

SELECTION GUIDE



Incremental Encoders

Version	Incremental magnetic encoder shaft DINMS24	Incremental encoder shaft BINS24	Incremental encoder hollow shaft BINB24	Incremental encoder shaft and hollow shaft AINS40/AINS40Z AINH40Z
Type series				
Electrical characteristics				
Output	RS 422/Push-pull	Push-pull	Push-pull	RS 422/Push-pull
Supply voltage (VDC)	5 or 5 ... 30	5 ... 24 or 8 ... 30	5 ... 24 or 8 ... 30	5 or 11 ... 30 or 5 ... 24
Mechanical characteristics				
Shaft Ø (mm)	6	4/5/6	4/6	6
housing diameter (mm)	24	24	24	40
max. speed (min ⁻¹)	12000	12000	12000	12000
max. shaft load radial/axial (N)	80/50	10/20	20/10	20/10
max. working temp. (°C)	-40 ... +80	-20 ... +85	-20 ... +85	-20 ... +80
Protection to	IP 65/IP 67	IP 64	IP 64	IP 52
Type of connection	cable, connector	IP 64 cable	IP 64 cable	IP 52 cable
max. resolution	1024	1080	1024	1024
highlights or product differentiations	miniature version	miniature version	miniature hollow shaft version	standard hollow shaft version
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Incremental Encoders

Version	Incremental encoder shaft EINS90	Incremental encoder hollow shaft AINH90/AINH90S	Incremental encoder hollow shaft EINH90	Incremental encoder hollow shaft AINH100
Type series				
Electrical characteristics				
Output	RS 422/Push-pull	RS 422/Push-pull	RS 422/Push-pull	RS 422A/Push-pull
Supply voltage (VDC)	5 or 11 ... 26	5 or 11 ... 30	5 or 5 ... 26	4.75 ... 30
Mechanical characteristics				
Shaft Ø (mm)	11/12	12/20/25/30/32	30	26/38/44
housing diameter (mm)	90	90	90	100
max. speed (min ⁻¹)	6000	4500	3500	4000
max. shaft load radial/axial (N)	30/30	30/30	30/30	80/60
max. working temp. (°C)	-20 ... +85	-20 ... +80	-20 ... +85	-20 ... +70
Protection to	IP 54/IP 64	IP 65	IP 62	IP 54
Type of connection	cable	cable, connector	cable	cable, connector
max. resolution	6000	10000	4096	25000
highlights or product differentiations	heavy duty high resolution	heavy duty hollow shaft	heavy duty large hollow shaft diameter	heavy duty hollow shaft
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Incremental Encoders

Version	Incremental encoder shaft EINS40	Incremental encoder hollow shaft EINH50	Incremental encoder shaft and hollow shaft FINS58/FINH58	Incremental encoder shaft AINS58
Type series				
Electrical characteristics				
Output	RS 422/Push-pull	RS 422/Push-pull	RS 422/Push-pull/sine wave	RS 422/Push-pull
Supply voltage (VDC)	5 or 5 ... 26	5 or 5 ... 30	5 or 5 ... 30 or 4.75 ... 30	5 or 4, 75 ... 30
Mechanical characteristics				
Shaft Ø (mm)	6	6/8/10/12/14/15	6/10 or 6/8/10/12/14	6/10
housing diameter (mm)	40	50	58	58
max. speed (min ⁻¹)	6000	10000	9000/12000	8000
max. shaft load radial/axial (N)	20/30	100/80	100/50	38/40
max. working temp. (°C)	-20 ... +70	-20 ... +85	-30 ... +100	-20 ... +70
Protection to	IP 62	IP 65/IP 67	IP 65/IP 67	IP 65
Type of connection	cable	cable, connector	cable, connector	cable, connector
max. resolution	1024	5000	80000 (interpolated)	2499
highlights or product differentiations	standard version	standard version	standard version Option: programmable sine wave output	economical version Option: up to +100 °C
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Incremental Encoders Overspeed switches

Version	Incremental encoder hollow shaft DINH100	Incremental encoder hollow shaft EINH100	Incremental encoder hollow shaft DINH145	Overspeed Switch with encoder AOSS90
Type series				
Electrical characteristics				
Output	RS 422/Push-pull	RS 422A/Push-pull	RS 422/Push-pull	NO, NC
Supply voltage (VDC)	4.75 ... 5.5 or 10 ... 30	5 or 5 ... 30	4.75 ... 5.5 or 10 ... 30	240 VAC / 6 A
Mechanical characteristics				
Shaft Ø (mm)	25 ... 45	26/28/30/32/38/40/42	48 ... 72	11, 12
housing diameter (mm)	100	100	145	90
max. speed (min ⁻¹)	3500	10000	800	9000
max. shaft load radial/axial (N)	200/100	240/140	200/100	200/100
max. working temp. (°C)	-10 ... +70	-20 ... +85	-10 ... +70	-30 ... +130
Protection to	IP 54	IP 65	IP 54	IP 66
Type of connection	cable, connector	cable	cable, connector	connector, terminal box
max. resolution	4096	10000	2500	4000
highlights or product differentiations	heavy duty large hollow shaft diameter	heavy duty hollow shaft	heavy duty large hollow shaft diameter	heavy duty centrifugal overspeed switch; multiple mounting possibilities with incremental and absolute encoders
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Overspeed switches Linear Encoders

