




---

 PRODUCT-DETAILS

## ESB20-20N-01

### ESB20-20N-01 Installation Contactor (NO) 20 A - 2 NO - 0 NC - 24 V - Control Circuit DC




---

#### General Information

<b>Extended Product Type:</b>	ESB20-20N-01
<b>Product ID:</b>	1SBE121111M0120
<b>Catalog Description:</b>	ESB20-20N-01 Installation Contactor (NO) 20 A - 2 NO - 0 NC - 24 V - Control Circuit DC
<b>Long Description:</b>	<p>The ESB20..N installation contactors are used to control single loads up to 20 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>
<b>Display Name:</b>	ESB20-20N-01

---

#### Ordering

<b>Minimum Order Quantity:</b>	12 piece
<b>Customs Tariff Number:</b>	85365080

## Popular Downloads

<b>EPLAN Data:</b>	9AAC404715_EPLAN
<b>Data Sheet, Technical Information:</b>	2CDC103051C0201
<b>Instructions and Manuals:</b>	2CDC103043M6801
<b>CAD Dimensional Drawing:</b>	2CDC001079B0201

## Dimensions

<b>Product Net Width:</b>	18 mm
<b>Product Net Depth / Length:</b>	65 mm
<b>Product Net Height:</b>	85 mm
<b>Product Net Weight:</b>	0.14 kg
<b>Dimension Diagram:</b>	1SBB505186D3001

## Technical

<b>Number of Main Contacts NO:</b>	2
<b>Number of Main Contacts NC:</b>	0
<b>Number of Auxiliary Contacts NO:</b>	0
<b>Number of Auxiliary Contacts NC:</b>	0
<b>Number of Poles:</b>	2P
<b>Standards:</b>	IEC/EN 60947-1 IEC/EN 60947-4-1 UL 60947-1 UL 60947-4-1 IEC/EN 61095 IEC 60335-2-40 A2L
<b>Rated Operational Voltage:</b>	Main Circuit 220 V DC Main Circuit 240 V AC
<b>Rated Frequency (f):</b>	Control Circuit DC Control Circuit 50 Hz Control Circuit 60 Hz Control Circuit 400 Hz Main Circuit DC Main Circuit 50 Hz Main Circuit 60 Hz
<b>Rated Operational Current AC-1 (I<sub>e</sub>):</b>	(NO) 20 A
<b>Rated Operational Current AC-3 (I<sub>e</sub>):</b>	(230 V) Single Phase, NO 9 A
<b>Rated Operational Current AC-7a (I<sub>e</sub>):</b>	(NO) 20 A
<b>Rated Operational Current AC-7b (I<sub>e</sub>):</b>	(230 V) Single Phase, NO 9 A
<b>Rated Operational Power AC-1 (P<sub>e</sub>):</b>	(230 V) Single Phase, NO 4.6 kW
<b>Rated Operational Power AC-3 (P<sub>e</sub>):</b>	(230 V) Single Phase, NO 1.3 kW
<b>Rated Operational Power AC-7a (P<sub>e</sub>):</b>	(230 V) Single Phase, NO 4.6 kW
<b>Rated Operational Power AC-7b (P<sub>e</sub>):</b>	(230 V) Single Phase, NO 1.3 kW
<b>Rated Breaking Capacity AC-3:</b>	8 x I <sub>e</sub> / AC-3
<b>Rated Making Capacity AC-3:</b>	10 x I <sub>e</sub> / 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 72 A

<b>Rated Insulation Voltage (<math>U_i</math>):</b>	400 V
<b>Rated Impulse Withstand Voltage (<math>U_{imp}</math>):</b>	6 kV
<b>Electrical Durability:</b>	AC-1 (NO) 150000 cycle AC-3 (NO) 150000 cycle AC-7a (NO) 150000 cycle AC-7b (NO) 150000 cycle
<b>Maximum Electrical Switching Frequency:</b>	(AC-1) 300 cycles per hour (AC-3) 600 cycles per hour (AC-7a) 300 cycles per hour (AC-7b) 600 cycles per hour
<b>Mechanical Durability:</b>	Nr. Operations 1000000 cycle
<b>Coil Operating Limits:</b>	(acc. to IEC 60947-4-1) 0.85 ... 1.1 x $U_c$ (at $\theta \leq 55$ °C)
<b>Rated Control Circuit Voltage (<math>U_c</math>):</b>	24 V
<b>Coil Consumption:</b>	Average Holding Value 50 / 60 Hz 2.5 V·A Average Holding Value DC 2.5 W Average Pull-in Value 50 Hz 2.5 V·A Average Pull-in Value 60 Hz 2.5 V·A Average Pull-in Value DC 2.5 W
<b>Power Loss:</b>	at Rated Operating Conditions AC-1 per Pole 1.4 W
<b>Mounting on DIN Rail:</b>	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
<b>Connecting Capacity Main Circuit:</b>	Flexible with Ferrule 1x 1 ... 6 mm <sup>2</sup> Flexible with Ferrule 2x 1 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 1 ... 6 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 1 ... 1.5 mm <sup>2</sup> Flexible 1x 1 ... 6 mm <sup>2</sup> Flexible 2x 1 ... 4 mm <sup>2</sup> Rigid 1x 1 ... 10 mm <sup>2</sup> Rigid 2x 1 ... 4 mm <sup>2</sup>
<b>Connecting Capacity Control Circuit:</b>	Flexible with Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.75 ... 1 mm <sup>2</sup> Flexible 1x 1 ... 2.5 mm <sup>2</sup> Flexible 2x 1 ... 1.5 mm <sup>2</sup> Rigid 1x 0.5 ... 4 mm <sup>2</sup> Rigid 2x 0.75 ... 2.5 mm <sup>2</sup>
<b>Wire Stripping Length:</b>	Control Circuit 7 mm Main Circuit 10 mm
<b>Degree of Protection:</b>	IP20
<b>Recommended Screw Driver:</b>	Control Circuit Pozidriv 1 Main Circuit Pozidriv 1
<b>Tightening Torque:</b>	Control Circuit 0.9 N·m Main Circuit 1.2 N·m
<b>Terminal Type:</b>	Screw Terminals
<b>Width in Number of Modular Spacings:</b>	1
<b>Product Name:</b>	Installation Contactor

