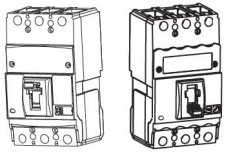
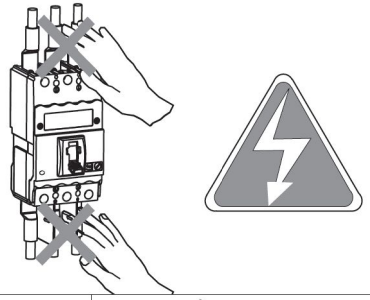
SWITCHGEAR
SAFE & SURE

INSTRUCTIONS FOR INSTALLATION & USE

MOULDED CASE CIRCUIT BREAKER

FOR YOUR SAFETY, PLEASE READ INSTRUCTIONS THOROUGHLY BEFORE OPERATING. MANUFACTURER ASSUMES NO RESPONSIBILITY FOR A HAZARD OR DAMAGE CAUSED BY INCORRECT OR NON-APPLICATION OF ANY OF THE INSTRUCTIONS ATTACHED HEREIN.



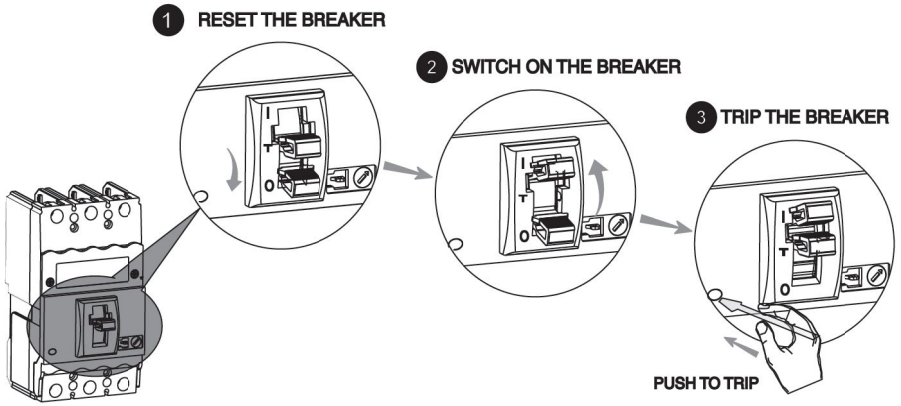


⚠ WARNING

ELECTRIC SHOCK HAZARD

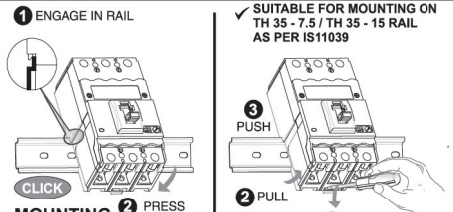
Disconnect all power supply from source before installing,modifying or sevicing.
Failure to follow these instructions may result in property damage, serious injury or death.

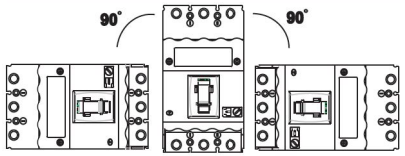
TEST



DU100H / DN0 MCCB

DINRAIL & MOUNTING ORIENTATIONS

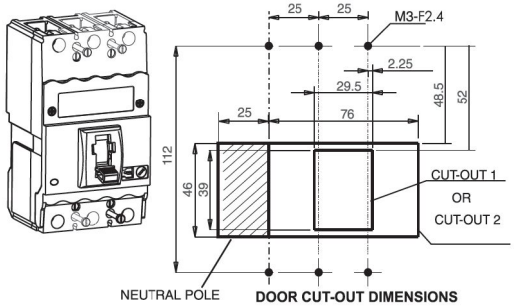


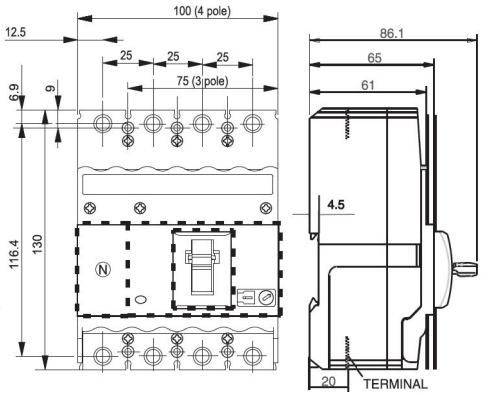


MOUNT IN ANY OF THESE THREE ORIENTATIONS ONLY

BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT

✓ MOUNT MCCB WITH TWO SCREWS AT ANY TWO DIAGONAL POSITIONS





TERMINATION

HARDWARE

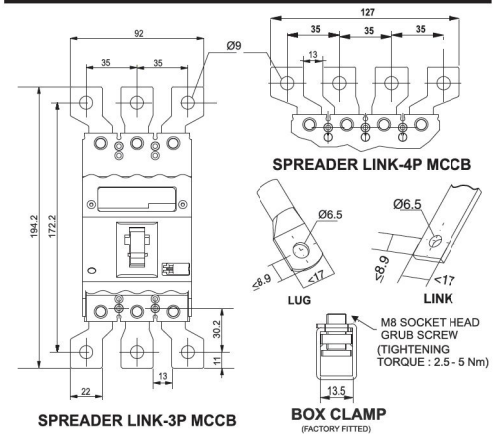
MOUNTING	1. M3X38 SLOTTED CROSS RECESSED CHEESE HEAD SCREW. - 0.7Nm 2. M3 HEX NUT	
TERMINATION	1. M6X12 SLOTTED CROSS RECESSED CHEESE HEAD SCREW. - 5 Nm 2. MS WASHER 3. SPRING WASHER	

USE APPROPRIATE PHILIPS OR SLOTTED SCREW DRIVER

TERMINAL CAPACITY:

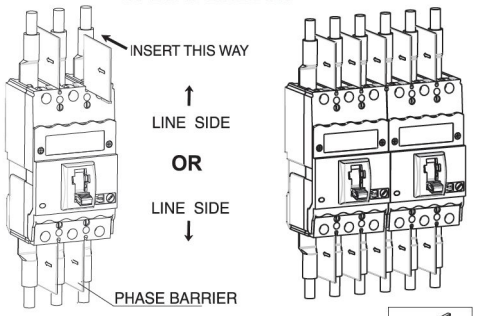
	SCREWED TERMINAL	BOX CLAMP
CABLE	35 sq. mm (With LUG)	35 sq. mm (Without lug)
LINK	<17 mm	<13.5 mm

TERMINAL CAPACITY MAY BE INCREASED BY USING SPREADER LINK.



PHASE BARRIER MOUNTING

✓ NO LOAD-LINE BIAS



⚠ WARNING

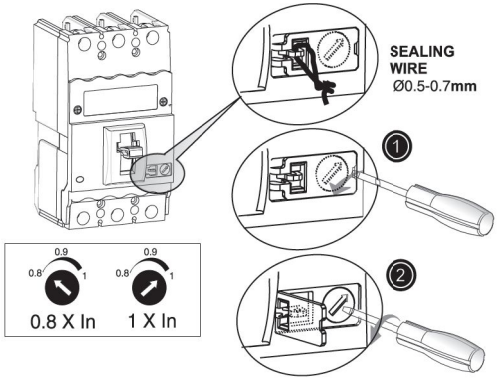
PHASE BARRIERS MUST BE MOUNTED ON THE BREAKER BEFORE USAGE

SELECTION CRITERIA

MCCB version	Protection release supplied
TM version	Thermal magnetic
M Version	Magnetic only

FOR BACK UP PROTECTION OF MOTOR, ONLY M VERSION OF MCCB SHOULD BE USED & IT'S SELECTION SHOULD BE AS PER TYPE 2 CO-ORDINATION CHART.
ENSURE INSTANTANEOUS TRIP SETTING OF MCCB IS HIGHER THAN MOTOR INRUSH CURRENT.

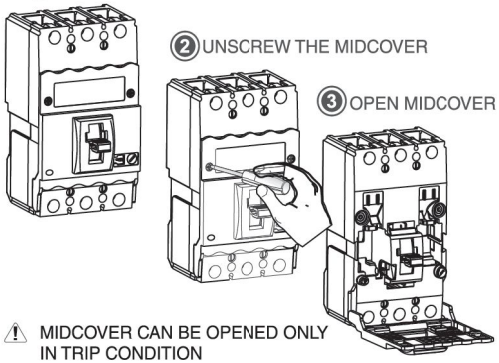
ADJUSTMENT OF THERMAL CURRENT RATING (Ith)



⚠ ADJUSTMENT OF THERMAL SETTING TO BE DONE IN TRIP CONDITION ONLY

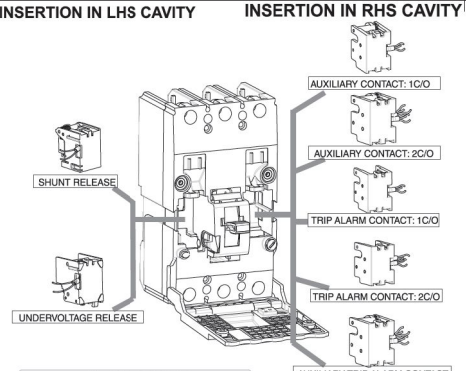
ACCESSORY MOUNTING

1. PUT BREAKER IN TRIP POSITION
2. UNSCREW THE MIDCOVER
3. OPEN MIDCOVER



⚠ MIDCOVER CAN BE OPENED ONLY IN TRIP CONDITION

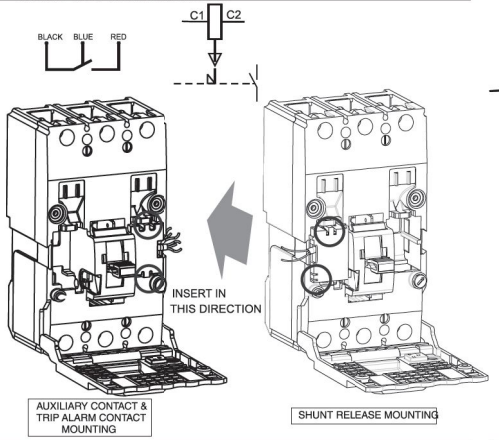
INSERTION IN LHS CAVITY **INSERTION IN RHS CAVITY**



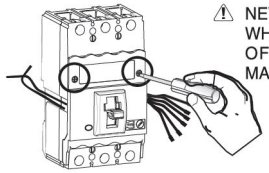
⚠ IMPORTANT

For detailed instructions, refer respective accessory product insert

AUXILIARY CONTACT, TRIP ALARM CONTACT & SHUNT RELEASE MOUNTING

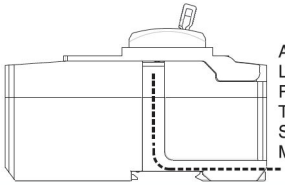


WIRE ROUTING



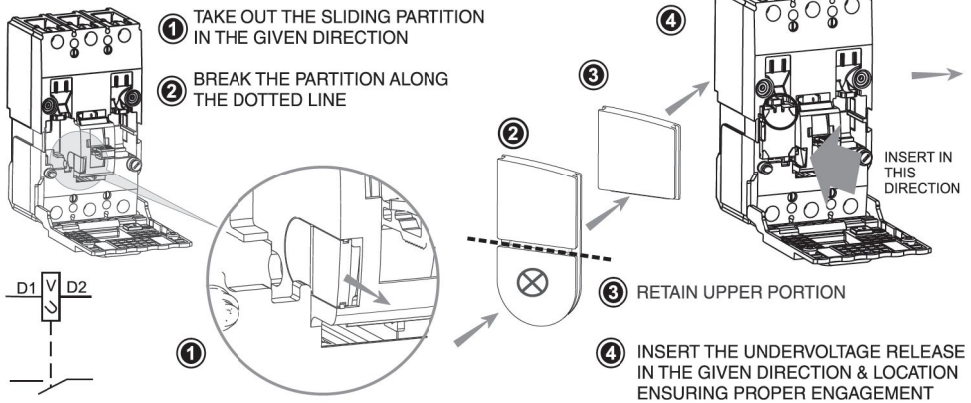
⚠ NEVER PULL THE LEAD-WIRES WHILE HANDLING OR REMOVAL OF ACCESSORY TO AVOID MALFUNCTION OF ACCESSORY

⚠ LOOSE MID-COVER MAY CAUSE MALFUNCTION OF ACCESSORY. SCREW THE MID-COVER PROPERLY AT BOTH PLACES BEFORE USE (0.7 Nm)



ACCESSORY LEAD-WIRES MAY BE ROUTED THROUGH THE CHANNEL ON BOTH SIDES IN SIDE BY SIDE MCCB MOUNTING.

UNDERVOLTAGE RELEASE MOUNTING



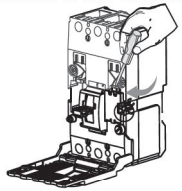
1. TAKE OUT THE SLIDING PARTITION IN THE GIVEN DIRECTION
2. BREAK THE PARTITION ALONG THE DOTTED LINE
3. RETAIN UPPER PORTION
4. INSERT THE UNDERVOLTAGE RELEASE IN THE GIVEN DIRECTION & LOCATION ENSURING PROPER ENGAGEMENT

INSERT IN THIS DIRECTION

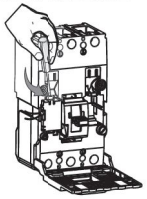
5. SLIDE IN THE UPPER HALF OF THE PARTITION IN THE GIVEN DIRECTION & LOCATION

REMOVAL OF ACCESSORIES

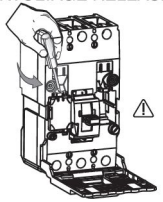
- AUXILIARY & TRIP ALARM CONTACT



- SHUNT RELEASE



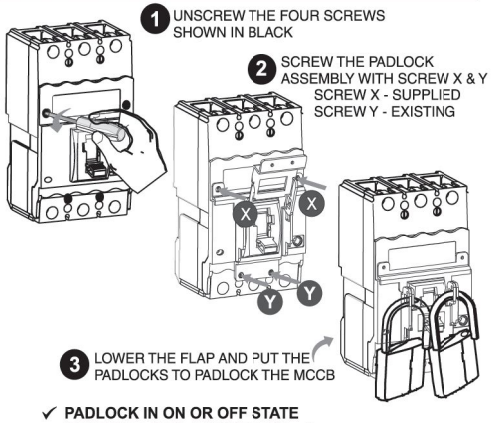
- UNDERVOLTAGE RELEASE



⚠ WHILE REMOVING ACCESSORIES , ENSURE THAT INTERIOR PARTS OF ACCESSORIES ARE NOT TOUCHED/ DAMAGED BY THE TOOL

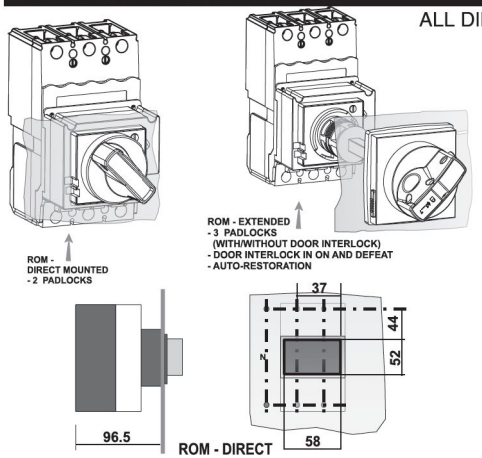
MCCB PADLOCK

1. UNSCREW THE FOUR SCREWS SHOWN IN BLACK
2. SCREW THE PADLOCK ASSEMBLY WITH SCREW X & Y
   SCREW X - SUPPLIED
   SCREW Y - EXISTING
3. LOWER THE FLAP AND PUT THE PADLOCKS TO PADLOCK THE MCCB

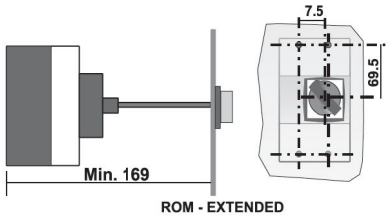


✓ **PADLOCK IN ON OR OFF STATE POSSIBLE, PADLOCK SIZE Ø4....6 mm**

ROTARY OPERATING MECHANISM



ALL DIMENSIONS ARE IN mm



PRODUCT DEVELOPMENT IS A CONTINUOUS PROCESS IN L&T. THE INFORMATION GIVEN IN THIS LITERATURE IS SUBJECT TO CHANGE. FOR LATEST INFORMATION THE CUSTOMER MAY CONTACT CUSTOMER INTERACTION CELL

THIS LITERATURE GIVES INFORMATION TO USER ABOUT PRODUCT INSTALLATION, OPERATION, MAINTENANCE AND DISPOSAL. THIS INFORMATION IS NOT EXHAUSTIVE AND SHOULD CUSTOMER REQUIRE FURTHER INFORMATION, IN SPECIFIC CASES, CUSTOMER MAY CONTACT CUSTOMER INTERACTION CELL.

CUSTOMER INTERACTION CELL (CIC)

TOLL FREE No. : 1800-233-5858
TOLL FREE No. : 1800-200-5858
TELEPHONE : 022-6774 5858
FAX : 022-6774 5859
E-MAIL : cic@LNTEBG.com
WEBSITE : www.LNTEBG.com

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SAFE & SURE

Larsen & Toubro Limited
Electrical Standard Products
P.O.Box - 8901, Mumbai - 400 072, India.

SP30942 - Smit Printers

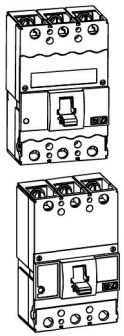
SWITCHGEAR
SAFE & SURE

INSTRUCTIONS FOR INSTALLATION & USE

MOULDED CASE CIRCUIT BREAKER WITH THERMAL & MAGNETIC RELEASE

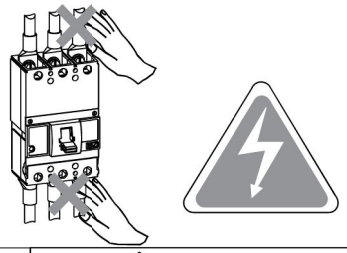
FOR YOUR SAFETY, PLEASE READ INSTRUCTIONS THOROUGHLY BEFORE OPERATING.

MANUFACTURER ASSUMES NO RESPONSIBILITY FOR A HAZARD OR DAMAGE CAUSED BY INCORRECT OR NON-APPLICATION OF ANY OF THE INSTRUCTIONS ATTACHED HEREIN.



