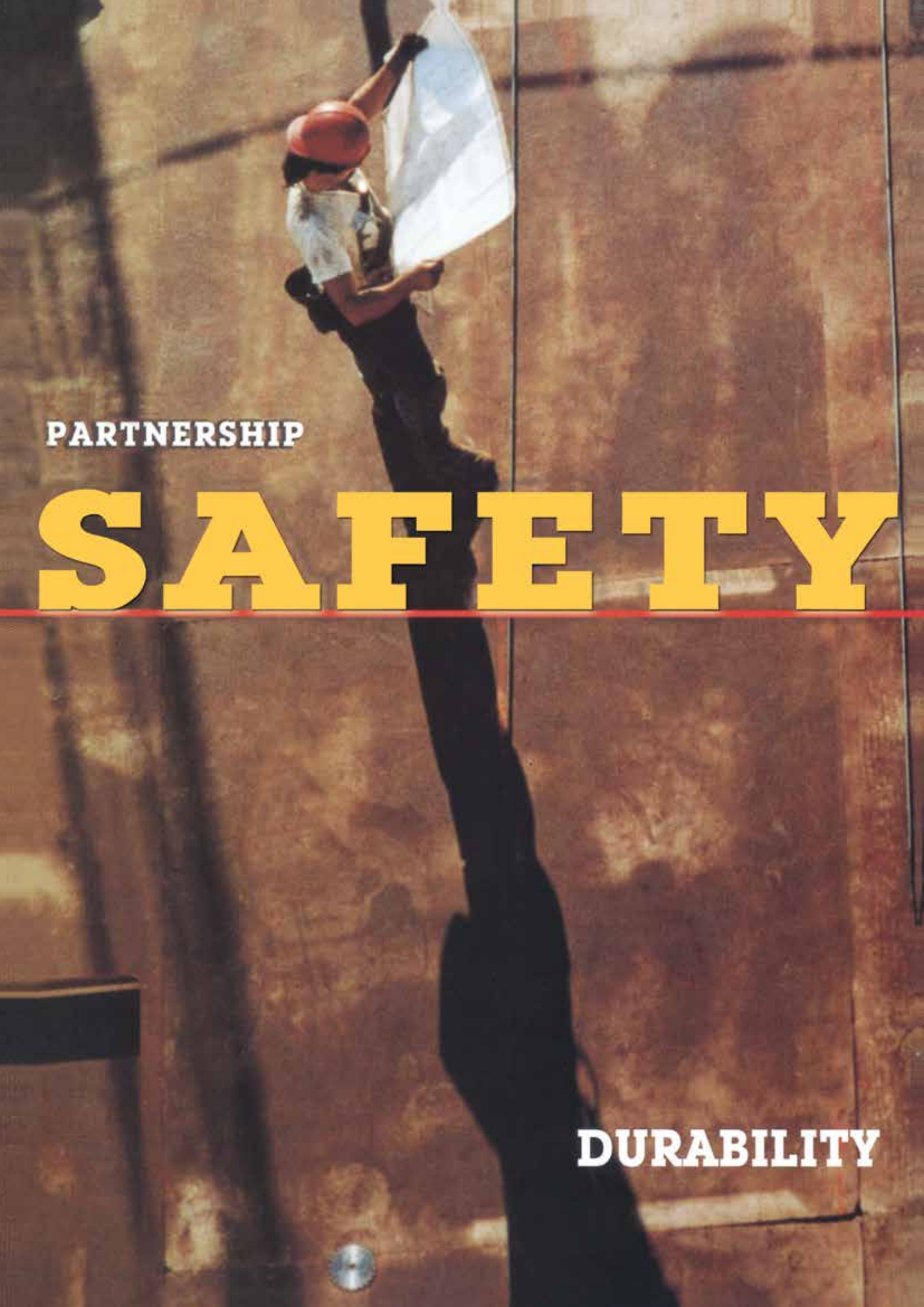
alfanar

ELETRA LOAD CENTERS (LD)

DIN-Rail

www.alfanar.com

الفنار alfanar


PARTNERSHIP
SAFETY
DURABILITY

Contents

ELETRA Load Center Type LD
Product Features

Removable top and bottom gland plates with various knockout sizes for easy cable entry

Matt finish polyester powder coated in RAL 1013 (light beige)

Keyholes for wall mounting

Pan assembly with adjustable depth

99.9% pure fully shrouded ETP copper busbars

short-time withstand of up to 25kA for 250mS

Spacious enclosure for easy wiring

Polycarbonate for busbar support and installation

Ample neutral terminals

Ample earth terminals

MCB and MCCB main breakers

QUALITY PRODUCT alfanar

مختبرة وفق المواصفة

Type tested as per

IEC 61439-3

علامة الجودة SASO QUALITY MARK

Introduction

It's hard to imagine our life without electricity, and as much as electricity is an important part of our daily lives it must be treated with respect and handled safely. At **alfanar**, we want you and your loved ones to always be safe around electricity so we have developed LD load centers that take proactive steps to ensure your electrical safety and give you peace of mind.

The load center, also known as a **Distribution Board (DB)**, is a component of an electricity supply system that serves as the service entrance for residential, commercial and light industrial premises. Load centers divide an electrical power feed into subsidiary circuits, while providing a protective circuit breaker for each circuit in a common enclosure.

Product Features

1. Design

a. Aesthetics

With its modern look and elegant design, the LD load center has come a long way from the boxy eyesore load centers used to be, and fits attractively in with your home decor.

b. Color

The LD load center's fresh color scheme was chosen to blend in with the wall colors of your home without the need to repaint it.

Product Features

2. Safety

a. Protection against electric shock

Effective earth continuity is ensured on each panel during design and manufacturing to protect operators against any possible electrical shock when they touch the enclosure.

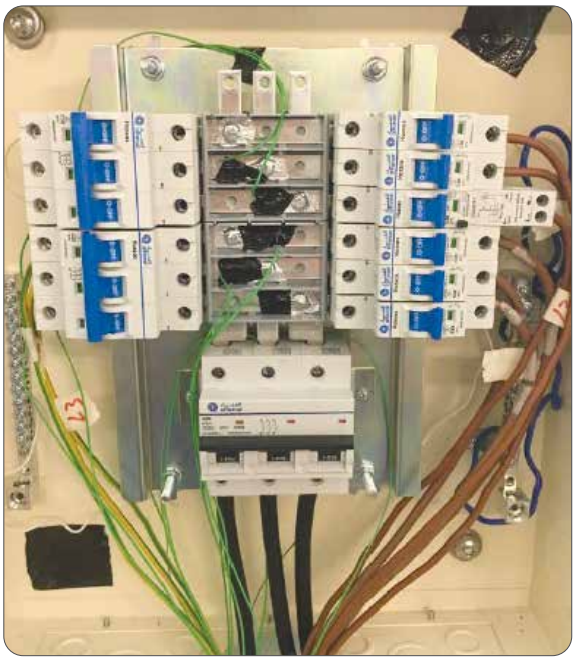
b. Fully shrouded busbar system

The fully shrouded busbar system safeguards customers from accidental contact to the busbars while they are energized. The shrouded busbar system plays a very important role in preventing an internal arc because it will prevent foreign objects from entering and touching the busbars and cause a short.

c. Dead front cover

A dead front cover is installed on the panels to eliminate the possibility of people touching any of the live parts inside the panel during operation.

3. Performance



a. Thermal stability

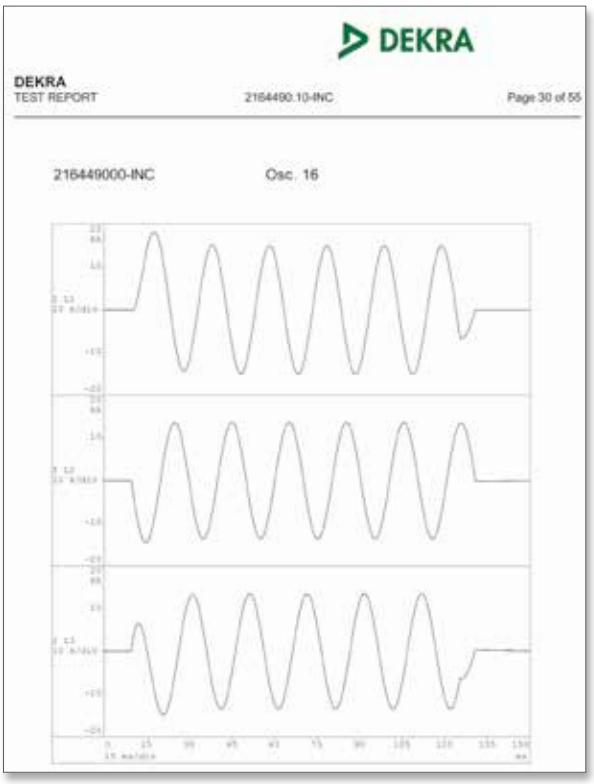
Thermal stability of our load centers is validated and ensured through a temperature rise test performed as per IEC 61439-3. This ensures that the product will keep working normally all day long at a steady temperature state.

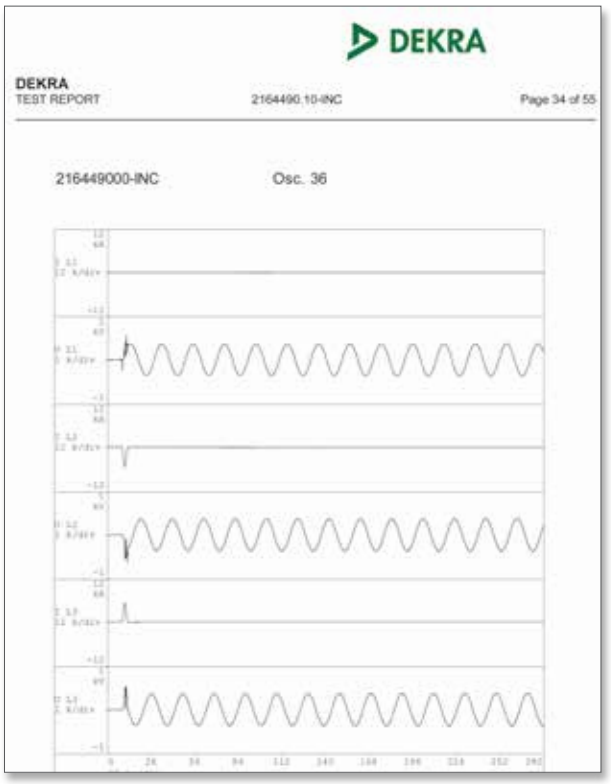
b. Selectivity

Selectivity ensures that tripping happens only at the faulty branch circuit level and other branches will not be affected and complete blackout is avoided. This is achieved by our state of art main breaker.

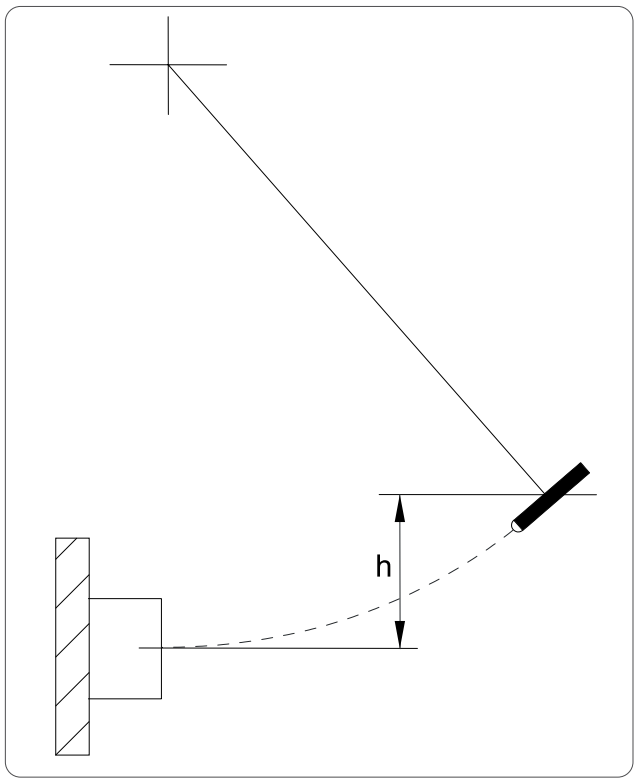
c. Short circuit strength

The **alfanar** LD load center and busbar assembly has been validated for a short circuit performance of 10kA. Our busbar assembly has a short-time withstand of up to 25kA for 250mS.



