
11DY0	27860X	24DC	288	25	2-C	7.450	7.360	7.270	7.190	

★ ★ TECHNICAL ADVICE ★ ★

Our team of Technical Field Sales Specialists will visit and offer the best advice.

**Teledyne 172 Series**



**GENERAL DESCRIPTION**

Ultraminiature, hermetically sealed centrigrid relay for commercial applications. Max. switching voltage 28 VDC.

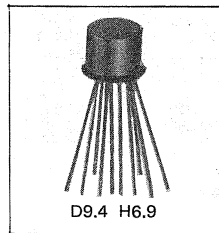
Schematics: refer to Page 270

L9.4 W9.4 H5.72

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	50+	100+
172-5	77288G	5	62	1	2-C	10.290	9.260	8.890
172-12	77289E	12	400	1	2-C	10.290	9.260	8.890
172-26	77290H	26.5	1600	1	2-C	10.290	9.260	8.890

**Teledyne 712 Series**



**GENERAL DESCRIPTION**

All welded construction hermetically sealed. Excellent R.F. performance. Max. switching voltage 28 VDC.

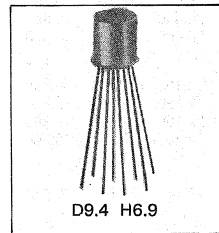
Schematics: refer to Page 270

D9.4 H6.9

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	50+	100+
712-5	20318B	5	50	1	2-C	13.360	12.480	11.600
712-6	20319X	6	98	1	2-C	13.360	12.480	11.600
712-12	20320C	12	390	1	2-C	13.360	12.480	11.600
712-18	20321A	18	880	1	2-C	13.360	12.480	11.600
712-26	20322X	26.5	1560	1	2-C	13.360	12.480	11.600
712D-12	20323H	12	390	1	2-C	15.030	14.090	13.360
712D-26	20324F	26.5	1560	1	2-C	15.030	14.090	13.360
712TN-5	20325D	5	50	1	2-C	17.580	16.430	15.180
712TN-12	71917X	12	390	1	2-C	17.580	16.430	15.180

**Teledyne 722 Series**



**GENERAL DESCRIPTION**

Magnetic latching relay, with effective "Memory" capability, not resetting on removal of power. Max. switching voltage 28 VDC.

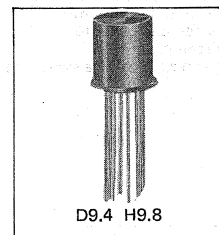
Schematics: refer to Page 270

D9.4 H6.9

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	50+	100+
722-5	20326B	5	61	1	2-C	20.540	18.410	17.260
722-12	20327X	12	500	1	2-C	20.540	18.410	17.260

**Teledyne 732 Series**



**GENERAL DESCRIPTION**

Subminiature, welded construction with excellent R.F. switching. Max. switching voltage 28 VDC.

Schematics: refer to Page 270

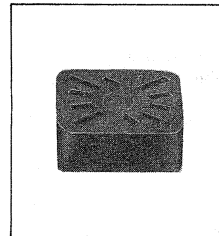
D9.4 H9.8

**Teledyne 732 Series (cont)**

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	50+	100+
732-5	20328R	5	100	1	2-C	14.300	13.310	12.380
732-1000	20329G	12	940	1	2-C	14.300	13.310	12.380
732-5	20330X	5	100	1	2-C	15.910	14.660	13.660
732-6	20331H	6	200	1	2-C	15.910	14.660	13.660
732D-9	20332F	9	400	1	2-C	15.910	14.660	13.660
732D-12	20333D	12	850	1	2-C	15.910	14.660	13.660
732D-26	20334B	26.5	3300	1	2-C	15.910	14.660	13.660
732D-1000	20335X	12	940	1	2-C	15.910	14.660	13.660

**Teledyne TO5 Spreader Pads**



**GENERAL DESCRIPTION**

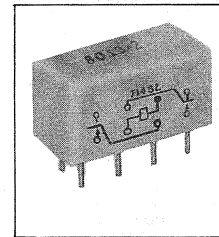
Spread and preform leads to grid patterns compatible with printed circuit board layouts and DIP sockets with minimum additional profile height.