DN1/DU250 MCCB

WARNING

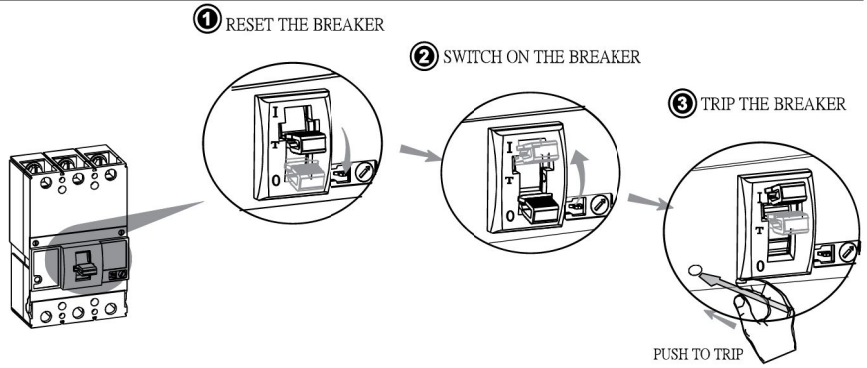


⚠ WARNING

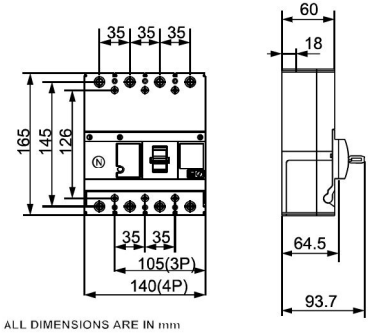
ELECTRIC SHOCK HAZARD

Disconnect all power supply from source before installing, modifying or servicing. Failure to follow these instructions may result in property damage, serious injury or death.

TEST

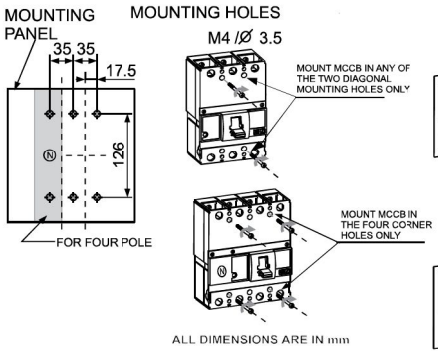


OVERALL DIMENSION

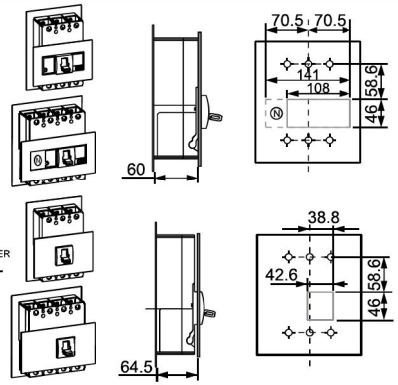


ALL DIMENSIONS ARE IN mm

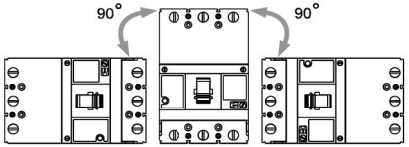
MOUNTING AND PANEL CUTOUT



ALL DIMENSIONS ARE IN mm

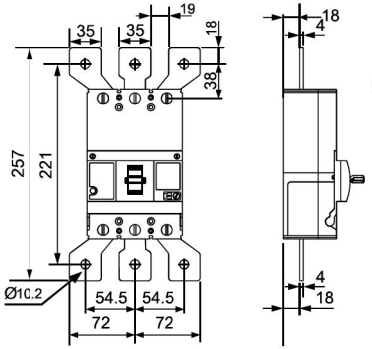


MOUNTING ORIENTATIONS



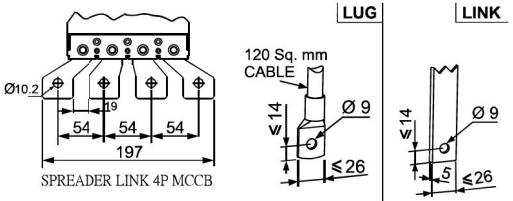
MOUNT IN ANY OF THESE THREE ORIENTATIONS ONLY

TERMINATION



SPREADER LINK 3PMCCB

ALL DIMENSIONS ARE IN mm

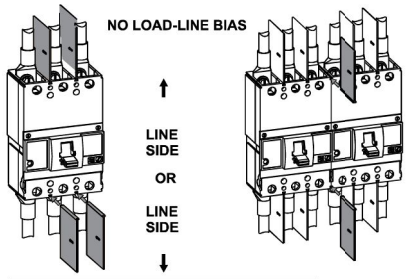


SPREADER LINK 4P MCCB

HARDWARE

MOUNTING	1. M4X60/15 SLOTTED CROSS RECESSED CHEESE HEAD SCREW. - 1.2Nm 2. M4 SPRING WASHER	
TERMINATION	1. M8X16 SCREW -10Nm 2. MS WASHER 3. SPRING WASHER	

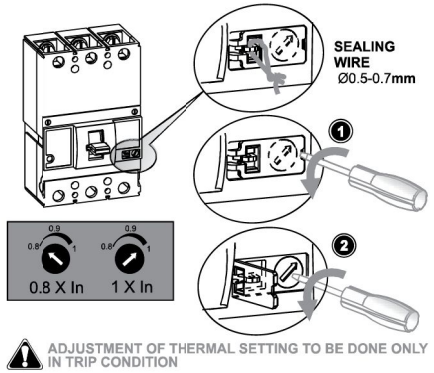
PHASE BARRIER MOUNTING



⚠ WARNING

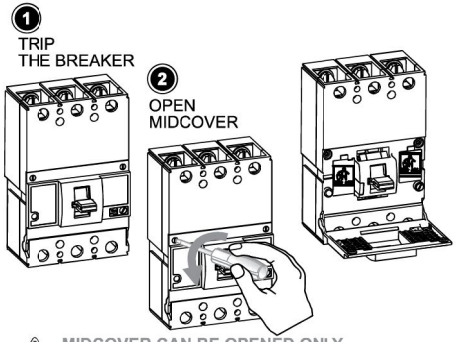
PHASE BARRIERS MUST BE MOUNTED ON THE BREAKER BEFORE USAGE

ADJUSTMENT OF THERMAL CURRENT RATING (Ith)

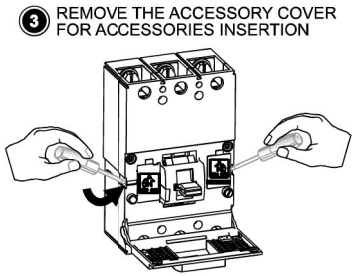


⚠ ADJUSTMENT OF THERMAL SETTING TO BE DONE ONLY IN TRIP CONDITION

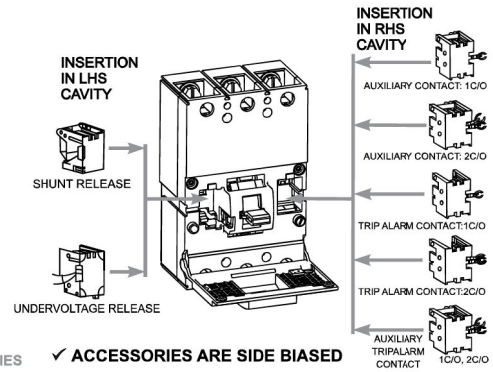
ACCESSORY MOUNTING



⚠ MIDCOVER CAN BE OPENED ONLY IN TRIP CONDITION

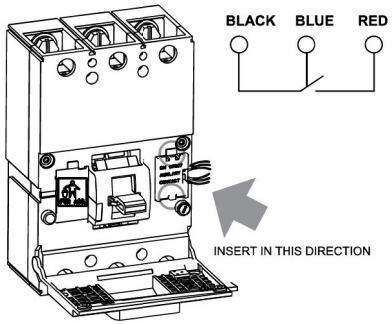


⚠ MCCB SHOULD BE IN TRIP CONDITION WHILE MOUNTING OR REMOVING THE ACCESSORIES

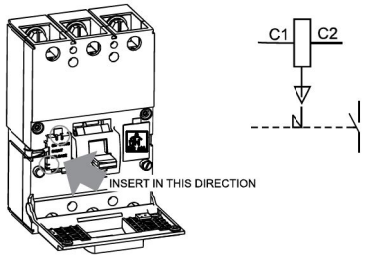


✓ ACCESSORIES ARE SIDE BIASED

AUXILIARY CONTACT & TRIP ALARM CONTACT MOUNTING



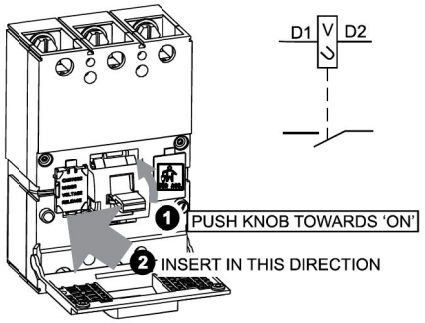
SHUNT RELEASE MOUNTING



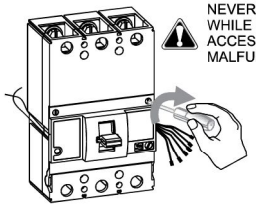
⚠ IMPORTANT

For detailed instructions, refer respective accessory product insert

UNDERVOLTAGE RELEASE MOUNTING

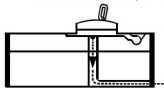


WIRE ROUTING



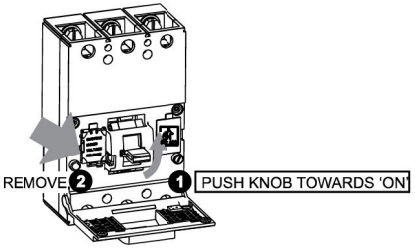
⚠ NEVER PULL THE LEAD-WIRES WHILE HANDLING OR REMOVING ACCESSORY TO AVOID MALFUNCTION OF ACCESSORY

⚠ LOOSE MIDCOVER MAY CAUSE MALFUNCTION OF ACCESSORY. ENSURE TIGHT FITMENT OF MIDCOVER (0.7 Nm)



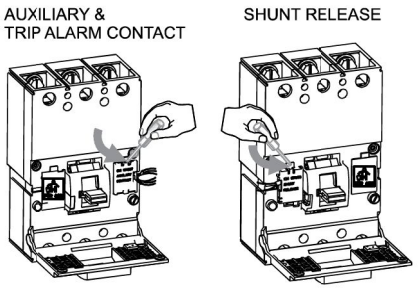
ACCESSORY LEAD-WIRES MAY BE ROUTED THROUGH THE CHANNEL ON BOTH SIDES IN SIDE BY SIDE MCCB MCUNTING.

REMOVAL OF UNDER VOLTAGE RELEASE



⚠ WHILE REMOVING ACCESSORIES ENSURE THAT INTERIOR PARTS OF ACCESSORIES ARE NOT TOUCHED / DAMAGED BY THE TOOL TO AVOID MALFUNCTION OF THE ACCESSORIES

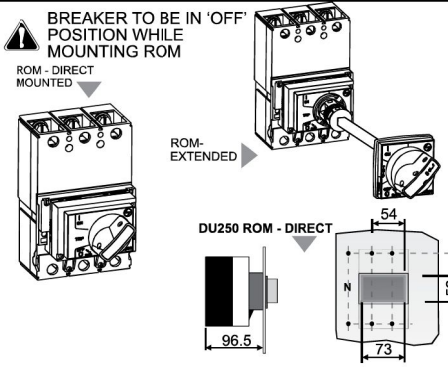
REMOVAL OF ACCESSORIES

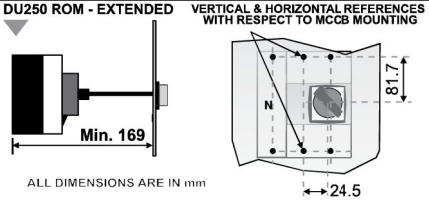


⚠ WHILE REMOVING ACCESSORIES ENSURE THAT INTERIOR PARTS OF ACCESSORIES ARE NOT TOUCHED/ DAMAGED BY THE TOOL TO AVOID MALFUNCTION OF THE ACCESSORIES

ROTARY OPERATING MECHANISM (ROM)

⚠ BREAKER TO BE IN 'OFF' POSITION WHILE MOUNTING ROM





ALL DIMENSIONS ARE IN mm

PRODUCT DEVELOPMENT IS A CONTINUOUS PROCESS IN L&T. THE INFORMATION GIVEN IN THIS LITERATURE IS SUBJECT TO CHANGE. FOR LATEST INFORMATION THE CUSTOMER MAY CONTACT CUSTOMER INTERACTION CELL.

THIS LITERATURE GIVES INFORMATION TO USER ABOUT PRODUCT INSTALLATION, OPERATION, MAINTENANCE AND DISPOSAL. THIS INFORMATION IS NOT EXHAUSTIVE AND SHOULD CUSTOMER REQUIRE FURTHER INFORMATION, IN SPECIFIC CASES, CUSTOMER MAY CONTACT CUSTOMER INTERACTION CELL.

CUSTOMER INTERACTION CELL (CIC)

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TOLL FREE No. : 1800-200-5858
TELEPHONE : 022-6774 5858
FAX : 022-6774 5859
E-MAIL : cic@LNTEBG.com
WEBSITE : www.LNTEBG.com

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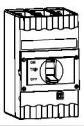
SWITCHGEAR
SAFE & SURE

INSTRUCTIONS FOR INSTALLATION & USE

MOULDED CASE CIRCUIT BREAKER

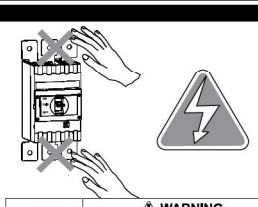
FOR YOUR SAFETY, PLEASE READ INSTRUCTIONS THOROUGHLY BEFORE OPERATING.

MANUFACTURER ASSUMES NO RESPONSIBILITY FOR A HAZARD OR DAMAGE CAUSED BY INCORRECT OR NON-APPLICATION OF ANY OF THE INSTRUCTIONS ATTACHED HEREIN.



DN2 MCCB

d sine

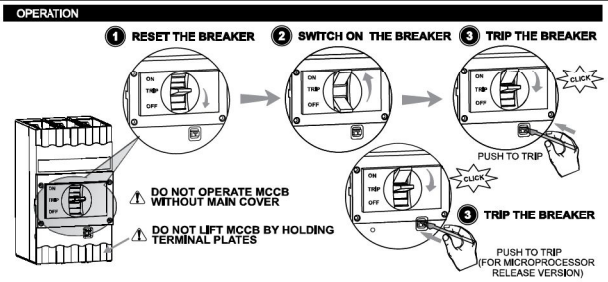


⚠ WARNING

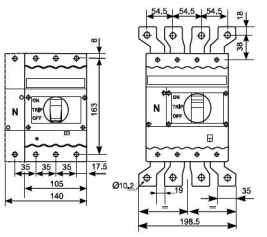
ELECTRIC SHOCK HAZARD

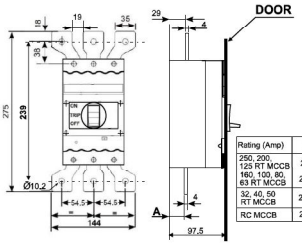
Disconnect all power supply from source before installing,modifying or servicing.
Failure to follow these instructions may result in property damage, serious injury or death.

OPERATION

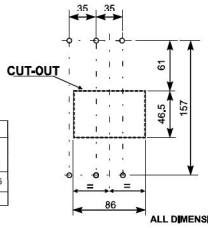


BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT



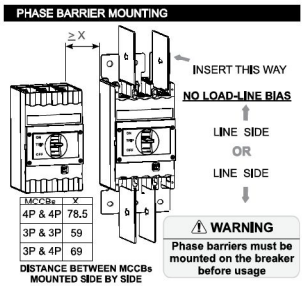


Rating (Amp)	A
250, 200, 125 RT MCCB 160, 100, 80, 63 RT MCCB	26
32, 40, 50 RT MCCB	25.5
RC MCCB	26.25
	28



ALL DIMENSIONS ARE IN mm

PHASE BARRIER MOUNTING



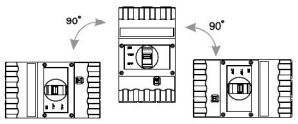
MCCBs	X
4P & 4P	78.5
3P & 3P	59
3P & 4P	69

DISTANCE BETWEEN MCCBs MOUNTED SIDE BY SIDE

⚠ WARNING

Phase barriers must be mounted on the breaker before usage

MOUNTING ORIENTATIONS



MOUNT IN ANY OF THESE THREE ORIENTATIONS ONLY

TERMINATION

HARDWARE		Qty.(3 P)	(4P)
MOUNTING	WASHER (ID 4.1)	4	6
	M4 HEX NUT	4	6
	M4X70/15MM SCREW	4	6
	WASHER	4	6
TERMINATION	M8 x 25 - 10.8 Nm	6	8
	Spring washer M8	6	8
	Plain washer M8	6	8

TERMINAL CAPACITY

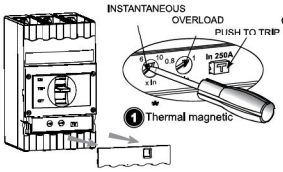
STANDARD	LINK	25 X 5 mm²
	CABLES	95 mm²
WITH SPREADER LINKS	LINK	35 X 6 mm²
	CABLES	185 mm²

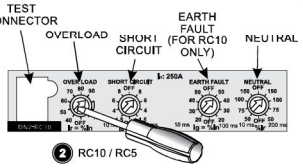
WEIGHT	
3 P	2.5 Kg
4 P	3.3 Kg

IMPORTANT

It is recommended to use Spreader Links for enhancing terminal capacity.Please contact nearest sales office or Stockist for ordering information of spreader links.

ADJUSTMENT OF RELEASE SETTINGS



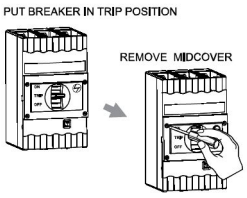


⚠ ADJUSTMENT OF THERMAL SETTING TO BE DONE IN TRIP CONDITION ONLY

FOR BACK UP PROTECTION OF MOTOR, ONLY M VERSION OF MCCB SHOULD BE USED & IT'S SELECTION SHOULD BE AS PER TYPE 2 CO-ORDINATION CHART. ENSURE INSTANTANEOUS TRIP SETTING OF MCCB IS HIGHER THAN MOTOR INRUSH CURRENT.

