

DCA DOG CLUTCH ACTUATOR



> MOTOR AND GEAR UNIT FOR PROVIDING

NECESSARY PERFORMANCE.

AT A GLANCE

- SPRING ELEMENT FOR EFFICIENT ACTUATION OPTIMIZED FOR DOG-CLUTCH ACTUAL NEEDS.
- > SHIFT FORK FOR MANEUVERING THE CLUTCH SLEEVE.
- > SENSOR ON THE FORK FOR CONTROLLING THE ACTUATION PROCEDURE.
- > FEATURE FOR HOLDING THE FORK IN PLACE, I.E. DETENT FUNCTIONALITY.
- > OPTION OF HAVING EMBEDDED ELECTRONICS PLATFORM OR HARDWIRED SIGNALS.
- > SUITABLE APPLICATIONS MIGHT BE:
 - » CONNECT/DISCONNECT ELECTRICAL DRIVE AXLE UNIT ON PHEVS.
 - » CONNECT/DISCONNECT AWD COUPLING
 - » GEAR SHIFTING ON EV TRANSMISSIONS WITH DOG CLUTCH COUPLING WITHOUT SYNC.

PRODUCT DESCRIPTION

The actuator system manages the actuation of the dog-clutch coupling from vehicle input to the transmission shift sleeve. Designed for efficient actuation, meeting the needs of dog-clutch coupling with fast engagement and deep penetration while remaining strong during disengagement of the clutch.





MECHANICAL SPECIFICATION

| AMBIENT TEMPERATURE RANGE: | -40°C to 125°C |
|----------------------------|---------------------|
| NUMBER OF SHIFTS | >8 000 000 |
| MAX DECOUPLING FORCE | 1500N |
| SHIFT STROKE | max ±12 mm |
| SHIFT TIME | approx. ±100 ms |
| INGRESS PROTECTION | IP6К7 / IP6К9К |
| LIFETIME | 45 000 h / 15 years |

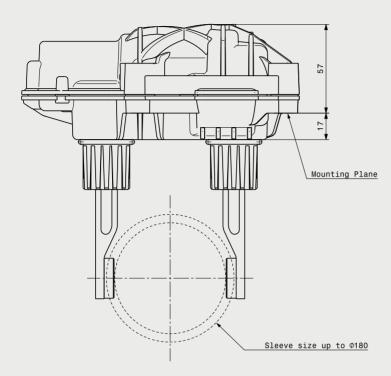
ELECTRICAL SPECIFICATION

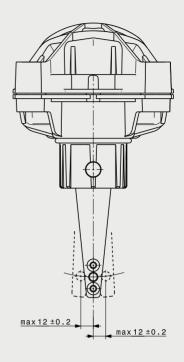
| MOTOR OPERATING VOLTAGE | 24V |
|-------------------------|------------------|
| MOTOR TYPE | BLDC 125W |
| ISO 26262 COMPLIANCE | ASIL B |
| COMMUNICATION | CAN FD |
| EMC COMPLIANCE | CISPR 25 class 3 |

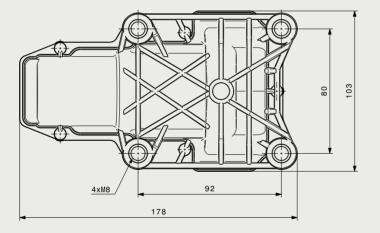
UNIQUE AND BENEFICIAL INSTALLATION

- > DESIGNED FOR A SIMPLE INSTALLATION, FORK LEGS GO THROUGH TWO SMALL OBLONG HOLES ON TRANSMISSION HOUSING THEN SEALED BY TWO O-RINGS, PROTECTING TRANSMISSION INTERIOR ENCLOSURE FROM INGRESS. IT'S FIXED IN PLACE BY FOUR SCREWS.
- > TWO SMALLER HOLES RATHER THAN ONE BIG IS BENEFICIAL FOR BOTH TRANSMISSION CASE AND ACTUATOR STRUCTURAL ROBUSTNESS. THE TRANSMISSION WALL EFFICIENTLY SUPPORTS THE PIVOT FORCE OF THE LARGE FORK.











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