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- Identification
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- Adaptability

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Fixing components for shaft encoders: flange, robust bearing unit, bearing box


























Connection of motor and encoder: coupling, flexible shaft coupling



SSI displays, safe speed monitors



















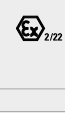

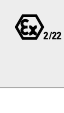
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Incremental encoders

		Ø Dimensions in mm [inch]	Magnetic (accuracy ±1°)	Optical (accuracy ≤ ±0.015°)	Resolution max. in ppr	Push-pull	RS422	SinCos	Open Collector	Ø Hollow shaft max. in mm [inch]	Speed max. in min ⁻¹ (shaft/ hollow shaft)	Temperature range in °C [°F]	Protection max.	Type of connection	Power supply in V DC	Pulse frequency max. in kHz	RoHS compliant	Approvals
	Miniature, optical 2400 (shaft) 2420 (hollow shaft)	24 [0.94]	-	•	1.024	•	-	-	-	6	12.000	-20 ... +85 [-4 ... +185]	IP64	cable	5 ... 24 8 ... 30	160	•	
	Miniature, magnetic 2430 (shaft) 2440 (hollow shaft)	24 [0.94]	•	-	256	-	•	-	-	6	12.000	-20 ... +85 [-4 ... +185]	IP67	cable	5	300	•	-
	Compact, optical Sendix Base KIS40 (shaft) Sendix Base KI40 (hollow s.)	40 [1.57]	-	•	2.500	•	•	-	•	8	4.500	20 ... +70 [-4 ... +158]	IP64	cable	5 5 ... 30 10 ... 30	250	•	
	Compact, optical 3610 (shaft) 3620 (hollow shaft)	36 [1.43]	-	•	2.500	•	•	-	-	8	12.000	-20 ... +85 [-4 ... +185]	IP64	cable M12	5 5 ... 18 8 ... 30	300	•	
	Compact, optical plastic housing 3700 (shaft) 3720 (hollow shaft)	37 [1.46]	-	•	1.024	•	-	-	-	8	6.000	20 ... +70 [-4 ... +158]	IP65	cable	5 5 ... 30 10 ... 30	250	•	
	Standard, optical Sendix 5000 (shaft) Sendix 5020 (hollow shaft) 24one ¹⁾	58 [2.28]	-	•	5.000	•	•	-	•	15 15.87	12.000	-40 ... +85 [-40 ... +185]	IP67	cable M12 M23 MIL Sub-D	5 5 ... 30 10 ... 30	300	•	
	Standard, optical Sendix Base KIS50 (shaft) Sendix Base KI50 (hollow s.)	58 [2.28]	-	•	5.000	•	•	-	•	15	6.000	20 ... +70 [-4 ... +158]	IP65	cable M12 M23	5 4.7 ... 30 5 ... 30 10 ... 30	300	•	 
	Standard, optical high temperature 5803 (shaft) 5823 (hollow shaft)	58 [2.28]	-	•	5.000	•	•	-	-	12	12.000	-20 ... +110 [-4 ... +230]	IP65	cable M23 MIL	5 10 ... 30	300	•	
	Standard, optical sine wave output, with zero pulse 5804 (shaft) 5824 (hollow shaft)	58 [2.28]	-	•	5.000	-	-	•	-	12	12.000	-20 ... +85 [-4 ... +185]	IP65	cable M23	5 10 ... 30	180	•	
	Standard, optical sine wave output, highly interpolable Sendix 5814 (shaft) Sendix 5834 (hollow shaft)	58 [2.28]	-	•	1.024 and 2.048	-	-	•	-	15	12.000	-40 ... +90 [-40 ... +194]	IP67	cable M12	5 10 ... 30	400	•	 
	Standard, optical Motor-Line Sendix 5834 (tapered shaft)	58 [2.28]	-	•	1.024 and 2.048	-	-	•	-	10 tap. shaft	12.000	-40 ... +90 [-40 ... +194]	IP67	cable PCB connector	5 10 ... 30	400	•	











1) We offer for all encoders configured with the underlined preferential options our free of charge 24one delivery promise. Orders placed on working days before 9AM CET are manufactured and ready for dispatch the same day. The 24one delivery promise is limited to 20 pieces per delivery.

