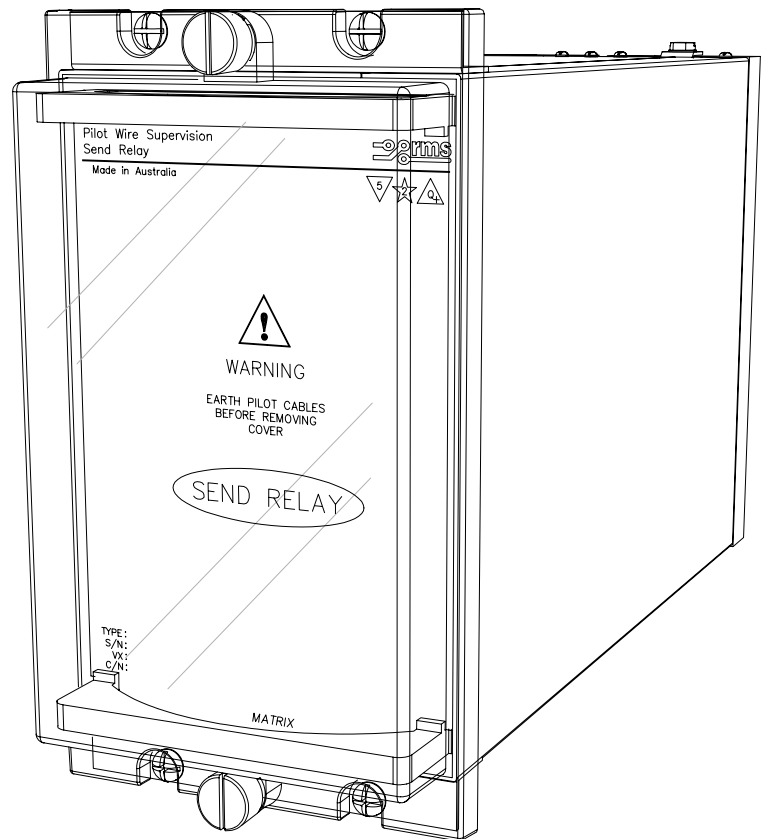


Features

- 3A220 Pilot wire supervision SEND relay
- 3A230 Pilot wire supervision RECEIVE relay
- Detects open circuited pilot wires
- Detects short circuited pilot wires
- Detects crossed pilot wires
- Suitable for operation with the “metallic” pilot wire differential relays
- Suitable for 5KV & 15KV isolated pilot schemes
- Built in AC supply supervision
- Simple & robust design
- Size 4M draw out case for 5KV isolation version
- Surface mount case suitable for pilot wire cubicle for 15KV isolation version
- Made in Australia



3A220[A] Pilot wire supervision send relay depicted

Application

These relays are designed for the supervision of 5KV & 15KV insulation level pilot wire protection schemes.

Pilot wire supervision is a vital function to ensure the stability of pilot wire feeder protection schemes. Supervision is achieved through the injection of a DC supply at the send end, with a continuously energized & polarized relay monitoring this supply at the receive end.

This technique is effective for detection of the pilot wire faults indicated above.

For additional security, a built in AC supply supervision relay is provided in the 3A220 with 2 alarm contacts.

Description

Differential feeder protection systems offer unit protection, which ensure discrimination without reference to the rest of the power system & provide high-speed operation. It has been designed to provide double ended tripping for in-zone faults with through fault stability.

To ensure maximum security of this protection system the pilot wires should be supervised so that faults such as short circuits, open circuits & crossed wiring are quickly detected.

CASE SIZE FOR 5KV ISOLATION LEVEL

For 5KV isolation level specification the 3A220 & 3A230 are supplied in standard 4M28 modular cases for 4U high rack & flush mounting.

CASE SIZE FOR 15KV ISOLATION LEVEL

For 15KV isolation level specification the 3A320 & 3A330 are supplied in surface mount cases suitable for installation in the pilot wire cubicle adjacent to the 15KV isolation transformers.

AC SUPPLY SUPERVISION CONTACTS (Idec RH type)

Maximum Contact Capacity (Amps)

Voltage	DC			AC		
	30	125	250	110	220	250
Resistive	10	2.4	1.2	10	7	6.6
Inductive L/R 7ms	7.5	1.8	0.9	7.5	5	4.4

Make & Carry for 200ms

30A at 250V DC resistive

Maximum Break Capacity

0.34A at 250V DC inductive (40ms)

RECEIVE RELAY OUTPUT CONTACTS

The output relay is fitted with 2 N/O & 2 N/C self reset fine silver contacts as standard. Magnetic blowouts may be specified to increase DC switching performance.

