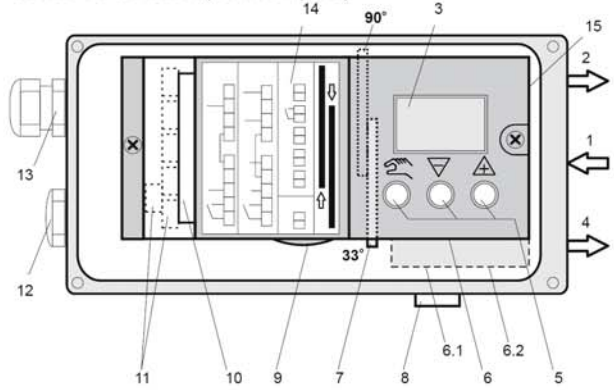
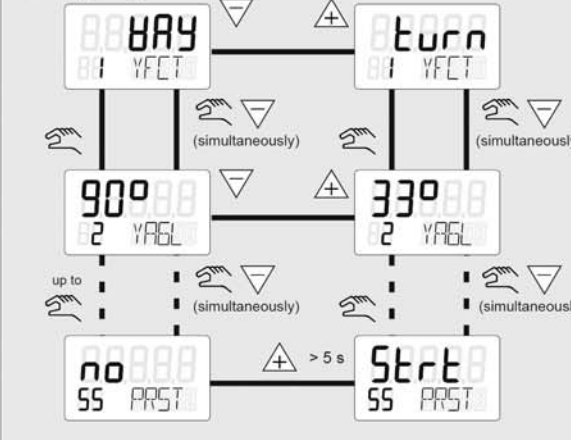


View of device (cover open)



- 1 Input: supply air PZ
 - 2 Output: Positioning pressure Y1
 - 3 Display
 - 4 Output: Positioning pressure Y2 *
 - 5 Input keys
 - 6 Restrictor Y1
 - 6.1 Restrictor Y1 *
 - 6.2 Restrictor Y2 *
 - 7 Transmission ratio selector
 - 8 Sound absorber
 - 9 Adjustment wheel for slipping clutch
 - 10 Terminals for basic unit
 - 11 Terminals for option modules
 - 12 Plug
 - 13 Cable gland
 - 14 Label (on module cover)
 - 15 Purging air selector
- *) With double-action actuators

Configuring



Changing the input level

Mode	Display
P-manual mode Change position using ∇/Δ	Potentiometer setting [%] Not initialized (can be reached using preset)
Configure Change parameter name using ∇/Δ back with ∇/Δ Change value using ∇/Δ	Parameter value Parameter number Parameter name
Manual mode Change position using ∇/Δ	Position [%] Error code Mode and Setpoint [%]
Automatic	Position [%] Error code Mode and Setpoint [%]
Diagnosis	Diagnosis value Diagnosis number Diagnosis name

Automatic initial start-up (starting with factory setting)

Step	Meaning
1.) Part-turn actuator	
Linear actuator	
2.)	Δ Press for > 5 s Remaining steps carried out automatically
3.)	Direction of action is determined
4.)	Checking of travel and adjustment of zero and stroke (from stop to stop)
5.)	Determination and Display of positioning time down (dxx.x), up (uxx.x) Stop with ∇ Pressing the Δ key initiates leakage measurement
6.)	Determination of minimum increment length
7.)	Optimization of transient response
8.)	Initialization terminated successfully (travel in mm for linear actuators) (angle of rotation for part-turn actuators) Continue using: ∇/Δ

(The gray values in the top display line are examples)

