Magene

MAGENE
EBIKE SYSTEM

2023 EDITION

Magene

About Magene

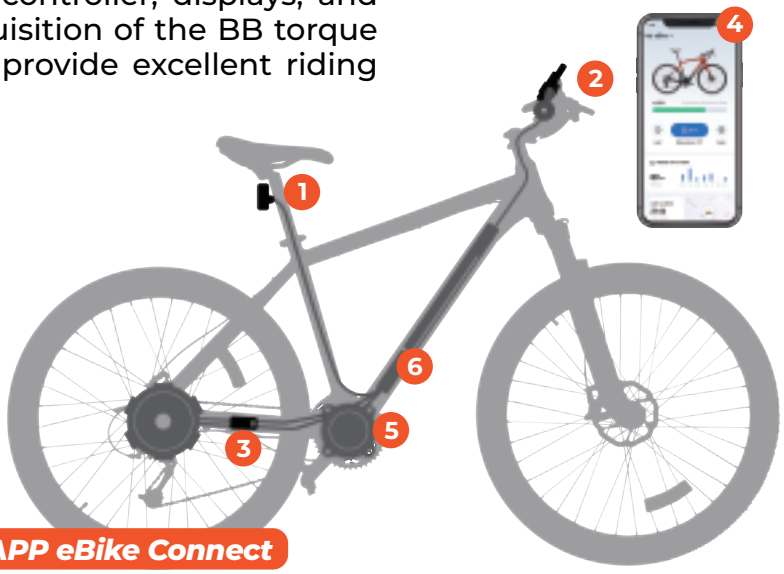
Founded in December 2015, Qingdao Magene Intelligence Technology Co., Ltd. has always been committed to the R&D of intelligent, fun, and information-based cycling equipment.

Focusing on users' needs and oriented by the development trend of cycling, Magene applies cutting-edge R&D technologies and combines with scientific innovation and sports technology coordinates with production and sales service. Magene aims to improve users' experience by providing high-end indoor&outdoor riding equipment, customized hardware, and software support.

In the field of eBike, based on the experience and R&D strength in the production of indoor and outdoor cycling equipment, Magene can provide complete eBike solutions, including the design, production, and adaptation of all components in the system, providing a safer, more comfortable, and more convenient cycling experience. In order to adapt to different eBike models and riding scenarios, as well as meet the needs of different consumers, Magene eBike system adopts an independently developed intelligent algorithm and on-site one-to-one model adjustment by engineers to ensure different riding feelings for each model.

eBike Solution

Magene eBike system is designed to guarantee to ride safely and conveniently by adding a radar sensor, electronic shifting, and other smart devices. Relying on the intelligent algorithm (Auto Assist, Smooth Assist) of the controller, displays, and APP as well as the precise data acquisition of the BB torque sensor, Magene eBike solution can provide excellent riding experience.



1 | RL51 RADAR SENSOR

- Work with the taillight to get more safety warnings
- Work with the display to observe the vehicles behind without looking back
- Integrated into eBike systems through wired connection

2 | DISPLAY

- Built-in Bluetooth, better interactions and user experience with APP
- Auto assist interaction supportive
- Electronic shifting supportive

4 | APP eBike Connect

- OTA Upgrading together with all electronic components
- Setting function like display key customize, assist level customize etc.
- Cycling and cycling record

3 | ED20 ELECTRONIC SHIFTING

- More stable performance through wired connection to access the system
- Small size, easy to install, and can also be hidden in the bike frame;
- Cost reduced by 80% compared to the electric rear derailleur

5 | SR20 BB TORQUE SENSOR

- Hollow BB, axle and sleeve separated, axle and spider integrated, weight only 460g, saving 50% installation and dismount time
- Digital signal, delay≤10ms, precision ±1.5%, more advanced and smart cycling experience

6 | CONTROLLER

- Centralized outlet design and equipped with waterproof cables
- Easier to plug in and out
- 6 mm-diameter connector and 35.5 mm-length cables, easier to hide
- Automatic assist and smooth assist algorithm

CONTROLLER

The Magene controller adopts a centralized outlet design and is equipped with waterproof cables as a standard for avoiding damage from water. A variety of controller products, the power range covers 250W-750W, can meet different ebike models and riding requirements.