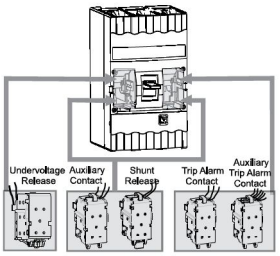
MCCB version	Protection release supplied
RT Version	Thermal magnetic
RC Version	Microprocessor
M Version	Magnetic only
SD Version	Without any release

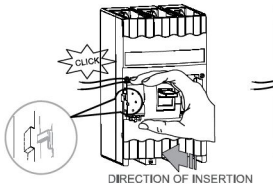
INTERNAL ACCESSORY - MOUNTING AND WIRE ROUTING



⚠ IMPORTANT

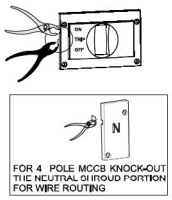
Any two internal accessories can be mounted at a time





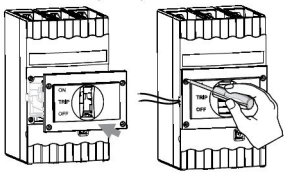
⚠ IMPORTANT

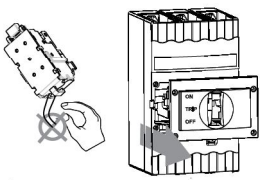
For detailed instructions, refer respective accessory product insert



INTERNAL ACCESORIES - MOUNTING AND WIRE ROUTING CONTD...

DO THE WIRE ROUTING AND SCREW THE MIDCOVER (0.7 Nm)

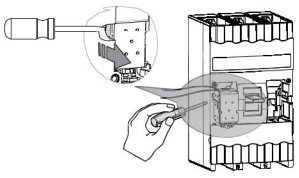




⚠ NEVER PULL THE LEAD-WIRES WHILE HANDLING OR REMOVAL TO AVOID MALFUNCTION OF ACCESSORY

INTERNAL ACCESSORIES - REMOVAL

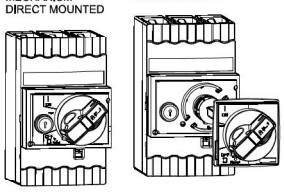
REMOVE THE ACCESSORY WITH HELP OF SCREW DRIVER AS SHOWN



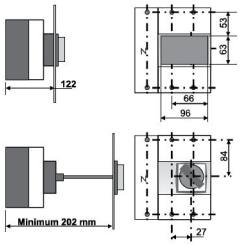
EXTERNAL ACCESSORIES

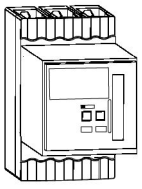
ROTARY OPERATING MECHANISM DIRECT MOUNTED

ROTARY OPERATING MECHANISM DOOR MOUNTED



EXTERNAL ACCESSORIES





EOM-STORED ENERGY DRIVE

PRODUCT DEVELOPMENT IS A CONTINUOUS PROCESS IN L&T. THE INFORMATION GIVEN IN THIS LITERATURE IS SUBJECT TO CHANGE. FOR LATEST INFORMATION THE CUSTOMER MAY CONTACT CUSTOMER INTERACTION CELL.

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CUSTOMER INTERACTION CELL (CIC)

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SWITCHGEAR
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INSTRUCTIONS FOR INSTALLATION & USE

MOULDED CASE CIRCUIT BREAKER
WITH MOTOR PROTECTION RELEASE

FOR YOUR SAFETY, PLEASE READ INSTRUCTIONS THOROUGHLY BEFORE OPERATING.
MANUFACTURER ASSUMES NO RESPONSIBILITY FOR A HAZARD OR DAMAGE CAUSED BY INCORRECT OR NON-APPLICATION OF ANY OF THE INSTRUCTIONS ATTACHED HEREIN.



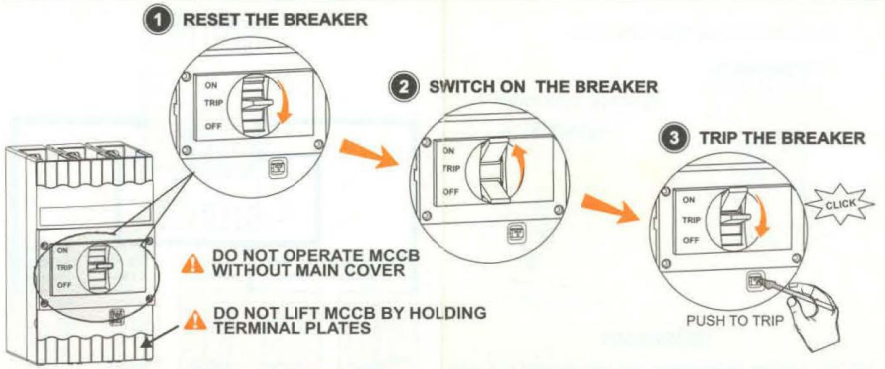
DN2 M Version MCCB

d sine

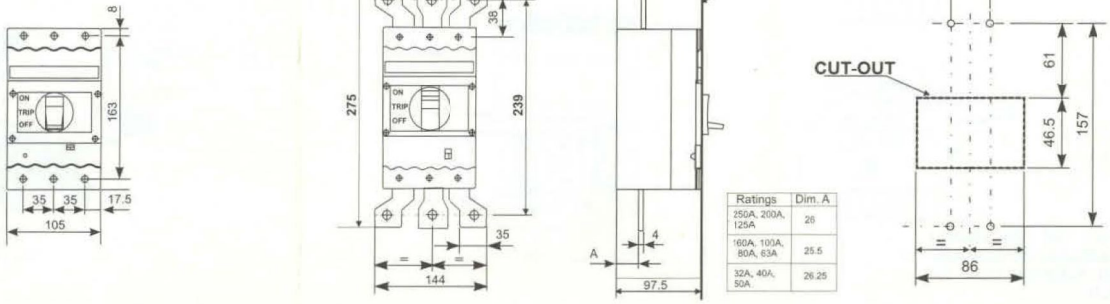


⚠ WARNING
ELECTRIC SHOCK HAZARD
Disconnect all power supply from source before installing,modifying or servicing.
Failure to follow these instructions may result in property damage, serious injury or death.

OPERATION

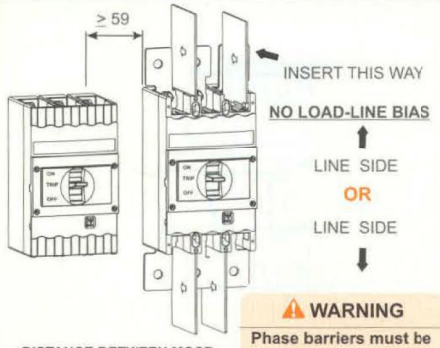


BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT



Ratings	Dim. A
250A, 200A, 125A	28
160A, 100A, 80A, 63A	25.5
32A, 40A, 50A	26.25

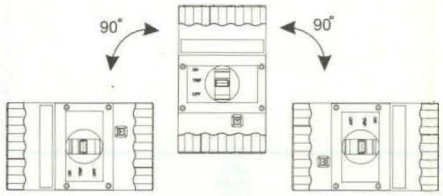
PHASE BARRIER MOUNTING



DISTANCE BETWEEN MCCBs MOUNTED SIDE BY SIDE

⚠ WARNING
Phase barriers must be mounted on the breaker before usage

MOUNT IN ANY OF THESE THREE ORIENTATIONS



TERMINATION

HARDWARE

		Quantity 3 P
MOUNTING	WASHER (ID 4.1)	4
	M4 HEX NUT	4
	M4X70/15MM **SCREW**	4
	WASHER	4
TERMINATION	M8 x 25 - **10.8 Nm** (max.)	6
	Spring washer M8	6
	Plain washer M8	6

WEIGHT

DN2 160 / 250	
3 P	2.5 Kg.

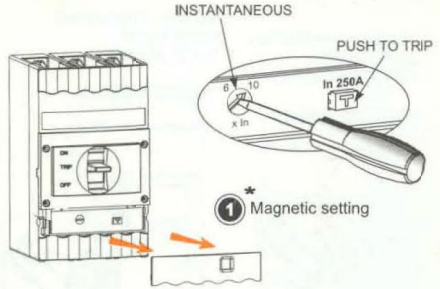
TERMINAL CAPACITY

STANDARD	LINK	25 X 5 mm^2
	CABLES	95 mm^2
WITH SPREADER LINKS	LINK	35 X 6 mm^2
	CABLES	185 mm^2

IMPORTANT

It is recommended to use Spreader Links for enhancing terminal capacity. Please contact nearest sales office or Stockist for ordering information of spreader links.

ADJUSTMENT OF RELEASE SETTINGS

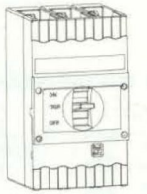


⚠ *ADJUSTMENT OF MAGNETIC SETTING TO BE DONE IN TRIP CONDITION

⚠ *TO BE HIGHER THAN INRUSH CURRENT OF MOTOR

INTERNAL ACCESSORY - MOUNTING AND WIRE ROUTING

PUT BREAKER IN TRIP POSITION

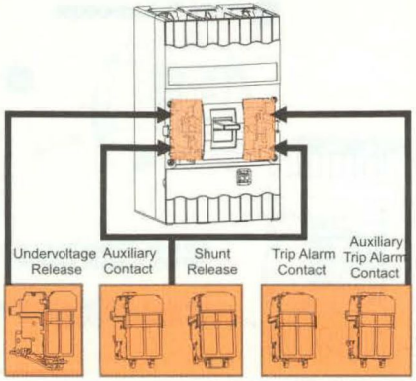


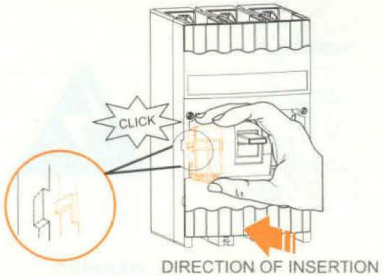
REMOVE MIDCOVER



⚠ IMPORTANT

Any two internal accessories can be mounted at a time

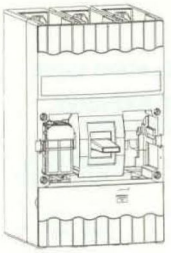




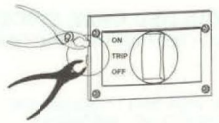
DIRECTION OF INSERTION

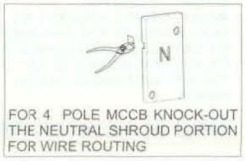
⚠ IMPORTANT

For detailed instructions, refer respective accessory product insert



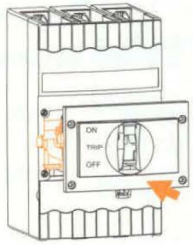
KNOCK OUT INDICATED PORTION



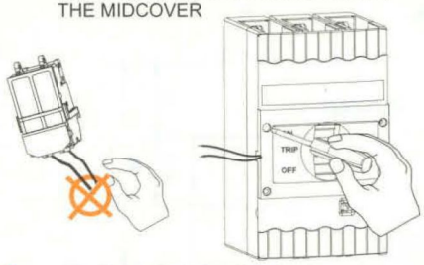


FOR 4 POLE MCCB KNOCK-OUT THE NEUTRAL SHROUD PORTION FOR WIRE ROUTING

INTERNAL ACCESORIES - MOUNTING AND WIRE ROUTING CONTD...



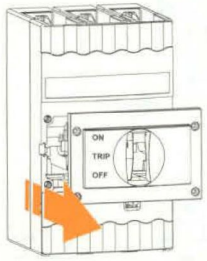
DO THE WIRE ROUTING AND SCREW THE MIDCOVER



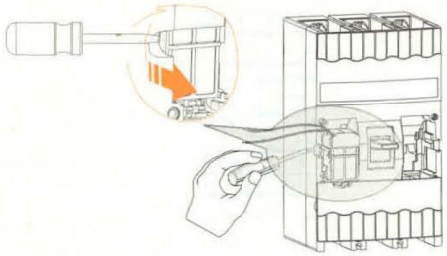
⚠ NEVER PULL THE LEAD-WIRES WHILE HANDLING OR REMOVAL TO AVOID MALFUNCTION OF ACCESSORY

INTERNAL ACCESSORIES - REMOVAL

PUT BREAKER IN TRIP POSITION AND REMOVE THE MIDCOVER

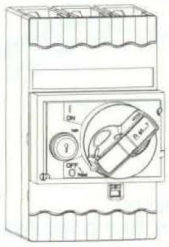


REMOVE THE ACCESSORY WITH HELP OF SCREW DRIVER AS SHOWN

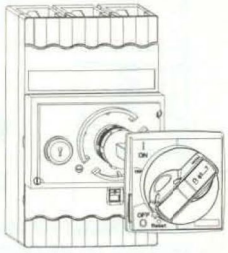


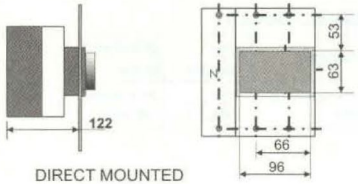
EXTERNAL ACCESSORIES

ROTARY OPERATING MECHANISM DIRECT MOUNTED

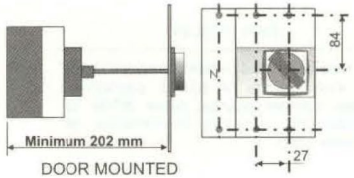


ROTARY OPERATING MECHANISM DOOR MOUNTED

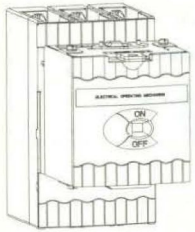




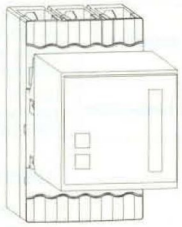
DIRECT MOUNTED



DOOR MOUNTED



ELECTRICAL OPERATING MECHANISM (EOM) **DIRECT DRIVE**



EOM-STORED ENERGY DRIVE

UNITY REV. A1 19/1/11

LARSEN & TOUBRO LIMITED
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SWITCHGEAR
SAFE & SURE

INSTRUCTIONS FOR INSTALLATION & USE

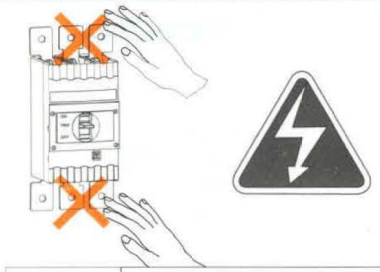
SWITCH DISCONNECTOR

FOR YOUR SAFETY, PLEASE READ INSTRUCTIONS THOROUGHLY BEFORE OPERATING.
MANUFACTURER ASSUMES NO RESPONSIBILITY FOR A HAZARD OR DAMAGE CAUSED BY INCORRECT OR NON-APPLICATION OF ANY OF THE INSTRUCTIONS ATTACHED HEREIN.



DN2 SD

d sine

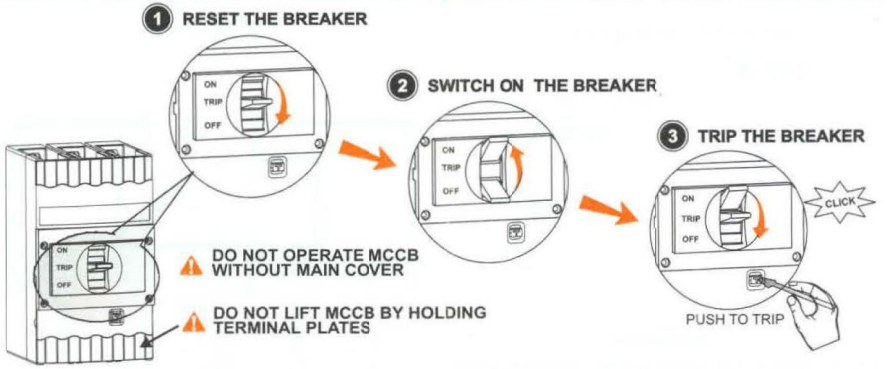


⚠ WARNING

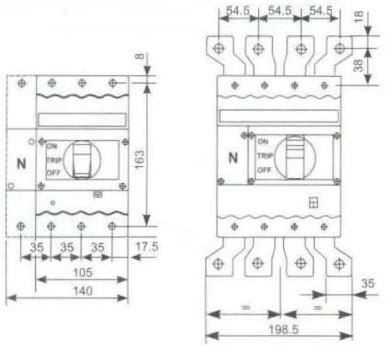
ELECTRIC SHOCK HAZARD

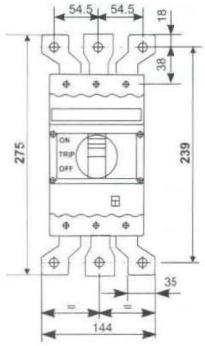
Disconnect all power supply from source before installing,modifying or servicing.
Failure to follow these instructions may result in property damage, serious injury or death.

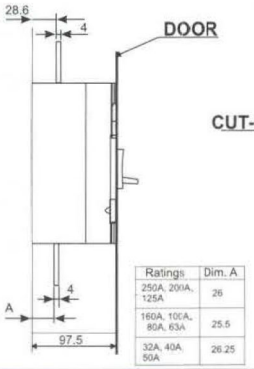
OPERATION

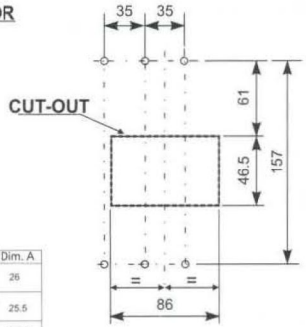


BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT



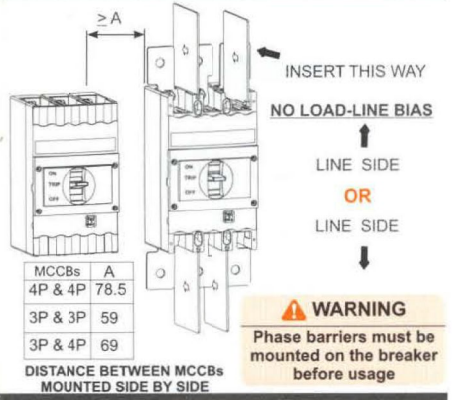






Ratings	Dim. A
250A, 200A, 125A	26
160A, 100A, 80A, 63A	25.5
32A, 40A, 50A	26.25

PHASE BARRIER MOUNTING



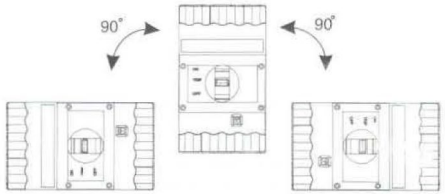
MCCBs	A
4P & 4P	78.5
3P & 3P	59
3P & 4P	69

DISTANCE BETWEEN MCCBs MOUNTED SIDE BY SIDE

⚠ WARNING

Phase barriers must be mounted on the breaker before usage

MOUNT IN ANY OF THESE THREE ORIENTATIONS



TERMINATION

HARDWARE		Quantity 3 P	Quantity 4 P
MOUNTING	WASHER (ID 4.1)	4	6
	M4 HEX NUT	4	6
	M4X70/15MM **SCREW**	4	6
	WASHER	4	6
TERMINATION	M8 x 25 - **10.8 Nm** (max.)	6	8
	Spring washer M8	6	8
	Plain washer M8	6	8

TERMINAL CAPACITY

STANDARD	LINK	25 X 5 mm^2
	CABLES	95 mm^2
WITH SPREADER LINKS	LINK	35 X 6 mm^2
	CABLES	185 mm^2

IMPORTANT

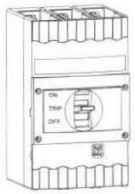
It is recommended to use Spreader Links for enhancing terminal capacity. Please contact nearest sales office or Stockist for ordering information of spreader links.

