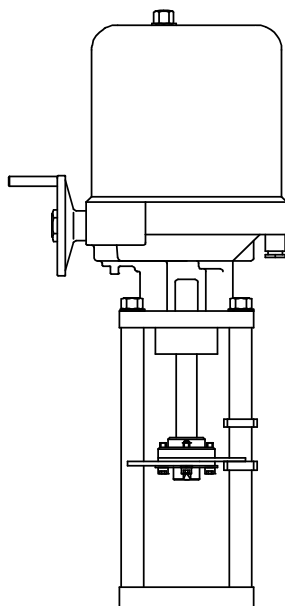


75mm - 15 kN
90mm - 20 kN / 25 kN



315U21

HIGHLIGHTS

- 3-point or modulating control of 2- or 3-way valves
- Maintenance free reversible motor with overload protection
- Manual override with a disengagement feature
- Mechanical position indication

DESCRIPTION

The electro-mechanical actuators, series 315.., 320.. and 325.. are designed for use on control valves in HVAC plants.

The rotary motion of the synchronous motor is converted into a linear movement via a spur gearing onto the centre gear with internal screw thread.

Modulating operation as well as on/off or 3-point control is possible. In both modes a load-dependent blocking detection switches off as soon as one of the two end positions is reached, or blocking occurs due to overload.

The series 315.. offer a 15 kN push and pull force for a 75 mm stroke at maximum.

The series 320.. offer a 20 kN push and pull force for a 90 mm stroke at maximum.

The series 325.. offer a 25 kN push and pull force for a 90 mm stroke at maximum.

M versions - 3-point control

By connecting a 3-point control signal to the 3P input, the direction of motion of the linear actuator and thus of the valve can be determined directly.

U versions - modulating control signal (Y)

The electronic positioner of the actuator compares the setpoint input signal (Y) with the actual value of the valve (stroke) specified by the controller of the system. In case of a deviation, the actuator is triggered until conformity between set value and actual value is achieved.

The sense of action of the input signal (direct control or indirect control) can be reversed if necessary.

The actual position of the valve is available as an analog output signal (X) 0(2)..10Vdc (0..100%).

Alternatively a modulating version with 0(4)..20mA control signal is available.



75mm - 15 kN
90mm - 20 kN / 25 kN

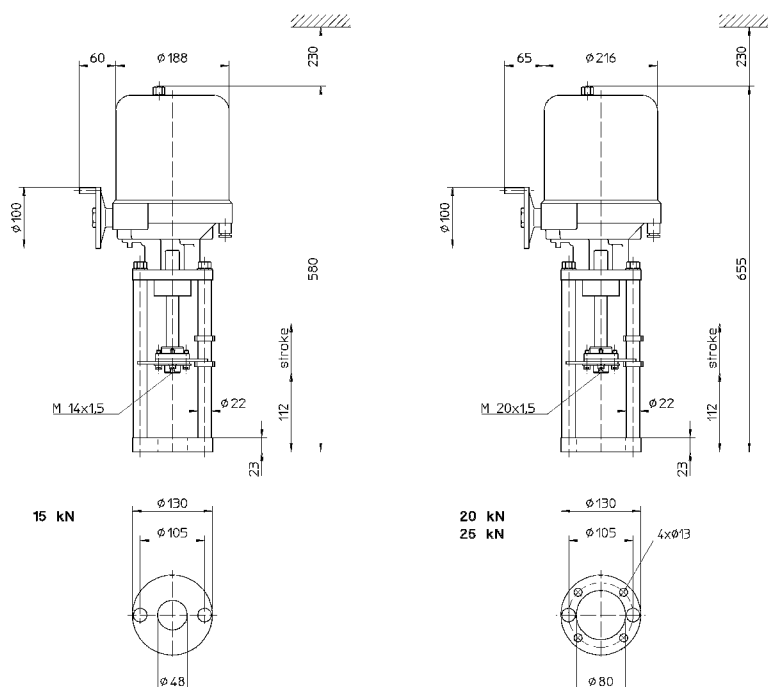
PRODUCT KEY

The product identification key contains all essential data defining the unique features of the valve actuator.

