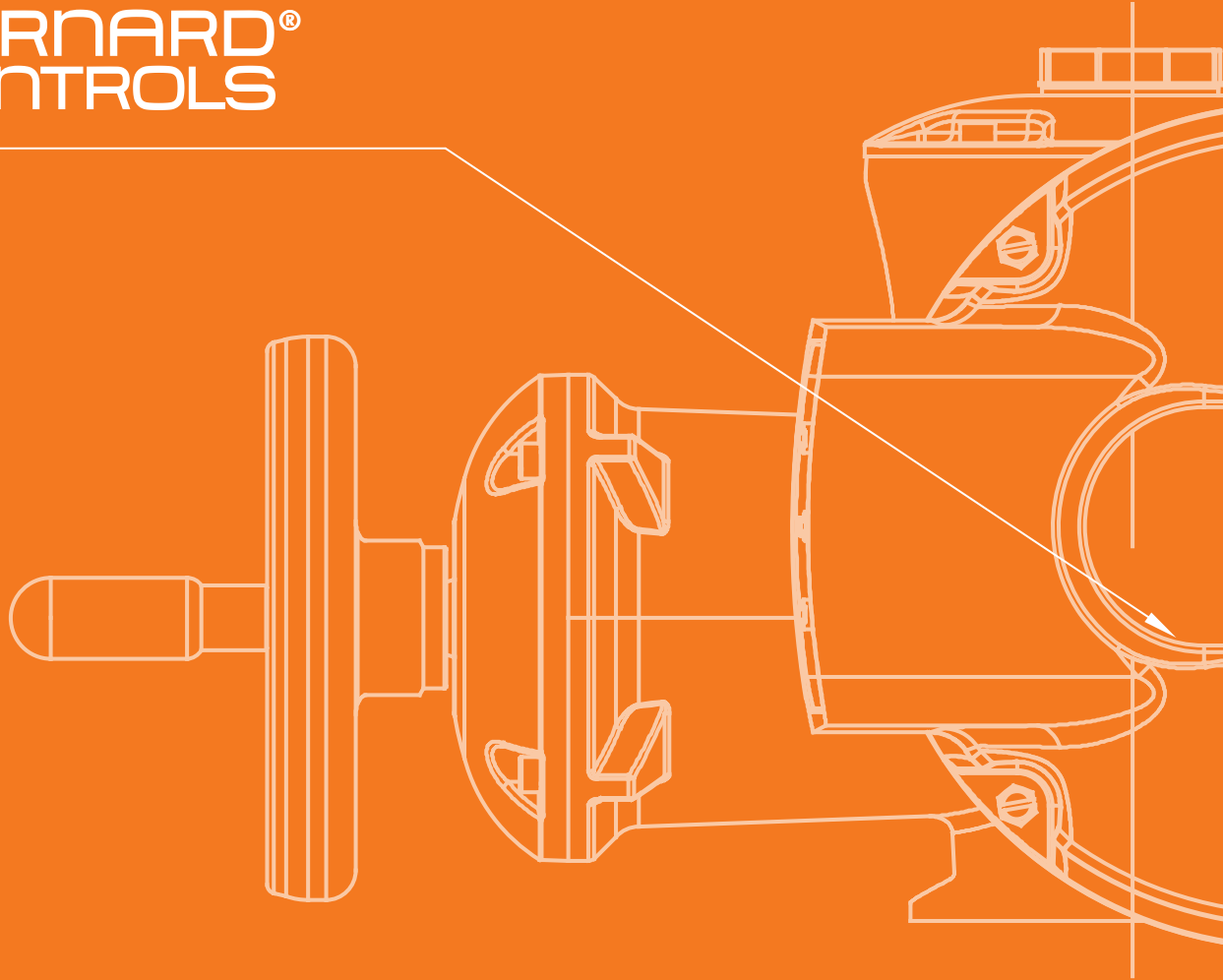


LABEL



**BERNARD[®]
CONTROLS**



//////// Invest in Confidence //////////////////////////////////////

New

Weatherproof
Multi-turn Actuators
AT RANGE

> AT range

The essentials

for multi-turn electric actuation



AT3 - AT6L - AT6 - AT14 - AT25 - AT50
SWITCH & LOGIC versions

AT7
SWITCH & LOGIC version

Product overview

Wide Stem Acceptance

- > suitable for rising stem thanks to a removable screw cap
- > easy & watertight fixation of the stem cover



Declutch-free handwheel

- > with motor priority
- > with foldable handle
- > optional dual speed and motorization



Two possible positions for the cover



Heavy duty design

Full aluminium enclosure protected by durable powder coating Grey & Champagne!



