

FINAL DISTRIBUTION PRODUCTS RANGE

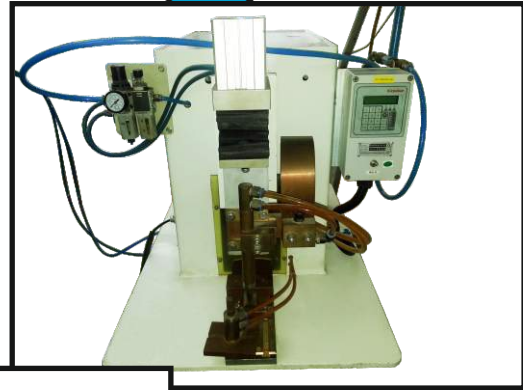


ISO 14001:2004 Certified
ISO 9001:2008 Certified



LAWSON FUSES INDIA LTD

Lawson Fuses India Ltd is a wholly owned subsidiary of Lawson Fuses Ltd, a long established UK company with a worldwide reputation for product quality and service excellence.



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WIDE RANGE

- 1P, 1P+N, 2P, 3P, 3P+N, 4P
- Trip Type 'B' & 'C' Breaking capacity 10kA
- Ratings 6A to 63A*
- IP- 20 Degree of protection (Finger -touch safe)
- Trip free mechanism
- Mechanism with pad locking facility
- Low Watt power loss
- Current limiting design- Class 3
- ISI & CE Marked

APPLICATION

LAWSON 63 Series Miniature Circuit Breakers are used in power distribution systems for protection against overload and short circuit faults. The product is highly reliable, excellent in performance and has a high breaking capacity. The product has been designed for un-interrupted duty at 230/400V circuits for overload as well as short circuit protection. The Lawson 63 Series MCBs comply with IS/IEC 60898-1.

HOUSING

LAWSON MCBs are made up of engineered thermo plastic for self lubrication and critical performance. The housing and other moulded components are fire retardant having high melting point, low water absorption, high dielectric strength & anti tracking properties therefore enabling it to withstand high temperatures.

OPERATING MECHANISM

LAWSON circuit breakers are based on Current Limiting Principle. The protection is ensured by combining a temperature receptive mechanism (bimetal) and a current sensitive electromagnetic device. The thermal operation provides protection from normal overloads and the electro-magnetic device against large overloads and short circuits.

SUPERIOR CONTACT MECHANISM

The mechanism comprises of fixed and moving contacts made up of high conductivity materials ensuring extended life span with anti-weld properties. These contacts having low contact resistance resulting in reduced voltage drop and low watt loss leads to energy savings.

EFFECTIVE ARC BLOWERS

The arc under the influence of magnetic field is driven directly into the arc-chute where it is quickly extinguished and quenched.



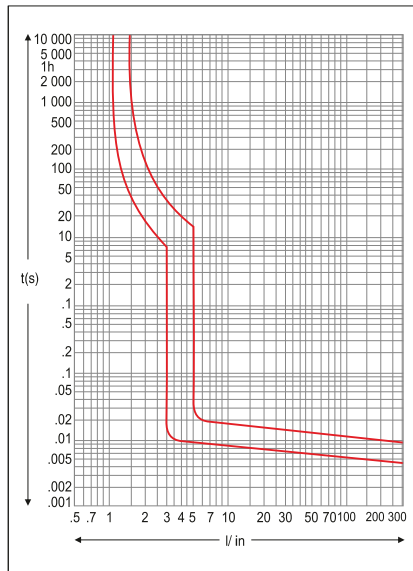
SELECTION

Description	TYPE 'B'	TYPE 'C'
Single pole	6/10/16/20/25/32/40/63	6/10/16/20/25/32/40/63
Single pole + Neutral	6/10/16/20/25/32/40/63	6/10/16/20/25/32/40/63
Double pole	6/10/16/20/25/32/40/63	6/10/16/20/25/32/40/63
Three pole	6/10/16/20/25/32/40/63	6/10/16/20/25/32/40/63
Three pole + Neutral	6/10/16/20/25/32/40/63	6/10/16/20/25/32/40/63
Four pole	6/10/16/20/25/32/40/63	6/10/16/20/25/32/40/63

