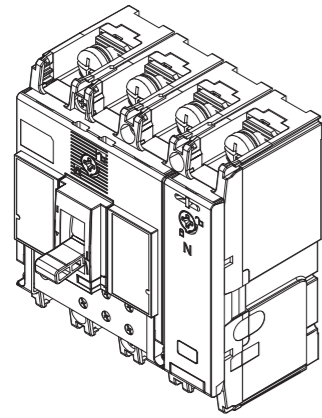


# INSTALLATION INSTRUCTIONS MOULDED CASE CIRCUIT BREAKERS TEMBREAK PRO P160 4P BASIC ELECTRONIC



NHP Electrical Engineering Products Pty Ltd  
A.B.N. 84 004 304 812  
AUS 1300 NHP NHP | nhp.com.au  
NZ 0800 NHP NHP | nhp-nz.com

**TOOLS REQUIRED (NOT included)**

- T1 Screwdriver Flathead (5mm)
- T2 Screwdriver Phillips (#2)
- T3 13mm Socket wrench
- T4 13mm Ring Spanner

**HARDWARE (included)**

- A M8x16 Slotted Philips screw (8 qty)
- B M8 spring washer (8 qty)
- C M8 flat washer (8 qty)
- D M4x62 mounting screws (2 qty)
- E Interpole Barriers (3 qty)
- Instruction Manual (This Document) (1 qty)

**HARDWARE (NOT included)**

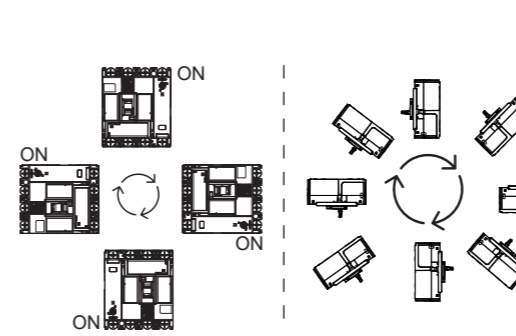
- F Lugs or Copper Bars
- G \*M8x25 hex bolt (8 qty)
- H \*M8 flat washer (8 qty)
- I \*M8 Belleville washer (8 qty)
- J \*M8 nut (8 qty)

\*For extension bar connection only

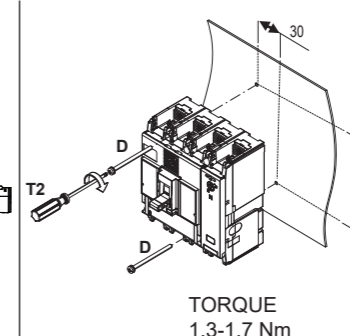
**OPTIONAL (NOT included)**

- K Extension Bars
- L Terminal Covers
- M Terminal Cover Lock
- N Handle Lock
- Internal Accessories