**REFERENCE TABLE**

Type No.	Stock No.	Description	Prices £ each
			1+
192-10	20316F	Spreads leads to 0.2" x 0.3" at 0.1" spacing. For use with all TO-5 except 411, 424A and 431 (including D and DD versions)	0.410
192-59	20317D	Spreads leads to 0.3" x 0.3" at 0.1" spacing. For use with 412, 421 and 432 (including D and DD versions), 712 and 732 (including D versions) and 411T, 431T.	0.410

**MILITARY/PROFESSIONAL**

**C. I. I. HFW Crystal Can Series**



**GENERAL DESCRIPTION**

Half crystal can. High performance relays for severe environmental and military applications. Manufactured by CII (U.S.A.). Max. switching voltage 28 VDC, 115VAC. Manufactured to MIL-R-39016/6

**Dimensions**

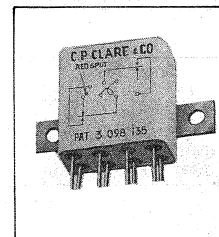
Plain Case L20.5 W10.4 H10.4  
Ear Bracket L33.5 (Overall)  
L27.3 (Holecentres)  
W10.4 H10.4

Schematics: refer to Page 270

**REFERENCE TABLE**

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	25+	50+
HFW								
1201B00	23373F	12	320	2	2-C	14.940	13.920	12.220
1201D00	23360E	26.5	1250	2	2-C	14.940	13.920	12.220
1201K00	23361C	26.5	700	2	2-C	14.940	13.920	12.220
1230A00	23374D	6	60	2	2-C	14.940	13.920	12.220
1230B00	23362A	12	320	2	2-C	14.940	13.920	12.220
1230D00	23363X	26.5	1250	2	2-C	14.940	13.920	12.220

**C. I. I. F. W. Series**



**GENERAL DESCRIPTION**

Full crystal can. High performance relays for severe environmental and military applications. Max. switching voltage 28 VDC, 115 VAC. Manufactured to MIL-R-5757/10

**Dimensions**

Plain Case L20.3 W10.1 H22.8  
Side Plate L33.7 (Overall)  
L27 (Hole Centres)  
W10.9 H22.8  
Ear Bracket L33.5 (Overall)  
L27.3 (Holecentres)  
W10.1 H22.8

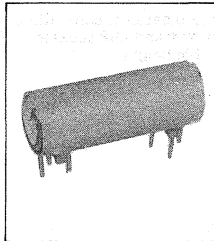
Schematics: refer to Page 270

C. I. I. F. W. Series (cont)

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	25+	50+
FW								
1105G00	23364H	26.5	675	2	2-C	14.940	13.920	12.220
1201G00	23368X	26.5	675	2	2-C	14.940	13.920	12.220
1205A00	23369R	6.3	35	2	2-C	14.940	13.920	12.220
1205D00	23370A	12.6	200	2	2-C	14.940	13.920	12.220
1205G00	23365F	26.5	675	2	2-C	14.940	13.920	12.220
1311G00	23375B	26.5	675	2	2-C	14.940	13.920	12.220
1105D00	71286H	12.6	200	2	2-C	14.940	13.920	12.220

STC 101, 102 & 211 Diaphragm Series



GENERAL DESCRIPTION

Hermetically sealed in an inert atmosphere. High resistance to shock and vibration. Max. switching voltage 150 VDC.

Dimensions

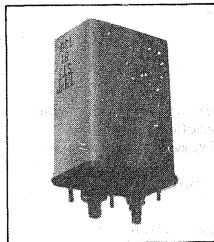
101	L18	W11	H12
102	L29.5	W11	H12
211	L26.4	W12.5	H12

Schematics: refer to Page 270

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	10+	25+
SINGLE MAKE								
101AAH	15270R	12	370	0.5	1-A	22.930	20.480	18.490
102AAH	15271G	12	180	0.5	2-A	34.040	30.400	27.450
101AAM	15272E	24	2000	0.5	1-A	22.930	20.480	18.490
102AAM	15273C	24	860	0.5	2-A	34.040	30.400	27.450
CHANGEOVER								
211EAH	31517F	12	370	0.5	1-C	32.450	28.970	26.170
211EAM	31518D	24	1500	0.5	1-C	32.450	28.970	26.170

STC 4190 & 4193 Series



GENERAL DESCRIPTION

Suitable for operation in an explosive atmosphere fully tropicalised. The 4193 type has two sets of changeover contacts and is a sensitive version of the 4190.

Dimensions

4190	L27	W19	H40
4193	L27	W19	H55

Schematics: refer to Page 270

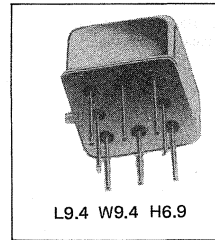
REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	10+	100+
4190								
GC	01990HM	12	170	2	2-C	32.150	29.220	27.250
GD	01991FM	24	700	2	2-C	32.150	29.220	27.250
GE	07894XM	48	2500	2	2-C	32.150	29.220	27.250
ED	01997EM	24	700	10	1-A	32.150	29.220	27.250
EE	07896GM	48	2500	10	1-A	32.150	29.220	27.250
EB	01995RM	6	45	10	1-A	32.150	29.220	27.250
EC	01996GM	12	170	10	1-A	32.150	29.220	27.250
HC	01999AM	12	170	3	2-C	32.150	29.220	27.250
HD	02000AM	24	700	3	2-C	32.150	29.220	27.250
HE	07897EM	48	2500	3	2-C	32.150	29.220	27.250
4193								
BB	02002HM	33	6800	1	2-C	49.040	44.580	41.570
AA	02001XM	28	6800	1	2-C	49.040	44.580	41.570

