

# BR930 Series Pin Code Allocations and Contact Arrangements

## Synopsis

This Guidance Note provides details of pin code allocations and contact arrangements for BR930 series equipment.

## Submitted by

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# BR930 Series Pin Code Allocations and Contact Arrangements

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**Railway Group Guidance Note**

**GK/GN0630**

**Issue One**

**Date** October 1998

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## **BR930 Series Pin Code Allocations and Contact Arrangements**

### **Part A**

#### **Issue Record**

This Guidance Note will be updated when necessary by distribution of a complete replacement.

Amended or additional parts of revised pages will be marked by a vertical black line in the adjacent margin.

<b>Issue</b>	<b>Date</b>	<b>Comments</b>
1	October	New document, supersedes BR944

#### **Health and Safety Responsibilities**

In issuing this Guidance Note, Railtrack PLC makes no warranties, express or implied, that compliance with all or any Railway Group Guidance Note is sufficient on its own to ensure safe systems of work or operation. Each user is reminded of its own responsibilities to ensure health and safety at work and its individual duties under health and safety legislation.

#### **Supply**

Controlled and uncontrolled copies of this Standard may be obtained from the Industry Safety Liaison Dept, Safety and Standards Directorate, Railtrack PLC, Railtrack House, DP01, Euston Square, London, NW1 2EE.

# BR930 Series Pin Code Allocations and Contact Arrangements

## Part B

### 1 Purpose

This Guidance Note details the pin code configurations and the arrangement of contacts and other connections.

### 2 Scope

This Guidance Note covers signalling relays and other equipment in general use on Railtrack controlled infrastructure which are designed to fit onto a BR829 plugboard.

### 3 Definitions

#### Pin-code

A series of locating pins assembled in a pattern to ensure the item bearing the pins can only be connected to a corresponding item of equipment containing a matching pattern of holes. The pin-code is sometimes referred to as the "registration pin-code".

### 4 Equipment Connecting to BR829 Style Plugboards

#### 4.1 Allocation of Pin Codes

Signalling relays to specifications in the BR930 series and other equipment, such as Reed-filtered Frequency Division Multiplex equipment, using the same style of BR829 plugboard have a well-defined set of pin-codes and rules for their allocation and use. In particular, the following should be noted:

##### 4.1.1 Safety-Critical / Safety-Related Equipment

As an added control measure, in order to prevent safety-related equipment being connected into a plugboard position which is designated for a piece of safety-critical equipment, safety-critical equipment should be allocated a five-pin pin-code and safety-related equipment a six-pin pin-code.

##### 4.1.2 Reed Remote Control Systems

In Reed remote control systems, a complete Reed receiver or transmitter is formed from a filter and an amplifier. Although the lower part (the filter) is fitted with pins, all the plugboard connections are made to the upper part (the amplifier). Over the years, the amplifier has been modified and so the site diagram should be consulted to ensure that the correct version of amplifier is used.

Pin-code 1360 is allocated to the universal spare for vital Reed equipment and has only a two-pin pin-code (locations P & Q).

Pin-code 6370 is allocated to the universal spare for non-vital Reed equipment and has only a three-pin pin-code (locations A, P & Q).

Due to the above:

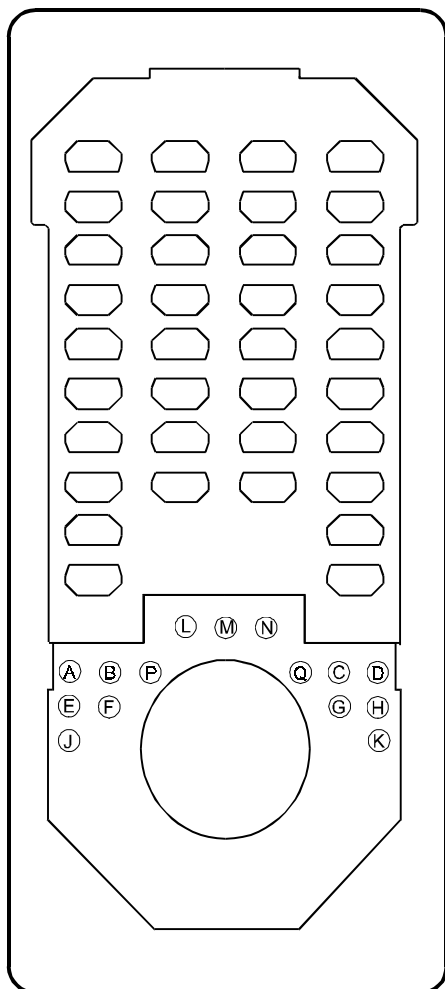
- a) Only those items of equipment for which the pin-code 1360 is approved as a universal spare, should be allocated a pin-code with a configuration which contains both P & Q (but excludes A).
- b) Only those items of equipment for which the pin-code 6370 is approved as a universal spare, should be allocated a pin-code with a configuration which contains all of A, P & Q.

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### 5 BR930 Style Equipment: Register of Pin Code Configurations

Within the tables contained in this section, the column headed "Arr" refers to the appropriate equipment/relay input, output, contact or strapping arrangement as illustrated in section 6 of the document. The layout of the plugboard is as shown below:



Plugboard (Front View)

Figure 2

Any reference to front or rear view contained within this document shall be as illustrated in Figure 1

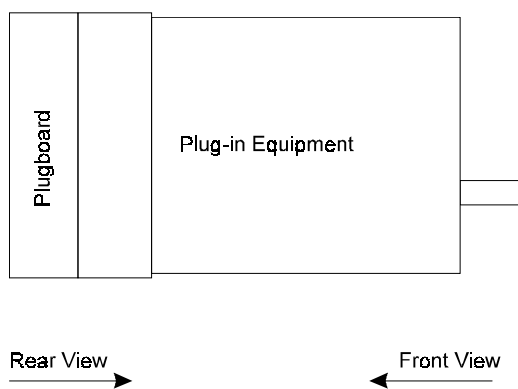


Figure 1

The pin hole positions referred to within this document shall be as illustrated in Figure 2

## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
0001	A B C D E	1	930	24V	DC Neutral Line Relay
		2	930	24V	DC Neutral Line Relay
		3	930	24V	DC Neutral Line Relay
		4	930	24V	DC Neutral Line Relay
0002	A B C D F	5	930	24V	DC Neutral Line Relay
		6	930	24V	DC Neutral Line Relay
		7	930	24V	DC Neutral Line Relay
		8	930	24V	DC Neutral Line Relay
		9	930	24V	DC Neutral Line Relay
0003	A B C E F	1	930	50V	DC Neutral Line Relay
		2	930	50V	DC Neutral Line Relay
		3	930	50V	DC Neutral Line Relay
		4	930	50V	DC Neutral Line Relay
		10	-	-	Geographical Shorting Unit
0004	A B D E F	5	930	50V	DC Neutral Line Relay
		6	930	50V	DC Neutral Line Relay
		7	930	50V	DC Neutral Line Relay
		8	930	50V	DC Neutral Line Relay
		9	930	50V	DC Neutral Line Relay
		11	930	50V	DC Neutral Line Relay
0005	A C D E F	1	-	50V	DC Neutral Line Relay with high drop away voltage
		3	-	50V	DC Neutral Line Relay with high drop away voltage
0006	A B C D G	9	-	50V	DC Neutral Line Relay with high drop away voltage
0007	A B C E G	13	935	24V	DC Magnetically Latched Neutral Line Relay. {A 6F 4B and 4F 4B version may also exist}
0008	A B C F G	13	935	50V	DC Magnetically Latched Neutral Line Relay. {A 6F 4B and 4F 4B version may also exist}
		14	-	-	Geographical Shorting Unit
0009	A B D E G	27	935	24V	DC Magnetically Latched Neutral Line Relay
		28	935	24V	DC Magnetically Latched Neutral Line Relay
		29			
0010	A B D F G	11	935	24V	DC Magnetically Latched Neutral Line Relay
0011	A B E F G	27	935	50V	DC Magnetically Latched Neutral Line Relay
		28	935	50V	
		29			
		10	-	-	Geographical Shorting Unit
0012	A C D E G	30	935	50V	DC Magnetically Latched Neutral Line Relay
0013	A C D F G	15	936	24V	DC Polarised Magnetic Stick Line Relay {12N 4R}
0014	A C E F G	16	936	24V	DC Polarised Magnetic Stick Line Relay {4N 4R}
		17	936	24V	DC Polarised Magnetic Stick Line Relay {8N 8R}
0015	A D E F G	15	936	50V	DC Polarised Magnetic Stick Line Relay {12N 4R}
0016	A B C D H	16	936	50V	DC Polarised Magnetic Stick Line Relay {4N 4R}
		17	936	50V	DC Polarised Magnetic Stick Line Relay {8N 8R}
0017	A B C E H	18	961	50V	Twin AC Immune DC Biased Neutral Line Relay
		19	961	50V	Twin AC Immune DC Biased Neutral Line Relay
0018	A B C F H	20	961	50V	Twin AC Immune DC Biased Neutral Line Relay with high drop away
0019	A B C G H	5	-	105mA	Lamp Proving Relay
0020	A B D E H	21	-	14Ω	Rectifier-Resistance Unit
			-	18Ω	Rectifier-Resistance Unit
			-	32Ω	Rectifier-Resistance Unit
			-	51Ω	Rectifier-Resistance Unit
			-	64Ω	Rectifier-Resistance Unit
			-	102Ω	Rectifier-Resistance Unit
			-	260Ω	Rectifier-Resistance Unit
			-	380Ω	Rectifier-Resistance Unit

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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
0021	A B D F H	1	931	24V	AC Immune DC Neutral Line Relay
		3	931	24V	AC Immune DC Neutral Line Relay
0022	A B D G H	5	931	24V	AC Immune DC Neutral Line Relay
		7	931	24V	AC Immune DC Neutral Line Relay
		9	931	24V	AC Immune DC Neutral Line Relay
0023	A B E F H	1	931	50V	AC Immune DC Neutral Line Relay
		3	931	50V	AC Immune DC Neutral Line Relay
0024	A B E G H	5	931	50V	AC Immune DC Neutral Line Relay
		7	931	50V	AC Immune DC Neutral Line Relay
		9	931	50V	AC Immune DC Neutral Line Relay
0025	A B F G H	1	932	24V	AC Immune DC Biased Neutral Line Relay
		3	932	24V	AC Immune DC Biased Neutral Line Relay
0026	A C D E H	5	932	24V	AC Immune DC Biased Neutral Line Relay
		7	932	24V	AC Immune DC Biased Neutral Line Relay
		9	932	24V	AC Immune DC Biased Neutral Line Relay
0027	A C D F H	1	932	50V	AC Immune DC Biased Neutral Line Relay
		3	932	50V	AC Immune DC Biased Neutral Line Relay
0028	A C D G H	5	932	50V	AC Immune DC Biased Neutral Line Relay
		7	932	50V	AC Immune DC Biased Neutral Line Relay
		9	932	50V	AC Immune DC Biased Neutral Line Relay
0029	A C E F H	26	966 F7	110V	AC Neutral Line Relay for use with SSI module
0030	A C E G H	22	966 F8	24V	Twin DC Lamp Proving Relay for flashing road lights at level crossings
0031	A C F G H	-	-	-	Reserved
0032	A D E F H	-	-	-	Reserved
0033	A D E G H	3	-	24V	DC Neutral Line Relay with high drop away voltage
0034	A D F G H	9	-	24V	DC Neutral Line Relay with high drop away voltage
0035	A E F G H	23	-	50V	DC Neutral Line & Thermal Relay (5 to 15 seconds delay)
0036	A B C D J	24	-	50V	DC Neutral Line & Thermal Relay (30 to 120 seconds delay)
0037	A B C E J	24	-	50V	DC Neutral Line & Thermal Relay (60 to 180 seconds delay)
0038	A B C F J	25	-	0.43A	DC Lamp Proving Relay for use with Stencil Route Indicators
0039	A B C G J	24	-	50V	DC Neutral Line & Thermal Relay (15 to 30 seconds delay)
0040	A B C H J	1	-	50V	AC Immune DC Biased Line Relay Slow Release
0041	A B D E J	26	933	24V	AC Immune DC Neutral Line Relay Slow Pick Up
0042	A B D F J	42	-	0.2A	DC Lamp Proving Relay
0043	A B D G J	26	933	50V	AC Immune DC Neutral Line Relay Slow Pick Up
0044	A B D H J	5	-	50V	AC Immune DC Neutral Line Relay Slow Acting
		7	-	50V	AC Immune DC Neutral Line Relay Slow Acting
		9	-	-	-
0045	A B E F J	42	-	1.3A	DC Lamp Proving Relay
0046	A B E G J	48	-	0.25A	DC Lamp Proving Relay
0047	A B E H J	3	-	50V	AC Immune DC Biased Line Relay
		1	-	0.18A	DC Lamp Proving for use with SL34 Lamps
0048	A B F G J	5	-	-	Reed Follower Relay {Matched to Reed System}
		1	-	-	-
0049	A B F H J	20	961	50V	Twin AC Immune DC Biased Neutral Line Relay
		20	961	50V	Twin AC Immune DC Biased Neutral Line Relay
0050	A B G H J	19	-	24V	Twin DC Neutral Line Relay with high drop away
0051	A C D E J	20	-	24V	Twin DC Neutral Line Relay with high drop away
0052	A C D F J	19	-	50V	Twin DC Neutral Line Relay with high drop away
0053	A C D G J	20	-	50V	Twin DC Neutral Line Relay with high drop away
0054	A C D H J	32	960	24V	Twin DC Neutral Line Relay
		33	960	24V	Twin DC Neutral Line Relay
0055	A C E F J	34	960	24V	Twin DC Neutral Line Relay
0056	A C E G J	34	960	50V	Twin DC Neutral Line Relay
		35	-	-	Geographical Shorting Unit
0057	A C E H J	18	960	24V	Twin DC Neutral Line Relay
		19	960	24V	Twin DC Neutral Line Relay
0058	A C F G J	19	-	50V	Twin DC Neutral Line Relay



## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
0059	A C F H J	20	–	50V	Twin DC Neutral Line Relay
0060	A C G H J	32	960	50V	Twin DC Neutral Line Relay
		33	960	50V	Twin DC Neutral Line Relay
		36	–	–	Geographical Shorting Unit
0061	A D E F J	1	934	24V	AC Immune DC Neutral Line Relay Slow Release
0063	A D E H J	1	934	50V	AC Immune DC Neutral Line Relay Slow Release
		10	–	–	Geographical Shorting Unit
0065	A D F H J	37	–	1.0A	AC Lamp Proving Relay for use with Position Light Junction Indicator
0066	A D G H J	5	–	0.81A	AC Lamp Proving Relay for use with a Theatre Type Indicator
0067	A E F G J	38	–	0.62A	DC Lamp Proving Relay for use with a Junction Indicator
0068	A E F H J	5	–	1.04A	AC Lamp Proving Relay for use with a Junction Indicator
0069	A E G H J	5	–	1.0A	AC Lamp Proving Relay for use with a Stencil Indicator
0070	A F G H J	38	942	1.4A	AC Lamp Proving Relay for use with a Stencil Indicator
0071	A B C D K	37	941	0.18A	AC Lamp Proving Relay for use with a Colour Light Signal
0072	A B C E K	25	–	0.9A	DC Lamp Proving Relay for use with a Junction Indicator
0073	A B C F K	26	–	0.23A	DC Lamp Proving Relay for use with MF type Colour Light Signal
0074	A B C G K	24	–	50V	DC Neutral Line & Thermal Relay. (5 to 15 seconds delay)
0075	A B C H K	26	–	Varies	DC Lamp Proving Relay Slow Acting
0076	A B C J K	–	–	110V	Point Control Overload Relay
0077	A B D E K	42	–	0.25A	DC Lamp Proving Relay for use with Stencil & Junction
0078	A B D F K	41	–	6W	Rectifier-Resistance Unit
0079	A B D G K	42	–	0.125A	DC Lamp Proving Relay Slow Release
0080	A B D H K	1	–	50V	AC Immune DC Neutral Line Relay Slow Acting
		3	–	–	–
0081	A B D J K	37	940	2.2A	DC Lamp Proving Relay for use with Colour Light Signals
		42	940	2.2A	DC Lamp Proving Relay for use with Colour Light Signals
0082	A B E F K	42	–	0.105A	DC Lamp Proving Relay Slow Release
0083	A B E G K	5	–	24V	AC Immune DC Neutral Line Relay Slow Acting
		7	–	24V	AC Immune DC Neutral Line Relay Slow Acting
		9	–	–	–
0084	A B E H K	1	–	12V	AC Immune DC Biased Neutral Line Relay
0085	A B E J K	5	–	0.54 & 0.46A	AC Lamp Proving Relay for use with Stencil Indicators & Position Light Signals
0086	A B F G K	42	–	0.125A	DC Lamp Proving Relay for use with Stencil Indicators
0087	A B F H K	42	–	1.1A	DC Lamp Proving Relay Slow Release for use with Colour Light Signals
0088	A B F J K	42	–	0.11A	DC Lamp Proving Relay Slow Release
0089	A B G H K	42	–	0.6A	DC Lamp Proving Relay
0091	A B H J K	37	945	4A	DC Lamp Proving Relay for use with Flashing Signals
0092	A C D E K	20	960	24V	Twin DC Neutral Line Relay
0093	A C D F K	1	–	0.185A	AC Immune DC Lamp Proving Relay Slow Acting
0094	A C D G K	37	–	0.185A	AC Lamp Proving Relay for use with Searchlight Signals
0095	A C D H K	19	–	50V	Twin DC Neutral Line Relay Slow Acting
0096	A C D J K	20	–	50V	Twin DC Neutral Line Relay Slow Acting
0097	A C E F K	18	961	24V	Twin AC Immune DC Biased Neutral Line Relay
		19	961	24V	Twin AC Immune DC Biased Neutral Line Relay
0098	A C E G K	20	961	24V	Twin AC Immune DC Biased Neutral Line Relay
0099	A C E H K	19	–	24V	Twin DC Neutral Line Relay Slow Acting
0100	A C E J K	20	–	24V	Twin DC Neutral Line Relay Slow Acting
0101	A C F G K	43	938	4Ω	DC Neutral Track Relay
0104	A C G H K	43	966 F9	60Ω	AC Immune DC Neutral Track Relay
0105	A C G J K	43	939	20Ω	AC Immune DC Neutral Track Relay
0106	A C H J K	–	–	12/50V	Inverter Unit
0107	A D E F K	–	–	50V	Earth Leakage Detector
0108	A D E G K	–	–	110V	Earth Leakage Detector
0109	A D E H K	43	–	9Ω	DC Neutral Track Relay

