alfanar
HOTEL ROOM DB

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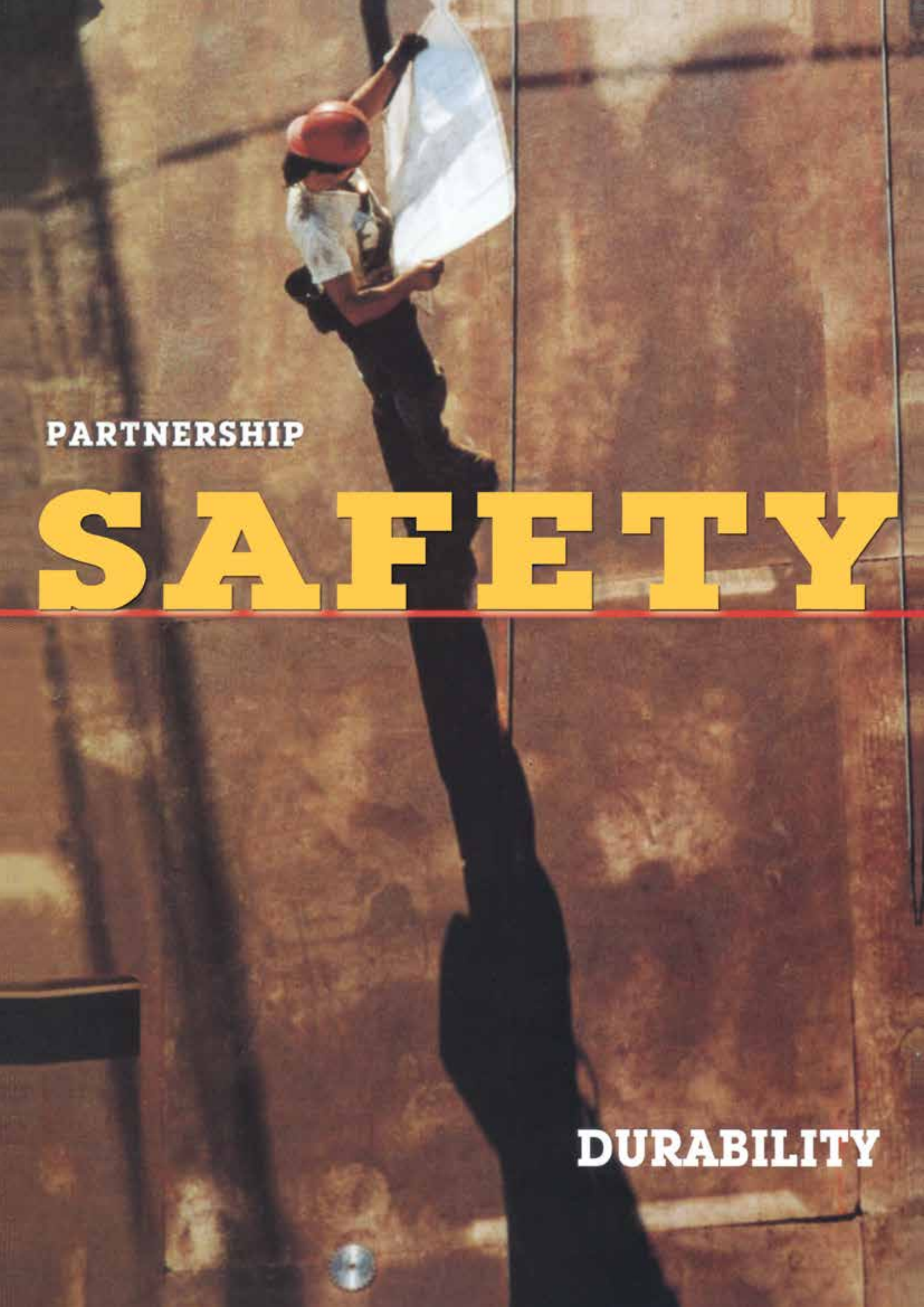

PARTNERSHIP
SAFETY
DURABILITY

Contents

Introduction

At **alfanar** we look for advanced solutions that provide safe electricity distribution, are convenient and save energy. Today, most hotels use high-tech hotel key cards which allow guests easy, secure access to their rooms and avoid excess energy consumption when the guests are not in the room. **alfanar** introduces the Hotel Room DB system that maximizes guest comfort and convenience, and provides hotel operators a cost-effective, energy savings solution.

Hotel Room DB is designed for reliable distribution and control of electrical power specifically for hotel rooms. When a guest enters the room, and inserts the room key card into the key card holder the room enters the occupied mode, the electrical loads are activated and the power is automatically turned on, the guest is in full control of the system. Conversely, when the guest removes the card when leaving the room, the assigned electrical loads are automatically turned off. Specific circuits can be designated to remain on to supply power to air conditioners, mini-bars or power stations. This system is designed specifically to reduce energy consumption while guaranteeing the operation of the service circuits. **alfanar** Hotel Room DB is type tested as per IEC 61439-3 and designed for DIN rail MCBs outgoing feeders for indoor applications, with the main MCB breaker type tested as per IEC 60898-1.

Product Features

1. Power Saving

alfanar Hotel Room DB ensures reliable power savings by continuously connecting and protecting your service circuits, whenprotected secondary circuits are disconnected when you are not in the premises. This can save up to 50% of the power.