- Centralized outlet design and equipped with waterproof cables
- Easier to plug in and out
- 6 mm-diameter connector and 35.5 mm-length cables, easier to hide
- Automatic assist and smooth assist algorithm

1 | CR31 Controller	250W-350W Compatible
2 | CR71 Controller	500W-750W Compatible
3 | CR30 Controller	250W-350W Compatible
4 | CR70 Controller	500W-750W Compatible

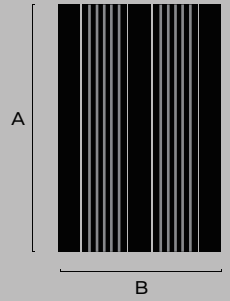
CR31 CONTROLLER

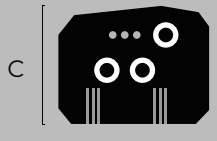
250W-350W

- 250W-350W compatible
- Smart device supportive by wire
- Auto Assist Function, Smooth Assist Function
- Small Size(85*48*30mm)， easy to hide

SPECIFICATION

	Model No.		CR31			
Basic Info	Dimension	A(mm)	85	Core Data	Type	FOC
		B(mm)	48		Communication	CAN
		C(mm)	30	Function	Assist Level	Configurable
	Weight(g)		315		Speed Limit	Configurable
	Operation Temperature(°C)		-20~50		Walk Assistance	Configurable
	Storage Temperature(°C)		-25~55		Auto Assist	Available
	Waterproof		IPX6		Smooth Assist	Available
Core Data	Rated Voltage(DCV)		36/48		Light	Available
	Low Voltage Protection(DCV)		31/41		Light Drive(DCV)	36/48
	Current Limit(A)		12/15		Power-Off during Brake	Available
	Rated Power(W)		250/350		Throttle Function	Available
	PAS Mode		Speed; Torque		Upgrading	OTA





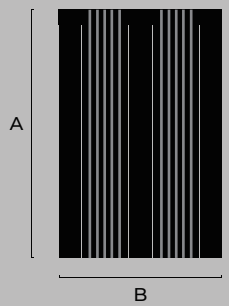
CR71 CONTROLLER

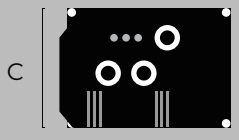
500W-750W

- 500W-750W compatible
- Smart device supportive by wire
- Auto Assist Function, Smooth Assist Function
- Small Size (80*48.8*38.5mm), fit for thinner tube

SPECIFICATION

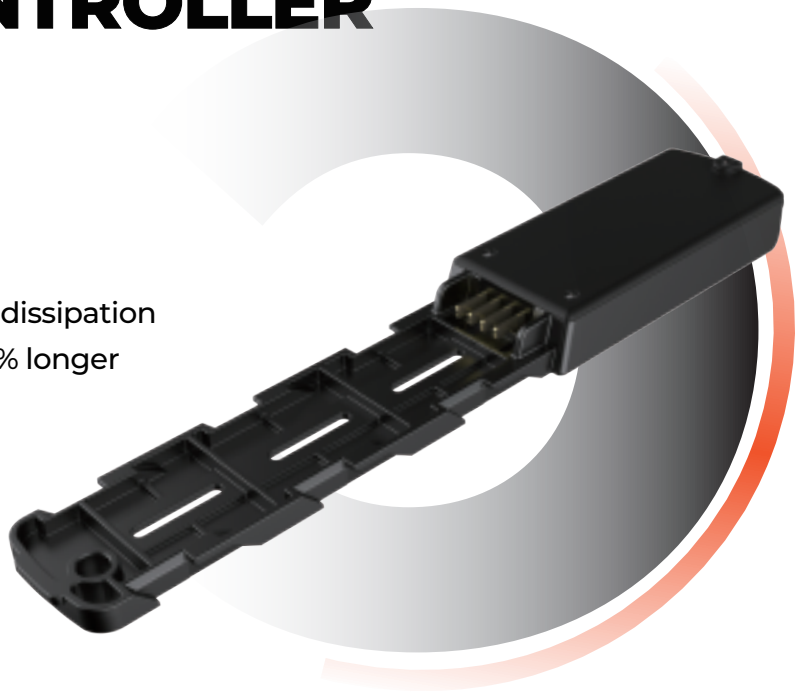
	Model No.		CR71			
Basic Info	Dimension	A(mm)	80	Core Data	Type	FOC
		B(mm)	48.8		Communication	CAN
		C(mm)	38.5	Function	Assist Level	Configurable
	Weight(g)		300		Speed Limit	Configurable
	Operation Temperature(°C)		-20~50		Walk Assistance	Configurable
	Storage Temperature(°C)		-25~55		Auto Assist	Available
	Waterproof		IPX6		Smooth Assist	Available
Core Data	Rated Voltage(DCV)		48		Light	Available
	Low Voltage Protection(DCV)		41		Light Drive(DCV)	48
	Current Limit(A)		20/25		Power-Off during Brake	Available
	Rated Power(W)		500/750		Throttle Function	Available
	PAS Mode		Speed; Torque		Upgrading	OTA