SOCKETS AND CLIPS

Type No.	Stock No.	Description	Prices £ each		
			1+	10+	100+
LP736720	01971C	Socket	1.660		
LP736546	02025E	Retaining Clip	0.590	0.540	0.430
LP733614	01972A	Retaining Clip	0.410	0.390	0.380
LP733615	01973X	Retaining Clip Plate	0.390	0.380	0.370

Teledyne Centigrad 114 and 132 Series



GENERAL DESCRIPTION

Subminiature hermetically sealed all welded construction with gold plated contacts. 114 series qualified to MIL-R-39016/17 114D series qualified to MIL-R-39016/18 132 series qualified to MIL-R-39016/41 Max. switching voltage 28 VDC.

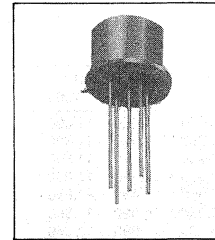
Schematics: refer to Page 270

L9.4 W9.4 H6.9

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	25+	50+
J114								
5WL	20299RT	5	50	1	2-C	21.420	20.800	18.660
2WL	20300XT	12	390	1	2-C	21.420	20.800	18.660
26WL	20301RT	26.5	1560	1	2-C	21.420	20.800	18.660
J114D								
5WL	20302GT	5	39	1	2-C	23.920	22.880	21.470
12WL	20303ET	12	390	1	2-C	23.920	22.880	21.470
26WL	20304CT	26.5	1560	1	2-C	23.920	22.880	21.470
J132								
12WL	20306XT	12	800	1	2-C	24.850	23.080	21.940
26WL	20307HT	26.5	3200	1	2-C	24.850	23.080	21.940

Teledyne TO5 411, 412 and 422 Series



GENERAL DESCRIPTION

Subminiature, all welded construction with excellent R.F. switching. 411 series qualified to MIL-R-39016/7 412 series qualified to MIL-R-39016/9 422 series qualified to MIL-R-39016/12 (Magnetically latching) Max. switching voltage 28 VDC.

Dimensions

411/412	D9.4	H6.7
422	D9.4	H6.9

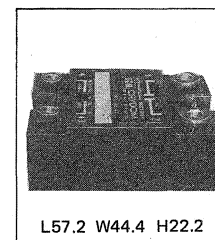
Schematics: refer to Page 270

REFERENCE TABLE

Type No.	Stock No.	Nom. VDC	Coil Ω	Contact Amps	Form	Prices £ each		
						1+	25+	50+
J411								
12WL	20308FT	12	500	1	1-C	24.490	22.100	19.860
18WL	20309DT	18	1130	1	1-C	24.490	22.100	19.860
26WL	20310GT	26.5	2000	1	1-C	24.490	22.100	19.860
J412								
5WL	20311ET	5	50	1	2-C	22.100	22.100	19.860
12WL	20312CT	12	390	1	2-C	22.100	22.100	19.860
18WL	20313AT	18	880	1	2-C	22.100	22.100	19.860
26WL	20314XT	26.5	1560	1	2-C	22.100	22.100	19.860
J412D								
5WL	71287FT	5	50	1	2-C	23.140	23.140	20.750
J422								
26WL	20315HT	26.5	2000	1	2-C	38.270	36.340	34.470

SOLID STATE

International Rectifier Type T Series **NEW**



GENERAL DESCRIPTION

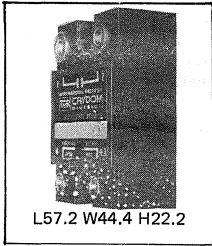
Solid state relay in the industry standard package, can operate directly from low level digital signals thus forming a direct interface between computer logic level outputs and AC load switching. Incorporates optical isolation and zero-voltage switching.

L57.2 W44.4 H22.2

REFERENCE TABLE

Type No.	Stock No.	Input Voltage	Output Voltage	Amps	Prices £ each			
					1+	10+	25+	50+
TD2410	09777X	±32DC	40-280AC	10	15.140	13.640	11.660	9.890
TD2425	09778R	±32DC	40-280AC	25	16.710	15.050	12.870	10.910

**International Rectifier Type 1 Series**



**GENERAL DESCRIPTION**

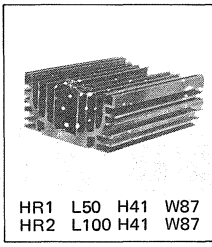
Solid state relays offering optical isolation of control signal and zero voltage switching.

