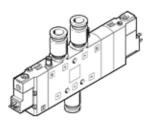
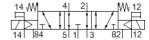
solenoid valve CPE24-M2H-5/3ES-QS-12 Part number: 170316

FESTO

High component density
This type is suitable for vacuum.





Data sheet

	Feature	Value
Width Standard nominal flow rate 1,600 l/min 0,90 m. 10 bar 0,90	Valve function	5/3 exhausted
Standard nominal flow rate Operating pressure Operating pressure Operating pressure Piston slide Type of reset mechanical spring Authorisation cut us - Recognized (OL) Maritime classification see certificate Protection class IP65 with plug socket to IEC 60529 Nominal size 11 mm Exhaust-air function Sealing principle Assembly position Any Manual override With accessories, detenting Ploted Plot air supply External Flow direction Inscription label holder Overlap Positive overlap Plot pressure Switching time off Systiching time of Switching time on Duty cycle Max. positive test pulse with logic 0 Max. positive test pulse with logic 1 Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation Operating medium Compressed air in accordance with FN 942017-5 and El Flota fresistance Flock resistance Flock sets with severity level 2 in accordance with FN 942017-5 and El Flox of resistance Flock resistance Flock resistance Flook direction test severity level 2 in accordance with FN 942017-5 and El Flox of resistance Flox of resistan	Type of actuation	electrical
Operating pressure 0.910 bar Design structure Piston slide Type of reset mechanical spring Authorisation c UL us - Recognized (OL) Maritime classification see certificate Protection class IP65 with plug socket to IEC 60529 Nominal size 11 mm Exhaust-air function throttleable Sealing principle soft Assembly position Any Manual override with accessories, detenting Pushing Pushing Pilot air supply external Flow direction reversible Valve position identification Inscription label holder Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time off 55 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,300 μs Max. negative test pulse with logic 1 3,100 μs Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA	Width	24 mm
Design structure Type of reset mechanical spring cult us - Recognized (OL) Maritime classification see certificate Protection class IP65 with plug socket to IEC 60529 Nominal size Exhaust-air function Sealing principle Soft Assembly position Any Manual override with accessories, detenting Pushing Type of piloting Piloted Pilot air supply external Flow direction Inscription label holder Overlap Positive overlap Pilot pressure Switching time off Soft Switching time on Duty cycle Max. positive test pulse with logic 0 Max. positive test pulse with logic 1 Special position (Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Urbation resistance Shock resistance Shock test with severit level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severits level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severits level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severits level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El Shock resistance	Standard nominal flow rate	1,600 l/min
Type of reset Authorisation c UL us - Recognized (OL) Maritime classification protection class lP65 with plug socket to IEC 60529 Nominal size 11 mm Exhaust-air function Sealing principle soft Any Manual override with accessories, detenting Pushing Type of piloting Piloted Pilot air supply external Flow direction versapp Plot pressure 2.5 10 bar Switching time off Switching time off Switching time of Duty cycle Max. positive test pulse with logic 0 Max. negative test pulse with logic 1 3,300 μs Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Compression resistance Protection in service versity level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El Shock resistance Shock resistance	Operating pressure	-0.9 10 bar
Authorisation cUL us - Recognized (OL) Maritime classification see certificate Protection class IP65 with plug socket to IEC 60529 Nominal size 11 mm Exhaust-air function soft Assembly position Any Manual override with accessories, detenting Pushing Type of piloting Piloted Pilot air supply external Flow direction reversible Valve position identification Inscription label holder Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time of 55 ms Switching time of 25 ms Outry cycle 100 % Max. negative test pulse with logic 0 Max. negative test pulse with logic 1 Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Cubic resistance Vibration resistance Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El	Design structure	Piston slide
Marritime classification Protection class IP65 with plug socket to IEC 60529 Nominal size 11 mm Exhaust-air function throttleable Sealing principle Assembly position Any Manual override With accessories, detenting Pushing Type of piloting Piloted Pilot air supply Flow direction Valve position identification Overlap Positive overlap Pilot pressure Switching time off Switching time off Switching time on Duty cycle Max. negative test pulse with logic 0 Max. negative test pulse with logic 1 Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Ubircated operation possible (subsequently required for further operation) Vibration resistance Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El	Type of reset	mechanical spring