CR30 CONTROLLER

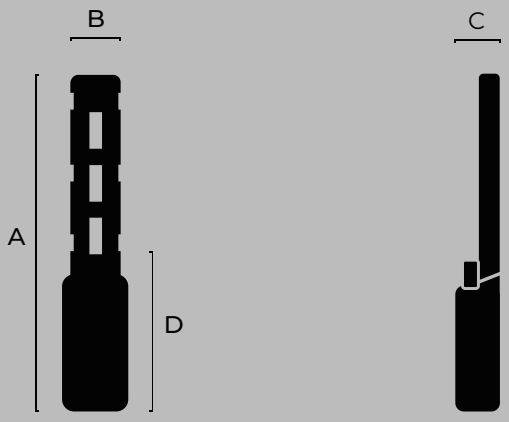
250W- 350W



- 250W-350W compatible
- Whole aluminum alloy base, heat dissipation improved by 30% with lifespan 30% longer
- Auto Assist Function, Smooth Assist Function

SPECIFICATION

	Model No.		CR30			
Basic Info	Dimension	A(mm)	344.5	Core Data	Type	FOC
		B(mm)	66		Communication	CAN
		C(mm)	23	Function	Assist Level	Configurable
		D(mm)	160.8		Speed Limit	Configurable
	Weight(g)		616		Walk Assistance	Configurable
	Operation Temperature(°C)		-20~50		Auto Assist	Available
	Storage Temperature(°C)		-25~55		Smooth Assist	Available
	Waterproof		IPX6		Light	Available
Core Data	Rated Voltage(DCV)		36/48		Light Drive(DCV)	36/48
	Low Voltage Protection(DCV)		31/41		Power-Off during Brake	Available
	Current Limit(A)		12/15		Throttle Function	Available
	Rated Power(W)		250/350		Upgrading	OTA
	PAS Mode		Speed; Torque			



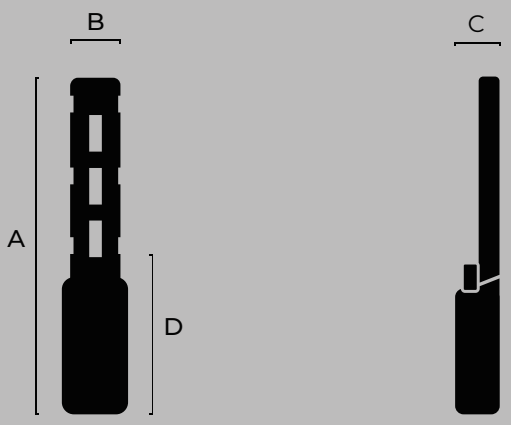
CR70 CONTROLLER

500W - 750W

- 500W-750W compatible
- Whole aluminum alloy base, heat dissipation improved by 30% with lifespan 30% longer
- Auto assist function, Smooth assist function

