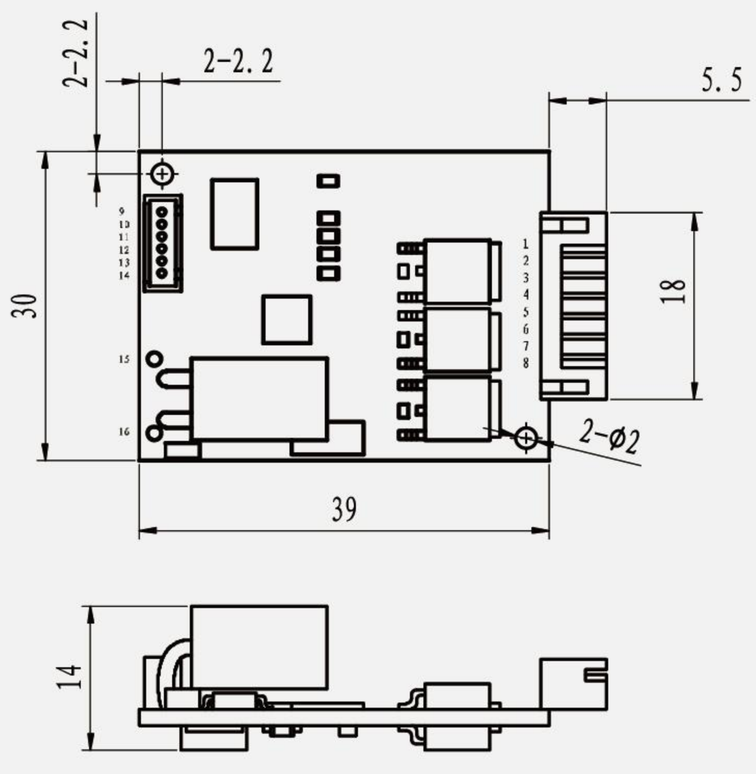
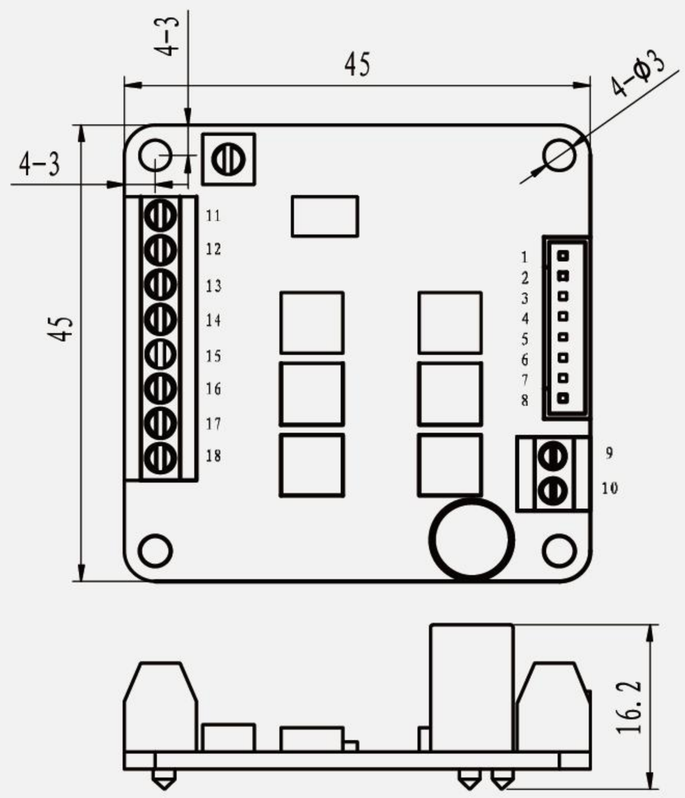
		VSC 3002S	VSC 3003S
Operating Mode		10-30VDC, Max. Current 2A Speed controller with hall sensor, Open loop Overload protection Stall protection Sensor error protection	8-30VDC, Max. Current 3A Speed controller with hall sensor, Open loop Overload protection Stall protection Sensor error protection
Electrical Data			
1	DC motor up to	60W	90W
2	Operating Voltage Vcc	10-30 VDC	8-30 VDC
3	Max.output current	5A , <60S	5A , <60S
4	Continuous output current	2A	3A
5	Pulse width modulation frequency	20KHz	20KHz
6	Sampling rate PI current controller	20KHz	20KHz
7	Max.Speed (1 pole pair)	60000rpm	60000rpm
8	Efficiency	92%	92%
Inputs/Outputs			
9	Hall sensor signal	HA,HB,HC	HA,HB,HC
10	Digital inputs/outputs	4	5
11	Set value "SP"	Set value speed 0…. +5V (1024 steps)	Set value speed 0…. +5V (1024 steps)
12	Enable "EN"	Enable 0…+5V	Enable 0…+5V
13	Direction "F/R"	Direction 0…+5V	Direction 0…+5V
14	Brake "BK"	Brake 0…+5V	Brake 0…+5V
15	Speed Feedback "PG"	- - -	TTL
16	Status Indicators	Operation: LED light/Blink at 1 HZ; Error: LED Blink at 20Hz	
17	Hall sensor supply voltage	+5 VDC	+5 VDC
18	Hall & Digital signal ground	GND	GND
Environmental Conditions			
18	Temperature - Operation	-30....+45℃	-30....+45℃
19	Temperature - Storage	-40....+85℃	-40....+85℃
Mechanical Data			
20	Weight	Approx. 15 g	Approx. 20 g
21	Dimensisons (L x W x H)	30 x 39 x 14mm	45 x 45 x16.2mm
22	Mounting holes	for screws M2	for screws M3
23	Connections		

Pin9	BK	Pin1	+5V, Output	Pin11	PG	Pin1	+5V, Output
Pin10	SP	Pin2	HA	Pin12	SP	Pin2	HA
Pin11	F/R	Pin3	HB	Pin13	GND	Pin3	HB
Pin12	EN	Pin4	HC	Pin14	GND	Pin4	HC
Pin13	+5V, Output	Pin5	GND	Pin15	+5V, Output	Pin5	GND
Pin14	GND	Pin6	MA	Pin16	EN	Pin6	MA
Pin15	POWER +	Pin7	MB	Pin17	F/R	Pin7	MB
Pin16	POWER -	Pin8	MC	Pin18	BK	Pin8	MC
						Pin9	POWER +
						Pin10	POWER -