Version	Overspeed switch/ Rotation Speed monitor 6KB44110/AL-Ni	Connector belt monitor with overspeed switch 6KB4111	Draw Wire	Magnetic linear encoder system KLME01
Type series			CDxx	
Electrical characteristics				
Output	2 Relay contacts r/ Internally generated	2 Relay contacts r/ Internally generated	see section	PPL/TTL/RS422 10 ... 30
Supply voltage (VDC)				
Mechanical characteristics				
Shaft Ø (mm)	Pin adapter 120	Pin adapter 120		
housing diameter (mm)	6000	6000		
max. speed (min ⁻¹)				
max. shaft load radial/axial (N)				
max. working temp. (°C)	-25 ... +70	-25 ... +70		-25 ... +85
Protection to	IP 65	IP 65		IP 67
Type of connection	M 20 cable gland	M 20 cable gland		cable
max. resolution				5/10/25/62.5 µm
highlights or product differentiations	Electroinic overspeed switch, Speed range adjustable from 60-6000 rpm	heavy duty conveyor belt speed monitor	incremental or absolute encoder	measuring length up to 100 mm High resolution up to 0.001 mm
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Absolute Encoders

Version	Absolute encoder, singleturn and multiturn shaft and blind shaft CAxx58	Absolute encode multiturn shaft and hollow shaft FAxx90
Type series		
Electrical characteristics		
Output	SSI/BiSS/Paralle/Profibus DP/Device Net/ CANopen/Interbus	SSI/Profibus/CANopen Parallel on request
Supply voltage (VDC)	5 or 10 ... 30	11 ... 30
Mechanical characteristics		
Shaft Ø (mm)	6/10 or 10/12	11/12 or 12/20/25/30
housing diameter (mm)	58	90
max. speed (min ⁻¹)	12000	9000/6000
max. shaft load radial/axial (N)	60/40	200/100
max. working temp. (°C)	-40 ... +100	-20 ... +90
Protection to	IP 64/IP 67	IP 65/IP 67
Type of connection	cable, connector	cable, connector
max. resolution	29 Bit	29 Bit
highlights or product differentiations	High temperature	heavy duty large hollow shaft diameter
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Linear Encoders Absolute Encoders

Version	Magnetic linear encoder profile system	Sealed magnetic measuring scale	Absolute magnetic encoder, singleturn, multiturn, shaft and blind shaft DAMxx37/58	Absolute encoder, single- turn and multiturn shaft, hollow and blind shaft CAxx37
Type series	KLME02	KMLE03		
Electrical characteristics				
Output	PPL/TTL/RS422	PPL/TTL/RS422	SSI/CANopen	SSI/BiSS option SinCos
Supply voltage (VDC)	10 ... 30	10 ... 30	5 or 10 ... 30	5 or 7 ... 30
Mechanical characteristics				
Shaft Ø (mm)			6, 8, 10, 12, 14	6 or 8
housing diameter (mm)			37/58	37,5
max. speed (min ⁻¹)			12000/8000	12000
max. shaft load radial/axial (N)			80/50 or 125 (220)/120	
max. working temp. (°C)			-40 ... +80	-25 ... +100/-15 ... +120
Protection to	-25 ... +85	-25 ... +85	IP 67	IP 64/IP 40
Type of connection	IP 67	IP 67	IP 67	cable, PCB connector
max. resolution	cable	cable	cable, connector	29/31 Bits
highlights or product differentiations	5/10/25/62.5 µm measuring length up to 100 mm High resolution up to 0.001 mm	5/10/25/62.5 µm measuring length up to 100 mm High resolution up to 0.001 mm	14/40 bit compact and heavy duty industrial absolut magnetic encoder	miniature version high temperature
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Incremental Encoders

Version	Incremental encoder shaft EINS58	Incremental encoder hollow shaft CINH76	Incremental encoder hollow shaft EINH80	Incremental encoder shaft AINS90/AINS90S
Type series				
Electrical characteristics				
Output	RS 422/Push-pull	RS 422/Push-pull	RS 422/Push-pull	RS 422/Push-pull
Supply voltage (VDC)	5 or 5 ... 30	5 or 10 ... 30	5 or 10 ... 30	5 or 11 ... 30
Mechanical characteristics				
Shaft Ø (mm)	6/8/10	15 ... 42	38/40/42/44	11/12
housing diameter (mm)	58	76	81	90
max. speed (min ⁻¹)	10000	6000	6000	6000
max. shaft load radial/axial (N)	240/140			200/100
max. working temp. (°C)	-20 ... +85	-25 ... +100	-25 ... +100	-20 ... +80
Protection to	IP 65	IP 40/IP 64	IP 54/IP 64	IP 65
Type of connection	cable	cable	cable	cable, connector
max. resolution	25000	10000	4096	10000
highlights or product differentiations		large hollow shaft diameter	large hollow shaft diameter	heavy duty high resolution
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- Specifications are subject to change without notice.
- Due to RoHS EU directive 2002/95/EC, housings will be changed to lead free colours without further notice. For actual RoHS status please consult factory.