WEIGHT

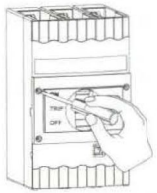
DN2 160 / 250	
3 P	2.5 Kg.
4 P	3.3 Kg.

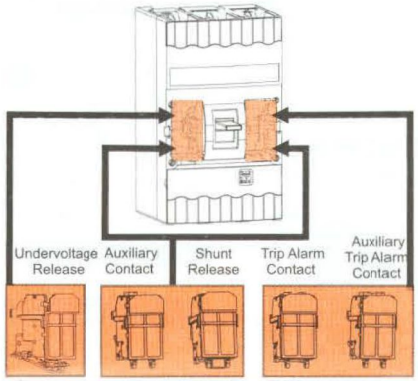
INTERNAL ACCESSORY - MOUNTING AND WIRE ROUTING

PUT BREAKER IN TRIP POSITION



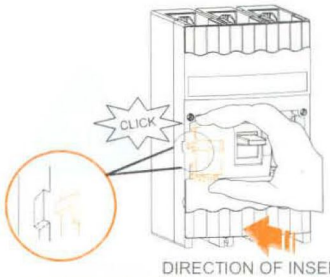
REMOVE MIDCOVER





⚠ IMPORTANT

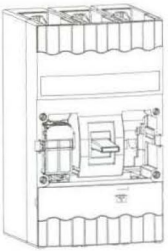
Any two internal accessories can be mounted at a time



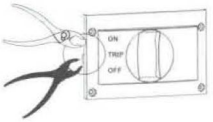
DIRECTION OF INSERTION

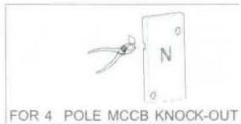
⚠ IMPORTANT

For detailed instructions, refer respective accessory product insert



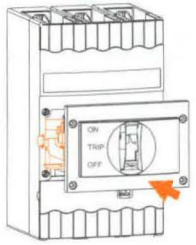
KNOCK OUT INDICATED PORTION



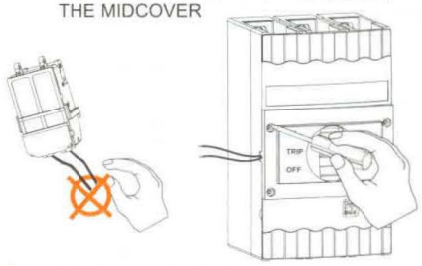


FOR 4 POLE MCCB KNOCK-OUT THE NEUTRAL SHROUD PORTION FOR WIRE ROUTING

INTERNAL ACCESORIES - MOUNTING AND WIRE ROUTING CONTD...



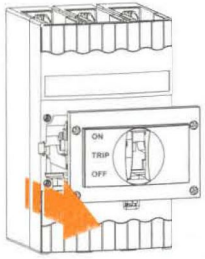
DO THE WIRE ROUTING AND SCREW THE MIDCOVER



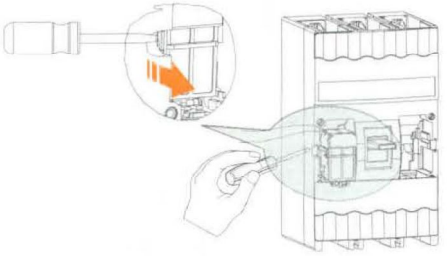
⚠ NEVER PULL THE LEAD-WIRES WHILE HANDLING OR REMOVAL TO AVOID MALFUNCTION OF ACCESSORY

INTERNAL ACCESSORIES - REMOVAL

PUT BREAKER IN TRIP POSITION AND REMOVE THE MIDCOVER

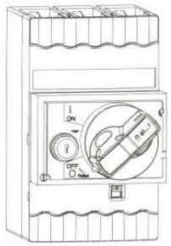


REMOVE THE ACCESSORY WITH HELP OF SCREW DRIVER AS SHOWN

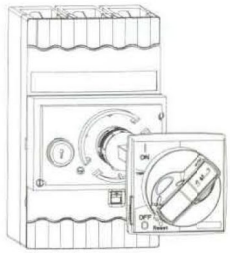


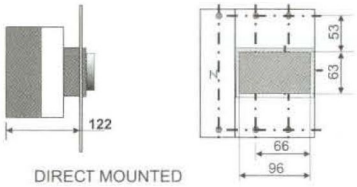
EXTERNAL ACCESSORIES

ROTARY OPERATING MECHANISM DIRECT MOUNTED

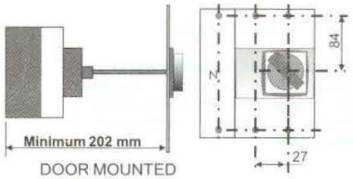


ROTARY OPERATING MECHANISM DOOR MOUNTED

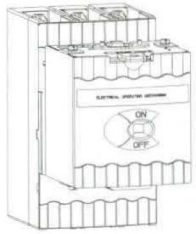




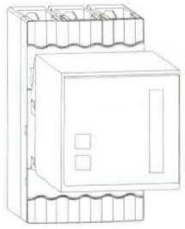
DIRECT MOUNTED



DOOR MOUNTED



ELECTRICAL OPERATING MECHANISM (EOM) **DIRECT DRIVE**



EOM-STORED ENERGY DRIVE

UNITY REV R1 19/1/11

LARSEN & TOUBRO LIMITED
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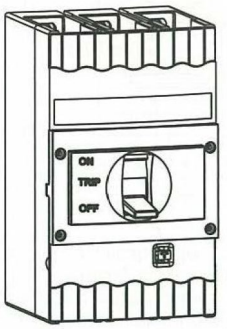
SWITCHGEAR
SAFE & SURE

INSTRUCTION MANUAL

DN2 MTX MCCB

d sine

MOULDED CASE CIRCUIT BREAKER
WITH THERMAL-MAGNETIC RELESE
& MICROPROCESSOR RELEASE



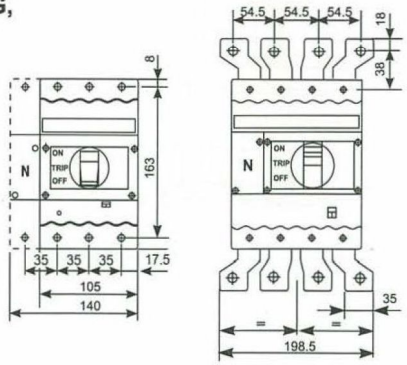


WARNING

Hazards of electric shock and burning. Installation, Commissioning and Maintenance to be done by qualified personnel only. Always use an appropriate voltage detection device to confirm the absence of voltage. Disconnect the power and isolate before proceeding with any work on this equipment. Use according to the operating instructions, professional practices, wiring rules, codes, safety regulations applicable to the installation.

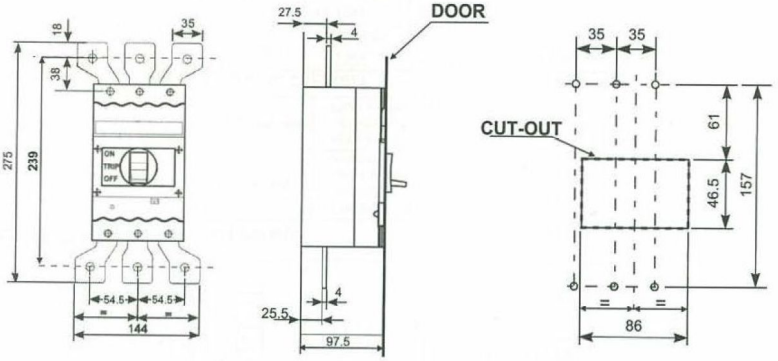
PRODUCT INFORMATION

BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT



PRODUCT INFORMATION

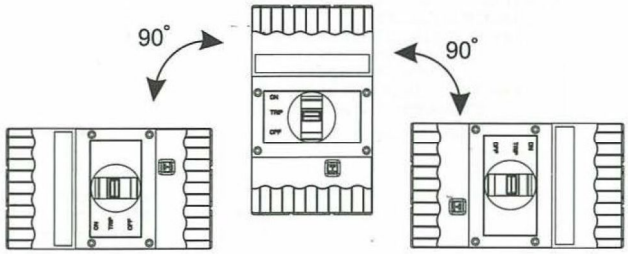
BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT



IMPORTANT

IT IS RECOMMENDED TO USE SPREADER LINKS FOR ENHANCING TERMINAL CAPACITY. PLEASE CONTACT NEAREST SALES OFFICE/STOCKIST FOR ORDERING INFORMATION OF SPREADER LINKS.

MOUNT IN ANY OF THESE THREE ORIENTATIONS



PRODUCT INFORMATION

TERMINATION

HARDWARE

		Qty.(3 P	(4P)
MOUNTING	WASHER (ID 4.1)	4	6
	M4 HEX NUT	4	6
	M4X70/15MM SCREW	4	6
	WASHER	4	6
TERMINATION	M8 x 25 - 10.8 Nm	6	8
	Spring washer M8	6	8
	Plain washer M8	6	8

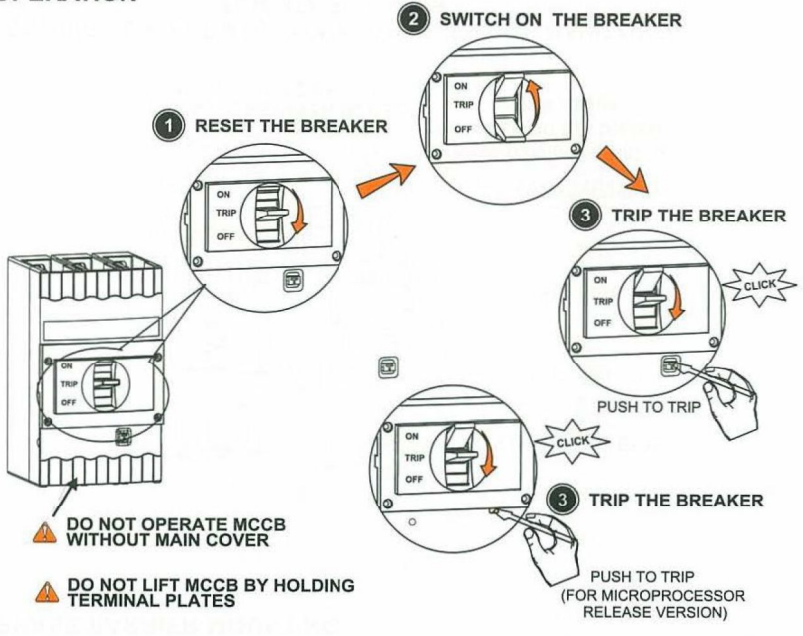
TERMINAL CAPACITY

STANDARD	LINK	25 X 5 mm^2
	CABLES	95 mm^2
WITH SPREADER LINKS	LINK	35 X 6 mm^2
	CABLES	185 mm^2
BOX CLAMP	(Cu. CABLE)	120 mm^2
REAR STUDS		120 mm^2

WEIGHT

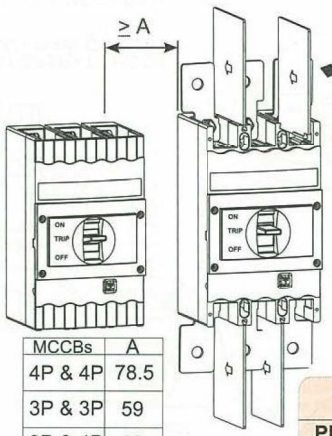
DN2 160 / 250	
3 P	2.5 Kg.
4 P	3.3 Kg.

OPERATION



PRODUCT INSTALLATION

PHASE BARRIER MOUNTING



MCCBs	A
4P & 4P	78.5
3P & 3P	59
3P & 4P	69

DISTANCE BETWEEN MCCBs MOUNTED SIDE BY SIDE

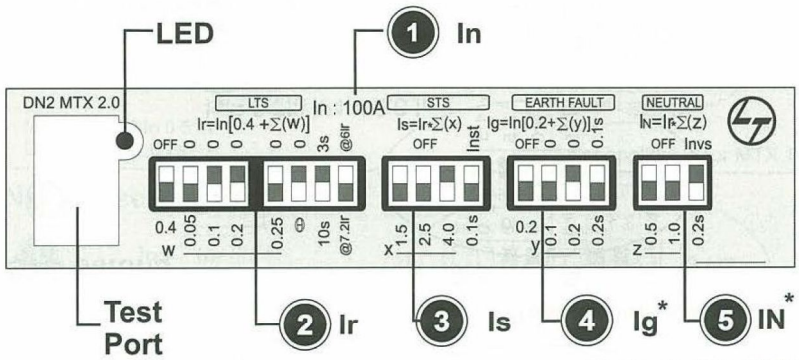
⚠ WARNING

Phase barriers must be mounted on the breaker before usage

ENSURE CORRECT N,R,Y,B PHASE SEQUENCE IS MAINTAINED FOR MTX RELEASES

PRODUCT INSTALLATION

MTX 1.0 / 2.0 RELEASE SETTINGS



* Not applicable for MTX 1.0

When either LTS (Ir) setting or Earth Fault (Ig) setting are set to OFF the respective protection is defeated.

LED indication:
Power up: 0.3 In
Alarm : 0.85 Ir
Pick up : 1.15 Ir

In : Normal Current
Ir : Overload Current
Is : Short circuit Current
Ig : Earth fault Current
IN : Neutral Current

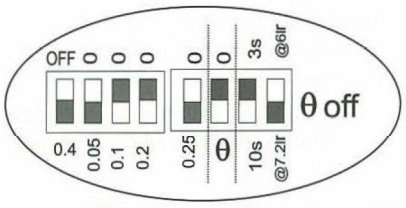
PRODUCT INFORMATION

LTS Setting

1 In: In

2 Ir: 0.7

Ir = 0.7 In

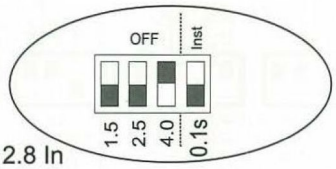


θ denotes Thermal Memory.

STS Setting

3 Is: 4.0

Is = 0.7In x 4 = 2.8 In



PRODUCT INFORMATION

Ir (%In): 0.4 to 1 In in steps of 5%
4 user selectable curves: 6Ir @10s,
6Ir @3s ,7.2Ir @10s, 7.2Ir @ 3s

Is (xIr): 1.5, 2.5, 4, 5.5, 6.5, 8 Ir
Delay: 0.1s
Inst: Instantaneous Setting

8

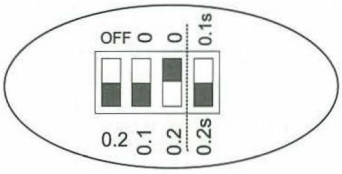
Earth fault setting*

1 In: In

4 Ig: 0.3

Ig = 0.3 In

Ig (xIn): 0.20 to 0.5 In
Delay: 0.1s & 0.2s



* Not applicable for MTX 1.0

Neutral setting*

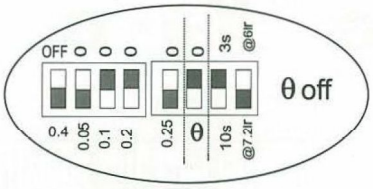
1 In: In

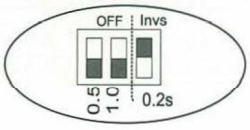
2 Ir: 0.7

Ir = 0.7 In

5 IN: 1.5

IN= 0.7In x 1.5 = 1.05In





PRODUCT INFORMATION

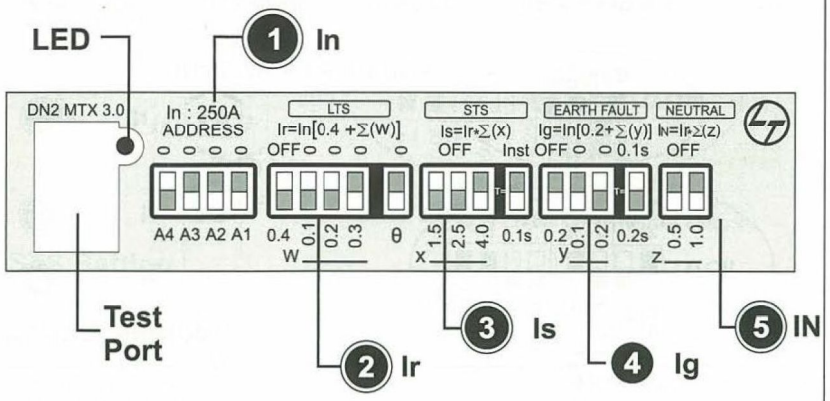
IN (x Ir): 0.5 ,1.0, 1.5 Ir
when Invs ON follows LTS curves
Delay: 0.2s

Ir ≤ 0.7 In for **1.5** Neutral setting with Invs enabled

* Not applicable for MTX 1.0

9

MTX 3.0 RELEASE SETTINGS

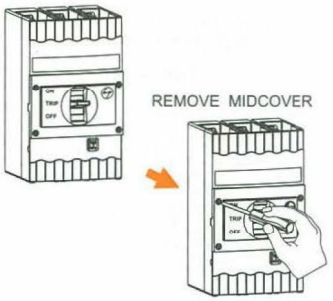


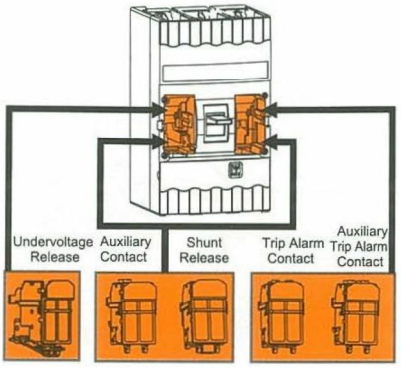
- For MTX 3.0 protection settings, refer page nos. 8 & 9
- Using ADDRESS,upto 13 MCCBs can be configured with a single Display Module.
- In case of LTS settings the default curve is 6Ir @ 10s
- In case of Neutral settings, default trip time is fixed at 0.2s.
  IDMT curve can be enabled using Display Module settings. Refer SP03549.
- For selection of additional trip time curves, fine settings of delay as well settings, and additional protections, use Display Module setup. Refer SP03549.