RECEIVE RELAY CONTACT RATINGS

Make & Carry Continuously

3,000 VA AC resistive with maximums of 660V & 12A
3,000 VA DC resistive with maximums of 660V & 12A

Make & Carry for 0.5 Seconds

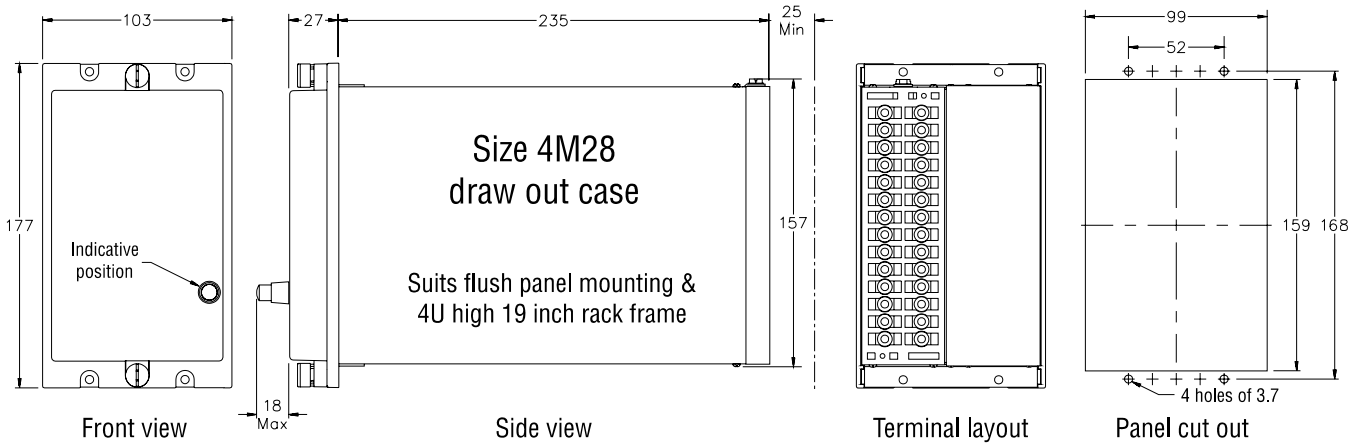
7,500 VA AC resistive with maximums of 660V & 30A
7,500 VA DC resistive with maximums of 660V & 30A

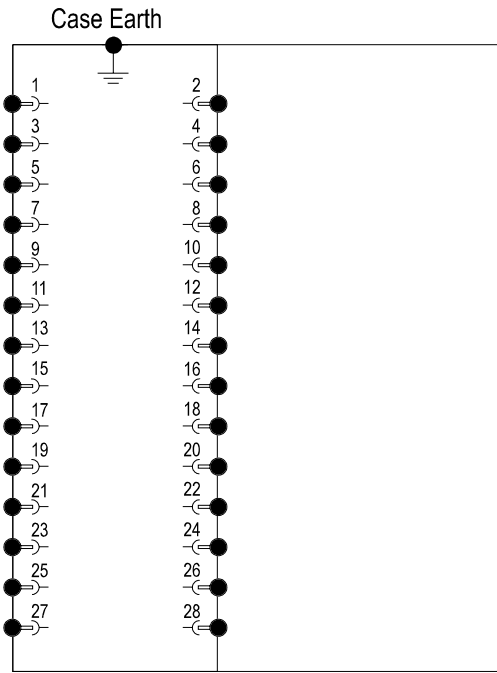
AC Break Capacity

3,000 VA AC resistive with maximums of 660V & 12A

DC Break Capacity (Amps)

Voltage		24V	48V	125V	250V
Resistive rating		12	1.5	0.5	0.25
L/R=40ms	Maximum break	12	1	0.4	0.2
	1K operations (N3 Rating)	12	12	5	2.5





4M28 Case terminations (REAR VIEW)