User-friendly local commands

through 2 buttons + 1 padlockable selector

New mobile application BC App

"Set up your actuator and more in a few clicks!"

- > Set up & Operate your actuator using your mobile phone
- > Get access to clear descriptions of alarms, troubleshooting functions, documentation, Bernard Controls Assistance
- > Upload & change the full actuator configuration in one step
- > Even complex settings are made easier



Mechanical position indicator option

> On SWITCH VERSION:
Easy & quick customization of color indication & orientation from the outside



Large LCD display

Easily orientable in few clicks on the BC APP or through local commands

Product benefits

• Innovative, reliable & unique design

- > Product architecture & torque range adapted to customers' requirements: 7 models from 12 to 500 Nm
- > Selection of the essential features to ensure a competitive but performing solution: actuator duty from On-Off to Modulating, heavy duty enclosure protection, IP68, integrated control, wide range of output speeds...
- > New reliable camblock system unaffected by vibrations. Fully new & unique design with internal modularity for compact solution, e.g. modular position sensor enables up to 1700 turns with the same product

• Performance for multi-turn actuation

- > From 12Nm to 500Nm (direct) and more with gearboxes
- > Wide range of speeds to address all types of applications
- > Wide stem acceptance
- > Self-locking at all speeds without any additional component*
- > S4 Motor Service Duty on all models
- > Suitable for modulating applications (BC Class III complying with EN15714-2 Class C)

• Easy to install

- > Easy commissioning: set up of travel limitation system (new camblock)

with a standard screwdriver (similar to FIRST BC AQ range), only two standard tools required to install and set up the actuator on valve, wiring reduced to the minimum for fast assembly

- > Large LCD display on LOGIC version for user-friendly commissioning and local command. Easily orientable (4-way direction) in few clicks
- > Product suitable for rising stem thanks to adjustable torque sensor from 40 to 100%

• Easy to maintain

- > Declutch-free manual override for quick intervention on site
- > Mechanical position indicator as an option on SWITCH versions: check the position of your valve at a glance
- > BC APP: Bernard Controls new mobile application for setting, operating, troubleshooting and easy access to documentation

• The main functions of integrated control with the new LOGIC control (v2)

- > Turn-key, time & cost-saving solution
- > User-friendly & intuitive
- > Non-intrusive setting for enhanced safety and reliability
- > Compatible with common fieldbus protocols: Modbus RTU, Profibus DPV1.
- > Bluetooth communication (as standard) to communicate with Bernard Controls' BC App

Range Overview

A new range of multi-turn electric actuators made up of 7 models with or without integrated controls



AT SWITCH

AT3-AT6L-AT7-AT6-AT14-AT25-AT50

- 1x110 VAC 50Hz
- 1x115/120 VAC 60Hz
- 1x220/230 VAC 50/60Hz
- 3x200/220 VAC 50/60Hz
- 3x230 VAC 50/60Hz
- 3x240 VAC 50Hz
- 3x360 VAC 60Hz
- 3x380/400 VAC 50/60Hz
- 3x415/550 VAC 50Hz
- 3x440 VAC 50/60Hz
- 3x460/480 VAC 60Hz
- 3x575/660 VAC 60Hz
- 3x600 VAC 50/60Hz
- Other voltages on request

On-Off Class A as standard

> OPTIONS

- + Low temp. -40°
- + Class B
- + Class III
- + Position potentiometer (1000 Ω)
- + Analog Transmitter (4-20mA)
- + Name Plate 316L
- + Mechanical position indicator



AT LOGIC

AT3-AT6L-AT7-AT6-AT14-AT25-AT50

- 1x110 VAC 50Hz
- 1x115/120 VAC 60Hz
- 1x220/230 VAC 50/60Hz
- 3x200/220 VAC 50/60Hz
- 3x230 VAC 50/60Hz
- 3x240 VAC 50Hz
- 3x360 VAC 60Hz
- 3x380/400 VAC 50/60Hz
- 3x415/550 VAC 50Hz
- 3x440 VAC 50/60Hz
- 3x460/480 VAC 60Hz
- 3x575/660 VAC 60Hz
- 3x600 VAC 50/60Hz
- Other voltages on request