Incremental encoders

















		Ø Dimensions in mm [inch]	Magnetic (accuracy ±1°)	Optical (accuracy ≤ ±0.015°)	Resolution max. in ppr	Push-pull	RS422	SinCos	Open Collector	Ø Hollow shaft max. in mm [inch]	Speed max. in min ⁻¹ (shaft/hollow shaft)	Temperature range in °C [°F]	Protection max.	Type of connection	Power supply in V DC	Pulse frequency max. in kHz	RoHS compliant	Approvals
	Standard, optical sine wave output, SIL2 / PLd Sendix 5814FS2 (shaft) Sendix 5834FS2 (hollow shaft)	58 [2.28]	-	•	1.024 and 2.048	-	-	•	-	14	12.000/ 9.000	-40 ... +90 [-40 ... +194]	IP67	cable M12 M23	5 10 ... 30	400	•	
	Standard, optical sine wave output, SIL3 / PLc Sendix 5814FS3 (shaft) Sendix 5834FS3 (hollow shaft)	58 [2.28]	-	•	1.024 and 2.048	-	-	•	-	14	12.000/ 9.000	-40 ... +90 [-40 ... +194]	IP67	cable M12 M23	5 10 ... 30	400	•	
	Standard, optical high resolution 5805 (shaft) 5825 (hollow shaft)	58 [2.28]	-	•	36.000	•	•	-	-	12	12.000	-20 ... +105 [-4 ... +221]	IP65	cable M23	5 10 ... 30	800	•	
	Standard, optical stainless-steel Sendix 5006 (shaft) Sendix 5026 (hollow shaft)	58 [2.28]	-	•	5.000	•	•	-	-	15	6.000	-40 ... +85 [-40 ... +185]	IP67	cable M12	5 5 ... 30 10 ... 30	300	•	
	Standard, optical ATEX / IECEx – zone 1/21 7000 (shaft) 7020 (hollow shaft)	70 [2.76]	-	•	5.000	•	•	-	-	14	6.000/ 3.000	-40 ... +60 [-40 ... +140]	IP67	cable	5 5 ... 30 10 ... 30	300	•	
	Standard, optical ATEX / IECEx – mining 7100 (shaft) 7120 (hollow shaft)	70 [2.76]	-	•	5.000	•	•	-	-	14	6.000/ 3.000	-40 ... +60 [-40 ... +140]	IP67	cable	5 5 ... 30 10 ... 30	300	•	
	Standard, optical large hollow shaft 5821 (hollow shaft)	58 [2.28]	-	•	5.000	•	•	-	-	28	2.500	-20 ... +70 [-4 ... +158]	IP64	cable M12	5 8 ... 30	300	•	-
	Large hollow shaft, optical A020 (hollow shaft)	100 [3.94]	-	•	5.000	•	•	•	-	42	3.000	-40 ... +70 [-40 ... +140]	IP65	cable M12 M23	5 5 ... 30 10 ... 30	300	•	
	Large hollow shaft, optical robust A02H (hollow shaft)	100 [3.94]	-	•	5.000	•	•	•	-	42	6.000	-40 ... +80 [-40 ... +176]	IP65	cable M12 M23 MIL	5 5 ... 30 10 ... 30	300	•	
	Heavy Duty, optical Sendix H100 (shaft)	115	-	•	3.600	•	•	-	-	-	6.000	-40 ... +100	IP66	cable ¹⁾	5 10 ... 30	300	•	
	Heavy Duty, optical Sendix H120 (hollow shaft)	100 [3.94]	-	•	5.000	•	•	-	-	28	6.000	-40 ... +100 [-40 ... +212]	IP67	cable ¹⁾ M12 M23 LWL	5 10 ... 30	300	•	

1) With terminal box.

































