

INSTALLATION CONTACTORS - ACCESSORIES

Auxiliary switch - AC-15 acc. to IEC/EN 60947-5-1 (2-pole, ½ module)

Type	Rated current I _e	Wiring diagram					Ordering No.	Weight (g)	Packaging (pcs)
		-20	-11	-01	-10	-02			
IKN20	6 A						38.046.002	30	1
IKN11	6 A	33 43	31 43	31	33	31 41	38.046.004	30	
IKN10	6 A						38.046.036	25	
IKN01	6 A	34 44	32 44	32	34	32 42	38.046.037	30	
IKN02	6 A						38.046.003	30	



3

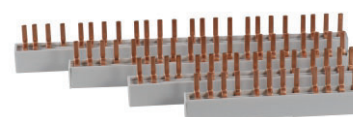
Auxiliary switch - Ratings acc. to UL 580 (2-pole, ½ module)

Type	Rating code	Wiring diagram			Ordering No.	Weight (g)	Packaging (pcs)
		-20	-11	-02			
IKN20UL	C300, Q300	33 43	31 43	31 41	38.046.050	30	1
IKN11UL	C300, Q300				38.046.049	30	
IKN02UL	C300, Q300	34 44	32 44	32 42	38.046.051	30	



4-phase busbars for installation contactors up to 32 A - insulated

Type	Module width	Length (mm)	Ordering No.	Weight (g)	Packaging (pcs)
L/32-8P	4	66	786.015.051	60	10
L/32-12P	6	98	786.015.052	86	
L/32-16P	8	138	786.015.053	114	
L/32-20P	10	173	786.015.054	141	
L/32-24P	12	208	786.015.055	169	



Single pin terminals for installation contactors up to 32 A - insulated

Type	Pin length	Cross-section rigid/flexible (mm ²)	Screw	Ordering No.	Weight (g)	Packaging (pcs)
S/32-1P	13.5/32 (total)	6-25/4-16	PZ2	786.015.060	12	25



Double pin terminals for installation contactors 40 and 63 A - insulated terminals for parallel connection

Type	Pin length	Cross-section rigid/flexible (mm ²)	Screw	Ordering No.	Weight (g)	Packaging (pcs)
S/63-2P	15	6-50/4-35	PZ2	786.015.061	22	25



ORDERING DATA

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Auxiliary switch - IKN, IKN-UL

