Multiturn absolute encoder

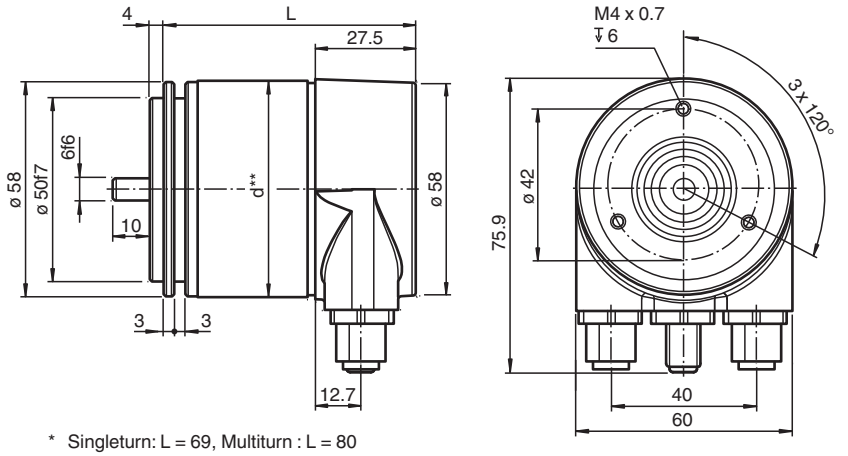
EVM58-EC

- Industrial standard housing Ø58 mm
- EtherCAT interface
- 30 Bit multiturn
- Two Ethernet connectors with built in hub
- Servo or clamping flange
- Mechanical compatibility with all major encoders with fieldbus interface
- Status LEDs
- Stainless steel desktop housing available

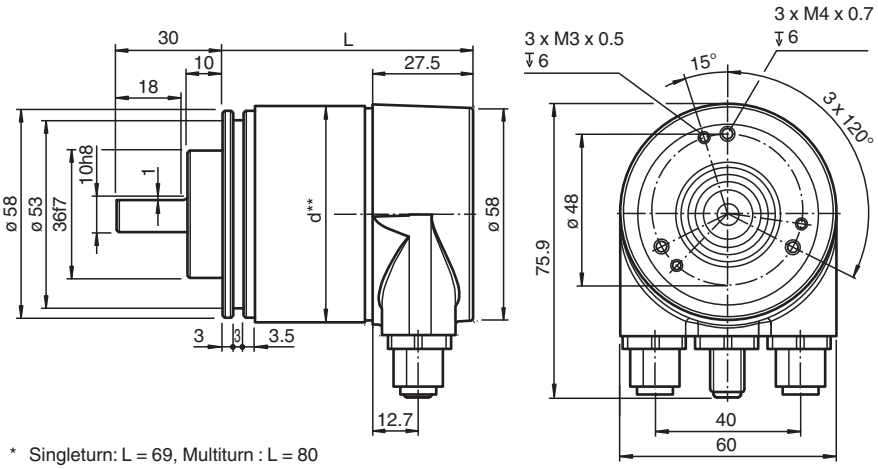
Function

The EVM58-EC series are high precision rotary endcoders with interal optical sampling.

Dimensions



* Singleturn: L = 69, Multiturn : L = 80
** Aluminum: d = 59, stainless steel: d = 61