Absolute encoders
Singleturn

		Ø Dimensions in mm [inch]	Magnetic (accuracy ±1°)	Optical (accuracy ≤ ±0.015°)	Resolution max. in bit	SSI interface	BiSS interface	Analog / RS485 interface	Parallel interface	Additional incremental track	Speed max. in min ⁻¹ (shaft / hollow shaft)	Temperature range in °C [°F]	Protection max.	Type of connection	Power supply in V DC	RoHS compliant	Approvals
	Miniature, magnetic 2450 (shaft) 2470 (hollow shaft)	24	•	–	12	•	–	–	–	–	12.000	-20 ... +85 [-4 ... +185]	IP67	cable	5	•	–
	Compact, magnetic analog Sendix 3651 (shaft) Sendix 3671 (hollow shaft)	36 [1.43]	•	–	12	–	–	4 ... 20 mA 0 ... 10 V	–	–	6.000	-40 ... +85 [-40 ... +185]	IP69k	cable M12	10 ... 30 15 ... 30	•	e1 Ex 2/22
	Compact, optical Sendix F3653 (shaft) Sendix F3673 (hollow shaft)	36 [1.43]	–	•	17	•	•	–	–	Sin Cos RS422	12.000	-40 ... +90 [-40 ... +194]	IP67	cable M12	5 10 ... 30	•	UL US
	Standard, optical parallel, highspeed 5852 (shaft) 5872 (hollow shaft)	58 [2.28]	–	•	14	–	–	–	•	–	12.000/ 6.000	-20 ... +85 [-4 ... +185]	IP66	cable M23	5 10 ... 30	•	UL US
	Standard, optical Sendix 5853 (shaft) Sendix 5873 (hollow shaft)	58 [2.28]	–	•	21	•	•	–	–	Sin Cos RS422	12.000/ 9.000	-40 ... +90 [-40 ... +194]	IP67	cable M12 M23	5 10 ... 30	•	UL US Ex 2/22
	Standard, optical Motor-Line Sendix 5873 (tapered shaft)	58 [2.28]	–	•	21	•	•	–	–	SinCos RS422	12.000	-40 ... +90 [-40 ... +194]	IP65	cable PCB connector	5 4.5 ... 5.5	•	UL US
	Standard, optical SIL2/ PLd Sendix 5853FS2 (shaft) Sendix 5873FS2 (hollow shaft)	58 [2.28]	–	•	17	•	•	–	–	Sin Cos	12.000/ 9.000	-40 ... +90 [-40 ... +194]	IP67	cable M23	5 10 ... 30	•	UL US Ex 2/22 SIL2 PLd
	Standard, optical SIL3/ PLe Sendix 5853FS3 (shaft) Sendix 5873FS3 (hollow shaft)	58 [2.28]	–	•	17	•	•	–	–	Sin Cos	12.000/ 9.000	-40 ... +90 [-40 ... +194]	IP67	cable M23	5 10 ... 30	•	UL US Ex 2/22 SIL3 PLe
	Standard, optical ATEX/IECEx – zone 1/21 Sendix 7053 (shaft) Sendix 7073 (hollow shaft)	70 [2.76]	–	•	17	•	•	–	–	–	6.000/ 3.000	-40 ... +60 [-40 ... +140]	IP67	cable	10 ... 30	•	Ex IECEx
	Standard, optical ATEX/IECEx – mining Sendix 7153 (shaft) Sendix 7173 (hollow shaft)	70 [2.76]	–	•	17	•	•	–	–	–	6.000/ 3.000	-40 ... +60 [-40 ... +140]	IP67	cable	10 ... 30	•	Ex IECEx










Absolute encoders
Singleturn
Fieldbus & Industrial Ethernet

		Ø Dimensions in mm [inch]	Magnetic (accuracy ±1°)	Optical (accuracy ≤ ±0.015°)	CANopen	SAE J1939 new	PROFIBUS DP	EtherCAT	PROFINET IO	EtherNet/IP	Resolution max. in bit	Speed max. in min ⁻¹ (shaft/hollow shaft)	Temperature range in °C [°F]	Protection max.	Type of connection	Power supply in V DC	RoHS compliant	Approvals
	Compact, magnetic Sendix M3658 (shaft) Sendix M3678 (hollow shaft)	36 [1.43]	•	–	•	•	–	–	–	–	14	6.000	-40 ... +85 [-40 ... +185]	IP69k	cable M12	8 ... 30	•	
	Compact, optical Sendix F3658 (shaft) Sendix F3678 (hollow shaft)	36 [1.43]	–	•	•	–	–	–	–	–	16	12.000	-40 ... +85 [-40 ... +185]	IP67	cable	10 ... 30	•	
	Standard, optical Sendix 5858 (shaft) Sendix 5878 (hollow shaft)	58 [2.28]	–	•	•	–	•	•	•	–	16	9.000	-40 ... +80 [-40 ... +176]	IP67	cable M12 M23	10 ... 30	•	 
	Standard, optical electronic singleturn Sendix F5858 (shaft) Sendix F5878 (hollow shaft)	58 [2.28]	–	•	–	–	–	–	•	–	16	8.000	-40 ... +80 [-40 ... +176]	IP65	M12	10 ... 30	•	 
	Standard, optical ATEX/IECEx – zone 1/21 Sendix 7058 (shaft) Sendix 7078 (hollow shaft)	70 [2.76]	–	•	•	–	•	–	–	–	16	6.000/ 3.000	-40 ... +60 [-40 ... +140]	IP67	cable	10 ... 30	•	 
	Standard, optical ATEX/IECEx – mining Sendix 7158 (shaft) Sendix 7178 (hollow shaft)	70 [2.76]	–	•	•	–	•	–	–	–	16	6.000/ 3.000	-40 ... +60 [-40 ... +140]	IP67	cable	10 ... 30	•	 

