



Online Data sheet

Encoder WDGI 36J

www.wachendorff-automation.com/wdgi36j

Wachendorff Automation systems and encoders

- Complete systems
- Industrial rugged encoders to suit your application
- Maximum permissible loads
- Made in Germany

Wachendorff Part Number	AutomationDirect Equivalent	PPR
WDGI 36J-10-60-ABN-M35-SC8	36J10603GSC8	60
WDGI 36J-10-100-ABN-M35-SC8	36J101003GSC8	100
WDGI 36J-10-360-ABN-M35-SC8	36J103603GSC8	360
WDGI 36J-10-500-ABN-M35-SC8	36J105003GSC8	500
WDGI 36J-10-1000-ABN-M35-SC8	36J1010003GSC8	1000
WDGI 36J-10-1024-ABN-M35-SC8	36J1010243GSC8	1024
WDGI 36J-10-2000-ABN-M35-SC8	36J1020003GSC8	2000
WDGI 36J-10-2500-ABN-M35-SC8	36J1025003GSC8	2500
WDGI 36J-10-4096-ABN-M35-SC8	36J1040963GSC8	4096
WDGI 36J-10-5000-ABN-M35-SC8	36J1050003GSC8	5000

Accessory	Description
DSK291010	Encoder coupling, double loop, 10mm bore, galvanized steel and polyurethane body, setscrew.
DSK481010	Encoder coupling, double loop, 10mm bore, galvanized steel and polyurethane body, setscrew.
FB29B1010	Encoder coupling, bellows, 10mm bore, stainless steel and aluminum body, setscrew.
MR200KG10	Encoder measuring wheel, 63.7mm diameter (200mm circumference), 10mm shaft, aluminum and plastic, grooved Hytrel contact surface.
MR200KH10	Encoder measuring wheel, 63.7mm diameter (200mm circumference), 10mm shaft, aluminum and plastic, smooth Hytrel contact surface.
MR200NG10	Encoder measuring wheel, 63.7mm diameter (200mm circumference), 10mm shaft, aluminum, pimpled rubber contact surface.
MR200KR10	Encoder measuring wheel, 63.7mm diameter (200mm circumference), 10mm shaft, aluminum, knurled metal contact surface.
MR500KH10	Encoder measuring wheel, 159.2mm diameter (500mm circumference), 10mm shaft, aluminum and plastic, smooth Hytrel contact surface.
MR500KG10	Encoder measuring wheel, 159.2mm diameter (500mm circumference), 10mm shaft, aluminum and plastic, grooved Hytrel contact surface.
MR500NG10	Encoder measuring wheel, 159.2mm diameter (500mm circumference), 10mm shaft, aluminum, pimpled rubber contact surface.
MR500KR10	Encoder measuring wheel, 159.2mm diameter (500mm circumference), 10mm shaft, aluminum, knurled metal contact surface.
MR500KV10	Encoder measuring wheel, 159.2mm diameter (500mm circumference), 10mm shaft, aluminum, smooth vulcanized rubber contact surface.
WDGMA31031	Spring-loaded counter-clockwise arm, aluminum. Mounting bracket included.
WDGMA31032	Spring-loaded clockwise arm, aluminum. Mounting bracket included.
SP300	Servo mount clamp, steel.

Encoder WDGI 36J



- Compact and robust
- Resolutions from 60 to 5000 PPR available
- Protection rating: IP67+IP69K (high pressure/steam cleaning)
- High shaft load rating (300N axial/radial)
- Quadrature output with index
- Universal electrical output accommodates HTL and TTL, single-ended and differential

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Mechanical Data

Flange	servo flange
Flange material	aluminum, type: AlMgSi1
Housing material	stainless steel, type: 1.4521 (magnetic)
Flange diameter	Ø 36 mm [Ø 1.417"]
Shaft material	stainless steel, type: 1.4305
Starting torque	approx. 1 Ncm [1.416 in-ozf] at ambient temperature
Shaft	Ø 10 mm [Ø 0.394"]
Shaft length	L: 0.787"
Max. Permissible shaft loading radial	300 N [30.59 kp]
Max. Permissible shaft loading axial	300 N [30.59 kp]
Bearings type	2 precision ball bearings
Nominal service life	5 x 10 ⁸ revs. at 100 % rated shaft load 5.44 x 10 ⁹ revs. at 40 % rated shaft load 3.1 x 10 ¹⁰ revs. at 20 % rated shaft load
Max. operating speed	6000 rpm