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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
0110	A D E J K	43	966	9Ω	AC Immune DC Neutral Track Relay
		-	-	9Ω	AC Immune DC Neutral Track Relay
0111	A D F G K	43	968	250Ω	DC Neutral Track Relay
0112	A D F H K	9	930	12V	DC Neutral Line Relay
0113	A D F J K	43	-	400Ω	DC Neutral Track Relay
0114	A D G H K	43	-	400Ω	AC Immune DC Neutral Track Relay
0115	A D G J K	44	-	10V	DC Neutral Thermal Time Element Relay (30-120 seconds delay)
0117	A E F G K	-	-	0.285Ω	DC Neutral Line Relay Slow Release
0118	A E F H K	45	-	50V	DC Neutral Line & Thermal Time Element Relay (15-30 seconds delay)
0119	A E F J K	46	-	24V	Twin DC Neutral Line & Single Heater Thermal Time Element Relay (30-90 seconds delay)
		-	-	24V	Twin DC Neutral Line & Single Heater Thermal Time Element Relay (60-120 seconds delay)
0120	A E G H K	46	-	50V	Twin DC Neutral Line & Single Heater Thermal Time Element Relay (30-90 seconds delay)
		-	-	50V	Twin DC Neutral Line & Single Heater Thermal Time Element Relay (60-120 seconds delay)
		-	-	50V	Twin DC Neutral Line & Single Heater Thermal Time Element Relay (30-120 seconds delay)
0121	A E G J H	46	-	50V	Twin DC Neutral Line & Double Heater Thermal Time Element Relay (30-60 seconds delay with both heaters & 60-150 seconds delay with one heater)
0122	A E H J K	46	-	50V	Twin DC Neutral Line & Double Heater Thermal Time Element Relay (30-60 seconds delay with both heaters & 60-150 seconds delay with one heater)
0123	A F G H K	45	937	24V	DC Neutral Thermal Time Element Relay (30-120 seconds delay)
0124	A F G J K	45	937	50V	DC Neutral Thermal Time Element Relay (30-120 seconds delay)
0125	A F H J K	49	937	24V	DC Neutral Thermal Time Element Relay (30-120 seconds delay)
0126	A G H J K	49	937	50V	DC Neutral Thermal Time Element Relay (30-120 seconds delay)
0127	B C D E F	50	962	24V	Twin DC Neutral Line & Thermal Time Element Relay (30-120 seconds delay)
0128	B C D E G	51	962	24V	Twin DC Neutral Line & Thermal Time Element Relay (30-120 seconds delay)
0129	B C D F G	50	962	50V	Twin DC Neutral Line & Thermal Time Element Relay (30-120 seconds delay)
0130	B C E F G	51	962	50V	Twin DC Neutral Line & Thermal Time Element Relay (30-120 seconds delay)
0131	B D E F G	52	-	50V	Pulse Generator for use with TOWS
0132	B C D E H	53	-	24V	Track Circuit Transient Suppressor Unit
# 0133	B C D F H	54	-	8.8V	DC Neutral Reed Follower Relay {32M10 or ZS2411}
# 0134	B C D G H	54	-	8.8V	DC Neutral Reed Follower Relay {32M10 or ZS2411}
0135	B C E F H	-	-	-	Track Circuit Transient Suppressor Unit
0136	B C E G H	-	-	50V	Pulse Generator
0137	B C F G H	-	-	50V	Pulse Generator
0138	B D E F H	-	-	50V	Twin Block Bell Delay Unit (6-8 seconds delay)
0139	B D E G H	55	-	50V	DC Impulse Timer Relay {5 Steps}
		55	-	50V	DC Impulse Timer Relay {10 Steps}
		55	-	50V	DC Impulse Timer Relay {15 Steps}
		55	-	50V	DC Impulse Timer Relay {20 Steps}
		55	-	50V	DC Impulse Timer Relay {22 Steps}
		55	-	50V	DC Impulse Timer Relay {25 Steps}
		55	-	50V	DC Impulse Timer Relay {30 Steps}
56	-	-	-	Geographical Shorting Unit	
0140	B D F G H	57	947	110V	AC Motor Timer Relay (3 to 30 seconds delay)
0141	B E F G H	68	-	50V	Solid State Time Delay Relay (2 to 254 seconds delay)

# Note: Pin Codes 0133 & 0134 were both allocated to the same relay.

## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
0142	B C D E J	59	–	15.3Ω	Lamp Proving Feed Unit for use with Junction & Stencil Indicators
		60	–	27.8Ω	Lamp Proving Feed Unit for use with Limit of Shunt Signals
		61	–	36.9Ω	Lamp Proving Feed Unit for use with Position Light Signals
		62	–	50.5Ω	Lamp Proving Feed Unit
		63	–	274Ω	Lamp Proving Feed Unit for use with Colour Light Signals
		64	–	W/OΩ	Lamp Proving Feed Unit for use with Multi-Lamp Route Indicators
0143	B C D F J	65	–	50V	DC Relay Unit containing two PO 3000 type relays
0144	B C D G J	66	–	50V	DC Relay Unit containing four relays
0145	B C D H J	67	–	50V	DC Relay Unit containing four relays
0146	B C E F J	58	–	50V	Solid State Timer
0147	B C E G J	66	–	530Ω	Relay Unit containing four PO type 23/9 relays for CCTV equipment at level crossings
0148	B C E H J	69	–	12/24V	Indication flasher Unit for flashing Level Crossing Indications
0149	B C F G J	–	–	50/12V	Hot Box Detector Reset Unit
0150	B C F H J	70	–	0.35A	Lamp Proving Relay Feed Unit
0151	B C G H J	71	–	50V	Pulse Generator Unit for use in Junction Approach Signal Flashing Circuit (70 pulses per minute)
0152	B D E F J	26	–	0.94A	DC Lamp Proving Relay for use with Searchlight Signals
0154	B D E H J	72	–	18Ω	Lamp Proving Relay Feed Unit
0155	B D F G J	72	–	10Ω	Lamp Proving Relay Feed Unit
0156	B D F H J	72	–	7.8Ω	Lamp Proving Relay Feed Unit
0157	B D G H J	72	–	6Ω	Lamp Proving Relay Feed Unit
0158	B E F G J	73	–	50V	Hot Box Detector Reset Unit
0159	B E F H J	74	966 F4	24V	AC Immune DC Biased Point Contactor Relay
0160	B E G H J	74	966 F4	50V	AC Immune DC Biased Point Contactor Relay
0161	B F G H J	75	–	24V	AC Immune DC Biased Point Contactor Relay
0162	B C D E K	75	–	24V	DC Biased Point Contactor Relay
0163	B C D F K	75	–	50V	AC Immune DC Biased Point Contactor Relay
0164	B C D G K	75	–	50V	DC Biased Point Contactor Relay with high drop away
0165	B C D H K	75	–	24V	DC Biased Point Contactor Relay with high drop away
0166	B C D J K	76	966 F1	50V	DC Neutral Point Contactor Relay with high drop away
0167	B C E F K	76	966 F1	24V	DC Neutral Point Contactor Relay with high drop away
0168	B C E G K	77	–	24/50V	Capacitor/Resistor Unit
0169	B C E H K	78	–	80V	Point Machine Snubbing Relay
0170	B C E J K	76	943	24V	AC Immune DC Biased Point Contactor Relay
0171	B C F G K	76	943	24V	AC Immune DC Biased Point Contactor Relay
0172	B C F H K	76	943	50V	AC Immune DC Biased Point Contactor Relay
0173	B C F J K	76	–	50V	AC Immune DC Biased Point Contactor Relay
0174	B C G H K	79	–	110V	AC Static Flasher Unit for Panel Indications (1 pulse per second)
0175	B C G J K	80	–	50V	Capacitor/Resistor Unit (2000μF & 330Ω) for use in Westpac MKIV units
0176	B C H J K	80	–	50V	Capacitor/Resistor Unit (1000μF & 330Ω) for use in Westpac MKIV units
0177	B D E F K	80	–	50V	Capacitor/Resistor Unit (470μF & 330Ω) for use in Westpac MKIV units
0178	B D E G K	81	–	50V	Relay Delay Unit
0179	B D E H K	82	–	50V	DC Neutral Line Relay Slow Release
0180	B D E J K	34	–	50V	Twin DC Neutral Line Relay with Silver Palladium Contacts
0181	B D F G K	83	–	12V	Opto Coupled Relay Unit
0182	B D F H K	–	–	24V	ERSE Buffer Output Relay Unit MkII
0183	B D F J K	–	–	24V	ERSE Alarm Relay Unit
0184	B D G H K	–	–	24V	Detector Storage Unit for use with a Flasher to BR 901
0185	B D G J K	–	–	24V	Surge Protector
0186	B D H J K	84	–	24/50V	Inverter
0188	B E F H K	85	–	0.4A	Lamp Proving Relay for use with Shunt Signal Lamps

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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
0189	B E F J K	86	947	50/110V	Motor Timer Relay (10-140 seconds delay)
		86	947	50/110V	Motor Timer Relay (30-240 seconds delay)
		87	-	-	Geographical Shorting Unit
		88	-	-	Geographical Shorting Unit
0190	B E G H K	86	947	24/110V	Motor Timer Relay (30-240 seconds delay)
0191	B E G J K	86	947	50/110V	Motor Timer Relay (2-50 seconds delay)
		87	-	-	Geographical Shorting Unit
0192	B E H J K	86	947	24/110V	Motor Timer Relay (2-50 seconds delay)
0193	B F G H K	5	932	50V	AC Immune DC Biased Line Relay
0194	B F G J K	18	961	50V	Twin AC Immune DC Biased Line Relay
0196	B G H J K	89	-	24V	BERSE Buffer Relay Unit
0197	C D E F G	74	966 F5	24V	DC Neutral Point Contactor Relay for use with AC/DC Converter
0198	C D E F H	74	966 F5	50V	DC Neutral Point Contactor Relay for use with AC/DC Converter
0199	C D E G H	58	947	50V	Solid State Timer (4-254 seconds delay). {The time delay are achieved by different combinations of external strap}
					Solid State Timer (Prototype)
0201	C D F G H	-	-	50V	DC Neutral Relay with special sensitivity
0201	C E F G H	90	-	50V	DC Neutral Relay with special sensitivity
0202	C D E F J	91	-	50V	DC Neutral Relay with special sensitivity
0203	C D E G J	47	-	45V	DC Neutral Relay with special sensitivity for use as an Axle Counter coincidence relay
0204	C D E H J	-	-	40V	DC Neutral Relay with special sensitivity
0205	C D F G J	1	-	24V	AC Immune DC Neutral Line Relay Slow Release with high drop away
0206	C D F H J	1	-	50V	AC Immune DC Neutral Line Relay Slow Release with high drop away
0207	C D G H J	3	-	50V	DC Neutral Relay with high drop away
0208	C E F G J	9	-	50V	DC Neutral Relay with high drop away
0209	C E F H J	20	966 F6	50V	Twin AC Immune DC Neutral Line Relay
0210	C E G H J	18	966 F6	50V	Twin AC Immune DC Neutral Line Relay
		19	966	50V	Twin AC Immune DC Neutral Line Relay
0211	C F G H J	18	960	50V	Twin DC Neutral Line Relay
		19	960	50V	Twin DC Neutral Line Relay
		92	-	-	Geographical Shorting Unit
0212	C D E F K	20	960	50V	Twin DC Neutral Line Relay
		93	-	-	Geographical Shorting Unit
0213	C D E G K	19	963	24V	Twin DC Neutral Line Relay Slow Acting
0214	C D E H K	20	963	24V	Twin DC Neutral Line Relay Slow Acting
0215	C D E J K	19	963	50V	Twin DC Neutral Line Relay Slow Acting
		92	-	-	Geographical Shorting Unit
0216	C D F G K	20	963	50V	Twin DC Neutral Line Relay Slow Acting
		93	-	-	Geographical Shorting Unit
0217	C D F H K	19	-	24V	Twin DC Neutral Line Relay with high drop away
0218	C D F J K	20	-	24V	Twin DC Neutral Line Relay with high drop away
0219	C D G H K	19	-	50V	Twin DC Neutral Line Relay with high drop away
0220	C D G J K	20	-	50V	Twin DC Neutral Line Relay with high drop away
0221	C D H J K	26	-	24V	AC Immune DC Neutral Line Relay Extra Slow Release
0222	C E F G K	26	-	50V	AC Immune DC Neutral Line Relay Extra Slow Release
0223	C E F H K	94	-	24V	Twin Magnetically Latched Timer Relay
0224	C E F J K	94	-	50V	Twin Magnetically Latched Timer Relay
0225	C E G H K	95	-	50/110V	Synchronous Motor Operated Pulse Generator (1 Pulse per second)
0226	C E G J K	95	-	50/110V	Synchronous Motor Operated Pulse Generator (1 Pulse per 2 seconds)
0227	C E H J K	95	-	50/110V	Synchronous Motor Operated Pulse Generator (1 Pulse per 3 seconds)
0228	C F G H K	95	-	50/110V	Synchronous Motor Operated Pulse Generator (1 Pulse per 6 seconds)

