

1. GENERAL TECHNICAL DATA

Input Voltage	5 V to 35 V
Peak Motor Current	8 A
Control Voltage Level	3.3 V
PWM Frequency	10 Hz to 325 Hz
Temperature	-40°C to 105°C
Dimensions	22x30x10 mm
Weight	10 g

2. DESCRIPTION

The DRV-901 is a brushless motor driver designed as an OEM solution for driving 3-phase brushless motors. It operates with typical DC supply voltage of either 12V or 24V. The DRV-901 integrates all essential motor control functions, simplifying the control process while offering built-in protection features to ensure enhanced system reliability.

3. FEATURES

- Three-phase permanent magnet synchronous motor driver with integrated sensorless motor control algorithm:
 - Code-free Field Oriented Control (FOC).
 - Optimized speed reference profile.
 - Pre-configured motor startup and stop options.
 - Anti-voltage surge to prevent overvoltage.
- 5 V to 35 V operating voltage.
- Output current capability: 8 A peak.
- Speed loop accuracy: 3% with internal clock and 1% with external clock reference.
- PWM frequency range: 10 Hz to 325 Hz.
- Built-in current sensing.

4. TYPICAL APPLICATIONS

- Drone
- Industrial actuators
- Sprayers
- Seed metering

TABLE OF CONTENTS

1. GENERAL TECHNICAL DATA	1
2. DESCRIPTION	1
3. FEATURES	1
4. TYPICAL APPLICATIONS	1
5. REVISION HISTORY	2
6. APPLICABLE PART NUMBERS	2
7. INTERFACES	3
7.1. POWER INPUT	3
7.1.1. Pinout	3
7.1.2. Suggested Mating Connector	3
7.2. MOTOR	4
7.2.1. Pinout	4
7.2.2. Suggested Mating Connector	4
7.3. CONTROL	5
7.3.1. Pinout	5
7.3.2. Suggested Mating Connector	5
8. MECHANICAL DRAWING.....	6

5. REVISION HISTORY

Revision	Date	Notes
A	May 2025	Initial release

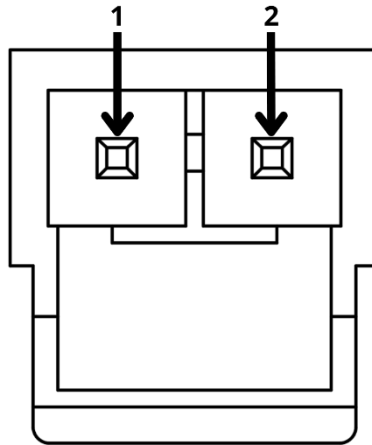
6. APPLICABLE PART NUMBERS

Part Number	Applicable	Notes
P.QFIRE.DRV.90.1.1	YES	

7. INTERFACES

7.1. POWER INPUT

7.1.1. Pinout



Connector: 105309-1102 (MOLEX)

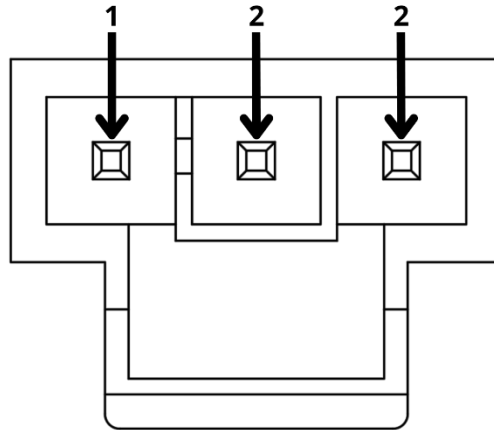
Number	Name	Type	Description
1	VCC	PWR	Device power supply
2	GND	PWR	Device ground

7.1.2. Suggested Mating Connector

Part Number	Quantity	Description
105307-1202	1	Receptacle Housing
105300-2100	2	Contact
105325-1002	1	OPTIONAL – Terminal Position Assurance