Example : type 315U41 - x

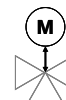
315	U	4	1	-	x	
						actuator trust force kN
						315 : 15 kN
						320 : 20 kN
						325 : 25 kN
						M : 3-point control
						U : 0-10 Vdc
						i : 4-20 mA
						2 : 230 Vac
						4 : 24 Vac
						running time [s/mm]
						-
						extension for special executions

DRAWING



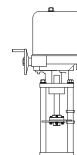
Actuator series 315..

Actuator series 320.. and 325..



75mm - 15 kN
90mm - 20 kN / 25 kN

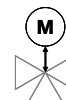
TECHNICAL DATA VALVE ACTUATOR SERIES 315..



ACTUATOR TYPE		315M21	315U21	315i21
Actuating time	s/mm	1.5	1.5	1.5
Actuating thrust	N	15.000	15.000	15.000
Stroke	mm	max. 75	max. 75	max. 75
Power supply	VAC	230 ±10%	230 ±10%	230 ±10%
Frequency	Hz	50/60 ±5%	50/60 ±5%	50/60 ±5%
Power consumption	VA	150	180	180
Input signal ¹⁾		3-point	0(2)...10 VDC 10 kOhm	0(4)...20 mA 0.5 kOhm
Output signal		-	0(2)...10 VDC max. 20 mA min. 500 Ohm	0(4)...20 mA max. 500 Ohm

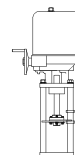
Enclosure protection:	IP 65		
Limit switches (motor):	max. rated load	resistive load :	10 A
		inductive load :	5 A
Operating mode:	S4-30% ED c/h 600	EN 60034-1	
End position switch-off:	2-way valves	extending actuator spindle :	load-dependent
	3-way valves	retracting actuator spindle :	travel (WE-S3) and load-dependent
Ambient temperature:	0...+60°C		
Weight:	315..	17.0 kg	
	320..	22.0 kg	
	325..	22.0 kg	

¹⁾ Invertible input signal



75mm - 15 kN
90mm - 20 kN / 25 kN

TECHNICAL DATA VALVE ACTUATOR SERIES 320..

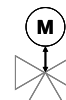


ACTUATOR TYPE		320M21		320U21		320i21	
Actuating time ¹⁾	s/mm	1.2	2.4	1.2	2.4	1.2	2.4
Actuating thrust	N	20.000		20.000		20.000	
Stroke	mm	max. 90		max. 90		max. 90	
Power supply	VAC	230 ±10%		230 ±10%		230 ±10%	
Frequency	Hz	50/60 ±5%		50/60 ±5%		50/60 ±5%	
Power consumption	VA	240	170	260	190	260	190
Input signal ²⁾		3-point		0(2)...10 VDC 10 kOhm		0(4)...20 mA 0.5 kOhm	
Output signal		-		0(2)...10 VDC max. 20 mA min. 500 Ohm		0(4)...20 mA max. 500 Ohm	

Enclosure protection:	IP 65		
Limit switches (motor):	max. rated load	resistive load :	10 A
		inductive load :	5 A
Operating mode:	S4-30% ED c/h 600	EN 60034-1	
End position switch-off:	2-way valves	extending actuator spindle :	load-dependent
	3-way valves	retracting actuator spindle :	travel (WE-S3) and load-dependent
Ambient temperature:	0...+60°C		
Weight:	315..	17.0 kg	
	320..	22.0 kg	
	325..	22.0 kg	

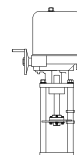
¹⁾ On request running time of 2.4 s/mm available (3-point version 170 VA ; modulating version 190 VA)

²⁾ Invertible input signal



75mm - 15 kN
90mm - 20 kN / 25 kN

TECHNICAL DATA VALVE ACTUATOR SERIES 325..