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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
0229	C F G J K	96	–	12/50V	DC Voltage Converter (0-50 volt output)
0230	C F H J K	96	–	12/50V	DC Voltage Converter (0-25 volt output)
0231	C G H J K	97	–	0.23A	Lamp Proving Relay Slow Release
0232	D E F G H	98	946	24V	DC Neutral Time Delay Relay (3 seconds delay)
0233	D E F G J	98	946	24V	DC Neutral Time Delay Relay (5 seconds delay)
0234	D E F H J	98	946	24V	DC Neutral Time Delay Relay (6 seconds delay)
0235	D E G H J	98	946	24V	DC Neutral Time Delay Relay (7.5 seconds delay)
0236	D F G H J	98	946	24V	DC Neutral Time Delay Relay (10 seconds delay)
0238	D E F H K	99	–	110V	Earth Leakage Detector
0239	D E F J K	100	–	12/50/ 130V	Earth Leakage Detector
0240	D E G H K	149	–	50/120V	Earth Leakage Detector
0241	D E G J K	101	–	24V	Bell Pulse Unit for Level Crossing Bells (60-70 pulses per minute)
		–	–	50V	Point Timing Relay
0242	D E H J K	102	–	24/50V	Indication Flasher Unit (60-70 pulses per minute)
		102	–	50V	Flasher Unit
0243	D F G H K	103	–	120V	Low Voltage Alarm Unit for Point Operation
0244	D F G J K	104	–	50V	FDM Transmitter (Style 25). {External strapping is used to select output levels and output frequency}
0245	D F H J K	105	–	50V	FDM Receiver (Style 25). {External strapping is used to select receiver sensitivity and output frequency}
0246	D G H J K	–	–	–	FDM Line Matching Unit (Style 25). {This is a multi-tap transformer unit which can be connected in many different configurations for line matching purposes}
0247	E F G H J	–	–	–	Remote Control Interface Unit
0248	E F G H K	103	–	40-60V	Low Voltage Alarm Unit for 50V Batteries
0249	E F G J K	–	–	50V	Relay. {No further details available}
0250	E F H J K	106	–	12-50V	Static Flasher Unit
0251	E G H J K	107	–	24V	Thermal Time Unit (30-120 seconds delay)
0252	F G H J K	107	–	50V	Thermal Time Unit (30-120 seconds delay)
0253	A B C D L	–	–	7.2V	DC Lamp Proving Relay
0254	A B C E L	24	–	50V	DC Neutral Line Thermal Relay (30-120 seconds delay)
		–	–	110/50V	Converter Unit
0255	A B C F L	24	–	50V	DC Neutral Line Thermal Relay (60-180 seconds delay)
		15	–	12V	DC Polarised Magnetic Stick Line Relay
0256	A B C G L	–	–	110V	Converter Feed Unit for 24 V relays
		25	–	0.84A	DC Lamp Proving Relay for use with a Junction Indicator
0257	A B C H L	26	–	0.23A	DC Lamp Proving Relay for use with MF type Colour Light Signal
0258	A B C J L	25	–	0.42A	DC Lamp Proving Relay for use with Stencil Route Indicators
		59	–	15.3Ω	Lamp Proving Feed Unit for use with Junction & Stencil Indicators
		60	–	27.8Ω	Lamp Proving Feed Unit for use with Limit of Shunt Signals
		61	–	36.9Ω	Lamp Proving Feed Unit for use with Position Light Signals
		62	–	50.5Ω	Lamp Proving Feed Unit
		63	–	274Ω	Lamp Proving Feed Unit for use with Colour Light Signals
		64	–	W/O Ω	Lamp Proving Feed Unit for use with Multi-Lamp Route Indicators
0259	A B C K L	40	–	110V	Point Control Overload Unit
		24	–	50V	DC Neutral Line & Thermal Relay (5 to 15 seconds delay)
0260	A B D E L	24	–	50V	DC Neutral Line & Thermal Relay (15 to 30 seconds delay)
0261	A B D F L	9	–	110V	DC Neutral Line Relay
		1	934	24V	AC Immune DC Neutral Line Relay Slow Release
		3	934	24V	AC Immune DC Neutral Line Relay Slow Release
0262	A B D G L	5	–	24V	AC Immune DC Neutral Line Relay Slow Acting
		7	–	24V	AC Immune DC Neutral Line Relay Slow Acting
		9	–	24V	AC Immune DC Neutral Line Relay Slow Acting
		–	–	24V	DC Neutral Line & Thermal Relay (30 to 120 seconds delay)

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0263	A B D H L	-	-	18.5V	DC Lamp Proving Relay
		1	-	50V	AC Immune DC Neutral Line Relay Slow Acting
		3	-	50V	AC Immune DC Neutral Line Relay Slow Acting
0264	A B D J L	5	-	50V	AC Immune DC Neutral Line Relay Slow Acting
		7	-	50V	AC Immune DC Neutral Line Relay Slow Acting
		9	-	50V	AC Immune DC Neutral Line Relay Slow Acting
		-	-	12V	DC Neutral Line & Thermal Relay (30 to 120 seconds delay)
0265	A B D K L	-	-	110/24V	Converter Unit
0266	A B E F L	-	-	0.2A	DC Lamp Proving Relay for 20 watt Lamps
		5	-	12V	DC Neutral Line Relay
		9	-	12V	DC Neutral Line Relay
0268	A B E H L	1	-	24V	AC Immune DC Neutral Line Relay Slow Release
0269	A B E J L	26	-	0.84A	DC Lamp Proving Relay for use with Searchlight Signals
		108	-	12V	Shunt Relay for the Post Office Railway
0270	A B E K L	-	-	24V	DC Neutral Line Relay
		-	-	60V	DC Neutral Line Relay
0271	A B F G L	5	-	8.8V	Reed Follower Relay
		4	-	24V	DC Neutral Line Relay Slow Release
0274	A B F K L	-	-	24V	DC Neutral Line Relay Slow Release
0275	A B G H L	-	-	24V	DC Neutral Line & Thermal Relay (30-120 seconds delay)
0279	A B H K L	-	-	12V	DC Neutral Line & Thermal Relay (30-120 seconds delay)
		1	-	12V	AC Immune DC Neutral Biased Line Relay
0280	A B J K L	109	-	9 or 2.25Ω	Biased Track Relay. {Two coils in series (9Ω) or in parallel (2.25Ω)}
		-	-	12V	DC Neutral Line Relay
0281	A C D E L	43	-	4Ω	Biased Track Relay
0282	A C D F L	43	-	9Ω	Biased Track Relay
0283	A C D G L	43	-	9Ω	AC Immune Biased Track Relay
0287	A C E F L	43	-	9Ω	DC Neutral Track Relay
0288	A C E G L	43	-	9Ω	AC Immune DC Neutral Track Relay
0289	A C E H L	-	-	24V	Twin DC Neutral Line Relay with Metal Contacts
		-	-	120V	Earth Leakage Detector
0290	A C E J L	19	-	24V	Twin DC Neutral Line Relay
0291	A C E K L	20	-	24V	Twin DC Neutral Line Relay
0292	A C F G L	19	-	50V	Twin DC Neutral Line Relay
0293	A C F H L	20	-	50V	Twin DC Neutral Line Relay
0294	A C F J L	33	-	24V	Twin DC Neutral Line Relay
0295	A C F K L	34	-	24V	Twin DC Neutral Line Relay
0296	A C G H L	33	960	50V	Twin DC Neutral Line Relay
0297	A C G J L	34	-	50V	Twin DC Neutral Line Relay
0298	A C G K L	19	-	24V	Twin DC Neutral Line Relay Slow Acting
0299	A C H J L	20	-	24V	Twin DC Neutral Line Relay Slow Acting
0300	A C H K L	19	-	50V	Twin DC Neutral Line Relay Slow Acting
0301	A C J K L	20	-	50V	Twin DC Neutral Line Relay Slow Acting
0302	A D E F L	-	-	50V	Flasher Relay
0303	A D E G L	-	-	50V	Flasher Relay
		-	-	50V	Impulse Timer Relay (30 Steps)
0312	A D G J L	55	-	50V	Impulse Timer Relay (5 Steps)
					Impulse Timer Relay (10 Steps)
					Impulse Timer Relay (15 Steps)
					Impulse Timer Relay (20 Steps)
					Impulse Timer Relay (22 Steps)
					Impulse Timer Relay (25 Steps)
			Impulse Timer Relay (30 Steps)		

## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
0322	A E G J L	46	-	24V	Twin DC Neutral Line & Double Heater Thermal Time Element Relay (30-60 seconds delay with both heaters & 60-150 seconds delay with one heater)
0323	A E G K L	46	-	50V	Twin DC Neutral Line & Double Heater Thermal Time Element Relay (30-60 seconds delay with both heaters & 60-150 seconds delay with one heater)
0324	A E H J L	46	-	50V	Twin DC Neutral Line & Double Heater Thermal Time Element Relay (30-60 seconds delay with both heaters & 60-150 seconds delay with one heater)
0336	A H J K L	19	-	24V	Twin AC Immune DC Biased Neutral Line Relay
0337	A B C D M	20	-	24V	Twin AC Immune DC Biased Neutral Line Relay
0338	A B C E M	19	-	50V	Twin AC Immune DC Biased Neutral Line Relay
0339	A B C F M	20	-	50V	Twin AC Immune DC Biased Neutral Line Relay
0340	A B C G M	5	-	0.1A	Lamp Proving Relay
0341	A B C H M	26	-	0.15A	DC Lamp Proving Relay Slow Acting
0342	A B C J M	-	-	12V	DC Neutral Line Relay with Metal Contacts
0358	A B F G M	26	-	24V	AC Immune DC Neutral Line Relay Extra Slow Release
0359	A B F H M	26	-	50V	AC Immune DC Neutral Line Relay Extra Slow Release
0360	A B F J M	-	-	12V	AC Immune DC Neutral Line Relay Extra Slow Release
0385	A C E L M	110	-	50V	DC Non Safety Solid State Time Delay Relay (6-9 seconds delay)
0391	A C G H M	111	-	12V 50 Hz	Transmitter Reed Filter (Track Circuit) RT5110
0392	A C G J M	112	-	12V 50 Hz	Receiver Reed Filter (Track Circuit) RT6110
0393	A C G K M	111	-	12V 50 Hz	Transmitter Reed Filter (Track Circuit) RT5120
0394	A C G L M	112	-	12V 50 Hz	Receiver Reed Filter (Track Circuit) RT6120
0395	A C H J M	111	-	12V 50 Hz	Transmitter Reed Filter (Track Circuit) RT5130
0396	A C H K M	112	-	12V 50 Hz	Receiver Reed Filter (Track Circuit) RT6130
0397	A C H L M	111	-	12V 50 Hz	Transmitter Reed Filter (Track Circuit) RT5140
0398	A C J K M	112	-	12V 50 Hz	Receiver Reed Filter (Track Circuit) RT6140
0399	A C J L M	111	-	12V 50/60Hz	Transmitter Reed Filter (Track Circuit) RT5150
0400	A C K L M	112	-	12V 50/60Hz	Receiver Reed Filter (Track Circuit) RT6150
0401	A D E F M	111	-	12V 50/60Hz	Transmitter Reed Filter (Track Circuit) RT5160
0402	A D E G M	112	-	12V 50/60Hz	Receiver Reed Filter (Track Circuit) RT6160
0403	A D E H M	111	-	12V 50/60Hz	Transmitter Reed Filter (Track Circuit) RT5170
0404	A D E J M	112	-	12V 50/60Hz	Receiver Reed Filter (Track Circuit) RT6170
0405	A D E K M	111	-	12V 50/60Hz	Transmitter Reed Filter (Track Circuit) RT5180
0406	A D E L M	112	-	12V 50/60Hz	Receiver Reed Filter (Track Circuit) RT6180
0407	A D F G M	111	-	12V 50Hz	Transmitter Reed Filter (Track Circuit) RT5190
0408	A D F H M	112	-	12V 50Hz	Receiver Reed Filter (Track Circuit) RT6190
0409	A D F J M	111	-	12V 50Hz	Transmitter Reed Filter (Track Circuit) RT5200

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0410	A D F K M	112	–	12V 50Hz	Receiver Reed Filter (Track Circuit) RT6200
0411	A D F L M	111	–	12V 50Hz	Transmitter Reed Filter (Track Circuit) RT5210
0412	A D G H M	112	–	12V 50Hz	Receiver Reed Filter (Track Circuit) RT6210
0414	A D G K M	112	–	12V 50Hz	Receiver Reed Filter (Track Circuit) RT6220 for use with Automatic Train Protection
0421	A D K L M	111	–	12V 50Hz	Transmitter Reed Filter (Track Circuit) RT5260 for use with Train Control Systems
0422	A E F G M	112	–	12V 50Hz	Receiver Reed Filter (Track Circuit) RT6260 for use with Train Control Systems
0425	A E F K M	111	–	12V 60Hz	Transmitter Reed Filter (Track Circuit) RT5280
0426	A E F L M	112	–	12V 60Hz	Receiver Reed Filter (Track Circuit) RT6280
0427	A E G H M	111	–	12V 60Hz	Transmitter Reed Filter (Track Circuit) RT5290
0428	A E G J M	112	–	12V 60Hz	Receiver Reed Filter (Track Circuit) RT6290
0429	A E G K M	111	–	12V 60Hz	Transmitter Reed Filter (Track Circuit) RT5300
0430	A E G L M	112	–	12V 60Hz	Receiver Reed Filter (Track Circuit) RT6300
0431	A E H J M	111	–	12V 60Hz	Transmitter Reed Filter (Track Circuit) RT5310
0432	A E H K M	112	–	12V 60Hz	Receiver Reed Filter (Track Circuit) RT6310
0435	A E J L M	111	–	12V 60Hz	Transmitter Reed Filter (Track Circuit) RT5320
0436	A E K L M	112	–	12V 60Hz	Receiver Reed Filter (Track Circuit) RT6320
0458	A B C E N	54	–	8.8V	Reed Follower Relay
0527	A C G M N	113 or 114	–	12V	Transmitter Reed Filter RR4210
0528	A C H J N	112 115 or 116		12V	Receiver Reed Filter RR7210
0529	A C H K N	113 or 114	–	12V	Transmitter Reed Filter RR4220
0530	A C H L N	112 115 or 116	–	12V	Receiver Reed Filter RR7220
0531	A C H M N	113 or 114	–	12V	Transmitter Reed Filter RR4230
0532	A C J K N	112 115 or 116		12V	Receiver Reed Filter RR7230
0533	A C J L N	113 or 114		12V	Transmitter Reed Filter RR4240
0534	A C J M N	112 115 or 116		12V	Receiver Reed Filter RR7240
0535	A C K L N	113 or 114		12V	Transmitter Reed Filter RR4250



## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
0536	A C K M N	112 115 or 116	–	12V	Receiver Reed Filter RR7250
0537	A C L M N	113 or 114	–	12V	Transmitter Reed Filter RR4260
0538	A D E F N	112 115 or 116	–	12V	Receiver Reed Filter RR7260
0539	A D E G N	113 or 114	–	12V	Transmitter Reed Filter RR4270
0540	A D E H N	112 115 or 116	–	12V	Receiver Reed Filter RR7270
0541	A D E J N	113 or 114	–	12V	Transmitter Reed Filter RR4280
0542	A D E K N	112 115 or 116	–	12V	Receiver Reed Filter RR7280
0543	A D E L N	113 or 114		12V	Transmitter Reed Filter RR4290
0544	A D E M N	112 115 or 116		12V	Receiver Reed Filter RR7290
0545	A D F G N	113 or 114		12V	Transmitter Reed Filter RR4300
0546	A D F H N	112 115 or 116		12V	Receiver Reed Filter RR7300
0547	A D F J N	113 or 114		12V	Transmitter Reed Filter RR4310
0548	A D F K N	112 115 or 116		12V	Receiver Reed Filter RR7310
0549	A D F L N	113 or 114		12V	Transmitter Reed Filter RR4320
0550	A D F M N	112 115 or 116		12V	Receiver Reed Filter RR7320
0551	A D G H N	113 or 114		12V	Transmitter Reed Filter RR4330
0552	A D G J N	112 115 or 116		12V	Receiver Reed Filter RR7330
0553	A D G K N	113 or 114		12V	Transmitter Reed Filter RR4340
0554	A D G L N	112 115 or 116		12V	Receiver Reed Filter RR7340
0566	A E F G N	117	–	24V	Fuse Failure Detector
0567	A E F H N	38	–	0.8A	Lamp Proving Relay for use with Fibre Optic Route Indicators

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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
0568	A E F J N	118	-	24V	Resistor/Capacitor Unit for use at Level Crossings
0569	A E F K N	42	-	0.52A	Lamp Proving Relay for use with Fibre Optic Display Units
0869	B G K L N	119	-	50V	Twin DC Neutral Relay with Palladium Contacts
		120	-	-	Geographical Shorting Unit
0870	B G K M N	33	-	50V	Twin DC Neutral Relay with Palladium Contacts
		36	-	-	Geographical Shorting Unit
0871	B G L M N	119	-	50V	Twin DC Neutral Relay with Palladium Contacts
0872	B H J K N	18	-	50V	Twin DC Neutral Relay with Palladium Contacts
1035	C F K M N	151	-	-	Train Protection and Warning System Power Supply and Signalling Interface Unit. {Provisional Allocation}
1036	C F L M N	152	-	-	Train Protection and Warning System Speed Trap Unit (Normal Direction). {Provisional Allocation}
1037	C G H J N	152	-	-	Train Protection and Warning System Speed Trap Unit (Wrong Direction). {Provisional Allocation}
1038	C G H K N	152	-	-	Train Stop Unit (Normal Direction). {Provisional Allocation}
1039	C G H L N	152	-	-	Train Stop Unit (Wrong Direction). {Provisional Allocation}
1044	C G K L N	119	-	50V	Twin DC Neutral Relay with Silver to Silver Contacts
1045	C G K M N	33	-	50V	Twin DC Neutral Relay with Silver to Silver Contacts
		36	-	-	Geographical Shorting Unit
1046	C G L M N	-	-	50V	Twin Neutral Relay Slow Release with Silver to Silver Contacts
1047	C H J K N	-	-	-	Correspondence Indicator. {No further details available}
1048	C H J L N	121	-	15W	"Call Technician" Unit
1049	C H J M N	-	-	50V	DC Neutral Line Relay with Silver to Silver Contacts
1050	C H K L N	122	-	12V	Oscillator Unit for Overlay Track Circuits (32 kHz)
1051	C H K M N	123	-	110/50 V	Transformer-Rectifier Unit
1052	C H L M N	124	962	24V	Twin DC Thermal Timer Relay (30-120 seconds time delay)
1053	C J K L N	124	962	50V	Twin DC Thermal Timer Relay (30-120 seconds time delay)
1054	C J K M N	125	962	24V	Twin DC Thermal Timer Relay (30-120 seconds time delay)
1055	C J L M N	-	-	-	Reserved for SR. {No further details available}
1056	C K L M N	126	-	50V	DC Neutral Relay Slow Release (1 second time delay)
		127	-	50V	DC Neutral Relay Slow Release (2 seconds time delay)
		128	-	50V	DC Neutral Relay Slow Release (3 seconds time delay)
		129	-	50V	DC Neutral Relay Slow Release (4 seconds time delay)
		130	-	50V	DC Neutral Relay Slow Release (5 seconds time delay)
1057	D E F G L	9	966 F3	24V	DC Neutral Line Relay with Heavy Duty Metal to Metal Back Contacts
		9	-	24V	DC Neutral Line Relay with Heavy Duty Metal to Metal Back Contacts
		11	966 F3	24V	DC Neutral Line Relay Double Wound
1058	D E F H L	-	-	-	Reserved
1059	D E F J L	125	962	50V	Twin DC Thermal Timer Relay (30-120 seconds time delay)
		131	-	-	Geographical Shorting Unit
1060	D E F K L	132	-	50V	Twin AC Immune (PO 3000 type) Relay Unit (6-9 seconds delay)
1061	D E G H L	113 or 114	-	12V	Transmitter Reed Filter RR1010
1062	D E G J L	112 115 116 or 134	-	12V	Receiver Reed Filter RR2010
1063	D E G K L	113 or 114	-	12V	Transmitter Reed Filter RR1020
1064	D E H J L	112 115 116 or 134	-	12V	Receiver Reed Filter RR2020