Machinery Directive: basic data safety integrity level

MTTF _d	2200 years
Mission time (TM)	25 years
Nominal service life (L10h)	3.1 x 10 ¹⁰ revs. at 20 % rated shaft load and 6000 rpm
Diagnostic coverage (DC)	0%

Environmental Data

ESD (DIN EN 61000-4-2)	8 kV
Burst (DIN EN 61000-4-4)	2 kV
includes EMC	DIN EN 61000-6-2 DIN EN 61000-6-3
Vibration (DIN EN 60068-2-6)	50 m/s ² (10 Hz up to 2000 Hz)
Shock (DIN EN 60068-2-27)	1000 m/s ² (6 ms)
Electrical Safety	according DIN VDE 0160

Electrical Data

Power supply VDC	4.75 - 30 VDC
Current Consumption	typ. 40 mA
Signal shape	square wave
Output circuit	HTL, inv. (TTL/RS422 comp. at 5 VDC)
Channels	ABN and inverted signals
Output	push-pull
Load	max. 40 mA / channel
Signal level mA	at 20 mA
Signal level H>	H > V _{CC} -10% V _{CC}
Signal level L	L < 2.5 VDC
Output frequency	HTL: max. 600 kHz; TTL: max. 1 MHz
Circuit protection	inverse-polarity and short-circuit protection
Light reserve warning	no

General Data

Weight	approx. 210 g [7.407 oz]
Connections	8-pin M12 A-coded
Protection rating (EN 60529)	IP67+IP69K all around
Operating temperature	-40 °C up to +85 °C, [-40 °F up to +185 °F]
Storage temperature	-40 °C up to +85 °C, [-40 °F up to +185 °F]

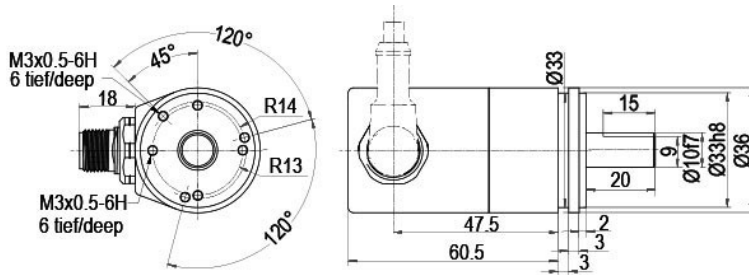
Duty Information

Customs tariff number	90318020
Country of origin	Germany

More Information

General technical data and safety instructions
<http://www.wachendorff-automation.com/gtd>

Sensor connector: 8-pin M12 A-coded



Alle Abmessungen in mm / All dimensions in mm

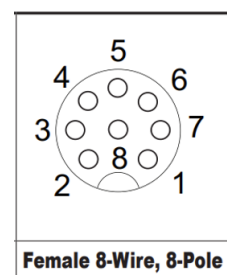
Description

SC8 radial, 8-pin, Connector connected to encoder housing

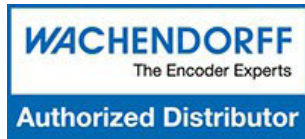
Wachendorff WDGI 36J Connector Pinout

SC8 8-Pin Connector	Circuit	Pin	Murr Wire Colors Part# 7000-170x1-292xxxx
	GND	1	White
	(+) VCC	2	Brown
	A	3	Green
	B	4	Yellow
	N	5	Gray
	A inv.	6	Pink
	B inv.	7	Blue
	N inv.	8	Red
	n.c.	—	—
	Shield	—	—

Part Number	Connector	Length	Protection Degree
7000-17041-2920300	Axial female	3m	IP65 IP66 IP67
7000-17061-2920300	90-degree female		
7000-17041-2920500	Axial female	5m	
7000-17061-2920500	90-degree female		
7000-17041-2921000	Axial female	10m	
7000-17061-2921000	90-degree female		



Ordering WDGI-36J-xxxx-ABN-M35-SC8 (ADC Part Number 36Jxxxx3GSC8)		
Example Order No.	Type	
WDGI 36J	WDGI 36J	
	Shaft	
10	10mm	
	Pulses per revolution PPR	
xxxx	60, 100, 360, 500, 1000, 1024, 2000, 2500, 4096, 5000	
	Channels:	
ABN	AB quadrature with index pulse	
	Output circuit	
M35	Power supply VDC	Output circuit
	4.75–30	HTL, inv. (TTL/RS422 comp. at 5 VDC)
	Electrical connections	
SC8	8-pin M12 A-coded	



For additional information, please contact AutomationDirect.
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