2. Complete Solution

alfanar provides a complete solution; Main breaker, Contactor and Branch breakers are readily assembled and internally connected, with flexibility to customize the branch breaker rating to cover the changing project requirements.

3. Design

a. Aesthetics

With its modern look and elegant design, the Hotel Room DB's has come a long way from the boxy eyesore DBs used to be, and fits attractively in with your room decor.

b. Color

alfanar Hotel Room DB fresh color scheme was chosen to blend in with the wall colors of your hotel rooms in a stylish, unique and appealing way.

Product Features

4. 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. 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.

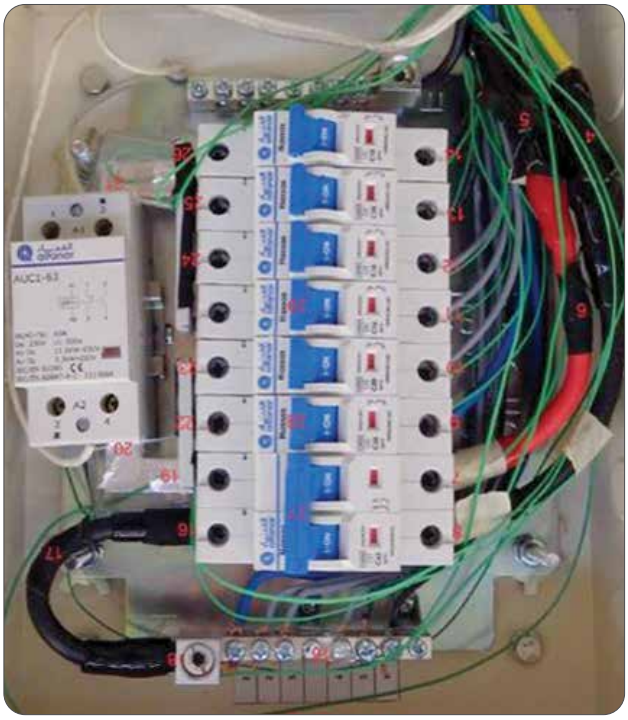
Product Features

5. Performance

a. Thermal stability

Thermal stability of alfanar Hotel Room DB is validated and ensured through a temperature rise test performed as per IEC 61439-3.

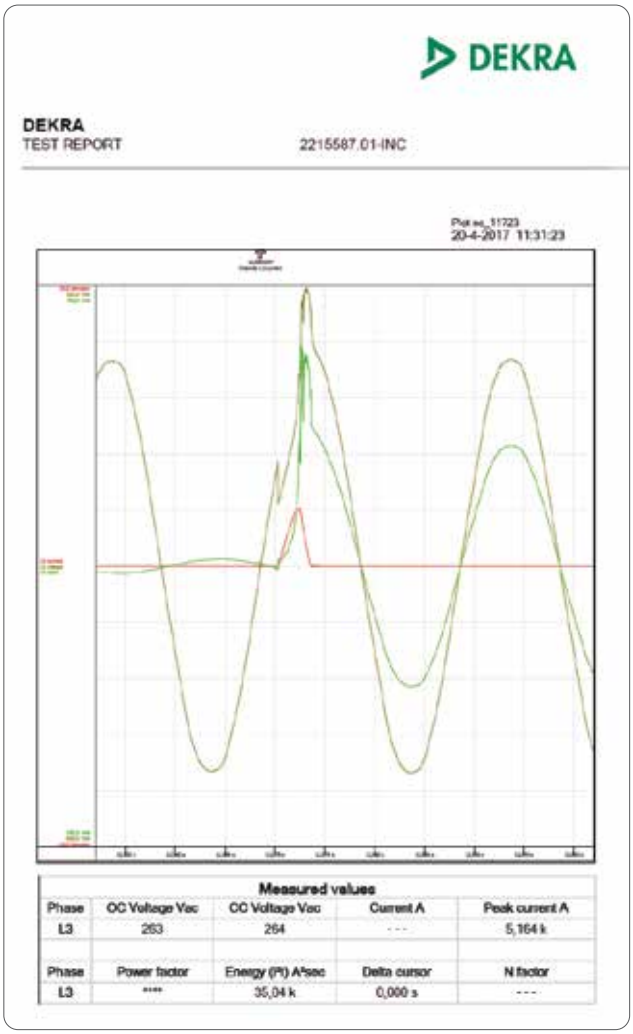
This ensures that the product will keep working normally all day long at a steady temperature state.



b. Short circuit strength

The **alfanar** Hotel Room DB and busbar assembly has been validated for a short circuit performance of 10kA.

Our busbar assembly has a short-time withstand of up to 10kA for 100mS.



