



Type: LMCCR-2A

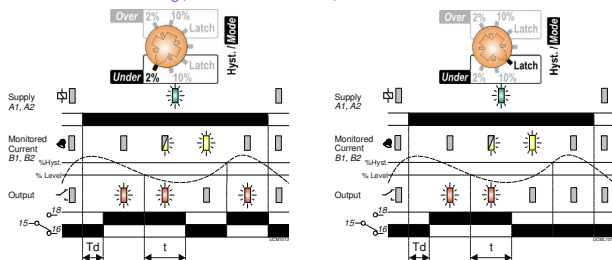
Multifunction, Combined Current Relay



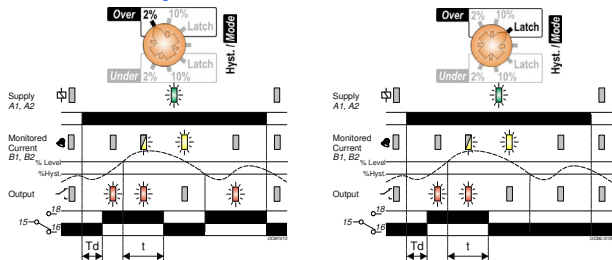
- ***NEW* 17.5mm DIN rail housing**
- **Microprocessor based**
- **True R.M.S. monitoring**
- **Monitoring input (0.02 – 2A) split in to 3 selectable ranges**
- **Selectable Under or Over current monitoring**
- **Selectable hysteresis or latch option**
- **Adjustable trip level and time delay**
- **Isolated Auxiliary supply (24 – 230V AC/DC) ¹**
- **1 x SPDT relay output 8A**
- **Green LED indication for supply status**
- **Yellow LED indication for alarm status**
- **Red LED indication for relay status**

• FUNCTION DIAGRAMS

Under Current Monitoring (with and without Latch enabled)



Over Current Monitoring (with and without Latch enabled)



• INSTALLATION AND SETTING

- BEFORE INSTALLATION, ISOLATE THE SUPPLY.
- Connect the Auxiliary and Monitored Inputs as required.



Installation work must be carried out by qualified personnel.

Setting the unit.

- Set the "Hyst. / Mode" selector ⑦ to the required position depending whether under or over monitoring is required. Select either a suitable hysteresis setting of 2% or 10% or choose Latch if required.
- Set the "Range" ③ to the required position (depending on monitored input current to be monitored). Set the "Power Up Delay" according to whether start up currents are likely in the application.
- Set the "Trip Level %" ⑤ and "Delay" ④ to suit the selected monitoring range and delay to tripping period.

Applying power.

- Apply power and the green LED ① will illuminate.

If Under current mode is selected:

- Relay energises / red LED ③ illuminate if the current is above the set "Trip Level". If the current falls below the "Trip Level", yellow LED ② flashes for the set "Delay" then remains lit. Red LED extinguishes / relay de-energises.

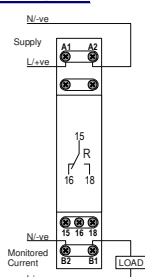
If Over current mode is selected:

- Relay energises / red LED ③ illuminate if the current is below the set "Trip Level". If the current rises above the "Trip Level", yellow LED ② flashes for the set "Delay" then remains lit. Red LED extinguishes / relay de-energises.