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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1065	D E H K L	113 or 114	–	12V	Transmitter Reed Filter RR1030
1066	D E J K L	112 115 116 or 134	–	12V	Receiver Reed Filter RR2030
1067	D F G H L	113 or 114	–	12V	Transmitter Reed Filter RR1040
1068	D F G J L	112 115 116 or 134	–	12V	Receiver Reed Filter RR2040
1069	D F G K L	113 or 114	–	12V	Transmitter Reed Filter RR1050
1070	D F H J L	112 115 116 or 134	–	12V	Receiver Reed Filter RR2050
1071	D F H K L	113 or 114	–	12V	Transmitter Reed Filter RR1060
1072	D F J K L	112 115 116 or 134	–	12V	Receiver Reed Filter RR2060
1073	D G H J L	113 or 114	–	12V	Transmitter Reed Filter RR1070
1074	D G H K L	112 115 116 or 134	–	12V	Receiver Reed Filter RR2070
1075	D G J K L	113 or 114	–	12V	Transmitter Reed Filter RR1080
1076	D H J K L	112 115 116 or 134	–	12V	Receiver Reed Filter RR2080
1077	D E F G M	113 or 114	–	12V	Transmitter Reed Filter RR1090
1078	D E F H M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2090
1079	D E F J M	113 or 114	–	12V	Transmitter Reed Filter RR1100
1080	D E F K M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2100
1081	D E F L M	113 or 114	–	12V	Transmitter Reed Filter RR1110

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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1082	D E G H M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2110
1083	D E G J M	113 or 114	–	12V	Transmitter Reed Filter RR1120
1084	D E G K M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2120
1085	D E G L M	113 or 114	–	12V	Transmitter Reed Filter RR1130
1086	D E H J M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2130
1087	D E H K M	113 or 114	–	12V	Transmitter Reed Filter RR1140
1088	D E H L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2140
1089	D E J K M	113 or 114	–	12V	Transmitter Reed Filter RR1150
1090	D E J L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2150
1091	D E K L M	113 or 114	–	12V	Transmitter Reed Filter RR1160
1092	D F G H M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2160
1093	D F G J M	113 or 114	–	12V	Transmitter Reed Filter RR1170
1094	D F G K M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2170
1095	D F G L M	113 or 114	–	12V	Transmitter Reed Filter RR1180
1096	D F H J M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2180
1097	D F H K M	113 or 114	–	12V	Transmitter Reed Filter RR1190
1098	D F H L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2190

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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1099	D F J K M	113 or 114	–	12V	Transmitter Reed Filter RR1200
1100	D F J L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2200
1101	D F K L M	113 or 114	–	12V	Transmitter Reed Filter RR1210
1102	D G H J M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2210
1103	D G H K M	113 or 114	–	12V	Transmitter Reed Filter RR1220
1104	D G H L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2220
1105	D G J K M	113 or 114	–	12V	Transmitter Reed Filter RR1230
1106	D G J L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2230
1107	D G K L M	113 or 114	–	12V	Transmitter Reed Filter RR1240
1108	D H J K M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2240
1109	D H J L M	113 or 114	–	12V	Transmitter Reed Filter RR1250
1110	D H K L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2250
1111	D J K L M	113 or 114	–	12V	Transmitter Reed Filter RR1260
1112	D E F G N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2260
1113	D E F H N	113 or 114	–	12V	Transmitter Reed Filter RR1270
1114	D E F J N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2270
1115	D E F K N	113 or 114	–	12V	Transmitter Reed Filter RR1280

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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1116	DEFLN	112 115 116 or 134	–	12V	Receiver Reed Filter RR2280
1117	DEFMN	113 or 114	–	12V	Transmitter Reed Filter RR1290
1118	DEGHN	112 115 116 or 134	–	12V	Receiver Reed Filter RR2290
1119	DEGJN	113 or 114	–	12V	Transmitter Reed Filter RR1300
1120	DEGKN	112 115 116 or 134	–	12V	Receiver Reed Filter RR2300
1121	DEGLN	113 or 114	–	12V	Transmitter Reed Filter RR1310
1122	DEGMN	112 115 116 or 134	–	12V	Receiver Reed Filter RR2310
1123	DEHJN	113 or 114	–	12V	Transmitter Reed Filter RR1320
1124	DEHKN	112 115 116 or 134	–	12V	Receiver Reed Filter RR2320
1125	DEHLN	113 or 114	–	12V	Transmitter Reed Filter RR1330
1126	DEHMN	112 115 116 or 134	–	12V	Receiver Reed Filter RR2330
1127	DEJKN	113 or 114	–	12V	Transmitter Reed Filter RR1340
1128	DEJLN	112 115 116 or 134	–	12V	Receiver Reed Filter RR2340
1129	DEJMN	113 or 114	–	12V	Transmitter Reed Filter RR1350
1130	DEKLN	112 115 116 or 134	–	12V	Receiver Reed Filter RR2350
1131	DEKMN	113 or 114	–	12V	Transmitter Reed Filter RR1360
1132	DELMN	112 115 116 or 134	–	12V	Receiver Reed Filter RR2360

## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1133	D F G H N	113 or 114	–	12V	Transmitter Reed Filter RR1370
1134	D F G J N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2370
1135	D F G K N	113 or 114	–	12V	Transmitter Reed Filter RR1380
1136	D F G L N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2380
1137	D F G M N	113 or 114	–	12V	Transmitter Reed Filter RR1390
1138	D F H J N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2390
1139	D F H K N	113 or 114	–	12V	Transmitter Reed Filter RR1400
1140	D F H L N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2400
1141	D F H M N	113 or 114	–	12V	Transmitter Reed Filter RR1410
1142	D F J K N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2410
1143	D F J L N	113 or 114	–	12V	Transmitter Reed Filter RR1420
1144	D F J M N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2420
1145	D F K L N	113 or 114	–	12V	Transmitter Reed Filter RR1430
1146	D F K M N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2430
1147	D F L M N	113 or 114	–	12V	Transmitter Reed Filter RR1440
1148	D G H J N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2440
1149	D G H K N	113 or 114	–	12V	Transmitter Reed Filter RR1450

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Pin Code	Pin Code Configuration	Arr	Style/ Spec	Rating	Description/Remarks
1150	D G H L N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2450
1151	D G H M N	113 or 114	–	12V	Transmitter Reed Filter RR1460
1152	D G J K N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2460
1153	D G J L N	113 or 114	–	12V	Transmitter Reed Filter RR1470 & RR4140
1154	D G J M N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2470 & RR7140
1155	D G K L N	113 or 114	–	12V	Transmitter Reed Filter RR1480 & RR4160
1156	D G K M N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2480 & RR7160
1157	D G L M N	113 or 114	–	12V	Transmitter Reed Filter RR1490
1158	D H J K N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2490
1159	D H J L N	113 or 114	–	12V	Transmitter Reed Filter RR1500
1160	D H J M N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2500
1161	D H K L N	113 or 114	–	12V	Transmitter Reed Filter RR1510
1162	D H K M N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2510
1169	E F G J L	113 or 114	–	12V	Transmitter Reed Filter RR4010
1170	E F G K L	112 115 or 116	–	12V	Receiver Reed Filter RR7010
1171	E F H J L	113 or 114	–	12V	Transmitter Reed Filter RR4020
1172	E F H K L	112 115 or 116	–	12V	Receiver Reed Filter RR7020
1173	E F J K L	113 or 114	–	12V	Transmitter Reed Filter RR4030



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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1174	E G H J L	112 115 or 116	–	12V	Receiver Reed Filter RR7030
1175	E G H K L	113 or 114	–	12V	Transmitter Reed Filter RR4040
1176	E G J K L	112 115 or 116	–	12V	Receiver Reed Filter RR7040
1177	E H J K L	113 or 114	–	12V	Transmitter Reed Filter RR4050
1178	E F G H M	112 115 or 116	–	12V	Receiver Reed Filter RR7050
1179	E F G J M	113 or 114	–	12V	Transmitter Reed Filter RR1600
1180	E F G K M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2600
1181	E F G L M	113 or 114	–	12V	Transmitter Reed Filter RR1610
1182	E F H J M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2610
1183	E F H K M	113 or 114	–	12V	Transmitter Reed Filter RR1620
1184	E F H L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2620
1185	E F J K M	113 or 114	–	12V	Transmitter Reed Filter RR1630
1186	E F J L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2630
1187	E F K L M	113 or 114	–	12V	Transmitter Reed Filter RR1640
1188	E G H J M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2640
1189	E G H K M	113 or 114	–	12V	Transmitter Reed Filter RR1650
1190	E G H L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2650
1191	E G J K M	113 or 114	–	12V	Transmitter Reed Filter RR1660

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## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/ Spec	Rating	Description/Remarks
1192	E G J L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2660
1193	E G K L M	113 or 114	–	12V	Transmitter Reed Filter RR1670
1194	E H J K M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2670
1195	E H J L M	113 or 114	–	12V	Transmitter Reed Filter RR1680
1196	E H K L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2680
1211	E F K M N	113 or 114	–	12V	Transmitter Reed Filter RR4060
1212	E F L M N	112 115 or 116	–	12V	Receiver Reed Filter RR7060
1213	E G H J N	113 or 114	–	12V	Transmitter Reed Filter RR4070
1214	E G H K N	112 115 or 116	–	12V	Receiver Reed Filter RR7070
1215	E G H L N	113 or 114	–	12V	Transmitter Reed Filter RR4080
1216	E G H M N	112 115 or 116	–	12V	Receiver Reed Filter RR7080
1217	E G J K N	113 or 114	–	12V	Transmitter Reed Filter RR4090
1218	E G J L N	112 115 or 116	–	12V	Receiver Reed Filter RR7090
1221	E G K M N	113 or 114	–	12V	Transmitter Reed Filter RR1810
1222	E G L M N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2810
1223	E H J K N	113 or 114	–	12V	Transmitter Reed Filter RR1820 & RR4120
1224	E H J L N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2820 & RR7120
1225	E H J M N	113 or 114	–	12V	Transmitter Reed Filter RR1830

## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1226	E H K L N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2830
1227	E H K M N	113 or 114	–	12V	Transmitter Reed Filter RR1840
1228	E H L M N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2840
1229	E J K L N	113 or 114	–	12V	Transmitter Reed Filter RR1850
1230	E J K M N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2850
1231	E J L M N	113 or 114	–	12V	Transmitter Reed Filter RR1860
1232	E K L M N	112 115 116 or 134	–	12V	Receiver Reed Filter RR2860
1233	F G H J L	113 or 114	–	12V	Transmitter Reed Filter RR1870
1234	F G H K L	112 115 116 or 134	–	12V	Receiver Reed Filter RR2870
1235	F G J K L	113 or 114	–	12V	Transmitter Reed Filter RR1880
1236	F H J K L	112 115 116 or 134	–	12V	Receiver Reed Filter RR2880
1237	F G H J M	113 or 114	–	12V	Transmitter Reed Filter RR1890
1238	F G H K M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2890
1239	F G H L M	113 or 114	–	12V	Transmitter Reed Filter RR1900
1240	F G J K M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2900
1241	F G J L M	113 or 114	–	12V	Transmitter Reed Filter RR1910
1242	F G K L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2910

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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1243	F H J K M	113 or 114	–	12 V	Transmitter Reed Filter RR1920
1244	F H J L M	112 115 116 or 134	–	12V	Receiver Reed Filter RR2920
1245	F H K L M	113 or 114	–	12V	Transmitter Reed Filter RR1930
1249	F G H L N	113 or 114	–	12 V	Transmitter Reed Filter RR4100
1250	F G H M N	112 115 or 116	–	12V	Receiver Reed Filter RR7100
1253	F G J M N	113 or 114	–	12 V	Transmitter Reed Filter RR4110
1254	F G K L N	112 115 or 116	–	12V	Receiver Reed Filter RR7110
1255	F G K M N	113 or 114	–	12 V	Transmitter Reed Filter RR4130
1256	F G L M N	112 115 or 116	–	12V	Receiver Reed Filter RR7130
1257	F H J K N	113 or 114	–	12 V	Transmitter Reed Filter RR4150
1258	F H J L N	112 115 or 116	–	12V	Receiver Reed Filter RR7150
1285	H J L M N	133	–	12V	Reed Transmitter Repeater Unit RR1990
1304	A B D K P	-	–	9Ω	DC Neutral Track Relay
1360	PQ	112 115 or 116	–	12V	Receiver Reed Filter (Universal Spare) RR1710, RR1720, RR2710 & RR2720
1361	D E G H L P Q	113 or 114	–	12V	Transmitter Reed Filter RR1010 for use with a Universal Spare
1362	D E G J L P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2010 for use with a Universal Spare
1363	D E G K L P Q	113 or 114	–	12V	Transmitter Reed Filter RR1020 for use with a Universal Spare
1364	D E H J L P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2020 for use with a Universal Spare
1365	D E H K L P Q	113 or 114	–	12V	Transmitter Reed Filter RR1030 for use with a Universal Spare
1366	D E J K L P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2030 for use with a Universal Spare

## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1367	D F G H L P Q	113 or 114	–	12V	Transmitter Reed Filter RR1040 for use with a Universal Spare
1368	D F G J L P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2040 for use with a Universal Spare
1369	D F G K L P Q	113 or 114	–	12V	Transmitter Reed Filter RR1050 for use with a Universal Spare
1370	D F H J L P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2050 for use with a Universal Spare
1371	D F H K L P Q	113 or 114	–	12V	Transmitter Reed Filter RR1060 for use with a Universal Spare
1372	D F J K L P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2060 for use with a Universal Spare
1373	D G H J L P Q	113 or 114	–	12V	Transmitter Reed Filter RR1070 for use with a Universal Spare
1374	D G H K L P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2070 for use with a Universal Spare
1375	D G J K L P Q	113 or 114	–	12V	Transmitter Reed Filter RR1080 for use with a Universal Spare
1376	D H J K L P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2080 for use with a Universal Spare
1377	D E F G M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1090 for use with a Universal Spare
1378	D E F H M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2090 for use with a Universal Spare
1379	D E F J M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1100 for use with a Universal Spare
1380	D E F K M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2100 for use with a Universal Spare
1381	D E F L M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1110 for use with a Universal Spare
1382	D E G H M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2110 for use with a Universal Spare
1383	D E G J M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1120 for use with a Universal Spare

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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1384	D E G K M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2120 for use with a Universal Spare
1385	D E G L M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1130 for use with a Universal Spare
1386	D E H J M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2130 for use with a Universal Spare
1387	D E H K M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1140 for use with a Universal Spare
1388	D E H L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2140 for use with a Universal Spare
1389	D E J K M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1150 for use with a Universal Spare
1390	D E J L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2150 for use with a Universal Spare
1391	D E K L M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1160 for use with a Universal Spare
1392	D F G H M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2160 for use with a Universal Spare
1393	D F G J M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1170 for use with a Universal Spare
1394	D F G K M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2170 for use with a Universal Spare
1395	D F G L M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1180 for use with a Universal Spare
1396	D F H J M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2180 for use with a Universal Spare
1397	D F H K M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1190 for use with a Universal Spare
1398	D F H L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2190 for use with a Universal Spare
1399	D F J K M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1200 for use with a Universal Spare
1400	D F J L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2200 for use with a Universal Spare

## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1401	D F K L M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1210 for use with a Universal Spare
1402	D G H J M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2210 for use with a Universal Spare
1403	D G H K M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1220 for use with a Universal Spare
1404	D G H L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2220 for use with a Universal Spare
1405	D G J K M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1230 for use with a Universal Spare
1406	D G J L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2230 for use with a Universal Spare
1407	D G K L M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1240 for use with a Universal Spare
1408	D H J K M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2240 for use with a Universal Spare
1409	D H J L M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1250 for use with a Universal Spare
1410	D H K L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2250 for use with a Universal Spare
1411	D J K L M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1260 for use with a Universal Spare
1412	D E F G N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2260 for use with a Universal Spare
1413	D E F H N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1270 for use with a Universal Spare
1414	D E F J N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2270 for use with a Universal Spare
1415	D E F K N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1280 for use with a Universal Spare
1416	D E F L N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2280 for use with a Universal Spare
1417	D E F M N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1290 for use with a Universal Spare

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## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/ Spec	Rating	Description/Remarks
1418	DEGHNPQ	112 115 116 or 134	–	12V	Receiver Reed Filter RR2290 for use with a Universal Spare
1419	DEGJNPQ	113 or 114	–	12V	Transmitter Reed Filter RR1300 for use with a Universal Spare
1420	DEGKNPQ	112 115 116 or 134	–	12V	Receiver Reed Filter RR2300 for use with a Universal Spare
1421	DEGLNPQ	113 or 114	–	12V	Transmitter Reed Filter RR1310 for use with a Universal Spare
1422	DEGMNPQ	112 115 116 or 134	–	12V	Receiver Reed Filter RR2310 for use with a Universal Spare
1423	DEHJNPQ	113 or 114	–	12V	Transmitter Reed Filter RR1320 for use with a Universal Spare
1424	DEHKNPQ	112 115 116 or 134	–	12V	Receiver Reed Filter RR2320 for use with a Universal Spare
1425	DEHLNPQ	113 or 114	–	12V	Transmitter Reed Filter RR1330 for use with a Universal Spare
1426	DEHMNPQ	112 115 116 or 134	–	12V	Receiver Reed Filter RR2330 for use with a Universal Spare
1427	DEJKNPQ	113 or 114	–	12V	Transmitter Reed Filter RR1340 for use with a Universal Spare
1428	DEJLNPQ	112 115 116 or 134	–	12V	Receiver Reed Filter RR2340 for use with a Universal Spare
1429	DEJMNPQ	113 or 114	–	12V	Transmitter Reed Filter RR1350 for use with a Universal Spare
1430	DEKLPQ	112 115 116 or 134	–	12V	Receiver Reed Filter RR2350 for use with a Universal Spare
1431	DEKMNPQ	113 or 114	–	12V	Transmitter Reed Filter RR1360 for use with a Universal Spare
1432	DELMNPQ	112 115 116 or 134	–	12V	Receiver Reed Filter RR2360 for use with a Universal Spare
1433	DFGHNPQ	113 or 114	–	12V	Transmitter Reed Filter RR1370 for use with a Universal Spare
1434	DFGJNPQ	112 115 116 or 134	–	12V	Receiver Reed Filter RR2370 for use with a Universal Spare



## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1435	D F G K N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1380 for use with a Universal Spare
1436	D F G L N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2380 for use with a Universal Spare
1437	D F G M N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1390 for use with a Universal Spare
1438	D F H J N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2390 for use with a Universal Spare
1439	D F H K N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1400 for use with a Universal Spare
1440	D F H L N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2400 for use with a Universal Spare
1441	D F H M N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1410 for use with a Universal Spare
1442	D F J K N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2410 for use with a Universal Spare
1443	D F J L N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1420 for use with a Universal Spare
1444	D F J M N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2420 for use with a Universal Spare
1445	D F K L N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1430 for use with a Universal Spare
1446	D F K M N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2430 for use with a Universal Spare
1447	D F L M N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1440 for use with a Universal Spare
1448	D G H J N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2440 for use with a Universal Spare
1449	D G H K N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1450 for use with a Universal Spare
1450	D G H L N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2450 for use with a Universal Spare
1451	D G H M N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1460 for use with a Universal Spare

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Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1452	D G J K N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2460 for use with a Universal Spare
1453	D G J L N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1470 for use with a Universal Spare
1454	D G J M N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2470 for use with a Universal Spare
1455	D G K L N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1480 for use with a Universal Spare
1456	D G K M N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2480 for use with a Universal Spare
1457	D G L M N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1490 for use with a Universal Spare
1458	D H J K N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2490 for use with a Universal Spare
1459	D H J L N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1500 for use with a Universal Spare
1460	D H J M N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2500 for use with a Universal Spare
1461	D H K L N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1510 for use with a Universal Spare
1462	D H K M N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2510 for use with a Universal Spare
1480	E F G K M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2600 for use with a Universal Spare
1482	E F H J M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2610 for use with a Universal Spare
1484	E F H L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2620 for use with a Universal Spare
1486	E F J L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2630 for use with a Universal Spare
1488	E G H J M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2640 for use with a Universal Spare

## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
1490	E G H L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2650 for use with a Universal Spare
1492	E G J L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2660 for use with a Universal Spare
1494	E H J K M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2670 for use with a Universal Spare
1496	E H K L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2680 for use with a Universal Spare
1521	E G K M N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1810 for use with a Universal Spare
1522	E G L M N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2810 for use with a Universal Spare
1523	E H J K N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1820 for use with a Universal Spare
1524	E H J L N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2820 for use with a Universal Spare
1525	E H J M N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1830 for use with a Universal Spare
1526	E H K L N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2830 for use with a Universal Spare
1527	E H K M N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1840 for use with a Universal Spare
1528	E H L M N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2840 for use with a Universal Spare
1529	E J K L N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1850 for use with a Universal Spare
1530	E J K M N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2850 for use with a Universal Spare
1531	E J L M N P Q	113 or 114	–	12V	Transmitter Reed Filter RR1860 for use with a Universal Spare
1532	E K L M N P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2860 for use with a Universal Spare
1533	F G H J L P Q	113 or 114	–	12V	Transmitter Reed Filter RR1870 for use with a Universal Spare

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Pin Code	Pin Code Configuration	Arr	Style/ Spec	Rating	Description/Remarks
1534	F G H K L P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2870 for use with a Universal Spare
1535	F G J K L P Q	113 or 114	–	12V	Transmitter Reed Filter RR1880 for use with a Universal Spare
1536	F H J K L P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2880 for use with a Universal Spare
1537	F G H J M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1890 for use with a Universal Spare
1538	F G H K M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2890 for use with a Universal Spare
1539	F G H L M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1900 for use with a Universal Spare
1540	F G J K M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2900 for use with a Universal Spare
1541	F G J L M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1910 for use with a Universal Spare
1542	F G K L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2910 for use with a Universal Spare
1543	F H J K M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1920 for use with a Universal Spare
1544	F H J L M P Q	112 115 116 or 134	–	12V	Receiver Reed Filter RR2920 for use with a Universal Spare
1545	F H K L M P Q	113 or 114	–	12V	Transmitter Reed Filter RR1930 for use with a Universal Spare
6001	A B C D E F	–	–	–	Reset Counter for TEMPL 32 for use with SEL Axle Counters
6002	A B C D E G	–	–	24V	Wheel Detector Control Unit (FREDDY)
6003	A B C D E H	–	–	12V	Wheel Detector Control Unit (FREDDY)
6011	A B C D G J	135	–	110/24V	Transformer-Rectifier Unit
6012	A B C D G K	136	–	110/50V	Transformer-Rectifier Unit
6013	A B C D H J	136	–	110/50V	Transformer-Rectifier Unit
6014	A B C D H K	136	–	110/50V	Transformer-Rectifier Unit
6015	A B C D J K	136	–	110/50V	Transformer-Rectifier Unit
6016	A B C E F G	135	–	110/28V	Transformer-Rectifier Unit
6017	A B C E F H	135	–	110/24V	Transformer-Rectifier Unit
6018	A B C E F J	135	–	110/24V	Transformer-Rectifier Unit
6019	A B C E F K	137	–	110/50V	Transformer-Rectifier Unit for use with 50 volt relays
6025	A B C E J K	138	–	50V	DC Neutral Line Relay with Elkonite contacts
6026	A B C F G H	138	–	50V	AC Immune DC Neutral Line Relay with Elkonite contacts
6027	A B C F G J	139	–	50V	AC Immune DC Neutral Line Relay with 4 Elkonite contacts
6041	A B D E G J	140	–	1.3A	Twin AC Relay Unit for filament changeover of two colour light signals

## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
6042	A B D E G K	141	–	50V	DC Relay Unit for detecting & indicating the state of filament changeover relays in unit coded 6041
6043	A B D E H J	142	–	1.3A	Twin Filament Proving Relay Unit
6044	A B D E H K	143	–	30W	Resistor Unit
6045	A B D E J K	142	–	1A	Twin Filament Proving Relay Unit
6046	A B D F G H	110	949	24V	DC Time Delay Relay (time delay 6-9 seconds)
6047	A B D F G J	110	949	24V	DC Time Delay Relay (time delay 6-9 seconds)
6058	A B E F G K	144	–	50V	Twin Relay Unit. {For use with Capacitor/Resistor Unit code 6059}
6059	A B E F H J	145	–	50V	Resistor/Capacitor Unit
6060	A B E F H K	146	–	12V	Resistor/Capacitor Unit
6061	A B E F J K	147	–	50V	Time Delay Unit (time delay 4.5-9.6 seconds)
6062	A B E G H J	148	–	50V	Diode Unit for Blocking DC Feeds
6063	A B E G H K	39	–	60Ω	Resistor-Diode Unit
		39	–	190Ω	Resistor-Diode Unit
		39	–	3x20kΩ	Resistor-Diode Unit
		39	–	2x20kΩ/ 1x190Ω	Resistor-Diode Unit
		39	–	4x20kΩ	Resistor-Diode Unit
6210	E F G H J K	-	–	50V	PO type Relay Unit
7061	A D E G H L Q	150	–	12V	Transmitter Reed RR3010
7063	A D E G K L Q	150	–	12V	Transmitter Reed RR3020
7065	A D E H K L Q	150	–	12V	Transmitter Reed RR3030
7067	A D F G H L Q	150	–	12V	Transmitter Reed RR3040
7069	A D F G K L Q	150	–	12V	Transmitter Reed RR3050
7071	A D F H K L Q	150	–	12V	Transmitter Reed RR3060
7073	A D G H J L Q	150	–	12V	Transmitter Reed RR3070
7075	A D G J K L Q	150	–	12V	Transmitter Reed RR3080
7077	A D E F G M Q	150	–	12V	Transmitter Reed RR3090
7079	A D E F J M Q	150	–	12V	Transmitter Reed RR3100
7081	A D E F L M Q	150	–	12V	Transmitter Reed RR3110
7083	A D E G J M Q	150	–	12V	Transmitter Reed RR3120
7085	A D E G L M Q	150	–	12V	Transmitter Reed RR3130
7087	A D E H K M Q	150	–	12V	Transmitter Reed RR3140
7089	A D E J K M Q	150	–	12V	Transmitter Reed RR3150
7091	A D E K L M Q	150	–	12V	Transmitter Reed RR3160
7093	A D F G J M Q	150	–	12V	Transmitter Reed RR3170
7095	A D F G L M Q	150	–	12V	Transmitter Reed RR3180
7097	A D F H K M Q	150	–	12V	Transmitter Reed RR3190
7099	A D F J K M Q	150	–	12V	Transmitter Reed RR3200
7101	A D F K L M Q	150	–	12V	Transmitter Reed RR3210
7103	A D G H K M Q	150	–	12V	Transmitter Reed RR3220
7105	A D G J K M Q	150	–	12V	Transmitter Reed RR3230
7107	A D G K L M Q	150	–	12V	Transmitter Reed RR3240
7109	A D H J L M Q	150	–	12V	Transmitter Reed RR3250
7111	A D J K L M Q	150	–	12V	Transmitter Reed RR3260
7113	A D E F H N Q	150	–	12V	Transmitter Reed RR3270
7115	A D E F K N Q	150	–	12V	Transmitter Reed RR3280
7117	A D E F M N Q	150	–	12V	Transmitter Reed RR3290
7119	A D E G J N Q	150	–	12V	Transmitter Reed RR3300
7121	A D E G L N Q	150	–	12V	Transmitter Reed RR3310
7123	A D E H J N Q	150	–	12V	Transmitter Reed RR3320
7125	A D E H L N Q	150	–	12V	Transmitter Reed RR3330
7127	A D E J K N Q	150	–	12V	Transmitter Reed RR3340
7129	A D E J M N Q	150	–	12V	Transmitter Reed RR3350
7131	A D E K M N Q	150	–	12V	Transmitter Reed RR3360
7133	A D F G H N Q	150	–	12V	Transmitter Reed RR3370
7135	A D F G K N Q	150	–	12V	Transmitter Reed RR3380
7137	A D F G M N Q	150	–	12V	Transmitter Reed RR3390

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Pin Code	Pin Code Configuration	Arr	Style/ Spec	Rating	Description/Remarks
7139	ADFHKNQ	150	-	12V	Transmitter Reed RR3400
7141	ADFHMNQ	150	-	12V	Transmitter Reed RR3410
7143	ADFJLNQ	150	-	12V	Transmitter Reed RR3420
7145	ADFKLNQ	150	-	12V	Transmitter Reed RR3430
7147	ADFLMNQ	150	-	12V	Transmitter Reed RR3440
7149	ADGHKNQ	150	-	12V	Transmitter Reed RR3450
7151	ADGHMNQ	150	-	12V	Transmitter Reed RR3460
7153	ADGJLNQ	150	-	12V	Transmitter Reed RR3470
7155	ADGKLNQ	150	-	12V	Transmitter Reed RR3480
7157	ADGLMNQ	150	-	12V	Transmitter Reed RR3490
7159	ADHJLNQ	150	-	12V	Transmitter Reed RR3500
7161	ADHKLNQ	150	-	12V	Transmitter Reed RR3510
7221	AEGKMNQ	150	-	12V	Transmitter Reed RR3810
7223	AEHJKNQ	150	-	12V	Transmitter Reed RR3820
7225	AEHJMNQ	150	-	12V	Transmitter Reed RR3830
7227	AEHKMNQ	150	-	12V	Transmitter Reed RR3840
7229	AEJKNQ	150	-	12V	Transmitter Reed RR3850
7231	AEJLMNQ	150	-	12V	Transmitter Reed RR3860
7233	AFGHJLQ	150	-	12V	Transmitter Reed RR3870
7235	AFGJKLQ	150	-	12V	Transmitter Reed RR3880
7237	AFGHJMQ	150	-	12V	Transmitter Reed RR3890
7239	AFGHLMQ	150	-	12V	Transmitter Reed RR3900
7241	AFGJLMQ	150	-	12V	Transmitter Reed RR3910
7243	AFHJKMQ	150	-	12V	Transmitter Reed RR3920
7285	AHJLMNQ	150	-	12V	Reed Transmitter Repeater Unit RR3990
7360	APQ	150	-	12V	Transmitter Reed Filter (Universal Spare) RR3710 & RR3720
7361	ADEGHLPQ	150	-	12V	Transmitter Reed RR3010
7363	ADEGKLPQ	150	-	12V	Transmitter Reed RR3020
7365	ADEHKLPQ	150	-	12V	Transmitter Reed RR3030
7367	ADFGHLPQ	150	-	12V	Transmitter Reed RR3040
7369	ADFGKLPQ	150	-	12V	Transmitter Reed RR3050
7371	ADFHKLPQ	150	-	12V	Transmitter Reed RR3060
7373	ADGHJLPQ	150	-	12V	Transmitter Reed RR3070
7375	ADGJKLPQ	150	-	12V	Transmitter Reed RR3080
7377	ADEFGMPQ	150	-	12V	Transmitter Reed RR3090
7379	ADEFJMPQ	150	-	12V	Transmitter Reed RR3100
7381	ADEFLMPQ	150	-	12V	Transmitter Reed RR3110
7383	ADEGJMPQ	150	-	12V	Transmitter Reed RR3120
7385	ADEGLMPQ	150	-	12V	Transmitter Reed RR3130
7387	ADEHKMPQ	150	-	12V	Transmitter Reed RR3140
7389	ADEJKMPQ	150	-	12V	Transmitter Reed RR3150
7391	ADEKLPQ	150	-	12V	Transmitter Reed RR3160
7393	ADFGJMPQ	150	-	12V	Transmitter Reed RR3170
7395	ADFGLMPQ	150	-	12V	Transmitter Reed RR3180
7397	ADFHKMPQ	150	-	12V	Transmitter Reed RR3190
7399	ADFJKMPQ	150	-	12V	Transmitter Reed RR3200
7401	ADFKLMPQ	150	-	12V	Transmitter Reed RR3210
7403	ADGHKMPQ	150	-	12V	Transmitter Reed RR3220
7405	ADGJKMPQ	150	-	12V	Transmitter Reed RR3230
7407	ADGKLMPQ	150	-	12V	Transmitter Reed RR3240
7409	ADHJLMPQ	150	-	12V	Transmitter Reed RR3250
7411	ADJKLMPQ	150	-	12V	Transmitter Reed RR3260
7413	ADEFHNPQ	150	-	12V	Transmitter Reed RR3270
7415	ADEFKNPQ	150	-	12V	Transmitter Reed RR3280
7417	ADEFMNPQ	150	-	12V	Transmitter Reed RR3290
7419	ADEGJNPQ	150	-	12V	Transmitter Reed RR3300