Absolute encoders
Multiturn

























		Ø Dimensions in mm [inch]	Magnetic (accuracy ±1°)	Optical (accuracy ≤ ±0.015°)	Resolution max. in bit	SSI interface	BiSS interface	Analog / RS485 interface	Additional incremental track	Speed max. in min ⁻¹ (shaft / hollow shaft)	Temperature range in °C [°F]	Protection max.	Type of connection	Power supply in V DC	RoHS compliant	Approvals
	Compact, magnetic electronic multiturn Sendix M3661 (shaft) Sendix M3681 (hollow shaft)	36 [1.43]	•	–	12 + 16	–	–	4 ... 20 mA 0 ... 10 V 0 ... 5 V	–	6.000	-40 ... +85 [-40 ... +185]	IP67	cable M12	10 ... 30 15 ... 30	•	  
	Compact, magnetic electronic multiturn Sendix M3663 (shaft) Sendix M3683 (hollow shaft)	36 [1.43]	•	–	14 + 24	•	–	–	–	6.000	-40 ... +85 [-40 ... +185]	IP67	cable M12	10 ... 30	•	  
	Compact, magnetic robust, electronic multiturn Sendix M3661R (shaft)	36 [1.43]	•	–	12 + 16	–	–	4 ... 20 mA 0 ... 10 V 0 ... 5 V	–	4.000	-40 ... +85 [-40 ... +185]	IP69k	cable M12	10 ... 30 15 ... 30	•	  
	Compact, magnetic robust, electronic multiturn Sendix M3663R (shaft)	36 [1.43]	•	–	14 + 24	•	–	–	–	4.000	-40 ... +85 [-40 ... +185]	IP69k	cable M12	10 ... 30	•	  
	Compact, optical electronic multiturn Sendix F3663 (shaft) Sendix F3683 (hollow shaft)	36 [1.43]	–	•	17 + 24	•	•	–	SinCos RS422	12.000	-40 ... +90 [-40 ... +194]	IP67	cable M12	5 10 ... 30	•	
	Standard, magnetic electronic multiturn Sendix M5861 (shaft)	58 [2.28]	•	–	12 + 16	–	–	4 ... 20 mA 0 ... 10 V 0 ... 5 V	–	4.000	-40 ... +85 [-40 ... +185]	IP65	cable M12	10 ... 30 15 ... 30	•	 
	Standard, magnetic electronic multiturn Sendix M5863 (shaft)	58 [2.28]	•	–	14 + 24	•	–	–	–	4.000	-40 ... +85 [-40 ... +185]	IP65	cable M12	10 ... 30	•	 
	Standard, optical electronic multiturn Sendix F5863 (shaft) Sendix F5883 (hollow shaft)	58 [2.28]	–	•	17 + 24	•	•	–	SinCos RS422	12.000	-40 ... +85 [-40 ... +185]	IP67	cable M12 M23	5 10 ... 30	•	 
	Standard, optical Motor-Line electronic multiturn Sendix F5883M (hollow shaft)	58 [2.28]	•	–	17 + 24	•	–	–	SinCos RS422	9.000	-40 ... +85 [-40 ... +185]	IP65	cable	5 10 ... 30	•	
	Standard, optical mechanical multiturn Sendix 5863 (shaft) Sendix 5883 (hollow shaft)	58 [2.28]	–	•	17 + 12	•	•	–	SinCos RS422	12.000	-40 ... +90 [-40 ... +194]	IP67	cable M12 M23	5 10 ... 30	•	 