PRODUCT INFORMATION

INTERNAL ACCESSORY - MOUNTING

PUT BREAKER IN TRIP POSITION



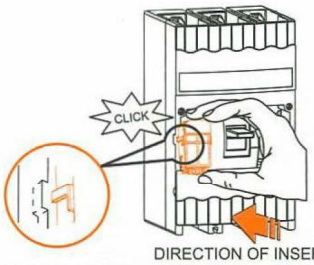


⚠ IMPORTANT

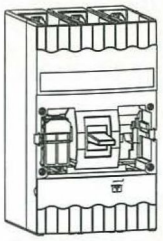
Any two internal accessories can be mounted at a time

PRODUCT INSTALLATION

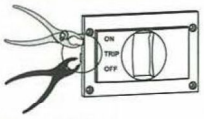
INTERNAL ACCESSORY - MOUNTING



DIRECTION OF INSERTION



KNOCK OUT
INDICATED PORTION





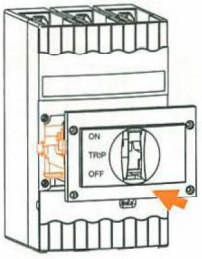
FOR 4 POLE MCCB KNOCK-OUT
THE NEUTRAL SHROUD PORTION
FOR WIRE ROUTING

⚠ IMPORTANT

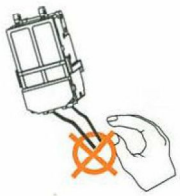
For detailed instructions, refer respective accessory product insert

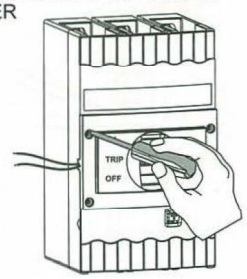
PRODUCT INSTALLATION

INTERNAL ACCESSORIES - WIRE ROUTING



DO THE WIRE ROUTING AND SCREW
THE MIDCOVER



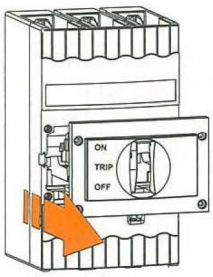


⚠ NEVER PULL THE LEAD-WIRES WHILE HANDLING OR REMOVAL TO AVOID MALFUNCTION OF ACCESSORY

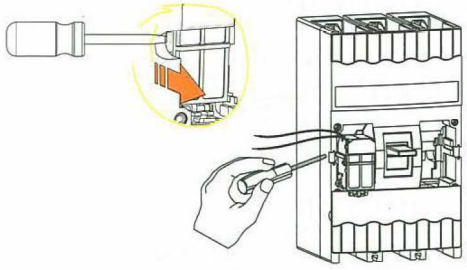
PRODUCT INSTALLATION

INTERNAL ACCESSORY - REMOVAL

PUT BREAKER IN TRIP POSITION
AND REMOVE THE MIDCOVER



REMOVE THE ACCESSORY WITH HELP
OF SCREW DRIVER AS SHOWN



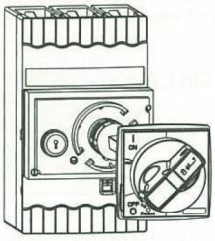
PRODUCT
INSTALLATION

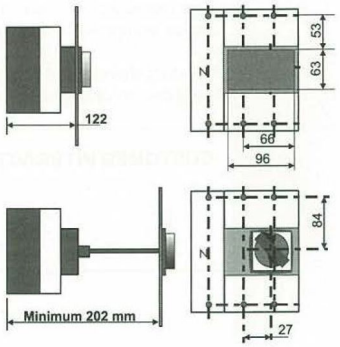
EXTERNAL ACCESSORY -

ROTARY OPERATING
MECHANISM
DIRECT MOUNTED



ROTARY OPERATING
MECHANISM
DOOR MOUNTED







Box Clamps

PRODUCT
INSTALLATION

DISCLAIMER NOTES

"This literature gives information to user about product installation, operation maintenance and disposal. This information is not exhaustive and should customer require further information, in specific cases, customer may contact customer interaction cell."

"The manufacturer assumes no responsibility for injuries, losses, damages to human beings and/or equipments due to inappropriate application of instructions, provided herein."

"Product development is a continuous process in L&T. The information given in this literature is subject to change. For latest information the customer may contact customer interaction cell"

CUSTOMER CARE

CUSTOMER INTERACTION CELL (CIC)

BSNL / MTNL (Toll-Free) : 1800 233 5858
RELIANCE (Toll-Free) : 1800 200 5858
Telephone : 022 6774 5858
email : cic@LNTEBG.com
wwbsite : www.LNTEBG.com

COMPANY INFORMATION

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SDDC - SP03546

SWITCHGEAR
SAFE & SURE

LARSEN & TOUBRO LIMITED,
ELECTRICAL STANDARD PRODUCTS,
P.O.BOX 8901, MUMBAI 400072, INDIA
Tel: +91-22-67050505
Fax: +91-22-67051125
Website: www.LNTEBG.com

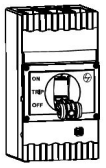
Ver. 3.0

SWITCHGEAR
SAFE & SURE

INSTRUCTIONS FOR INSTALLATION & USE
MOULDED CASE CIRCUIT BREAKER

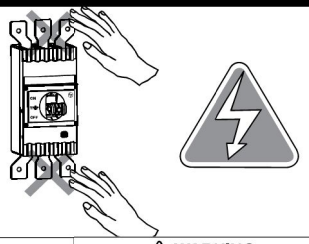
FOR YOUR SAFETY, PLEASE READ INSTRUCTIONS THOROUGHLY BEFORE OPERATING.

MANUFACTURER ASSUMES NO RESPONSIBILITY FOR A HAZARD OR DAMAGE CAUSED BY INCORRECT OR NON-APPLICATION OF ANY OF THE INSTRUCTIONS ATTACHED HEREIN.



DN3 MCCB

d sine

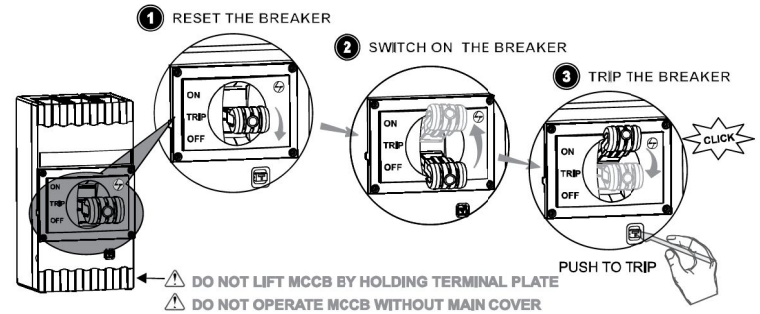


⚠ WARNING

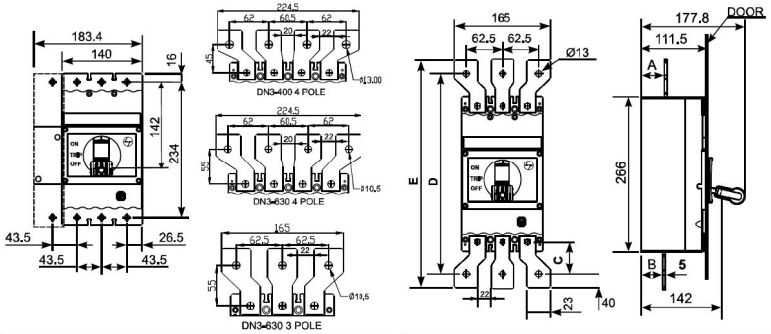
ELECTRIC SHOCK HAZARD

Disconnect all power supply from source before installing,modifying or servicing.
Failure to follow these instructions may result in property damage, serious injury or death.

OPERATION



BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT



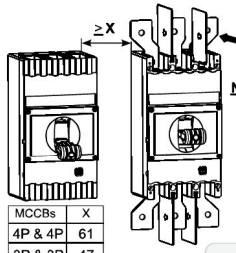
TYPE	DN3-400	DN3-630
A	39	43
B	37	39
C	45	55
D	324	344
E	370	390

IMPORTANT

IT IS RECOMMENDED TO USE SPREADER LINKS FOR ENHANCING TERMINAL CAPACITY. PLEASE CONTACT NEAREST SALES OFFICE/STOCKIST FOR ORDERING INFORMATION OF SPREADER LINKS.

ALL DIMENSIONS ARE IN mm

PHASE BARRIER MOUNTING



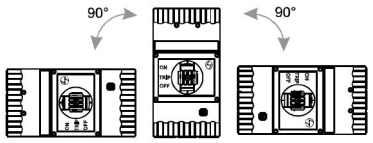
MCCBs	X
4P & 4P	61
3P & 3P	47
3P & 4P	54

DISTANCE BETWEEN MCCBs MOUNTED SIDE BY SIDE

⚠ WARNING

Phase barriers must be mounted on the breaker before usage

MOUNTING ORIENTATIONS



MOUNT IN ANY OF THESE THREE ORIENTATIONS ONLY

TERMINATION

HARDWARE

		Quantity 3 P	Quantity 4 P
MOUNTING	PLAIN WASHER (ID 5.5)	4	6
	M5 HEX NUT	4	6
	M5 x 50 mm CROSS RECESSED SCREW	4	6
	SPRING WASHER	4	6
TERMINATION	M10X30 - **20,6 Nm**	6	8
	SPRING WASHER M10	6	8
	PLAIN WASHER M10	6	8

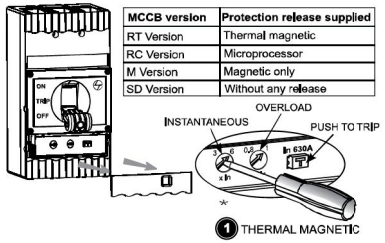
TERMINAL CAPACITY

STANDARD	LINK CABLES	27x15 mm² 120 mm²
WITH SPREADER LINK	LINK CABLES	2x40x8 mm² 2x185 mm²

WEIGHT

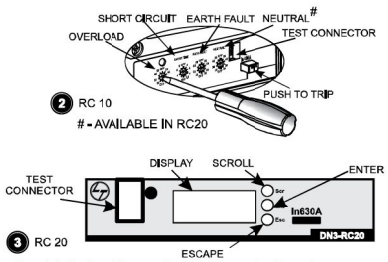
DN 3	400 Kg	630 Kg
3 P	5,5	6
4 P	7,2	7,8

ADJUSTMENT OF RELEASE SETTINGS



MCCB version	Protection release supplied
RT Version	Thermal magnetic
RC Version	Microprocessor
M Version	Magnetic only
SD Version	Without any release

FOR BACK UP PROTECTION OF MOTOR, ONLY M VERSION OF MCCB SHOULD BE USED & IT'S SELECTION SHOULD BE AS PER TYPE 2 CO-ORDINATION CHART. ENSURE INSTANTANEOUS TRIP SETTING OF MCCB IS HIGHER THAN MOTOR INRUSH CURRENT.

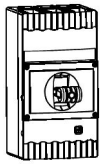


For detailed settings refer RC 20 product insert.

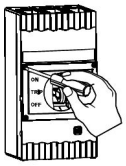
⚠* **ADJUSTMENT OF THERMAL SETTING TO BE DONE IN TRIP CONDITION ONLY**

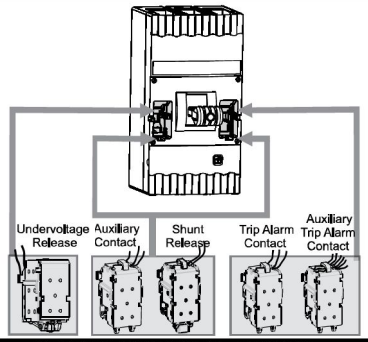
INTERNAL ACCESSORY - MOUNTING AND WIRE ROUTING

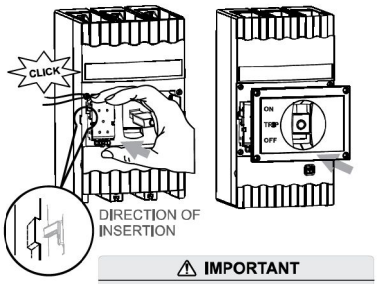
PUT BREAKER IN TRIP POSITION



REMOVE MIDCOVER



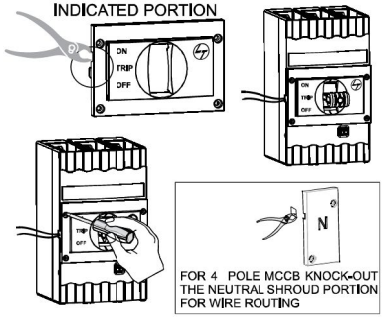




⚠ IMPORTANT

For detailed instructions, refer respective accessory product insert

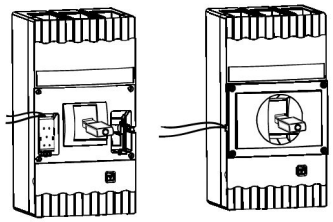
KNOCK OUT INDICATED PORTION



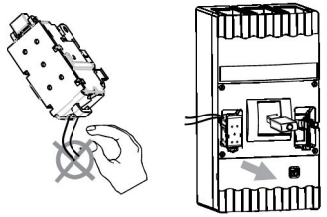
FOR 4 POLE MCCB KNOCK-OUT THE NEUTRAL SHROUD PORTION FOR WIRE ROUTING

INTERNAL ACCESSORY - REMOVAL

DO THE WIRE ROUTING AND SCREW THE MIDCOVER (0.7 Nm)

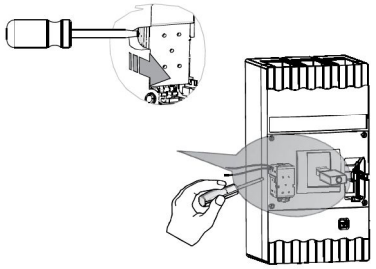


PUT BREAKER IN TRIP POSITION AND REMOVE THE MIDCOVER



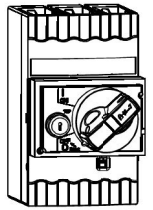
⚠ NEVER PULL THE LEAD-WIRES WHILE HANDLING OR REMOVAL TO AVOID MALFUNCTION OF ACCESSORY

REMOVE THE ACCESSORY WITH HELP OF SCREW DRIVER AS SHOWN

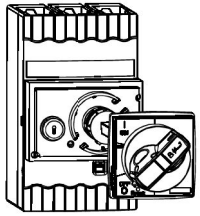


EXTERNAL ACCESSORY

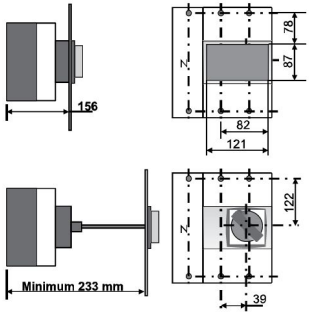
ROTARY OPERATING MECHANISM DIRECT MOUNTED

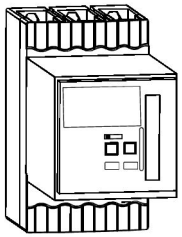


ROTARY CPERATING MECHANISM DOOR MOJNTED



EXTERNAL ACCESSORY





EOM-STORED ENERGY DRIVE

PRODUCT DEVELOPMENT IS A CONTINUOUS PROCESS IN L&T. THE INFORMATION GIVEN IN THIS LITERATURE IS SUBJECT TO CHANGE. FOR LATEST INFORMATION THE CUSTOMER MAY CONTACT CUSTOMER INTERACTION CELL.

THIS LITERATURE GIVES INFORMATION TO USER ABOUT PRODUCT INSTALLATION, OPERATION, MAINTENANCE AND DISPOSAL. THIS INFORMATION IS NOT EXHAUSTIVE AND SHOULD CUSTOMER REQUIRE FURTHER INFORMATION, IN SPECIFIC CASES, CUSTOMER MAY CONTACT CUSTOMER INTERACTION CELL.

CUSTOMER INTERACTION CELL (CIC)

TOLL FREE No. : 1800-233-5858
TOLL FREE No. : 1800-200-5858
TELEPHONE : 022-6774 5858
FAX : 022-6774 5859
E-MAIL : cic@LNTEBG.com
WEBSITE : www.LNTEBG.com

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SWITCHGEAR SAFE & SURE

Larsen & Toubro Limited
Electrical Standard Products
P.O.Box - 8901, Mumbai - 400 072, India.

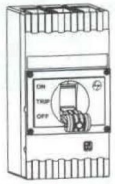
SPO1853

SWITCHGEAR
SAFE & SURE

INSTRUCTIONS FOR INSTALLATION & USE

MOULDED CASE CIRCUIT BREAKER WITH MOTOR PROTECTION RELEASE

FOR YOUR SAFETY, PLEASE READ INSTRUCTIONS THOROUGHLY BEFORE OPERATING.
MANUFACTURER ASSUMES NO RESPONSIBILITY FOR A HAZARD OR DAMAGE CAUSED BY INCORRECT OR NON-APPLICATION OF ANY OF THE INSTRUCTIONS ATTACHED HEREIN.