On-Off Class A as standard

> OPTIONS

- + Low temp. -40°
- + Class B
- + Class III
- + Analog Positioner
- + Position & Torque Transmitter
- + 4 additional signaling relays
- + Profibus DPV1
- + Modbus RTU
- + Name Plate 316L
- + Padlockable HMI protection



Contents

Product specifications - AT SWITCH	4
Product specifications - AT LOGIC	6

AT SWITCH

PRODUCT SPECIFICATIONS

GENERAL	Description	All AT actuators include motor with thermal protection, gear case, emergency handwheel, travel limit switches, torque switches and anti-condensation heater. Wide range of number of turns: 4 to 1695 turns
	Torque range	<ul style="list-style-type: none"> • AT3 = 12 to 30 Nm • AT6L = 24 to 60 Nm • AT6 = 24 to 60 Nm • AT7 = 28 to 70 Nm • AT14 = 56 to 140 Nm • AT25 = 100 to 250 Nm • AT50 = 200 to 500 Nm
	Duty Classification	Adapted to process requirements: <ul style="list-style-type: none"> • On-Off : Class A actuators complying with EN15714-2 • Inching/Positioning: Class B actuators complying with EN15714-2 • Modulating: Class III actuators with higher duty performance and specification of additional performance criteria compared to EN15714-2 Class C basic design requirements
ENCLOSURE - PROTECTION	Casing	<ul style="list-style-type: none"> • Aluminium casting • Cover fastened by captive and stainless screws
	External Protection	<ul style="list-style-type: none"> • Type: Polyester based powder coating as standard • Protection: standard tested to C4 environments acc. to ISO 12944, up to C5 as an option. • Durability (M) : 10 years • Color: Grey & Champagne Other colors and finishes, please consult us
	Weatherproofness	IP68 NEMA 4X as standard <i>Relative humidity: 0 to 95%.</i>
	Ambient temperature range	<ul style="list-style-type: none"> • -20...+70°C / -4 ... +158°F • -40°C (-40°F) as an option Other temperatures, please consult us
	Vibration resistance	1g (9.8 m/s ²) at 10-200 Hz. (Contact our sales teams for higher vibration levels)
MOTOR	Motor technology	<ul style="list-style-type: none"> • TENV design (Totally-enclosed, not ventilated) 3-phase or single-phase asynchronous motor, Class F insulation and Class B temperature rise; integrated thermal overload protection. • TENV DC motors with 2-wire connection available on request for some references
	Motor duty rating	<ul style="list-style-type: none"> • On/Off operation (complying with EN15714-2 Class A): S4-30% and S2-15min (as a standard) • Inching/Positioning (complying with EN15714-2 Class B): S4-30% motor duty rating. Up to 360 starts per hour at peak of operation. S4-50% as option. • BC Modulating Class III (complying with EN15714- 2 Class C): S4-50% motor duty rating. Up to 1 200 starts per hour at peak of operation. <i>(Voltage ±10%, Frequency ±2%)</i>
MECHANICAL SPECIFICATIONS	Gear design	<ul style="list-style-type: none"> • Reduction by planetary gear and largely sized worm & wheel • The gears are mechanically self-locking
	Manual emergency operation	Handwheel does not rotate during motor operation. <ul style="list-style-type: none"> • Automatic switch between manual and electrical. Priority to electric drive. • Manual control gear ratios: Standard ratio = between 11 and 55 depending on the model AT3 = ratio 30:1 AT3 = ratio 55:1 (speed 7 & 10 rpm) AT6L = ratio 30:1 AT7 = ratio 1:1 AT6 = ratio 27:1 AT14 = ratio 27:1 AT25 = ratio 29:1 (speed ≤ 96rpm) AT25 = ratio 11:1 (speed > 96rpm) AT50 = ratio 29:1 (speed ≤ 96rpm) AT50 = ratio 11:1 (speed > 96rpm) • Maximum rim force to apply conform to EN 12570 • Dual speed and motorization option for AT25 & AT50