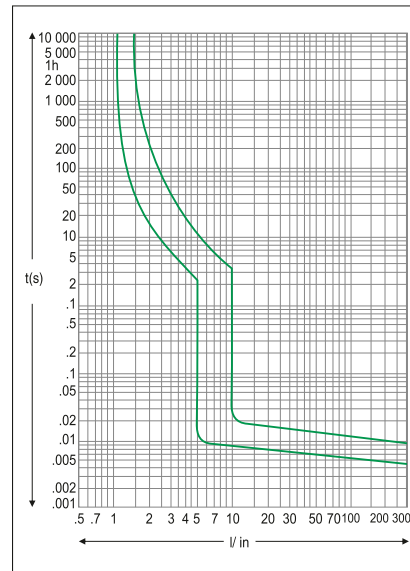
* 0.5 to 5A Ratings are available on Request

Tripping Characteristic Curve 'B & C' Series

Type 'B'



Type 'C'



MCB ISOLATORS

LAWSON Isolators are available in ratings 40,63 & 100A in SP,DP,TP & FP executions

TECHNICAL DATA

Specification	LAWSON MCB	LAWSON ISOLATOR
TYPE	'B' 'C'	
Standard conformity	IS/IEC60898-1	IS/IEC60947-3
Rated current (In)	6-63A	40-63A-100A
Rated voltage AC	230/400V	230/400V
Utilization category	-	AC22A
Rated frequency (Hz)	50Hz	50Hz
No. of pole(Execution)	1P, 1P+N, 2P, 3P, 3P+N & 4P	1P,2P,3P & 4P
Rated short circuit breaking capacity	10kA	
Rated insulation voltage	660V	660V
Magnetic release setting	B-(3-5)In C-(5-10)In	-
Rated impulse voltage	6kV	6kV
Electrical / Mechanical life <32A >32A	30000 10000	30000 10000
Ambient temperature	-5°C to +55°C	-5°C to +55°C
Mounting	Clip on din rail	Clip on din rail
Degree of protection (Finger touch safe)	IP20	IP20
Resistance to shock	40mm free fall	40mm free fall

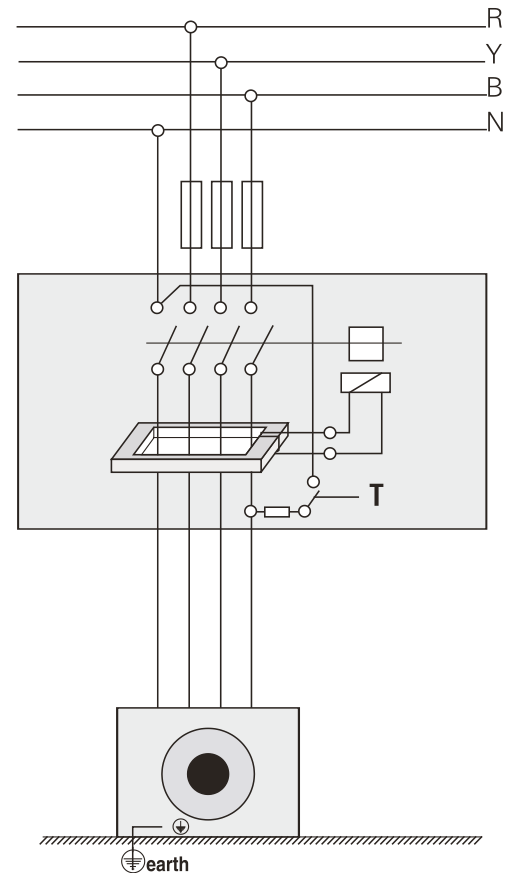


LAWSON Residual Current Circuit Breaker (RCCB)

INTRODUCTION

RCCB works on balance current principle. The supply side of the current carrying conductors is passed through a torroid and act as the primary winding of Core Balanced Current Transformer. The secondary winding of this transformer is connected to an extremely sensitive electromagnetic trip relay which operates the tripping mechanism. In normal healthy circuit the vector sum of currents in all phases and neutral is equal to zero, if there is leakage in any of the phases flowing to earth the vector sum becomes not equal to zero. This residual current is enough to develop a resultant current flow in the secondary of Core Balanced Current Transformer which is applied to the sensitive relay resulting in actuating the tripping mechanism thereby tripping the supply.