Protection class IP65 with plug socket to IEC 60529 Nominal size 11 mm Exhaust-air function throttleable Sealing principle soft Assembly position Manual override with accessories, detenting Pushing Type of piloting Piloted Piloted Piloted Piloted Pilot air supply external Flow direction reversible Valve position identification Inscription label holder Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time off 55 ms Switching time on Duty cycle 100 % Max. positive test pulse with logic 0 Max. negative test pulse with logic 1 3,100 µs Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and El	Authorisation	c UL us - Recognized (OL)
with plug socket to IEC 60529 Nominal size Exhaust-air function Sealing principle Soft Assembly position Manual override Pushing Type of piloting Piloted Pilot air supply external Flow direction Valve position identification Overlap Plot positive overlap Pilot pressure 2.5 10 bar Switching time off Switching time off Switching time on 25 ms Max. positive test pulse with logic 0 3,300 µs Max. negative test pulse with logic 1 Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Vibration resistance Face of 55 ms Shock test with severity level 2 in accordance with FN 942017-5 and El	Maritime classification	see certificate
to IEC 60529 Nominal size 11 mm Exhaust-air function throttleable Sealing principle soft Assembly position Any Manual override with accessories, detenting Pushing Type of piloting Piloted Pilot air supply external Flow direction reversible Valve position identification Inscription label holder Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time off 55 ms Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,300 µs Max. negative test pulse with logic 1 3,100 µs Max. negative test pulse gluctuation 100 reversible lover 2.5 % / +10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and El	Protection class	IP65
Nominal size Exhaust-air function Sealing principle Soft Assembly position Manual override With accessories, detenting Pushing Pushing Piloted Pilot air supply Pilot greversible Valve position identification Overlap Pilot pressure Switching time off Switching time on Duty cycle Max. positive test pulse with logic 0 Max. negative test pulse with logic 1 Characteristic coil data Permissible voltage fluctuation Operating medium Operating medium Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El Soft characteristic coil date (Shock test with severity level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El Shock test with severity level 2 in accordance with FN 942017-5 and El		with plug socket
Exhaust-air function Sealing principle Assembly position Manual override Pushing Type of piloting Piloted Piloted Pilot air supply Flow direction Valve position identification Overlap Pilot pricessure Switching time off Switching time on Duty cycle Max. positive test pulse with logic 0 Max. positive test pulse with logic 1 Characteristic coil data Permissible voltage fluctuation Operating medium Note on operating and pilot medium Vibration resistance Flow direction Inscription label holder reversible Nexternal Flow direction Feversible Positive overlap		to IEC 60529
Sealing principle Assembly position Any Manual override With accessories, detenting Pushing Type of piloting Pilot de Pilot de Pilot air supply external Flow direction Valve position identification Inscription label holder Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off Soff soms Switching time on Duty cycle 100 % Max. positive test pulse with logic 0 Max. negative test pulse with logic 1 Characteristic coil data Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Urbaracteristic coil every level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El	Nominal size	11 mm
Assembly position Any Manual override With accessories, detenting Pushing Type of piloting Piloted Piloted Pilot air supply Elow direction Valve position identification Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time on Duty cycle 100 % Max. positive test pulse with logic 0 Max. negative test pulse with logic 1 Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and El Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El	Exhaust-air function	throttleable
Manual overridewith accessories, detenting PushingType of pilotingPilotedPilot air supplyexternalFlow directionreversibleValve position identificationInscription label holderOverlapPositive overlapPilot pressure2.5 10 barSwitching time off55 msSwitching time on25 msDuty cycle100 %Max. positive test pulse with logic 03,300 μsMax. negative test pulse with logic 13,100 μsCharacteristic coil data110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VAPermissible voltage fluctuation-15 % / +10 %Operating mediumCompressed air in accordance with ISO8573-1:2010 [7:4:4]Note on operating and pilot mediumLubricated operation possible (subsequently required for further operation)Vibration resistanceTransport application test at severity level 2 in accordance with FN 942017-5 and ElShock resistanceShock test with severity level 2 in accordance with FN 942017-5 and El	Sealing principle	soft
Pushing Type of piloting Piloted Pilot air supply external Flow direction reversible Valve position identification Inscription label holder Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,300 μs Max. negative test pulse with logic 1 3,100 μs Characteristic coil data 110 V Ac: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation -15 % / +10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-6	Assembly position	Any