AT SWITCH

PRODUCT SPECIFICATIONS

MECHANICAL SPECIFICATIONS	Output flange	Actuator flanges comply with ISO 5210 (see corresponding output flange spreadsheet p.9)
	Lubrication	The actuators are lubricated for the product lifetime and do not require any special maintenance.
ELECTRICAL SPECIFICATIONS	Power supply	Actuators can operate on a wide variety of power supplies (see detail on technical handbook): <ul style="list-style-type: none"> • single-phase or 3-phase, • up to 480 V • 50 or 60 Hz
	Terminal compartment	<ul style="list-style-type: none"> • All control elements are directly connected to push type terminals • Internal and external earth ground rod. - up to 2,5mm² for Control terminal - up to 2,5mm² for Power terminal
	Conduit entries	3 x M20 (or 3x3/4" NPT)
POSITION & TORQUE SENSORS	Travel limit systems	<ul style="list-style-type: none"> • Limit switches actuated by adjustable camblock • As standard: 4 SPDT switches (2 for Open, 2 for Close); 250VAC-5A/48VDC-5A (resistive load)
	Torque limiting system	<ul style="list-style-type: none"> • Direct mechanical torque measurement • Self maintained torque information • The torque limiting system is calibrated at the factory. • 2 switches as standard (1 in opening and 1 in closing); SPDT; 250VAC-5A/48VDC-5A under resistive load • Adjustable torque from 40 to 100% of max torque
	Position Transmitter (option)	POSITION TRANSMITTER OPTION: <ul style="list-style-type: none"> • 2 wires for 4-20mA Position Transmitter • POT 1000Ω
CONTROLS	Visual position indication (option)	Mechanical position indicator
SETTINGS	Actuator on valve settings	Easy and quick setting of position and torque camblocks with a standard screwdriver
	Application for mobile device	BERNARD CONTROLS new mobile application is available as standard. BERNARD CONTROLS mobile interface allows the user to: <ul style="list-style-type: none"> • assistance to commissioning on valve • access to the documentation relative to the selected actuator (enter the Serial number) or scan the QR code on the nameplate of the actuator • assistance to curative maintenance with a simple and efficient troubleshooting • access to BERNARD CONTROLS contact information according to the area concerned
CONFORMITY TO EC DIRECTIVES	Conformity to EC directives	AT actuators comply with: <ul style="list-style-type: none"> • directive 2004/108/EC Electromagnetic compatibility • directive 2006/95/EC Low voltage • the following harmonised standards: <ul style="list-style-type: none"> EN 61000- 6-4: Generic emissions standard for industrial environments; EN 61000-6-2: Generic immunity standard for industrial environments; EN 60034-1: Rotating electrical machines; EN 60529: Degrees of protection provided by enclosures (IP ratings code)
OPTIONS	On SWITCH version	<ul style="list-style-type: none"> • Low temp. -40° • Class B • Class III • Position potentiometer (1000 Ω) • Analog Transmitter (4-20mA) • Stainless steel name plate • C5 Protection • Mechanical position indicator • Dual speed and motorization option for AT25 & AT50