## BR930 Series Pin Code Allocations and Contact Arrangements

Pin Code	Pin Code Configuration	Arr	Style/Spec	Rating	Description/Remarks
7421	ADEGLNPQ	150	-	12V	Transmitter Reed RR3310
7423	ADEHJNPQ	150	-	12V	Transmitter Reed RR3320
7425	ADEHLNPQ	150	-	12V	Transmitter Reed RR3330
7427	ADEJKNPQ	150	-	12V	Transmitter Reed RR3340
7429	ADEJMNPQ	150	-	12V	Transmitter Reed RR3350
7431	ADEKMNPQ	150	-	12V	Transmitter Reed RR3360
7433	ADFGHNPQ	150	-	12V	Transmitter Reed RR3370
7435	ADFGKNPQ	150	-	12V	Transmitter Reed RR3380
7437	ADFGMNPQ	150	-	12V	Transmitter Reed RR3390
7439	ADFHKNPQ	150	-	12V	Transmitter Reed RR3400
7441	ADFH MNPQ	150	-	12V	Transmitter Reed RR3410
7443	ADFJLNPQ	150	-	12V	Transmitter Reed RR3420
7445	ADFKLNPQ	150	-	12V	Transmitter Reed RR3430
7447	ADFLMNPQ	150	-	12V	Transmitter Reed RR3440
7449	ADGHKNPQ	150	-	12V	Transmitter Reed RR3450
7451	ADGHMNPQ	150	-	12V	Transmitter Reed RR3460
7453	ADGJLNPQ	150	-	12V	Transmitter Reed RR3470
7455	ADGKLN PQ	150	-	12V	Transmitter Reed RR3480
7457	ADGLMNPQ	150	-	12V	Transmitter Reed RR3490
7459	ADHJLNPQ	150	-	12V	Transmitter Reed RR3500
7461	ADHKLNPQ	150	-	12V	Transmitter Reed RR3510
7521	AEGKMNPQ	150	-	12V	Transmitter Reed RR3810
7523	AEHJKNPQ	150	-	12V	Transmitter Reed RR3820
7525	AEHJMNPQ	150	-	12V	Transmitter Reed RR3830
7527	AEHKMNPQ	150	-	12V	Transmitter Reed RR3840
7529	AEJKLNPQ	150	-	12V	Transmitter Reed RR3850
7531	AEJLMNPQ	150	-	12V	Transmitter Reed RR3860
7533	AFGHJLPQ	150	-	12V	Transmitter Reed RR3870
7535	AFGJKLPQ	150	-	12V	Transmitter Reed RR3880
7537	AFGHJMPQ	150	-	12V	Transmitter Reed RR3890
7539	AFGHLM PQ	150	-	12V	Transmitter Reed RR3900
7541	AFGJLMPQ	150	-	12V	Transmitter Reed RR3910
7543	AFHJKMPQ	150	-	12V	Transmitter Reed RR3920

## **BR930 Series Pin Code Allocations and Contact Arrangements**

### **6 Arrangement of Contacts and Other Connections**

The arrangements shown in this section depict the contact, coil and other connections to the plugboards as viewed from the rear (wiring side). The shaded positions are not used.

The following abbreviations are used on the arrangement illustrations:

a.c	Alternating Current
A	Arm
B	Back Contact
C	Coil
c/o	Changeover Contact
d.c	Direct Current
E	Earth
F	Front Contact
Fe	Elkonite Front Contact
HD	Heavy Duty
i/p	input
MB	Metal to Metal Back Contact
MF	Metal to Metal Front Contact
N	Normal Contact
o/p	output
PU	Pick up Coil
r	Resistor
R	Reverse Contact
REL	Release Coil
+ve	Positive
-ve	Negative



# BR930 Series Pin Code Allocations and Contact Arrangements

Arr. 1

	A	B	C	D
1	F	F		F
2	A	A		A
3	F	F		F
4	A	A		A
5	A	F		A
6	B	A		B
7	A	F		A
8	B	A		B
R1	C			C
R3				

8F 4B  
Single Wound

Arr. 2

	A	B	C	D
1	F	F		F
2	A	A		A
3	F	F		F
4	A	A		A
5	A	F		A
6	B	A		B
7	A	F		A
8	B	A		B
R1	C1			C1
R3	C2			C2

8F 4B  
Double Wound

Arr. 3

	A	B	C	D
1	F	F	F	F
2	A	A	A	A
3	F	F	F	F
4	A	A	A	A
5	A	F	F	A
6	B	A	A	B
7	A	F	F	A
8	B	A	A	B
R1	C			C
R3				

12F 4B  
Single Wound

Arr. 4

	A	B	C	D
1	F	F	F	F
2	A	A	A	A
3	F	F	F	F
4	A	A	A	A
5	A	F	F	A
6	B	A	A	B
7	A	F	F	A
8	B	A	A	B
R1	C1			C1
R3	C2			C2

12F 4B  
Double Wound

Arr. 5

	A	B	C	D
1	F			F
2	A			A
3	F			F
4	A			A
5	A			A
6	B			B
7	A			A
8	B			B
R1	C			C
R3				

4F 4B  
Single Wound

Arr. 6

	A	B	C	D
1	F			F
2	A			A
3	F			F
4	A			A
5	A			A
6	B			B
7	A			A
8	B			B
R1	C1			C1
R3	C2			C2

4F 4B  
Double Wound

Arr. 7

	A	B	C	D
1	F	F		F
2	A	A		A
3	F	F		F
4	A	A		A
5	A	A		A
6	B	B		B
7	A	A		A
8	B	B		B
R1	C			C
R3				

6F 6B  
Single Wound

Arr. 8

	A	B	C	D
1	F	F		F
2	A	A		A
3	F	F		F
4	A	A		A
5	A	A		A
6	B	B		B
7	A	A		A
8	B	B		B
R1	C1			C1
R3	C2			C2

6F 6B  
Double Wound

Arr. 9

	A	B	C	D
1	F	F	F	F
2	A	A	A	A
3	F	F	F	F
4	A	A	A	A
5	A	A	A	A
6	B	B	B	B
7	A	A	A	A
8	B	B	B	B
R1	C			C
R3				

8F 8B  
Single Wound

**Railway Group Guidance Note**

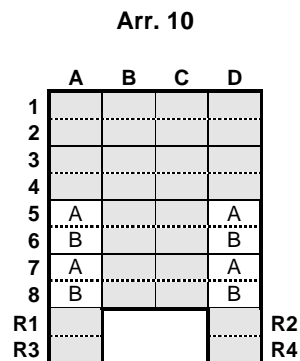
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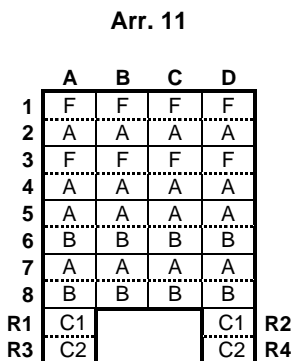
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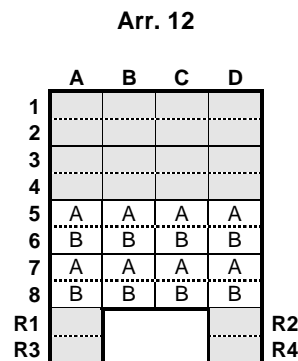
**BR930 Series Pin Code Allocations and Contact Arrangements**



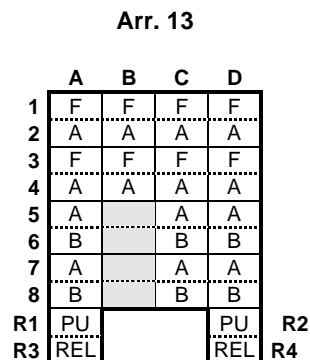
4B  
Shorting Unit



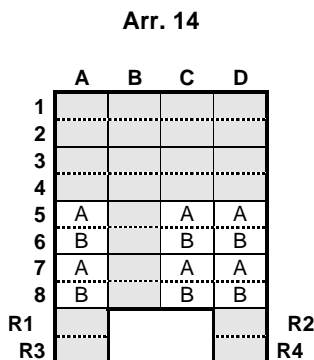
8F 8B  
Double Wound  
For Magnetically Latched Relay:  
Pick-up Coil R1 R2  
Release Coil R3 R4



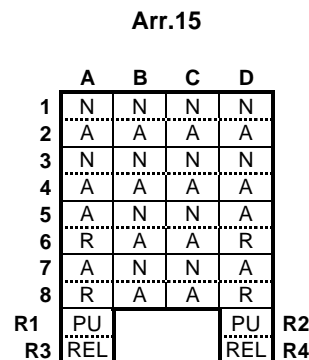
8B  
Shorting Unit



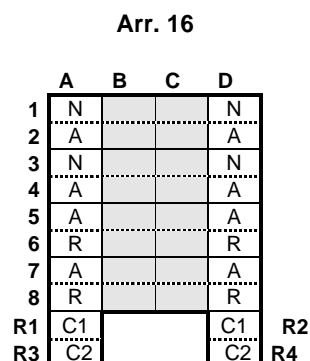
8F 6B  
Double Wound



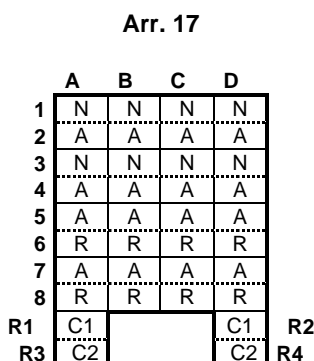
6B  
Shorting Unit



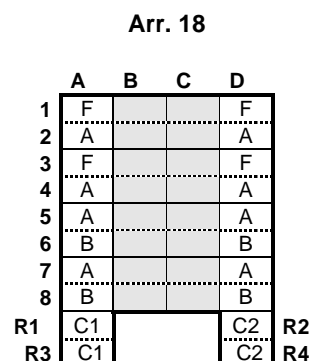
12N 4R  
Double Wound



4N 4R  
Double Wound



8N 8R  
Double Wound



2F 2B / 2F 2B  
Twin Single Wound

# BR930 Series Pin Code Allocations and Contact Arrangements

Arr. 19

	A	B	C	D	
1	F	F	F	F	
2	A	A	A	A	
3	F	F	F	F	
4	A	A	A	A	
5	A	A	A	A	
6	B	B	B	B	
7	A	A	A	A	
8	B	B	B	B	
R1	C1			C2	R2
R3	C1			C2	R4

4F 4B / 4F 4B  
Twin Single Wound

Arr. 20

	A	B	C	D	
1	F	F	F	F	
2	A	A	A	A	
3	F	F	F	F	
4	A	A	A	A	
5	A	F	F	A	
6	B	A	A	B	
7	A	F	F	A	
8	B	A	A	B	
R1	C1			C2	R2
R3	C1			C2	R4

6F 2B / 6F 2B  
Twin Single Wound

Arr. 21

	A	B	C	D	
1	AC			AC	
2					
3					
4	+ve			-ve	
5					
6					
7					
8					
R1					R2
R3					R4

Unit

Arr. 22

	A	B	C	D	
1	F			F	
2	A			A	
3	F			F	
4	A			A	
5					
6					
7					
8					
R1	C1			C1	R2
R3	C2			C2	R4

2F / 2F  
Twin Single Wound

Arr. 23

	A	B	C	D	
1	F				
2	A				
3	F				
4	A				
5	A				
6	B				
7	*1				
8	*2				
R1	*3			*5	R2
R3	*4			*6	R4

2F / 1B + Thermal

- \*1 Thermal Element
- \*2 Cold Contact
- \*3 Thermal Common
- \*4 Hot Contact & Coil
- \*5 Thermal Element & Coil
- \*6 Thermal Common

Arr. 24

	A	B	C	D	
1	*1				
2	*2				
3	F				
4	A				
5	A				
6	B				
7	*3				
8	*4				
R1	*4				R2
R3	*5				R4

1F 1B + Thermal

- \*1 Cold Contact
- \*2 Thermal Common
- \*3 Thermal Element
- \*4 Hot Contact
- \*5 Thermal Element & Coil

Arr. 25

	A	B	C	D	
1	F	F	F	F	
2	A	A	A	A	
3					
4					
5	A	A	A	A	
6	B	B	B	B	
7					
8					
R1	C			C	R2
R3					R4

4F 4B  
Single Wound

Arr. 26

	A	B	C	D	
1	F	F	F	F	
2	A	A	A	A	
3	F	F	F	F	
4	A	A	A	A	
5	A	A	A	A	
6	B	B	B	B	
7					
8					
R1	C			C	R2
R3					R4

8F 4B  
Single Wound

Arr. 27

	A	B	C	D	
1	F	F		F	
2	A	A		A	
3	F	F		F	
4	A	A		A	
5	A	F		A	
6	B	A		B	
7	A	F		A	
8	B	A		B	
R1	PU			PU	R2
R3	REL			REL	R4

8F 4B  
Double Wound

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**BR930 Series Pin Code Allocations and Contact Arrangements**

**Arr. 28**

	A	B	C	D	
1	F	F	F	F	
2	A	A	A	A	
3	F	F	F	F	
4	A	A	A	A	
5	A	F	F	A	
6	B	A	A	B	
7	A		F	A	
8	B		A	B	
R1	PU			PU	R2
R3	REL			REL	R4

11F 4B  
Double Wound

**Arr. 29**

	A	B	C	D	
1	F	F	F	F	
2	A	A	A	A	
3	F	F	F	F	
4	A	A	A	A	
5	A	F	F	A	
6	B	A	A	B	
7	A	F	F	A	
8	B	A	A	B	
R1	PU			PU	R2
R3	REL			REL	R4

12F 4B  
Double Wound

**Arr. 30**

	A	B	C	D	
1	F	F	F	F	
2	A	A	A	A	
3	F	F	F	F	
4	A	A	A	A	
5	A	A	A	A	
6	B	B	B	B	
7	A	A	A	A	
8	B	B	B	B	
R1	PU			PU	R2
R3	REL			REL	R4

8F 8B  
Double Wound

**Arr. 31**

	A	B	C	D	
1	F	F	F	F	
2	A	A	A	A	
3	F	F	F	F	
4	A	A	A	A	
5	A	A	A	A	
6	B	B	B	B	
7					
8					
R1	C			C	R2
R3					R4

8F 4B  
Single Wound

**Arr. 32**

	A	B	C	D	
1	F			F	
2	A			A	
3	F			F	
4	A			A	
5	A			A	
6	B			B	
7	C1			C3	
8	C1			C3	
R1	C2			C4	R2
R3	C2			C4	R4

2F 1B / 2F 1B  
Twin Double Wound

**Arr. 33**

	A	B	C	D	
1	F	F	F	F	
2	A	A	A	A	
3	F	F	F	F	
4	A	A	A	A	
5	A	A	A	A	
6	B	B	B	B	
7	C1	A	A	C3	
8	C1	B	B	C3	
R1	C2			C4	R2
R3	C2			C4	R4

4F 3B / 4F 3B  
Twin Double Wound

**Arr. 34**

	A	B	C	D	
1	F	F	F	F	
2	A	A	A	A	
3	F	F	F	F	
4	A	A	A	A	
5	A	F	F	A	
6	B	A	A	B	
7	C1	F	F	C3	
8	C1	A	A	C3	
R1	C2			C4	R2
R3	C2			C4	R4

6F 1B / 6F 1B  
Twin Double Wound

**Arr. 35**

	A	B	C	D	
1					
2					
3					
4					
5	A			A	
6	B			B	
7					
8					
R1					R2
R3					R4

1B 1B  
Shorting Unit

**Arr. 36**

	A	B	C	D	
1					
2					
3					
4					
5	A	A	A	A	
6	B	B	B	B	
7		A	A		
8		B	B		
R1					R2
R3					R4

3B / 3B  
Shorting Unit

# BR930 Series Pin Code Allocations and Contact Arrangements

Arr. 37

	A	B	C	D	
1	F			F	
2	A			A	
3	F			F	
4	A			A	
5					
6					
7					
8					
R1	C			C	R2
R3					R4

4F  
Single Wound

Arr. 38

	A	B	C	D	
1					
2					
3	F			F	
4	A			A	
5	A			A	
6	B			B	
7					
8					
R1	C			C	R2
R3					R4

2F 2B  
Single Wound

Arr. 39

	A	B	C	D	
1	+			-	
2	+			-	
3	+			-	
4	+			-	
5	+			-	
6	+			-	
7	+			-	
8	+			-	
R1	r			r	R2
R3					R4

Unit

Components to be added  
A1-D1 etc as required

Arr. 40

	A	B	C	D	
1					
2					
3					
4					
5					
6					
7		A		A	
8		B[ N]		B[ R]	
R1					R2
R3					R4

1B [Normal]  
1B [Reverse]