• TECHNICAL SPECIFICATION

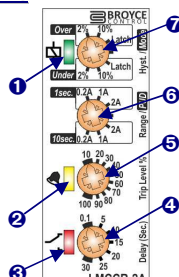
Auxiliary supply voltage U (A1, A2):	24 – 230V AC/DC ¹ (12 – 60V AC/ DC also available)
Frequency range:	48 – 63Hz (AC supplies)
Supply variation:	+15% / - 10%
Overvoltage category:	III (IEC 60664)
Rated impulse withstand voltage:	4kV (1.2/50µs) IEC 60664
Power consumption (max.):	24V 48V 115V 230V
AC:	0.84 VA 0.82 VA 1.1 VA 1.4 VA
DC:	0.6 W 0.47 W 0.46 W 0.53 W
Monitoring mode:	Under or Over current (selectable)
Hysteresis:	2 or 10% (selectable)
Latch:	Enabled using Mode selector switch
Monitoring ranges:	0.02 – 0.2A, 0.1 – 1A, 0.2 – 2A
Trip level:	10 – 100% of selected monitoring range
Time delay (t):	0.1 – 30S (from fault occurring to relay de-energising)
Power up delay (Td):	1 or 10 seconds
Reset time:	100ms
Accuracy:	± 1% of maximum full scale
Adjustment accuracy:	< 5% of maximum full scale
Repeat accuracy:	< 0.5% at constant conditions
Drift with temperature:	± 0.05% / °C
Drift with voltage:	± 0.2% / V
Monitoring input (B1, B2):	0.01 to 2.4A AC/DC
Frequency:	DC, 48 – 70Hz
Maximum input rating:	1.4 x 5A
Overload:	5A for 1s
Overvoltage category:	III (IEC 60664)
Rated impulse withstand voltage:	4kV (1.2/50µs) IEC 60664
Power on indication:	Green LED
Alarm status indication:	Yellow LED
Relay status indication:	Red LED
Ambient temp:	-20 to +60°C
Relative humidity:	+95%
Output (15, 16, 18):	SPDT relay
Output rating:	AC1 250V 10A (2500VA) AC15 250V 5A (no), 3A (nc) DC1 25V 10A (250W)
Electrical life:	≥ 150,000 ops at rated load
Dielectric voltage:	2kV AC (rms) IEC 60947-1
Rated impulse withstand voltage:	4kV (1.2/50µs) IEC 60664
Housing:	Orange flame retardant UL94 V0
Weight:	≈ 63g
Mounting option:	On to 35mm symmetric DIN rail to BS EN 60715 or direct surface mounting via 2 x M3.5 or 4BA screws using the black clips provided on the rear of the unit
Terminal conductor size	≤ 2 x 2.5mm ² solid or stranded
Approvals:	CE and RoHS Compliant. EMC: Immunity: EN 61000-6-2 (EN 61000-4-3 10V/m 80MHz - 2.7GHz) Emissions: EN 61000-6-4

• CONNECTION DIAGRAM

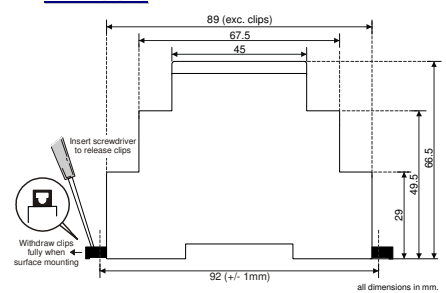


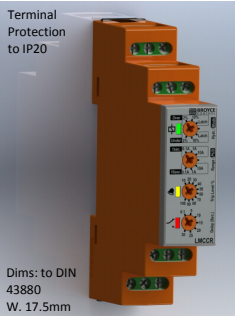
• SETTING DETAILS

1. Power supply status (Green) LED
2. Alarm status (Yellow) LED
3. Relay output status (Red) LED
4. Time delay adjustment
5. Trip level adjustment
6. Power up delay / Monitoring range selector
7. Hysteresis / Mode selector



• DIMENSIONS

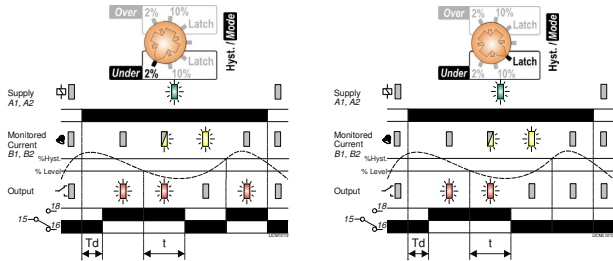




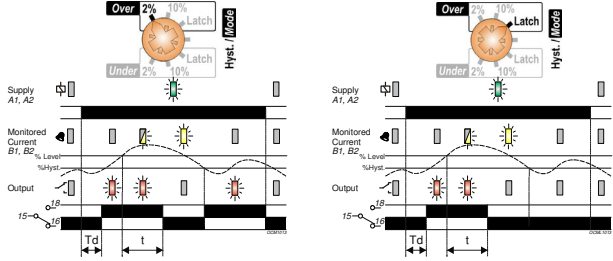
- *NEW* 17.5mm DIN rail housing
- Microprocessor based
- True R.M.S. monitoring
- Monitoring input (0.2 – 10A) split in to 3 selectable ranges
- Selectable Under or Over current monitoring
- Selectable hysteresis or latch option
- Adjustable trip level and time delay
- Isolated Auxiliary supply (24 – 230V AC/DC)¹
- 1 x SPDT relay output 8A
- Green LED indication for supply status
- Yellow LED indication for alarm status
- Red LED indication for relay status

• **FUNCTION DIAGRAMS**

Under Current Monitoring (with and without Latch enabled)



Over Current Monitoring (with and without Latch enabled)



• **INSTALLATION AND SETTING**

- BEFORE INSTALLATION, ISOLATE THE SUPPLY.
- Connect the Auxiliary and Monitored Inputs as required.



