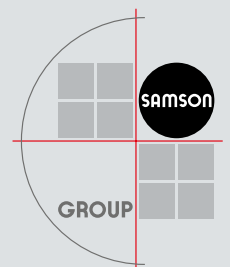


# Electronic Limit Switches for On/off Valves



*Where Innovation is Tradition*



# Benefits

- High level of accuracy and reliability
- Easy mounting on the actuator
- Compact, rugged design
- Easy operation on site or from a computer
- Integrated diagnostics with partial stroke testing (PST)



- **Type 3738-20**  
3 limit contacts and  
1 alarm contact  
at NAMUR signal  
(acc. to IEC 60957-5-6)  
24 V solenoid valve
- **Type 3738-50**  
FOUNDATION™ fieldbus  
communication  
Inputs and output blocks:  
5 DI, 5 DO, 1 AI



# Smart technology

## ■ Accuracy and reliability

High-precision, drift-free switching points

Measuring accuracy better than 1 %

Reproducible precise settings

## ■ Mounting

Attachment to rotary actuators according to VDI/VDE 3845, level 1 (2010) or to linear actuators

Attachment to rotary actuators according to VDI/VDE 3845, level 2 or to linear actuators



## ■ Design

Rugged non-contact position sensing

Air purging of the actuator's spring chamber

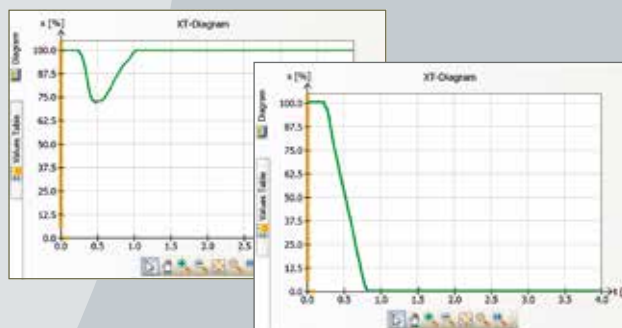
## ■ Operation

Calibration at the push of a button

On-site operation using a rotary pushbutton

Serial interface for convenient operation from a computer (SAMSON's TROVIS-VIEW software)

With eDD or DTM using FOUNDATION™ fieldbus (Type 3738-50 only)



## ■ Diagnostics

Logging of transit time for each valve movement

Logging of valve movements with time stamp

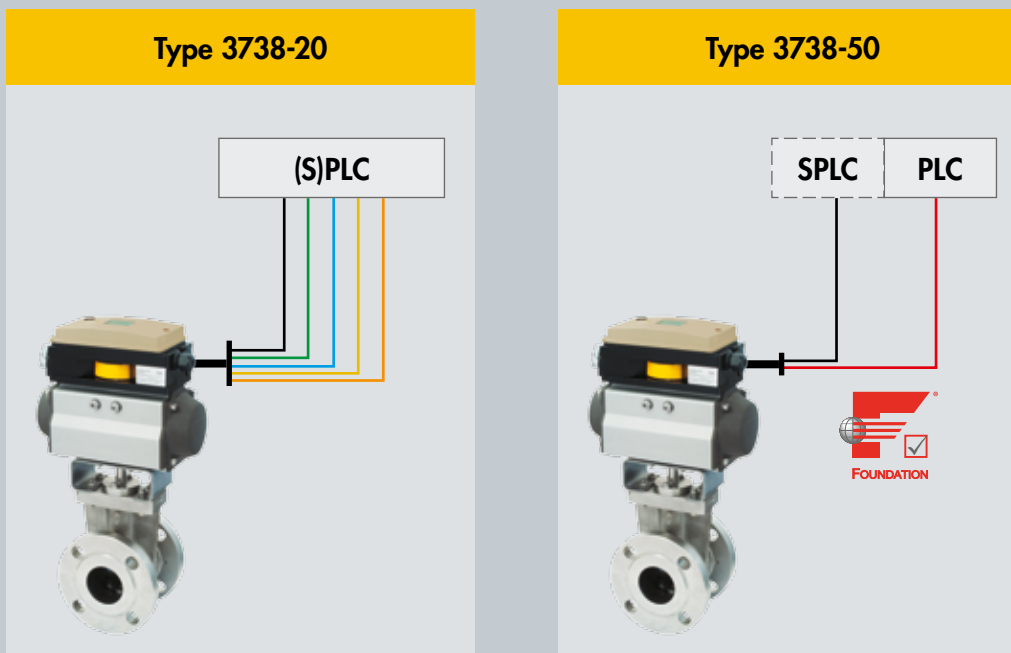
Partial stroke testing to exercise the valve



# Technical data

- Permissible ambient temperature  $-40/-25$  to  $80$  °C
- Permissible operating angle of the rotary actuator  $30^\circ$  to  $170^\circ$
- Degree of protection IP 66
- Explosion protection Ex ia or Ex e
- Safety certification SIL 3
- Integrated solenoid valve  $K_{VS}$  0.32
- External solenoid valve for standard solenoid valves
- Power supplied by the NAMUR signal (Type 3738-20) only or by FOUNDATION™ fieldbus (Type 3738-50)

## Control



- Fault alarm output
- Partial stroke test (PST) monitoring
- End position 1 (operation)
- End position 2 (fail-safe action)
- Solenoid valve 24 V

- FOUNDATION™ fieldbus (IEC 61158-2)
- Forced venting function 24 V





# Mounting versions

- Version with internal solenoid valve to fit specific actuator models
- Universal version with internal solenoid valve for standard actuators
- Universal version with external solenoid valve for standard actuators



# ■ Applications



- For demanding ambient conditions, e.g. dust atmospheres or vibrations
- For safety-instrumented systems
- For plants subject to documentation requirements
- With exact switching point, e.g. for butterfly valves
- With wear detection, e.g. by comparing the test results for transit time and dead time with the valve signature
- With a low-drift and temperature-stable signal



SAMSON AG · MESS- UND REGELTECHNIK  
Weismüllerstraße 3 · 60314 Frankfurt am Main, Germany  
Phone: +49 69 4009-0 · Fax: +49 69 4009-1507  
E-mail: [samson@samson.de](mailto:samson@samson.de) · Internet: [www.samson.de](http://www.samson.de)  
SAMSON GROUP · [www.samsongroup.net](http://www.samsongroup.net)