DEKRA

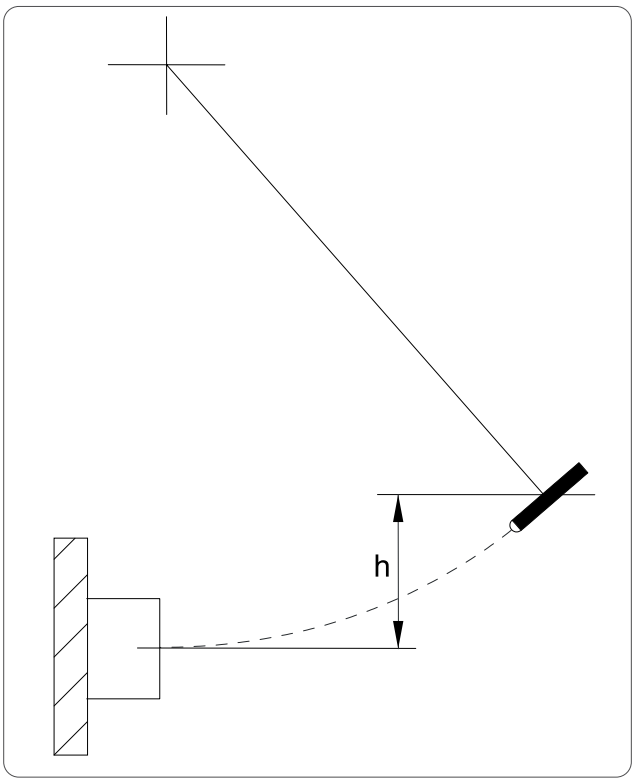
DEKRA
TEST REPORT 2215587.01-INC

Plot no_11723
20-4-2017 11:31:23

Measured values

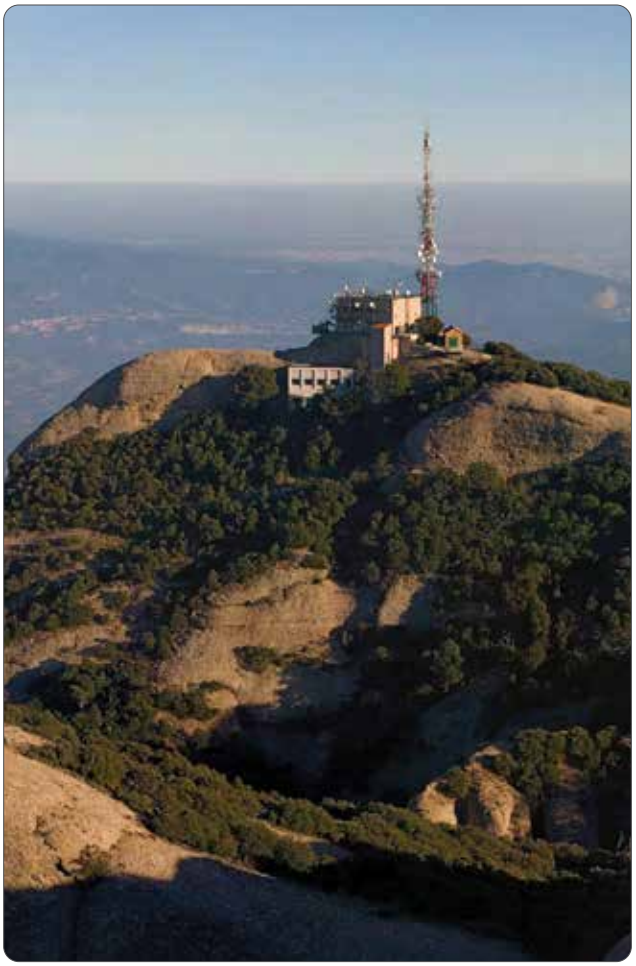
Phase	OC Voltage Vac	CC Voltage Vac	Current A	Peak current A
L3	253	264	- - -	5,164 k

Phase	Power factor	Energy (Pt) A²sec	Delta cursor	N factor
L3	****	35,04 k	0,000 s	- - -



c. Mechanical impact

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



d. 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.

Product Features

6. Reliability

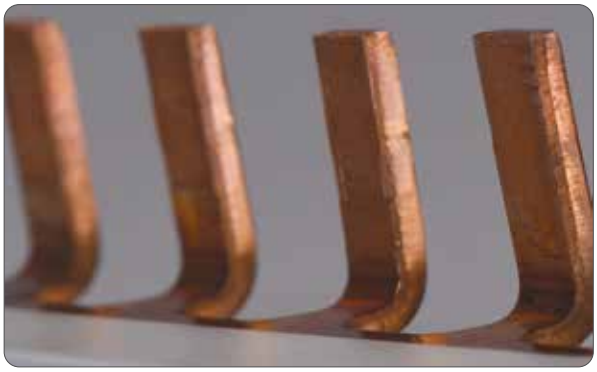
a. High corrosion resistant enclosure and internal parts

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.

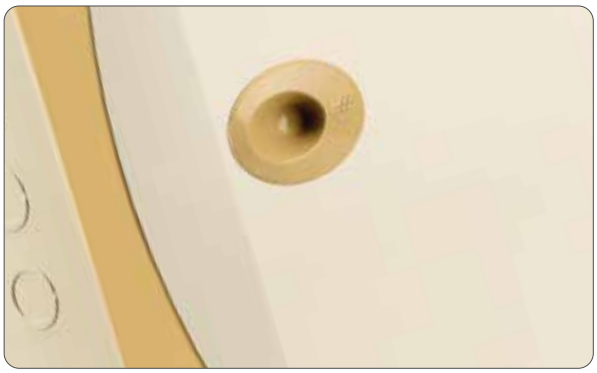
b. Copper busbars

99.9% pure copper comb busbars are used to construct the busbars of **alfanar** Hotel Room DB load centers. Busbar assembly is rated at 100A and finger safe insulated.



c. Ingress protection

alfanar Hotel Room DBs are tested for IP40 to ensure the ingress protection against solid particles in an indoor application.