Possible messages

Display	Meaning	Measures
	Actuator does not move	Acknowledge message using ∇/Δ Check restrictor (6) and open if necessary Drive actuator to working range using ∇/Δ Restart initialization
	Down tolerance band violated	Change gearing (7) Continue using Δ or adjust sliding clutch up to display Continue using Δ or ∇ with "WAY"
	Once the slipping clutch has been adjusted	Linear actuator: Set pick-up lever into vertical position using ∇/Δ Continue using ∇/Δ
	Up tolerance band violated	Acknowledge message using ∇/Δ Set the next highest travel value on the lever Restart initialization Additionally possible with rotary actuators: Adjust using ∇/Δ up to display: Continue using ∇/Δ
	Up/down span violated	Acknowledge message using ∇/Δ Set the next lowest travel value on the lever Restart initialization
	Actuator does not move Positioning time is possible to adjust	Adjust positioning time using restrictor(s) Continue using ∇ or Δ

See Manual for further messages

Parameter name	Function	Parameter values (Bold = factory setting)	Unit	
1.YFCT	Type of actuator	turn (part-turn actuator) WAY (linear actuator) LWAY (linear actuator without sine correction) ncSt (part-turn actuator with NCS) -ncSt (ditto, inv. direction of action) ncSL (linear actuator with NCS) ncSLL (ditto, and lever)		
2.YAGL	1) Rated angle of rotation of feedback Set transmission ratio selector (7) appropriately (see view of device)	33° 90°	Degrees	
3.YWAY	2) Stroke range (optional setting)	OFF 5 10 15 20 (short lever 33°)	mm	
	If used, the value must correspond with the set of the leverage ratio on the actuator Driver pin must be set to the value of the actuator travel or, if this value is not scaled, to the next larger scale value.	25 30 35 (short lever 90°) 40 50 60 70 90 110 130 (long lever 90°)		
4.INITA	Initialization (automatically)	noini no / ###.# Strt		
5.INITM	Initialization (manually)	noini no / ###.# Strt		
6.SCUR	Current range of setpoint	0 to 20 mA 4 to 20 mA		
7.SDIR	Setpoint direction	rising falling		
8.SPRA	Setpoint for start of split range	0.0 ... 100.0	%	
9.SPRE	Setpoint for end of split range	0.0 ... 100.0	%	
10.TSUP	Setpoint ramp up	Auto / 0 ... 400	s	
11.TSDO	Setpoint ramp down	0 ... 400	s	
12.SFCT	Setpoint function	Linear Equal-percentage 1:25, 1:33, 1:50 Inverse equal-percentage 1:25, 1:33, 1:50 Freely adjustable		
13.SL0	3) Setpoint turning point at 0% 14.SL1 5% etc. up to 32.SL19 33.SL20 100%	Lin 1 - 25 1 - 33 1 - 50 n1 - 25 n1 - 33 n1 - 50 FrEE		
34.DEBA		Dead band of controller	Auto / 0.1 ... 10.0	%
35.YA		Start of manipulated variable limiting	0.0 ... 100.0	%
36.YE		End of manipulated variable limiting	0.0 ... 100.0	%
37.YNRM	Standardization of manipulated variable	To mech. travel To flow	MPOS FLOW	
38.YDIR	Direction of manipulated variable for display and feedback	Rising Falling	riSE FALL	
39.YCLS	Tight closing with manipulated variable	Without Top only Bottom only Top and bottom	no uP do uP do	
40.YCDO	Value for tight closing, bottom	0.0 .. 0.5 .. 100.0	%	
41.YCUP	Value for tight closing, top	0.0 .. 99.5 .. 100.0	%	
42.BIN1	4) Function of BI 1	OFF		
		NO contact	NC contact	
43.BIN2	4) Function of BI 2	OFF		
		NO contact	NC contact	
44.AFCT	5) Alarm function	OFF		
		normal	inverted	
45.A1	Response threshold of alarm 1	0.0 .. 10.0 .. 100.0	%	
46.A2	Response threshold of alarm 2	0.0 .. 90.0 .. 100.0	%	
47.YFCT	5) on fault Fault + not automatic Fault + not automatic + BI ("+" means logical OR operation)	normal	inverted	
48.YTIM	Monitoring time for fault message "control deviation"	Auto / 0 ... 100	s	
49.YLIM	Response threshold for fault message "control deviation"	Auto / 0 ... 100	%	
50.PRST	Preset (factory setting) "no" nothing activated "Strt" start of factory setting after pressing key for 5s "oCAY" display following successful factory setting CAUTION: preset results in "NO INI"	no Strt oCAY		
51.XDIAG	Activating for extended diagnostics	OFF On1 On2 On3		

