

Specifications for MSR8-NI Pilot Wire Relay

To continuously monitor the resistance of the *earth bond*, an electrical measuring signal is fed into the *earth conductor* via a separate *pilot wire*. To cater for the possibility of a short between this pilot and the earth, a *remote module* must be employed.

A loop now exists, consisting of the *pilot wire*, the *remote module* and the *earth wire* in the cable. An intrinsically safe signal is injected into the loop and, by interpreting the voltage and the current flowing, the resistance can be monitored: see Fig 1. The energy level of an intrinsically safe signal is so low that dangerous gases like hydrogen or methane cannot be ignited by it.

The MSR8-NI Relay is connected via a 9-pin Molex plug and can be replaced without the use of tools. The relay is normally situated in a gully box or gate end box and controls a contactor or the trip coil of a circuit breaker as shown in Fig 1. The Molex plug is wired according to Fig 3 and dimensions are shown in Fig 2.

The Two Wire Remote Module is shown in Fig 4 and is used where only continuity sensing is required. For applications that need remote control as well as sensing the Three Wire Remote Module should be used. Blue 2 & 3 Wire Modules incorporate additional circuitry to ensure the proper operation of the earth leakage relay in the event of a line to pilot fault.

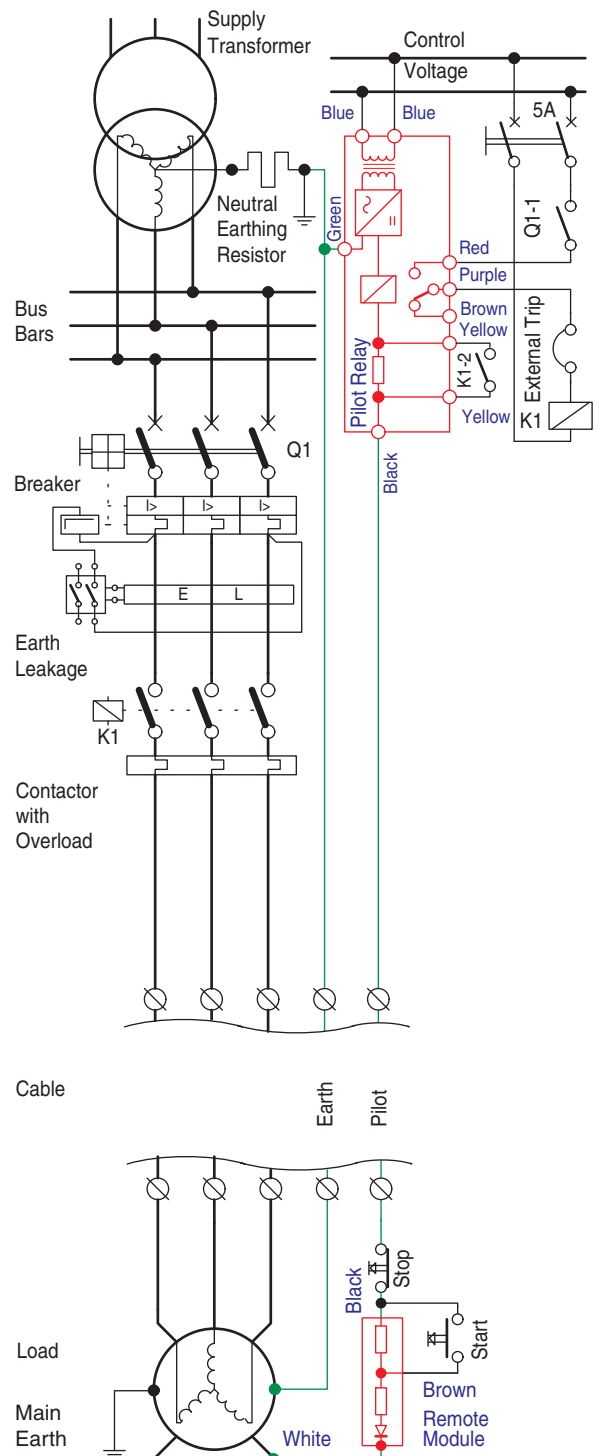


Fig 1

Pilot Wire Control Relay with 3-Wire Module provides continuity sensing & remote control.

Note: The relay shown above is in the OFF state.

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Control Voltage (Vnom):	525Vac +15% -30% (Orange case)
Earth loop detection:	100Ω ± 15%
Line-to-pilot	
fault withstand time:	1.8sec on 2,5A restricted neutral systems.
Relay Burden:	10VA
Output Contacts:	Potential free C/O contact rated at 5A 250Vac
Max ambient temp:	Relays 45°C Remote Modules 120°C
Indicator:	Red - Relay energised
Classification:	None
Compliance standard:	Complies with the requirements of the A.A.C.; Specification 540/1 issue 3
Operation modes	
Loop sensing only:	2-wire Remote Module
Loop sensing with	
remote control:	3-wire Remote Module + Pushbutton Station
Suitable for noise levels:	Below 2Vac

Ordering:

Stock No.	Description
5001-001	MSR8-525V-NI Relay (Orange)
5001-002	MSR8 Connection leads
5001-003	MSR8/9 Pushbutton station (Yellow)
5001-004	MSR8/9 2-Wire Module (Blue)
5001-005	MSR8/9 3-Wire Module (Blue)

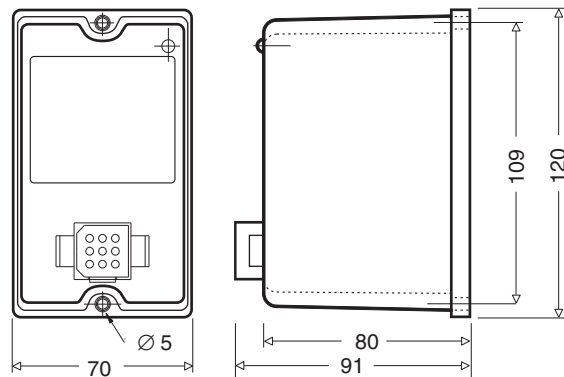
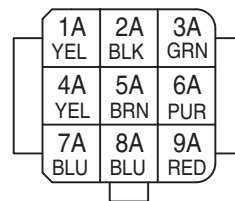


Fig 2
Dimensions of relay (in mm)



1A. Yel :	Feedback
2A. Blk :	Pilot
3A. Grn :	Earth
4A. Yel :	Feedback
5A. Brown :	N/C
6A. Purple :	Common
7A. Blue :	Supply
8A. Blue :	Supply
9A. Red :	N/O

Fig3
MSR8-NI Plug Connections

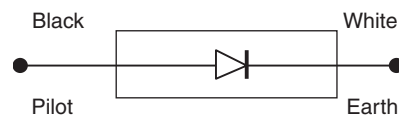


Fig 4
2-Wire Remote Module Connection Diagram

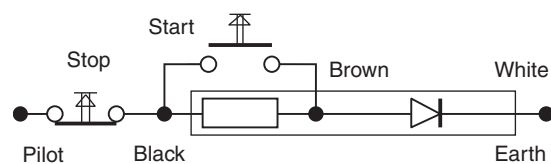


Fig 5
3-Wire Remote Module Connection Diagram