Arr. 41

	A	B	C	D	
1	AC			AC	
2	AC			AC	
3					
4	+ve			-ve	
5					
6					
7					
8					
R1					R2
R3					R4

Unit

Arr. 42

	A	B	C	D	
1	F			F	
2	A			A	
3	F			F	
4	A			A	
5	A			A	
6	B			B	
7					
8					
R1	C			C	R2
R3					R4

4F 2B  
Single Wound

Arr. 43

	A	B	C	D	
1	F			F	
2	A			A	
3					
4					
5					
6					
7					
8					
R1	C			C	R2
R3					R4

2F  
Single Wound

Arr. 44

	A	B	C	D	
1	F				
2	A				
3	F				
4	A				
5	A			A	
6	B			B	
7					
8					
R1	C			C	R2
R3	C			C	R4

2F 2B + Thermal

Arr. 45

	A	B	C	D	
1	F				
2	A				
3	F				
4	A				
5	A				
6	B				
7	*1				
8	*2				
R1	*3			*5	R2
R3	*4			*3	R4

2F 1B + Thermal

- \*1 Thermal Element
- \*2 Cold Contact
- \*3 Thermal Common
- \*4 Hot Contact & Coil
- \*5 Thermal Element & Coil

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**BR930 Series Pin Code Allocations and Contact Arrangements**

**Arr. 46**

	A	B	C	D	
1	F	F	*1	F	
2	A	A	*1	A	
3	F	F	*2	F	
4	A	A	*2	A	
5	A	A	*3	F	
6	B	B	*4	A	
7	A	A	*5	A	
8	B	B	*6	B	
R1	C1			C2	R2
R3	C1			C2	R4

3F 1B / 4F 4B  
+ Thermal

- \*1 Heater 1
- \*2 Heater 2
- \*3 Thermal Front
- \*4 Thermal Arm
- \*5 Thermal Arm
- \*6 Thermal Back

**Arr. 47**

	A	B	C	D	
1	F			F	
2	A			A	
3					
4					
5					
6					
7					
8					
R1	C2			C2	R2
R3	C1			C1	R4

2F  
Double Wound

**Arr. 48**

	A	B	C	D	
1	F	F	F	F	
2	A	A	A	A	
3	A	A	A	A	
4	B	B	B	B	
5					
6					
7					
8					
R1	C			C	R2
R3					R4

4F 4B  
Single Wound

**Arr. 49**

	A	B	C	D	
1	*1				
2	*2				
3	F				
4	A				
5	A				
6	B				
7	*3				
8	*4				
R1	*5				R2
R3	*6				R4

1F 1B + Thermal

- \*1 Cold Contact
- \*2 Coil
- \*3 Thermal Element
- \*4 Hot Contact
- \*5 Hot Contact
- \*6 Thermal Element & Coil

**Arr. 50**

	A	B	C	D	
1	F	F	F		
2	A	A	A		
3	F	F	F		
4	A	A	A		
5	A	F	A		
6	B	A	B		
7	A	F	*1		
8	B	A	*2		
R1					R2
R3					R4

2F 1B / 6F 2B  
+ Thermal

- \*1 Thermal Element
- \*2 Cold Contact

**Arr. 51**

	A	B	C	D	
1	F	F	F		
2	A	A	A		
3	F	F	F		
4	A	A	A		
5	A	A	A		
6	B	B	B		
7	A	A	*1		
8	B	B	*2		
R1					R2
R3					R4

2F 1B / 4F 4B  
+ Thermal

- \*1 Thermal Element
- \*2 Cold Contact

# BR930 Series Pin Code Allocations and Contact Arrangements

**Arr. 52**

	A	B	C	D	
1				*1	
2				*2	
3					
4					
5				*3	
6				*4	
7				*4	
8				*5	
R1				*6	R2
R3				*2	R4

Unit

- \*1 B50 & External Strap to R2
- \*2 N50
- \*3 BX110
- \*4 O/P to Yodalarm
- \*5 NX110
- \*6 External Strap to D1

**Arr. 53**

	A	B	C	D	
1	*1	F			
2	*1	A			
3	*1	B			
4					
5					
6					
7					
8					
R1	C				R2
R3	C				R4

Unit

- \*1 Terminations to unit

**Arr. 54**

	A	B	C	D	
1	F	F		F	
2	A	A		A	
3	F	F		F	
4	A	A		A	
5	A	A		A	
6	B	B		B	
7					
8					
R1	C <sub>B</sub>			C <sub>B</sub>	R2
R3	C <sub>A</sub>			C <sub>A</sub>	R4

6F 3B  
Two Coils (See Note)

- Note: Early versions are twin coil with external strap required R2-R3 and feed on R1 & R4. Later versions have single coil R1-R2 with internal strap R3-R4 but use the same external wiring.

**Arr. 55**

	A	B	C	D	
1		*1			
2		*2			
3		*3			
4		*4			
5		F			
6		A			
7		A			
8		B			
R1					R2
R3					R4

1F 1B  
+ Thermal

- \*1 Positive Supply
- \*2 Negative Supply
- \*3 Pulses
- \*4 Start timing

**Arr. 56**

	A	B	C	D	
1					
2					
3					
4					
5					
6					
7		A			
8		B			
R1					R2
R3					R4

1B  
Shorting Unit

**Arr. 57**

	A	B	C	D	
1					
2					
3					
4					
5					
6					
7	A			F	
8	B			A	
R1	C			C	R2
R3					R4

1F 1B  
Single Wound

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**BR930 Series Pin Code Allocations and Contact Arrangements**

**Arr. 58**

	A	B	C	D	
1			*2	*5	
2			*5	*2	
3			*1	*5	
4			*5	*3	
5			*1	*5	
6			*5	*3	
7			*4	*5	
8			*4	*5	
R1	*6			*7	R2
R3	*7				R4

Timer

**Arr. 59**

	A	B	C	D	
1		a.c			
2		a.c			
3					
4					
5					
6					
7		d.c			
8		d.c			
R1					R2
R3					R4

Unit

**Arr. 60**

	A	B	C	D	
1		a.c			
2					
3		a.c			
4					
5					
6					
7		d.c			
8		d.c			
R1					R2
R3					R4

Unit

- \*1 External Link C3-C5
- \*2 External Link C1-D2
- \*3 External Link D4-D6
- \*4 External Relay
- \*5 Linked in various combinations to obtain time delay
- \*6 N50
- \*7 B50

**Arr. 61**

	A	B	C	D	
1		a.c			
2					
3					
4		a.c			
5					
6					
7		d.c			
8		d.c			
R1					R2
R3					R4

Unit

**Arr. 62**

	A	B	C	D	
1			a.c		
2			a.c		
3					
4					
5					
6					
7		d.c			
8		d.c			
R1					R2
R3					R4

Unit

**Arr. 63**

	A	B	C	D	
1		a.c			
2					
3					
4					
5		a.c			
6					
7		d.c			
8		d.c			
R1					R2
R3					R4

Unit



# BR930 Series Pin Code Allocations and Contact Arrangements

Arr. 64

	A	B	C	D
1		a.c		
2				
3				
4				
5				
6		a.c		
7		d.c		
8		d.c		
R1				R2
R3				R4

Unit

Arr. 65

	A	B	C	D
1				
2				
3	F			F
4	A			A
5	B			B
6				
7	*1			*1
8	*1			*1
R1	C1			C2
R3	C1			C2

1F[HD]1c/o / 1F[HD]1c/o  
Twin Single Wound

\*1 Heavy duty front

Arr. 66

	A	B	C	D
1	B	B	B	B
2	A	A	A	A
3	F	F	F	F
4	B	B	B	B
5	A	A	A	A
6	F	F	F	F
7	C <sub>A</sub>	C <sub>B</sub>	C <sub>C</sub>	C <sub>D</sub>
8	C <sub>A</sub>	C <sub>B</sub>	C <sub>C</sub>	C <sub>D</sub>
R1				R2
R3				R4

2c/o / 2c/o / 2c/o / 2c/o  
Four Coils

Arr. 67

	A	B	C	D
1	F	F	F	F
2	A	A	A	A
3	F	F	F	F
4	A	A	A	A
5	F	F	F	F
6	A	A	A	A
7	C <sub>A</sub>	C <sub>B</sub>	C <sub>C</sub>	C <sub>D</sub>
8	C <sub>A</sub>	C <sub>B</sub>	C <sub>C</sub>	C <sub>D</sub>
R1				R2
R3				R4

3F / 3F / 3F / 3F  
Four Coils

Arr. 68

	A	B	C	D
1	F	F	*1	*6
2	A	A	*2	*2
3	F	F	*1	*1
4	A	A	*3	*7
5	F	F	*1	*1
6	A	A	*3	*7
7	A	A	*4	*1
8	B	B	*5	*1
R1				R2
R3			C	R4

6F 2B  
Timer

- \*1 Linked in various combinations to obtain time delay
- \*2 External link C2 to D2
- \*3 External link C4 to C6
- \*4 External link C7 to D1
- \*5 External link C8 to R2 & Coil
- \*6 External link D1 to C7, D1 may also be linked to other terminals to obtain the desired time delay
- \*7 External link D4 to D6

Arr. 69

	A	B	C	D
1	*1			*1
2				
3				
4				
5				
6				
7				
8				
R1	i/p			R2
R3				R4

Unit

\*1 Flashing output

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**BR930 Series Pin Code Allocations and Contact Arrangements**

**Arr. 70**

	A	B	C	D	
1					
2					
3					
4					
5					
6					
7					
8					
R1	AC			DC	R2
R3	AC			DC	R4

Unit

**Arr. 71**

	A	B	C	D	
1		*1	F	F	
2		*1	A	A	
3		*1	F	F	
4		*1	A	A	
5		*1	F	A	
6		*1	A	B	
7		*1	F	A	
8		*1	A	B	
R1				*1	R2
R3				*1	R4

6F 2B  
Single Wound

\*1 Terminals

**Arr. 72**

	A	B	C	D	
1	i/p			o/p	
2					
3					
4					
5					
6					
7					
8					
R1					R2
R3					R4

Unit

**Arr. 73**

	A	B	C	D	
1	*1	*5		*6	
2	*1	*5		*7	
3	*2			*8	
4	*3			*9	
5	*4			*10	
6	*4			*10	
7	*4			*5	
8	*4			*5	
R1					R2
R3					R4

Unit

**Arr. 74**

	A	B	C	D	
1	F		*1	F	
2	A		+ve	A	
3	F		*1	F	
4	A		-ve	A	
5	A		+ve	A	
6	B		+ve	B	
7	A		*1	A	
8	B		-ve	B	
R1	C			C	R2
R3					R4

4F 4B 2[HD]F  
Single Wound

\*1 Heavy duty front

**Arr. 75**

	A	B	C	D	
1	F	F	*1		
2	A	A	+ve		
3	F	F	*1		
4	A	A	-ve		
5	A	A	*1		
6	B	B	+ve		
7	A	A	*1		
8	B	B	-ve		
R1	C			C	R2
R3					R4

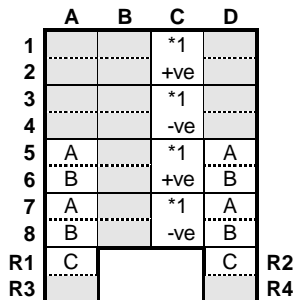
4F 4B 2[HD]F  
Single Wound

\*1 Heavy duty front

- \*1 50V Supply
- \*2 TPR i/p
- \*3 Alarm o/p
- \*4 Pushbutton i/p
- \*5 Alarm reset
- \*6 BX24 i/p
- \*7 FBX24 i/p
- \*8 Panel Indication
- \*9 Buzzer
- \*10 Track Counter reset

## BR930 Series Pin Code Allocations and Contact Arrangements

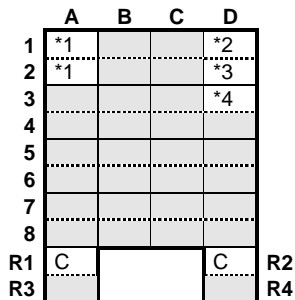
**Arr. 76**



4B 2[HD]F  
Single Wound

\*1 Heavy duty front

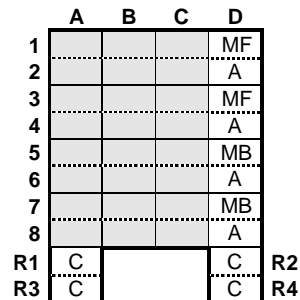
**Arr. 77**



Unit

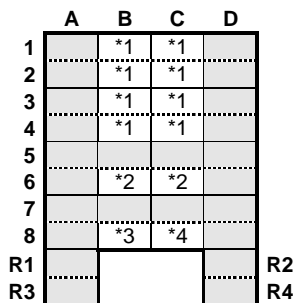
\*1 Internal strap A1 to A2 & 680  $\mu$ F capacitor  
\*2 1500  $\mu$ F Capacitor  
\*3 390  $\Omega$  Resistor  
\*4 180  $\Omega$  Resistor

**Arr. 78**



2MF 2MB  
Two coils in series

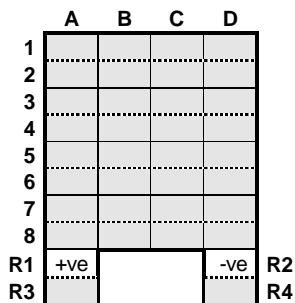
**Arr. 79**



Unit

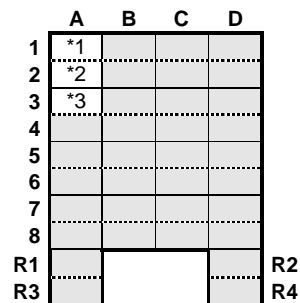
\*1 Flashing outputs  
\*2 Flash enable contact  
\*3 BX110  
\*4 NX110

**Arr. 80**



Unit

**Arr. 81**



Unit

\*1 Diode & Resistor in Series  
\*2 Common  
\*3 Capacitor

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**Arr. 82**

	A	B	C	D	
1	F	F	F	F	
2	A	A	A	A	
3	F			F	
4	A			A	
5	A			A	
6	B			B	
7					
8					
R1	C			C	R2
R3					R4

6F 2B  
Single Wound

**Arr. 83**

	A	B	C	D	
1	B	B	B	B	
2	F	F	F	F	
3	A	A	A	A	
4	B	B	B	B	
5	F	F	F	F	
6	A	A	A	A	
7					
8					
R1				C	R2
R3				C	R4

2c/o / 2c/o / 2c/o / 2c/o  
Unit

**Arr. 84**

	A	B	C	D	
1	i/p				
2	i/p				
3					
4					
5					
6					
7	o/p				
8	o/p				
R1					R2
R3					R4

Unit

**Arr. 85**

	A	B	C	D	
1	F			F	
2	A			A	
3	F			F	
4	A			A	
5					
6					
7	A			A	
8	B			B	
R1	C			C	R2
R3					R4

4F 2B  
Single Wound

**Arr. 86**

	A	B	C	D	
1	*1	F	*4	*3	
2		A			
3	*2	A	A	A	
4		B	B	B	
5	*3			*5	
6					
7					
8					
R1					R2
R3					R4

2B /1F 1B  
Timer

- \*1 B50
- \*2 N50
- \*3 External Strap A5 to D1
- \*4 BX110
- \*5 NX110

**Arr. 87**

	A	B	C	D	
1					
2					
3		A	A	A	
4		B	B	B	
5					
6					
7					
8					
R1					R2
R3					R4

3B  
Shorting Unit

**Arr. 88**

	A	B	C	D	
1		F			
2		A			
3		A			
4		B			
5					
6					
7					
8					
R1					R2
R3					R4

1F 1B  
Shorting Unit

**Arr. 89**

	A	B	C	D	
1					
2	CA	CB	Cc	Cd	
3	B	B	B	B	
4	A	A	A	A	
5	F	F	F	F	
6	B	B	B	B	
7	A	A	A	A	
8	F	F	F	F	
R1	*1				R2
R3					R4

Unit

- \*1 Coil connection for all relays

**Arr. 90**

	A	B	C	D	
1	F			F	
2	A			A	
3					
4					
5	A			A	
6	B			B	
7					
8					
R1	C			C	R2
R3					R4

2F 2B  
Single Wound

# BR930 Series Pin Code Allocations and Contact Arrangements

Arr. 91

	A	B	C	D
1				F
2	A			A
3	B			
4				
5				
6				
7				
8				
R1	C			C
R3				

1F 1B  
Single Wound

Arr. 92

	A	B	C	D
1				
2				
3				
4				
5	A	A	A	A
6	B	B	B	B
7	A	A	A	A
8	B	B	B	B
R1				
R3				

4B 4B  
Shorting Unit

Arr. 93

	A	B	C	D
1				
2				
3				
4				
5	A			A
6	B			B
7	A			A
8	B			B
R1				
R3				

2B 2B  
Shorting Unit

Arr. 94

	A	B	C	D
1	F	F	F	F
2	A	A	A	A
3	F	F	F	F
4	A	A	A	A
5	A	A	A	A
6	B	B	B	B
7	*1	A	A	*1
8	*1	B	B	*1
R1	C1			C2
R3	C1			C2

4F 2B / 4F 2B  
Twin Coil

\*1 Cut off contact

Arr. 95

	A	B	C	D
1			*2	F
2			*2	A
3				F
4	*1	*1		F
5				A
6				A
7				A
8				B
R1				
R3				

3F 1B  
Unit

\*1 50V supply to alarm cct  
\*2 110V supply to motor

Arr. 96

	A	B	C	D
1				
2				
3				
4				
5				
6				
7				
8				
R1	*1			*1
R3	*2			*2

Unit

\*1 Battery input  
\*2 Output

Arr. 97

	A	B	C	D
1	F	F	F	F
2	A	A	A	A
3	F	F	F	F
4	A	A	A	A
5				
6				
7				
8				
R1	C			C
R3				

8F  
Single Wound

Arr. 98

	A	B	C	D
1				
2				
3	F			
4	A			
5	A			
6	B			
7				
8				
R1	C			C
R3				

1F 1B  
Single Wound

Arr. 99

	A	B	C	D
1	F			*1
2	A			*1
3	B			*2
4				*2
5	F			
6	A			
7	B			
8				
R1	*3			*3
R3	*4			*5

Unit

\*1 Remote reset  
\*2 Remote test  
\*3 110V supply  
\*4 Earth (main)  
\*5 Earth (test)