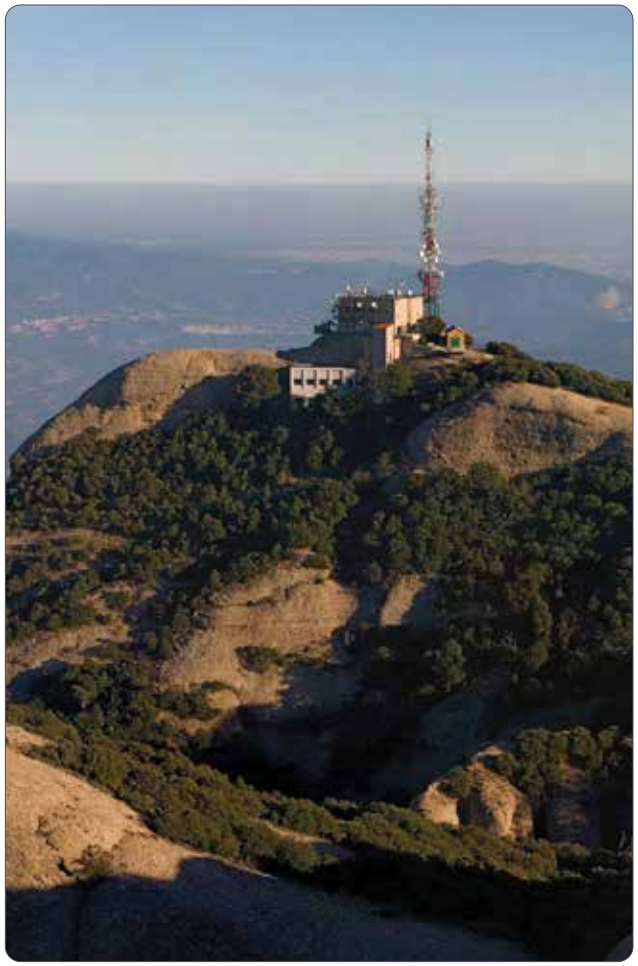


Product Features



d. Mechanical impact

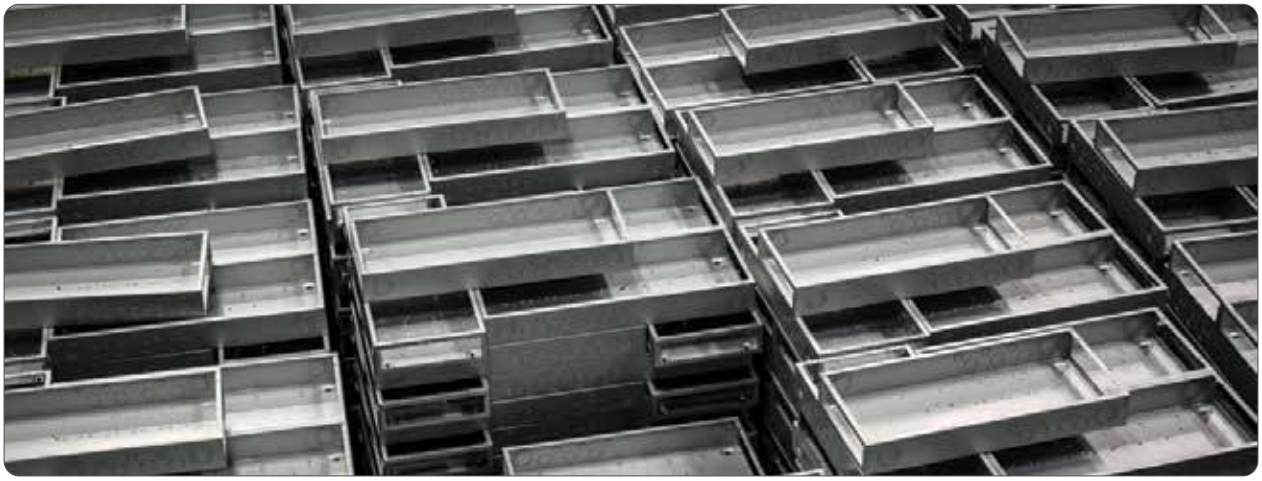
The **alfanar** LD load center is tested to withstand the impact load as per the international standard IEC 61439-3 to ensure the strength requirement of the application.



e. Altitude

DBs are rated for the altitude of 2000m without any derating to ensure you get all the performance regardless of the area of installation.

4. Reliability



a. High corrosion resistant enclosure and internal parts

Double protection against corrosion is achieved by using an electrogalvanized steel sheet as the base material and powder-coating the same with Polyester powder.

This process has been validated for 1000 hours using the Salt Spray test. This ensures the functionality of the load center under the worst atmospheric corrosive conditions.

b. Tin plated copper busbars

99.9% pure copper is used to construct the busbars of **alfanar** LD load centers. Busbars are tin plated to protect them against atmospheric corrosion.

c. Ingress protection

alfanar LD load centers are tested for IP40 to ensure the ingress protection against solid particles in an indoor application.

Product Features

5. Installation

a. Ample wiring space

Compact busbar system and wide enclosure design provide more space for easier wiring even when wider components like RCBOs are used.

b. Knockouts

Knockouts are designed to handle multiple sized conduits and glands of international standards which can be opened easily and do not have sharp edges that might damage the conduits, wires or injure the user.

c. Removable top and bottom gland plates

Removeable gland plates make the wiring and conduit installation a much easier process in tight spaces.

d. Depth adjustability (pan assembly depth adjustability)

Pan assembly depth is adjustable to ensure the breakers are not recessed into the box and to eliminate the gaps between cover and breakers after the installation of the door.

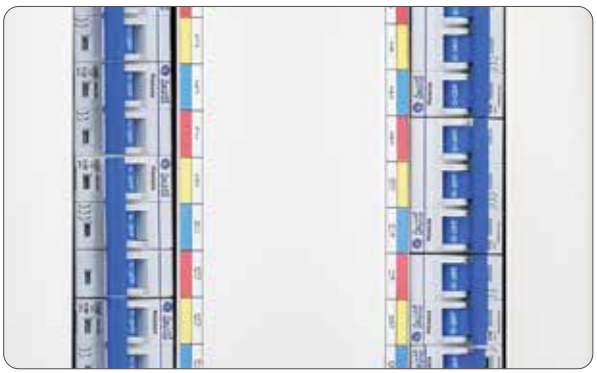
e. Ample earth and neutral terminals

Earth and neutral terminals are made from a solid piece of tin plated brass to prevent any series arc or loose connection. The quantity of earth and neutral terminals is equal to the number of outgoing circuits.

f. Cement guard

Protects the product from cement deposit during installation and keeps the box clean for the installation of the pan assembly.

Product Features

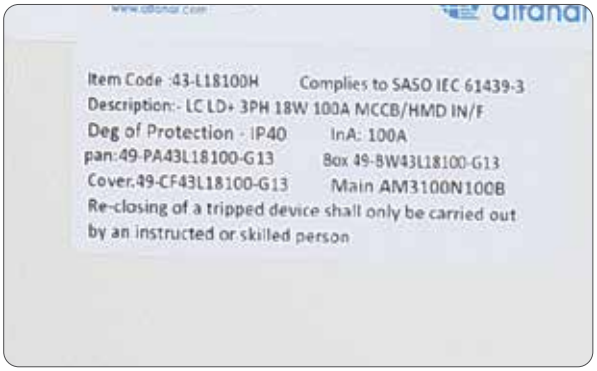


g. Phase identification

Clear phase identification on the cover and on the directory helps the electrician in load balancing.

h. Wiring directory

The wiring directory notes the connection information so that the user can identify and switch on/off a specific circuit during maintenance.



i. Additional information

Batch code and spare parts information are clearly provided on the door of each panel.

j. Easy cover fixing

The cover holding feature enables the user to align the dead front cover (DFC) properly. The entire weight of the DFC is borne by the box, so the user can support the cover with one hand and fix the screw with other hand without much effort.

6. Environment

All the components that are used in LD load centers are environmentally friendly and RoHS compliant.

7. Type Testing

Extensive care is taken at several stages of the design and manufacturing processes of load centers and breakers to ensure end user safety. **alfanar** LD load centers are type tested as per the new standard IEC 61439-3 DBO (Distribution Boards intended to be operated by Ordinary Persons) to ensure a higher level of safety when used by consumers.

The following extensive tests are conducted:

IEC 61439-3 Clause	Clause Description	Result
10.2	Strength of material and parts	
10.2.2	Resistance to corrosion	Pass
10.2.3	Properties of insulating materials	
10.2.3.1	Verification of thermal stability of enclosures	Pass
10.2.3.2	Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects	Pass
10.2.6	Mechanical impact	Pass
10.2.7	Marking	Pass
10.3	Degree of protection of assembly	Pass
10.4	Clearances and creepage distances	Pass
10.5	Protection against electric shock and integrity of protective circuits	
10.5.2	Effective earth continuity between the exposed conductive parts of the assembly and the protective circuit	Pass
10.5.3	Short-circuit withstand strength of the protective circuit	Pass
10.6	Incorporation of switching devices and components	Pass
10.7	Internal electrical circuits and connections	Pass
10.8	Terminals for external conductors	Pass
10.9	Dielectric properties	
10.9.2	Power-frequency withstand voltage	Pass
10.9.3	Impulse withstand voltage	Pass
10.10	Verification of temperature rise	
10.10.2.3.5	Verification of the complete assembly	Pass
10.11	Short-circuit withstand strength	Pass
10.12	Electromagnetic Compatibility (EMC)	Pass
10.13	Mechanical operation	Pass

Certificate

TEST CERTIFICATE

Issued to:	Alfanar Electrical Systems Madinet alfanar, 3rd Industrial City, P.O.Box 564, Riyadh 11383 Saudi Arabia
For the product:	Low-voltage switchgear and controlgear assembly - Distribution boards intended to be operated by ordinary persons (DBO)
Trade name:	Alfanar/Eletra
Type/Model:	LD 3Ph 200A Range MCCB Main with total selectivity between Main & Branches
Ratings:	I_{nA} 195 A, U_e 240 V / 415 V, U_i 500 V, U_{imp} 6 kV, I_{cw} 20 kA – 0,25 s (main busbar), I_{cc} 10 kA at 415 V (incoming unit), I_{cc} 10 kA at 415 V (3P / 2P outgoing units 6-63A), I_{cc} 10 kA at 240 V (1P outgoing units 6-63A) For more details see annex
Manufactured by:	Alfanar Electrical Systems Madinet alfanar, 3rd Industrial City, P.O.Box 564, Riyadh 11383 Saudi Arabia
Subject:	Design verification; Construction and performance
Requirements:	IEC 61439-3, 1st ed. 2012-02 Clauses 10.2.2, 10.2.3, 10.2.6, 10.2.7, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 10.10, 10.11, 10.12, 10.13
Remarks:	The product complies with the above requirements from the standard

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in report no. 2164490.10-INC, dated 9 February 2015.

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

Arnhem, 9 February 2015

Number: 2164490.109

DEKRA Certification B.V.

H.R.M. Barends
Certification Manager

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T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.com Company registration 09085396

Technical Specifications

Technical Data – 1ph		
Standard		SASO & IEC 61439-3
		Designed to be operated by an ordinary person
Electrical		
Busbar rating		100A
Busbar type		ETP copper, fully shrouded
Voltage range		110-240V AC 50/60 Hz
Rated current		32,40,50,63,80 & 100A
No. of ways		4, 6, 8,10,12,14 & 16
Icw for busbar		10 kA - 0.1 Sec
Ui / Uimp		500V / 4KV
Type		Indoor
Degree of protection		IP40
Mechanical impact		IK05
Mounting		Flush/Surface
Main breaker (Incomer)		AZM MCB, 2Pole 32,40,50,63,80 & 100A
Branches		1 Pole Din-rail MCBs 6,10,16,20,25,32,40,50 & 63A
		e-RCBO 1Pole 6,10,16,20,25,32,40A - ImA - 30 & 100
Terminal Capacity		
Main MCB frame size 100A		50 sq.mm
Branch MCB frame size 63A		35 sq.mm
Neutral terminal bar	incoming	50 sq.mm
	outgoing	16 sq.mm
Earth terminal bar	incoming	50 sq.mm
	outgoing	16 sq.mm
No. of outgoing terminals		≥ no. of ways
Environmental/General		
Average ambient temperature:		35°C
Operational temperature range:		-5°C to 40°C (without derating as per the standard IEC 61439-3)
Operational temperature range with derating:		Refer annexure
Construction Features		
Door lock		Sliding lock – RAL1001
Enclosure material		Electro-galvanized steel sheet (Corrosion resistant)
Steel thickness		Up to 1.0 mm
Knockout sizes		See details on page 9, figure (insert figure #)
Enclosure color		Polyester powder coated in RAL-1013 (Beige)
Dimensions		Refer annexure