7. Installation

a. Ample wiring space

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

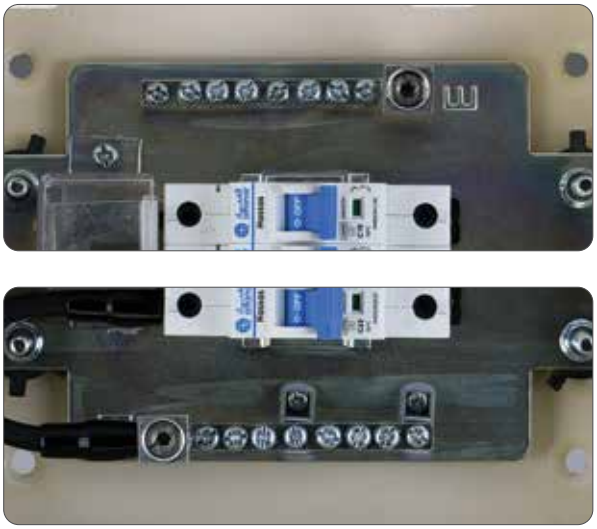
b. Knockouts

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. 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.

Product Features



d. Ample earth and neutral terminals

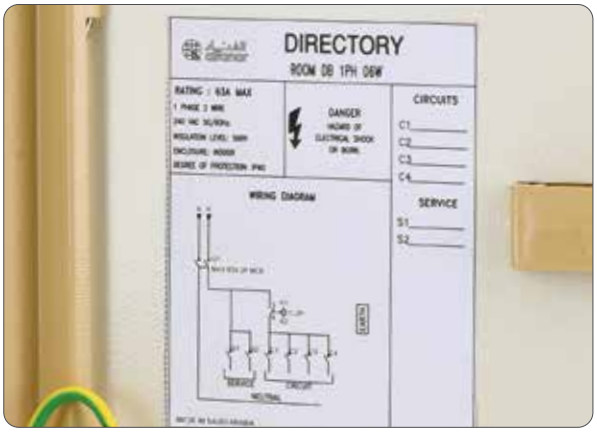
Earth and neutral terminals are made from a solid piece of tin plated brass to prevent any series arc or loose connection. The quantity of earth and neutral terminals is equal to the number of outgoing circuits.

e. Cement guard

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

f. Phase identification

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



g. Wiring directory

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

h. Additional information

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

8. Environment

All the components that are used in **alfanar** Hotel Room DB are environmentally friendly and RoHS compliant.

9. Type Testing

Extensive care is taken at several stages of the design and manufacturing processes of **alfanar** Hotel Room DB (DBO) to ensure end user safety.

alfanar Hotel Room DBs are type tested as per the new standard IEC 61439-3 DBO (Distribution Boards intended to be operated by non-technical 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
Type/Model:	Load Center - Room DB 1PH
Ratings:	I_{nA} 56 A, U_e 240 V, U_i 500 V, U_{imp} 4 kV, IP4X, IK05 I_{cc} 10 kA at 240 V (incoming and outgoing units) I_{cc} 10 kA at 240 V (neutral and PE busbar) 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, 10.10.2.3.5, 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. 2215587.01-INC, dated 24 May 2017.

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, 24 May 2017

Number: 2215587.100

DEKRA Certification B.V.

