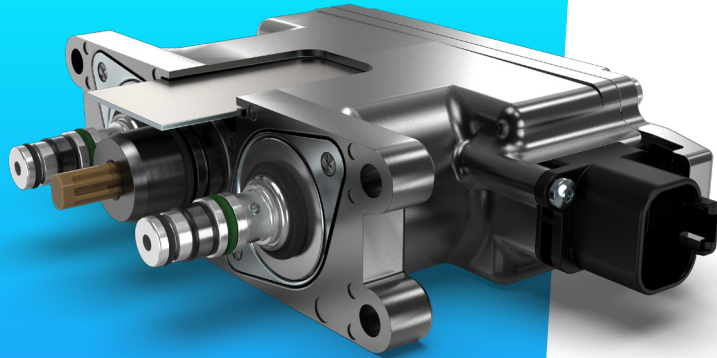


# Electrohydraulic Actuator [EHA 2.0 with PPCD 03-NG PPRV Fail-Safe]



Proportional valves

Directional valves

Smart products

Special designs

## Product classification

Name	Max volume flow @ 6 bar dp
EHA	1,25 l/min based on PPCD 03 FS
	2,5-5 l/min based on PPCD 04
	10 l/min based on PPCD 05
EMA	



### Hydraulic Data

Max pressure pump	$P_p = 50 \text{ bar}$
Max pressure tank	$P_T = 30 \text{ bar}$
Max pressure work	$P_A = 20, 25 \text{ or } 32 \text{ bar}$
Contamination level	Min Filtration: 20/18/15 According to ISO 4406
Fluid	Mineral Oil According to DIN 51524
Temperature range	-30°C to +90°C (ambient) -30°C to +90°C (fluid)
Leakage (internal, each valve)*	< 0,03 l/min (de-energized) < 0,15 l/min (energized)
Filterscreen size	125 $\mu\text{m}$ (P-Port)

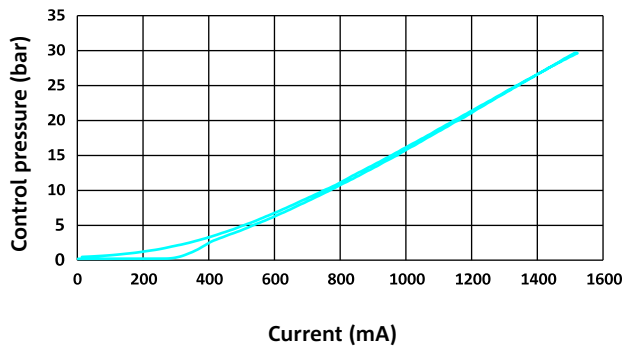
\* The reported data are measured @  $P_p=35 \text{ bar}$  and an oil viscosity of 32 cSt

### Electrical Data

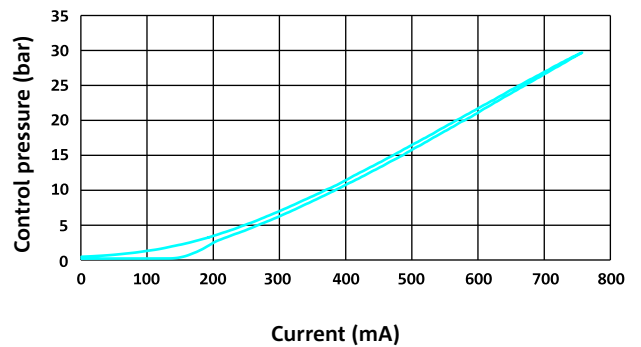
Voltage	12 V	24 V
Voltage range min/max	9/16 [V]	16/32 [V]
Short term overvoltage	36 V	
Max idle power	1 W	1 W
Max power consumption	25 W	
EMC Immunity	1) acc. to ISO 11452-2:2019,2015 100 V/m; 80-2500 Mhz 2) acc. to ISO 11452-4:2011 150 mA; 0,5-200 Mhz	
EMC Transient Conduction Test	acc. to ISO 7637-2:2011 Tests 1, 2a, 2b, 3a, 3b, 3, 5 Test level: IV except for 24 V systems + test No. 5 Test level: III	
Connector	Deutsch Connector DT14-6P	
Protection class	up to IP6K6 / IPX9K	

### Flow characteristics (Average characteristic)

P-I CURVE (12 V)



P-I CURVE (24 V)



### Safety functions The EHA provides three safety functions in compliance of DIN EN ISO 13849

	SAFETY FUNCTION 1	SAFETY FUNCTION 2	DIAGNOSTIC FUNCTION 3
	Current less state	Pressure less state	Rated customer diagnostic function - EHA diag-message
Description	Whenever the signal processing of setpoints along the rated safety-chain (CAN ... valve-coil) is disturbed, the valves enter the current less state, which is defined as the safe state.	Whenever the signal processing of setpoints along the rated safety-chain (CAN ... pilot-pressure) is disturbed, the valves enter the pressure less state, which is defined as the safe state.	The current position of the valve slider (accuracy $\pm 4\%$ ) is transmitted via the CAN bus interface cyclically (user configurable intervals of 10ms, 30ms and 100ms) accompanied by an error code in case one has occurred.
MTTFd	~ 100 years	~ 53 years	~ 49 years
Diagnostic coverage	~ 95 %	93 %	~ 93 %
Performance level	D	D	D