Technical Specifications

Technical Data – 2ph		
Standard		SASO & IEC 61439-3
		Designed to be operated by an ordinary person
Electrical		
Busbar rating		100A
Busbar type		ETP copper tin plated, fully shrouded
Voltage range		110-415V AC 50/60 Hz
Rated current		32,40,50,63,80 & 100A
No. of ways		4, 6, 8,10,12,14 & 16
Icw for busbar		10 kA - 0.1 Sec
Ui / Uimp		500V / 4KV
Type		Indoor
Degree of protection		IP40
Mechanical impact		IK05
Mounting		Flush/Surface
Main breaker (Incomer)		AZM MCB, 2Pole 32,40,50,63,80 & 100A
Branches		2&1 Pole Din-rail MCBs 6,10,16,20,25,32,40,50 & 63A
		e-RCBO 1Pole 6,10,16,20,25,32,40A - ImA - 30 & 100
Terminal Capacity		
Main MCB frame size 100A		50 sq.mm
Branch MCB frame size 63A		35 sq.mm
Neutral terminal bar	incoming	50 sq.mm
	outgoing	16 sq.mm
Earth terminal bar	incoming	50 sq.mm
	outgoing	16 sq.mm
No. of outgoing terminals		≥ no. of ways
Environmental/General		
Average ambient temperature		35°C
Operational temperature range		-5°C to 40°C (without derating as per the standard IEC 61439-3)
Operational temperature range with derating		Refer annexure
Construction Features		
Door lock		Sliding lock – RAL1001
Enclosure material		Electro-galvanized steel sheet (corrosion resistant)
Steel thickness		Up to 1.0 mm
Knockout sizes		See details on page 9, figure (insert figure #)
Enclosure color		Polyester powder coated in RAL-1013 (Beige)
Dimensions		Refer annexure

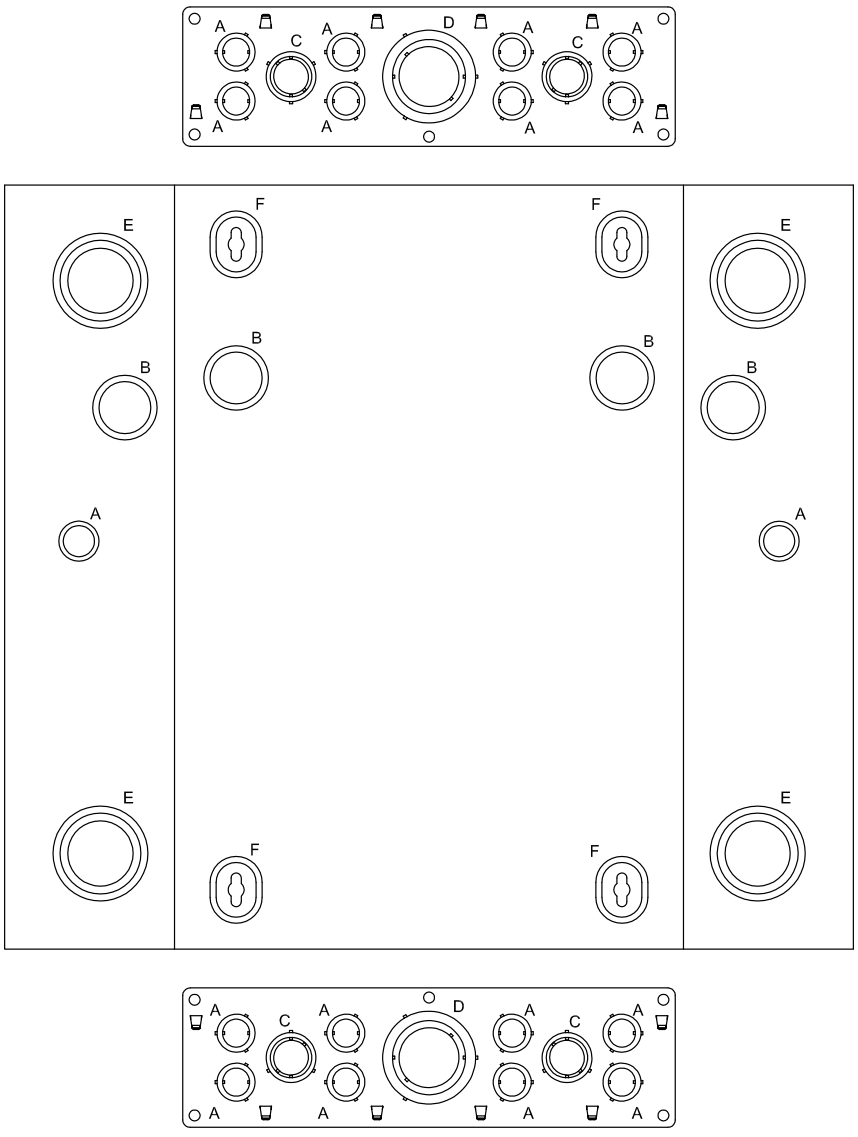
Technical Data – 3ph			
Standard	SASO & IEC 61439-3		
	Designed to be operated by an ordinary person		
Electrical			
Varieties	100A with MCB main	100A with MCCB main	225A with MCCB main
Busbar rating	100A	100A	225A
Icw for busbar	14 kA - 0.25 Sec	14 kA - 0.25 Sec	20 kA - 0.25 Sec
Rated current	32,40,50,63,80 & 100A	30,40,50,60,75 & 100A	125,150,175,200 & 225A
Main breaker (Incomer)	AZM MCB, 3Pole 32,40,50,63,80 & 100A	AF100N MCCB, 3Pole 32,40,50,63,80 & 100A	AF250N MCCB, 3Pole 125,150,175,200 & 225A
Busbar type	ETP copper tin plated, fully shrouded		
Voltage range	110-415V AC 50/60 Hz		
No. of ways	12, 18,24,30,36,42 & 48		
Ui / Uimp	500V / 4KV		
Type	Indoor		
Degree of protection	IP40		
Mechanical impact	IK05		
Mounting	Flush/Surface		
Branches	1,2&3 Pole Din-rail MCBs 6,10,16,20,25,32,40,50 & 63A		
	e-RCBO 1Pole 6,10,16,20,25,32,40A - ImA - 30 & 100		
Terminal Capacity			
Main MCB/MCCB frame size 100A	50 sq.mm	50 sq.mm	120 sq.mm
Branch MCB frame size 63A	35 sq.mm	35 sq.mm	35 sq.mm
Neutral terminal bar – incoming	35 sq.mm	50 sq.mm	120 sq.mm
Neutral terminal bar – outgoing	16 sq.mm	16 sq.mm	16 sq.mm
Earth terminal bar – incoming	50 sq.mm	50 sq.mm	50 sq.mm
Earth terminal bar – outgoing	16 sq.mm	16 sq.mm	16 sq.mm
No. of outgoing terminals	≥ no. of ways		
Environmental/General			
Average ambient temperature:	35°C		
Operational temperature range:	-5°C to 40°C (without derating as per the standard IEC 61439-3)		
Operational temperature range with derating:	Refer annexure		
Construction Features			
Door lock	Sliding lock – RAL1001		
Enclosure material	Electro-galvanized steel sheet (Corrosion resistant)		
Steel thickness	Up to 1.0 mm		
Knockout sizes	See details on page 17, figure (insert figure #)		
Enclosure color	Polyester powder coated in RAL-1013 (Beige)		
Dimensions	Refer annexure		

Knockout Dimensions

Each of our products undergoes a strict quality control check as per routine verification mentioned in the standard.

Knockout Sizes

A	-	ø19 / ø25	Double Knockout	18 Nos.
B	-	ø35 / ø43.5	Double Knockout	4 Nos.
C	-	ø23 / ø28 / ø33	Triple Knockout	4 Nos.
D	-	ø44 / ø50 / ø62	Triple Knockout	2 Nos.
E	-	ø44 / ø54.5 / ø64	Triple Knockout	4 Nos.
F	-	Wall mounting emboss with key hole		4 Nos.



Notes:

- All dimensions are in mm.
- The details in this drawing indicate dimensions and knockout positions for a typical ELETRA load center. Knockout details for other load center types, shown in this catalogue, are available on request.

alfanar ELETRA Load Center Type LD
Product Range

الفنار
alfanar

alfanar LD load Center

Single phase with MCB main

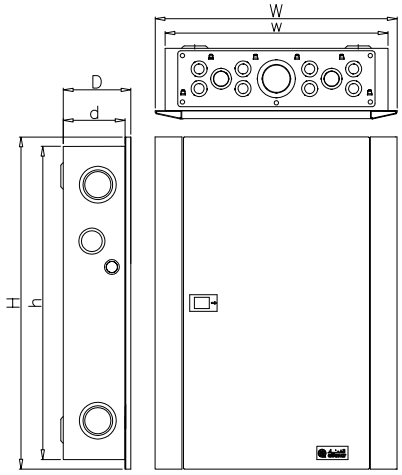
Single Phase alfanar LD Load Center with MCB main							
NO. OF WAYS	MAIN RATING	ITEM CODE	H	h	W	w	D
4	32A	43-T104032H	263	243	270	249	93
4	40A	43-T104040H	263	243	270	249	93
4	50A	43-T104050H	263	243	270	249	93
4	63A	43-T104063H	263	243	270	249	93
4	80A	43-T104080H	263	243	270	249	93
4	100A	43-T104100H	263	243	270	249	93
6	32A	43-T106032H	299	279	270	249	93
6	40A	43-T106040H	299	279	270	249	93
6	50A	43-T106050H	299	279	270	249	93
6	63A	43-T106063H	299	279	270	249	93
6	80A	43-T106080H	299	279	270	249	93
6	100A	43-T106100H	299	279	270	249	93

Note: All dimensions are in mm.

Ordering Information

Single Phase alfanar LD Load Center with MCB main							
NO. OF WAYS	MAIN RATING	ITEM CODE	H	h	W	w	D
8	32A	43-T108032H	335	315	270	249	93
8	40A	43-T108040H	335	315	270	249	93
8	50A	43-T108050H	335	315	270	249	93
8	63A	43-T108063H	335	315	270	249	93
8	80A	43-T108080H	335	315	270	249	93
8	100A	43-T108100H	335	315	270	249	93
10	32A	43-T110032H	371	351	270	249	93
10	40A	43-T110040H	371	351	270	249	93
10	50A	43-T110050H	371	351	270	249	93
10	63A	43-T110063H	371	351	270	249	93
10	80A	43-T110080H	371	351	270	249	93
10	100A	43-T110100H	371	351	270	249	93
12	32A	43-T112032H	407	387	270	249	93
12	40A	43-T112040H	407	387	270	249	93
12	50A	43-T112050H	407	387	270	249	93
12	63A	43-T112063H	407	387	270	249	93
12	80A	43-T112080H	407	387	270	249	93
12	100A	43-T112100H	407	387	270	249	93
14	32A	43-T114032H	443	423	270	249	93
14	40A	43-T114040H	443	423	270	249	93
14	50A	43-T114050H	443	423	270	249	93
14	63A	43-T114063H	443	423	270	249	93
14	80A	43-T114080H	443	423	270	249	93
14	100A	43-T114100H	443	423	270	249	93
16	32A	43-T116032H	479	459	270	249	93
16	40A	43-T116040H	479	459	270	249	93
16	50A	43-T116050H	479	459	270	249	93
16	63A	43-T116063H	479	459	270	249	93
16	80A	43-T116080H	479	459	270	249	93
16	100A	43-T116100H	479	459	270	249	93

Note: All dimensions are in mm.



alfanar LD load Center

Two phase with MCB main

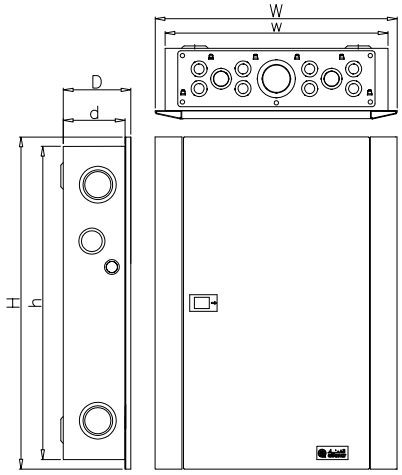
Two phase alfanar LD load center with MCB main							
NO. OF WAYS	MAIN RATING	ITEM CODE	H	h	W	w	D
4	32A	43-T204032H	263	243	270	249	93
4	40A	43-T204040H	263	243	270	249	93
4	50A	43-T204050H	263	243	270	249	93
4	63A	43-T204063H	263	243	270	249	93
4	80A	43-T204080H	263	243	270	249	93
4	100A	43-T204100H	263	243	270	249	93
6	32A	43-T206032H	299	279	270	249	93
6	40A	43-T206040H	299	279	270	249	93
6	50A	43-T206050H	299	279	270	249	93
6	63A	43-T206063H	299	279	270	249	93
6	80A	43-T206080H	299	279	270	249	93
6	100A	43-T206100H	299	279	270	249	93

Note: All dimensions are in mm.