SPECIFICATION

	Model No.		CR70			
Basic Info	Dimension	A(mm)	344.5	Core Data	Type	FOC
		B(mm)	66		Communication	CAN
		C(mm)	23	Function	Assist Level	Configurable
		D(mm)	160.8		Speed Limit	Configurable
	Weight(g)		616		Walk Assistance	Configurable
	Operation Temperature(°C)		-20~50		Auto Assist	Available
	Storage Temperature(°C)		-25~55		Smooth Assist	Available
	Waterproof		IPX6		Light	Available
Core Data	Rated Voltage(DCV)		48		Light Drive(DCV)	48
	Low Voltage Protection(DCV)		41		Power-Off during Brake	Available
	Current Limit(A)		20/25		Throttle Function	Available
	Rated Power(W)		500/750		Upgrading	OTA
	PAS Mode		Speed; Torque			



DISPLAY

Magene DY series covers a variety of products with differenct configurations and functions. The display shows at a glance all the important information you need for ebiking: the battery level, the current riding mode, the supporting levels, and others. You can import map through the APP and set navigation on the display.

- Built-in Bluetooth, better interactions and user experience with APP
- Auto assist interaction supportive
- Electronic shifting supportive

1 | DY21 LCD Display

2 | DY12 LED Display

3 | DY11 LED Display

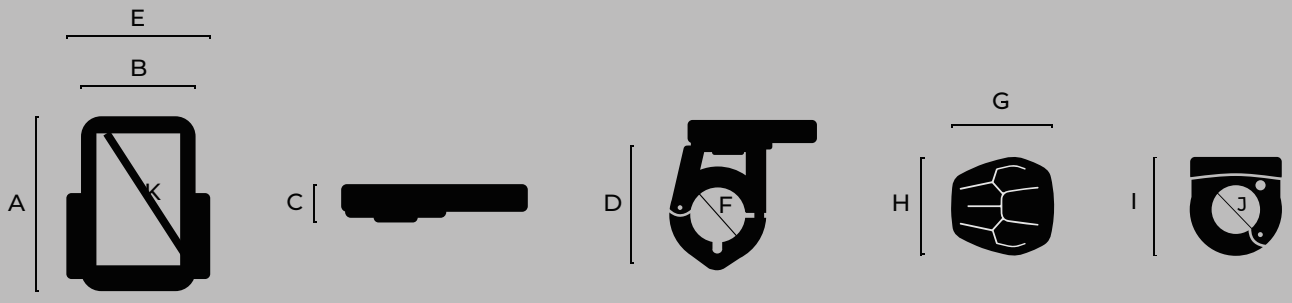
DY21 LCD DISPLAY

BLE supportive and APP available

- Built-in Bluetooth, better interactions and user experience with APP
- Display of precise power, range, efficiency, dual-power switch, etc.
- Auto assist interaction supportive
- Electronic shifting supportive

SPECIFICATION

	Model No.		CR70			
Basic Info	Dimension	A(mm)	83.4	Core Data	Display Type	LCD
		B(mm)	58.3		Rated Voltage(DCV)	36/48
		C(mm)	20.5		Communication	CAN, BLE
		D(mm)	64.4		Assist Level (Cycling Mode)	A(AUTO), I(ECO), 2(CITY), 3(TOUR), 4(SPORT), 5(TURBO)
		E(mm)	73.4			
		F(mm)	22.2Φ	Function	Walk Assist Function	Available
		G(mm)	43.7		Light On/Off Function	Available
		H(mm)	41.9		Button/Function Tone	Available
		I(mm)	45.7		Backlight	Manual
		J(mm)	31.8Φ		Charging	Type-C
		K(mm)	3”		Data Display	Current Speed, Max Speed, Avg Speed, Single Trip, Single Trip Time, ODO, Assist Level, Assist Bar, Battery Capacity, Range, Time, Error Code, BLE Icon, Light Icon, Assist Icon, Electronic Shifting Gear, etc.
	Weight(g)		100			
	Operation Temperature(°C)		-20~50			
	Storage Temperature(°C)		-25~55		Upgrading	OTA
	Waterproof		IPX6		App	Available