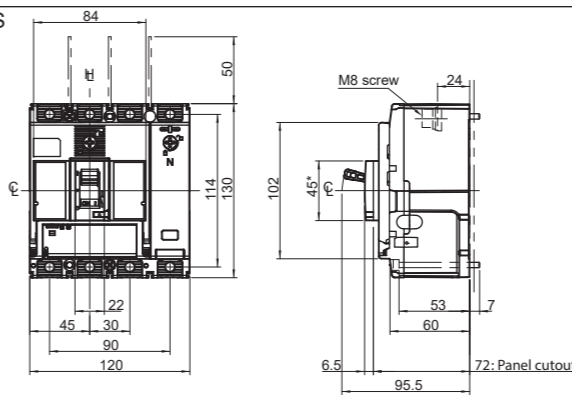
## MOUNTING ANGLES



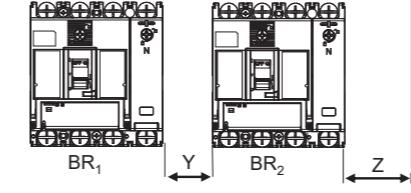
## MOUNTING



## DIMENSIONS

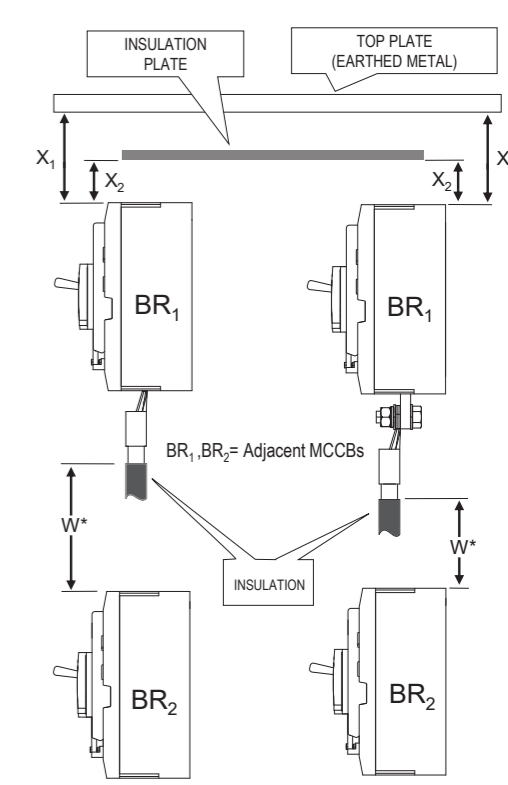


## CLEARANCE



MCCB Cat No.	Y min (mm)	Z min (mm)
P160F	0	25
P160N	0	25
P160H		

## CLEARANCE



\*distance from conductor insulation to downstream MCCB

MCCB Cat No.	W* min (mm)	X <sub>1</sub> min (mm)	X <sub>2</sub> min (mm)
P160F	50	10	10
P160N	75	45	25
P160H			