Ordering Information

Two phase alfanar LD load center with MCB main							
NO. OF WAYS	MAIN RATING	ITEM CODE	H	h	W	w	D
8	32A	43-T208032H	335	315	270	249	93
8	40A	43-T208040H	335	315	270	249	93
8	50A	43-T208050H	335	315	270	249	93
8	63A	43-T208063H	335	315	270	249	93
8	80A	43-T208080H	335	315	270	249	93
8	100A	43-T208100H	335	315	270	249	93
10	32A	43-T210032H	371	351	270	249	93
10	40A	43-T210040H	371	351	270	249	93
10	50A	43-T210050H	371	351	270	249	93
10	63A	43-T210063H	371	351	270	249	93
10	80A	43-T210080H	371	351	270	249	93
10	100A	43-T210100H	371	351	270	249	93
12	32A	43-T212032H	407	387	270	249	93
12	40A	43-T212040H	407	387	270	249	93
12	50A	43-T212050H	407	387	270	249	93
12	63A	43-T212063H	407	387	270	249	93
12	80A	43-T212080H	407	387	270	249	93
12	100A	43-T212100H	407	387	270	249	93
14	32A	43-T214032H	443	423	270	249	93
14	40A	43-T214040H	443	423	270	249	93
14	50A	43-T214050H	443	423	270	249	93
14	63A	43-T214063H	443	423	270	249	93
14	80A	43-T214080H	443	423	270	249	93
14	100A	43-T214100H	443	423	270	249	93
16	32A	43-T216032H	479	459	270	249	93
16	40A	43-T216040H	479	459	270	249	93
16	50A	43-T216050H	479	459	270	249	93
16	63A	43-T216063H	479	459	270	249	93
16	80A	43-T216080H	479	459	270	249	93
16	100A	43-T216100H	479	459	270	249	93

Note: All dimensions are in mm.



alfanar LD load Center

Three phase with MCB main

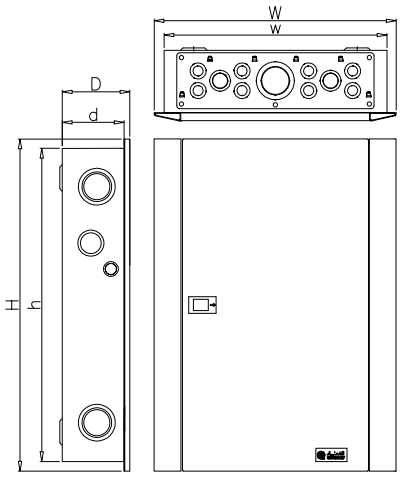
Three phase alfanar LD load center – MCB main							
NO. OF WAYS	MAIN RATING	ITEM CODE	H	h	W	w	D
12	40A	43-T12040H	472	440	407	375	104
12	50A	43-T12050H	472	440	407	375	104
12	63A	43-T12063H	472	440	407	375	104
12	80A	43-T12080H	472	440	407	375	104
12	100A	43-T12100H	472	440	407	375	104
18	40A	43-T18040H	527	495	407	375	104
18	50A	43-T18050H	527	495	407	375	104
18	63A	43-T18063H	527	495	407	375	104
18	80A	43-T18080H	527	495	407	375	104
18	100A	43-T18100H	527	495	407	375	104

Note: All dimensions are in mm.

Ordering Information

Three phase alfanar LD load center – MCB main							
NO. OF WAYS	MAIN RATING	ITEM CODE	H	h	W	w	D
24	40A	43-T24040H	582	550	407	375	104
24	50A	43-T24050H	582	550	407	375	104
24	63A	43-T24063H	582	550	407	375	104
24	80A	43-T24080H	582	550	407	375	104
24	100A	43-T24100H	582	550	407	375	104
30	40A	43-T30040H	637	605	407	375	104
30	50A	43-T30050H	637	605	407	375	104
30	63A	43-T30063H	637	605	407	375	104
30	80A	43-T30080H	637	605	407	375	104
30	100A	43-T30100H	637	605	407	375	104
36	40A	43-T36040H	692	660	407	375	104
36	50A	43-T36050H	692	660	407	375	104
36	63A	43-T36063H	692	660	407	375	104
36	80A	43-T36080H	692	660	407	375	104
36	100A	43-T36100H	692	660	407	375	104
42	40A	43-T42040H	747	715	407	375	104t
42	50A	43-T42050H	747	715	407	375	104
42	63A	43-T42063H	747	715	407	375	104
42	80A	43-T42080H	747	715	407	375	104
42	100A	43-T42100H	747	715	407	375	104

Note: All dimensions are in mm.



alfanar LD load Center

Three phase with MCCB main

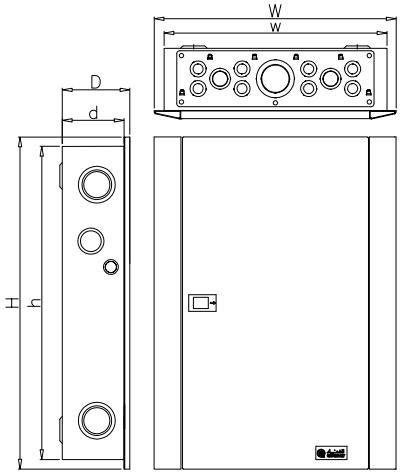
Three phase alfanar LD load center – MCCB main							
NO. OF WAYS	MAIN RATING	ITEM CODE	H	h	W	w	D
12	30A	43-L12030H	582	550	407	375	104
12	40A	43-L12040H	582	550	407	375	104
12	50A	43-L12050H	582	550	407	375	104
12	60A	43-L12060H	582	550	407	375	104
12	75A	43-L12075H	582	550	407	375	104
12	100A	43-L12100H	582	550	407	375	104
12	125A	43-L12125H	692	660	407	375	104
12	150A	43-L12150H	692	660	407	375	104
12	175A	43-L12175H	692	660	407	375	104
12	200A	43-L12200H	692	660	407	375	104
12	225A	43-L12225H	692	660	407	375	104
18	30A	43-L18030H	637	605	407	375	104
18	40A	43-L18040H	637	605	407	375	104
18	50A	43-L18050H	637	605	407	375	104
18	60A	43-L18060H	637	605	407	375	104

Note: All dimensions are in mm.

Ordering Information

Three phase alfanar LD load center – MCCB main							
NO. OF WAYS	MAIN RATING	ITEM CODE	H	h	W	w	D
18	75A	43-L18075H	637	605	407	375	104
18	100A	43-L18100H	637	605	407	375	104
18	125A	43-L18125H	747	715	407	375	104
18	150A	43-L18150H	747	715	407	375	104
18	175A	43-L18175H	747	715	407	375	104
18	200A	43-L18200H	747	715	407	375	104
18	225A	43-L18225H	747	715	407	375	104
24	30A	43-L24030H	692	660	407	375	104
24	40A	43-L24040H	692	660	407	375	104
24	50A	43-L24050H	692	660	407	375	104
24	60A	43-L24060H	692	660	407	375	104
24	75A	43-L24075H	692	660	407	375	104
24	100A	43-L24100H	692	660	407	375	104
24	125A	43-L24125H	802	770	407	375	104
24	150A	43-L24150H	802	770	407	375	104
24	175A	43-L24175H	802	770	407	375	104
24	200A	43-L24200H	802	770	407	375	104
24	225A	43-L24225H	802	770	407	375	104
30	30A	43-L30030H	747	715	407	375	104
30	40A	43-L30040H	747	715	407	375	104
30	50A	43-L30050H	747	715	407	375	104
30	60A	43-L30060H	747	715	407	375	104
30	75A	43-L30075H	747	715	407	375	104
30	100A	43-L30100H	747	715	407	375	104
30	125A	43-L30125H	857	825	407	375	104
30	150A	43-L30150H	857	825	407	375	104
30	175A	43-L30175H	857	825	407	375	104
30	200A	43-L30200H	857	825	407	375	104
30	225A	43-L30225H	857	825	407	375	104
36	30A	43-L36030H	802	770	407	375	104

Note: All dimensions are in mm.



Ordering Information

Three phase alfanar LD load center – MCCB main							
NO. OF WAYS	MAIN RATING	ITEM CODE	H	h	W	w	D
36	40A	43-L36040H	802	770	407	375	104
36	50A	43-L36050H	802	770	407	375	104
36	60A	43-L36060H	802	770	407	375	104
36	75A	43-L36075H	802	770	407	375	104
36	100A	43-L36100H	802	770	407	375	104
36	125A	43-L36125H	912	880	407	375	104
36	150A	43-L36150H	912	880	407	375	104
36	175A	43-L36175H	912	880	407	375	104
36	200A	43-L36200H	912	880	407	375	104
36	225A	43-L36225H	912	880	407	375	104
42	30A	43-L42030H	857	825	407	375	104
42	40A	43-L42040H	857	825	407	375	104
42	50A	43-L42050H	857	825	407	375	104
42	60A	43-L42060H	857	825	407	375	104
42	75A	43-L42075H	857	825	407	375	104
42	100A	43-L42100H	857	825	407	375	104
42	125A	43-L42125H	967	935	407	375	104
42	150A	43-L42150H	967	935	407	375	104
42	175A	43-L42175H	967	935	407	375	104
42	200A	43-L42200H	967	935	407	375	104
42	225A	43-L42225H	967	935	407	375	104
48	30A	43-L48030H	912	880	407	375	104
48	40A	43-L48040H	912	880	407	375	104
48	50A	43-L48050H	912	880	407	375	104
48	60A	43-L48060H	912	880	407	375	104
48	75A	43-L48075H	912	880	407	375	104
48	100A	43-L48100H	912	880	407	375	104
48	125A	43-L48125H	1022	990	407	375	104
48	150A	43-L48150H	1022	990	407	375	104
48	175A	43-L48175H	1022	990	407	375	104
48	200A	43-L48200H	1022	990	407	375	104
48	225A	43-L48225H	1022	990	407	375	104

Hassas Branch MCB

alfanar Miniature Circuit Breaker

alfanar LD Load centers are supplied with a fitted main breaker and the branch MCBs are sold separately to provide flexibility of selection based on the application and customer requirements.

Hassas Features

- Safe & effective method for locking out circuit breakers in ON & OFF position
- Finger proof protection (IP20) for termination
- Let-through energy is considerably less resulting in enhanced lifespan of electrical installation
- ON/OFF positions are marked on handle and indicator to show true contact position of MCB
- Better heat dissipation and ensures the product is suitable for 50 C ambient temperature
- Patented Tripping Arrangement to improve the short circuit performance
- Trip-free mechanism
- World Class terminal reliability
- Conforms to International Standards
- Excellence temperature performance
- New and unique **alfanar** industrial design
- Uniform box terminals for connecting cables up to 25 mm² for input and output terminals
- Terminal shutter prevents the wrong insertion and termination of cables
- Two Position Din clip facilitates easy mounting and removal of MCB from Dinrail
- Incoming and outgoing terminal are suitable for Busbar and cable

Hassas Ordering Information

Hassas - DIN Rail 1P 10kA		
SL. No.	Item Code	Description
1	HMD63N106C	alfanar Hassas MCB DIN Rail 1P 06A 10KA C
2	HMD63N110C	alfanar Hassas MCB DIN Rail 1P 10A 10KA C
3	HMD63N116C	alfanar Hassas MCB DIN Rail 1P 16A 10KA C
4	HMD63N120C	alfanar Hassas MCB DIN Rail 1P 20A 10KA C
5	HMD63N125C	alfanar Hassas MCB DIN Rail 1P 25A 10KA C
6	HMD63N132C	alfanar Hassas MCB DIN Rail 1P 32A 10KA C
7	HMD63N140C	alfanar Hassas MCB DIN Rail 1P 40A 10KA C
8	HMD63N150C	alfanar Hassas MCB DIN Rail 1P 50A 10KA C
9	HMD63N163C	alfanar Hassas MCB DIN Rail 1P 63A 10KA C

Hassas - DIN Rail 2P 10kA		
SL. No.	Item Code	Description
1	HMD63N206C	alfanar Hassas MCB DIN Rail 2P 06A 10KA C
2	HMD63N210C	alfanar Hassas MCB DIN Rail 2P 10A 10KA C
3	HMD63N216C	alfanar Hassas MCB DIN Rail 2P 16A 10KA C
4	HMD63N220C	alfanar Hassas MCB DIN Rail 2P 20A 10KA C
5	HMD63N225C	alfanar Hassas MCB DIN Rail 2P 25A 10KA C
6	HMD63N232C	alfanar Hassas MCB DIN Rail 2P 32A 10KA C
7	HMD63N240C	alfanar Hassas MCB DIN Rail 2P 40A 10KA C
8	HMD63N250C	alfanar Hassas MCB DIN Rail 2P 50A 10KA C
9	HMD63N263C	alfanar Hassas MCB DIN Rail 2P 63A 10KA C

Hassas - DIN Rail 3P 10kA		
SL. No.	Item Code	Description
1	HMD63N306C	alfanar Hassas MCB DIN Rail 3P 06A 10KA C
2	HMD63N310C	alfanar Hassas MCB DIN Rail 3P 10A 10KA C
3	HMD63N316C	alfanar Hassas MCB DIN Rail 3P 16A 10KA C
4	HMD63N320C	alfanar Hassas MCB DIN Rail 3P 20A 10KA C
5	HMD63N325C	alfanar Hassas MCB DIN Rail 3P 25A 10KA C
6	HMD63N332C	alfanar Hassas MCB DIN Rail 3P 32A 10KA C
7	HMD63N340C	alfanar Hassas MCB DIN Rail 3P 40A 10KA C
8	HMD63N350C	alfanar Hassas MCB DIN Rail 3P 50A 10KA C
9	HMD63N363C	alfanar Hassas MCB DIN Rail 3P 63A 10KA C