Ordering Information

Generate the required ordering code as follows: e.g. 3A220 B

3A220



1 ISOLATION LEVEL / AUXILIARY SUPPLY

- A 5KV / 110V AC & 240V AC
- B 15KV / 110V AC
- C 15KV / 24V AC

Generate the required ordering code as follows: e.g. 3A330 B

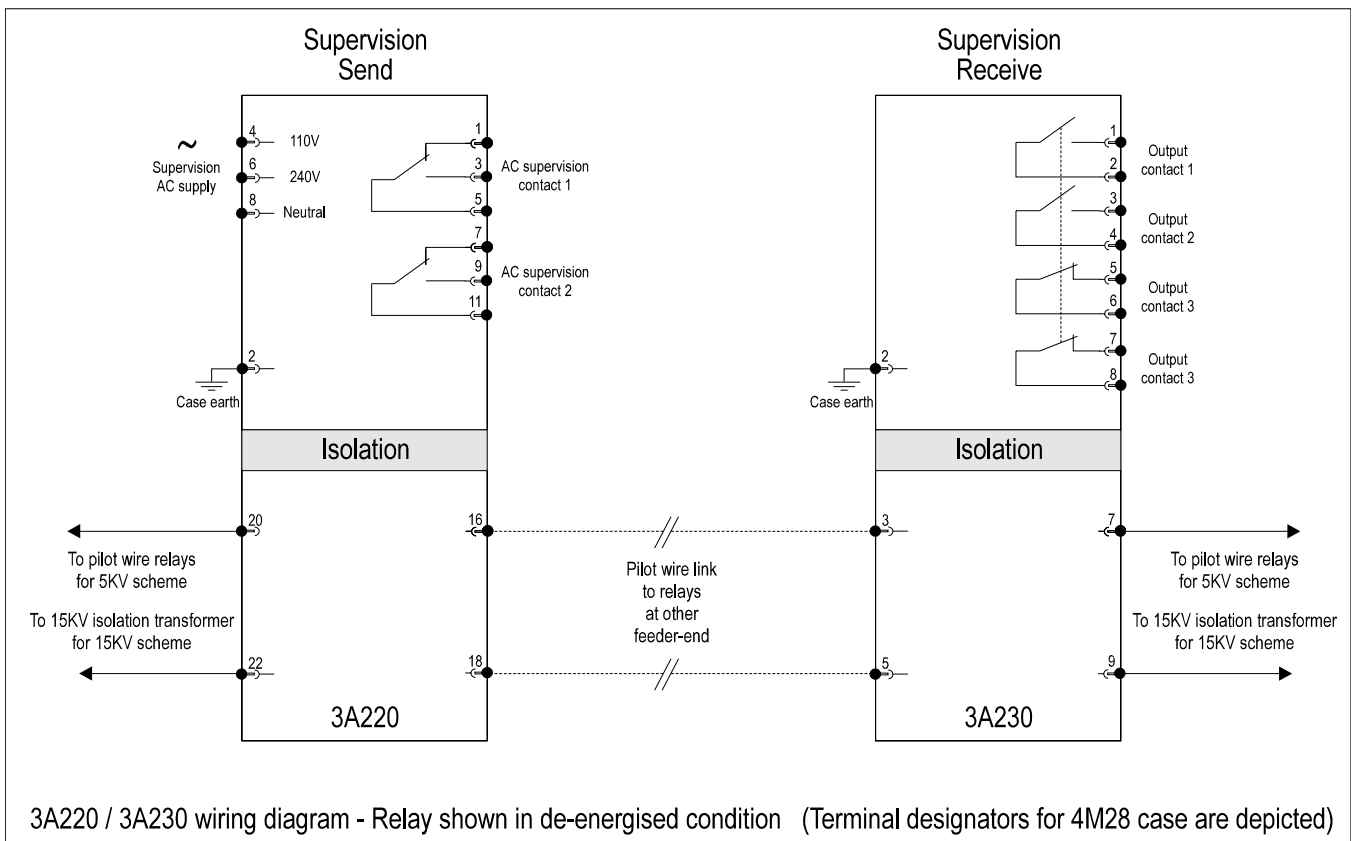
3A230



1 ISOLATION LEVEL / AUXILIARY SUPPLY

- A 5KV
- B 15KV

Refer to the 2C82 data sheet for further operational parameters & specifications.



3A220 / 3A230 wiring diagram - Relay shown in de-energised condition (Terminal designators for 4M28 case are depicted)

Australian Content

Unless otherwise stated the product(s) quoted are manufactured by RMS at our production facility in Melbourne Australia. Approximately 60% of our sales volume is derived from equipment manufactured in house with a local content close to 90%. Imported components such as semi-conductors are sourced from local suppliers & preference is given for reasonable stock holding to support our build requirements.

Quality Assurance

RMS holds NCSI (NATA Certification Services International), registration number 6869 for the certification of a quality assurance system to AS/NZS ISO9001-2000. Quality plans for all products involve 100% inspection and testing carried out before despatch. Further details on specific test plans, quality policy & procedures may be found in section A4 of the RMS product catalogue.

Product Packaging

Protection relays are supplied in secure individual packing cardboard boxes with moulded styrene inserts suitable for recycling. Each product & packing box is labeled with the product part number, customer name & order details.

Design References

The products & components produced by RMS are based on many years of field experience since Relays Pty Ltd was formed in 1955. A large population of equipment is in service throughout Australia, New Zealand, South Africa & South East Asia attesting to this fact. Specific product & customer reference sites may be provided on application.

Product Warranty

All utility grade protection & auxiliary relay products, unless otherwise stated, are warranted for a period of 24 months from shipment for materials & labour on a return to factory basis. Repair of products damaged through poor application or circumstances outside the product ratings will be carried out at the customer's expense.

Standard Conditions of Sale

Unless otherwise agreed RMS Standard Terms & Conditions (QF 907) shall apply to all sales. These are available on request or from our web site.



Relay Monitoring Systems Pty Ltd

6 Anzed Court, Mulgrave, Victoria 3170, AUSTRALIA

Tel: 61 3 9561 0266 Fax: 61 3 9561 0277 Email: rms@rmspl.com.au Web: www.rmspl.com.au