	Type	Symbol	Unit	IKN	IKN-UL
GENERAL	Standards			IEC/EN 60947-5-1	UL508, C22.2 No. 14, IEC/EN 60947-5-1
	Approvals			CE, CB, NF, EAC	CE, UL, CSA
	Module width			0.5	0.5
	Number of poles			2	2
	Degree of protection			IP20 ¹⁾	IP20 ¹⁾
	Pollution degree			3	3
	Climatic conditions			95 % relative humidity	
	Ambient temperature:				
	open			-25 °C ... +55 °C	
	closed				-13 °F ... 104 °F / -25 °C ... +40 °C
	Storage temperature			-30 °C ... +80 °C	-22 °F ... 176 °F / -30 °C ... +80 °C
	Maximum altitude		m	2000	2000
	U _i and U _e is reduced for 1.2 % and I _e for 0.4 % for every additional 100 m				
	Mechanical endurance		op. c.	3.000.000	3.000.000
Weight			30 g	0.08 lb / 30 g	
AUXILIARY CIRCUIT	Contact reliability			≥12 V; ≥5 mA	≥12 V; ≥5 mA
	Minimum distance of open contacts			3.6 mm	0.142 in / 3.6 mm
	Power dissipation per pole		W	0.3	0.3 (at I _{th} = 6 A)
	Maximum back-up fuse for short-circuit protection gL and gG: coordination type 2 (at prospective current 3 kA)	I _v	A	6	6
	Maximum back-up fuse for short-circuit protection KS acc. to UL and CSA	I _v	A	6	6
	Rated insulation voltage	U _i	V	500	500
	Rated impulse withstand voltage	U _{imp}	kV	4	4
	Rated operational voltage	U _e	V	230/400	IEC: 230 /400 UL: C300 (120 VAC, 240 VAC) UL: Q300 (125 VDC, 250 VDC)
	Rated frequency	f	Hz	50/60	50/60
	Thermal current	I _{th}	A	6	IEC: 6 ; UL: 2.5
	Rated operational current for AC-15:				
	single-phase 230 V	I _e	A	6	6
	single-phase 400 V			4	4
	Electrical endurance for AC-15		op. c.	50.000	50.000
	Switching of auxiliary loads acc. to standard UL and CSA				C300, Q300
	Electrical endurance for auxiliary loads acc. UL and CSA		op. c.		50.000
	Rated operational current for DC-13:				
	1 pole ... 24 VDC / 48 VDC / 60 VDC / 110 VDC / 220 VDC	I _e	A	6/4/1/0.3/0.05	6/4/1/0.3/0.05
	2 poles in series ... 24 VDC / 48 VDC / 60 VDC / 110 VDC / 220 VDC			6/6/4/1/0.1	6/6/4/1/0.1
	Electrical endurance for DC-13		op. c.	50.000	50.000
	Switching of auxiliary loads acc. to standard UL and CSA				C300, Q300
	Electrical endurance for auxiliary loads acc. UL and CSA		op. c.		50.000
	Terminal capacity:				
rigid (solid and stranded)	S		1 ... 2.5 mm ²	16 ... 14 AWG / 1 ... 2.5 mm ²	
flexible			1 ... 2.5 mm ²	16 ... 14 AWG / 1 ... 2.5 mm ²	
Length of removed wire insulation			7 mm	0.276 in / 7 mm	
Screw			M3	M3	
Screw head			PZ1	PZ1	
Tightening torque			0.8 Nm	7.08 lb-in / 0.8 Nm	
SAFETY	MTTF - Mean time to failure		h	833	694
	MTTF = 1/λ = B10/(0.1 n _{op})				
	MTTF _d - Mean time to failure dangerous		h	1.666	1.388
	MTTF _d = 1/λ _d = B10 _d /(0.1 n _{op})				
	B10 - Number of operating cycles until 10 % of devices fail		op. c.	25.000	25.000
	B10 _d - Number of operating cycles until 10 % of device dangerous		op. c.	50.000	50.000
	B10 _d = B10/ratio of dangerous failures				
	λ - Failure rate		1/h	0.0012	0.00144
	λ = (0.1 n _{op})/B10				
	λ _d - Failure rate dangerous		1/h	0.0006	0.00072
λ _d = (0.1 n _{op})/B10 _d					
Ratio of dangerous failures		%	50	50	
n _{op} - Operating cycles (operating cycles/h)		op. c./h	300	360	

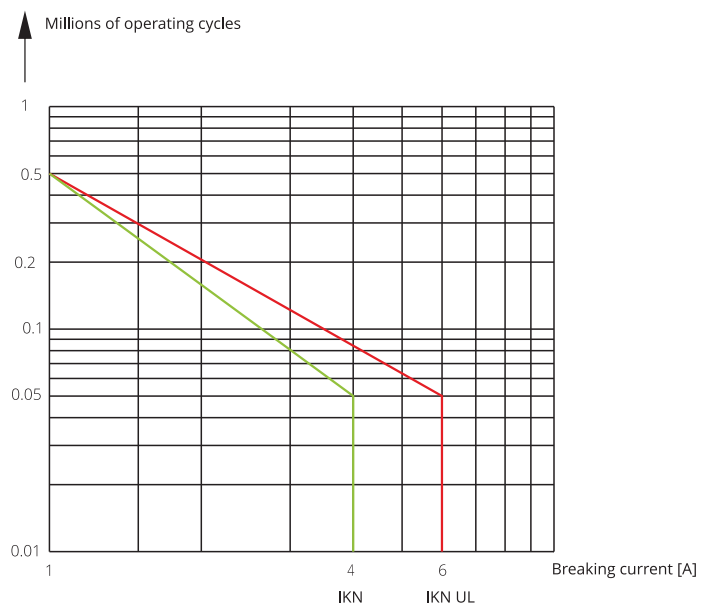
1) IP40 when installed in installation box - distribution boards