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Technical Data

General specifications		
Detection type		photoelectric sampling
Device type		Multiturn absolute encoder
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC , safe galvanic isolation per EN 50178
Power consumption	P_0	max. 2.5 W
Linearity		± 0.5 LSB (up to 12 Bit) ± 2 LSB (up to 16 Bit)
Output code		binary code
Code course (counting direction)		programmable, cw ascending (clockwise rotation, code course ascending) cw descending (clockwise rotation, code course descending)
Interface		
Interface type		EtherCAT CoE (CANopen over EtherCAT, according to CiA DS-301 and DS-406 device profile CiA)
Resolution		
Single turn		up to 16 Bit
Multiturn		up to 14 Bit
Overall resolution		up to 30 Bit
Physical		Ethernet
Transfer rate		10 MBit/s / 100 MBit/s
Cycle time		≥ 65 µs
Connection		
Connector		Ethernet: 2 sockets M12 x 1, 4-pin, D-coded Supply: 1 plug M12 x 1, 4-pin, A-coded
Standard conformity		
Degree of protection		DIN EN 60529, shaft side: IP65 (without shaft seal)/ IP66/67 (with shaft seal) housing side: IP66/67 Stainless steel version (INOX): completely IP66/67
Climatic testing		DIN EN 60068-2-3, no moisture condensation
Emitted interference		EN 61000-6-4:2007
Noise immunity		EN 61000-6-2:2005
Shock resistance		DIN EN 60068-2-27, 100 *g*, 6 ms
Vibration resistance		DIN EN 60068-2-6, 10 g, 10 ... 1000 Hz
Ambient conditions		
Operating temperature		-40 ... 85 °C (-40 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Relative humidity		98 % , no moisture condensation
Mechanical specifications		
Shaft dimensions	Ø x l	$Ø6_{f6}$ mm x 10 mm or $Ø10_{h8}$ mm x 20 mm
Material		
Combination 1		housing: powder coated aluminum flange: aluminum shaft: stainless steel
Combination 2 (Inox)		housing: stainless steel 1.4305 / AISI 303 flange: stainless steel 1.4301 / AISI 304 shaft: stainless steel 1.4305 / AISI 303
Mass		approx. 370 g (combination 1) approx. 840 g (combination 2)
Rotational speed		max. 12000 min^{-1}
Moment of inertia		30 gcm^2
Starting torque		≤ 3 Ncm (version without shaft seal)
Shaft load		
Axial		40 N
Radial		110 N

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Accessories

	**9203**	Angled flange
	**9300**	Mounting bracket for servo flange
	**MBT-36ALS**	Spring-loaded mounting bracket with a diameter of 36 mm

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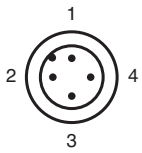
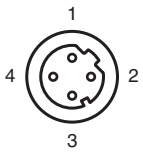
Connection

Pin	Male connector M12 x 1, 4-pin, A-coded	Female connector M12 x 1, 4-pin, D-coded
1	Supply voltage +U_B	Tx +
2	-	Rx +
3	0 V	Tx -
4	-	Rx -
		

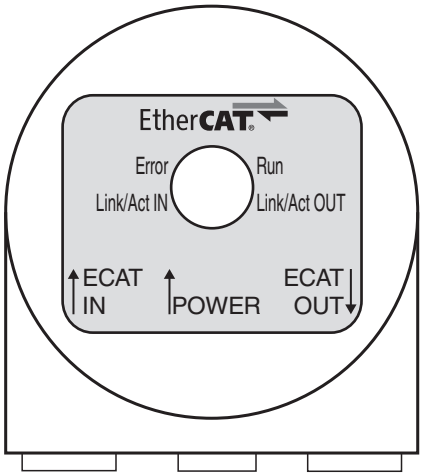
Indication

Port LEDs

LED	Color	Status	Description
Link/Act IN	green	on	LINK active for HUB port 1
		blinking	Activity on HUB port 1
Link/Act OUT	green	on	LINK active for HUB port 2
		blinking	Activity on HUB port 2

EtherCAT LEDs

LED	Color	Status	Description
Error	red	off	no error
		blinking	invalid configuration
		single flash	local error
		double flash	process data watchdog timeout/ EtherCAT watchdog timeout
		flickering	booting error
		on	application failure
Run	green	off	initialization
		blinking	Pre-Operational
		single flash	Safe-Operational
		flickering	initialization or bootstrap
		on	Operational



