



IDRATEK

INTELLIGENT AUTOMATION

DRH-003

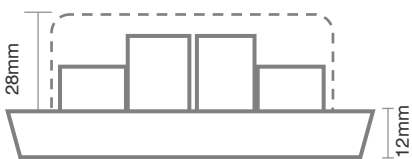
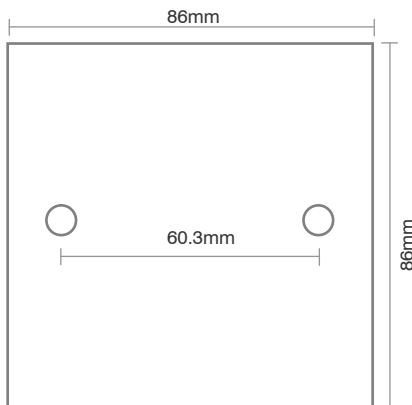
Dual 13A SPCO Relays + LEDs + 2x Digital Inputs + 1x Analogue Input



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The DRH-003 module integrates a number of basic input/output elements suited to functions such as appliance control, security system sensors/alarms interfacing, and general purpose higher power mains rated switching activities. The availability of changeover contacts on both relays allows fail 'ON' switching, DC reversing, and safety critical (sequenced serial relay) switching schemes to be implemented within one module. Pulse counting on digital inputs allows interface to pulse output metering devices such as utility meters or anemometers. An analogue input is also provided which can be used for resistive sensors such as UFH floor probes or pipe clamp thermistors. Note: This module does not incorporate internal fuses.



Input/Output

- 2 x Non-Isolated Digital Inputs with pulse count capability
- 1x Non-isolated Analogue (variable resistance) input
- 2 x General Purpose LED Indicator Outputs
- 2 x Relay Outputs (SPCO 13A/240Vac /30Vdc)

Functional

- All input and output states can be interrogated at any time
- Highly flexible static output state modification eg. WRITE/SET/CLEAR/TOGGLE any group or individual
- Module start-up output states are user programmable
- Powerful programmable dynamic output functions include:
 - Single shot: Delay, activity time, post activity state
 - Toggle: Period, duration
 - PWM: Mark, space, duty cycle
- All Input devices can provide independent event triggers with mode programmable trigger gating: Eg: trigger on High->Low, trigger on Low->High, trigger on either transition, trigger and latch, analogue thresholds
- Each event trigger can generate a pre-defined response and/or several user programmable responses.
- Analogue input configured in potentiometric mode with on board selectable 10K/57K pullups. Typical use: thermistor (eg UFH probe or pipe temperature sensor) or other resistive sensors
- Pulse counting capability on digital inputs
- Module Initialise trigger
- Status indicator LED
- In-situ reprogrammable firmware

Electrical

- Operating voltage 12-15V DC
- Current consumption 8mA (nom), 97mA (max)
- 0V Reference provided for digital inputs
- Switching output capacity 13A/240Vac/30Vdc per channel
- Output/IDRANet isolation >3kV (12mm min creepage)

