

Product information

3.5 RollerDrive EC5000 as a replacement for RollerDrive EC310

The RollerDrive EC5000 24 V DC 20 W AI and EC5000 24 V DC 35 W AI are suitable as a replacement for RollerDrive EC310 without further modifications or accessories.

NOTE

Overload of the existing extension cable with RollerDrive EC5000 24 V DC 50 W AI

- When using the RollerDrive EC5000 24 V DC 50 W AI as a replacement for the RollerDrive EC310, any extension cables used must be replaced.



Note the different speeds as a result of the different rated speeds of the installed motors and different gear ratios.

	RollerDrive EC310	RollerDrive EC5000
Motor rated speed	6000 rpm	6900 rpm ¹⁾
Gear stages	9:1	9:1
	12:1	13:1
	16:1	18:1
	20:1	21:1
	24:1	30:1
	36:1	42:1
	48:1	49:1
	64:1	78:1
	96:1	108:1

¹⁾ If the EC5000 is operated below the rated voltage, a minimal speed reduction must be expected.

3.6 Product identification

The following information is required to identify the RollerDrive:

Information	Possible value	Own value
RollerDrive	Motor type	
Rating plate	Gear ratio	
	Serial number	
	Mechanical power	
	Supply voltage	
	Analogue/CAN bus	
UL certified	Yes/no	
Tube diameter	50 mm, 60 mm	
Tube material	Stainless steel	
	Zinc-plated steel	
Tube sleeve	PVC hose 2 mm, 5 mm	
	PU hose 2 mm	
	Rubber coating 2–5 mm	
	Tapered elements 1.8°, 2.2°	
Installation length RollerDrive	Installation length	
Drive element on the non-cable side	PolyVee drive head	
	Round belt:	
	Two grooves	
	Round belt head	
	Toothed belt drive head	
	Sprocket drive head	
Attachment on the non-cable side	Hexagonal spring shaft	
	Female thread attachment	
	Hexagonal spring shaft, conical	
	(See „Drive axle dimensions“ auf Seite 36)	

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3.7 Technical specifications

EC5000 20 W – AI/BI – 24 V DC

Rated voltage	24 V DC, protected extra-low voltage (PELV)
Voltage range	18 to 28 V DC
Rated current	1.2 A/1.4 A ¹⁾
Starting current	3.0 A ²⁾
Switching threshold, signal input 'Rotational direction'	Safe 'High': U > 7 V DC Safe 'Low': U < 4 V DC
Maximum residual ripple of the power supply	3%
Maximum noise level (mounted)	55 dB(A) ³⁾
Protection rate	IP54 or IP66
UL type rating	Type rating 2 (optional)
Ambient temperature in operation	0°C to +40°C
Ambient temperature for transport and storage	-30°C to +75°C
Altitude of installation site	Max. 1000 m ⁴⁾

All data applies for an ambient temperature of 20°C.

From 25°C, a derating factor must be taken into account.

¹⁾ Higher rated current at gear ratios of 78:1 and 108:1 (three-stage rather than two-stage gear)

²⁾ The actual current course is dependent on the circumstances of the application, such as conveyor weight, number of connected rollers and so on

³⁾ The value can vary depending on the installation condition, profile shapes and system resonance behaviour.

⁴⁾ Estimated derating: 5% from 1500 m, 10% from 2000 m.

EC5000 35 W – AI/BI – 24 V DC

Rated voltage	24 V DC, protected extra-low voltage (PELV)
Voltage range	18 to 28 V DC
Rated current	2.2 A/2.4 A ¹⁾
Starting current	5.5 A ²⁾
Switching threshold, signal input 'Rotational direction'	Safe 'High': U > 7 V DC Safe 'Low': U < 4 V DC
Maximum residual ripple of the power supply	3%
Maximum noise level (mounted)	55 dB(A) ³⁾
Protection rate	IP54 or IP66 ⁴⁾
UL type rating	Type rating 2 (optional)
Ambient temperature in operation	0°C to +40°C (30:1, 42:1, 49:1 = -30°C to +40°C)
Ambient temperature for transport and storage	-30°C to +75°C
Altitude of installation site	Max. 1000 m ⁵⁾

All data applies for an ambient temperature of 20°C.

From 25°C, a derating factor must be taken into account.