DN3 M Version MCCB

d sine

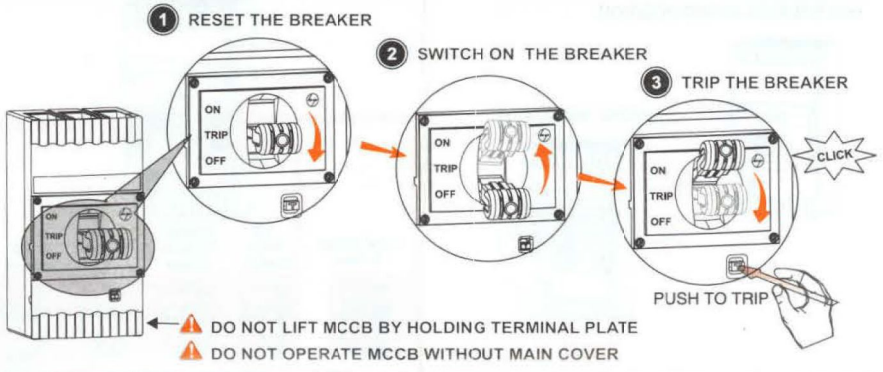


⚠ WARNING

ELECTRIC SHOCK HAZARD

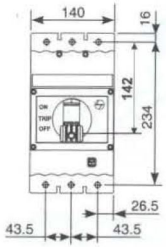
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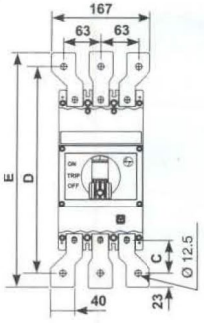
OPERATION

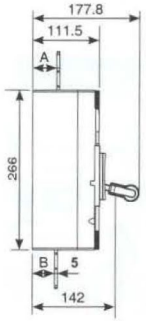


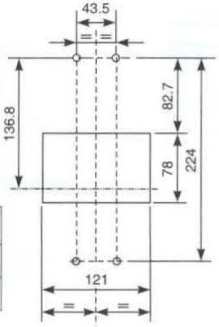
⚠ DO NOT LIFT MCCB BY HOLDING TERMINAL PLATE
⚠ DO NOT OPERATE MCCB WITHOUT MAIN COVER

BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT



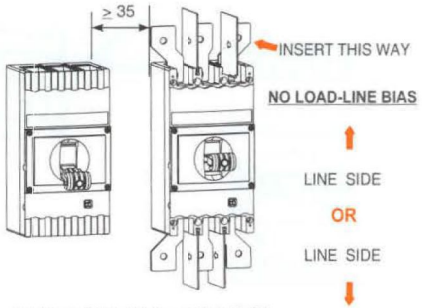






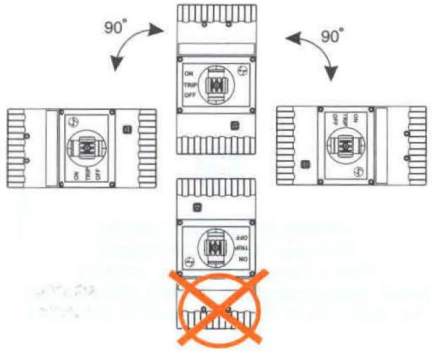
Type	A	B	C	D	E
DN3-400	39	37	**45**	**324**	**370**
DN3-630	41	38	**55**	**344**	**390**

PHASE BARRIER MOUNTING



UNITS MOUNTED SIDE BY SIDE

MOUNT IN ANY OF THESE THREE ORIENTATIONS



TERMINATION

HARDWARE		Quantity 3 P
MOUNTING	PLAIN WASHER (ID 5.5)	4
	M5 HEX NUT	4
	M5 x 50 mm CROSS RECESSED SCREW	4
	SPRING WASHER	4
TERMINATION	M10X30 - **20.6 Nm**	6
	SPRING WASHER M10	6
	PLAIN WASHER M10	6

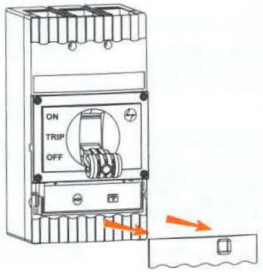
TERMINAL CAPACITY

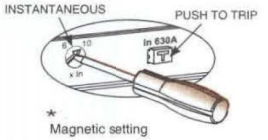
STANDARD	LINK	27x15 mm²
	CABLES	120 mm²
WITH SPREADER LINK	LINK	2x40x8 mm²
	CABLES	2x185mm²
BOX CLAMP	(Cu. CABLE)	240 mm²
REAR STUDS		240 mm²

WEIGHT

	DN 3 400 Kg.	DN 3 630 Kg.
3 P	5.5	6

ADJUSTMENT OF RELEASE SETTINGS



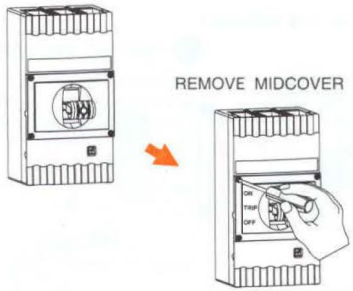


* Magnetic setting

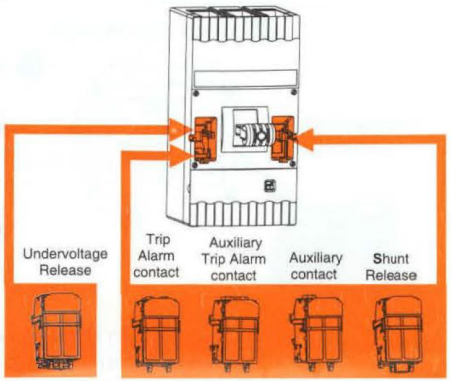
⚠ * ADJUSTMENT OF MAGNETIC SETTING TO BE DONE IN TRIP CONDITION

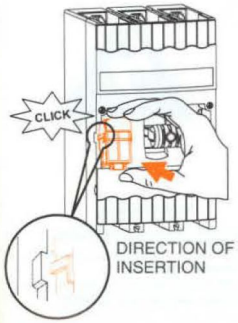
INTERNAL ACCESSORY - MOUNTING

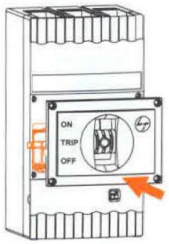
PUT BREAKER IN TRIP POSITION

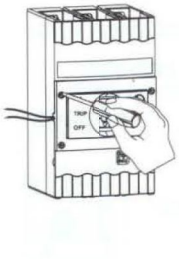


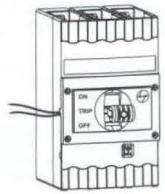
REMOVE MIDCOVER





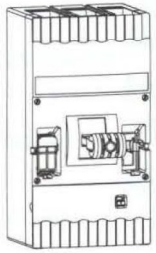


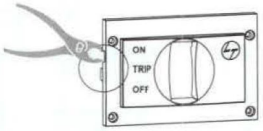


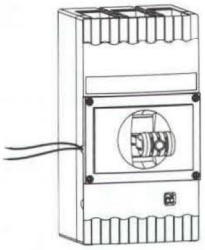


*For detailed instructions, refer respective accessory product insert

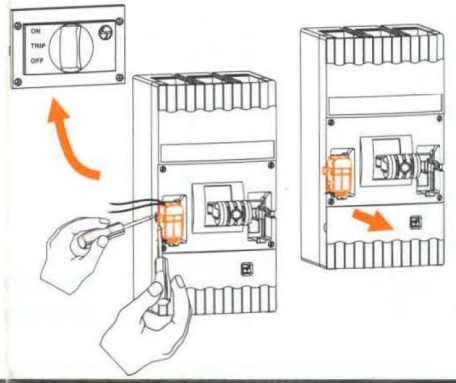
INTERNAL ACCESSORIES - WIRE ROUTING

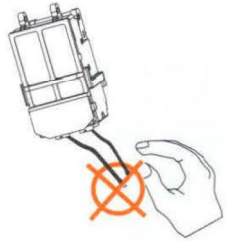






INTERNAL ACCESSORY - REMOVAL

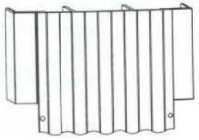




⚠ NEVER PULL THE LEAD-WIRES WHILE HANDLING OR REMOVAL TO AVOID MALFUNCTION OF ACCESSORY

EXTERNAL ACCESSORY -

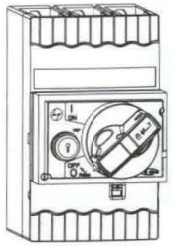
TERMINAL SHROUDS



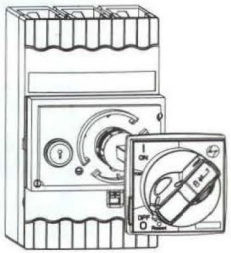


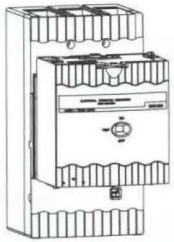
Box Clamps

ROM - DIRECT MOUNTED

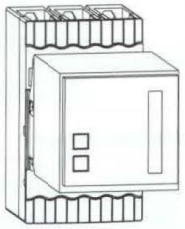


ROM - DOOR MOUNTED





ELECTRICAL OPERATING MECHANISM (EOM) **DIRECT DRIVE**



EOM-STORED ENERGY DRIVE

LARSEN & TOUBRO LIMITED
Electrical Standard Products
Powai Campus, Mumbai: 400 072
Email: esp@lntebg.com; WWW.LNTEBG.COM
Tel.: 022-6705 0505; FAX: 022-6705 1324/1746

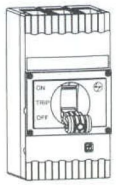
SP03248

SWITCHGEAR
SAFE & SURE

INSTRUCTIONS FOR INSTALLATION & USE

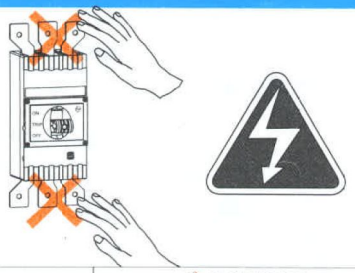
SWITCH DISCONNECTOR

FOR YOUR SAFETY, PLEASE READ INSTRUCTIONS THOROUGHLY BEFORE OPERATING. MANUFACTURER ASSUMES NO RESPONSIBILITY FOR A HAZARD OR DAMAGE CAUSED BY INCORRECT OR NON-APPLICATION OF ANY OF THE INSTRUCTIONS ATTACHED HEREIN.



DN3 SD

d sine

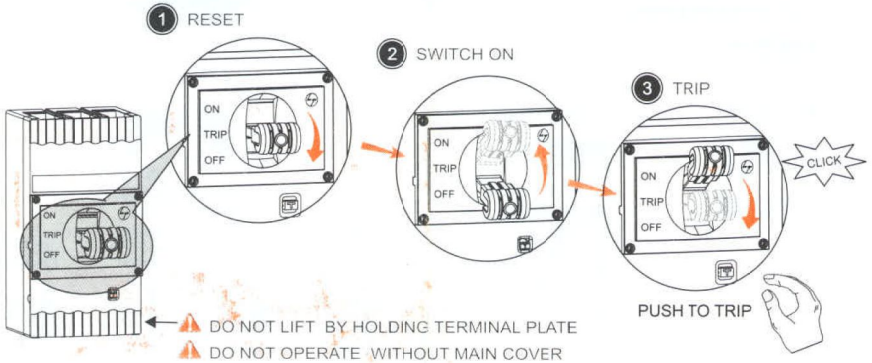


⚠ WARNING

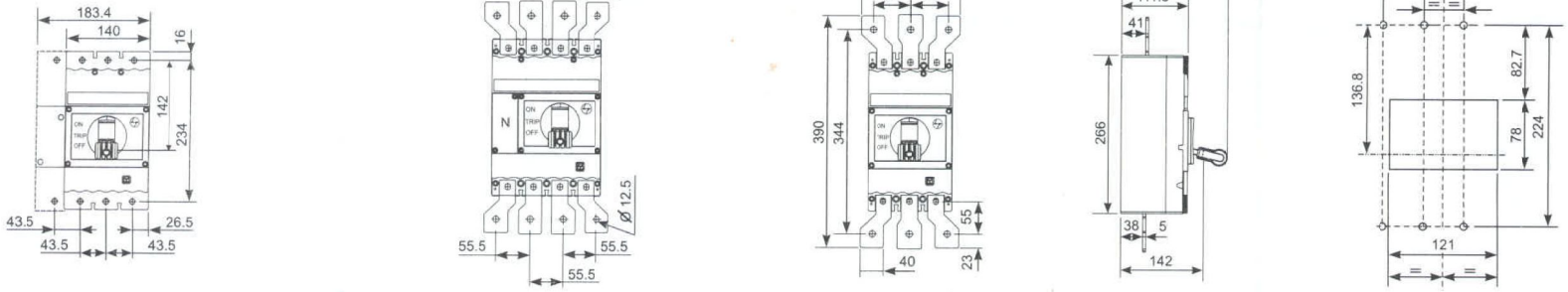
ELECTRIC SHOCK HAZARD

Disconnect all power supply from source before installing, modifying or servicing.
Failure to follow these instructions may result in property damage, serious injury or death.

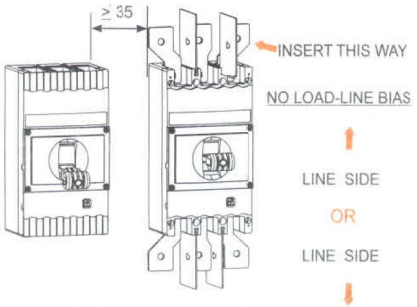
OPERATION



BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT

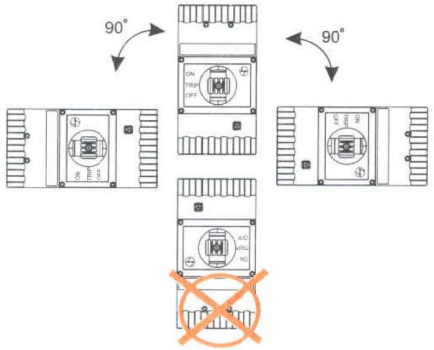


PHASE BARRIER MOUNTING



UNITS MOUNTED SIDE BY SIDE

MOUNT IN ANY OF THESE THREE ORIENTATIONS



TERMINATION

HARDWARE

		Quantity 3 P	Quantity 4 P
MOUNTING	PLAIN WASHER (ID 5.5)	4	6
	M5 HEX NUT	4	6
	M5 x 50 mm CROSS RECESSED SCREW	4	6
	SPRING WASHER	4	6
TERMINATION	M10X30 - 20.6 Nm	6	8
	SPRING WASHER M10	6	8
	PLAIN WASHER M10	6	8

TERMINAL CAPACITY

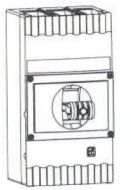
STANDARD	LINK CABLES	27x15 mm² 120 mm²
WITH SPREADER LINK	LINK CABLES	2x40x8 mm² 2x185 mm²
BOX CLAMP	(Cu. CABLE)	240 mm²
REAR STUDS		240 mm²

WEIGHT DN 3

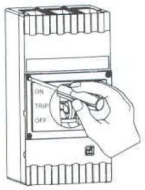
Pole	Kg.
3 P	6
4 P	7.8

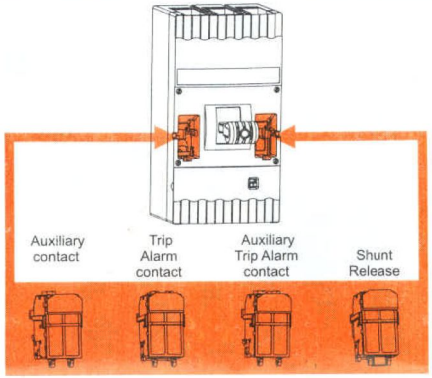
INTERNAL ACCESSORY - MOUNTING

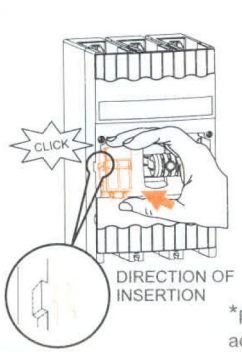
PUT SD IN TRIP POSITION

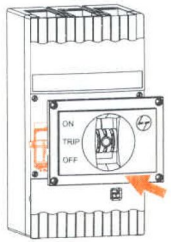


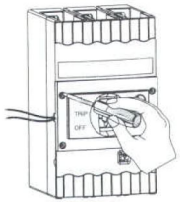
REMOVE MIDCOVER

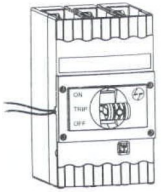






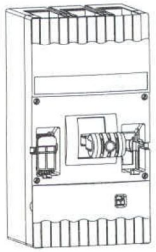


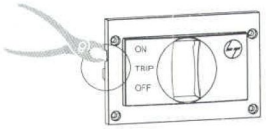


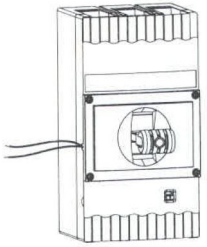


*For detailed instructions, refer respective accessory product insert

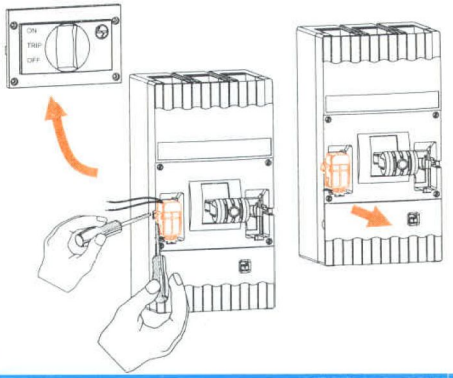
INTERNAL ACCESORIES - WIRE ROUTING

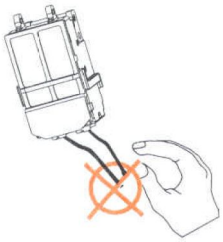






INTERNAL ACCESSORY - REMOVAL

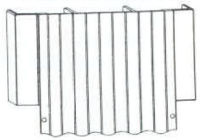




⚠ NEVER PULL THE LEAD-WIRES WHILE HANDLING OR REMOVAL TO AVOID MALFUNCTION OF ACCESSORY

EXTERNAL ACCESSORY -

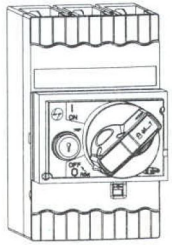
TERMINAL SHROUDS



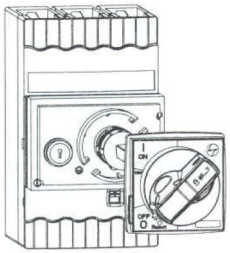


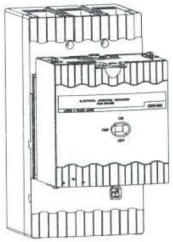
Box Clamps

ROM - DIRECT MOUNTED

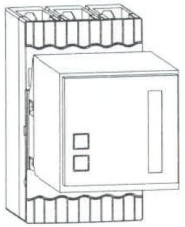


ROM - DOOR MOUNTED





ELECTRICAL OPERATING MECHANISM (EOM) DIRECT DRIVE



EOM-STORED ENERGY DRIVE

LARSEN & TOUBRO LIMITED
Electrical Standard Products
Powai Campus, Mumbai: 400 072
Email: esp@lntebg.com; WWW.LNTEBG.COM
Tel.: 022-6705 0505; FAX: 022-6705 1324/1746

SP02680 UNITY

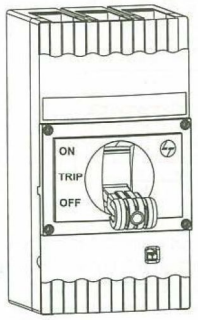
SWITCHGEAR
SAFE & SURE

INSTRUCTION MANUAL

DN3 MTX MCCB

d sine

MOULDED CASE CIRCUIT BREAKER
MICROPROCESSOR RELEASE





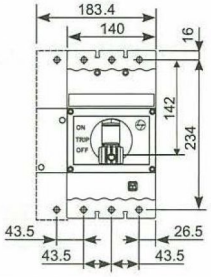


WARNING

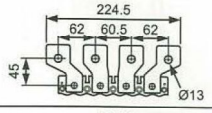
Hazards of electric shock and burning. Installation, Commissioning and Maintenance to be done by qualified personnel only. Always use an appropriate voltage detection device to confirm the absence of voltage. Disconnect the power and isolate before proceeding with any work on this equipment. Use according to the operating instructions, professional practices, wiring rules, codes, safety regulations applicable to the installation.