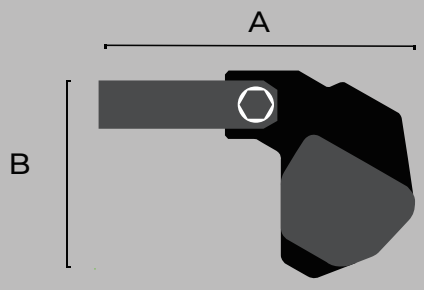
DY12 LED DISPLAY

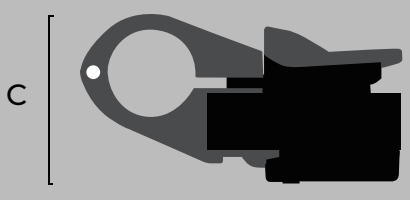
BLE supportive and APP available

- Ergonomic-design buttons, located under the handlebar, featuring more comfortable touching
- Built-in light sensor module, intelligently control the brightness of LED and the headlight
- Mirroring-design installation, installed on the left or right or both sides of the handle-bar

SPECIFICATION

	Model No.		DY12			
Basic Info	Dimension	A(mm)	82.03	Function	Assist Level	4 (including AUTO)
		B(mm)	54.47		Light-Sensing	Available
		C(mm)	42.75		Walk Assist	Available
	Rated Voltage()DCV)		12-60V		Light On/Off Function	Available
	Operation Temperature (°C)		-20~50		Data Display	Assist Level, Error Code, Battery Capacity, etc.
	Storage Temperature (°C)		-25~55			
	Waterproof		IPX6		APP	Available
	Display Type		LED		Communication	CAN, BLE
					Upgrading	OTA





DY11 LED DISPLAY

BLE supportive and APP available

- 3-button simple design
- Better interactions and user experience with BLE and APP
- Auto assist interaction supportive
- Electronic shifting supportive

SPECIFICATION

	Model No.		DY11			
Basic Info	Dimension	A(mm)	43.7	Core Data	Rated Voltage(DCV)	36/48
		B(mm)	41.9		Communication	CAN, BLE
		C(mm)	45.7	Function	Assist Level	4(AUTO included)
		D(mm)	22.2		Walk Assist Function	Available
	Weight(g)		30		Light On/Off Function	Available
	Operation Temperature(°C)		-20~50		Indication Information	Assist Level, Battery Capacity, Error Code
	Storage Temperature(°C)		-25~55			
	Waterproof		IPX6		App	Available
Core Data	Display Type		LED Indicator		Upgrading	OTA

TORQUE SENSOR

The SR20 is an Hollow BB torque sensor with axle and sleeve separated and axle and spider integrated. It uses digital signal tramsmission to ensure transmission efficiency and stability and the reliable performance through better testing standards.

460g

Light design, weight only 460g

50%

Easy installation, saving time by 50%

±1.5%

Digital signal, delay≤10ms,
max precision ±1.5%

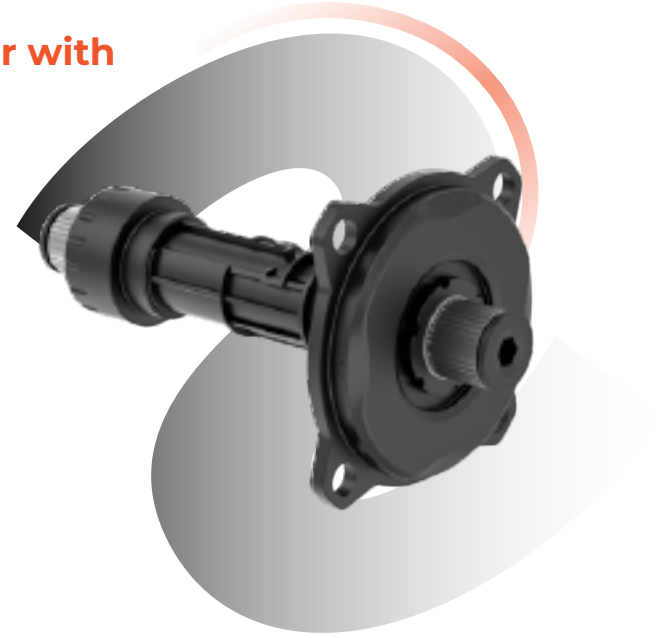
15000

The salt spray test 168 hours,
1800N fatigue test of 150,000 times

SR20 BB TORQUE SENSOR

SR20 BB TORQUE SENSOR

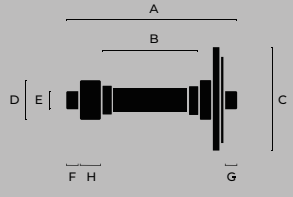
World first digital hollow torque sensor with axle and spider integrated (X-pipe BB)

