

/// BR930 Series - Electromechanical Signalling Relay

TY160/GRP02

QNNA1 2x4F4B 50V

Twin AC immune DC neutral line relay to BR966 F6.

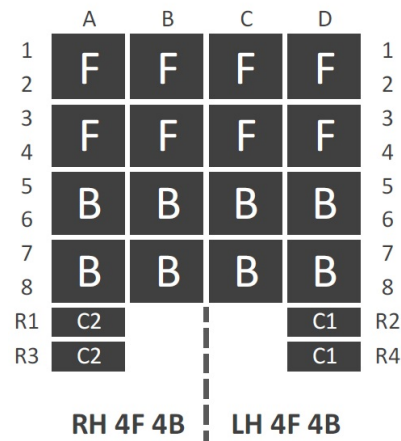


Features

The TY160/GRP02 is a Twin 4F 4B AC Immune DC neutral line relay for general railway trackside signalling applications where special characteristics such as slow release etc. are not required. 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	0085/001660
Pin code	210 CEGHJ
Contact arrangement	4F 4B LH&RH
Coil configuration	Single wound twin coil
Resistance of winding(s)	935Ω
Rating	50V DC
Weight	1.3 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 BR966 F6
Full operate value	40.0V
Release value	7.5V
Full release value	4.0V
Operate time	<200ms @ 80% of Nominal Voltage
Release time	<200ms @ 120% of Nominal Voltage
Interrupt time	Not specified in BR966 F6
Signalling contact pressure	28 g (1 oz) min

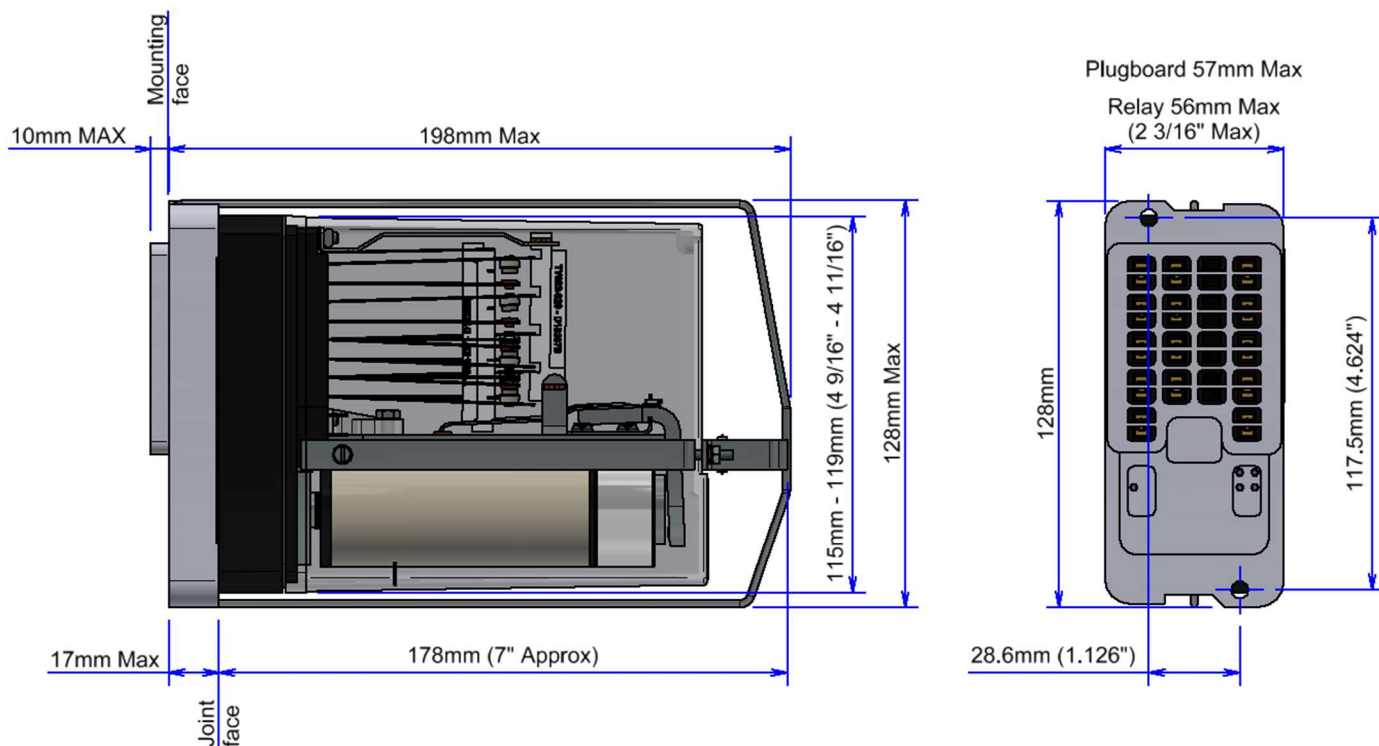
Product acceptance certification

Network Rail UK: PA05/04802

Outline drawing

Twin AC immune DC neutral line relay to BR966 F6

TY160/GRP02



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!**

Mors Smitt Asia Ltd.
 26/F., Casey Aberdeen House
 38 Heung Yip Road, Wong Chuk Hang
 Hong Kong
 Tel: +852 2343 555
 sales.msa@wabtec.com

Wabtec Netherlands B.V.
 Darwinstraat 10,
 6718 XR Ede, Netherlands
 Tel: +31 (0)88 600 4500
 sales.msbv@wabtec.com

Mors Smitt France SAS
 2 Rue de la Mandinière
 72300 Sablé-sur-Sarthe, France
 Tel: +33 (0) 243 92 82 00
 sales.msf@wabtec.com

Mors Smitt Technologies Ltd.
 1010 Johnson Drive,
 Buffalo Grove, IL 60089-6918, USA
 mst_salesupport@wabtec.com.

Mors Smitt UK
 Graycar Business Park,
 Burton on Trent, DE13 8EN, UK
 Tel: +44 (0)1283 357 263
 sales.msuk@wabtec.com

RMS Mors Smitt
 19 Southern Court,
 Keysborough, VIC 3173, Australia
 Tel: +61 (0)3 8544 1200
 sales.rms@wabtec.com

(c) Copyright 2025

All rights reserved. Nothing from this edition may be multiplied, or made public in any form or manner, either electronically, mechanically, by photocopying, recording, or in any manner, without prior written consent from Mors Smitt. This also applies to accompanying drawings and diagrams. Due to a policy of continuous development Mors Smitt reserves the right to alter the equipment specification and description outlined in this datasheet without prior notice and no part of this publication shall be deemed to be part of any contract for the equipment unless specifically referred to as an inclusion within such contract. Mors Smitt does not warrant that any of the information contained herein is complete, accurate, free from potential errors, or fit for any particular purpose. Mors Smitt does not accept any responsibility arising from any party's use of the information in this document.