AT LOGIC

PRODUCT SPECIFICATIONS

GENERAL	Description	<p>All AT actuators include motor with thermal protection, gear case, emergency handwheel, position sensor, torque sensor and anti-condensation heater.</p> <p>AT LOGIC models also include:</p> <ul style="list-style-type: none"> • integrated controls • built-in motor reversing starters • local commands with large LCD display <p>Wide range of number of turns: 4 to 2450 turns.</p>
	Torque range	<ul style="list-style-type: none"> • AT3 = 12 to 30 Nm • AT6L = 24 to 60 Nm • AT7 = 28 to 70 Nm • AT6 = 24 to 60 Nm • AT14 = 56 to 140 Nm • AT25 = 100 to 250 Nm • AT50 = 200 to 500 Nm
	Duty Classification	<p>Adapted to process requirements:</p> <ul style="list-style-type: none"> • On-Off: Class A actuators complying with EN15714-2 • Inching/Positioning: Class B actuators complying with EN15714-2 • Modulating: Class III actuators with higher duty performance and specification of additional performance criteria compared to EN15714-2 Class C basic design requirements
ENCLOSURE - PROTECTION	Casing	<ul style="list-style-type: none"> • Aluminium casting • Cover fastened by captive and stainless screws
	External Protection	<ul style="list-style-type: none"> • Type: Polyester based powder coating as standard • Protection: standard tested to C4, environments acc. to ISO 12944, up to C5 as an option. • Durability (M): 10 years • Color: Grey & Champagne <p>Other colors and finishes, please consult us</p>
	Weatherproof	<p>IP68 - NEMA 4X as standard</p> <p><i>Relative humidity: 0 to 95%.</i></p>
	Ambient temperature range	<ul style="list-style-type: none"> • -20...+70°C / -4 ... +158°F • -40°C (-40°F) as an option <p>Other temperatures, please consult us</p>
	Vibration resistance	<p>1g (9.8 m/s²) at 10-200 Hz.</p> <p>Contact our sales teams for higher vibration levels</p>
MOTOR	Motor technology	<ul style="list-style-type: none"> • TENV design (Totally-enclosed, not ventilated) 3-phase or single-phase asynchronous motor, Class F insulation and Class B temperature rise; integrated thermal overload protection. • TENV DC motors with 2-wire connection available on request for some references
	Motor duty rating	<ul style="list-style-type: none"> • On/Off operation (complying with EN15714-2 Class A): S4-30% and S2-15min (as a standard) • Inching/Positioning (complying with EN15714-2 Class B): S4-30% motor duty rating. Up to 360 starts per hour at peak of operation. S4-50% as option. • BC Modulating Class III (complying with EN15714-2 Class C): S4-50% motor duty rating. Up to 1 200 starts per hour at peak of operation. <p><i>(Voltage ±10%, frequency ±2%)</i></p>
MECHANICAL SPECIFICATIONS	Gear design	<ul style="list-style-type: none"> • Reduction by planetary gear and largely sized worm & wheel • The gears are mechanically self-locking
	Manual emergency operation	<p>Handwheel does not rotate during motor operation.</p> <ul style="list-style-type: none"> • Automatic switch between manual and electrical. Priority to electric drive. • Manual control gear ratios: <p>Standard ratio = between 11 and 55 depending on the model</p> <p>AT3 = ratio 30:1 AT3 = ratio 55:1 (speed 7 & 10 rpm) AT6L = ratio 30:1 AT7 = ratio 1:1 AT6 = ratio 27:1 AT14 = ratio 27:1 AT25 = ratio 29:1 (speed ≤ 96rpm) AT25 = ratio 11:1 (speed > 96rpm) ...</p>

AT LOGIC

PRODUCT SPECIFICATIONS

MECHANICAL SPECIFICATIONS	Manual emergency operation	AT50 = ratio 29:1 (speed \leq 96rpm) AT50 = ratio 11:1 (speed > 96rpm) <ul style="list-style-type: none"> • Maximum rim force to apply conform to EN 12570 • Dual speed and motorization option for AT25 & AT50
	Output flange	Actuator flanges comply with ISO 5210 (see corresponding output flange spreadsheet p.6)
	Lubrication	The actuators are lubricated for the product lifetime and do not require any special maintenance.
ELECTRICAL SPECIFICATIONS	Power supply	Actuators can operate on a wide variety of power supplies (see detail on technical handbook): <ul style="list-style-type: none"> • single-phase or 3-phase • up to 480 V • 50 or 60 Hz
	Bluetooth	Bluetooth (BLE 4.1) in standard
	Terminal compartment	<ul style="list-style-type: none"> • All control elements are directly connected to push type terminals • Internal and external earth ground rod. - up to 1,5mm² for Control terminal - up to 2,5mm² for Power terminal
	Fuse protection	Primary: 0,5A-500V Secondary: Two automatic resettable fuses
	Conduit entries	<ul style="list-style-type: none"> • 3 x M20 + 2 x M16 (or 3 x 3/4" + 2 x 1/2" NPT)
POSITION & TORQUE SENSORS	Travel limit systems	<ul style="list-style-type: none"> • Position: movement reading on the output shaft • Position sensor: Absolute encoder (Hall effect sensor)
	Torque limiting system	<ul style="list-style-type: none"> • Direct mechanical torque measurement • Self maintained torque information • Absolute encoder sensor (Hall effect sensor) • The torque limiting system is calibrated at the factory. It remains adjustable via LOGIC (non intrusive setting) • Non intrusive setting: Adjustable torque from 40 to 100% of max torque
	Position Transmitter (option)	In current: maximum acceptable load of 600 Ohms (24VDC), must be supplied (12 to 32VDC) 2-wire or 3-wire connection
CONTROLS	Control	<ul style="list-style-type: none"> • Isolated by opto-couplers • by Voltage: 10V to 60V; 90V to 250 VDC/AC (Current: 10mA at 24V) • by dry contacts (using actuator isolated 24 VDC supply) • Minimum pulse duration: 100ms • Time of rotational direction's change: 200ms
	Visual position indication	A black & white LCD screen to display the position, the torque and alarms
	Local command description	<ul style="list-style-type: none"> • 2 buttons + 1 padlockable selector • A large LCD screen to display the position, the torque and alarms and to perform the settings • Green/Red: Configurable LED for CLOSED/OPEN
	Power circuit	Motor reversing starters (electromechanical controls for On-Off Class A / Inching-Positioning Class B / Modulating Class III)
	Auxiliary power supply	With external 24VDC supply
	Signaling relay	<ul style="list-style-type: none"> • 3 latching relays - Contact configuration: normally open or normally closed - Minimum current 10mA at 5V - Maximum current 5A at 250V or 5A at 30VDC (resistive load) Relay 1: Valve open Relay 2: Valve closed Relay 3: Configurable relay • Additional 4 relays board as an option
	Fault relay	<ul style="list-style-type: none"> • Fault relay is pre-programmed (not configurable) • SPDT non-latching relay, in fault position when not supplied. • Minimum current 10mA at 5V • Maximum current 5A at 250VAC or 5A at 30VDC (resistive load)