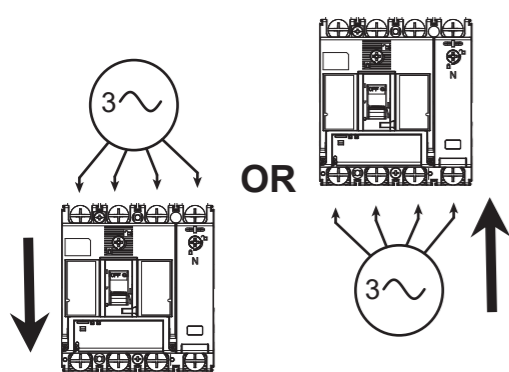
P160\_4\_BE-IN-001-EN V1.0.0

## OPERATING INSTRUCTIONS

TRIP Button

Operation	Force (Nm)
OFF → ON	40
ON → OFF	30
TRIP → OFF	60

## DIRECTION OF POWER SUPPLY



## INTERNAL ACCESSORIES ASSEMBLY PROCEDURE\*

**STEP 1 TRIP MCCB**

**STEP 2 OPEN COVER**

**STEP 3 IDENTIFY TRIP BAR & MECHANISM**

**STEP 4 UVT/SHUNT INSTALLATION**

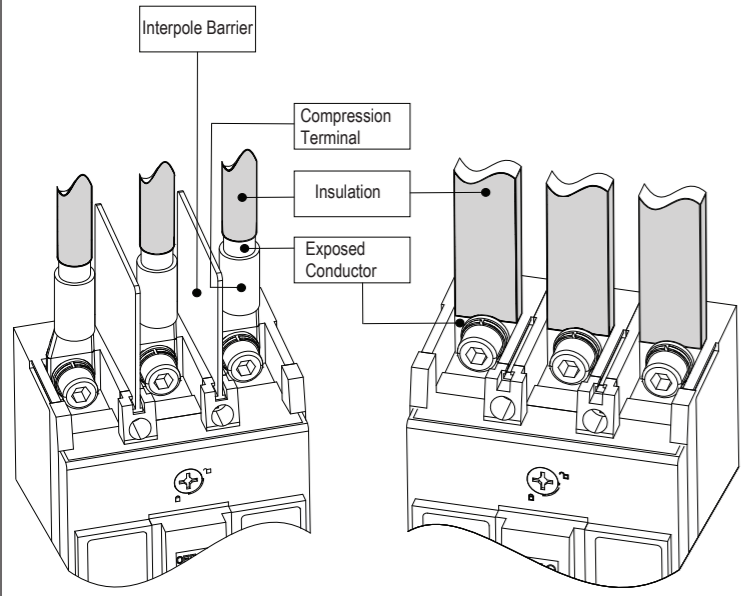
**STEP 5 CLOSE MCCB COVER**

**STEP 4.2 ALARM INSTALLATION**

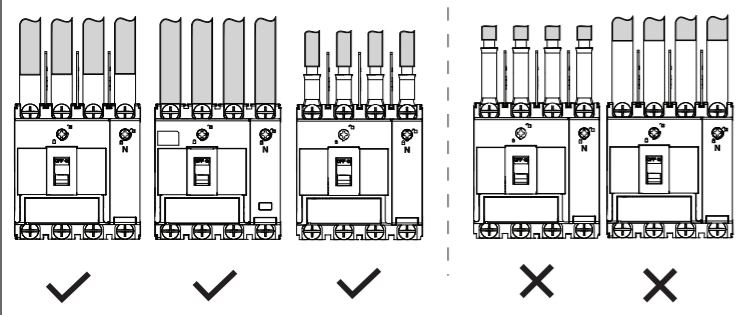
\*For additional internal accessory installations, scan QR code and refer to user manual for more details

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TOPSIDE INSULATION RECOMMENDATIONS – 415 / 440V AC

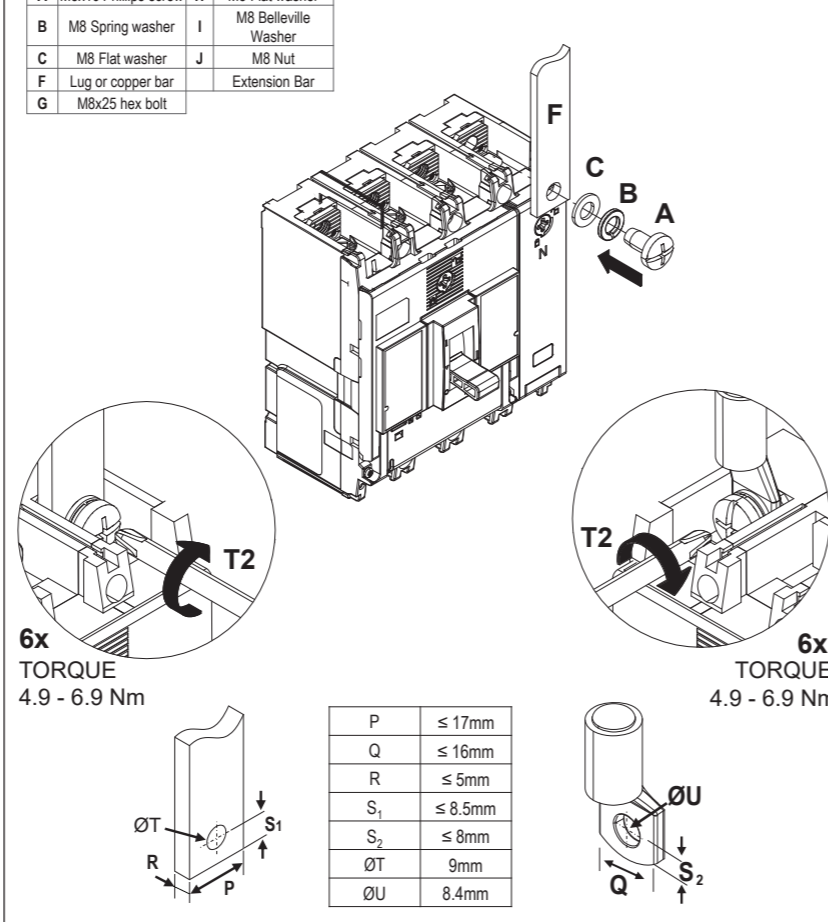


NOTE: Insulate the exposed conductor to achieve IP2X or protect from finger access.