L57.2 W44.4 H22.2

**REFERENCE TABLE**

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each			
					1+	10+	25+	50+
A1202	36783X	90-280AC	120AC	2.5	15.340	13.820	11.810	10.020
A1225	36785G	90-280AC	120AC	25				
A1240	36786E	90-280AC	120AC	40	21.530	19.390	16.580	14.060
A2410	31806X	90-280AC	240AC	10	18.160	16.360	13.990	11.860
A2425	31807H	90-280AC	240AC	25	19.910	17.940	15.340	13.010
D1225	36758B	3-32DC	120AC	25	18.300	16.480	14.090	11.950
D1240	36759X	3-32DC	120AC	40	20.180	18.180	15.550	13.180
D2402	31808F	3-32DC	240AC	2.5	14.130	12.730	10.880	9.230
D2410	31809D	3-32DC	240AC	10	16.820	15.150	12.950	10.980
D2425	31810G	3-32DC	240AC	25	18.570	16.730	14.300	12.130
D2440	33230D	3-32DC	240AC	40	21.730	19.580	16.740	14.190
D4825	09767D	3-32DC	80-530AC	25	32.020	28.850	24.670	20.920

**International Rectifier Heatsink Type HR NEW**



**GENERAL DESCRIPTION**

Designed to directly accept the I.R. type T and type 1 series solid state relays. No machining or hole-drilling is necessary as mounting holes are provided.

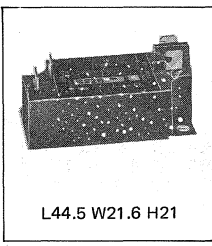
Note:- apply thermally conductive silicone grease between relay and heatsink.

HR1 L50 H41 W87  
HR2 L100 H41 W87

**REFERENCE TABLE**

Type No.	Stock No.	Length (mm)	Prices £ each	
			1+	10+
HR1	36767X	50	3.110	2.330
HR2	36768R	100	5.900	4.430

**International Rectifier Type 2 Series**



**GENERAL DESCRIPTION**

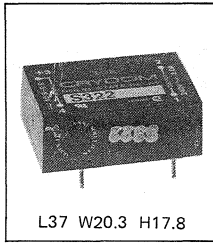
A surface mounting triac output solid state relay with standard push on connections designed to provide maximum tracking distances between control and load circuits.

L44.5 W21.6 H21

**REFERENCE TABLE**

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each			
					1+	10+	25+	50+
S228	36876A	±8 DC	40-280V	8	16.010	14.420	12.330	10.460

**International Rectifier Type 3 Series**



**GENERAL DESCRIPTION**

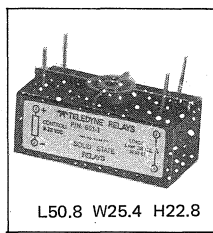
Low profile PCB mounting solid state relay with optical isolation of control signal and zero voltage switching.

L37 W20.3 H17.8

**REFERENCE TABLE**

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each			
					1+	10+	25+	50+
S322	36878H	±8 DC	40-280V	2	10.020	9.030	7.720	6.550

**Teledyne 601 Series**



**GENERAL DESCRIPTION**

AC relays featuring LED optical isolation and synchronous zero voltage turn on.

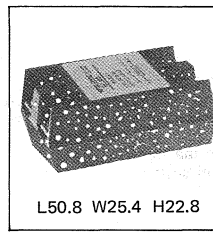
601 - 1 Pcb  
601 - 2 Screw Terminal

L50.8 W25.4 H22.8

**REFERENCE TABLE**

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each			
					1+	25+	50+	100+
601-1	20338E	3-32 DC	250	5	19.340	17.470	15.650	14.150
601-2	20339C	3-32 DC	250	10	22.460	20.230	18.150	16.430

**Teledyne 603 Series**



**GENERAL DESCRIPTION**

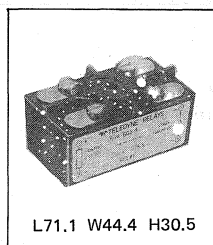
Available in either optically isolated (603-2) or transformer isolated form, (603-4). Screw type terminations.

L50.8 W25.4 H22.8

**REFERENCE TABLE**

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each			
					1+	25+	50+	100+
603-2	20340F	3-32 DC	50 DC	5	26.420	24.820	21.480	19.290
603-4	20341D	10-32 DC	250 DC	5	36.500	33.120	29.590	26.620

**Teledyne 613 Series**



**GENERAL DESCRIPTION**

High current relays designed for switching loads up to 20 amps. at 50°C and below. Derating to 10 amps. at 100°C (when mounted on a 1°C/Watt heat sink or heat sinking panel or chassis). Screw terminations.