¹⁾ Higher rated current at gear ratios of 78:1 and 108:1 (three-stage rather than two-stage gear)

²⁾ The actual current course is dependent on the circumstances of the application, such as conveyor weight, number of connected rollers and so on

³⁾ The value can vary depending on the installation condition, profile shapes and system resonance behaviour.

⁴⁾ IP66 not for Deep Freeze applications

⁵⁾ Estimated derating: 5% from 1500 m, 10% from 2000 m.

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EC5000 50 W – AI/BI – 24 V DC

Rated voltage	24 V DC, protected extra-low voltage (PELV)
Voltage range	18 to 28 V DC
Rated current	3.0 A/3.4 A ¹⁾
Starting current	7.5 A ²⁾
Switching threshold, signal input 'Rotational direction'	Safe 'High': U > 7 V DC Safe 'Low': U < 4 V DC
Maximum residual ripple of the power supply	3%
Maximum noise level (mounted)	55 dB(A) ³⁾
Protection rate	IP54 or IP66 ⁴⁾
UL type rating	Type rating 2 (optional)
Ambient temperature in operation	-30°C to +40°C
Ambient temperature for transport and storage	-30°C to +75°C
Altitude of installation site	Max. 1000 m ⁵⁾

All data applies for an ambient temperature of 20°C.

From 25°C, a derating factor must be taken into account.

¹⁾ Higher rated current at gear ratios of 78:1 and 108:1 (three-stage rather than two-stage gear)

²⁾ The actual current course is dependent on the circumstances of the application, such as conveyor weight, number of connected rollers and so on

³⁾ The value can vary depending on the installation condition, profile shapes and system resonance behaviour.

⁴⁾ IP66 not for Deep Freeze applications

⁵⁾ Estimated derating: 5% from 1500 m, 10% from 2000 m.

EC5000 20 W – AI/BI – 48 V DC

Rated voltage	48 V DC, protected extra-low voltage (PELV)
Voltage range	36 to 56 V DC
Rated current	0.6 A/0.7 A ¹⁾
Starting current	1.5 A ²⁾
Switching threshold, signal input 'Rotational direction'	Safe 'High': U > 7 V DC Safe 'Low': U < 4 V DC
Maximum residual ripple of the power supply	3%
Maximum noise level (mounted)	55 dB(A) ³⁾
Protection rate	IP54 or IP66
UL type rating	Type rating 2 (optional)
Ambient temperature in operation	0°C to +40°C
Ambient temperature for transport and storage	-30°C to +75°C
Altitude of installation site	Max. 1000 m ⁴⁾

All data applies for an ambient temperature of 20°C.

From 25°C, a derating factor must be taken into account.

¹⁾ Higher rated current at gear ratios of 78:1 and 108:1 (three-stage rather than two-stage gear)

²⁾ The actual current course is dependent on the circumstances of the application, such as conveyor weight, number of connected rollers and so on

³⁾ The value can vary depending on the installation condition, profile shapes and system resonance behaviour.

⁴⁾ Estimated derating: 5% from 1500 m, 10% from 2000 m.

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EC5000 35 W – AI/BI – 48 V DC

Rated voltage	48 V DC, protected extra-low voltage (PELV)
Voltage range	36 to 56 V DC
Rated current	1.1 A/1.2 A ¹⁾
Starting current	2.8 A ²⁾
Switching threshold, signal input 'Rotational direction'	Safe 'High': U > 7 V DC Safe 'Low': U < 4 V DC
Maximum residual ripple of the power supply	3%
Maximum noise level (mounted)	55 dB(A) ³⁾
Protection rate	IP54 or IP66 ⁴⁾
UL type rating	Type rating 2 (optional)
Ambient temperature in operation	0°C to +40°C (30:1, 42:1, 49:1 = -30°C to +40°C)
Ambient temperature for transport and storage	-30°C to +75°C
Altitude of installation site	Max. 1000 m ⁵⁾

All data applies for an ambient temperature of 20°C.

From 25°C, a derating factor must be taken into account.

¹⁾ Higher rated current at gear ratios of 78:1 and 108:1 (three-stage rather than two-stage gear)

²⁾ The actual current course is dependent on the circumstances of the application, such as conveyor weight, number of connected rollers and so on

³⁾ The value can vary depending on the installation condition, profile shapes and system resonance behaviour.

⁴⁾ IP66 not for Deep Freeze applications

⁵⁾ Estimated derating: 5% from 1500 m, 10% from 2000 m.