INSTALLATION CONTACTORS

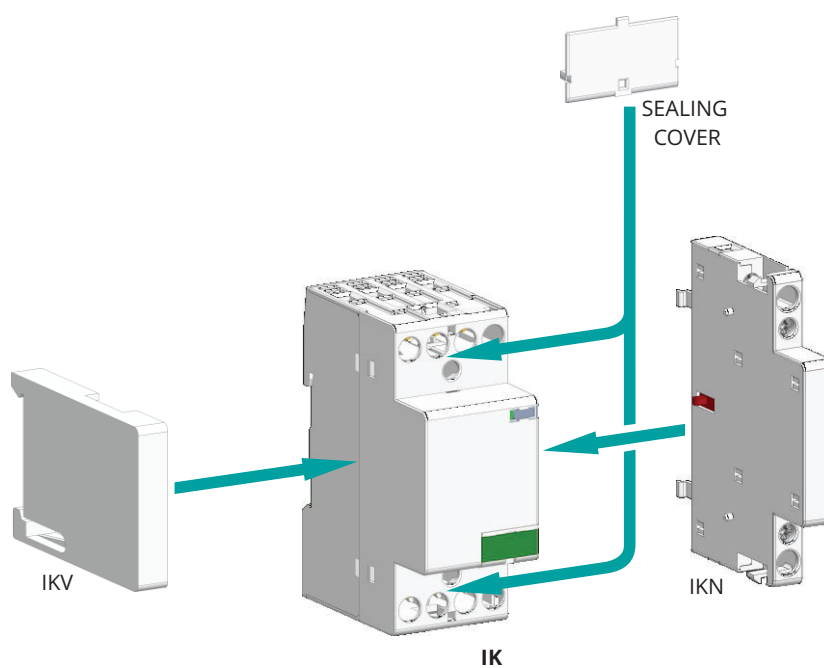
Electrical endurance

AC-15 for IKN, IKN-UL

Diagram 4



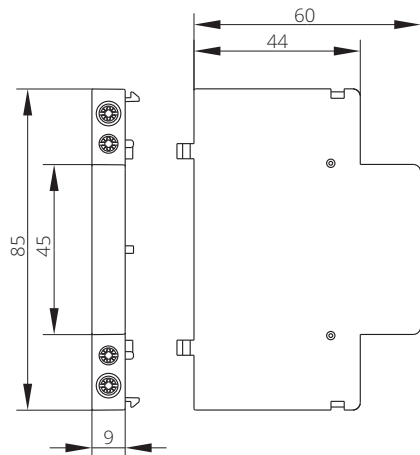
Mounting positions of accessories



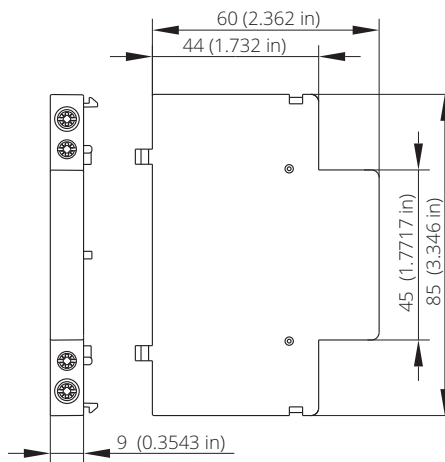
INSTALLATION CONTACTORS

Dimensions (in millimeters unless otherwise stated)

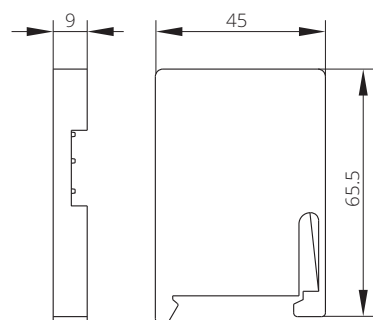
IKN



IKN-UL



IKV



3

DIMENSIONS