

Control electronics.

VTD-XX.XX-K3



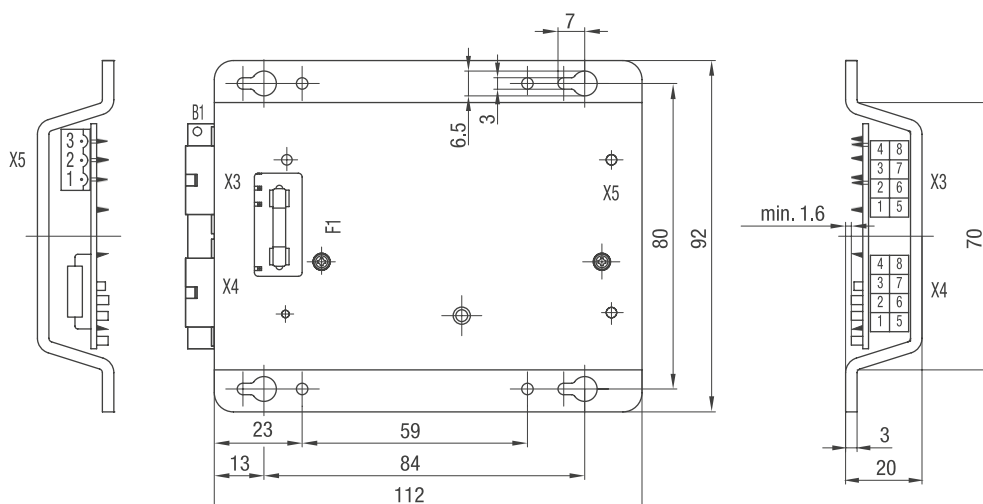
Operating electronics for driving 3-phase BLDC motors from the ECI-42.XX-K1 and ECI-63.20-K1 series. Design in digital technology for use as OEM electronics in series applications

- Motor commutation and speed control via microcontroller
- Control parameters are each specifically designed for the motor
- Four-quadrant controller
- Speed setting via analog nominal value 0 ... 10 V DC
- Speed actual value processing and output
- Setting of the operating mode via 2 control inputs
- Monitoring function for output current and voltage

Nominal data			
Type		VTD-24.XX-K3	VTD-48.XX-K3
Nominal voltage (Power supply U_N)	V DC	24	48
Permissible supply voltage range (U)	V DC	18 ... 30	30 ... 52
Permissible continuous output current*	A	3 - 12 depending on model	3 - 6 depending on model
Maximum commutation frequency	kHz	2	
Switching frequency	kHz	20	
Minimum connection inductance	mH	0.1	
Digital inputs	Number	2	
Digital outputs	Number	1	
Analog inputs	Number	1	
Efficiency (in optimum working range)	%	95	
Permissible ambient temperature range (T_U)	°C	0 ... +40	
Permissible ambient humidity**	%	5 ... 93	
Protection class		IP 00	
Weight	kg	0.2	
Order number		On request	On request
Subject to alterations			
Commutation: block commutation (by means of 3 digital Hall sensors)			
* Applicable at rated temperature $T_U = 40^\circ\text{C}$			
** Condensation not permitted			

Technical drawing

All dimensions in mm



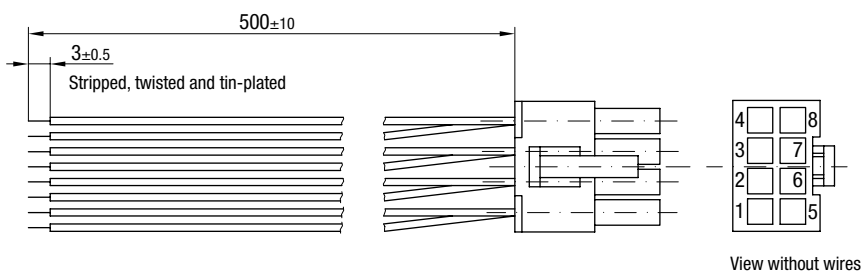
Electrical connection

Pin	Control plug X3		Motor plug X4		Capacitor plug X5	
1	A	Operating mode	L3	Motor phase	U+	Capacitor connector
2	+U _B	Operating voltage	+U-Hall	Hall sensor supply	U-	Capacitor connector
3	n.c.	Not allocated	RLG2	Hall signal 2	BR	Braking resistor
4	S+	Set value input	RLG1	Hall signal 1		
5	B	Operating mode	L2	Motor phase 2		
6	Actual	Actual speed value	L1	Motor phase 1		
7	GND	Ground	GND Hall	Ground Hall sensor supply		
8	S-	Ground set value input	RLG3	Hall signal 3		

Accessories

Cable connector X3

Type	Order no.
X3 Control plug	194 0017 000



Color assignment

No.	Color	Function
1	white (AWG 20)	A
2	red (AWG 18)	+U _B
3	violet (AWG 20)	n.c.
4	green (AWG 20)	S+
5	gray (AWG 20)	B
6	yellow (AWG 20)	Actual
7	black (AWG 18)	GND
8	brown (AWG 20)	S-