## Technical UL/CSA

<b>Maximum Operating Voltage UL/CSA:</b>	Main Circuit 240 V AC
<b>General Use Rating UL/CSA:</b>	(acc. to UL 240 V) 20 A

<b>Horsepower Rating UL/CSA:</b>	(220 ... 240 V AC) Single Phase, NO 1 Hp
<b>Connecting Capacity Main Circuit UL/CSA:</b>	Solid 14-8 AWG Stranded 14-8 AWG
<b>Connecting Capacity Control Circuit UL/CSA:</b>	Solid 16-10 AWG Stranded 16-10 AWG
<b>Tightening Torque UL/CSA:</b>	Control Circuit 8 in-lb Main Circuit 11 in-lb
<b>Full Load Amps Motor Use:</b>	(220 ... 240 V AC) Single Phase, NO 8 A

## Environmental

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

## Material Compliance

<b>Conflict Minerals Reporting Template (CMRT):</b>	9AKK108467A5658
<b>REACH Declaration:</b>	2CMT2021-006202
<b>RoHS Declaration:</b>	2CMT2021-006277
<b>RoHS Information:</b>	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019
<b>SCIP:</b>	dacaaf24-6234-4047-87c2-1011b5a22d0c Bulgaria
<b>Simplified SCIP:</b>	0e9eb8b7-2314-4753-a41b-e00648865aaa Czechia 0ece68ae-971a-4b3c-be2b-eb46da3a295c Germany 186115b4-8640-4b65-8588-f05dfd1b25e5 Germany 1d02fa64-57ee-4ffe-bcbe-85f8bc35161b Spain 1d603904-d4cd-4e5d-ab12-bde2dbb8d712 Germany 209c2f3e-ca50-449b-9408-0d1957e6de3e Portugal 25a8e323-63d9-4b2d-a3f4-f475ecb5aa24 Netherlands 25ce6543-7837-479b-b5f4-02398d31bdc8 Germany 25cfc145-0b5d-46e2-9ee1-2532a392e806 Finland 3815dff-7951-4bc2-a134-8efab3a06be6 Norway 40295e4f-34e1-4b8e-83a5-a54c58ebd456 Poland 4c6a9f1d-08dd-4b1f-8b65-ba3b8722d48 Belgium 521e63de-9062-400a-a6d9-48d0f0f60aee Italy 6aeb4f4e-e5fa-4b15-936b-80538e6ee813 France 79bec44c-6000-46c6-8c15-92d3d3755a68 Greece 8f2b9a4c-8830-469e-8b27-b279f1a90346 Estonia 92ee5f61-e0ee-4029-b585-3ba026f7341b Poland ad389e5d-c3c3-41cc-834a-dc8ef6f5456f Poland ad537ca6-7b7c-4f34-9f98-df17aec955e0 Sweden b948b0e7-43c4-48f5-a5bd-24635a9af99c Hungary bb06cd36-91fd-48d1-ae9c-898d3c174a62 Denmark d13ad294-27d9-4775-a20e-5cdfc6faa6a5 Hungary de3832c1-24c7-42b4-9200-d1c9377f29b Sweden e24872bc-8281-406c-91de-0d206c41d60d Germany e8e78d4b-908a-46cb-89e5-19d29db83f00 Croatia eba5348e-e6ed-489f-98d8-b33d8b1916aa France ebafe3aa-cd14-47d7-a83b-4c27f8e11adb Belgium
<b>Toxic Substances Control Act - TSCA:</b>	2CMT2023-006525
<b>WEEE B2C / B2B:</b>	Business To Consumer

**WEEE Category:** 5. Small Equipment (No External Dimension More Than 50 cm)

**ABB EcoSolutions**

**End Of Life Disassembling Instructions:** 1SBC100156C0268

**Environmental Product Declaration - EPD:** 1SAC200416H0001

**Certificates and Declarations**

**A2L Certificate – IEC:** 1SAA920000-4601

**ABS Certificate:** 1SAA920000-0101

**CB Certificate:** 1SAA920007-2001

**CCC Certificate:** 2024010304659814  
2024010304659813

**Declaration of Conformity - CE:** 1SAD101100-3301

**Declaration of Conformity - UKCA:** 1SAD201100-3301

**DNV Certificate:** 1SAA920000-0306

**NF Certificate:** 1SAA920002-1201

**UL Certificate:** E191658-19960301

**Container Information**

**Package Level 1 Units:** box 12 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:** 1.68 kg

**Package Level 1 EAN:** 3471523004962

**Package Level 2 EAN:** 4013614583513

**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	Qty	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

### Categories

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

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