PRODUCT INFORMATION

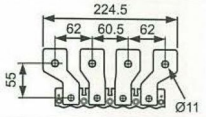
BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT



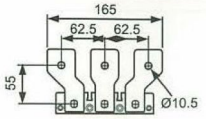
DN3 -400 4 POLE



DN3 -630 4 POLE

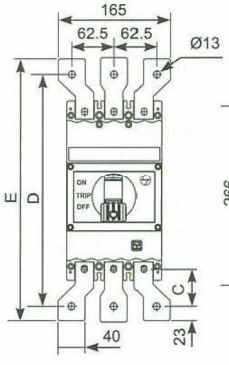


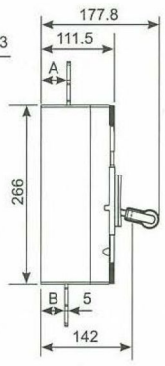
DN3 -630 3 POLE

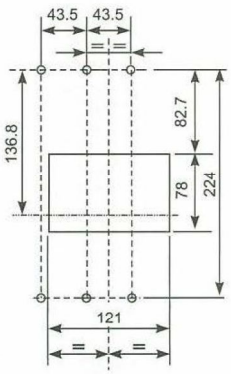


PRODUCT INFORMATION

BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT





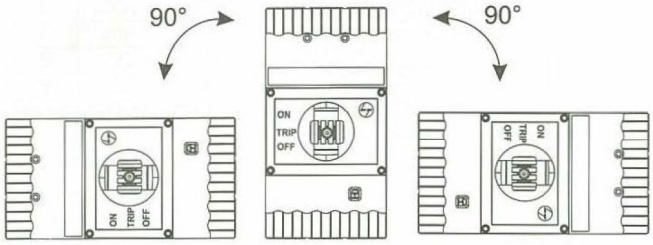


TYPE	DN3-400	DN3-630
A	39	41
B	37	38
C	45	55
D	324	344
E	370	390

IMPORTANT

IT IS RECOMMENDED TO USE SPREADER LINKS FOR ENHANCING TERMINAL CAPACITY. PLEASE CONTACT NEAREST SALES OFFICE/STOCKIST FOR ORDERING INFORMATION OF SPREADER LINKS.

MOUNT IN ANY OF THESE THREE ORIENTATIONS



PRODUCT INFORMATION

TERMINATION

HARDWARE

		Quantity 3 P	Quantity 4 P
MOUNTING	PLAIN WASHER (ID 5.5)	4	6
	M5 HEX NUT	4	6
	M5 x 50 mm CROSS RECESSED SCREW	4	6
	SPRING WASHER	4	6
TERMINATION	M10X30 - **20.6 Nm**	6	8
	SPRING WASHER M10	6	8
	PLAIN WASHER M10	6	8

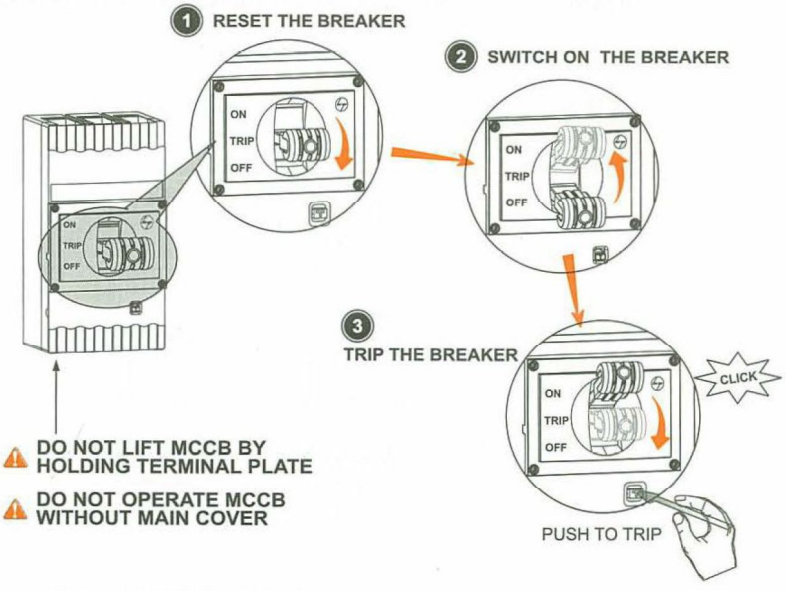
TERMINAL CAPACITY

STANDARD	LINK	27x15 mm²
	CABLES	120 mm²
WITH SPREADER LINK	LINK	2x40x8 mm²
	CABLES	2x185 mm²
BOX CLAMP	(Cu. CABLE)	240 mm²
REAR STUDS		240 mm²

WEIGHT

	DN 3 400 Kg.	DN 3 630 Kg.
3 P	5.5	6
4 P	7.2	7.8

OPERATION

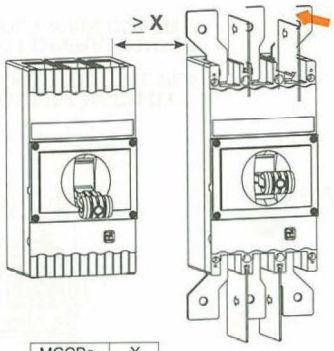


⚠ DO NOT LIFT MCCB BY HOLDING TERMINAL PLATE

⚠ DO NOT OPERATE MCCB WITHOUT MAIN COVER

PRODUCT INSTALLATION

PHASE BARRIER MOUNTING



INSERT THIS WAY

NO LOAD-LINE BIAS

LINE SIDE

OR

LINE SIDE

MCCBs	X
4P & 4P	61
3P & 3P	47
3P & 4P	54

⚠ WARNING

Phase barriers must be mounted on the breaker before usage

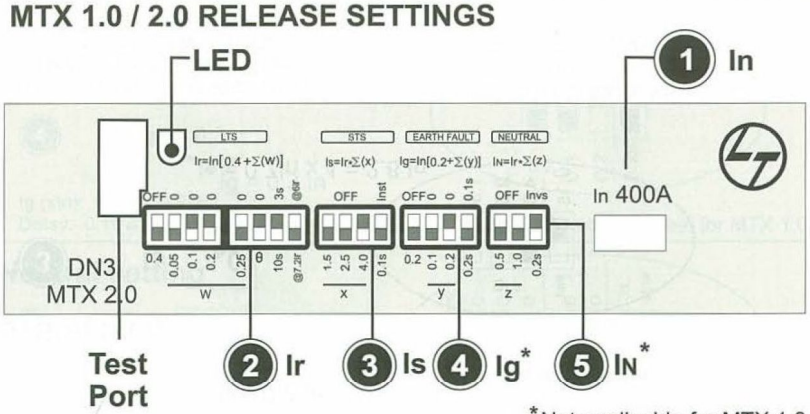
UNITS MOUNTED SIDE BY SIDE

ENSURE CORRECT N,R,Y,B PHASE SEQUENCE IS MAINTAINED FOR MTX RELEASES

PRODUCT INSTALLATION

6

MTX 1.0 / 2.0 RELEASE SETTINGS



*Not applicable for MTX 1.0

When either LTS (Ir) setting or Earth Fault (Ig) setting are set to OFF the respective protection is defeated.

LED indication:
Power up: 0.3 In
Alarm : 0.85 Ir
Pick up : 1.15 Ir

In : Nominal Current
Ir : Overload Current
Is : Short circuit Current
Ig : Earth fault Current
IN : Neutral Current

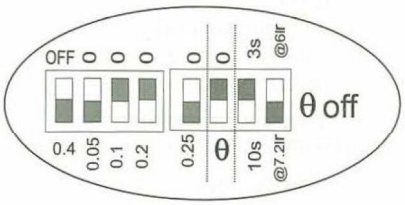
PRODUCT INFORMATION

7

LTS Setting

1. In — In
2. Ir — 0.7

Ir = 0.7 In

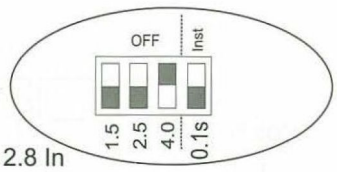


θ denotes Thermal Memory.

STS Setting

3. Is — 4.0

Is = 0.7In x 4 = 2.8 In



PRODUCT INFORMATION

Ir (%In): 0.4 to 1 In in steps of 5%
4 user selectable curves: 6Ir @10s, 6Ir @3s ,7.2Ir @10s, 7.2Ir @ 3s

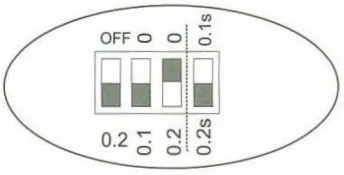
Is (xIr): 1.5, 2.5, 4, 5.5, 6.5, 8 Ir
Delay: 0.1s
Inst: Instantaneous Setting

Earth fault setting*

1. In — In
4. Ig — 0.3

Ig = 0.3 In

Ig (xIn): 0.20 to 0.5 In
Delay: 0.1s & 0.2s



* Not applicable for MTX 1.0

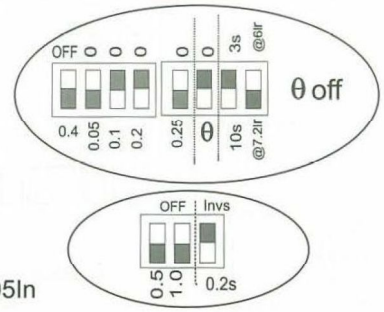
Neutral setting*

1. In — In
2. Ir — 0.7

Ir = 0.7 In

5. IN — 1.5

IN= 0.7In x 1.5 = 1.05In



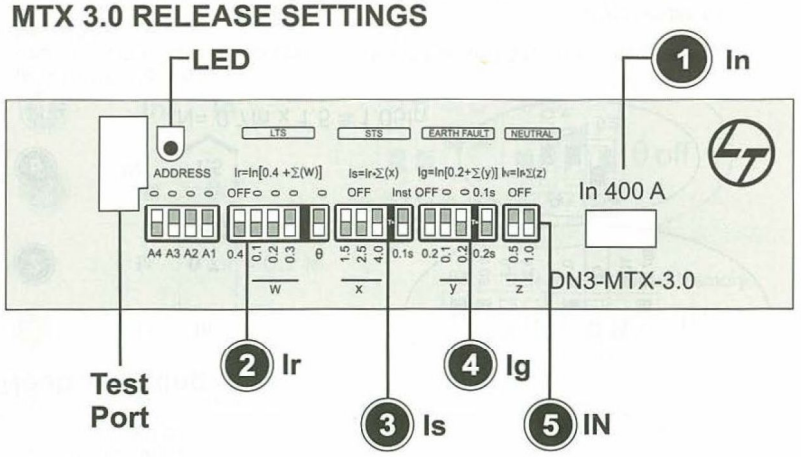
PRODUCT INFORMATION

IN (x Ir): 0.5 ,1.0, 1.5 Ir
when Invs ON follows LTS curves
Delay: 0.2s

Ir ≤ 0.7 In for **1.5** Neutral setting with Invs enabled

* Not applicable for MTX 1.0

MTX 3.0 RELEASE SETTINGS

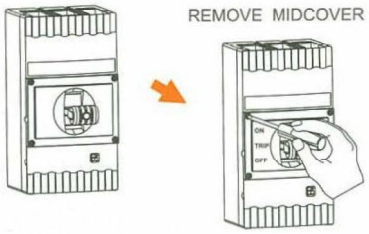


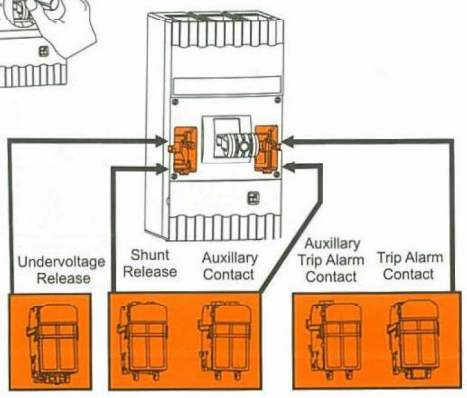
- For MTX 3.0 protection settings, refer page nos. 8 & 9
- Using ADDRESS,upto 13 MCCBs can be configured with a single Display Module.
- In case of LTS settings the default curve is 6Ir @ 10s
- In case of Neutral settings, default trip time is fixed at 0.2s.
  IDMT curve can be enabled using Display Module settings. Refer SP03549.
- For selection of additional trip time curves, fine settings of delay as well settings, and additional protections, use Display Module setup. Refer SP03549.

PRODUCT INFORMATION

INTERNAL ACCESSORY - MOUNTING

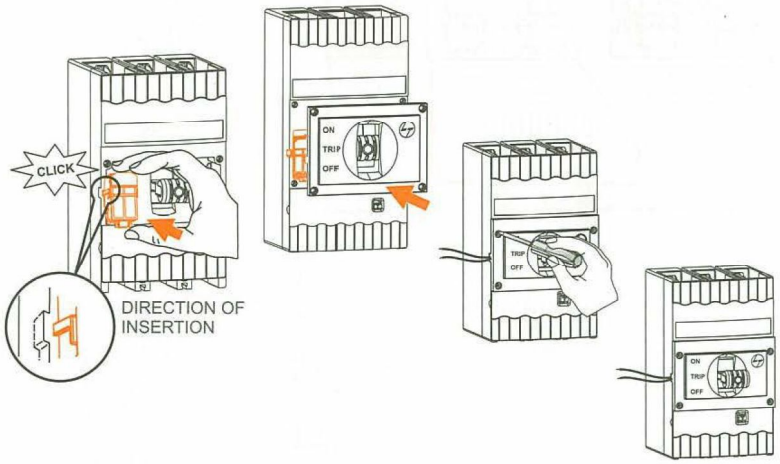
PUT BREAKER IN TRIP POSITION





PRODUCT INSTALLATION

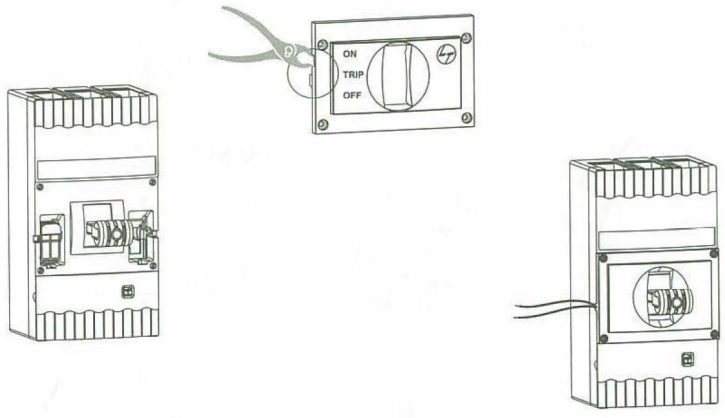
INTERNAL ACCESSORY - MOUNTING



*For detailed instructions, refer respective accessory product insert

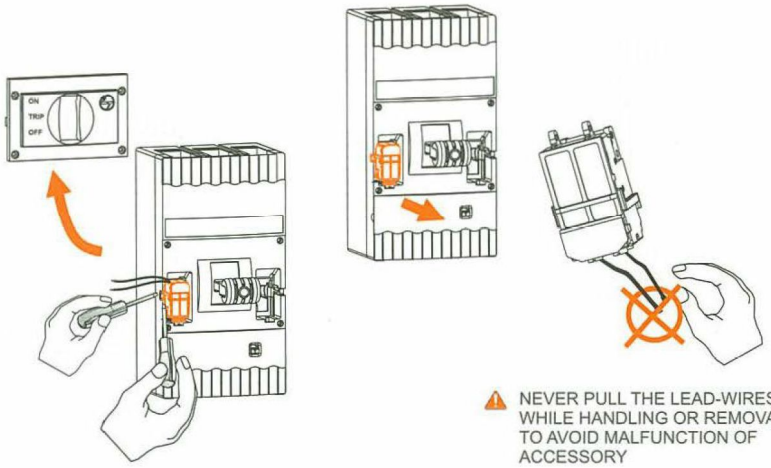
PRODUCT INSTALLATION

INTERNAL ACCESSORIES - WIRE ROUTING



PRODUCT INSTALLATION

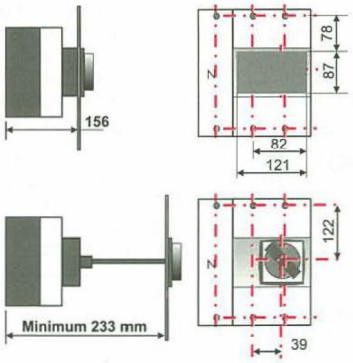
INTERNAL ACCESSORY - REMOVAL



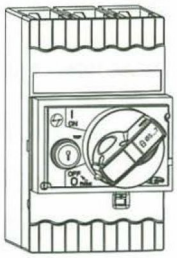
⚠ NEVER PULL THE LEAD-WIRES WHILE HANDLING OR REMOVAL TO AVOID MALFUNCTION OF ACCESSORY

PRODUCT INSTALLATION

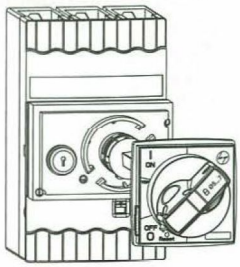
EXTERNAL ACCESSORY -



ROM - DIRECT MOUNTED



ROM - DOOR MOUNTED





Box Clamps

PRODUCT INSTALLATION



DISCLAIMER NOTES

"This literature gives information to user about product installation, operation maintenance and disposal. This information is not exhaustive and should customer require further information, in specific cases, customer may contact customer interaction cell."