Hassas Ordering Information

Hassas - DIN Rail 1P 6kA

SL. No.	Item Code	Description
1	HMD63N6K106C	alfanar Hassas MCB DIN Rail 1P 06A 6KA C
2	HMD63N6K110C	alfanar Hassas MCB DIN Rail 1P 10A 6KA C
3	HMD63N6K116C	alfanar Hassas MCB DIN Rail 1P 16A 6KA C
4	HMD63N6K120C	alfanar Hassas MCB DIN Rail 1P 20A 6KA C
5	HMD63N6K125C	alfanar Hassas MCB DIN Rail 1P 25A 6KA C
6	HMD63N6K132C	alfanar Hassas MCB DIN Rail 1P 32A 6KA C
7	HMD63N6K140C	alfanar Hassas MCB DIN Rail 1P 40A 6KA C
8	HMD63N6K150C	alfanar Hassas MCB DIN Rail 1P 50A 6KA C
9	HMD63N6K163C	alfanar Hassas MCB DIN Rail 1P 63A 6KA C

Hassas - DIN Rail 2P 6kA

SL. No.	Item Code	Description
1	HMD63N6K206C	alfanar Hassas MCB DIN Rail 2P 06A 6KA C
2	HMD63N6K210C	alfanar Hassas MCB DIN Rail 2P 10A 6KA C
3	HMD63N6K216C	alfanar Hassas MCB DIN Rail 2P 16A 6KA C
4	HMD63N6K220C	alfanar Hassas MCB DIN Rail 2P 20A 6KA C
5	HMD63N6K225C	alfanar Hassas MCB DIN Rail 2P 25A 6KA C
6	HMD63N6K232C	alfanar Hassas MCB DIN Rail 2P 32A 6KA C
7	HMD63N6K240C	alfanar Hassas MCB DIN Rail 2P 40A 6KA C
8	HMD63N6K250C	alfanar Hassas MCB DIN Rail 2P 50A 6KA C
9	HMD63N6K263C	alfanar Hassas MCB DIN Rail 2P 63A 6KA C

Hassas - DIN Rail 3P 6kA

SL. No.	Item Code	Description
1	HMD63N6K306C	alfanar Hassas MCB DIN Rail 3P 06A 6KA C
2	HMD63N6K310C	alfanar Hassas MCB DIN Rail 3P 10A 6KA C
3	HMD63N6K316C	alfanar Hassas MCB DIN Rail 3P 16A 6KA C
4	HMD63N6K320C	alfanar Hassas MCB DIN Rail 3P 20A 6KA C
5	HMD63N6K325C	alfanar Hassas MCB DIN Rail 3P 25A 6KA C
6	HMD63N6K332C	alfanar Hassas MCB DIN Rail 3P 32A 6KA C
7	HMD63N6K340C	alfanar Hassas MCB DIN Rail 3P 40A 6KA C
8	HMD63N6K350C	alfanar Hassas MCB DIN Rail 3P 50A 6KA C
9	HMD63N6K363C	alfanar Hassas MCB DIN Rail 3P 63A 6KA C

Hassas Technical Data

Technical Data		
Product standard		IEC 60898-1
Tripping characteristics		B,C Curve
Electrical		
Rated current range (A)		6, 10, 16, 20, 25, 32, 40, 50, 63
Number of poles		v
Rated operational voltage (Ue) V AC	Single pole	240
	Multi pole	415
Rated insulation voltage (Ui) V AC		vv
Rated impulse voltage (Uimp) kV		4
Rated ultimate short circuit		10kA,6kA
Rated service short circuit breaking capacity Ics (A) at 415V AC		7.5kA, 6kA
Rated frequency (Hz)		50/60
Suitability for isolation		Yes
Thermal tripping characteristics		> 1 hour @ 1.13 In @ 50°C
		< 1 hour @ 1.45 In @ 50°C
Electrical endurance (Number of operation cycles)		≥10000
Mechanical		
Protection degree		IP 20
Maximum terminal capacity (mm²)		35
Tightening torque (Nm)		2.8
Mounting type		DIN rail 35 mm acc. to EN 60715
Method of connection		Cables / Busbar / Cables+Busbar
Frame width (mm) (max.)		17.7 mm per pole
Dimensions 1 Pole (W × H × D) (mm) (max.)		17.7 x 83.2 x 68.3
Dimensions 2 Pole (W × H × D) (mm) (max.)		35.4 x 83.2 x 70.1
Dimensions 3 Pole (W × H × D) (mm) (max.)		53.1 x 83.2 x 70.1
Environmental/General		
Energy limiting class		3
Reference ambient air temperature		50°C
Operating temperature range		- 5°C to + 70°C
Storage temperature range		- 5°C to + 70°C

Hassas General Characteristics

Power Loss

The power (watt) loss is calculated on the basis of the voltage drop across the main terminals measured at the device rated current.

MCB rated Current (A)	10	16	20	25	32	40	50	63
Watts loss per pole (W)	1.7	1.8	2.4	2.6	3.8	3.8	4	6

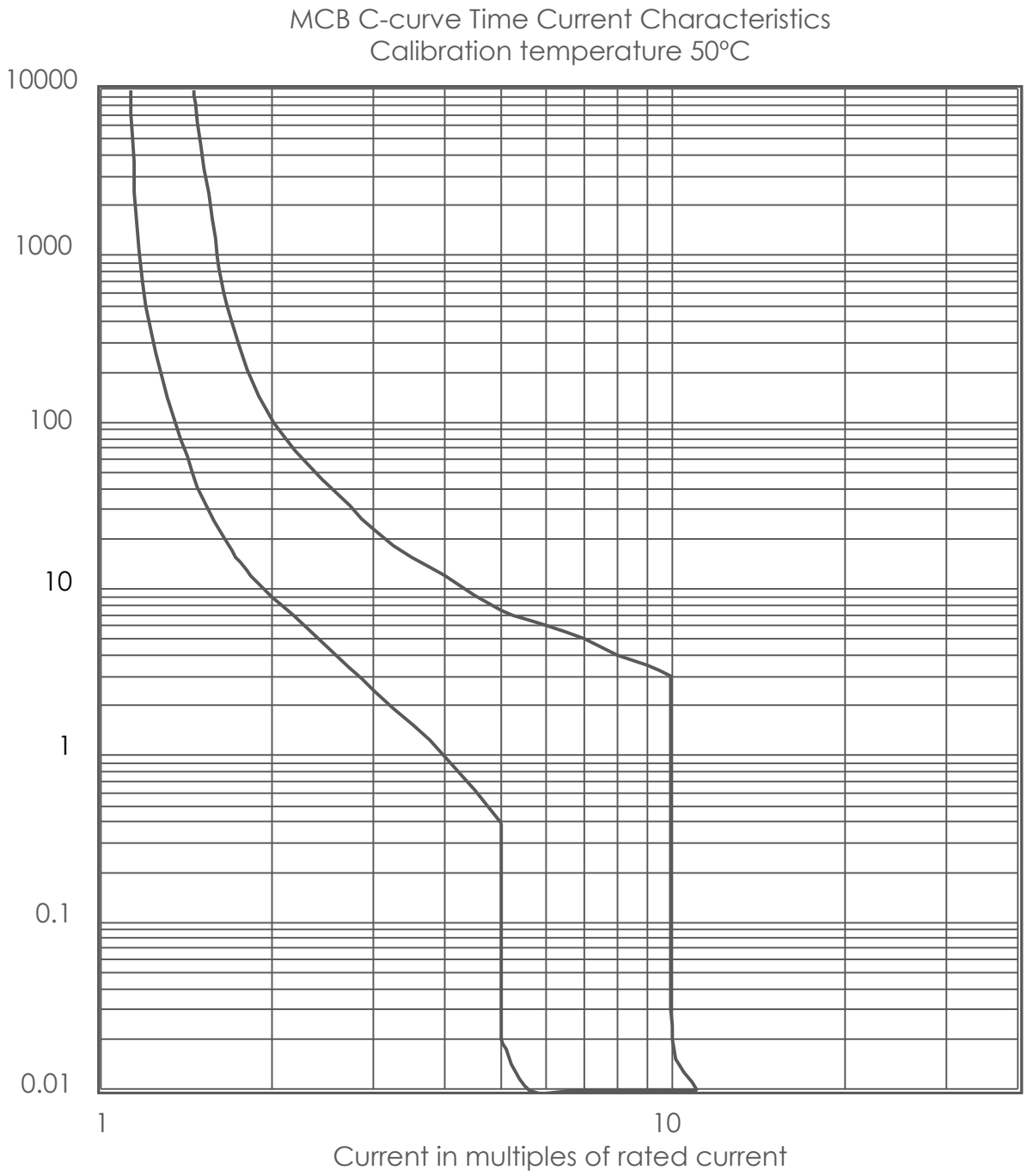
Temperature Derating

MCBs are designed and calibrated to carry their rated current and to operate within their designated thermal time/current zone at 50°C.

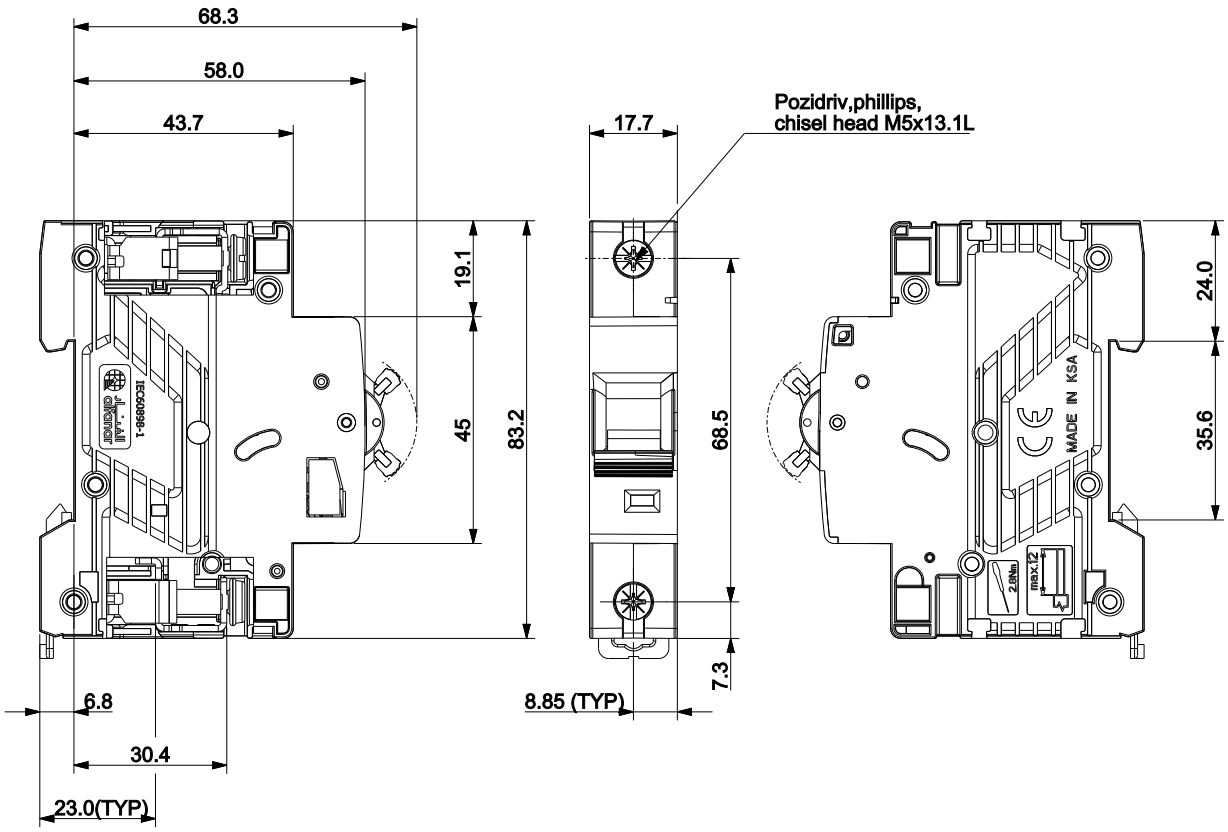
Testing is carried out with the breaker mounted singly in a vertical plane in a controlled environment. Therefore, if the circuit breaker is required to operate in conditions which differ from the reference conditions, certain factors must be applied to the standard data. For instance, if the circuit breaker is required to operate in a higher ambient temperature other than 50°C it will require progressively less current to trip within the designated time/current zone.