Parameter name	Function	Parameter values (Bold = factory setting)	Unit
A.Y PST	6) Partial-Stroke-Test with the following parameters:	0.0 ... 100.0 0.1 .. 2.0 .. 10.0 0.1 .. 10.0 .. 100.0 uP / do / uP do OFF / 1 ... 365 noini / (C)### / #FdnI/rREAL	% % % days s
A1.STPOS	Start position	0.0 ... 100.0	%
A2.STTOL	Start tolerance	0.1 .. 2.0 .. 10.0	%
A3.STEP	Step height	0.1 .. 10.0 .. 100.0	%
A4.STEPD	Step direction	uP / do / uP do	
A5.INTRV	Test interval	OFF / 1 ... 365	days
A6.PSTIN	Partial-Stroke-Test reference step time	noini / (C)### / #FdnI/rREAL	s
A7.FACT1	Factor 1	0.1 .. 1.5 .. 100.0	%
A8.FACT2	Factor 2	0.1 .. 3.0 .. 100.0	%
A9.FACT3	Factor 3	0.1 .. 5.0 .. 100.0	%
b.Y DEV	6) Generally fault of valve with the following parameters:	Auto / 1 ... 400	s
b1.TIM	Time constant	0.0 .. 1.0 .. 100.0	%
b2.LIMIT	Limit	0.1 .. 5.0 .. 100.0	%
b3.FACT1	Factor 1	0.1 .. 1.5 .. 100.0	%
b4.FACT2	Factor 2	0.1 .. 3.0 .. 100.0	%
b5.FACT3	Factor 3	0.1 .. 5.0 .. 100.0	%
c.Y LEAK	6) Pneumatic leakage with the following parameters:	0.0 .. 30.0 .. 100.0 0.1 .. 1.0 .. 100.0 0.1 .. 1.5 .. 100.0 0.1 .. 2.0 .. 100.0	%
C1.LIMIT	Limit	0.0 .. 30.0 .. 100.0	%
C2.FACT1	Factor 1	0.1 .. 1.0 .. 100.0	%
C3.FACT2	Factor 2	0.1 .. 1.5 .. 100.0	%
C4.FACT3	Factor 3	0.1 .. 2.0 .. 100.0	%
d.Y STIC	6) Stiction (Slip stick effect) with the following parameters:	0.1 .. 1.0 .. 100.0 0.1 .. 2.0 .. 100.0 0.1 .. 5.0 .. 100.0 0.1 .. 10.0 .. 100.0	%
d1.LIMIT	Limit	0.1 .. 1.0 .. 100.0	%
d2.FACT1	Factor 1	0.1 .. 2.0 .. 100.0	%
d3.FACT2	Factor 2	0.1 .. 5.0 .. 100.0	%
d4.FACT3	Factor 3	0.1 .. 10.0 .. 100.0	%
E.Y DEBA	6) Monitoring for dead band with the following parameter:	0.0 .. 2.0 .. 10.0	%
E1.LEVEL3	Threshold	0.0 .. 2.0 .. 10.0	%
F.Y ZERO	6) Zero shift with the following parameters:	0.1 .. 1.0 .. 10.0 0.1 .. 2.0 .. 10.0 0.1 .. 4.0 .. 10.0	% % %
F1.LEVL1	Threshold 1	0.1 .. 1.0 .. 10.0	%
F2.LEVL2	Threshold 2	0.1 .. 2.0 .. 10.0	%
F3.LEVL3	Threshold 3	0.1 .. 4.0 .. 10.0	%
G.Y OPEN	6) Shift of upper end stop with the following parameters:	0.1 .. 1.0 .. 10.0 0.1 .. 2.0 .. 10.0 0.1 .. 4.0 .. 10.0	% % %
G1.LEVL1	Threshold 1	0.1 .. 1.0 .. 10.0	%
G2.LEVL2	Threshold 2	0.1 .. 2.0 .. 10.0	%
G3.LEVL3	Threshold 3	0.1 .. 4.0 .. 10.0	%
H.Y TMIN	6) Monitoring for lower temperature limit with the following parameters:	°C / °F -40 ... 90 / -40 ... 194 -40 ... 90 / -40 ... 194 -40 ... 90 / -40 ... 194	