Absolute encoders
Multiturn

		Ø Dimensions in mm [inch]	Magnetic (accuracy ±1°)	Optical (accuracy ≤ ±0.015°)	Resolution max. in bit ST+MT	SSI interface	BISS interface	Analog / RS485 interface	Additional incremental track	Speed max. in min ⁻¹ (shaft / hollow shaft)	Temperature range in °C [°F]	Protection max.	Type of connection	Power supply in V DC	RoHS compliant	Approvals
	Standard, optical mechanical multiturn SIL2 / PLd Sendix 5863FS2 (shaft) Sendix 5883FS2 (hollow shaft)	58 [2.28]	-	•	17 +12	•	•	-	SinCos	12.000/ 9.000	-40 ... +90 [-40 ... +194]	IP67	cable M23	5 10 ... 30	•	
	Standard, optical mechanical multiturn SIL3 / PLe Sendix 5863FS3 (shaft) Sendix 5883FS3 (hollow shaft)	58 [2.28]	-	•	17 +12	•	•	-	SinCos	12.000/ 9.000	-40 ... +90 [-40 ... +194]	IP67	cable M23	5 10 ... 30	•	
	Standard, optical mechanical multiturn ATEX / IECEx – zone 1/21 Sendix 7063 (shaft) Sendix 7083 (hollow shaft)	70 [2.76]		•	17 +12	•	•	-	-	6.000/ 3.000	-40 ... +60 [-40 ... +140]	IP67	cable	10 ... 30	•	
	Standard, optical mechanical multiturn ATEX / IECEx – mining Sendix 7163 (shaft) Sendix 7183 (hollow shaft)	70 [2.76]		•	17 +12	•	•	-	-	6.000/ 3.000	-40 ... +60 [-40 ... +140]	IP67	cable	10 ... 30	•	
	Large hollow shaft AX	-	• ¹⁾	• ¹⁾	17 + 24	• ¹⁾	• ¹⁾	• ¹⁾	• ¹⁾	4.500	-	IP64	• ¹⁾	• ¹⁾	•	-

1) Depends on the encoder used.

Absolute encoders
Multiturn
Fieldbus & Industrial Ethernet

		Ø Dimensions in mm [inch]	Magnetic (accuracy ±1°)	Optical (accuracy ≤ ±0.015°)	Resolution max. in bit ST+MT	CANopen	CANopenlift	SAE J1939 new	PROFIBUS DP	MODBUS RTU	EtherCAT	PROFINET IO	EtherNet/IP	Speed max. in min ⁻¹ (shaft/ hollow shaft)	Temperature range in °C [°F]	Protection max.	Type of connection	Power supply in V DC	RoHS compliant	Approvals
	Compact, magnetic electronic multiturn Sendix M3668 (shaft) Sendix M3688 (hollow shaft)	36 [1.43]	•	–	14 +24	•	–	•	–	–	–	–	–	6.000	-40 ... +85 [-40 ... +185]	IP67	cable M12	10 ... 30	•	  
	Compact, magnetic robust, electronic multiturn Sendix M3668R (shaft)	36 [1.43]	•	–	14 +24	•	–	•	–	–	–	–	–	4.000	-40 ... +85 [-40 ... +185]	IP69k	cable M12	10 ... 30	•	  
	Compact, optical electronic multiturn Sendix F3668 (shaft) Sendix F3688 (hollow shaft)	36 [1.43]	–	•	14 +24	•	–	–	–	–	–	–	–	12.000	-40 ... +85 [-40 ... +185]	IP67	cable	10 ... 30	•	
	Standard, magnetic electronic multiturn Sendix M5868 (shaft)	58 [2.28]	•	–	14 +24	•	–	•	–	–	–	–	–	4.000	-40 ... +85 [-40 ... +185]	IP65	cable M12	10 ... 30	•	
	Standard, optical electronic multiturn Sendix F5868 (shaft) Sendix F5888 (hollow shaft)	58 [2.28]	–	•	16 +16	•	–	–	–	•	–	–	•	12.000/ 9.000	-40 ... +80 [-40...+176]	IP67	cable M12	10 ... 30	•	 
	Standard, optical Motor-Line electronic multiturn Sendix F5888M (hollow shaft)	58 [2.28]	–	•	16 +16	•	–	–	–	–	–	–	–	9.000	-40 ... +85 [-40 ... +185]	IP65	cable	10 ... 30	•	
	Standard, optical mechanical multiturn Sendix 5868 (shaft) Sendix 5888 (hollow shaft)	58 [2.28]	–	•	16 +12	•	•	–	•	–	•	•	–	9.000	-40 ... +85 [-40 ... +185]	IP67	cable M12 Sub-D	10 ... 30	•	 
	Standard, optical mechanical multiturn ATEX/IECEx – zone 1/21 Sendix 7068 (shaft) Sendix 7088 (hollow shaft)	70 [2.76]	–	•	16 +12	•	–	–	•	–	–	–	–	6.000/ 3.000	-40 ... +60 [-40 ... +140]	IP67	cable	10 ... 30	•	 
	Standard, optical mechanical multiturn ATEX/IECEx – mining Sendix 7168 (shaft) Sendix 7188 (hollow shaft)	70 [2.76]	–	•	16 +12	•	–	–	•	–	–	–	–	6.000/ 3.000	-40 ... +60 [-40 ... +140]	IP67	cable	10 ... 30	•	