In(A)	-5 ˚C	0 ˚C	10 ˚C	20 ˚C	30 ˚C	40 ˚C	50 ˚C	60 ˚C	70 ˚C
10.0	12.9	12.7	12.2	11.7	11.2	10.6	10.0	9.4	8.7
16.0	20.2	19.9	19.2	18.4	17.7	16.8	16.0	15.1	14.2
20.0	24.3	24.0	23.2	22.5	21.7	20.9	20.0	19.1	18.2
25.0	29.1	28.8	28.0	27.3	26.6	25.8	25.0	24.2	23.3
32.0	39.1	38.5	37.3	36.0	34.7	33.4	32.0	30.5	29.0
40.0	50.3	49.4	47.7	45.9	44.0	42.1	40.0	37.8	35.5
50.0	61.2	60.3	58.4	56.4	54.3	52.2	50.0	47.7	45.3
63.0	77.1	75.9	73.5	71.0	68.5	65.8	63.0	60.1	57.0

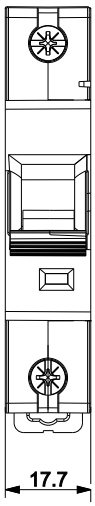
Hassas I-T Characteristics



Hassas Dimensions



1 POLE



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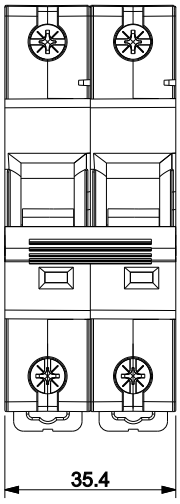
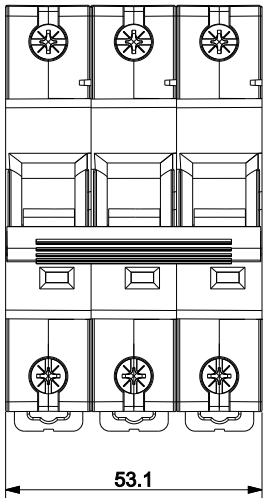


3 POLE



Hassas RCBO

Hassas RCBO Features

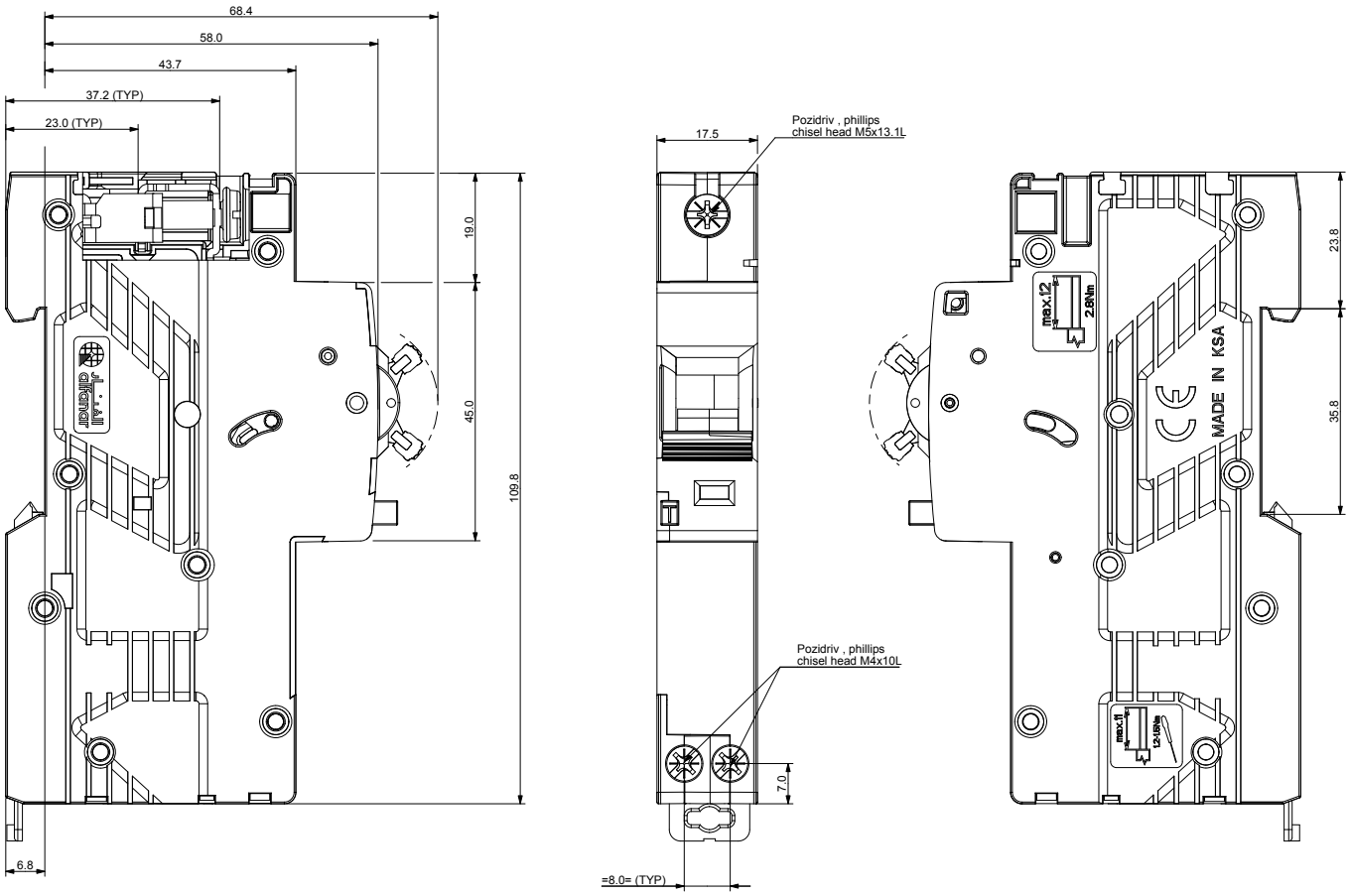
- Protects people from electric shock
- 30mA sensetivity for people protection
- 100mA sensetivity for protection against fire caused by leakage current
- Safe & effective method for locking out circuit breakers in ON & OFF position
- Finger proof protection (IP20) for termination
- Let-through energy is considerably less resulting in enhanced lifespan of electrical installation
- ON/OFF positions are marked on handle and indicator to show true contact position of MCB
- Better heat dissipation and ensures the product is suitable for 50 C ambient temperature
- Patented Tripping Arrangement to improve the short circuit performance
- Trip-free mechanism
- World Class terminal reliability
- Conforms to International Standards
- Excellence temperature performance
- New and unique **alfanar** industrial design
- Uniform box terminals for connecting cables up to 25 mm² for input and output terminals
- Terminal shutter prevents the wrong insertion and termination of cables
- Two Position Din clip facilitates easy mounting and removal of MCB from Dinrail
- Incoming and outgoing terminal are suitable for Busbar and cable

Performance and Technical Specifications

RCBO Technical Data		
Product standard		IEC 61009-1
Tripping characteristics		C Curve
Electrical		
Rated current range In (A)		6, 10, 16, 20, 25, 32, 40
Rated leakage current IΔn (mA)		30,100
Number of poles		1P+N
Type		AC, A
Rated frequency (Hz)		50/60
Rated voltage (Un)		240V
Rated insulation voltage (Ui) V AC		500
Rated impulse voltage (Uimp) kV		4
Protection degree		IP20
Rated short circuit capacity Icn (kA)		10kA
Rated service short circuit breaking capacity Ics (A)		7.5kA
Rated residual making and breaking capacity IΔm (kA)		6kA
Suitability for isolation		Yes
Thermal tripping characteristics		> 1 hour @ 1.13 In @ 50°C
		< 1 hour @ 1.45 In @ 50°C
Endurance		As per IEC 61009-1
Mechanical		
Protection degree		IP 20
Maximum terminal capacity (mm²)	Line	35
	Load	16
Tightening torque (Nm)	Line	2.8
	Load	1.2-1.5 Nm
Method of connection		Cables / Busbar / Cables + Busbar
Environmental/General		
Energy limiting class		3
Reference ambient air temperature		50°C
Operating temperature range		- 5°C to + 70°C
Storage temperature range		- 5°C to + 70°C

Dimensions

Hassas RCBO Din-Rail type



Ordering Data

Hassas RCBO DIN-Rail type			
Ampere	**Leakage current**	**Description**	**Item code**
06A	30mA	AeRCBO DIN rail Type-A 06A 30mA 10KA C	HERD40N030M06C
10A	30mA	AeRCBO DIN rail Type-A 10A 30mA 10KA C	HERD40N030M10C
16A	30mA	AeRCBO DIN rail Type-A 16A 30mA 10KA C	HERD40N030M16C
20A	30mA	AeRCBO DIN rail Type-A 20A 30mA 10KA C	HERD40N030M20C
25A	30mA	AeRCBO DIN rail Type-A 25A 30mA 10KA C	HERD40N030M25C
32A	30mA	AeRCBO DIN rail Type-A 32A 30mA 10KA C	HERD40N030M32C
40A	30mA	AeRCBO DIN rail Type-A 40A 30mA 10KA C	HERD40N030M40C
06A	100mA	AeRCBO DIN rail Type-A 06A 100mA 10KA C	HERD40N100M06C
10A	100mA	AeRCBO DIN rail Type-A 10A 100mA 10KA C	HERD40N100M10C
16A	100mA	AeRCBO DIN rail Type-A 16A 100mA 10KA C	HERD40N100M16C
20A	100mA	AeRCBO DIN rail Type-A 20A 100mA 10KA C	HERD40N100M20C
25A	100mA	AeRCBO DIN rail Type-A 25A 100mA 10KA C	HERD40N100M25C
32A	100mA	AeRCBO DIN rail Type-A 32A 100mA 10KA C	HERD40N100M32C
40A	100mA	AeRCBO DIN rail Type-A 40A 100mA 10KA C	HERD40N100M40C

AZM Main MCB

AZM Features

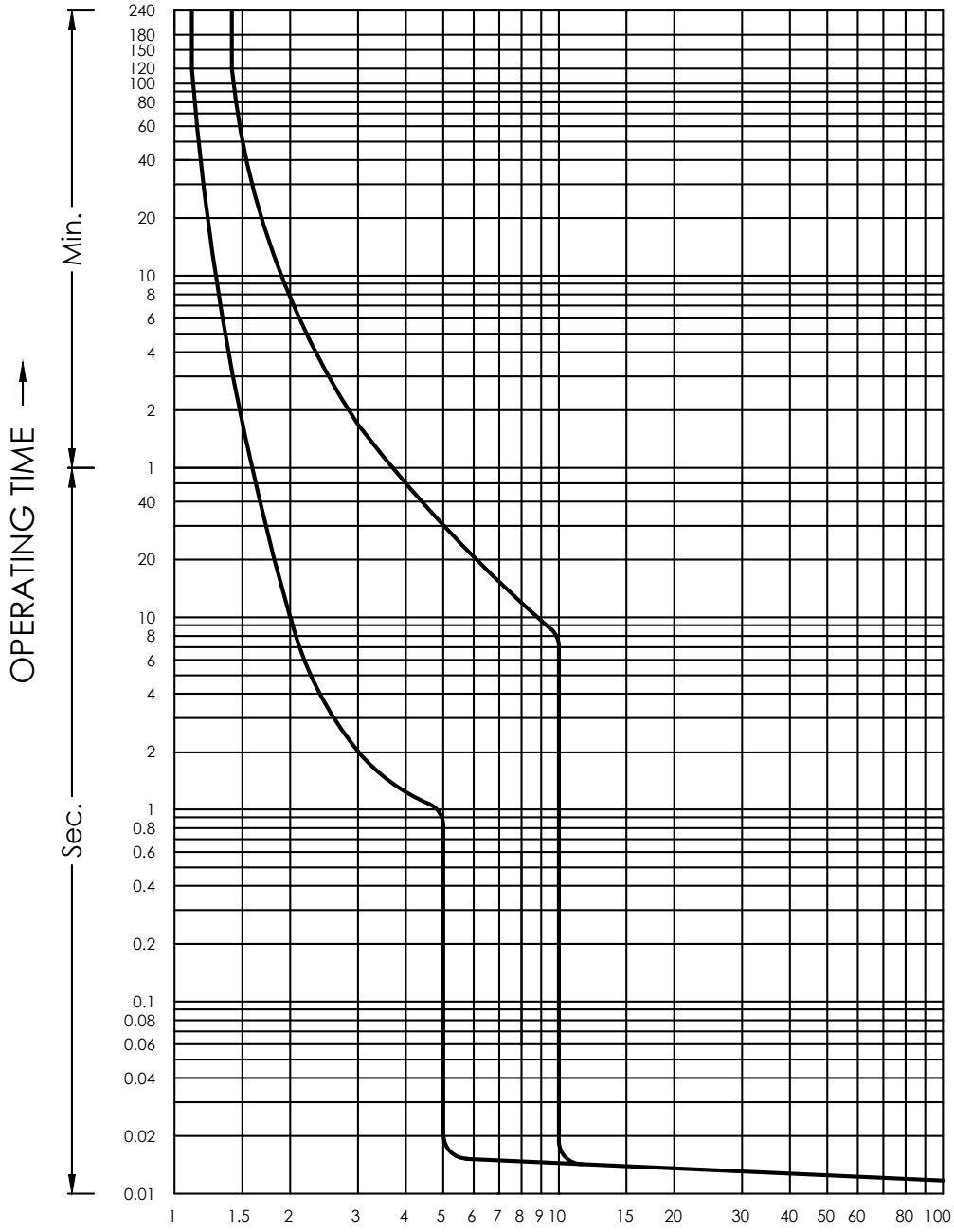
1. Let-through energy is considerably less resulting in enhanced lifespan of electrical installation.
2. Rapid closing design for quick make operation.
3. Uniform box terminals for connecting cables up to 50 mm² for input and output terminals for 32-100A MCB range.
4. Positive gripping features are provided on input terminals for cable termination.
5. Finger proof protection (IP20) for termination.
6. Trip-free mechanism.
7. Critical operating mechanism parts and assemblies are made of special engineering plastics / Alloy steel with superior mechanical thermal properties facilitating accurate operation of MCBs during its service life.
8. Suitable for Busbar connection for incomer terminals.
9. Critical parts and assemblies are manufactured in-house with statistical process controls.
10. Assembly, calibration, and testing are done in controlled temperature and dust free environment.
11. ON/OFF positions are marked on handle and indicator show true contact position of MCB.
12. Unique identification through bar code system for traceability of internal testing result for individual breakers.
13. New and unique **alfanar** industrial design.
14. Seamless integration with **alfanar** load center.
15. Provide short circuit and overload protection for residential as well as commercial installations.