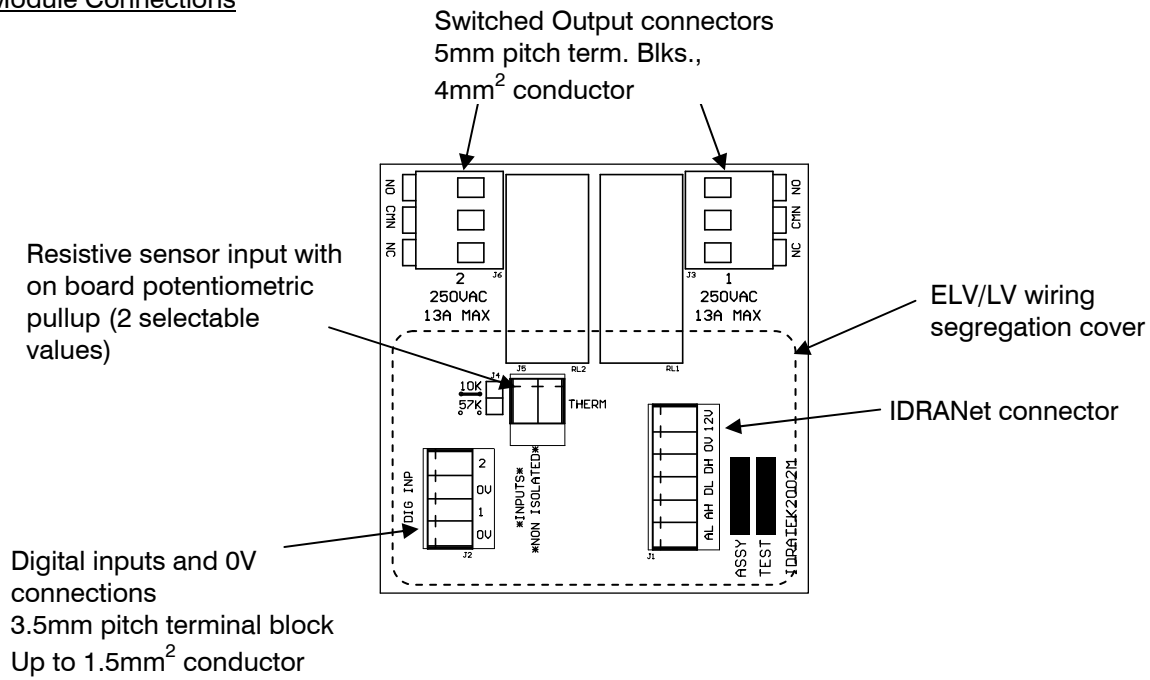
Environmental

- Operating temperature -10°C to +40°C
- Operating humidity 5% to 85% (non-condensing)

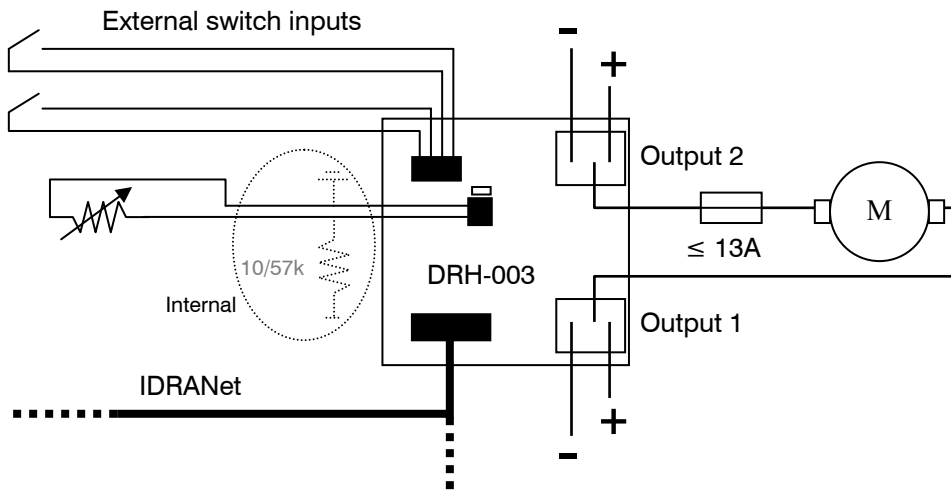
Mechanical

- Designed to fit UK standard 35mm deep electrical pattrass
- 60.3mm fixing centres using standard M3.5 screws
- Protective cover provided for low voltage cables
- Switched connections via 5mm pitch terminal block, up to 4mm² conductor cross section.
- Digital input connections via 3.5mm pitch terminal block, up to 1.5mm² conductor cross section.

Module Connections



Example connectivity



Note: Though both digital and analogue filtering are employed on all inputs, for longer (eg. >3m) normally open input connections it is advisable to take additional noise protection precautions, eg.: Use twisted pair or shielded cables (one side/shield to 0V).

Relay contact suppression

In some situations, eg. for highly inductive loads, it may be advantageous to connect suppression components across the load or, if not possible, across the relay terminals. Appropriately rated suppressors must be used eg 250Vac X2 type for mains switching.

Note: The DRH-002 module does not incorporate internal fuses. External fuses or circuit breakers (up to a maximum 13A rating) MUST be fitted to suit the application