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**BR930 Series Pin Code Allocations and Contact Arrangements**

**Arr. 100**

	A	B	C	D	
1	*1	*5	*8		
2	*1		*8		
3	*2	*6	*9		
4	*2		*9		
5					
6	*3	*7	*10		
7	*4		*10		
8	*4	*7	*10		
R1	*11			C	R2
R3					R4

Unit

**Arr. 101**

	A	B	C	D	
1					
2					
3		N24			
4		N24			
5		o/p			
6		o/p			
7		B24			
8		B24			
R1					R2
R3					R4

Unit

**Arr. 102**

	A	B	C	D	
1				F	
2				A	
3				F	
4				A	
5			B	F	
6				A	
7				F	
8				A	
R1	C				R2
R3	C				R4

3F 1c/o  
Unit

- \*1 B130 [A1 High sensitivity; A2 Reduced sensitivity]
- \*2 B50 [A3 High sensitivity; A4 Reduced sensitivity]
- \*3 Remote indication supply
- \*4 Remote indication
- \*5 Main earth 130V
- \*6 Main earth 50V
- \*7 12V or 24V indication supply
- \*8 N130 [C1 High sensitivity; C2 Reduced sensitivity]
- \*9 N50 [C3 High sensitivity; C4 Reduced sensitivity]
- \*10 Remote reset
- \*11 Test earth

**Arr. 103**

	A	B	C	D	
1				A	
2				B	
3				F	
4				B	
5				F	
6				A	
7				A	
8			B	F	
R1				C	R2
R3				C	R4

3c/o  
Unit

**Arr. 104**

	A	B	C	D	
1					
2					
3					
4					
5					
6				o/p	
7				o/p	
8					
R1				B50	R2
R3				N50	R4

Unit

**Arr. 105**

	A	B	C	D	
1				i/p	
2				i/p	
3					
4					
5				B	
6			A	F	
7			A	B	
8				F	
R1				C	R2
R3				C	R4

2c/o  
Unit

# BR930 Series Pin Code Allocations and Contact Arrangements

**Arr. 106**

	A	B	C	D
1				i/p
2				o/p
3				*1
4				*1
5				*1
6				i/p
7				
8				
R1				R2
R3				R4

Unit

\*1 External straps  
D5-D3 for 12V  
D5-D4 for 24V

**Arr. 107**

	A	B	C	D
1				
2				
3				
4		F		
5		A		
6		B		
7				
8		*1		
R1				R2
R3				R4

1c/o + Heater  
Unit

\*1 Heater

**Arr. 108**

	A	B	C	D
1	F			
2	A			
3	F			
4	A			
5	A			
6	B			
7	A			
8	B			
R1	C			R2
R3	C			R4

2F 2B  
Single Wound

**Arr. 109**

	A	B	C	D
1	F			F
2	A			A
3				
4				
5	A			A
6	B			B
7				
8				
R1	C1			R2
R3	C2			R4

2F 2B  
Two Coils

**Arr. 110**

	A	B	C	D
1	A			F
2				
3	A			B
4				
5	A			B
6				
7	A			B
8				
R1	C			R2
R3	C			R4

1F 3B  
Timer

**Arr. 111**

	A	B	C	D
1	*1			*3
2	*2			*3
3				
4				
5				
6				
7				
8				
R1				R2
R3				R4

Unit

\*1 B15 supply  
\*2 N15 supply  
\*3 Output

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**Arr. 112**

	A	B	C	D
1	*1			*1
2				*3
3	*2			
4	*4			*4
5				
6				
7				
8				
R1				R2
R3				R4

Unit

- \*1 Reed follower relay
- \*2 N12
- \*3 B12
- \*4 Line input

**Arr. 113**

	A	B	C	D
1	*1			*1
2	*2			*2
3	*3			*4
4	*5			*5
5				
6				
7				
8				
R1				R2
R3				R4

Unit

- \*1 Line output
- \*2 Control contact delayed output
- \*3 N12
- \*4 B12
- \*5 Control contact instant output

**Arr. 114**

	A	B	C	D
1	*1			*1
2	*2			*1
3	*3			*4
4	*5			*5
5				
6				
7				
8				
R1				R2
R3				R4

Unit

- \*1 Line output  
full output A1-D1  
reduced output A1-D2
- \*2 Control contact delayed output
- \*3 N12
- \*4 B12
- \*5 Control contact instant output

**Arr. 115**

	A	B	C	D
1	*1			*1
2	*2			*3
3	*4			*4
4	*4			*4
5				
6				
7				
8				
R1				R2
R3				R4

Unit

- \*1 Reed follower relay
- \*2 N12
- \*3 B12
- \*4 Line input: Strap D3-A3 if immunisation not required

**Arr. 116**

	A	B	C	D
1	*1			*1
2	*2			*3
3	*4			*4
4	*4			*4
5				
6				
7				
8				
R1				R2
R3				R4

Unit

- \*1 Reed follower relay
- \*2 N12
- \*3 B12
- \*4 Line input: Strap D2-A3 if immunisation not required

**Arr. 117**

	A	B	C	D
1	A			
2	B			
3	A			
4	F			
5				
6				
7				
8	*1			
	*2			
R1	C			R2
R3	C			R4

Unit

- \*1 FBX24 fuse failure
- \*2 NX24



# BR930 Series Pin Code Allocations and Contact Arrangements

Arr. 118

	A	B	C	D
1	*1		*1	*1
2				
3	*1		*1	*1
4				
5	*1		*1	*1
6				
7	*1		*1	*1
8	*2		*2	*2
R1				R2
R3				R4

Unit

- \*1 CR Network 470µF/6.8Ω
- \*2 CR Network 2200µF/6.8Ω

Arr. 119

	A	B	C	D
1	F	F	F	F
2	A	A	A	A
3	F	F	F	F
4	A	A	A	A
5	F	A	A	F
6	A	B	B	A
7	A	A	A	A
8	B	B	B	B
R1	C1			C2
R3	C1			C2

5F 3B / 5F 3B  
Twin Single Wound

Arr. 120

	A	B	C	D
1				
2				
3				
4				
5		A	A	
6		B	B	
7	A	A	A	A
8	B	B	B	B
R1				R2
R3				R4

3B / 3B  
Shorting Unit

Arr. 121

	A	B	C	D
1	C			
2	C			
3	F			
4	A			
5	F			
6	A			
7	*1			
8	*2			
R1				R2
R3				R4

3F  
Unit

- \*1 BX110
- \*2 NX110

Arr. 122

	A	B	C	D
1		*1		
2		*2		
3		*3		
4		*2		
5		*2		
6		*2		
7		*4		
8		*3		
R1				R2
R3				R4

Unit

- \*1 N12
- \*2 Track connections
- \*3 Track relay
- \*4 B12

Arr. 123

	A	B	C	D
1	50			0
2	55			11
3	60			
4				
5				
6				
7				
8	0			
R1	*1			110
R3	*1			115

Unit

- \*1 Rectifier R1 positive R3 negative

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**Arr. 124**

	A	B	C	D	
1	F	F	F		
2	A	A	A		
3	F	F	F		
4	A	A	A		
5	A	A	A		
6	B	B	B		
7	A	A	*3		
8	B	B	*3		
R1	C			*1	R2
R3	C			*2	R4

4F 4B / 2F 1B  
Timer

- \*1 External strap C1
- \*2 Coil & thermal element
- \*3 Thermal arm & external strap to C6

**Arr. 125**

	A	B	C	D	
1	F	F	F		
2	A	A	A		
3	F	F	F		
4	A	A	A		
5	A	F	A		
6	B	A	B		
7	A	A	*3		
8	B	B	*3		
R1	C			*1	R2
R3	C			*2	R4

6F 2B / 2F 1B  
Timer

- \*1 External strap C1
- \*2 Coil & thermal element
- \*3 Thermal arm & external strap to C6

**Arr. 126**

	A	B	C	D	
1		F			
2		A			
3		F			
4		A			
5		C			
6		C			
7					
8					
R1					R2
R3					R4

2F  
Single Wound

**Arr. 127**

	A	B	C	D	
1		F			
2		A			
3		F			
4		A			
5		C			
6					
7		C			
8					
R1					R2
R3					R4

2F  
Single Wound

**Arr. 128**

	A	B	C	D	
1		F			
2		A			
3		F			
4		A			
5		C			
6					
7					
8		C			
R1					R2
R3					R4

2F  
Single Wound

**Arr. 129**

	A	B	C	D	
1		F			
2		A			
3		F			
4		A			
5					
6		C			
7		C			
8					
R1					R2
R3					R4

2F  
Single Wound

**Arr. 130**

	A	B	C	D	
1		F			
2		A			
3		F			
4		A			
5					
6		C			
7					
8		C			
R1					R2
R3					R4

2F  
Single Wound

**Arr. 131**

	A	B	C	D	
1					
2					
3					
4					
5	A				
6	B				
7	A				
8	B				
R1					R2
R3					R4

2B  
Shorting Unit

**Arr. 132**

	A	B	C	D	
1	F	A	A	F	
2	A	B	B	A	
3	F			F	
4	A			A	
5	B			B	
6	F			F	
7	A			A	
8	B			B	
R1	C <sub>B</sub>			C <sub>A</sub>	R2
R3	C <sub>B</sub>			C <sub>A</sub>	R4

2c/o 1F 1B / 2c/o 1F 1B  
Twin Single Wound

# BR930 Series Pin Code Allocations and Contact Arrangements

Arr. 133

	A	B	C	D
1	*1			
2	*1			
3	*2	*3		
4	*4	*6	*8	
5				
6	*4	*6	*8	
7	*5	*7	*9	
8	*5	*7	*9	
R1				R2
R3				R4

Unit

- \*1 Transmitter input
- \*2 N12
- \*3 B12
- \*4 Switch 1
- \*5 Output 1
- \*6 Switch 2
- \*7 Output 2
- \*8 Switch 3
- \*9 Output 3

Arr. 134

	A	B	C	D
1	*1	F	F	*3
2	F	A	A	*4
3	A	B	B	A
4	*2	B	B	*2
5				
6				
7				
8				
R1				R2
R3				R4

Unit

- \*1 N12
- \*2 Line input
- \*3 B12
- \*4 False feed connection

Arr. 135

	A	B	C	D
1	E			NX
2				*5
3				
4				
5				
6				
7				
8				
R1	*1			*2
R3	*3			*4

Unit

- \*1 B output
- \*2 BX110 input
- \*3 N output
- \*4 BX115.5 input
- \*5 BX11 input

Arr. 136

	A	B	C	D
1	*5			NX
2	*5			*6
3	*5			
4				
5				
6				
7				
8	*5			
R1	*1			*2
R3	*3			*4

Unit

- \*1 B50 output
- \*2 BX110 input
- \*3 N50 output
- \*4 BX115.5 input
- \*5 Strap A1 to A8-50V o/p  
Strap A2 to A8-55V o/p  
Strap A3 to A8-60V o/p
- \*6 BX11 input

Arr. 137

	A	B	C	D
1		*1		
2		*1		
3		*1		
4		*1		
5				
6				
7		B50		
8		N50		
R1				R2
R3				R4

Unit

- \*1 For relays with 950-1150Ω resistance 110 AC supply on B1 & B3  
For relays with 1800-2400Ω resistance 110 AC supply on B2 & B4

Arr. 138

	A	B	C	D
1	F	F	F	F
2	A	A	A	A
3	F	F	F	F
4	A	A	A	A
5	F	F	F	F
6	A	A	A	A
7	F	F	F	F
8	A	A	A	A
R1	C			C
R3				

16F

Single Wound

**Railway Group Guidance Note**

**GK/GN0630**

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**BR930 Series Pin Code Allocations and Contact Arrangements**

**Arr. 139**

	A	B	C	D	
1	Fe	Fe	Fe	Fe	
2	A	A	A	A	
3	F	F	F	F	
4	A	A	A	A	
5	A			A	
6	B			B	
7	A			A	
8	B			B	
R1	C			C	R2
R3					R4

4Fe 4F 4B  
Single Wound

**Arr. 140**

	A	B	C	D	
1					
2					
3					
4					
5	A			A	
6	B			B	
7	*1				
8	A			*2	
R1	C1			C1	R2
R3	C2			C2	R4

1F 1B / 1F 1B  
Twin Single Wound

\*1 ER1 front contact  
\*2 ER1 & ER2 front contacts in series

**Arr. 141**

	A	B	C	D	
1	C			B50	
2	*1			C	
3	*2			*1	
4				*2	
5					
6					
7					
8					
R1					R2
R3					R4

2F  
Single Wound

\*1 A2 front D3 arm  
\*2 A3 front D4 arm

**Arr. 142**

	A	B	C	D	
1	A			F	
2	A			F	
3	A			F	
4	C				
5					
6	*1				
7	A			F	
8	A			F	
R1					R2
R3				C	R4

2F 1B[HD] / 3F  
Unit

\*1 Heavy duty back contact

**Arr. 143**

	A	B	C	D	
1	*1			*1	
2	*2			*2	
3					
4					
5					
6					
7					
8					
R1					R2
R3					R4

Unit

\*1 Variable resistor 1  
\*2 Variable resistor 2

**Arr. 144**

	A	B	C	D	
1	A	F	F	A	
2	B			B	
3	A			F	
4	F			A	
5	B			B	
6	F			F	
7	A			A	
8	B			B	
R1	C1			C2	R2
R3	C1			C2	R4

3c/o / 3c/o  
Twin

# BR930 Series Pin Code Allocations and Contact Arrangements

**Arr. 145**

	A	B	C	D
1	*1			*2
2	*1			*2
3				
4				
5				
6				
7				
8				
R1				R2
R3				R4

Unit

- \*1 Capacitor-Resistor (1)
- \*2 Capacitor-Resistor (2)

**Arr. 146**

	A	B	C	D
1				*1
2	*1			
3				
4				
5				
6				
7				
8				
R1				R2
R3				R4

Unit

- \*1 Capacitor-Resistor (1)

**Arr. 147**

	A	B	C	D
1				
2				
3	B			B
4	A			A
5	F			F
6	B			B
7	A			A
8	F			F
R1	C			R2
R3				R4

4c/o  
Single Wound

- Contacts grouped :
- A7, D8 & D6: A4, D5 & D3;
  - D7, A8 & A6, D4, A5 & A3

**Arr. 148**

	A	B	C	D
1	+	-	+	-
2	+	-	+	-
3	+	-	+	-
4	+	-	+	-
5	+	-	+	-
6	+	-	+	-
7	+	-	+	-
8	+	-	+	-
R1				R2
R3				R4

Unit

Diodes A1-B1 etc

**Arr. 149**

	A	B	C	D
1	*1	*5	*9	*11
2	*2	*5	*10	*12
3	*3		*9	*13
4	*4		*10	*14
5		*6		
6				
7		*7		
8		*8		
R1	*15			R2
R3				R4

Unit

- \*1 N120 BB
- \*2 N120 Strap
- \*3 N50 BB
- \*4 N50 Strap
- \*5 Remote Indication
- \*6 Independent Earth
- \*7 Earth (50V)
- \*8 Earth (120V)
- \*9 Vcc
- \*10 Remote Reset
- \*11 B120 BB
- \*12 B120 Strap
- \*13 B50 BB
- \*14 B50 Strap
- \*15 B30
- \*16 N30

**Arr. 150**

	A	B	C	D
1				*1
2				
3				*2
4				*3
5				*4
6				*1
7				*3
8				
R1				R2
R3				R4

Unit

- \*1 Line output
- \*2 B12 input
- \*3 Control contact
- \*4 N12 input