



PRODUCT-DETAILS

ESB40-20N-01

ESB40-20N-01 Installation Contactor (NO) 40 A - 2 NO - 0 NC - 24 V - Control Circuit 400 Hz



General Information	
Extended Product Type	ESB40-20N-01
Product ID	1SAE341111M0120
Catalog Description	ESB40-20N-01 Installation Contactor (NO) 40 A - 2 NO - 0 NC - 24 V - Control Circuit 400 Hz
Long Description	<p>The ESB40..N installation contactors are used to control single and three-phase loads up to 40 A and can be operated by AC or DC.</p> <p>These contactors are made for use in household applications as well as in industrial environments.</p> <p>The following benefits are provided:</p> <p>Hum-free operation, low power consumption and integrated overvoltage protection.</p> <p>Various contact combinations and accessories are available.</p>
Ordering	
Minimum Order Quantity	4 piece
Customs Tariff Number	85365080

Popular Downloads	
Data Sheet, Technical	2CDC103051C0201

Information

Instructions and Manuals

2CDC103043M6801

CAD Dimensional
Drawing

2CDC001079B0201

Dimensions

Product Net Width	54 mm
Product Net Depth / Length	65 mm
Product Net Height	85 mm
Product Net Weight	0.37 kg

Technical

Number of Main Contacts NO	2
Number of Main Contacts NC	0
Number of Auxiliary Contacts NO	0
Number of Auxiliary Contacts NC	0
Number of Poles	2P
Standards	IEC/EN 60947-1 IEC/EN 60947-4-1 IEC/EN 61095 UL 60947-1 UL 60947-4-1 IEC 60335-2-40 A2L
Rated Operational Voltage	Main Circuit 220 V DC Main Circuit 400 V AC
Rated Frequency (f)	Control Circuit 400 Hz Control Circuit 50 Hz Control Circuit 60 Hz Control Circuit DC Main Circuit 50 Hz Main Circuit 60 Hz Main Circuit DC
Rated Operational Current AC-1 (I_e)	(NO) 40 A
Rated Operational Current AC-3 (I_e)	(230 V) Single Phase, NO 22 A
Rated Operational Current AC-7a (I_e)	(NO) 40 A
Rated Operational Current AC-7b (I_e)	(230 V) Single Phase, NO 22 A
Rated Operational Power AC-1 (P_e)	(230 V) Single Phase, NO 9.2 kW
Rated Operational Power AC-3 (P_e)	(230 V) Single Phase, NO 3.7 kW
Rated Operational Power AC-7a (P_e)	(230 V) Single Phase, NO 9.2 kW
Rated Operational Power AC-7b (P_e)	(230 V) Single Phase, NO 3.7 kW
Rated Breaking Capacity AC-3	8 x I_e / AC-3
Rated Making Capacity AC-3	10 x I_e / AC-3
Rated Short-time Withstand Current Low Voltage (I_{cw})	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 176 A
Rated Insulation Voltage (U_i)	500 V

Rated Impulse Withstand Voltage (U_{imp})	6 kV
Electrical Durability	AC-1 (NO) 150000 cycle AC-3 (NO) 100000 cycle AC-7a (NO) 150000 cycle AC-7b (NO) 100000 cycle
Maximum Electrical Switching Frequency	(AC-1) 300 cycles per hour (AC-3) 600 cycles per hour (AC-7a) 300 cycles per hour (AC-7b) 600 cycles per hour
Mechanical Durability	1000000 cycle
Coil Operating Limits	(acc. to IEC 60947-4-1) 0.85 ... 1.1 x U_c (at $\theta \leq 55^\circ\text{C}$)
Rated Control Circuit Voltage (U_c)	24 V
Coil Consumption	Average Holding Value 50 / 60 Hz 4.5 V·A Average Holding Value DC 5 W Average Pull-in Value 50 Hz 4.5 V·A Average Pull-in Value 60 Hz 4.5 V·A Average Pull-in Value DC 5 W
Power Loss	at Rated Operating Conditions AC-1 per Pole 3 W
Mounting on DIN Rail	TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715 TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715
Connecting Capacity Main Circuit	Flexible with Ferrule 1x 1.5 ... 16 mm ² Flexible with Ferrule 2x 1.5 ... 10 mm ² Flexible with Insulated Ferrule 1x 1.5 ... 16 mm ² Flexible with Insulated Ferrule 2x 1.5 ... 10 mm ² Flexible 1x 1.5 ... 16 mm ² Flexible 2x 1.5 ... 10 mm ² Rigid 1x 1.5 ... 25 mm ² Rigid 2x 1.5 ... 10 mm ²
Connecting Capacity Control Circuit	Flexible with Ferrule 1x 0.75 ... 2.5 mm ² Flexible with Ferrule 2x 0.75 ... 1.5 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 1 mm ² Flexible 1x 1 ... 4.0 mm ² Flexible 2x 1 ... 2.5 mm ² Rigid 1x 1 ... 4 mm ² Rigid 2x 1 ... 2.5 mm ²
Wire Stripping Length	Control Circuit 7 mm Main Circuit 13 mm
Degree of Protection	IP20
Recommended Screw Driver	Control Circuit Pozidriv 1 Main Circuit Pozidriv 2
Tightening Torque	Control Circuit 0.9 N·m Main Circuit 2.5 N·m
Terminal Type	Screw Terminals
Width in Number of Modular Spacings	3.0
Product Name	Installation Contactor

Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 480 V AC
General Use Rating UL/CSA	(acc. to UL 240 V) 40 A (acc. to UL 480 V) 40 A
Horsepower Rating UL/CSA	(220 ... 240 V AC) Single Phase, NO 3 Hp (440 ... 480 V AC) Single Phase, NO 7.5 Hp
Connecting Capacity Main Circuit UL/CSA	Solid 16-4 AWG Stranded 16-4 AWG
Connecting Capacity Control Circuit UL/CSA	Solid 16-10 AWG Stranded 16-10 AWG
Tightening Torque UL/CSA	Control Circuit 8 in·lb Main Circuit 20 in·lb
Full Load Amps Motor Use	(220 ... 240 V AC) Single Phase, NO 22 A (440 ... 480 V AC) Single Phase, NO 21 A

Environmental

Ambient Air Temperature	Operation -25 ... +55 °C Storage -40 ... +80 °C
Maximum Operating Altitude Permissible	2000 m
Resistance to Shock acc. to IEC 60068-2-27	11 ms Pulse 15g
Pollution Degree	3

Material Compliance

Conflict Minerals Reporting Template (CMRT)	9AKK108467A5658
REACH Declaration	2CMT2021-006202
RoHS Information	2CMT2021-006277
RoHS Status	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019
Toxic Substances Control Act - TSCA	2CMT2023-006525
WEEE B2C / B2B	Business To Consumer
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)

ABB EcoSolutions

End Of Life Disassembling Instructions	1SBC100156C0267
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Certificates and Declarations

A2L Certificate - IEC	1SAA920000-4601
ABS Certificate	1SAA920000-0101
CB Certificate	1SAA920005-2001
CQC Certificate	CQC2017010304993562 CQC2017010304993563
Declaration of Conformity - CCC	2020980304001310 2020980304001313
Declaration of Conformity - CE	1SAD101100-3301
Declaration of Conformity - UKCA	1SAD201100-3301
DNV Certificate	1SAA920000-0306
EAC Certificate	1SAA920001-2702
RINA Certificate	1SAA920000-0801
RMRS Certificate	1SAA920000-0705
UL Certificate	E191658-19960301

Container Information

Package Level 1 Units	box 4 piece
Package Level 1 Width	88 mm
Package Level 1 Depth / Length	222 mm
Package Level 1 Height	69.5 mm
Package Level 1 Gross Weight	1.48 kg
Package Level 1 EAN	4013614520037
Package Level 2 EAN	4013614567414

External Classifications and Standards

Object Classification Code	Q
ETIM 7	EC001653 - Installation contactor for distribution board
ETIM 8	EC001653 - Installation contactor for distribution board
ETIM 9	EC001653 - Installation contactor for distribution board
eClass	V11.0 : 27142308
UNSPSC	39121529
IDEA Granular Category Code (IGCC)	4759 >> Installation contactor for distribution board

Accessories

Identifier	Description	Type	Quantity	Unit Of Measure
1SAE901901R1011	EH04-11N Auxiliary Contact - 0 NO - 0 NC - Auxiliary Circuit 50 Hz	EH04-11N	1	piece
1SAE901901M1011	EH04-11N Auxiliary Contact - 0 NO - 0 NC - Auxiliary Circuit 50 Hz	EH04-11N	1	piece
1SAE901901R1020	EH04-20N Auxiliary Contact - 0 NO - 0 NC - Auxiliary Circuit 50 Hz	EH04-20N	1	piece
1SAE901901M1020	EH04-20N Auxiliary Contact - 0 NO - 0 NC - Auxiliary Circuit 50 Hz	EH04-20N	1	piece
GHE3401903R0001	ESB-PLK40/63 Sealing Cover ESB-PLK40/63		1	piece
GHE3201902R0001	ESB-DIS Distance Piece	ESB-DIS	1	piece

Categories

Low Voltage Products and Systems → Control Products → Contactors → Installation Contactors

Low Voltage Products and Systems → Modular DIN Rail Products → Command and Signalling Devices → Installation Contactors