AZM Technical Data

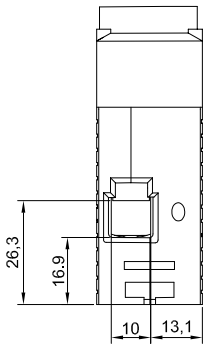
AZM Technical data		
Product standard		IEC 60898-1
Tripping characteristics		C Curve
Electrical		
Rated current range (A)		32, 40, 50, 63, 80, 100
Number of poles		2P, 3P
Rated operational voltage (Ue) V AC		415
Rated insulation voltage (Ui) V AC		600
Rated impulse voltage (Uimp) kV		4
Rated ultimate short circuit breaking capacity Icn (A) at 415V AC		10000
Rated service short circuit breaking capacity Ics (A) at 415V AC		7500
Rated frequency (Hz)		50/60
Suitability for isolation		Yes
Thermal tripping characteristics		> 2 hour @ 1.13 In @ 50°C
		< 2 hour @ 1.45 In @ 50°C
Magnetic operating limit		(5-10)×In
Endurance (Number of operations cycles)	Mechanical	10000
	Electrical	4000
Environmental/General		
Reference ambient air temperature		50°C
Operating temperature range		- 5°C to + 65°C
Storage temperature range		- 5°C to + 70°C
Mechanical		
Protection degree	For Housing	IP 40
	For Terminals	IP 20
Terminal capacity (mm²)		50
Tightening torque (Nm)		3.5
Mounting type		Din Rail
Type of termination incoming		Cables, Busbar
Type of termination outgoing		Cables, Busbar
Frame width (mm)		27 mm per pole
Dimensions 2 Pole (W × H × D) (mm)		(53.7 × 80.5 × 83.5)
Dimensions 3 Pole (W × H × D) (mm)		(80.4 × 80.5 × 83.5)
Weight 2P (g)		335
Weight 3P (g)		500

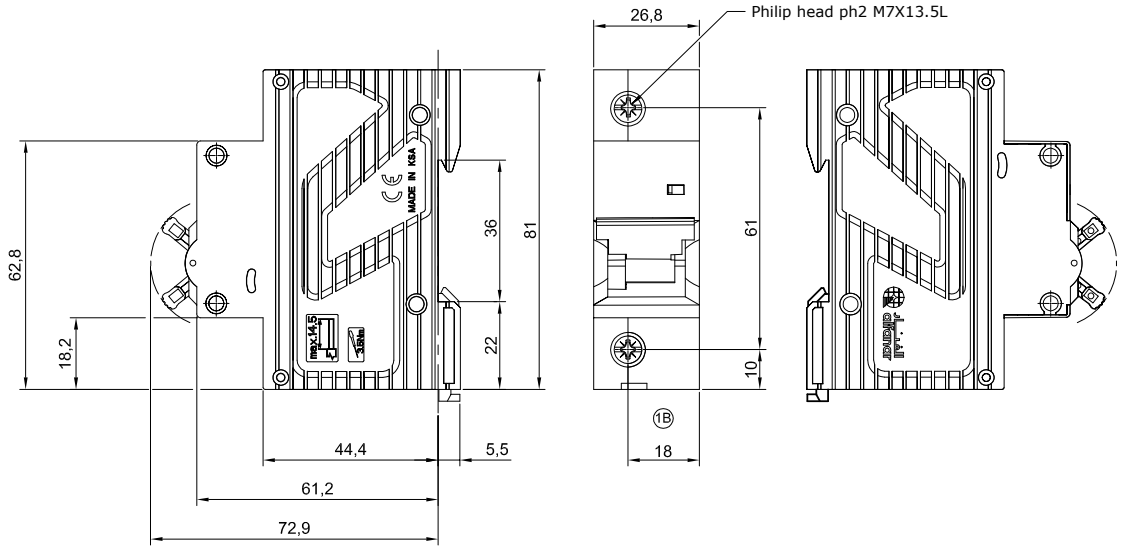
AZM I-T Characteristics

MCB C-curve Time Current Characteristics
Calibration temperature 50°C



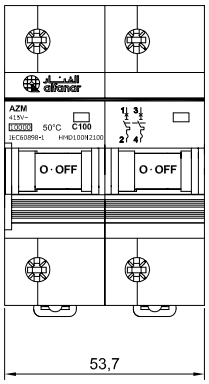
AZM Dimensions



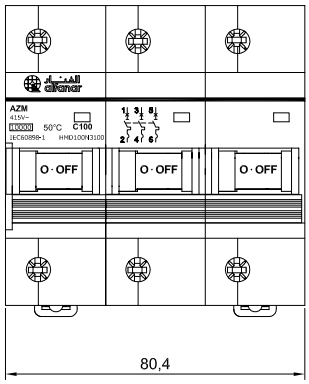


Single Pole Details

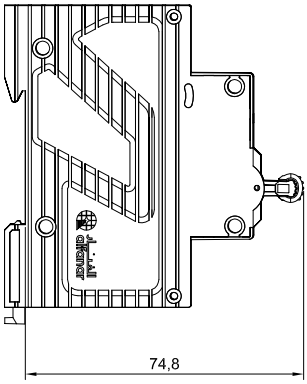
2 POLE

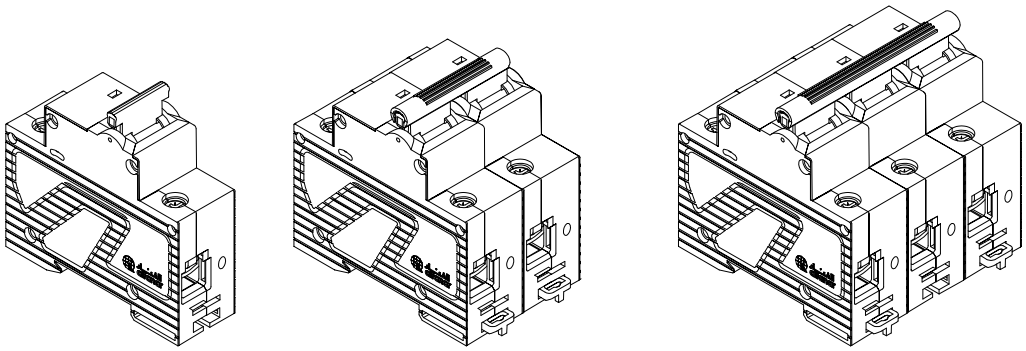


3 POLE



2 POLE / 3 POLE





AF series MCCBs

AF Series MCCB Features

1 - Handle is protected for IP30 protection where >2.5mm wires unable to enter inside breaker and touches to live parts.
2 - MCCB can be easily identified for the “OFF”, “ON” and “Tripped” positions.
3 - Trip Free Mechanism – The breaker trips in case of fault and ensures safety even if the padlock is used to hold handle in ON position.
4 - All Position of circuit breakers are suitable for isolation as defined in IEC standard 60947-2.
5 - MCCB arc chamber is specially designed with an arc channel as a flow guide to Improve the capability of extinguishing the arc and reducing the arc distance.
6 - Arc chutes are designed for efficient and faster arc quenching.
7 - Optimized arc runner profile for effective arc pulling.
8 - Fixed contacts with serrations for better grip.
9 - Accelerate movable contact speed by arcing gas generated from special resin located closely to movable contact.
10 - Line Load Reversibility – Incoming supply can be connected to both upper and lower side and load to the opposite side without compromising on breaking capacity and isolation.
11 - Current limiting Breaker - Low let through energy.
12 - MCCB’s are designed for easy installation in the various types of switchboards. They can be mounted vertically, horizontally or flat on their back without any de-rating of characteristics.
13 - Box clamps made of higher strength material which withstand 40% higher torque values more than standard specification.
14 - 100A & 250A MCCB grub screws are riveted to the box clamp assembly to prevent them from going missing.
15 - Longer electrical & mechanical life – (ensured minimum 2 times higher than specified in the standard).
16 - Low watt loss through optimally designed current carrying path.

AF series Technical Data

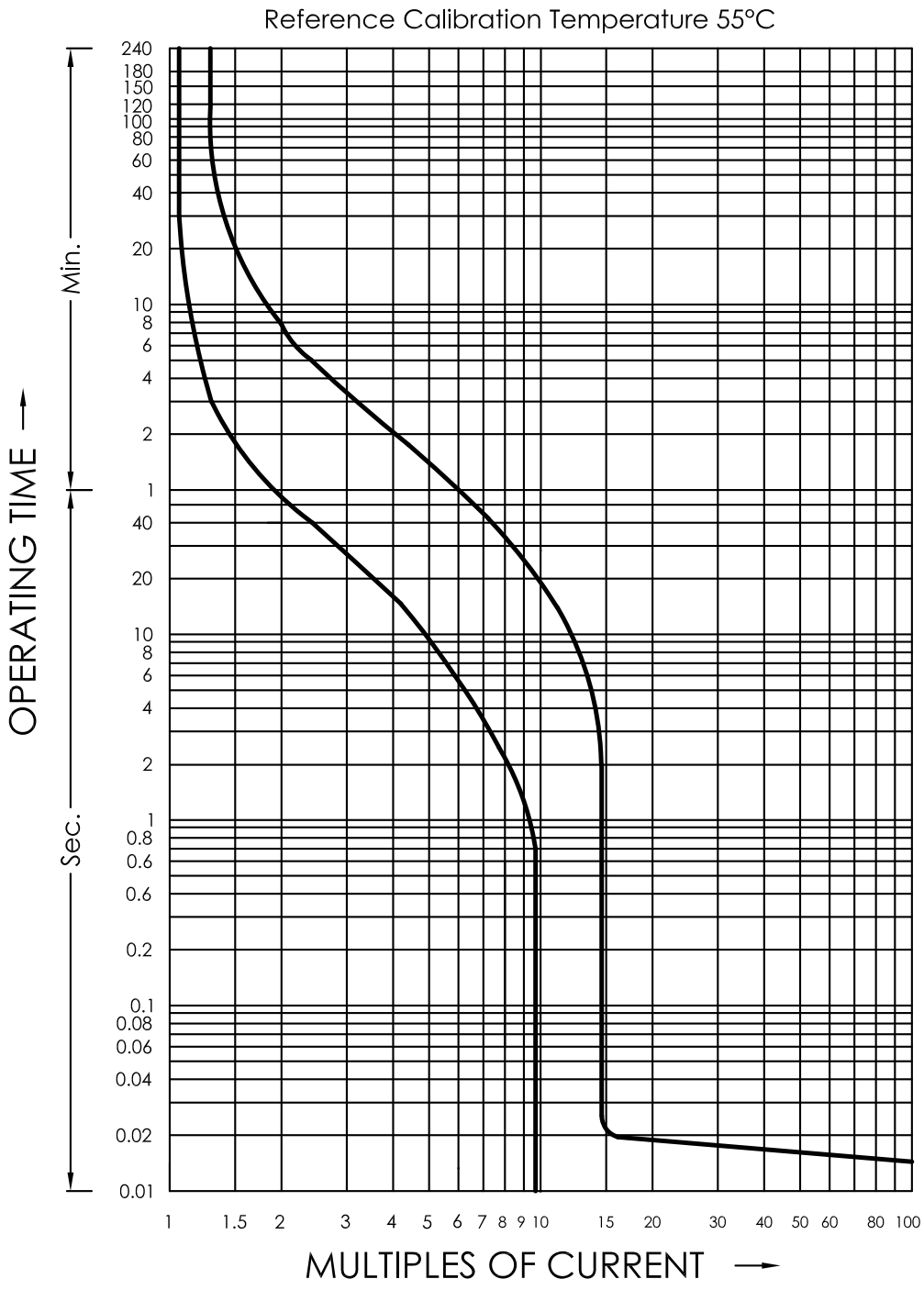
AF100N	
Product standard	IEC 60947-2
Frame size (AF)	AF100N
Rated current range (A)	30, 40,50,60,75,100
Number of poles	3P
Rated operational voltage (Ue) V	415
Rated insulation voltage (Ui) V AC	690
Rated impulse voltage (Uimp) kV	8
Ambient temperature (°C)	55
Rated frequency (Hz)	50/60
Utilization category	Cat. A
Pollution degree	3
Rated Ultimate short circuit breaking capacity Icu (kA)	
@ 415 V	15
@ 230 V	25
Rated Service short circuit breaking capacity Ics (A)	
@ 415V	75 % Icu
@ 230V	75 % Icu
Trip release type	Fixed - Thermal & Magnetic
Magnetic release setting (In)	12In ± 20%
Electrical endurance life (No. of operations cycles)	1500
Mechanical endurance life (No. of operations cycles)	8500
Phase barrier	Yes
Operating temperature range (without de-rating)	- 5°C to + 55°C
Storage temperature range	- 5°C to + 70°C
Method of connection	Cables / Bus bar
Terminal width for flat copper connection (mm)	16
Screw size for flat bar / Tightening torque (N.m)	M8 / 6
Box clamp screw size (mm) / Tightening torque (N.m)	Allen key 4 / 7
Maximum terminal capacity - Copper cable (mm^2)	50
Weight of the breaker (kg)	1.2
Dimensions (W × H × D) (mm) (max.)	91 x 150 x 66