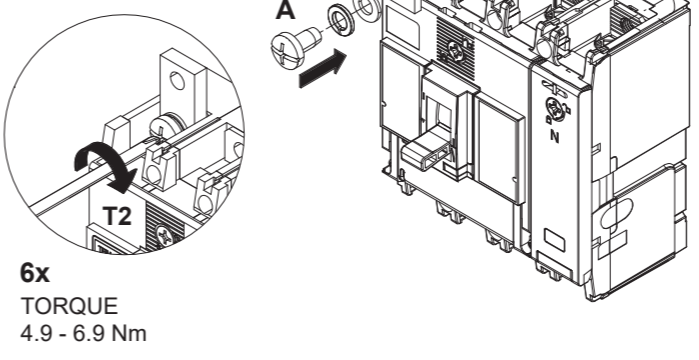


CONDUCTOR CONNECTION PROCEDURE -- FRONT CONNECTION -- EXTENSION BAR CONNECTION PROCEDURE

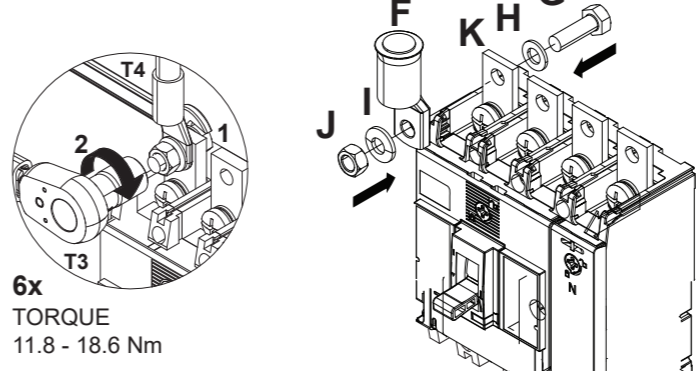
A	M8x16 Phillips screw	H	M8 Flat washer
B	M8 Spring washer	I	M8 Belleville Washer
C	M8 Flat washer	J	M8 Nut
F	Lug or copper bar		Extension Bar
G	M8x25 hex bolt		



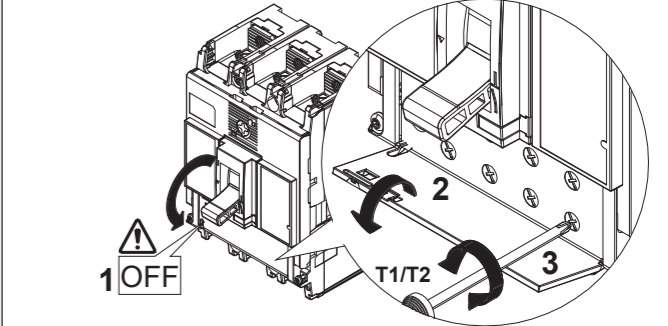
STEP 1



STEP 2



TRIP UNIT ADJUSTMENT PROCEDURE



Protection Settings		
L	$I_{r1} I_{r2}$	Threshold Long Time Protection (Rated Current)
	$t_r$	Long Time Delay (Time Delay)
S	$I_{sd}$	Threshold Short Time Protection
	$t_{sd}$	Short Time Delay
	$I^2t$ ON / OFF	$I^2t$ curve on Short delay protection activated or not
I	$I_i$	Instantaneous Protection Threshold
GF	$I^2t$ ON/OFF	$I^2t$ curve on Earth Protection Activated (ON) or not activated. (OFF)

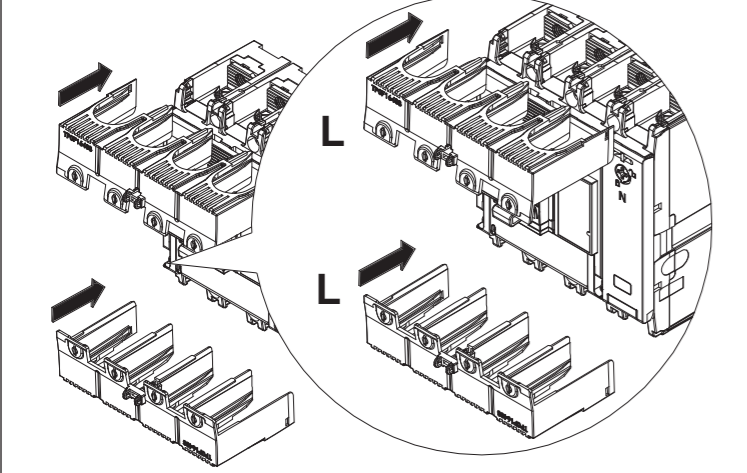
NOTE: The  $I_r$  ( Rated Current ) threshold is firstly set using the  $I_{r1}$  MAX adjustment dial. If necessary , fine adjustments of 1% increments of  $I_{r1}$  are possible using the  $I_{r2}$  dial from 0.92 to 1.