AT LOGIC

PRODUCT SPECIFICATIONS

CONTROLS	Inching/Positioning & Modulating control (option)	<p>LOGIC Positioner: Signal configurations (with integrated analog output):</p> <ul style="list-style-type: none"> • Standard input signal: 4-20 mA Position output signal: 4-20mA • Torque output signal: 4-20mA <p>Other input signal (configurable): 0-20mA, 4-12mA, 12-20mA, 0-10V Other Position output signal (configurable): 2 wires: 4-20mA; 4-12mA; 12-20mA, 3/4 wires: 0-20mA; 4-20mA; 4-12mA; 12-20mA. Configurable input & output signal (direct/reverse)</p> <p>Analogue Input: - in current: impedance of 260 Ohms - in voltage: impedance of 10 kOhms:</p> <p>Analogue Output: - in current: maximum acceptable load of 350 Ohms, external supply 12-32VDC</p>
	Transmitter (option)	<p>Position & Torque transmitter in standard, Position output signal: 4-20mA Torque output signal: 4-20mA</p> <p>Other Position output signal (configurable): 2 wires: 4-20mA; 4-12mA; 12-20mA 3/4 wires: 0-20mA; 4-20mA; 4-12mA; 12-20mA Configurable signal (direct/reverse)</p> <p>Analogue Output: - in current: maximum acceptable load of 350 Ohms, external supply 12-32VDC</p>
SETTINGS	Settings	<p>Non-Intrusive settings All actuator settings and parameters are stored in a non-volatile EEPROM memory. Protection by password. Configurable via Local control; via BC Application as standard (to keep a high level of security, Bluetooth range is limited to 10m. With BC App, communication is encrypted and access is restricted with password.)</p>
	Local settings	<p>The LOGIC can be fully set via its local display and selectors Does not require any specific setting tool Local / Off / Remote selector is padlockable. Optionnal padlockable protection against sandy winds & vandalism.</p>
	Application for mobile device	<p>BERNARD CONTROLS new mobile application is available as standard, with its bluetooth secured communication interface, and allows the user to:</p> <ul style="list-style-type: none"> • Assistance to commissioning on valve • Simply set every parameters of the actuator (non-intrusive setting) • Command the actuator (open/close/stop) as a local control • Check at a glance an overview of the feedbacks information which are displayed on a large color screen of the mobile • Assistance to curative maintenance with a simple and efficient troubleshooting • Access to BERNARD CONTROLS contact information according to the area concerned • Access to the documentation relative to the selected and scanned actuator • Customize the actuator display • Log the Systems Alarms and Warnings • Duplicate one actuator configuration to another actuator • Check the actuator life operation • Select the suitable language among 14 available languages • Identify the actuator operated valve by its valve tag and location process • Track the last user connections for traceability and safety reasons
FIELDBUS	Profibus DP (option)	Available with DPV1
	Profibus DPV1 (option)	<ul style="list-style-type: none"> • PROFIBUS-DPV1 - RS 485 • Baud rate: 9.6 kbit/s up to 1.5 Mbit/s (autodetection) • Communication protocol: PROFIBUS DPV1 slave-cyclic & acyclic • Type of connection: single line • Cable specification: Profibus certified cable only • Line connection without repeater: <ul style="list-style-type: none"> - Actuators per line: 31 max. - Line length: 1.2 km max. (0.75 mi) • Line connection with repeaters: <ul style="list-style-type: none"> - Number of repeaters per line: 9 max - 30 actuators and 1 Km max. per segment - Number of actuators per line with repeater: 120 maximum - Line length with 9 repeaters: 10.2 km max. (6.2 mi) • Scan speed (30 units & 1.2 km): 0.1s (at a baud rate of 93.75 Kbit/s) • Power supply: internal and isolated. 24VDC emergency power supply to refresh Open /Close position information in case of loss of electric supply • Technical approval: operability approved by PNO (Profibus Nutzer Organisation)