H.L. Schendstok
Certification Manager

DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem, The Netherlands
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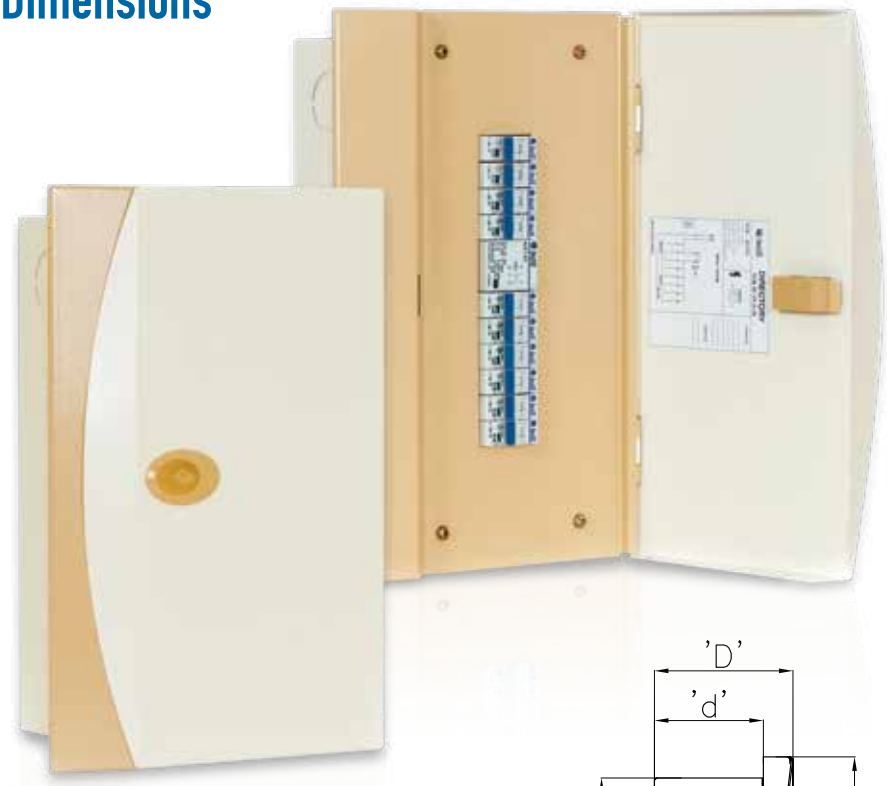
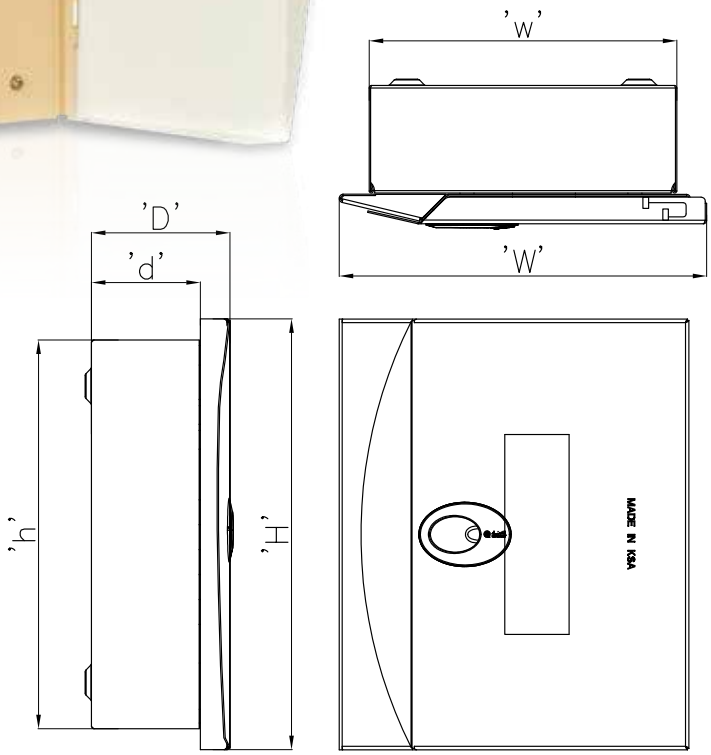
Technical Specification

Item	DESCRIPTION
Standard	SASO & IEC 61439-3
Busbar rating	100A
Busbar type	STD Comb Busbar
Voltage rating	110-415V AC 50/60 Hz
No. of ways	1PH: 2+4W; 2+6W; 2+7W; 2+8W, 3PH: 3+6W; 3+9W
Ui / Uimp	500V / 4kV
Degree of protection	IP40
Enclosure material	Electro-galvanized steel sheet (Corrosion resistant)
Steel thickness	Up to 1.2 mm
Knockout sizes	See details on page 15
Enclosure color	Polyester powder coated in RAL-1013 + RAL-1001
Main breaker (Incomer)	MCB (10-63A/2P); (10-63A/3P)
Branch-Service	1, 2 & 3 Poles (6 to 63A) DIN Rail MCBs
Contactor	63A/2P/4P, 1NO+1NC, Coil operates @ 230V
Branch- Contactor-Controlled	1, 2 & 3 Poles (6 to 63A) DIN Rail MCBs
Terminal capacity	Main/Branch MCB frame size 63A : 25 sq.mm
Neutral terminal bar	Incoming cable lug : 50 sq.mm,
	Outgoing terminals : 16 sq.mm
	No. of outgoing terminals : ≥ no. of ways
Earth terminal bar	Incoming cable lug : 50 sq.mm
	Outgoing terminals : 16 sq.mm
	No. of outgoing terminals : ≥ no. of ways