Thus RCCB provides earth leakage protection in electrical circuits and even provides protection due to electric shocks against accidental coming in contact with live parts / leaky equipments in an electrical circuit.



SELECTION OF RCCBS

RCCBs can be selected as per individual need based on application as under

Sensitivity	Application
• 30mA	Designed for additional protection against direct contact. The 30mA RCCBs protects against leakage currents and indirect contact with earth loop impedance electric shock hazards.
• 100mA	Suitable for protection against indirect contact and leakage currents for larger installation.
• 300mA	Suitable for large installation having high levels of leakage currents. 300mA RCCBs protect against leakage currents, indirect contact & fire hazards.

SALIENT FEATURES OF LAWSON RCCBS

LAWSON RCCBs are highly reliable, hi-tech state of the art product. These are composite unit RCCBs for single phase and three phase applications with current sensitivity of 30, 100 & 300mA against all kind of faults due to earth leakage.

LAWSON RCCBs ensure safety to human life and installations against fire and electric shocks. In short human life is extremely precious and Lawson RCCBs are the answer to safeguard the same.

SOME MAJOR SALIENT FEATURES

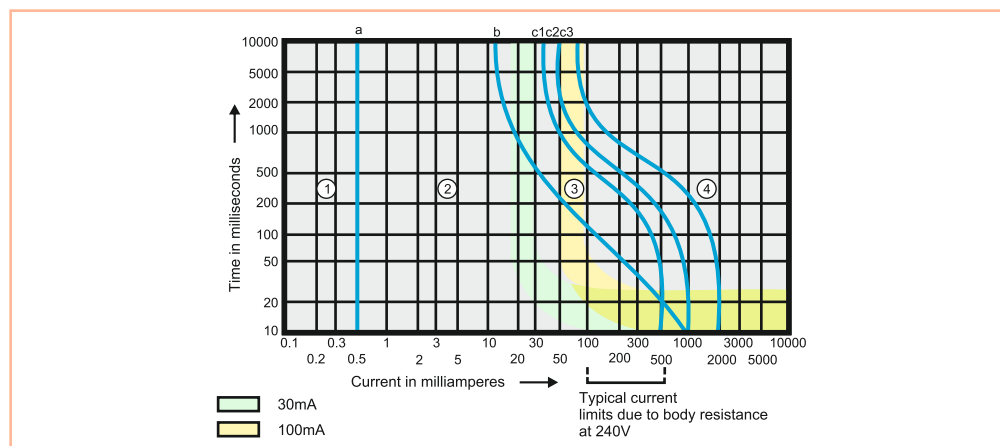
- Provides protection against earth fault/ leakage and also fulfill the function of isolation.
- Automatically measures and disconnect the circuit when earth fault/ leakage current occurs and exceeds the rated sensitivity.
- High short-circuit current withstand capacity.
- Dual termination possible for cable and comb type bus bar connection.
- Having finger-touch safe connection terminals (IP 20 Protection).
- Fire resistant plastic parts to withstand abnormal heating and strong impact.
- Independent of power supply and line voltage. Also free from external voltage fluctuation.
- Incorporates a filtering device for prevention of nuisance tripping due to transient voltage.
- High current ratings upto 100A.

Physiological damage to human body by electric current due to accidental contact is explained below

- 70-100mA Results in irreversible cardiac fibrillation leading to non steady beating of heart which may be non reversible at times.
- 20-30mA May cause respiratory damage due to contraction of muscles.
- 10mA May cause muscle contraction.
- 1-10mA May cause needle like pricking sensation.