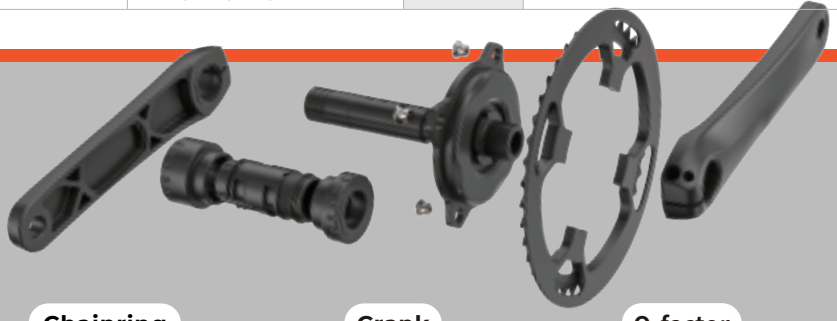


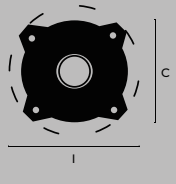
- Hollow BB, axle and sleeve separated, axle and spider integrated, as light as 460g, saving installation and dismounting time by 50%
- Digital signal, delay≤10ms, max precision ±1.5%, more advanced and smart cycling experience

SPECIFICATION

	Model No.		SR20			
Basic Info	Dimension	A(mm)	149.5/154.5/165.5/181.5	Basic Info	Storage Temperature(°C)	-25~55
		B(mm)	68/73/84/100		Waterproof	IPX6
		C(mm)	96		Operation Temperature(°C)	-20~50
		D(mm)	44			
		E(mm)	24	Core Data	Signals(Pulse/Cycle)	32
		F(mm)	18.75		Input Voltage(DCV)	4.5~5.5
		G(mm)	18.5		Power Consumption(W)	0.25
		H(mm)	22		Torque Range(N.m)	0~100
		I(mm)	120		Data Transmission	Digital
	BB Width(mm)		68/73/84/100		Precision/Delay	±1.5%/≤10ms
	Type		Cadence & Torque		communication	UART
	Weight(g)		460,485,520,650		Upgrading	OTA







BCD	Chainring	Crank	Q-factor	ChainLine
BCD 104	38T/40T/42T/ 46T/50T/52T	165/167.5/170/ 172.5/175	172/177/ 188/204	47/49.5/ 55/63

ELECTRONIC SHIFTING

The ED20 small-volume wire actuator solution can realize gear shifting via buttons, which can effectively reduce finger fatigue or pain and is more accurate.

Perfect integration

More stable performance through wired connection to access the system and powered by the eBike battery.

Easy installation

Small size, easy to install, and can also be hidden in the bike frame.

Better cost performance

Cost reduced by 80% compared to the electric rear derailleur.

1 | ED20 Electronic Shifting

2 | ED20 Auto Shift 1.0

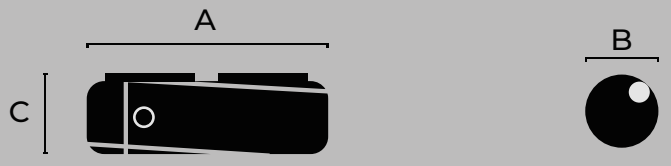
ED20 ELECTRONIC SHIFTING

Small-sized Wire Actuator

- More stable performance through wired connection to access the system
- Gear shift via buttons, reducing finger fatigue or pain
- Remove the mechanical shifting for more concise handlebar
- Small size, easy to install, and can also be hidden in the bike frame
- Cost reduced by 80% compared to the electric rear derailleur

SPECIFICATION

	Model No.		ED20			
Basic Info	Dimension	A(mm)	85.5	Core Data	Rated Current (mA)	400
		B(mm)	29		Speed-Ration Compatible	12-speed and below
		C(mm)	28.3		Fixing Method	Screw/Tire
	Weight(g)		100		Fixing Position	Chain Stay/Seat Stay
	Waterproof		IPX6		Communication Protocol	CAN
Core Data	Maximum Wire Weight(kg)		7		Upgrading	OTA
	Rated Voltage(DCV)		20-60			