Dimensions

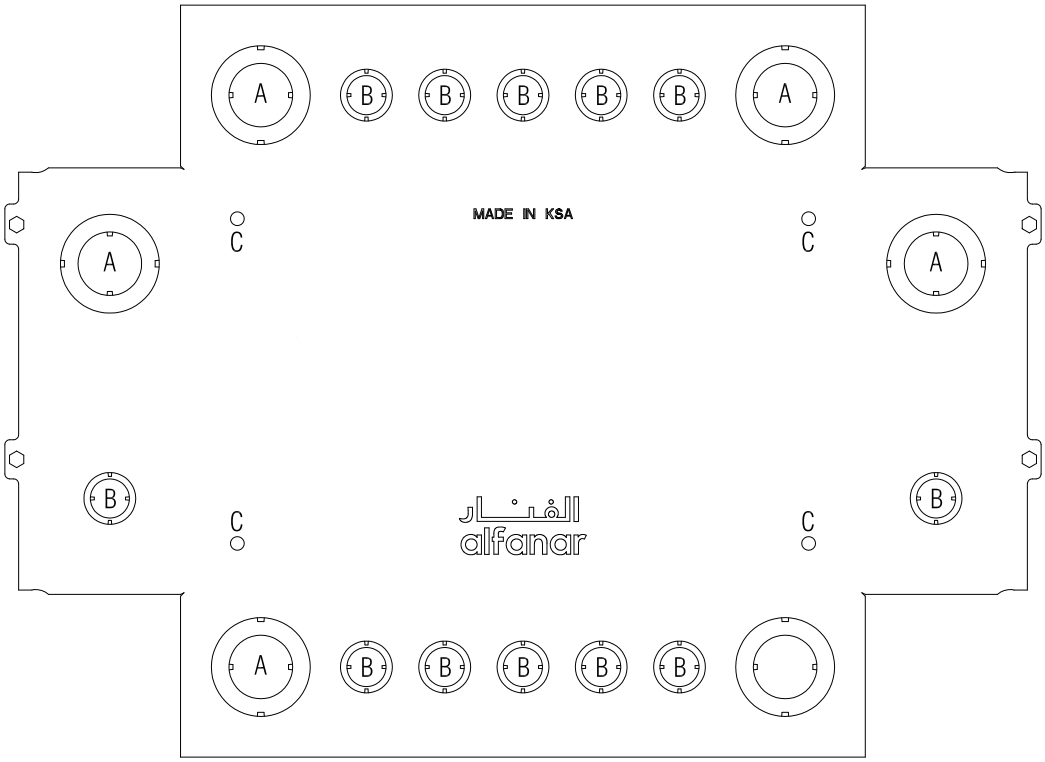




NO of Ways	ORDERING NUMBER(1PH), TYPE, AND DIMENSION						
	Flush	H	h	W	w	D	d
2+4W	RDB12S4C	308	278	250	220	97	77
2+6W	RDB12S6C	380	350	250	220	97	77
2+7W	RDB12S7C	380	350	250	220	97	77
2+8W	RDB12S8C	380	350	250	220	97	77

NO of Ways	ORDERING NUMBER (3PH), TYPE, AND DIMENSION						
	Flush	H	h	W	w	D	d
3+6W	RDB33S6C	432	402	300	270	97	77
3+9W	RDB33S9C	486	456	300	270	97	77

Knockouts Sizes



Size	Type	1PH		3PH	
		8M	12M	15M	18M
A - ø32.5/ø50.5	Double Knockout	6	6	6	6
B - ø20.5/ø26.5	Double Knockout	8	12	14	16
C – M6 Wall Mount	Mount with keyholes	4	4	4	4

- All dimensions are in mm.
- The details in this drawing indicate dimensions and knockout positions for a typical Hotel Room DB. Knockout details for projects, shown in this catalogue, are available upon request.

Ordering details

CODING KEY

Enclosures Ordering

RDB X XSXC

RDB ---------- Hotel Room DB
X ---------- 1 OR 3 (1-Phase / 3-Phase)
XSXC---------- Service branches + Contactor Controlled Branches- No of Way (e.g. 02+08W)

For example:
Item code **RDB12S8C** represents Hotel Room DB, 1PH 2+8W
Item code **RDB33S6C** represents Hotel Room DB, 3PH 3+6W

Hassas

alfanar Miniature Circuit Breaker

alfanar Hotel Room DBs are supplied with a fitted main and branch MCBs installed and internally wired for your convenience, with the possibility of changing breaker ratings as per project 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 50ºC Ambient temperature
- Patented Tripping Arrangement to improve the short circuit Performance
- Trip-free mechanism
- World Class terminal reliability
- Conforms to major 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 Technical Data

Technical Data		
Product standard		IEC 60898-1
Tripping characteristics		C Curve
Electrical		
Rated current range (A)		6, 10, 16, 20, 25, 32, 40, 50, 63
Number of poles		1P, 2P, 3P
Rated operational voltage (Ue) V AC	Single pole	240
	Multi pole	415
Rated insulation voltage (Ui) V AC		500
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