H1.TUNIT	Temperature unit	°C / °F	
H2.LEVL1	Threshold 1	-40 ... 90 / -40 ... 194	
H3.LEVL2	Threshold 2	-40 ... 90 / -40 ... 194	
H4.LEVL3	Threshold 3	-40 ... 90 / -40 ... 194	
J.Y TMAX	6) Monitoring for upper temperature limit with the following parameters:	°C / °F -40 ... 90 / -40 ... 194 -40 ... 90 / -40 ... 194 -40 ... 90 / -40 ... 194	
J1.TUNIT	Temperature unit	°C / °F	
J2.LEVL1	Threshold 1	-40 ... 90 / -40 ... 194	
J3.LEVL2	Threshold 2	-40 ... 90 / -40 ... 194	
J4.LEVL3	Threshold 3	-40 ... 90 / -40 ... 194	
L.Y STRK	6) Monitoring for stroke integral with the following parameters:	1 ... 1 000 000 0.1 .. 1.0 .. 40.0 0.1 .. 2.0 .. 40.0 0.1 .. 5.0 .. 40.0	
L1.LIMIT	Limit of strokes	1 ... 1 000 000	
L2.FACT1	Factor 1	0.1 .. 1.0 .. 40.0	
L3.FACT2	Factor 2	0.1 .. 2.0 .. 40.0	
L4.FACT3	Factor 3	0.1 .. 5.0 .. 40.0	
O.Y DCHG	6) Monitoring for direction change with the following parameters:	1 ... 1 000 000 0.1 .. 1.0 .. 40.0 0.1 .. 2.0 .. 40.0 0.1 .. 5.0 .. 40.0	
O1.LIMIT	Limit of direction changes	1 ... 1 000 000	
O2.FACT1	Factor 1	0.1 .. 1.0 .. 40.0	
O3.FACT2	Factor 2	0.1 .. 2.0 .. 40.0	
O4.FACT3	Factor 3	0.1 .. 5.0 .. 40.0	
P.Y PAVG	6) Calculation for average value of position with the following parameters:	0.5h / 8h / 5d / 60d / 2.5y IdLE / rEF / ###.# / Strt 0.1 .. 2.0 .. 100.0 0.1 .. 5.0 .. 100.0 0.1 .. 10.0 .. 100.0	% % %
P1.TBASE	Time basis for average value	0.5h / 8h / 5d / 60d / 2.5y	
P2.STATE	Condition of calculation	IdLE / rEF / ###.# / Strt	
P3.LEVL1	Threshold 1	0.1 .. 2.0 .. 100.0	%
P4.LEVL2	Threshold 2	0.1 .. 5.0 .. 100.0	%
P5.LEVL3	Threshold 3	0.1 .. 10.0 .. 100.0	%

HINTS:

- Parameter appears only if "turn" or "WAY" is selected; at "turn", you cannot select 33°
- Parameter does not appear if "turn", "LWAY" or "ncS_" has been selected with YFCT
- Turning points only appear with selection SFCT = "FrEE"
- NC contact means: action with opened switch or Low level
NO contact means: action with closed switch or High level
- Normal means: High level without fault
Inverted means: Low level without fault
- Parameters A up to P appears only if the extended diagnostics with On1, On2 or On3 is activated. The contents of the parameters A up to P appears also only if the selected parameter is activated with On.