

NEW ELEC

MOTOR PROTECTION & CONTROL TECHNOLOGY

100M Series Electronic Motor Protection Relay



A South African Company to be Proud of

About

The 100M Series electronic motor protection relay is a compact relay ideally suited for fitting into gate-end boxes for protecting underground coal cutting machinery and transformers.

Warning LEDs indicate when the respective threshold settings are exceeded. In the event of a trip, the respective LED and the main trip relay LED are latched in order to assist maintenance personnel in identifying the cause for the trip.

Available in ampere calibration from 5 to 360A, split over three ampere ranges, or in percentage calibration. Selectable motor starting curves from 2 to 10s as well as a thermal envelope that exactly accommodates the duty design parameters of the motor are available. This is achieved by selecting thermal lock-out periods ranging from 30s (120 stop - starts per hour) to 10 minutes (6 stop - starts per hour).

The main trip relay comprises 1 n/o and 1 n/c contact. The short circuit protection trip contact is a dedicated n/o designed to operate a shunt trip on a back-up circuit breaker.

Features Include:

- Thermal OverloadProtection
- Locked RotorProtection
- Starting StallProtection
- Unbalanced CurrentProtection Single PhasingProtection
- Short CircuitProtection
- Starts per HourLimitation
- LED statusIndication

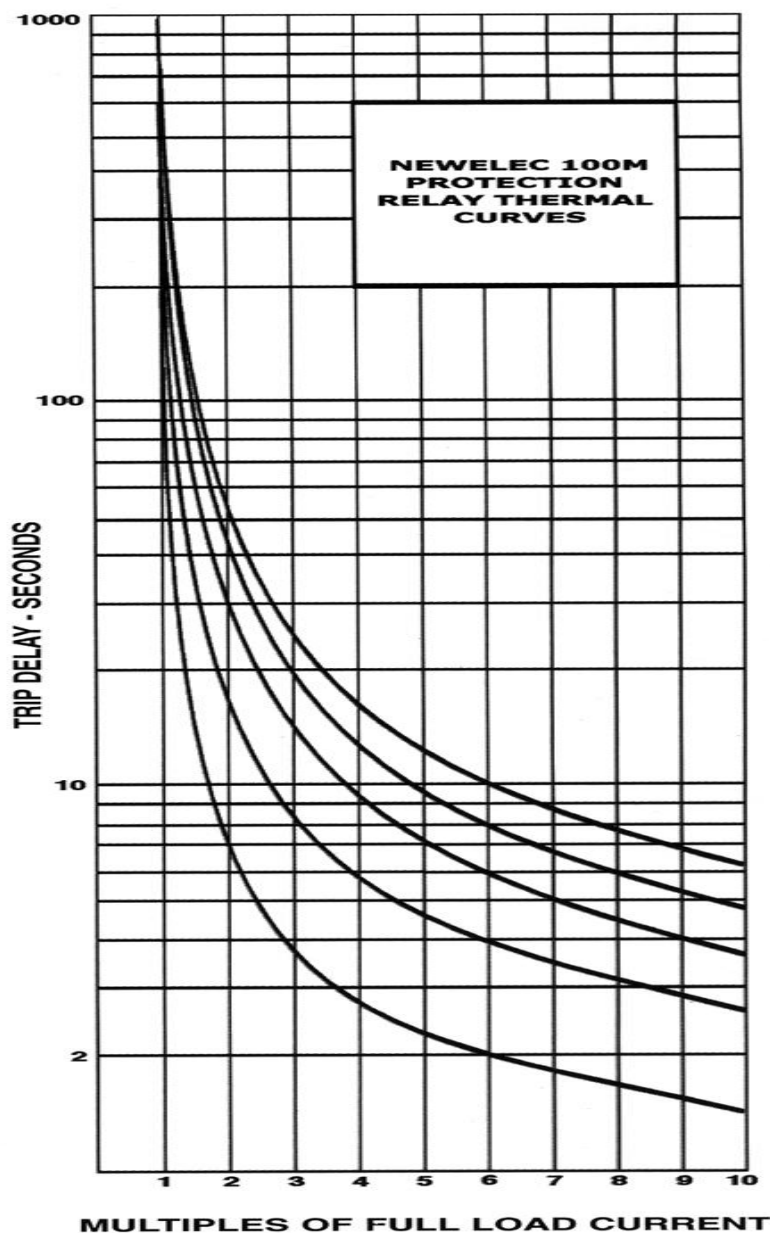


Ordering Information

C.T. Ratio	Setting Range	Code	Control Supply	Starts per hour
xxx:1	5 - 120%	0	012 - 12V A.C.	6 - 10 Min
100:	5 - 120A	1	110 - 110V A.C.	12 - 5 Min
200:	10 - 240A	2	220 - 220V A.C.	18 - 3 Min 30sec
300:1	30 - 360A	3		120 - 30 sec

Example 10 3 M 01218

Thermal Curves



Product Specifications

Input Converter

Overload capacity	: 6 x In 5 min
	: 12 x In 30 s
Frequency Response	: 42 to 66 Hz

Overload Trip Delay Curves

Accuracy	: $\pm 5\%$ 1,2-10 x Ie
	: $\pm 10\%$ 1,01-1,2 x Ie
Calibration	: Optional, Amp or % of In

Control Supply

12, 110 or 220Volt A.C. specified voltage	: 90 to 115% of
--	-----------------

Short Circuit Sensor

Tripping Level	: 7,5 to 12 x Ie
Accuracy	: $\pm 8\%$
Insulation between separate contacts	: 2kV 1 minute
Back Tripping relay trip delay	: 100ms
Main Tripping relay trip delay	: 2s

Maximum Unbalance Sensor

Maximum level setting (M.F.L.)	: 20% of Ie
Trip Delay	: 5 seconds
18 Starts per hour	: 3,5 minutes
120 Starts per hour	: 30 seconds
Accuracy	: $\pm 5\%$

Maximum Load Current Sensor

Level Setting Accuracy	: $\pm 4\%$
Linearity	: $\pm 4\%$
Repeatability	: $\pm 1\%$
Detection Level	: $\pm 1\%$
Range	: 5 to 120% In

Main Trip and Short Circuit Tripping Relay

Current rating	: 5Amp 220V A.C.
Configuration	: 2 Form C (CM n/o n/c)
Insulation coil to contacts	: 2kV 1 minute
Insulation across open contacts	: 1kV 1 minute