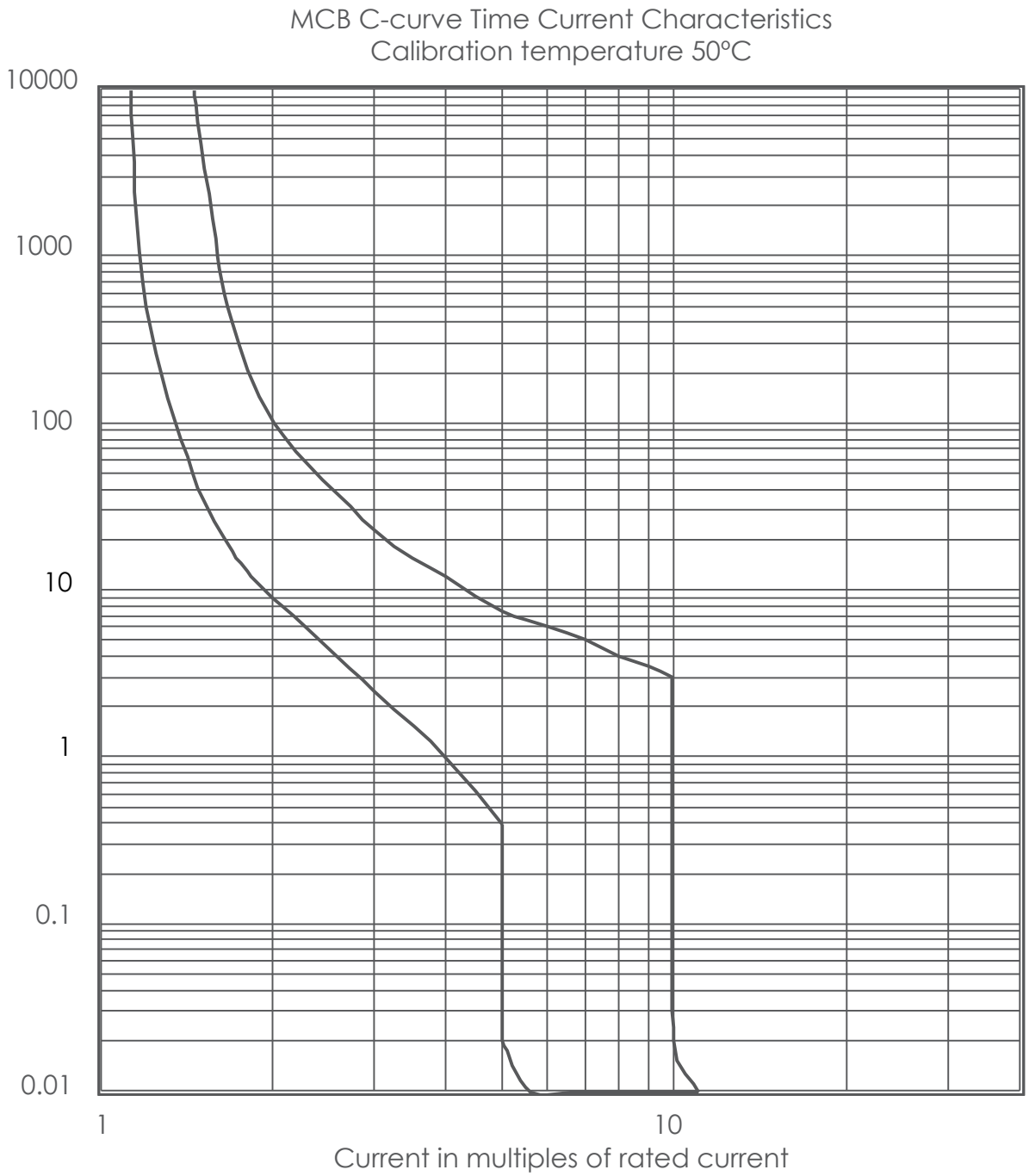
Temperature Derating

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

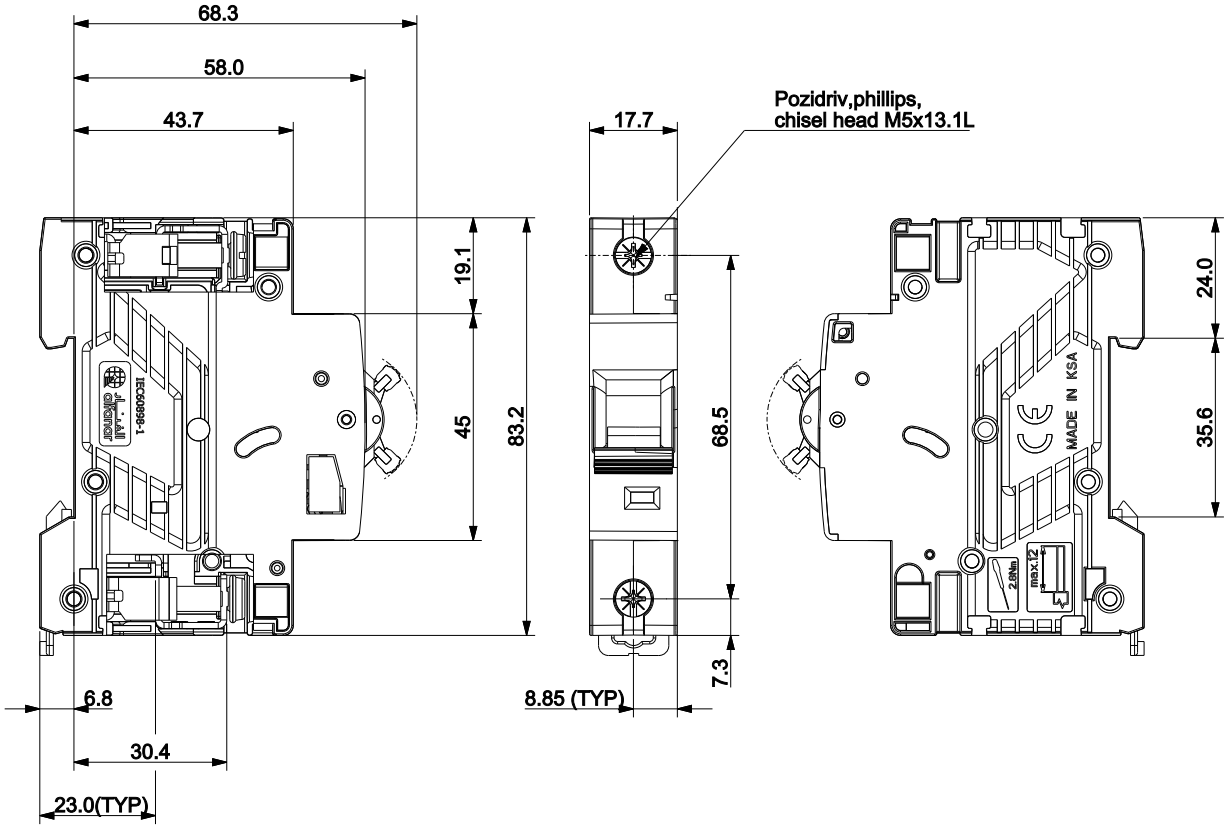
Testing is carried out with the breaker mounted singly in a vertical plane in a controlled environment. Therefore, if the circuit breaker is required to operate in conditions which differ from the reference conditions, certain factors must be applied to the standard data. For instance, if the circuit 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.

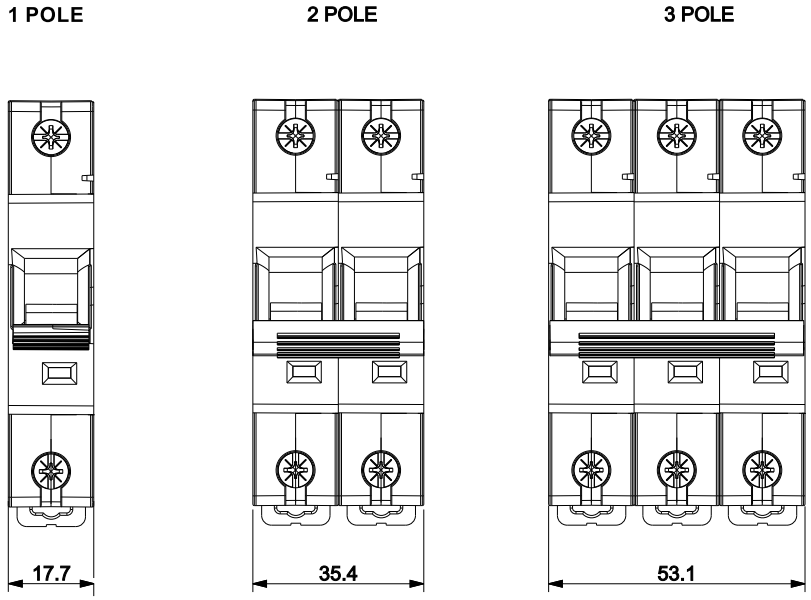
In(A)	-5 ˚C	0 ˚C	10 ˚C	20 ˚C	30 ˚C	40 ˚C	50 ˚C	60 ˚C	70 ˚C
10.0	12.9	12.7	12.2	11.7	11.2	10.6	10.0	9.4	8.7
16.0	20.2	19.9	19.2	18.4	17.7	16.8	16.0	15.1	14.2
20.0	24.3	24.0	23.2	22.5	21.7	20.9	20.0	19.1	18.2
25.0	29.1	28.8	28.0	27.3	26.6	25.8	25.0	24.2	23.3
32.0	39.1	38.5	37.3	36.0	34.7	33.4	32.0	30.5	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





AUC6 (Modular AC Contactor)

Product Description

Technical Specifications

Modular Contactor Technical Specifications		
Rating (Module)	AUC1-63A/4P	AUC1-63A/2P
General		
Standards	IEC60947-4-1, IEC 61095	
Nominal Operating voltage 1- Phase (Ue)	230V	230V
Nominal Operating voltage 3- Phase (Ue)	400V	-
Mechanical Endurance (Switching cycles)	3,000,000,000	3,000,000,000
Ambient temperature	-5 to + 55ºC	-5 to + 55ºC
Protection degree	IP 20	IP 20
Consumption (230Vac)	≤ 1.55	≤ 1.55
Contact Rating		
Rated insulation voltage Ui	500 V	500 V
Rated impulse withstands voltage Uimp	4kV	4kV
Frequency	50/60 Hz	50/60 Hz
Conventional thermal current (Ith)	63A	63A
AC1 / AC7a Rated current operational current (Ie)	63A	63A
AC1 / AC7a Rated current operational current at Ue=230Vac	Pmax= 24 kW	-
AC1 / AC7a Rated current operational current at Ue=400Vac	Pmax= 40 kW	Pmax= 11.6 kW
AC3 / AC7b Rated current operational current at Ue=230Vac	Pmax= 8.5 kW	-
AC3 / AC7b Rated current operational current at Ue=400Vac	Pmax= 15 kW	Pmax= 3.3 kW
Electrical Endurance		
Maximum operating cycles at AC1/AC7a application	250,000	250,000
Maximum operating cycles at AC1/AC7b application	250,000	250,000
Maximum back-up fuse	80A gl	63A gl
Terminals for Main and Auxiliary contacts		
Terminal Capacity-line standard wire	1-1.6 mm2	1-1.6 mm2
Terminal Capacity-Solid wire	1-2.5 mm2	1-2.5 mm2
Terminal Screw size	M5	M5
Maximum Torque	2.0 N.m	2.0 N.m
Terminals for Operating Coil		
Terminal capacity - line standard wire	1-2.5 mm2	1-2.5 mm2
Terminal capacity - solid wire	1-2.5 mm2	1-2.5 mm2
Terminal screw size	M3	M3
Maximum torque	0.6 N.m	0.6 N.m
Other Parameters		
Length (L1)	82.5 ± 0.3	-
Width (L2)	54 ± 0.3	-
Hight (L3)	66 ± 0.33	-
Mounting dimensions	35 ± 0.25	-
The Contact Parameters		
The main contact distance	≤ 1.8mm	-
The main contact overtravel	≤ 1.0mm	-
The main end pressures	≤ 0.6N	-
Electrical Clearance and Creepage Distance		
Clearance	≤ 3mm	-
The creepage distance	≤ 4mm	-

Free Maintenance Service at Home for alfanar Products

Switches, Sockets, Distribution Boards, & Circuit Breakers

Our customer satisfaction rate was 94.4%
on services delivered by our Technical Support team.

Customer Service
800-124-1333

Scan the QR code to learn more about our free maintenance service

Notes

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