7.2. MOTOR

7.2.1. Pinout



Connector: 105309-1103 (MOLEX)

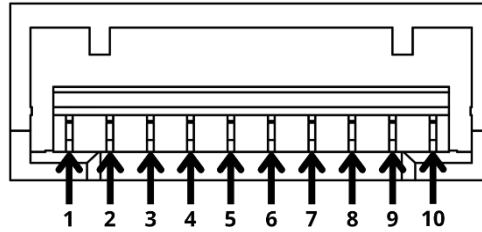
Number	Name	Type	Description
1	A	OUT	Motor phase A
2	B	OUT	Motor phase B
3	C	OUT	Motor phase C

7.2.2. Suggested Mating Connector

Part Number	Quantity	Description
105307-1203	1	Receptacle Housing
105300-2100	3	Contact
105325-1003	1	OPTIONAL - Terminal Position Assurance

7.3. CONTROL

7.3.1. Pinout



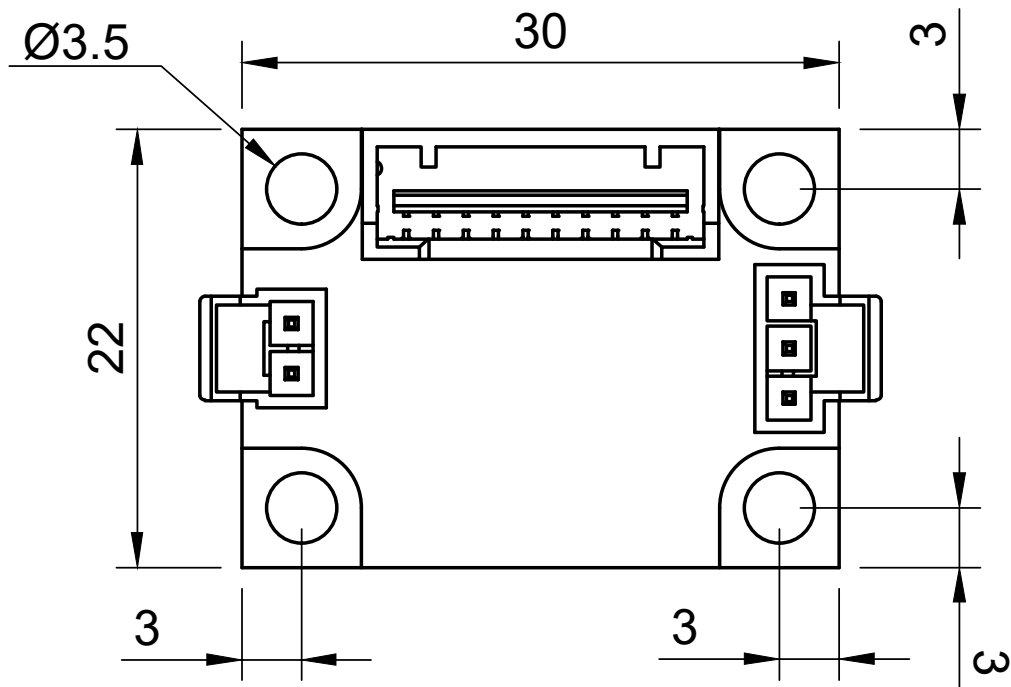
Connector: 503159-1000 (MOLEX)

Number	Name	Type	Description
1	FAULT	OUT	Fault status
2	SOX	OUT	Current sense
3	FG	OUT	Speed indication
4	DRVOFF	IN	Shutdown command
5	BRAKE	IN	Brake command
6	DIR	IN	Direction command
7	SPEED	IN	Speed command (PWM)
8	NC	---	Do not connect
9	NC	---	Do not connect
10	GND	PWR	Device ground

7.3.2. Suggested Mating Connector

Part Number	Quantity	Description
502578-1000	1	Plug Housing
213028-1000	10	Contact

8. MECHANICAL DRAWING



All dimensions in mm