"The manufacturer assumes no responsibility for injuries, losses, damages to human beings and/or equipments due to inappropriate application of instructions, provided herein."

"Product development is a continuous process in L&T. The information given in this literature is subject to change. For latest information the customer may contact customer interaction cell"



CUSTOMER CARE

CUSTOMER INTERACTION CELL (CIC)

BSNL / MTNL (Toll-Free) : 1800 233 5858
RELIANCE (Toll-Free) : 1800 200 5858
Telephone : 022 6774 5858
email : cic@LNTEBG.com
wwbsite : www.LNTEBG.com



COMPANY INFORMATION

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SDDC - SP03547

SWITCHGEAR
SAFE & SURE

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Tel: +91-22-67050505
Fax: +91-22-67051125
Website: www.LNTEBG.com

Ver. 3.0

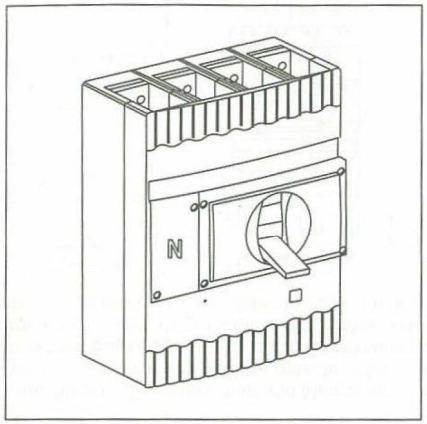
SWITCHGEAR
SAFE & SURE

INSTRUCTION MANUAL

DN4 MTX MCCB

d sine

MOULDED CASE CIRCUIT BREAKER
MICROPROCESSOR RELEASE



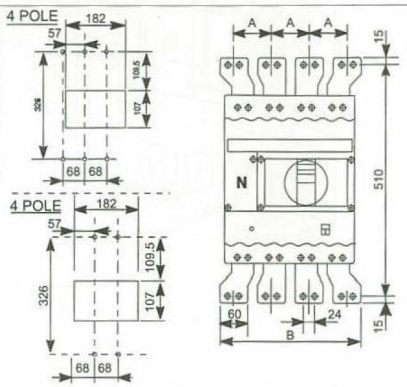


WARNING

Hazards of electric shock and burning. Installation, Commissioning and Maintenance to be done by qualified personnel only. Always use an appropriate voltage detection device to confirm the absence of voltage. Disconnect the power and isolate before proceeding with any work on this equipment. Use according to the operating instructions, professional practices, wiring rules, codes, safety regulations applicable to the installation.

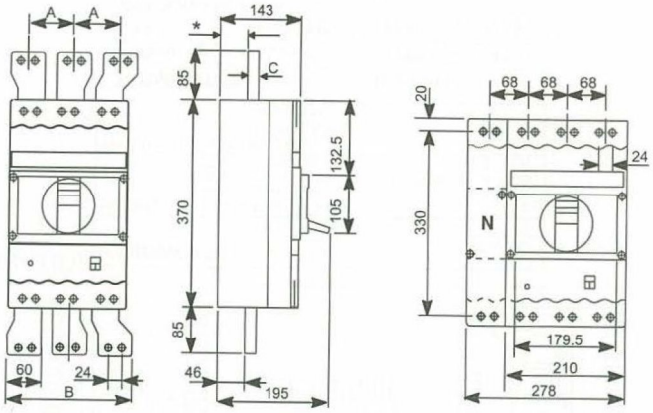
PRODUCT INFORMATION

BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT



PRODUCT INFORMATION

BASE PLATE MOUNTING, OVERALL DIMENSIONS AND PANEL CUT-OUT



4 POLE FRAME

TYPE	A	B	C
800A	88	324	6
1000/ 1250 1600A	80	300	20

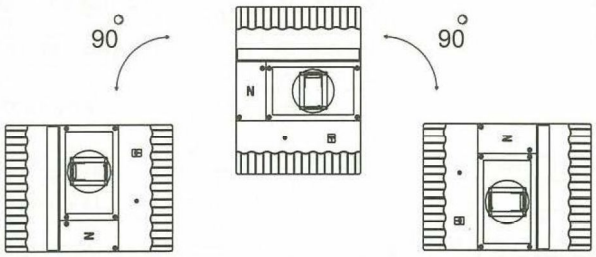
3 POLE FRAME

TYPE	A	B	C
800A	88	236	6
1000/A	80	220	20

*46 (N version)
42 (S version)

All dimensions are in mm.

MOUNT IN ANY OF THESE THREE ORIENTATIONS



TERMINATION

HARDWARES		Quantity 3P	Quantity 4P
MOUNTING	PLAIN WASHER (ID 5.5)	4	6
	M5 HEXNUT	4	6
	M5 x 80mm. CROSS RECESSED SCREW	4	6
	SPRING WASHER	4	6
TERMINATION	M10 x 30-20.6Nm	8	8
	SPRING WASHER M10	8	8
	PLAIN WASHER M10	8	8

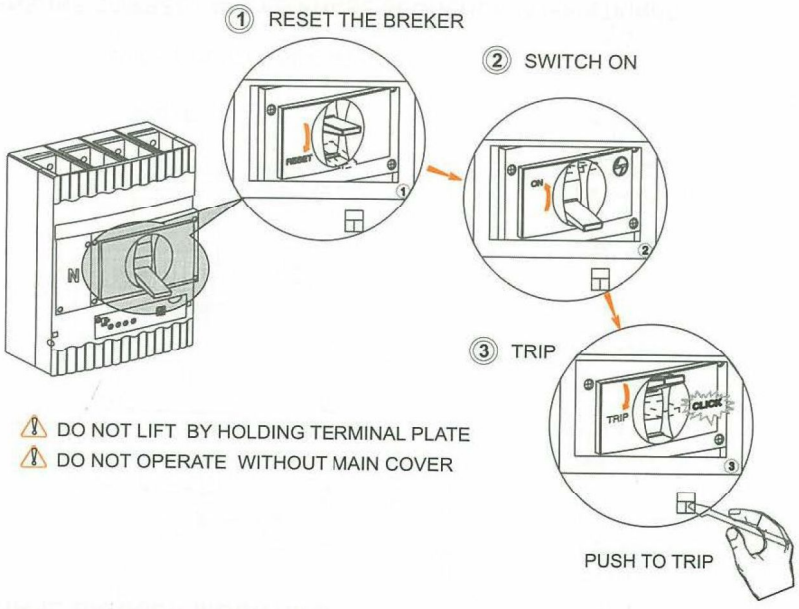
TERMINATION	
Without Spreader Links	
Link	**2x40x15 mm²**
With Spreader Links	
Link	**2x60x15 mm²**
Cable with lug	**2x300 mm²**

WEIGHT

TYPE	3P	4P
800A	17kg	18kg
1000A	19kg	21kg

PRODUCT INFORMATION

OPERATION

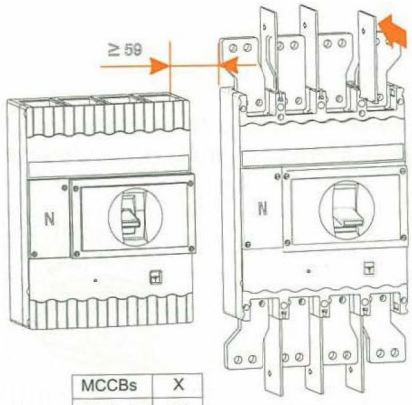


⚠ DO NOT LIFT BY HOLDING TERMINAL PLATE

⚠ DO NOT OPERATE WITHOUT MAIN COVER

PRODUCT INSTALLATION

PHASE BARRIER MOUNTING



INSERT THIS WAY
NO LOAD LINE BIAS

LINE SIDE
OR
LINE SIDE

MCCBs	X
4P & 4P	61
3P & 3P	47
3P & 4P	54

WARNING

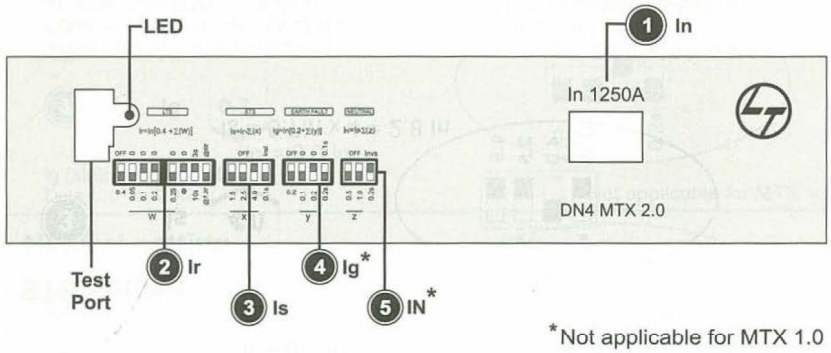
Phase barriers must be mounted on the breaker before usage

UNITS MOUNTED SIDE BY SIDE

ENSURE CORRECT N,R,Y,B PHASE SEQUENCE IS MAINTAINED FOR MTX RELEASES

PRODUCT INSTALLATION

MTX 1.0 / 2.0 RELEASE SETTINGS



*Not applicable for MTX 1.0

When either LTS (Ir) setting or Earth Fault (Ig) setting are set to OFF the respective protection is defeated.

LED indication:
Power up: 0.3 In
Alarm : 0.85 Ir
Pick up : 1.15 Ir

In : Normal Current
Ir : Overload Current
Is : Short ckt Current
Ig : Earth fault Current
IN : Neutral Current

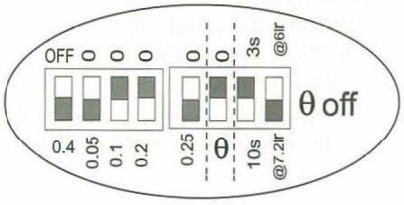
PRODUCT INFORMATION

LTS Setting

1 In: **In**

2 Ir: **0.7**

Ir = 0.7 In

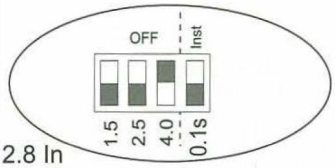


θ denotes Thermal Memory.

STS Setting

3 Is: **4.0**

Is = 0.7In x 4 = 2.8 In



PRODUCT INFORMATION

Ir (%In): 0.4 to 1 In in steps of 5%
4 user selectable curves: 6Ir @10s,
6Ir @3s ,7.2Ir @10s, 7.2Ir @ 3s

Is (xIr): 1.5, 2.5, 4, 5.5, 6.5, 8 Ir
Delay: 0.1s
Inst: Instantaneous Setting

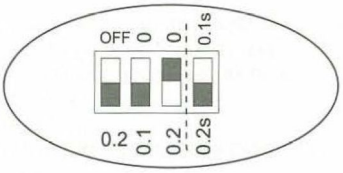
Earth fault setting*

1 In: **In**

4 Ig: **0.3**

Ig = 0.3 In

Ig (xIn): 0.20 to 0.5 In
Delay: 0.1s & 0.2s



* Not applicable for MTX 1.0

Neutral setting*

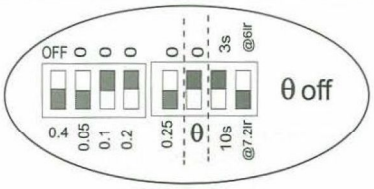
1 In: **In**

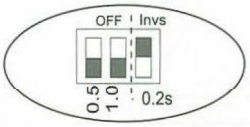
2 Ir: **0.7**

Ir = 0.7 In

5 IN: **1.5**

IN= 0.7In x 1.5 = 1.05In





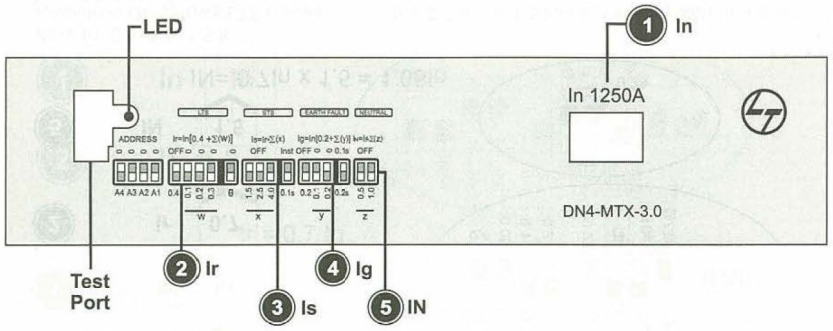
PRODUCT INFORMATION

IN (x Ir): 0.5 ,1.0, 1.5 Ir
when Invs ON follows LTS curves
Delay: 0.2s

Ir ≤ 0.7 In for **1.5** Neutral setting with Invs enabled

* Not applicable for MTX 1.0

MTX 3.0 RELEASE SETTINGS

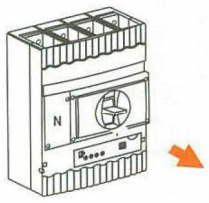


- For MTX 3.0 protection settings, refer page nos. 8 & 9
- Using ADDRESS,upto 13 MCCBs can be configured with a single Display Module.
- In case of LTS settings the default curve is 6Ir @ 10s
- In case of Neutral settings, default trip time is fixed at 0.2s.
  IDMT curve can be enabled using Display Module settings. Refer display product insert.
- For selection of additional trip time curves, fine settings of delay as well settings, and additional protections, use Display Module setup. Refer display product insert.

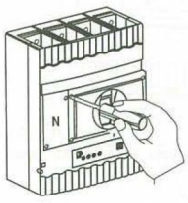
PRODUCT INFORMATION

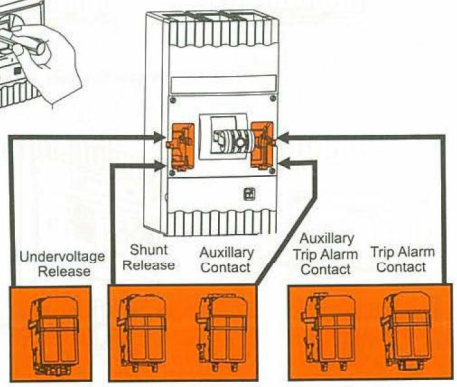
INTERNAL ACCESSORY - MOUNTING

PUT BREAKER IN TRIP POSITION



REMOVE MIDCOVER

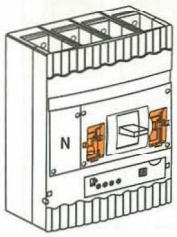


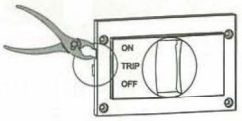


PRODUCT INSTALLATION

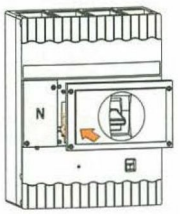
INTERNAL ACCESSORY - MOUNTING

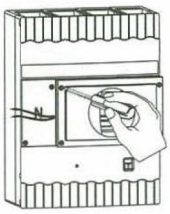


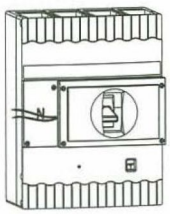




*For detailed instructions, refer respective accessory product insert



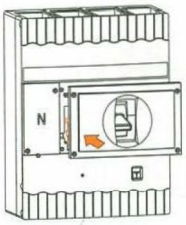


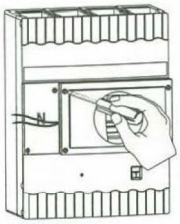


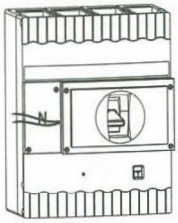
PRODUCT INSTALLATION

*For detailed instructions, refer respective accessory product insert

INTERNAL ACCESSORIES - WIRE ROUTING

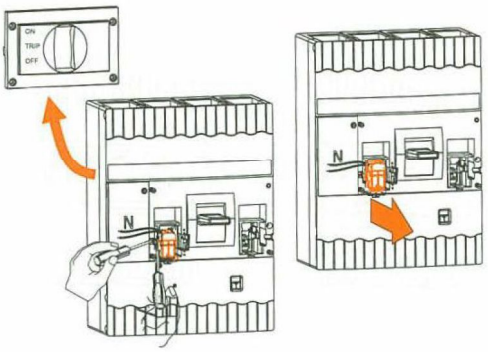


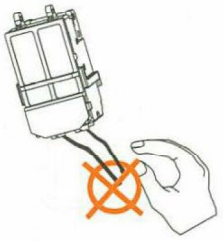




PRODUCT INSTALLATION

INTERNAL ACCESSORY - REMOVAL

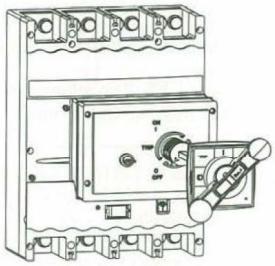




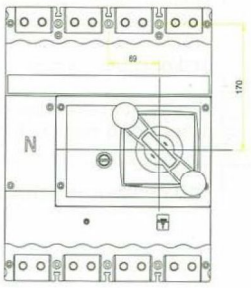
⚠ NEVER PULL THE LEAD-WIRES WHILE HANDLING OR REMOVAL TO AVOID MALFUNCTION OF ACCESSORY

PRODUCT INSTALLATION

EXTERNAL ACCESSORY -

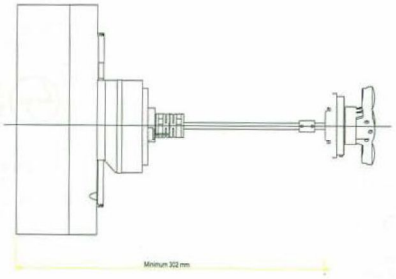


ROM -
DOOR MOUNTED





Box Clamps



PRODUCT INSTALLATION

DISCLAIMER NOTES

"This literature gives information to user about product installation, operation maintenance and disposal. This information is not exhaustive and should customer require further information, in specific cases, customer may contact customer interaction cell."

"The manufacturer assumes no responsibility for injuries, losses, damages to human beings and/or equipments due to inappropriate application of instructions, provided herein."

"Product development is a continuous process in L&T. The information given in this literature is subject to change. For latest information the customer may contact customer interaction cell"

CUSTOMER CARE

CUSTOMER INTERACTION CELL (CIC)

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RELIANCE (Toll-Free) : 1800 200 5858
Telephone : 022 6774 5858
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wwbsite : www.LNTEBG.com

COMPANY INFORMATION

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