NOTE: The  $t_r$  time delay defines the trip time of the long-time delay protection for a current of  $6 \times I_r$ .

NOTE: The Ground Fault Protection can be turned ON and OFF using the GF dial for a current of  $0.4 \times I_n$ .

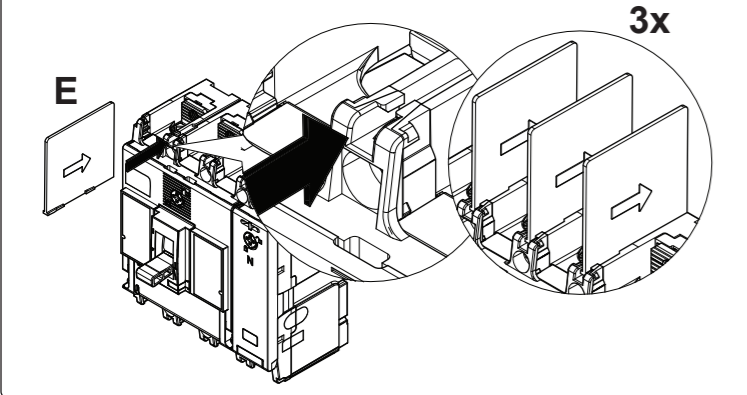
FOR MORE INFORMATION, PLEASE SCAN THE QR CODE

TERMINAL COVER

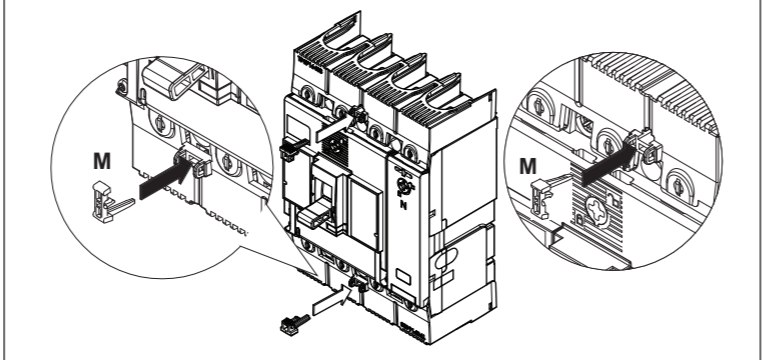
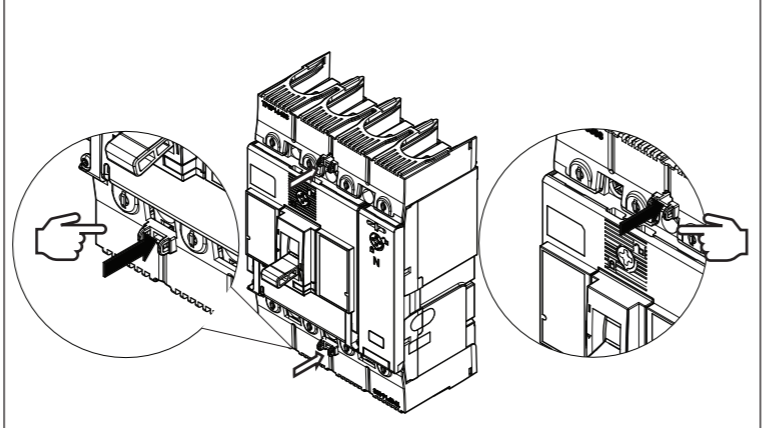