AT LOGIC PRODUCT SPECIFICATIONS

FIELDBUS	Modbus (option)	<ul style="list-style-type: none"> • MODBUS RTU - RS 485 • Transmission medium: 1 shielded pair cable • Functions: Half Duplex, asynchronous mode, multidrop • Baud rate: 1.2k to 115 Kbit/s • Format: 8 data bits, 1 stop bit, no parity • Communication protocol: Modbus (slave) • Modbus address: configurable by the actuator menu • Modbus loop (option operated with Master Station)
CONFORMITY TO EC DIRECTIVES	Compliance with EC Directives	<p>AT actuators comply with:</p> <ul style="list-style-type: none"> • directive 2004/108/EC Electromagnetic compatibility • directive 2006/95/EC Low voltage • the following harmonised standards: • EN 61000-6-4: Generic emissions standard for industrial environments; • EN 61000-6-2: Generic immunity standard for industrial environments; • EN 60034-1: Rotating electrical machines; EN 60529: Degrees of protection provided by enclosures (IP ratings code)
OPTIONS	Options LOGIC	<ul style="list-style-type: none"> • Position and torque feed-back (current loop) • Analog Positioner • Fieldbus interface • 4 additional signaling relays • Stainless steel name plate • C5 Protection • Padlockable HMI protection against sandy winds and vandalism • Dual speed and motorization option for AT25 & AT50

4/4

Corresponding output flange

	C FORM / B3 / B4	A FORM / B1 / B2
AT3 / AT6L / AT7	F10	F07 and F10 / F07 et F10 (F05 on request)
AT6 / AT14	F10 or F14	F10 and F14
AT25 / AT50	F14 or F16	F14 or F16

////////// **ACCESS TECHNICAL DATA**

Scan the QR Code to access technical data such as motor data, dimensional drawings, wiring diagrams...



Solutions Overview



NEW RANGES OF ACTUATORS
AQ, AQL, AQXL, AT & BT



NEW MOBILE APPLICATION BC APP

The only application that allows not only to set up your actuator in a few clicks, but also to improve the reliability of your process thanks to key features and data for preventive maintenance. Compatible with our new controls: LOGIC (v2) & INTELLI+® (v3)

SCAN THE QR CODE & WATCH BCAPP VIDEO HERE



WEATHERPROOF RANGES



The essentials

Quarter-turn AQL RANGE

- 15 to 70 Nm (direct mount)
- Type of Controls: > Electromechanical SWITCH
- BC Duty & Modulating Classification

On-Off **A** Inching Positioning **B**

- Environment:
 - > IP 68 / C4 (High paint protection option C5)
 - > T: -20°C ...+60°C



Quarter-turn AQ RANGE

- 50 to 10,000 Nm (up to 1000 Nm direct mount) | Up to 1,000,000 Nm on request
- Type of Controls: > Electromechanical SWITCH > Smart LOGIC (v2)
- BC Duty & Modulating Classification

On-Off **A** Inching Positioning **B** Modulating **III**

- Environment:
 - > IP 68 / C4 (High paint protection option C5)
 - > T: -20°C ...+70°C (Low T° option -40°C)



Multi-turn AT RANGE

- 12 to 500 Nm (direct mount) | Up to 32,000 Nm on request
- 10 to 180 rpm (direct mount)
- Type of Controls: > Electromechanical SWITCH > Smart LOGIC (v2)
- Wiring: > Screw Type Terminal
- BC Duty & Modulating Classification

On-Off **A** Inching Positioning **B** Modulating **III**

- Environment: > IP 68 / C4 (High paint protection option C5) > T: -20°C ...+70°C (Low T° option -40°C)
- Linear applications



FLEXIBLE & MODULAR

WEATHERPROOF RANGES



The dedicated solutions

Multi-turn BT RANGE

- 30 to 500 Nm (direct mount) | Up to 32,000 Nm on request
- 10 to 180 rpm (direct mount)
- Type of Controls: > Smart INTELLI+®(v3)
- Wiring: **Double-sealing as standard**
 - > New terminal plate with pins for easy wiring
 - > Quick Connector