L71.1 W44.4 H30.5

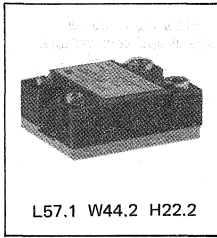
**REFERENCE TABLE**

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each			
					1+	25+	50+	100+
613-1	20343X	4-10 DC	50 DC	20	32.340	29.070	26.210	23.610
613-2	20344R	10-32 DC	50 DC	20	32.340	29.070	26.210	23.610

**★ ★ TRADING ACCOUNTS ★ ★**

We will open your Credit Account immediately on receipt of your first order.

Teledyne 615 Series



GENERAL DESCRIPTION

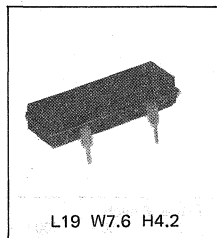
Optically isolated with built-in snubber protection guaranteeing high immunity from false triggering and reliable switching of low power factor loads. Screw terminations.

L57.1 W44.2 H22.2

REFERENCE TABLE

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each			
					1+	25+	50+	100+
615-2	20345G	3-32DC	250AC	10	16.640	15.240	14.040	12.900
615-2H	20346E	3-32DC	250AC	10	17.680	16.220	14.920	13.780
615-4	20347C	3-32DC	250AC	25	17.680	16.220	14.920	13.780
615-4H	20348A	3-32DC	250AC	25	20.020	18.620	16.950	15.600
615-6	20349X	3-32DC	250AC	40	23.090	21.220	19.550	18.040

Teledyne 640 Series



GENERAL DESCRIPTION

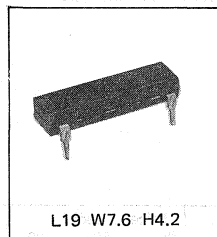
Serendip transformer isolated relays. Switching capability up to 50V.

L19 W7.6 H4.2

REFERENCE TABLE

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each			
					1+	25+	50+	100+
640-1	20350B	3.8-10 DC	50	0.8	10.760	9.830	8.960	8.370

Teledyne 641 Series



GENERAL DESCRIPTION

Serendip transformer isolated relays with triac output rated at 0.5 amp up to 50°C ambient without a heat-sink. The addition of a heat sink raises the output rating to 1 amp. Moulded in the standard TO-116 package with PCB type terminations.

L19 W7.6 H4.2

REFERENCE TABLE

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each			
					1+	25+	50+	100+
641-1	20351X	4-10 DC	140 AC	0.5	12.790	11.800	10.820	10.040
641-2	20352R	4-10 DC	250 AC	0.5	13.680	12.530	11.490	10.660

Teledyne 642 Series



GENERAL DESCRIPTION

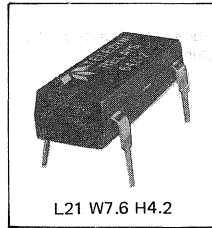
Serendip optically isolated relay with peak voltage rating of 400V.

L21.6 W7.6 H4.2

REFERENCE TABLE

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each			
					1+	25+	50+	100+
642-2	20353G	3-32 DC	250 AC	1.5	17.940	16.470	15.280	13.960

Teledyne 645 Series



GENERAL DESCRIPTION

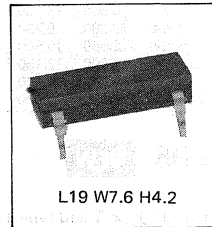
Photo coupled SCR provides transient-free switching and 2500 vrms input/output isolation. Rating to 1A without heatsink PCB terminations.

L21 W7.6 H4.2

REFERENCE TABLE

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each		
					1+	25+	50+
645-2	73632E	3.8-32 DC	250 AC	1	10.090	9.260	8.530
645-2H	73633C	3.8-32 DC	250 AC	1	10.190	9.360	8.630

Teledyne 643 Series



GENERAL DESCRIPTION

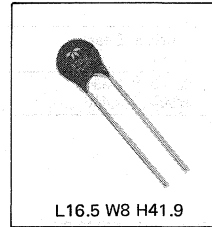
Transformer coupling. Moulded in a standard TO-116 DIP package with PCB terminations.

L19 W7.6 H4.2

REFERENCE TABLE

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each			
					1+	25+	50+	100+
643-1	20354E	3.8-10 DC	60 DC	0.4	10.760	9.830	8.990	8.370
643-2	20355C	3.8-10 DC	250 DC	0.1	13.420	12.320	11.340	10.400

Teledyne 970 Series



GENERAL DESCRIPTION

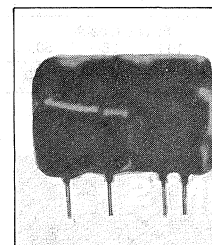
Specifically for use with Teledyne solid state AC relays and I/O converter modules for protection against high voltage transients. May also be used for general circuit protective service other than solid state relays.