OR

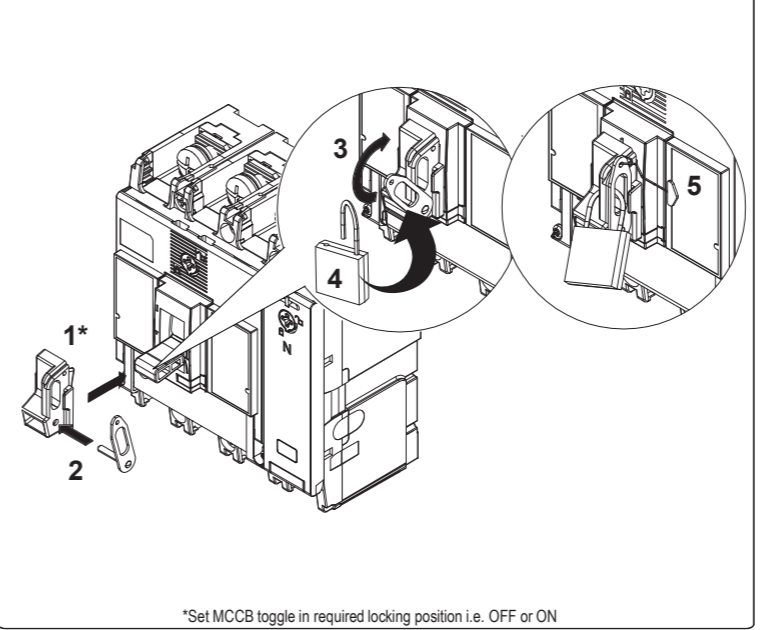
INTERPOLE BARRIER



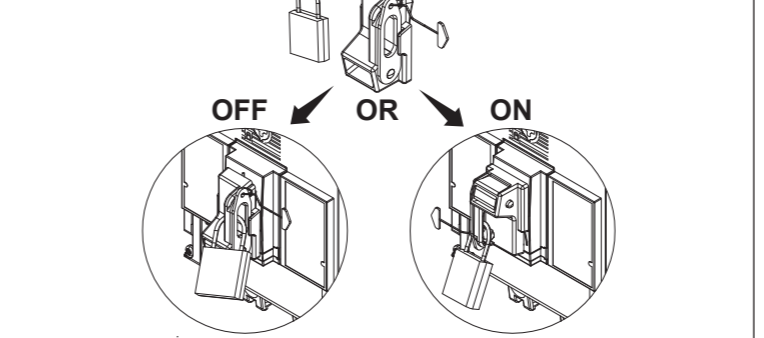
TERMINAL COVER LOCK



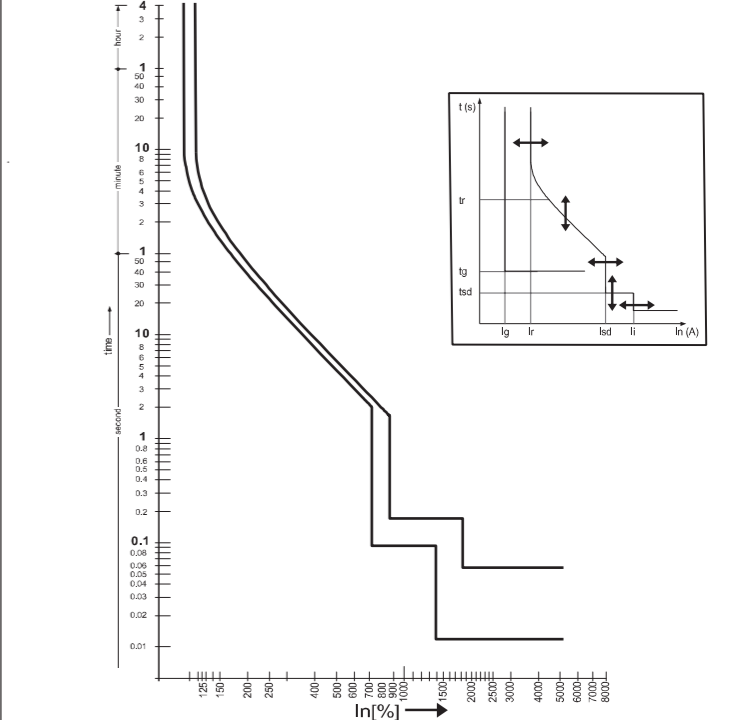
TOGGLE LOCK / PADLOCK ASSEMBLY PROCEDURE



TOGGLE LOCK OPTION



TIME CURRENT CHARACTERISTIC CURVE



$I_n$ (A)	$I_{r1}$ (A)	$I_{r2}$ (ICB)	$I_{sd}$ (xI <sub>r</sub> )	$t_r$ (s)	$I_i$ (xI <sub>n</sub> )	$t_{sd}$ (ms)
100	110	0.96	0.97	5	6	400
90	125	0.95	0.98	4	7	300
80	135	0.94	0.99	3	8	200
70	150	0.93	1	2	10	100
63	160	0.92	OFF 1.5	1	11	50

NOTE: When  $I_{r2}$  is OFF, the long time and short time protections are deactivated, and only instantaneous protection (ICB) is activated