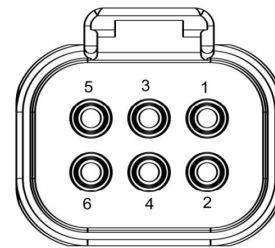


## Sensoric accuracy

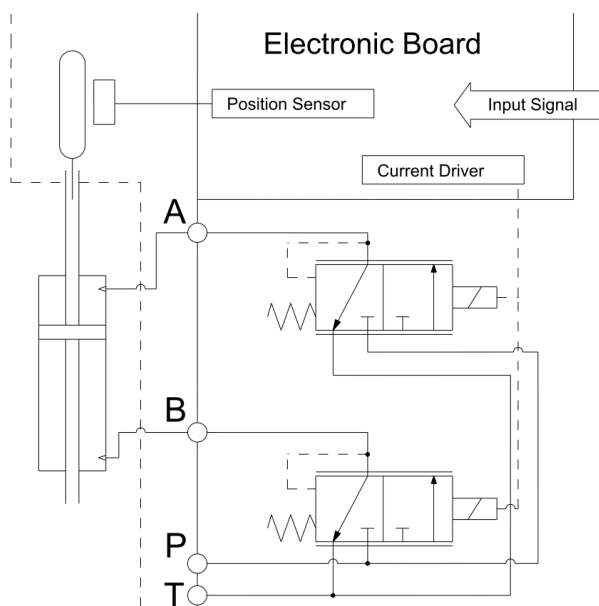
SENSOR TYPE	HALL EFFECT
Range	± 11 mm
Max. sensing deviation	< 90 µm
Max. position offset	30% (of max. stroke)

## Pin assignment

Pin number	Function
1	U Bat (battery voltage)
2	CAN_L CAN Signal (dominant low)
3	"Ain (analog input signal)" (Valve A for electrical override)
4	Agnd (analog output ground) (Valve B for electrical override)
5	GND (battery ground)
6	CAN_H CAN Signal (dominant high)



## Hydraulic schematic



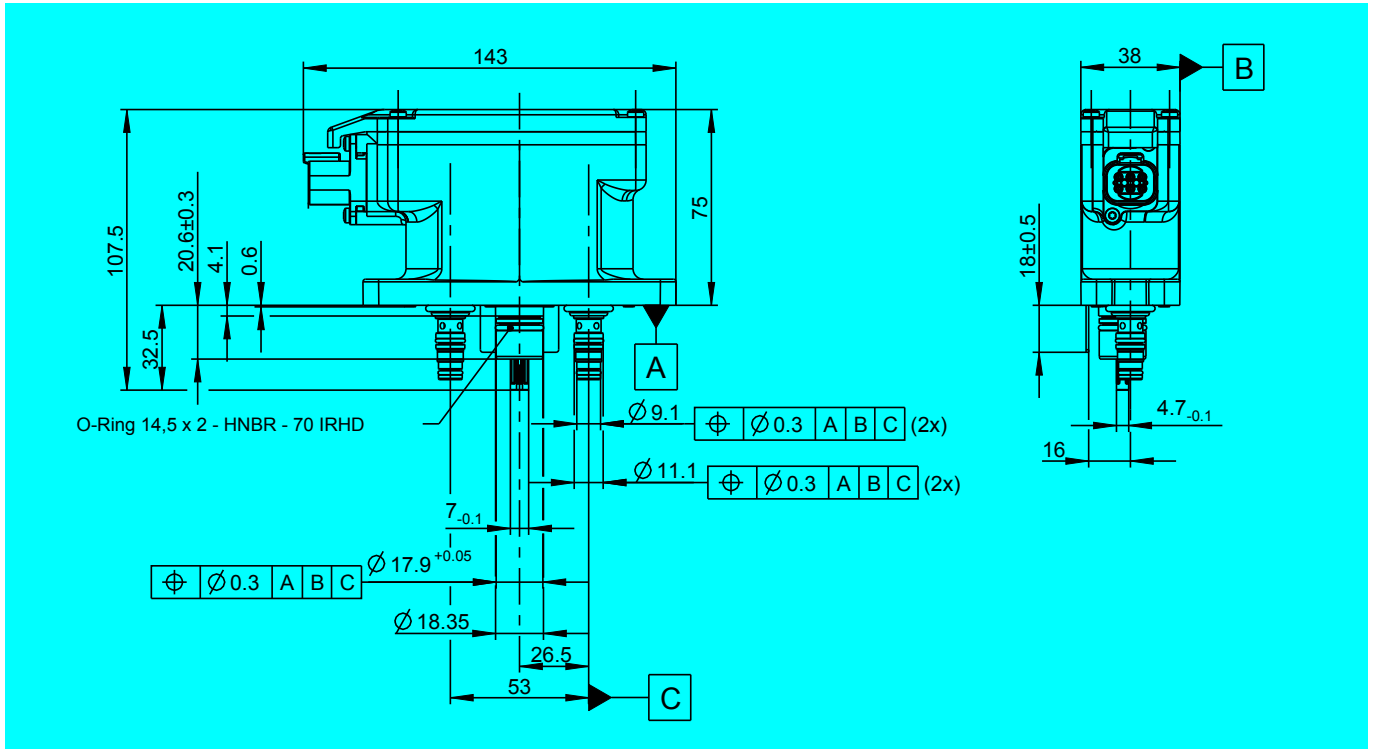
## Additional data

<b>Weight</b>	approx. 670 g
<b>Mounting position (recommended)</b>	any
<b>Reference</b>	Valve specifications according to Thomas LHP 98 EHA TES



## Dimensions with Deutsch Connector and PPCD03-NG PPRV Fail-Safe

(All dimensions in mm)



## Cavity Dimensions PPCD03-NG PPRV FS

(All dimensions in mm)