L16.5 W8 H41.9

REFERENCE TABLE

Type No.	Stock No.	Transient Peak VAC	Line VAC	Prices £ each			
				1+	25+	50+	100+
970-1	20365X	400	140V	2.650	2.340	2.130	1.920
970-2	20366H	600	250V	2.650	2.340	2.130	1.920

International Rectifier D2W202F



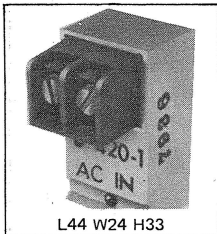
GENERAL DESCRIPTION

Small size PCB mounting solid state relay can be driven by all common logic systems and offers optical isolation, zero voltage switching and high heat transfer.

REFERENCE TABLE

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each		
					1+	25+	100+
D2W202F	09774F	3-32DC	60-280VAC	2	4.910	4.360	3.960

**International Rectifier Type 4 Series**



**GENERAL DESCRIPTION**

High performance microprocessor interface switches providing an electrically clean, photo isolated and noise free interface for use with programmable controllers, microprocessors etc.

L44 W24 H33

**REFERENCE TABLE**

Type No.	Stock No.	Input Voltage	Output Voltage	Amp	Prices £ each			
					1+	10+	25+	50+
S410-1	22507D	10-32 DC	30 DC	—	11.790	10.620	9.080	7.700
S411-1	22508B	10-55 DC	30 DC	—	11.790	10.620	9.080	7.700
S412-1	22509X	40-120 DC	30 DC	—	11.790	10.620	9.080	7.700
S420-1	22510C	90-135 AC	30 DC	—	12.300	11.080	9.470	8.030
S421-1	22511A	180-270 AC	30 DC	—	12.300	11.080	9.470	8.030
S430-1	22512X	4-8 DC	55 DC	4	19.640	17.700	15.130	12.830
S432-1	22513H	4-8 DC	55 DC	2	16.550	14.910	12.750	10.810
S440-1	22514F	4-8 DC	140 AC	4	18.030	16.240	13.890	11.780
S441-1	22515D	4-8 DC	280 AC	4	18.840	16.970	14.510	12.300
S442-1	22516B	4-8 DC	140 AC	2	14.800	13.330	11.406	9.670
S443-1	22517X	4-8 DC	280 AC	2	15.740	14.180	12.130	10.280

**Mounting Track for International Rectifier Type 4 Series**

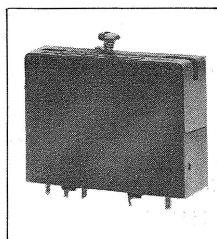
**GENERAL DESCRIPTION**

Convenient mounting system for series 4 I/O modules accommodating up to 16 switches in any combination of input, output, AC or DC models. These mounting boards are designed for a standard 19" relay rack panel and all control terminations are made through an 18 pin edge card connector.

**REFERENCE TABLE**

Type No.	Stock No.	Description	Prices £ each
CY3325	22518R	Unmounted	59.91

**International Rectifier Type 6 Series**



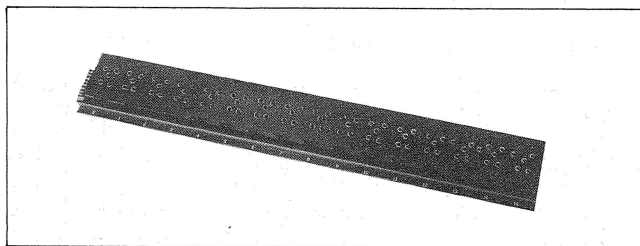
**GENERAL DESCRIPTION**

High performance interface switches designed to provide an electrically clean, photo-isolated and noise free interface between programmable controllers, microprocessors and computerized machine controls, etc. AC models have integral snubber and zero-voltage switching. DC models incorporate transient voltage suppression.

**REFERENCE TABLE**

Type No.	Stock No.	Input Voltage	Output Voltage	Amps	Prices £ each			
					1+	10+	25+	50+
6101	09768B	4-32 DC	30 DC	—	6.390	5.760	4.920	4.170
6201	09769X	90-140 AC	30 DC	—	6.790	6.120	5.230	4.440
6202	09770C	180-280 AC	30 DC	—	7.060	6.360	5.440	4.610
6301	09771A	3-6 DC	60 DC	3.5	6.790	6.120	5.230	4.440
6401	09772X	3-6 DC	140 AC	3.5	7.740	6.970	5.960	5.050
6402	09773H	3-6 DC	280 AC	3.5	7.940	7.150	6.110	5.180

**Mounting Board for International Rectifier Type 6 Series**



**GENERAL DESCRIPTION**

8 or 16 position mounting board that accepts any series 6 I/O module in any position. Features include LED status indicators, fuses, a terminal strip for power connections and a PCB edge connector for the logic signals.

