

	TF..	LF..	NF..A	SF..A	EF..A
	2.5 Nm	4 Nm	10 Nm	20 Nm	30 Nm
For air damper sizes up to approx.	0.5 m <sup>2</sup>	0.8 m <sup>2</sup>	2 m <sup>2</sup>	4 m <sup>2</sup>	6 m <sup>2</sup>
<b>Open-close actuators</b>					
<b>AC/DC 24 V</b>	TF24	LF24	NF24A	SF24A	EF24A
with auxiliary switch, 1 x SPDT	TF24-S	LF24-S			
with auxiliary switch, 2 x SPDT			NF24A-S2	SF24A-S2	EF24A-S2
<b>AC 230 V</b>	TF230	LF230	NF230A	SF230A	EF230A
with auxiliary switch, 1 x SPDT	TF230-S	LF230-S			
with auxiliary switch, 2 x SPDT			NF230A-S2	SF230A-S2	EF230A-S2
<b>AC 24...240 V / DC 24...125 V</b>			NFA	SFA	
with auxiliary switch, 2 x SPDT			NFA-S2	SFA-S2	
<b>3-point actuator</b>					
<b>AC 24 V</b>	TF24-3		NF24A-3	SF24A-3	
<b>Modulating actuators</b>					
Control Signal Y: DC 0...10 V, 100 kΩ Position feedback DC 2...10 V or DC 0...10 V, max. 1 mA					
<b>AC/DC 24 V Operating range DC 2...10 V</b>	TF24-SR	LF24-SR	NF24A-SR	SF24A-SR	EF24A-SR
with auxiliary switch, 2 x SPDT			NF24A-SR-S2	SF24A-SR-S2	EF24A-SR-S2
<b>Operating range DC 0...10 V</b>			NF24A-SZ	SF24A-SZ	
with auxiliary switch, 2 x SPDT			NF24A-SZ-S2	SF24A-SZ-S2	
<b>AC 230 V Operating range DC 2...10 V</b>	TF230-SR				
<b>Parameterisable actuators</b> <span style="float: right;">parameterisable <sup>1)</sup></span>					
<b>AC/DC 24 V</b>	TF24-MFT	LF24-MFT	NF24A-MF	SF24A-MF	EF24A-MF
<b>Technical data</b>					
<b>Damper spindle</b>	6...12 mm	8...16 mm	10...25.4 mm	10...25.4 mm	12...26.7 mm
<b>Running time</b> <span style="float: right;">Motor</span>	<75 s / 90°↔ (SR: 150 s / 90°↔)	40...75 s / 90°↔ (SR: 150 s / 90°↔)	<75 s / 90°↔ (SR/SZ: 150 s / 90°↔)	<75 s / 90°↔ (SR/SZ: 150 s / 90°↔)	<75 s / 90°↔ (SR: 150 s / 90°↔)
Emergency control function	<25 s / 90°↔	20 s / 90°↔	<20 s / 90°↔	<20 s / 90°↔	<20 s / 90°↔
<b>Manual override</b>	Hand crank				
<b>Connection</b>	Cable 1 m, PVC				Cable FRNC 1 m
<b>Direction of rotation</b>	Can be selected by mounting L / R				
<b>Angle of rotation</b>	Max. 95°↔, can be limited at both ends with adjustable mechanical end stops				
<b>Position indication</b>	Mechanical, pluggable				
<b>Sound power level</b> <span style="float: right;">Motor</span>	≤50 dB(A) @ 75 s	≤50 dB(A) @ 75 s	≤45 dB(A) @ 75 s		≤50 dB(A) @ 75 s
Emergency control function	=62 dB(A) @ 25 s	=62 dB(A) @ 20 s	=62 dB(A) @ 20 s		=62 dB(A) @ 20 s
<b>Degree of protection</b>	IP 42	IP 54			IP 54 <sup>2)</sup>
<b>EMC</b>	CE according to 2004/108/EC				
<b>Ambient temperature</b>	-30...+50°C				
<b>Non-operating temperature</b>	-40...+80°C				
<b>Ambient humidity</b>	95% r.h., non-condensating				

<sup>1)</sup> Control, operating range, position feedback, running time and further functions are parameterisable with PC-Tool or with the parameterising device ZTH EU.

<sup>2)</sup> EF..: IP 66 versions on request.

Other versions on request.