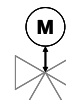


ACTUATOR TYPE		325M21		325U21		325i21	
Actuating time ¹⁾	s/mm	1.2	2.4	1.2	2.4	1.2	2.4
Actuating thrust	N	25.000		25.000		25.000	
Stroke	mm	max. 90		max. 90		max. 90	
Power supply	VAC	230 ±10%		230 ±10%		230 ±10%	
Frequency	Hz	50/60 ±5%		50/60 ±5%		50/60 ±5%	
Power consumption	VA	240	170	260	190	260	190
Input signal ²⁾		3-point		0(2)...10 VDC 10 kOhm		0(4)...20 mA 0.5 kOhm	
Output signal		-		0(2)...10 VDC max. 20 mA min. 500 Ohm		0(4)...20 mA max. 500 Ohm	

Enclosure protection:	IP 65		
Limit switches (motor):	max. rated load	resistive load :	10 A
		inductive load :	5 A
Operating mode:	S4-30% ED c/h 600	EN 60034-1	
End position switch-off:	2-way valves	extending actuator spindle :	load-dependent
	3-way valves	retracting actuator spindle :	travel (WE-S3) and load-dependent
Ambient temperature:	0...+60°C		
Weight:	315..	17.0 kg	
	320..	22.0 kg	
	325..	22.0 kg	

¹⁾ On request running time of 2.4 s/mm available (3-point version 170 VA ; modulating version 190 VA)

