



AUTOMATIC GEARSHIFT SYSTEM

Always in the right gear – wherever you are! With the *VELOMATIC*

With products from the SCHAEFFLER VELOSOLUTIONS range – innovative solutions for bikes - Schaeffler gives you easier cycling. The automatic bike gearing system *VELOMATIC* from this range always calculates the optimum gear and the ideal shift point, even when starting off again! It can be easily integrated in any pedelec and is suitable for chain gearshifts and hub gearshifts. In combination with the App *VELODAPTIC*, cyclists can select customized gearshift programs for their individual riding style. An optimum package for more cycling pleasure.

Advantages

- Suitable for any pedelec and any electric drive
- Shifts automatically to the optimum starting gear when you stop
- Suitable for all manufacturers
- Increased range through optimized battery energy consumption

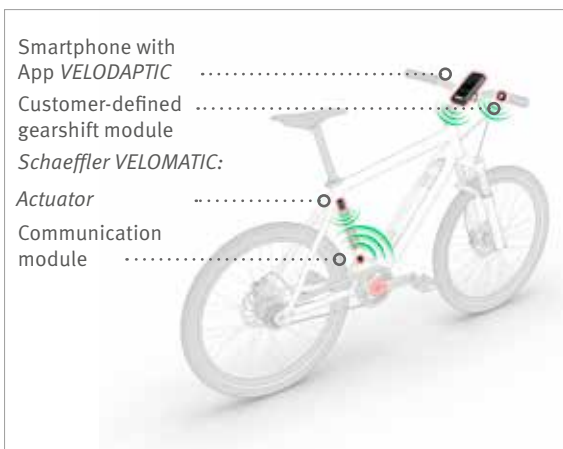
Features

- Sensor technology for ascent and descent
- Shifts automatically without noticeable transitions and prevents shift errors
- Low mass and compact design
- Conserves e-bike battery through automatic cycling in optimum gear
- App *VELODAPTIC* for control and configuration

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Mounting options for modules

Options	VELOMATIC	VELOMATIC + Customer-defined gearshift module	VELOMATIC + App VELODAPTIC
Initial operation of the VELOMATIC	X	X	✓
Fully automatic shifting	✓	✓	✓
Manual shifting in automatic mode	X	✓	✓
Manual shifting	X	✓	✓
Configuration of individual automatic programs	X	X	✓

Performance characteristics

The VELOMATIC, in combination with the app, allows customized gearshift programs for you individual riding style.

Advantages

- Always in the right gear
- Always in the required frequency
- Possibility to configurate individual settings

Technical data

Gearshift actuator	
Drive system	Linear actuators with position control
Housing material	Aluminum and plastic
Control values	Gradient conditions, wheel speeds (to be provided by customer)
Bowden cable absorption	for Standard cable with nipple
Voltage supply	DC 24 V – DC 42 V
Current consumption	Standby: approx. 20 mA Shift operation: < 600 mA
Shift speed	15 mm/s
Switching accuracy	0,2 mm
Tension force	max. 100 Nm
Connector	2-pin Nano MQS
Dimensions	Length 202,5 mm/diameter 25 mm
Compatibility for hub gearshifts	inter alia Shimano (e.g. Nexus 7, Nexus 8, Alfine 8, Alfine 11) others types and manufacturers possible
Compatibility for chain gearshifts	inter alia Shimano (e.g. HG62 HG-X 11-36T, Deore HG30H 11-32T), Sun (e.g. M66 11-32T, MFE60 13-32T) others types and manufacturers possible
Protection class	IP54
Mounting location (recommended)	Down tube or seat tube
Communication module with voltage converter	
Interfaces/communication	BLE/ANT/CAN
Sensor	Acceleration sensor to determine ascent
Voltage rating	12 to 48VDC
Idle current	100 mA
Mass	34 g
Protection class	IP54
Mounting location	Recommendation: fitting close to actuator