**REFERENCE TABLE**

Type No.	Stock No.	Description	Prices £ each	
			1+	5+
MS8-H	09775D	8 Position	39.200	29.400
MS16-H	09776B	16 Position	59.700	44.800

**Teledyne 673 Series**



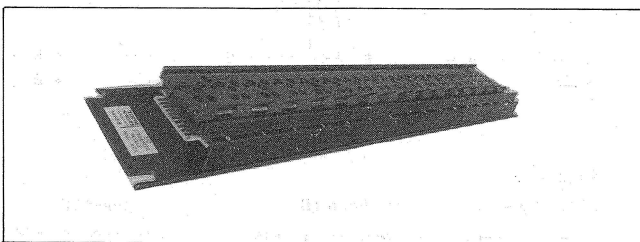
**GENERAL DESCRIPTION**

Solid state technology offered in a package. Ideal for microprocessor and programmable control systems.

**REFERENCE TABLE**

Type No.	Stock No.	Control Voltage	Output Voltage	Amp Rating	Prices £ each		
					1+	25+	50+
673-1	20356A	95-132 AC	18 DC	—	14.920	13.780	12.690
673-6	20357X	4-32 DC	132 AC	4	19.500	18.250	17.000
673-6H	20358H	4-32 DC	250 AC	4	21.680	20.020	18.670
673-11	20359F	187-250 AC	18 DC	—	14.920	13.780	12.690
673-21	20360R	10-55 DC	18 DC	—	14.920	13.780	12.690
673-22	20361G	4-10 DC	55 DC	3	19.920	18.510	16.590
673-23	20362E	10-32 DC	55 DC	3	19.290	18.510	16.590

**Mounting Track for Teledyne 673 Series**



**GENERAL DESCRIPTION**

Custom designed mounting panel for Teledyne 673 Series Solid State I/O Converter Modules. Fits standard 19" rack and accepts up to 16 modules. Panel contains integral interconnect wiring to 20 pin edge connector (.156 centers) for logic circuitry.

Also available unmounted without back plate, or with 2 rows (for 32 modules) mounted on 5.25" back plate.

**REFERENCE TABLE**

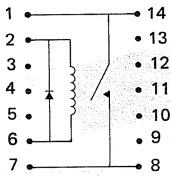
Type No.	Stock No.	Description	Prices £ each
			1+
673P-1E1	20364A	1 Row (3.5" back plate)	44.200
673P-1D1	70010C	1 Row (3.5" back plate) to suit 'D' connector	60.220

11

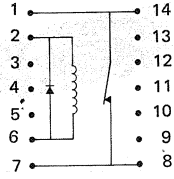
**★ POSTAGE AND PACKING ★**  
 FREE OF CHARGE for small orders below £30.  
 Deliveries of £30 plus, add £2.30.  
 Special deliveries arranged at cost.

**ASTRALUX 120,130**

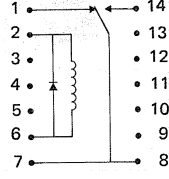
Form A



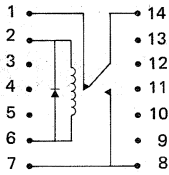
Form B



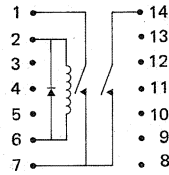
Form C (3 Watt)



Form C (5 Watt)

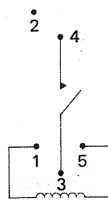


Form 2A

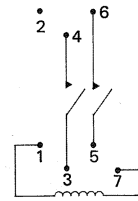


**CLARE CUP**

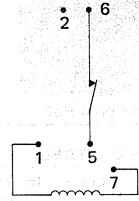
Form 1A



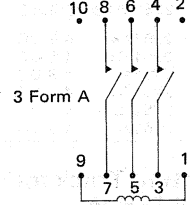
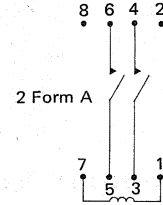
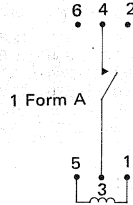
Form 2A