Type of piloting Piloted Pilot air supply external Flow direction reversible Valve position identification Inscription label holder Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,300 µs Max. negative test pulse with logic 1 3,100 µs Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation -15 % / +10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Unbration operation Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN	Manual override	with accessories, detenting
Pilot air supply external Flow direction reversible Valve position identification Inscription label holder Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,300 µs Max. negative test pulse with logic 1 3,100 µs Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation -15 % / +10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and El		Pushing
Pilot air supply external Flow direction reversible Valve position identification Inscription label holder Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,300 µs Max. negative test pulse with logic 1 3,100 µs Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation -15 % / +10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and El	Type of piloting	Piloted
Valve position identification Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 Max. negative test pulse with logic 1 Characteristic coil data Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and El Shock resistance Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El		external
Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,300 μs Max. negative test pulse with logic 1 3,100 μs Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation -15 % / +10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN	Flow direction	reversible
Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,300 µs Max. negative test pulse with logic 1 Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation -15 % / +10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and El Shock resistance	Valve position identification	Inscription label holder
Switching time off Signification is switching time of the special spe	Overlap	Positive overlap
Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,300 µs Max. negative test pulse with logic 1 3,100 µs Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation -15 % / +10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN	Pilot pressure	2.5 10 bar
Duty cycle 100 % Max. positive test pulse with logic 0 3,300 µs Max. negative test pulse with logic 1 3,100 µs Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation -15 % / +10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN	Switching time off	55 ms
Max. positive test pulse with logic 03,300 μsMax. negative test pulse with logic 13,100 μsCharacteristic coil data110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VAPermissible voltage fluctuation-15 % / +10 %Operating mediumCompressed air in accordance with ISO8573-1:2010 [7:4:4]Note on operating and pilot mediumLubricated operation possible (subsequently required for further operation)Vibration resistanceTransport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6Shock resistanceShock test with severity level 2 in accordance with FN 942017-5 and EN	Switching time on	25 ms
Max. negative test pulse with logic 13,100 μsCharacteristic coil data110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VAPermissible voltage fluctuation-15 % / +10 %Operating mediumCompressed air in accordance with ISO8573-1:2010 [7:4:4]Note on operating and pilot mediumLubricated operation possible (subsequently required for further operation)Vibration resistanceTransport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6Shock resistanceShock test with severity level 2 in accordance with FN 942017-5 and EN	Duty cycle	100 %
Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation -15 % / +10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El	Max. positive test pulse with logic 0	3,300 μs
Permissible voltage fluctuation -15 % / +10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN	Max. negative test pulse with logic 1	3,100 μs
Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN	Characteristic coil data	110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA
Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN	Permissible voltage fluctuation	-15 % / +10 %
operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN	Operating medium	Compressed air in accordance with ISO8573-1:2010 [7:4:4]
942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and El	Note on operating and pilot medium	
	Vibration resistance	
160068-2-2/	Shock resistance	Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27
Corrosion resistance classification CRC 2 - Moderate corrosion stress	Corrosion resistance classification CRC	· · · · · · · · · · · · · · · · · · ·
Medium temperature -5 50 °C		
Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4]		
Ambient temperature -5 50 °C		
Electrical connection Plug pattern type C to EN 175301-803	•	



Feature	Value
Mounting type	with through hole
Pilot exhaust port 82	M5
Pilot exhaust port 84	M5
Pilot air port 12	M5
Pilot air port 14	M5
Pneumatic connection, port 1	QS-12
Pneumatic connection, port 2	QS-12
Pneumatic connection, port 3	G3/8
Pneumatic connection, port 4	QS-12
Pneumatic connection, port 5	G3/8
Materials note	Conforms to RoHS
Material seals	NBR
Material housing	Aluminium die cast