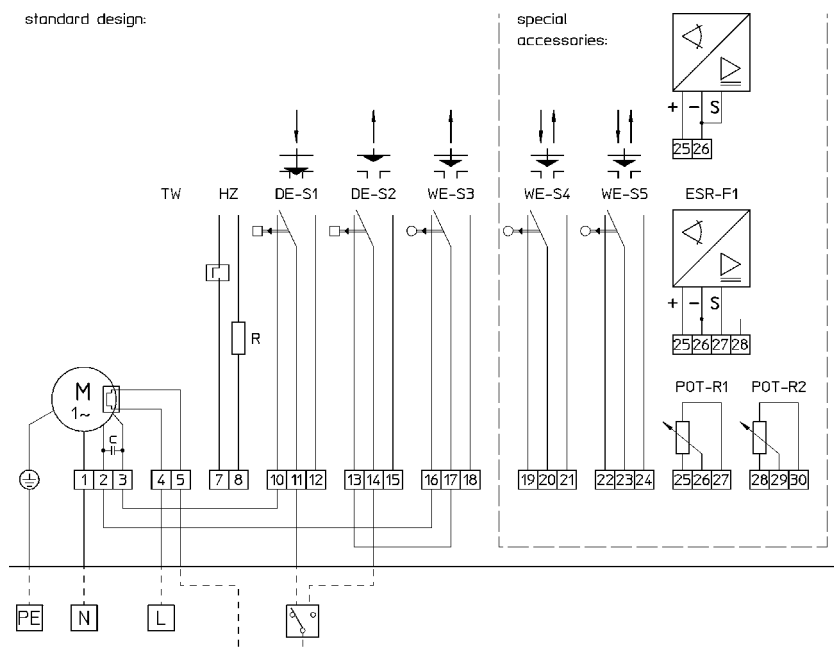
²⁾ Invertible input signal



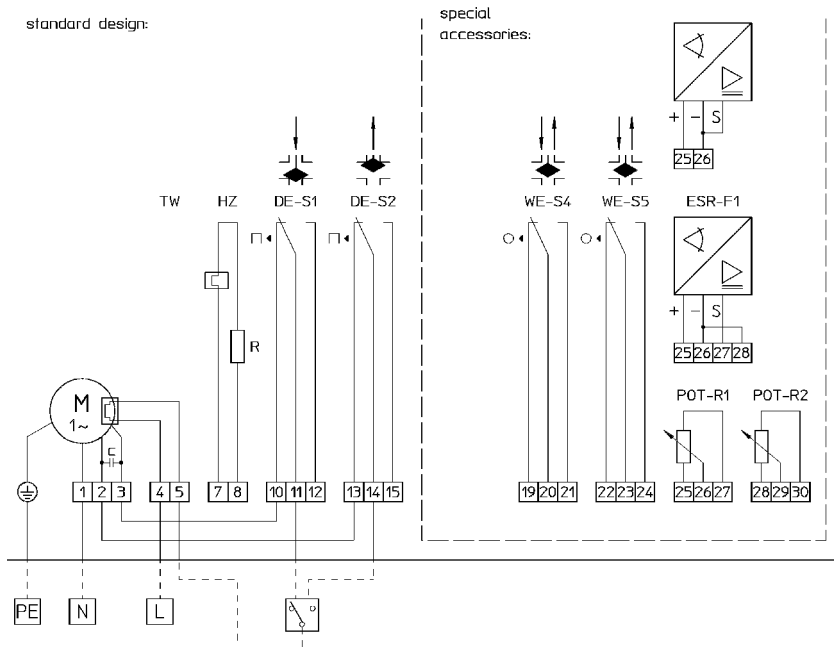
75mm - 15 kN
90mm - 20 kN / 25 kN

ELECTRICAL WIRING

2-way valves - 3point control



3-way valves - 3point control

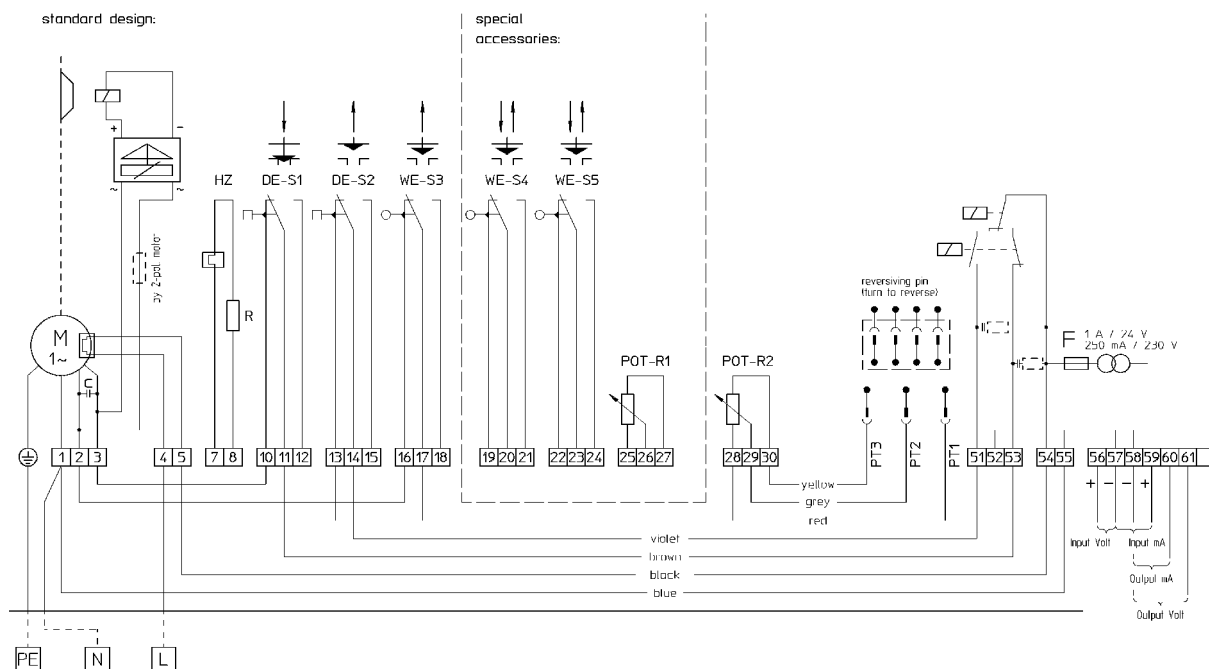




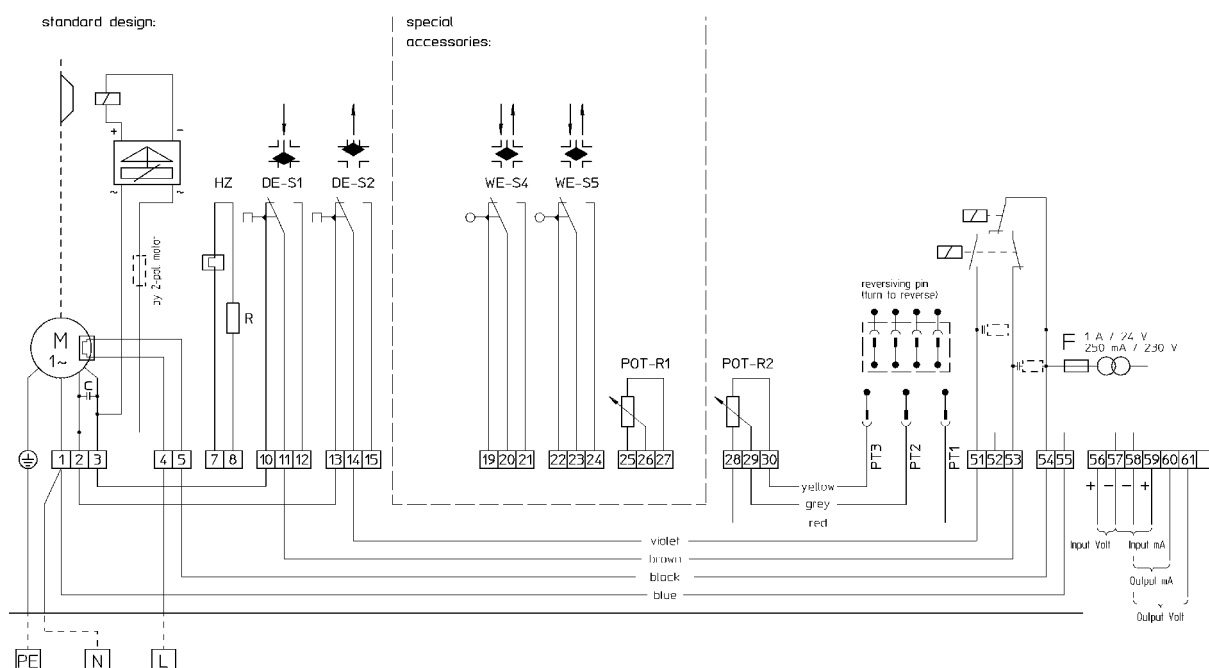
75mm - 15 kN
90mm - 20 kN / 25 kN

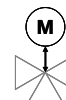
ELECTRICAL WIRING

2-way valves - modulating control



3-way valves - modulating control





75mm - 15 kN
90mm - 20 kN / 25 kN

Actuator alternatives and accessories

Type	315M21	320M21	325M21	315U21	320U21	325U21
T.HH.ZA64 Potentiometer (max. 2 pieces) 0,1 / 0,2 / 0,5 / 1 / 5 / 10 kOhm 1,5 VA	•	•	•			
T.HH.ZA67 Position switch unit 2 switches (WE-S4/WE-S5), max. 250 VAC potential free, infinitely adjustable max. rated load: resistive load 5 A inductive load 3 A filament lamp 1 A	•	•	•	•	•	•
T.HH.ZA65 Heater -20°C ... +60°C 230 VAC, 15 VA	•	•	•	•	•	•
T.HH.ZA66 Electric position indication on 3point versions Voltage: 24 VDC Output signal: X=0(4)...20 mA max. 500 Ohm	•	•	•			