Form 1B

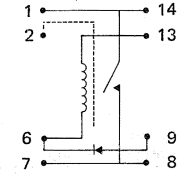


**CLARE PRMG (951)**



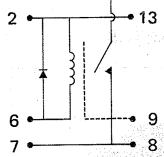
**CLARE PRME (Low Profile)**

Form 1A

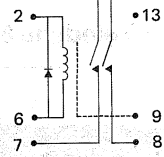


**PRMA (High Profile)**

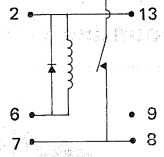
Form 1A



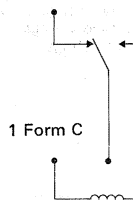
Form 2A



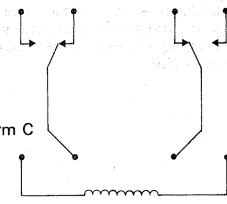
Form 1B



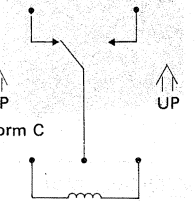
**CLARE HGRM**



**HGR2M**

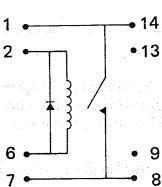


**HGSM**

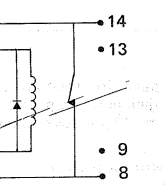


**HAMLIN HE700**

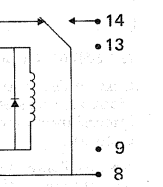
Form 1A



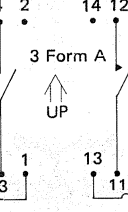
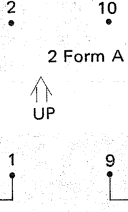
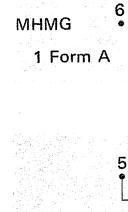
Form 1B



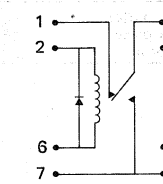
Form 1C



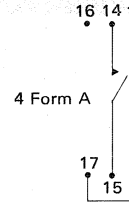
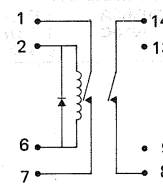
**CLARE MHMG**



Form 1C (E Version)



Form 2A

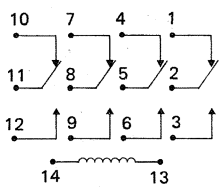


**HAMLIN S1090**

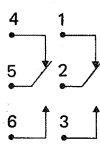


ITT PZ

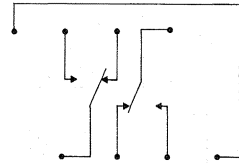
PZ4



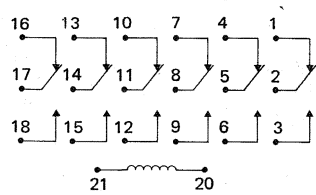
PZ2



ITT SM



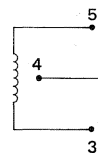
PZ6



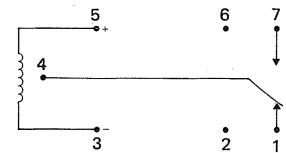
8

7

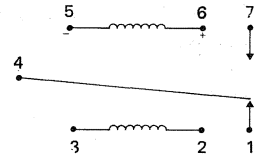
NATIONAL R RS



RSL

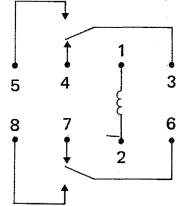


RSL2

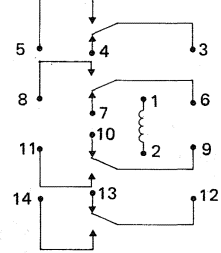


NATIONAL NF/NFE

NF2

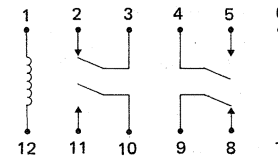


NF4

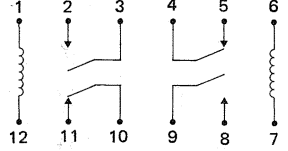


NATIONAL

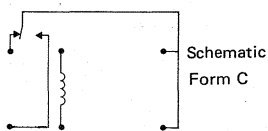
S2



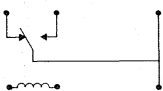
S2L2



FUJITSU FBR211  
Form A or C



Form B

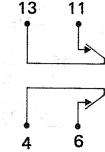


Schematic  
Form C

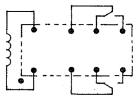
PYE  
SERIES 21



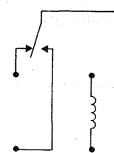
STC  
SERIES 47



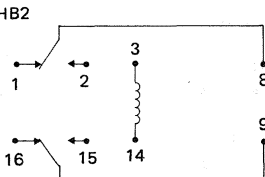
FUJITSU FBR240



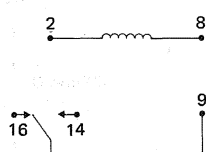
FUJITSU FBR111



NATIONAL  
HB2



HB1



FUJITSU FBR600 + PYE 26  
Form 2C



FBR600 + PYE 65  
Form 1C

