MKDSP 95/ 1-20,0-FL - PCB terminal block

1841856

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Printed circuit board terminal, nominal current: 232 A, rated voltage (III/2): 1000 V, nominal cross section: 95 mm^2, number of potentials: 1, number of rows: 1, number of positions per row: 1, product range: MKDSP 95/..-F, pitch: 20 mm, connection method: Screw connection with tension sleeve, screw head form: T40 Torx®, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 4 mm, number of solder pins per potential: 6, type of packaging: packed in cardboard

Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Quick and convenient testing using integrated test option
- Mounting flanges reduce the mechanical strain on the soldering spots
- Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve

Commercial data

Item number	1841856
Packing unit	5 pc
Minimum order quantity	5 pc
Sales key	AA16
Product key	AAPIBA
GTIN	4046356920018
Weight per piece (including packing)	156.6 g
Weight per piece (excluding packing)	107 g
Customs tariff number	85369010
Country of origin	SK

Technical data

Product properties

Product type	Printed circuit board terminal
Product family	MKDSP 95/..-F
Product line	COMBICON Terminals XXL
Type	Standard
Number of positions	1
Pitch	20 mm
Number of connections	1
Number of rows	1
Number of potentials	1
Pin layout	Linear pinning
Solder pins per potential	6

Electrical properties

Properties

Nominal current I_N	232 A
Nominal voltage U_N	1000 V
Rated voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

Connection data

Connection technology

Type	Standard
Nominal cross section	95 mm²

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor cross-section rigid	10 mm² ... 16 mm²
Single-conductor/terminal point multi-stranded	16 mm² ... 95 mm²
Conductor cross-section flexible	25 mm² ... 95 mm²
Conductor cross-section AWG	6 ... 3/0
Conductor cross-section flexible, with ferrule without plastic sleeve	16 mm² ... 95 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	16 mm² ... 95 mm²
2 conductors with same cross section, solid	16 mm² ... 25 mm²
2 conductors with same cross section, flexible	16 mm² ... 25 mm²
2 conductors with same cross section, flexible, with ferrule	16 mm² ... 25 mm²

without plastic sleeve	
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	16 mm² ... 25 mm²
Stripping length	25 mm
Drive form screw head	Torx® (T40)
Tightening torque	10 Nm

Information on the aluminum conductor

Cross section / torque / form of conductor	Cable cross section:95 mm²; Torque:10 Nm; Form of cable:sector-shaped, single-strand, class 1, α = 90°(se)
Specification	DIN VDE 0276-603 (VDE 0276-603):2010-03
Note on conductor pretreatment	The following measures are required for durable and reliable contacting of the aluminum conductor: the stripped end of the aluminum conductor must be separated from the oxide layer using a blade, and immediately dipped in non-acid and non-alkali Vaseline. The pretreatment must be repeated when connecting the conductors anew.

Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

Material specifications

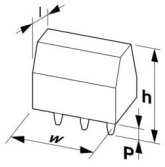
Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	Tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface soldering area (top layer)	Tin (4 - 8 µm Sn)

Material data - housing

Color (Housing)	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the ball pressure test according to EN 60695-10-2	125 °C

Dimensions

Dimensional drawing	
Pitch	20 mm
Width [w]	52 mm
Height [h]	73 mm
Length [l]	44 mm
Installed height	69 mm
Solder pin length [P]	4 mm
Pin dimensions	3 x 3 mm

PCB design

Pin spacing	13.8 mm
Hole diameter	4.8 mm

Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
	IEC 60999-2:2003-05
Result	Test passed

Pull-out test

Specification	IEC 60999-1:1999-11
	IEC 60999-2:2003-05
Conductor cross-section/conductor type/tractive force setpoint/actual value	10 mm² / solid / > 90 N
	16 mm² / stranded / > 100 N
	25 mm² / flexible / > 135 N
	95 mm² / stranded / > 351 N

Electrical tests

Temperature-rise test

Specification	IEC 60947-7-4:2013-08
Requirement temperature-rise test	The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature.

Short-time withstand current

Specification	IEC 60947-7-4:2013-08

Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

Air clearances and creepage distances |

Specification	IEC 60947-1:2007-06 + A1:2010-12
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	12.5 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

