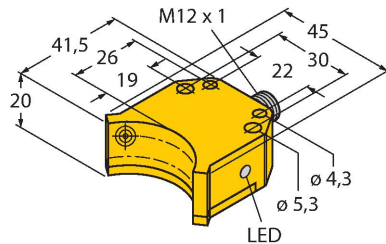


# NI4-DS20-2AP6X2-H1141

## Inductive Sensor – For Rotary Actuators



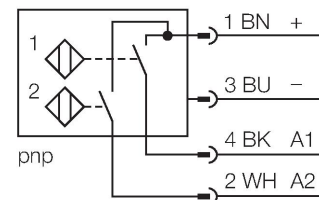
### Technical data

|                                        |                                                                       |
|----------------------------------------|-----------------------------------------------------------------------|
| Type                                   | NI4-DS20-2AP6X2-H1141                                                 |
| ID                                     | 1650020                                                               |
| General data                           |                                                                       |
| Rated switching distance               | 4 mm                                                                  |
| Mounting conditions                    | Non-flush, Mounting on metal on the non-printed (rear) side permitted |
| Correction factors                     | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4                   |
| Repeat accuracy                        | ≤ 2 % of full scale                                                   |
| Temperature drift                      | ≤ ±10 %                                                               |
| Hysteresis                             | 3...15 %                                                              |
| Electrical data                        |                                                                       |
| Operating voltage $U_B$                | 10...30 VDC                                                           |
| Ripple $U_{rs}$                        | ≤ 10 % $U_{Bmax}$                                                     |
| DC rated operating current $I_o$       | ≤ 200 mA                                                              |
| No-load current                        | ≤ 15 mA                                                               |
| Residual current                       | ≤ 0.1 mA                                                              |
| Isolation test voltage                 | 0.5 kV                                                                |
| Short-circuit protection               | yes/Cyclic                                                            |
| Voltage drop at $I_o$                  | ≤ 1.8 V                                                               |
| Wire break/reverse polarity protection | Complete                                                              |
| Output function                        | 4-wire, NO contact, PNP                                               |
| Switching frequency                    | 0.05 kHz                                                              |
| Mechanical data                        |                                                                       |
| Design                                 | Dual sensor for valve monitoring, DS20                                |

### Features

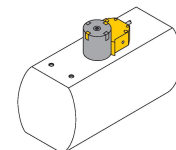
- Rectangular, housing DS20
- Plastic, PBT-GF30-VO
- Two switching outputs for monitoring the position of rotary actuators
- Mounting on all standard actuators
- 2 x NO contact, PNP output
- DC 4-wire, 10...30 VDC

### Wiring diagram



### Functional principle

Inductive sensors detect metal objects contactless and wear-free. Dual sensors are especially designed for position detection in rotary actuators. They combine the reliability of non-contact inductive sensors with the flexibility of a modular housing system.



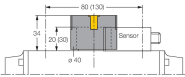
Technical data

|                                       |                                            |
|---------------------------------------|--------------------------------------------|
| Dimensions                            | 42 x 45 x 20 mm                            |
| Housing material                      | Plastic, PBT-GF30-V0                       |
| Active area material                  | Plastic, PBT-GF30-V0                       |
| Max. tightening torque of housing nut | 3 Nm                                       |
| Electrical connection                 | Connector, M12 x 1                         |
| Environmental conditions              |                                            |
| Ambient temperature                   | -25...+70 °C                               |
| Vibration resistance                  | 55 Hz (1 mm)                               |
| Shock resistance                      | 30 g (11 ms)                               |
| Protection class                      | IP67                                       |
| MTTF                                  | 2283 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state                       | 2 x LEDs, Yellow/yellow                    |

Accessories

BTS-DS20-TP1

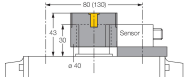
6900155



Actuation kit (puck) for dual sensors; end position damped; hole pattern on receptacle surface: 80 x 30 mm; connection shaft (shaft extension) height: 20 mm/Ø: max. 30 mm

BTS-DS20-TK1

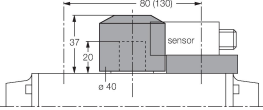
6900156



Actuation kit (puck) for dual sensors; end position damped; hole pattern on receptacle surface: 80 x 30 mm (130 x 30 mm); connection shaft (shaft extension) height: 30 mm/Ø: max. 30 mm

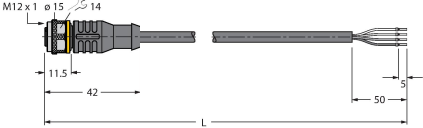
BTS-DS20-KEY

6900136



Actuation kit (puck) for dual sensors; end position damped and switchpoint adjustable; hole pattern on receptacle surface: 80 x 30 mm (130 x 30 mm); connection shaft (shaft extension) height: 20 mm/Ø: max. 22 mm

Wiring accessories

| Dimension drawing                                                                   | Type          | ID      |                                                                                                                         |
|-------------------------------------------------------------------------------------|---------------|---------|-------------------------------------------------------------------------------------------------------------------------|
|  | RKC4.4T-2/TEL | 6625013 | Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval |