

SERIES AX70/AX71

ACURO™ brand

Magnetic Absolute Encoder

Key Features

- Up to 17 bit of Singleturn, 12 bit of True Multiturn Absolute Positioning
- ATEX Certification for Explosion Proof Requirements
- Stainless Steel or Aluminum Housing
- Multiple Communication Options

NEW!



SPECIFICATIONS

ELECTRICAL - DeviceNet / CANopen

Parameter	DeviceNet	CANopen
Supply voltage:	DC 10-30 V	DC 10-30 V
Current consumption ST/MT:	max.250 mA	max.250 mA
Profile/ Protocol:	DeviceNet according to Rev. 2.0, programmable encoder	CANopen according DS 301 with encoder profile DSP 406
Output code:	Binary	Binary
Resolution Singleturn:	10 - 14 Bit	10 - 16 Bit
Resolution Multiturn:	12 Bit	12 Bit
Baud rate:	set via Bus	set via Bus
Bus termination:	External resistor	External resistor
MAC-ID:	set via Bus	-
Node ID:	-	set via Bus
Integrated special functions:	-	Speed, acceleration, round axis, limit values
Programmable:	Resolution, Preset, Direction	Resolution, Preset, Limits value, Direction
Connection:	Cable axial	Cable axial

ELECTRICAL CONNECTIONS - DeviceNet / CANopen

Color	DeviceNet	CANopen
Yellow	CAN in+	CAN in+
Green	CAN in -	CAN in -
Pink	CAN out+	CAN out+
Grey	CAN out -	CAN out -
Blue	DRAIN	CAN GND in
Black	DRAIN	CAN GND out
White	UB in	UB in
Brown	0 V in	0 V in
Screen	Screen connected to encoder housing	

ELECTRICAL - SSI/ SSI-P

Parameter	SSI	SSI-P
Supply voltage	DC 10-30 V	DC 10-30 V
Max. current w/o load	220 mA (ST), 250 mA (MT)	250 mA (ST /MT)
Resolution singleturn	10 -17 Bit	10 -17 Bit
Resolution multiturn	12 Bit	12 Bit
Output code	Binary, Gray	Binary, Gray
Drives	Clock and Data /RS422	Clock and Data /RS422
Control inputs	Direction	Direction, Preset 1, Preset 2
Alarm output	Alarm bit (SSI Option)	Alarm bit
Parametrization	N/A	Resolution, Code type, Direction, Warning, Output format, Alarm, Preset values

ELECTRICAL CONNECTIONS — SSI-P

Wire Color	Pin No.	SSI-P Function
White 0.14 mm	6	RS232 Rx/D
Brown 0.14 mm	5	RS232 Tx/D
Green	10	Clock
Yellow	9	Clock
Gey	8	Data
Pink	7	Data
Blue	3	Direction
Black	4	0 V signal output
Red	1	Preset 1
Violet	2	Preset 2
Brown 0.5 mm	11	0 V supply voltage
White 0.5 mm	12	DC 10 ...30 V
Screen	—	Screen connected to encoder housing

Note: Parameterization is programmable with WIN SSI software

SSI / SSI-P RECOMMENDED DATA TRANSFER RATE (bei SSI)

Cable length	Frequency
<50 m	<400 kHz
<100 m	<300 kHz
<200 m	<200 kHz
<400 m	<100 kHz

The max. data transfer rate depends on the cable length.

For Clock /Clock and Data /Data please use twisted pairs. Use shielded cable.

ELECTRICAL CONNECTIONS — SSI

Wire Color	Pin No.	SSI Function
White 0.14 mm	12	Vcc 10 to 30VDC
Brown 0.14 mm	11	0 V Gnd.
Green	10	Clock
Yellow	9	Clock
Gey	8	Data
Pink	7	Data
Blue	3	Direction
Black	4	0 V Gnd.

ELECTRICAL - Profibus

Parameter	Profibus
Supply voltage	10-30 VDC
Max. current w/o load	220 mA (ST), 250 mA (MT)
Resolution singleturn	10 -14 Bit
Resolution multiturn	12 Bit
Output code	Binary
Profile/protocol	Profibus DP with encoder profile class C2 (parameterizable)
Parametrization	Resolution, Preset, Direction
Integrated special functions	Speed, Acceleration, Operating time
Baud rate	Automatically set within a range of 9.6 Kbaud through 12 Mbaud
Device address	Set via Bus
Bus termination resistor	External mounting

ELECTRICAL CONNECTIONS — Profibus

Wire Color	Profibus Function
Yellow	B in
Green	A in
Pink	B out
Grey	A out
Blue	GND1 (M5V ¹)
Brown	VCC1 (P5V ¹)
White 0.5 mm	DC 10 - 30 V
Brown 0.5 mm	0 V
Screen	Connected to encoder housing

¹ used for power supply for an external bus termination resistor

MECHANICAL - All Types

Shaft diameter: 10 mm (Solid shaft)
Mounting: Clamping flange
Max. Shaft load: Axial= 40 N; Radial= 100 N
Max. shaft speed: T4= 10 000 rpm; T6= 6000 rpm
Torque: ≤1 Ncm
Moment of inertia: approx. 20 gcm²
Material shaft: Stainless Steel
Material housing: AX 70= Aluminum; AX 71= Stainless Steel
Weight: AX 70= approx. 1.4 kg; AX 71= approx. 4.8 kg
Connection: Cable, axial