Overload Thermal Lock Out Times

6 Starts per hour	: 10 minutes
12 Starts per hour	: 5 minutes

Environmental Specifications

Reference Standards IEC 255

Isolation N/O Contact

1kV for 1 minute To IEC 255-5 C

Impulse Withstand

5kV To IEC 255-4 EIII

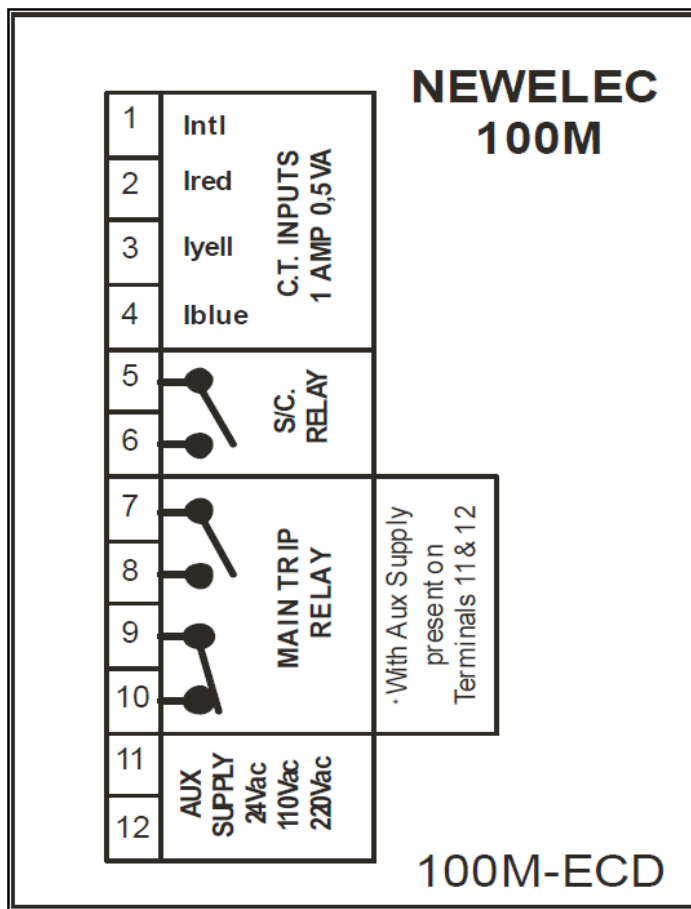
Isolation Separate Contacts

1KV for 1 minute To IEC 60255-5C

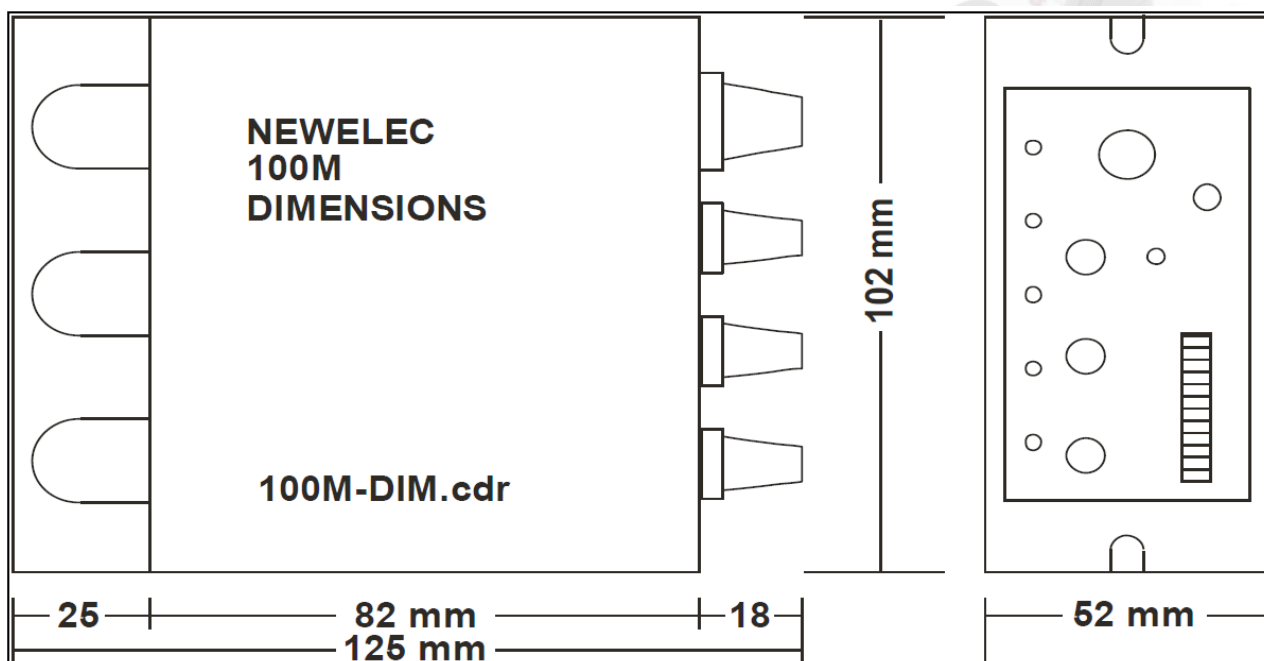
High Frequency

IEC 255-4 EIII

Wiring Diagram



100M Series Dimensions



NEW ELEC

MOTOR PROTECTION & CONTROL TECHNOLOGY

Physical Address:

298 Soutter Street,
Pretoria West

Tel: +27 12 327 1729

Fax: +27 (0)12 327 1733

Toll Assist: 0860 10 30 41

www.newelec.co.za

sales@newelec.co.za

100M Series

Electronic Motor Protection Relay

