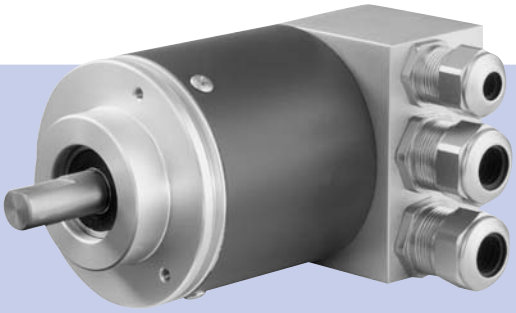
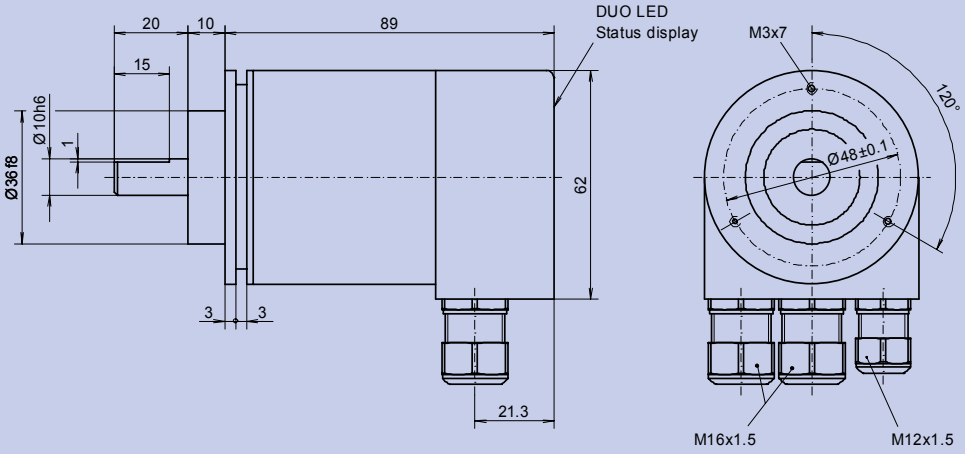
Absolute encoder *with shaft PROFIBUS-DP*

ATD 2B B14 Y 4

Features

- Robust single- resp. multiturn-Absolute encoder
- **Programmable resolution:** max. 8.192 steps/revolution max. 65.536 shaft turns (only multiturn)
- Centering seat Ø36, mounting punch circle Ø48
- programmable operating value
- programmable preset value
- Bus cover detachable





Drawing-no.: 028- 7 Y 4

Mechanical data

Design style		B14		**B14**
Material	housing flange/bus cover	steel, black light-alloy metal, unpainted		
Protective class		IP 65	according to DIN EN 60 529	**IP65**
Construction principle		LED with glas slotdisc electronical count with buffer (multiturn)		
max. revolution	mechanical electrical	n_{max} ≤ 10.000 rpm n_{max} ≤ 6.000 rpm		
Permissible shaft load	axial radial	≤ 20 N ≤ 40 N	 (at shaft end)	
Starting torque		< 0.015 Nm		
Vibration	16... 2.000 Hz	≤ 200 m/s²	according to DIN IEC 60 068, part 2-6	
Shock	6 ms	≤ 2.000 m/s²	according to DIN IEC 60 068, part 2-27	
Moment of inertia (rotor)		2x10-6 kgm²		
Shaft diameter	d	10 mm		**10**
Weight		approx. 600 g		

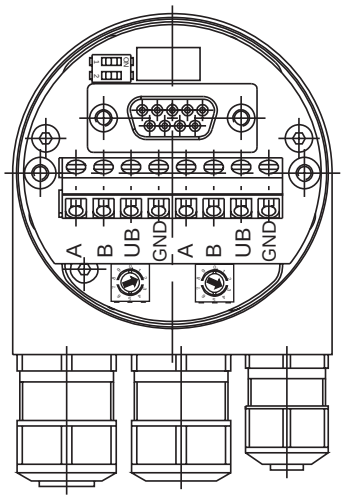
Electrical data

Steps per revolution	Single-/Multiturn	**programmable** up to max. 8.192 (13 Bit) steps/revolution	**XX**
Number of turns	Multiturn	**programmable** up to max. 65.536 (16 Bit) shaft turns	**YY**
Output code		Binär	
Accuracy		±0.025 Grad at 400 kHz ±0.05 Grad at 800 kHz	
Operating voltage	U_B	10-30 VDC (poling error safe)	
Load current (without load)	I_{max}	≤ 100 mA (at 24 VDC)	
Baud-rate		9.6 kBaud to 12 MBaud	
Type of connection		detachable bus cover with 2xM16, 1xM12	**M16/12**
Operating temperature range		-20 °C to +60 °C	**S**
Permissible relativ humidity		≤ 90 % (condensation not permitted)	
Adress		settable with rotary switch (00 factory setting)	
Rotating direction		clockwise (cw) when shaft is viewed from the front (programmable)	
Electrical connection		The electrical connection and the bus cover may not be attached or removed under voltage.	

Profibus-DP Merkmale

Bus protocol	Profibus-DP
Profibus features	PNO Class 1 and 2
Preset value	With the „Preset" parameter the encoder can be set to a desired actual value that corresponds to the defined axis position ot the system.
Parameter functions	Rotating direction: With the operating parameter the rotating direction for which the output code is to increase or decrease can be parameterized. Scaling: The steps per revolution and the total revolution can be parameterized
Diagnosis	The encoder supports the following error messages: Position error, Lithium cell voltage at lower limit (multiturn)

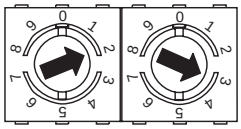
View inside bus cover



Settings of terminating resistors

ON = Last user
OFF = User X

Settings of user address



Address can be set with rotary switch
Example: User adress 23

Connection table

A Negative serial data line, pair 1 and pair 2
B Positive serial data line, pair 1 and pair 2
U_B Supply voltage 10 - 30 VDC
GND Ground contact for U_B
(Terminals with the same designation are internally interconnected)

Ordering example

ATD 2B	B14	Y 4	13/16	PB	PN	M16/12	S	10	IP65	
Absolute encoder *ATD 2B*	Design style *B14*	Mechanical variante *Y 4 = look at the drawing*	Steps / rev. / no. of turns *8.192 (13 Bit) steps/rev. 65.536 (16 Bit) rev.*	Datatransmission *PROFIBUS-DP*	Parameter setting *according to PNO class 2*	Type of connection *Bus cover with 2 x M16, 1 x M12*	Operating temperature *-20 °C to +60 °C*	Shaft diameter *10 mm*	Protective class *IP65*	Attachment kit variante