ENVIRONMENTAL - All Types

Protection class, shaft (EN 60529): T4= IP64 or IP67; T6= IP64
Protection class, housing (EN 60529): T4= IP65 or IP67; T6= IP65 (IP64 for CANopen or DeviceNet)
Vibration resistance (DIN EN 60068-2-6): 100 m/s² (10 to 500 Hz)
Shock resistance (DIN EN 60068-2-27): 1000 m/s² (6 ms)
Operating temperature: T4= -40°C to +60°C; T6= -40°C to +40°C
Storage temperature: -25°C to +85°C
¹ No dust explosion-proof (D) for IP64

T6 = Highest permissible surface temperature +85°C (max. speed = 6000 /min⁻¹)
 T4 = Highest permissible surface temperature +130°C (max. speed = 10,000 /min⁻¹)

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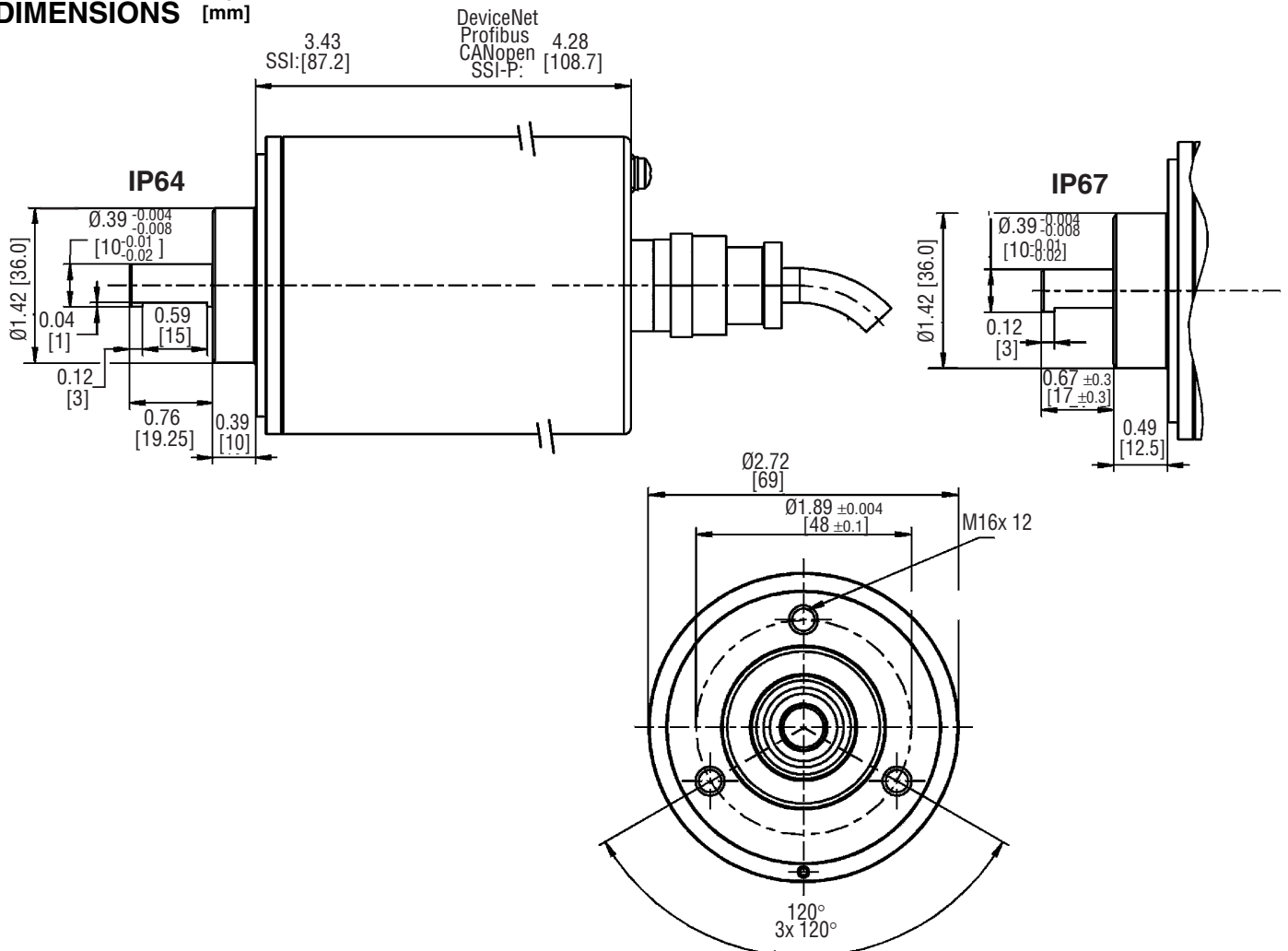


Ordering Information

To order, complete the model number with code numbers from the table below:

Code 1: Model	Code 2: Resolution	Code 3: Voltage	Code 4: Mounting	Code 5: Protection Class	Code 6: Shaft Size	Code 7: Interface	Code 8: Connection	Code 9: Cable Length	
Ordering Information									
AX70	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Acuro Series AX70 Heavy Duty Absolute encoder, Aluminum Housing AX71 Stainless Steel Housing	SSI Only Single Turn 0010 0012 0013 0014 0017 Multi Turn 1212 1213 1214 1217	CAN, Profibus, DeviceNet Single Turn 0014 Multi Turn 1214	A 5 VDC E 10-30VDC	K Clamping Flange	4 IP64 7 IP67	2 10mm	SB SSI-Binary SG SSI-Gray SP SSI-Programmable DP Profibus DP VD DeviceNet CL CAN-L2 OL CAN-Open	A Axial Cable	FO 5m KO 10m PO 15m UO 20m VO 25m

DIMENSIONS inch [mm]





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