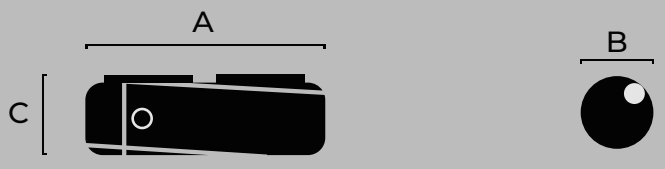
ED20 AUTO SHIFT 1.0

Small-sized Wire Actuator

- Auto switch to the appropriate flywheel according to the changes of the riding environment
- Pay no attention to gear shifting, more focused on the riding experience
- Reducing the distraction of shifting and safer riding in special scenes

SPECIFICATION

	Model No.		ED20			
Basic Info	Dimension	A(mm)	85.5	Core Data	Rated Current (mA)	400
		B(mm)	29		Speed-Ration Compatible	12-speed and below
		C(mm)	28.3		Fixing Method	Screw/Tire
	Weight(g)		100		Fixing Position	Chain Stay/Seat Stay
	Waterproof		IPX6		Communication Protocol	CAN
Core Data	Maximum Wire Weight(kg)		7		Upgrading	OTA
	Rated Voltage(DCV)		20-60			



RADAR SENSOR

To pursue safer riding, Magene has included the RL51 small-size radar sensor, which can help detect the speed and distance of approaching vehicles within 140 m behind in real-time. Working with displays the vehicles behind can be observed without looking back. The product is small in size and can be directly installed on the rear end of the seat.

Work with the taillight

Get more safety warnings, ensuring the user's riding safety.

Work with the display

Observe the vehicles behind without looking back

Integrated into eBike systems

More stable performance through wired connection to access the system and powered by the eBike battery.

RL51Radar Sensor

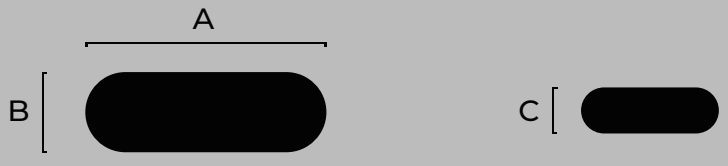
RL51 RADAR SENSOR

Small-sized Radar

- Sense vehicles approaching from behind up to 140 meters away
- 40°horizontal detection angle effectively warning of rear vehicles
- Working with eBike displays to sense vehicles
- Working with eBike rear light to warn rear vehicles
- Small size, easy installation, good performance/cost ratio

SPECIFICATION

	Model No.		RL51			
Basic Info	Dimension	A(mm)	65	Core Data	Distance Precision	0.5m
		B(mm)	27		Functions	Target Distinguish, Speed Distinguish, Safety Warning
		C(mm)	13.5			
	Weight (g)		24		Detectable Targets	Motor Vehicle, Non-Motorized Vehicle, Pedestrian
	Waterproof		IPX6			
Core Data	Input Voltage(DCV)		20-60		Radar	24GHz
	Horizontal Detection Angle		40°		Max Detectable Targets Quantity	8
	Vertical Detection Angle Range		-10°~10°		Installation Position	Below of Seat Tube, Outside of Rear Rack
	Relative Speed of Detectable Targets		10-120km/h		Communication Protocol	CAN
	Detection Distance		1m-140m		Upgrading	OTA



Magene

Magene eBike system is designed to provide riders with a comprehensive solution that not only enhances their safety but also allows them to focus on enjoying their cycling.

One of the most important features of this eBike system is its advanced safety features. The system connects to other smart devices, to provide riders with real-time information about their surroundings, route, and traffic conditions. The connected sensors that can detect potential hazards, such as obstacles or vehicles, and alert riders in real-time, helping to prevent accidents.

Magene eBike system also paid more attention on its easy-operation and convenience, which enhance riders' overall riding experience. The system can be easily adjusted before/during/after the cycling ensuring a smooth and comfortable ride.

For more information, contact us via sales-BD@magene.cn