

## /// BR930 Series - Electromechanical Signalling Relay

### TY159/GRP14

#### QNNSA1 2×4F4B 50V

Twin AC immune DC slow acting neutral line relay nominally to BR963.



### Features

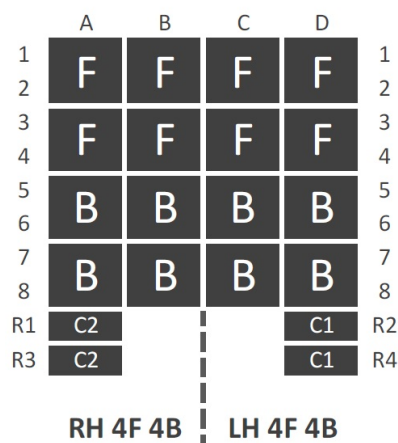
The TY159/GRP14 is a Twin AC immune 4F 4B slow operate, slow release neutral line relay for railway trackside signalling applications.

Twin relays consist of two relays which in effect are electrically and mechanically independent, housed in a single enclosure to the dimensions of a single relay to BR930.

Of compact modular plug-in design it has non-weld contacts and is equipped with a safety interlocking system (pin code) for insertion into mating plugboards.

### Contact arrangement

REAR VIEW OF RELAY



### General characteristics

PADS Reference	0085/001962
Pin code	572 AEGHN
Contact arrangement	4F 4B LH&RH
Coil configuration	Single wound twin coil
Resistance of winding(s)	1200Ω
Rating	50V DC
Weight	1.5 kg
Plugboard	TY081-001 PADS Ref 0085/002081 See plugboard datasheet for more information

### Specific characteristics

AC Immunity Coil RMS voltage at 50 Hz frequency that can be applied without generating the closing of any of the front (N/O - Normally Open) contacts	AC immune to 1000V 50hz
DC Biasing Maximum supply which can be applied connected in reverse polarity and shall not result in the breaking of any back contact of the relay	This relay is not DC biased

### Electrical characteristics

Operate value	Not specified in BR963
Full operate value	40.0V
Release value	7.5V
Full release value	4.0V
Operate time	150-250ms @ Nominal Voltage
Release time	Not specified in BR963
Interrupt time	150ms @ 80% of Nominal Voltage
Signalling contact pressure	28 g (1 oz) min

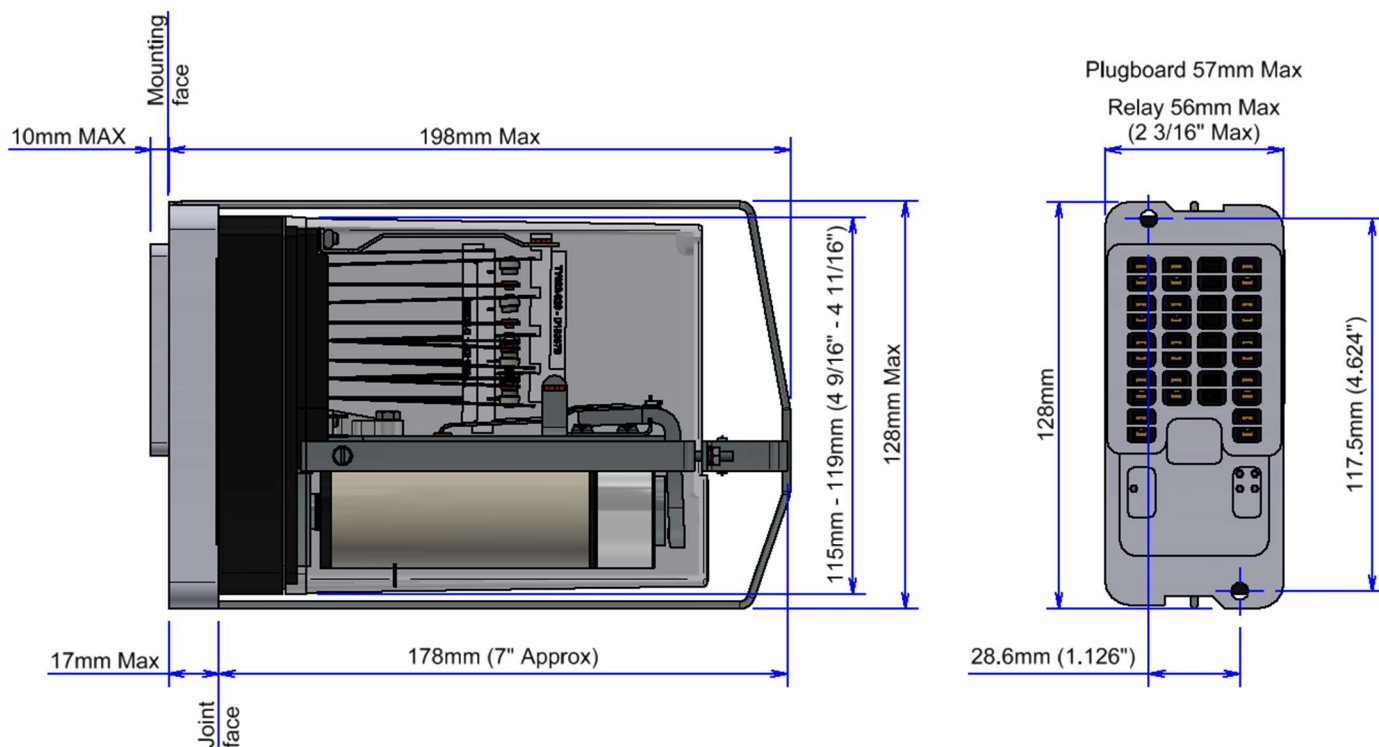
### Product acceptance certification

Network Rail UK: PA05/04802

## Outline drawing

## Twin AC immune DC slow acting neutral line relay nominally to BR963

**TY159/GRP14**



Imperial dimensions in brackets are those specified in BR930  
 Dimensions illustration shows generic BR930 relay.

### Note

BR930 relays are optimised to switch traditional signalling circuits consisting of the coils of other relays and incandescent lamps. Their contacts are non-weld, not weld-no-transfer. Signalling schemes using these relays must be designed to operate safely within these constraints. Furthermore, it is the operators' responsibility to ensure compliance with the requirements of clauses 1.2, 5.2, 8.1, 8.2 and 12.1 of BR930.

 **Over 10 million Mors Smitt relays in use in rail transport applications worldwide!**

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