Type Code

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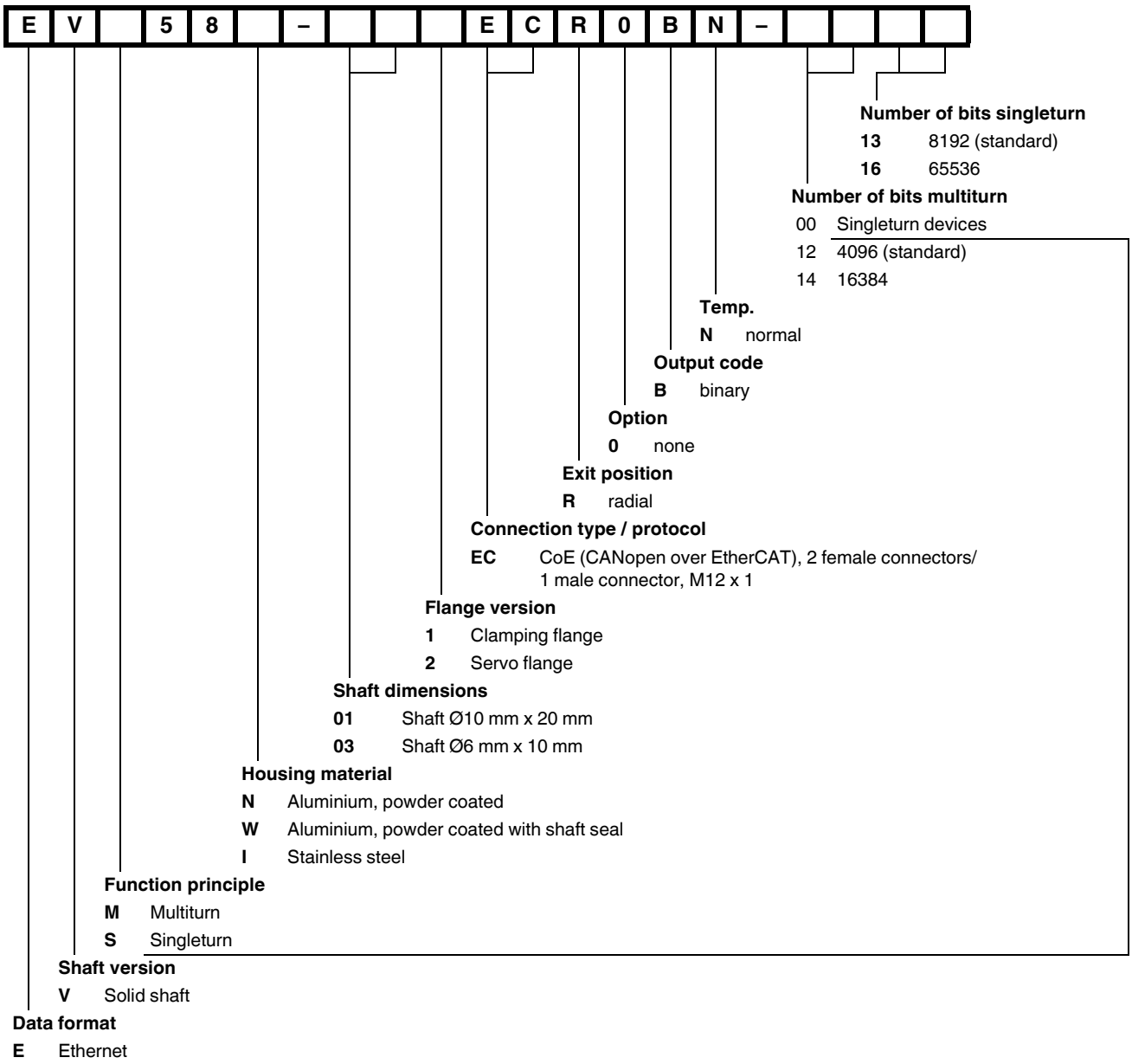
Order code



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