Installation work must be carried out by qualified personnel.

Setting the unit.

- Set the "Hyst. / Mode" selector ⑦ to the required position depending whether under or over monitoring is required. Select either a suitable hysteresis setting of 2% or 10% or choose Latch if required.
- Set the "Range" ⑥ to the required position (depending on monitored input current to be monitored). Set the "Power Up Delay" according to whether start up currents are likely in the application.
- Set the "Trip Level %" ⑤ and "Delay" ④ to suit the selected monitoring range and delay to tripping period.

Applying power.

- Apply power and the green LED ① will illuminate.

If Under current mode is selected:

- Relay energises / red LED ③ illuminate if the current is above the set "Trip Level". If the current falls below the "Trip Level", yellow LED ② flashes for the set "Delay" then remains lit. Red LED extinguishes / relay de-energises.

If Over current mode is selected:

- Relay energises / red LED ③ illuminate if the current is below the set "Trip Level". If the current rises above the "Trip Level", yellow LED ② flashes for the set "Delay" then remains lit. Red LED extinguishes / relay de-energises.

• **TECHNICAL SPECIFICATION**

Auxiliary supply voltage U (A1, A2): 24 – 230V AC/DC¹ (12 – 60V AC/ DC also available)

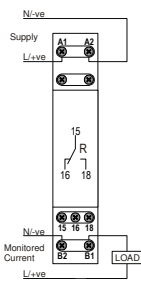
Frequency range:	48 - 63Hz (AC supplies)
Supply variation:	+15% / - 10%
Overvoltage category:	III (IEC 60664)
Rated impulse withstand voltage:	4kV (1.2/50µs) IEC 60664
Power consumption (max.):	24V 48V 115V 230V
	AC: 0.84 VA 0.82 VA 1.1 VA 1.4 VA
	DC: 0.6 W 0.47 W 0.46 W 0.53 W

Monitoring mode:	Under or Over current (selectable)
Hysteresis:	2 or 10% (selectable)
Latch:	Enabled using Mode selector switch
Monitoring ranges:	0.2 – 2A, 0.5 – 5A, 1 – 10A
Trip level:	10 – 100% of selected monitoring range
Time delay (t):	0.1 – 30S (from fault occurring to relay de-energising)
Power up delay (Td):	1 or 10 seconds
Reset time:	100ms
Accuracy:	± 1% of maximum full scale
Adjustment accuracy:	< 5% of maximum full scale
Repeat accuracy:	± 0.5% at constant conditions
Drift with temperature:	± 0.05% / °C
Drift with voltage:	± 0.2% / V
Monitoring input (B1, B2):	0.01 to 12A AC/DC
Frequency:	DC, 48 – 70Hz
Maximum input rating:	1.2 x 10A
Overload:	20A for 1s
Overvoltage category:	III (IEC 60664)
Rated impulse withstand voltage:	4kV (1.2/50µs) IEC 60664
Power on indication:	Green LED
Alarm status indication:	Yellow LED
Relay status indication:	Red LED
Ambient temp:	-20 to +60°C
Relative humidity:	+95%
Output (15, 16, 18):	SPDT relay
Output rating:	AC1 250V 10A (2500VA) AC15 250V 5A (no), 3A (nc) DC1 25V 10A (250W)

Electrical life:	≥ 150,000 ops at rated load
Dielectric voltage:	2kV AC (rms) IEC 60947-1
Rated impulse withstand voltage:	4kV (1.2/50µs) IEC 60664
Housing:	Orange flame retardant UL94
Weight:	≈ 63g
Mounting option:	On to 35mm symmetric DIN rail to BS EN 60715 or direct surface mounting via 2 x M3.5 or 4BA screws using the black clips provided on the rear of the unit

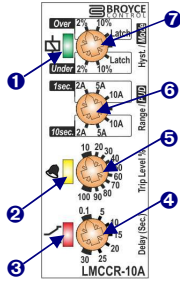
Terminal conductor size	≤ 2 x 2.5mm ² solid or stranded
Approvals:	CE and RoHS Compliant. EMC: Immunity: EN 61000-6-2 (EN 61000-4-3 10V/m 80MHz - 2.7GHz) Emissions: EN 61000-6-4

• **CONNECTION DIAGRAM**



• **SETTING DETAILS**

1. Power supply status (Green) LED
2. Alarm status (Yellow) LED
3. Relay output status (Red) LED
4. Time delay adjustment
5. Trip level adjustment
6. Power up delay / Monitoring range selector
7. Hysteresis / Mode selector



• **DIMENSIONS**