* More technical details & data on request

Indian Electricity Rules mandate for compulsory use of RCCBs for loads beyond 5KW



LAWSON DISTRIBUTION BOARDS

Distribution of power in Residential & Commercial Buildings, Independent Villas, Hotels , Hospitals and of course Industries is ensured through composite system known as Distribution Boards.

Distribution Boards are made up of metallic or engineering plastic single door or double door enclosures complete with DIN-Rail, Copper/Aluminum Bus Bars, Neutral Link and Earth Link.

The enclosure known as Distribution Board is used for installing Isolators,RCCBs,MCBs etc. to make composite Power Distribution System complete with all these protective devices.

For safety of installations and human beings it is imperative to properly select Distribution Boards. LAWSON has introduced a very exhaustive range of high quality Distribution Boards.

LAWSON high quality Distribution Boards are manufactured using CRCA sheet steel Powder Coated with state-of-the-art powder coating technology making it highly corrosion resistant over a long period of time.

LAWSON Distribution Boards blend very well with MCBs, RCCBs & Isolators to provide a very reliable and comprehensive protection system for power distribution.

DB RANGE

Lawson offers complete range of Distribution Boards suitable for various applications as under

- SPN Distribution Boards- Single & Double Door.
- TPN Distribution Boards Horizontal- Single & Double Door.
- Vertical TPN Distribution Boards with MCB as incomer.
- Vertical TPN Distribution Boards with MCCB as incomer.
- PPI Distribution Boards.
- TPN Phase Selector Distribution Boards.
- Seven Segment Distribution Boards.



Finished sheet metal powder coated Plug & Socket Distribution Boards.

Range available in 10 & 20A SPN and 20 & 30 A TPN.

Adjustable 35 sq.mm din rail with connecting Links.

Insulated neutral link in SPN Board.

SPN & TPN boards with sockets having plastic cover.

Connecting Links cross section SPN-2.5 sq.mm flexible cable, TPN-6.0 sq.mm flexible cable.

Provision for both flush & wall mounting.

Heavy duty screw type out going wire nozzle.

Body in matt finish and cover in semi glossy finish.

Paint 60 micron powder coating.

Plug & Sockets internal material PBT / Porcelain.

Plug & Sockets are also available as spares.



LAWSON DISTRIBUTION BOARD-SELECTION TABLE
Single Pole Neutral Distribution Board
SINGLE DOOR

Type	Product Code	No. of Modules (incomer+ outgoing)	Total Module
4 way Single Door	LDBSPNS4	4	4
6 way Single Door	LDBSPNS6	6	6
8 way Single Door	LDBSPNS8	8	8
12 way Single Door	LDBSPNS12	12	12
16 way Single Door	LDBSPNS16	16	16


DOUBLE DOOR

Type	Product Code	No. of Modules (incomer+ outgoing)	Total Module
4 way Double Door	LDBSPND4	4	4
6 way Double Door	LDBSPND6	6	6
8 way Double Door	LDBSPND8	8	8
12 way Double Door	LDBSPND12	12	12
16 way Double Door	LDBSPND16	16	16



Triple Pole Neutral Distribution Board-Horizontal

SINGLE DOOR

Type	Product Code	No. of Modules (incomer+ outgoing)	Total Module
4 way Double Door	LDBTPNS4	8+12	20
6 way Double Door	LDBTPNS6	8+18	26
8 way Double Door	LDBTPNS8	8+24	32
12 way Double Door	LDBTPNS12	8+36	44
16 way Double Door	LDBTPNS16	8+48	56



DOUBLE DOOR

Type	Product Code	No. of Modules (incomer+ outgoing)	Total Module.
4 way Double Door	LDBTPND4	8+12	20
6 way Double Door	LDBTPND6	8+18	26
8 way Double Door	LDBTPND8	8+24	32
12 way Double Door	LDBTPND12	8+36	44
16 way Double Door	LDBTPND16	8+48	56



Triple Pole Neutral Vertical Distribution Board with provision for MCB/Isolator as incomer



Type	Product code	No. of Modules (incomer+ outgoing)	Total Module
4 way Double Door	LDBTPNVDD4	8+12	20
6 way Double Door	LDBTPNVDD6	8+18	26
8 way Double Door	LDBTPNVDD8	8+24	32
12 way Double Door	LDBTPNVDD12	8+36	44