Environmental and real-life conditions

Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

Glow-wire test

Specification	IEC 60695-2-10:2000-10
Temperature	850 °C
Time of exposure	5 s

Aging

Specification	IEC 60947-7-4:2013-08

Ambient conditions

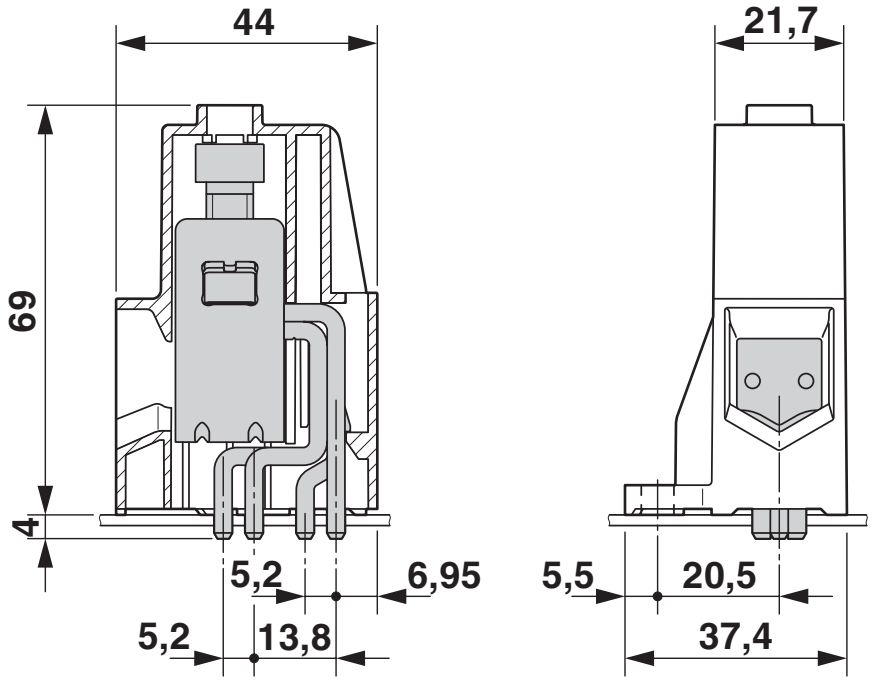
Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

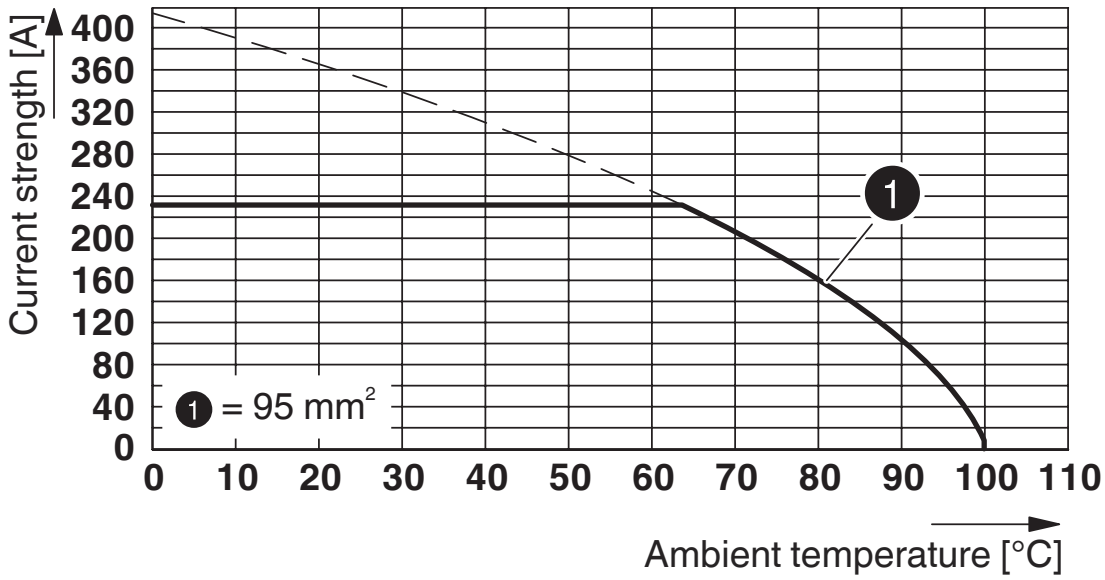
Type of packaging	packed in cardboard
Outer packaging type	Carton

Drawings

Dimensional drawing



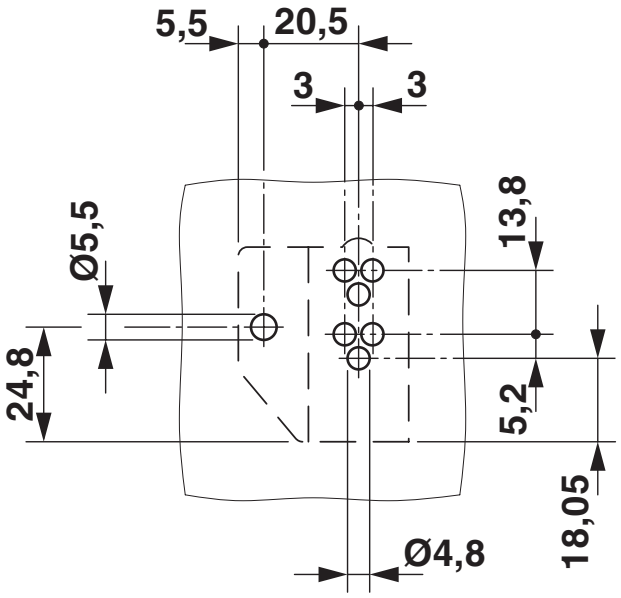
Diagram



Type: MKDSP 95/ 4-20,0-F

Tested in accordance with DIN EN 60512-5-2:2003-01
Reduction factor = 1
Number of positions: 4

Drilling plan/solder pad geometry



Approvals

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cULus Recognized
Approval ID: E60425-19770427

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	600 V	200 A	6 - 3/0	-
C				
	600 V	200 A	6 - 3/0	-

VDE approval of drawings
Approval ID: 40041859

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	1000 V	232 A	-	10 - 95

Classifications

ECLASS

ECLASS-13.0	27460101
ECLASS-15.0	27460101

ETIM

ETIM 9.0	EC002643

UNSPSC

UNSPSC 21.0	39121400

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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