On-Off **A+** Inching Positioning **B+** Modulating **III+**

- Environment: > IP 68 / C4 (High paint protection option C5) > T: -20°C ...+70°C Low T° (Low T° option -40°C)
- Linear applications



FLEXIBLE & MODULAR

SPECIAL REQUESTS

Quarter-turn SQ RANGE

- 45 to 10,000 Nm (up to 800 Nm direct mount) | Up to 1,000,000 Nm on request
- With type of Controls: > Smart INTELLI+®(v2) With Fieldbus Redundant ... > SIL2
- Wiring: Double-sealing with INTELLI+



Multi-turn ST RANGE

- 60 to 2,200 Nm (direct mount) | up to 20,000 Nm on request
- 10 to 120 rpm (direct mount) | High speed: up to 190 rpm (direct & <300Nm)
- With type of Controls: > Smart INTELLI+®(v2) With Fieldbus Redundant ... > SIL2



EXPLOSIONPROOF RANGES

Quarter-turn AQXL RANGE

- 40 Nm and 70 Nm
- Compliance with international explosionproof standards: ATEX, IEC-Ex, NEMA 7...
- Type of Controls: > Electromechanical SWITCH
- BC Duty & Modulating Classification

On-Off **A** Inching Positioning **B**

- Environment: IP 68 / C4 (C5 on request) / T: -20°C ...+60°C
- Linear applications



EXPLOSIONPROOF RANGES

Quarter-turn & Multi-turn SQX & STX RANGES

- SQX: 80 to 800 Nm (direct) & up to 1,000,000 Nm on request
- STX: 25 to 2,200 Nm (direct) & up to 20,000 Nm on request
- Compliance with international explosionproof standards: ATEX, INMETRO, IEC-Ex, EAC-Ex, NEMA 7 & 9...
- Type of Controls:
 - > Electromechanical SWITCH
 - > Hardwired
 - > Smart INTELLI+® (v2)
 - > SIL2



- BC Duty & Modulating Classification

On-Off **A+** Inching Positioning **B+** Modulating **III**

- Environment: IP 68 / C3 up to C5-M / T: -20°C ...+70°C (low T° option: -60°C)
- Special configurations: Corrosion protection, Fire proofing, Extreme temperatures

FAILSAFE RANGES

Quarter-turn Failsafe Actuators FQ RANGE

Fast and shock-free reliable spring-return technology during emergency operation

- BC Duty & Modulating Classification

On-Off **A** Inching Positioning **B** Modulating **III**

- Environment: IP 67 / C3 / T: -20°C ...+70°C (low T° option -40°C)

Failsafe Actuators FXQ RANGE

- Explosionproof versions ATEX-NEMA



Quarter-turn & Linear Failsafe FSeX RANGE

The complete combination of modern electrics and power of hydraulics

- BC Duty & Modulating Classification

On-Off **A** Inching Positioning **B** Modulating **III**

- Environment: IP 67 / C4 / T: -20°C ...+60°C
- ATEX-NEMA, SIL3



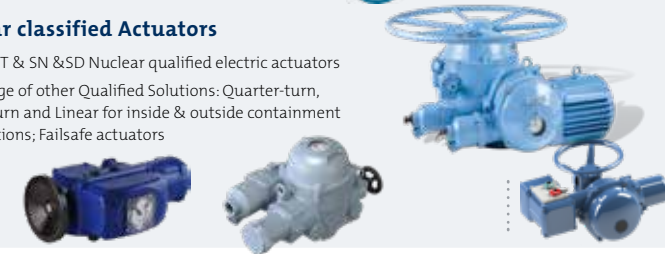
NUCLEAR RANGES



Nuclear classified Actuators

- SQN & ST & SN & SD Nuclear qualified electric actuators

+ Full range of other Qualified Solutions: Quarter-turn, Multi-turn and Linear for inside & outside containment applications; Failsafe actuators



CUSTOMIZED DESIGN & PROJECTS:

At any time and anywhere on the globe, BERNARD CONTROLS teams are available for dedicated support. From the design stage to installation, commissioning, maintenance and training, our experts help you to define and implement the most appropriate solution to your specific needs thanks to our local R&D centers, test labs, calculation tools and training center.



NEW GENERATION OF SMART CONTROLS



LOGIC (v2)

The main functions you expect from modern integrated controls



INTELLI+® (v3)

Advanced control solution for your critical applications!

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