Triple Pole Neutral Vertical Distribution Board with provision for MCCB as incomer

Type	Product Code
MCCB as incomer 100A DD04 way IP43	LDBMCCB100DD04IP43
MCCB as incomer 100A DD08 way IP43	LDBMCCB100DD08IP43
MCCB as incomer 100A DD12 way IP43	LDBMCCB100DD12IP43
MCCB as incomer 225A DD04 way IP43	LDBMCCB225DD04IP43
MCCB as incomer 225A DD08 way IP43	LDBMCCB225DD08IP43
MCCB as incomer 225A DD12 way IP43	LDBMCCB225DD12IP43

* More technical details available on request.

Triple Pole Neutral Distribution board with Per Phase Isolation

Type	Product Code	No. of Modules (incomer+ outgoing)	Total Module
4 way Double Door PPI DB	LDBTPNPPID4	8+12	20
6 way Double Door PPI DB	LDBTPNPPID6	8+18	26
8 way Double Door PPI DB	LDBTPNPPID8	8+24	32
12 way Double Door PPI DB	LDBTPNPPID12	8+36	44

Plug & Socket Distribution Board

SINGLE POLE NEUTRAL PLUG AND SOCKET DB (WITHOUT MCB)



Type	Product Code
10A SPN Plug & Socket DB	LDBPSSPN10
20A SPN Plug & Socket DB	LDBPSSPN20
20A SPN Plug & Socket (1P Cut-outs)	LDBPSSPN20IP

TRIPLE POLE NEUTRAL PLUG AND SOCKET DB (WITHOUT MCB)

Type	Product Code
20A TPN Plug & Socket DB	LDBPSTPN20
30A TPN Plug & Socket DB	LDBPSTPN30

METAL ENCLOSURE (WITH DIN RAIL)



Type	Product Code
SP MCB Enclosure	LDBSSE1
DP MCB Enclosure	LDBSSE2
TP MCB Enclosure	LDBSSE3
FP MCB Enclosure	LDBSSE4

PLASTIC ENCLOSURE

Type	Product Code
SP & DP Plastic MCB Enclosure	LDBPE1/2
TP & FP Plastic MCB Enclosure	LDBPE 3/4

* Dimensional Drawings available on request

* Due to Continuous Research and Development the actual Product may Slightly Vary from the one shown here

OTHER PRODUCTS

available from

LAWSON FUSES INDIA LTD

LOW VOLTAGE HRC FUSE RANGE

500 Volt DIN NH Fuse System

Fuse-Links, Solid/Neutral Links, Replacement Handle, Fuse-bases

415 Volt BS Fuse System Fuse-Links

Standardised Fuse-Links, Motor Circuit Protection Fuse-Links

660/690Volt BS Fuse System Fuse-Links

Industrial Fuse-Links

415 Volt BS Fuse System Fuse-holders

Fuse-holders, Fuse-holder Accessories, Solid/Neutral Links

400/415 Volt Electricity Supply Fuse-Links

Standardised Fuse-Links, Non-Standard Fuse-Links, Fuse-holders

Cylindrical Fuse System

500 Volt Cylindrical Fuse-Links, 400/415 Volt House Service Cut-Out Fuse-Links,
Modular Fuse-holders

Street Lighting Cut-Out Fuse-Links

230/240 Volt Street Lighting Cut-Out Fuse-Links

240/690Volt Semiconductor Protection Fuse-Links

Fuse-Links, Indicators

*All items from the Lawson Fuses Ltd range of products are also
available from Lawson Fuses India Ltd.*

See www.lawson-fuses.co.uk for product details, technical data and application guide.

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The products referred in this publication are manufactured and tested to the specification indicated on the product as applicable to the appropriate type reference number. To provide protection within the capability of the stated ratings and related performance characteristics the product must be correctly installed by competent personnel.

The information contained in this publication is correct at the time of publication, but the company reserve the right to change the design or construction of any listed product. The company also reserves the right to supply products differing in construction or performance.