AF series Technical Data

AF250N	
Product standard	IEC 60947-2
Frame size (AF)	AF250N
Rated current range (A)	125,150,175, 200, 225, 250
Number of poles	3P
Rated operational voltage (Ue) V	415
Rated insulation voltage (Ui) V AC	690
Rated impulse voltage (Uimp) kV	8
Ambient temperature (°C)	55
Rated frequency (Hz)	50/60
Utilization category	Cat. A
Pollution degree	3
Rated Ultimate short circuit breaking capacity Icu (kA)	
@ 415 V	15
@ 230 V	25
Rated Service short circuit breaking capacity Ics (A)	
@ 415V	75 % Icu
@ 230V	75 % Icu
Trip Release type	Fixed - Thermal & Magnetic
Magnetic release setting (In)	12In ± 20%
Electrical endurance life (No. of operations cycles)	1000
Mechanical endurance life (No. of operations cycles)	7000
Phase barrier	Yes
Operating temperature range (without de-rating)	- 5°C to + 55°C
Storage temperature range	- 5°C to + 70°C
Method of connection	Cables / Bus bar
Terminal width for flat copper connection (mm)	25
Screw size for flat bar / Tightening torque (N.m)	M8 / 6
Box clamp screw size (mm) / Tightening torque (N.m)	Allen key 5 / 12
Maximum terminal capacity - Copper cable (mm^2)	120
Weight of the breaker (kg)	1.9
Dimensions (W × H × D) (mm) (max.)	106 165 x 104

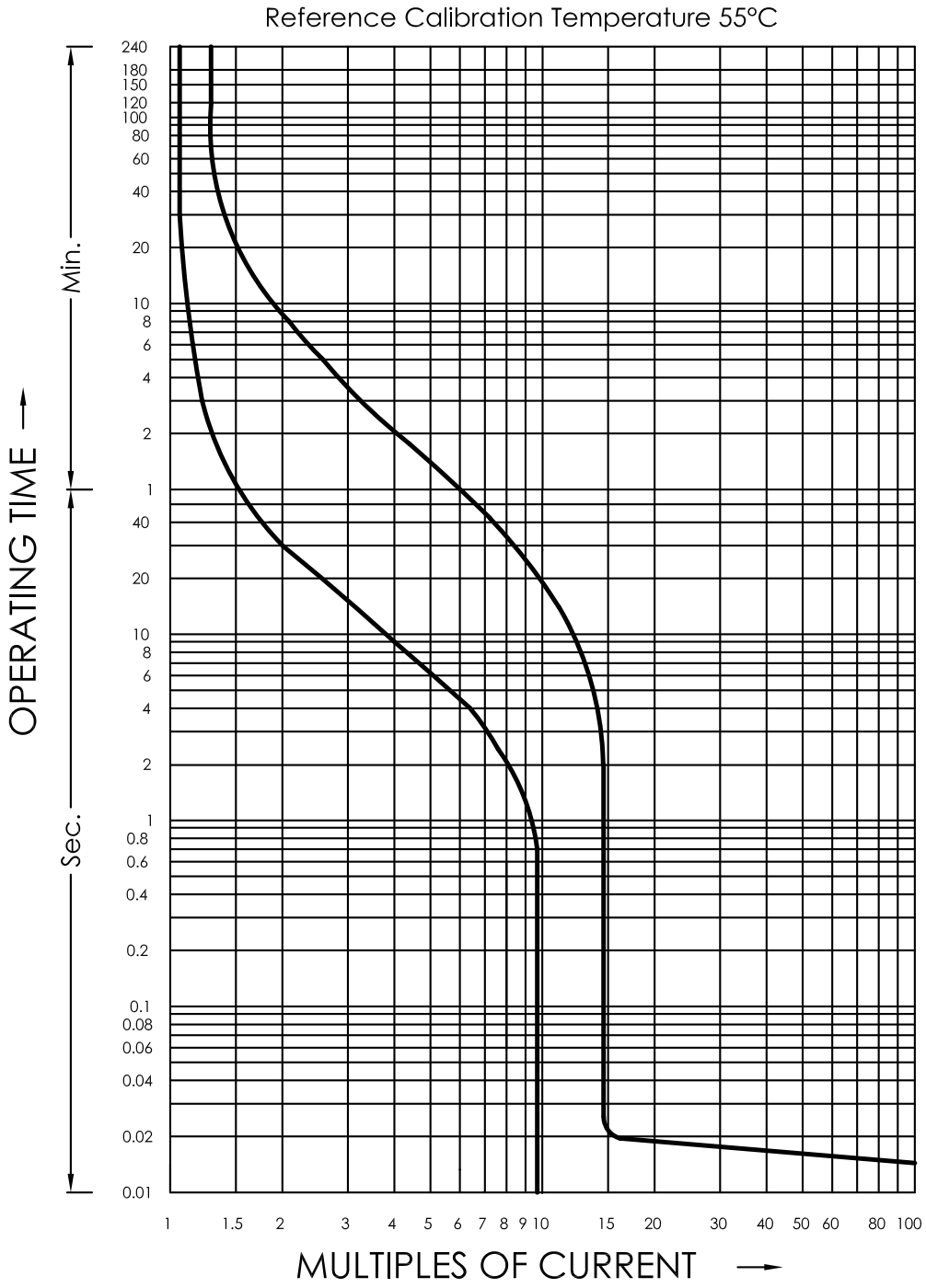
AF series I-T Characteristics

AF100N



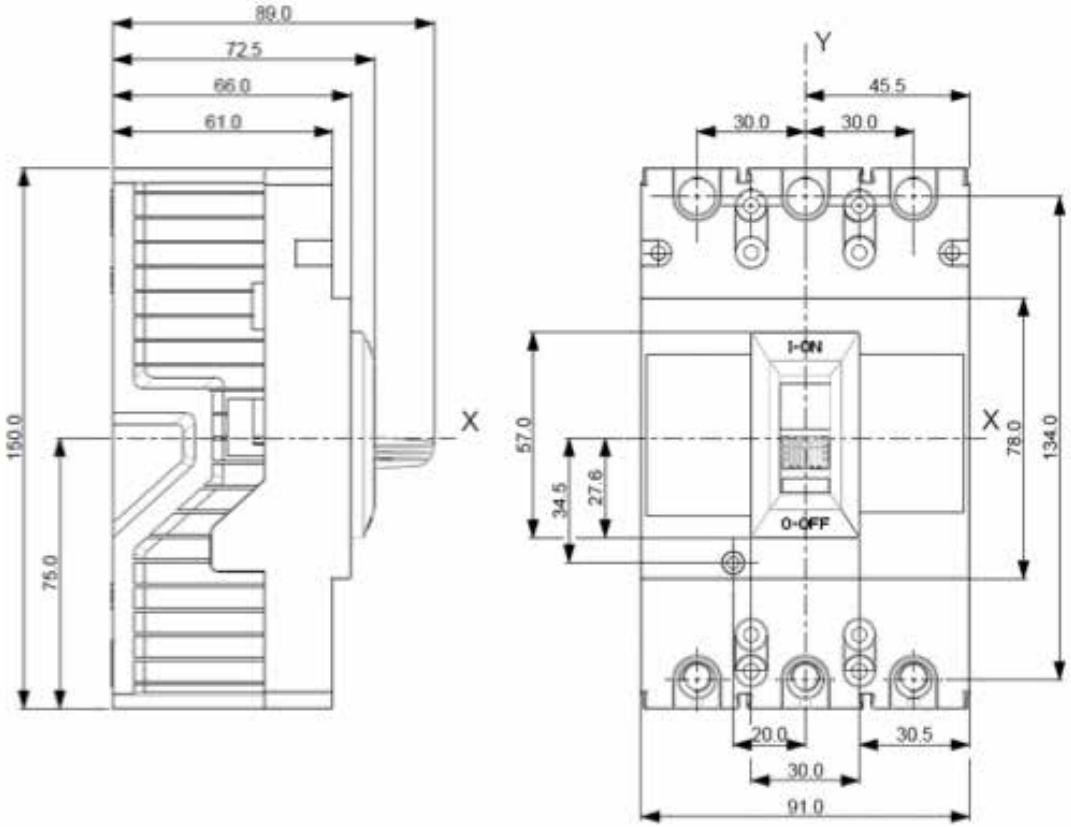
AF series I-T Characteristics

AF250N

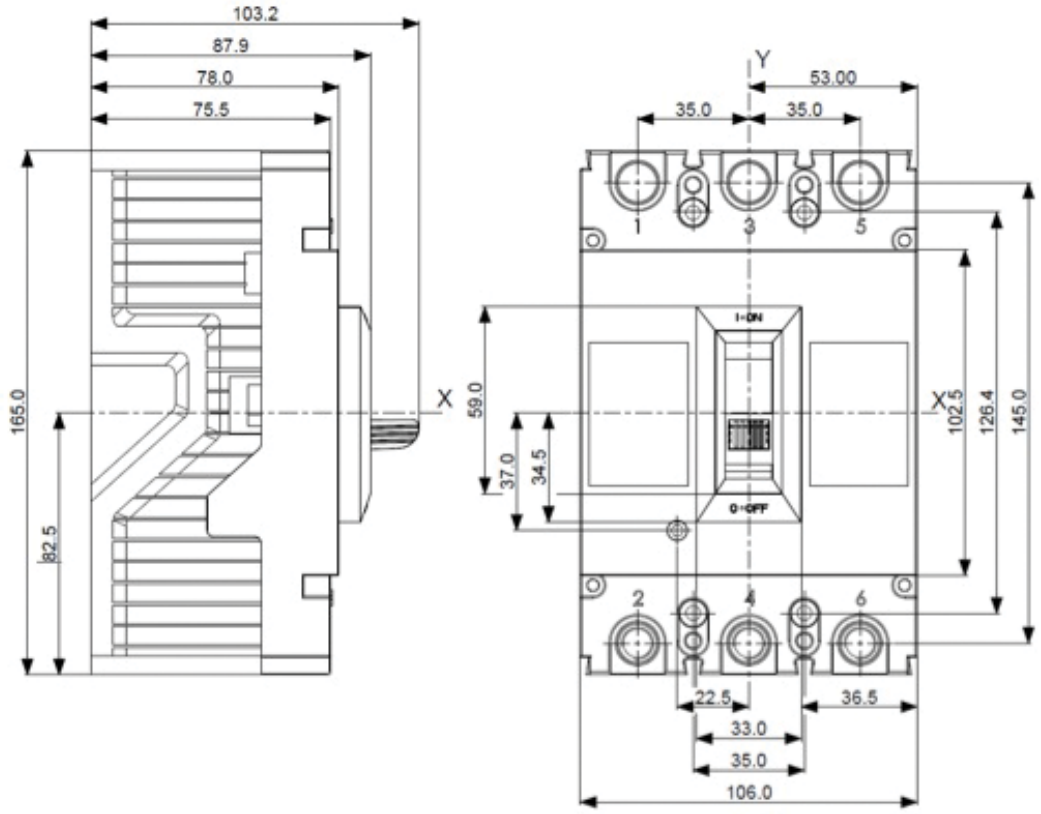


AF series Dimensions

AF100N Dimensions



AF250N Dimensions



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