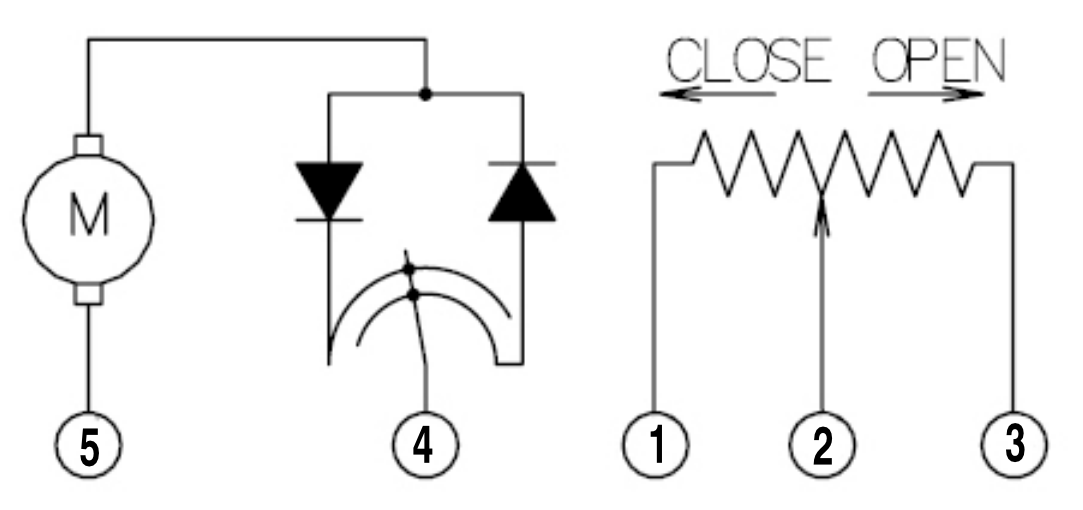
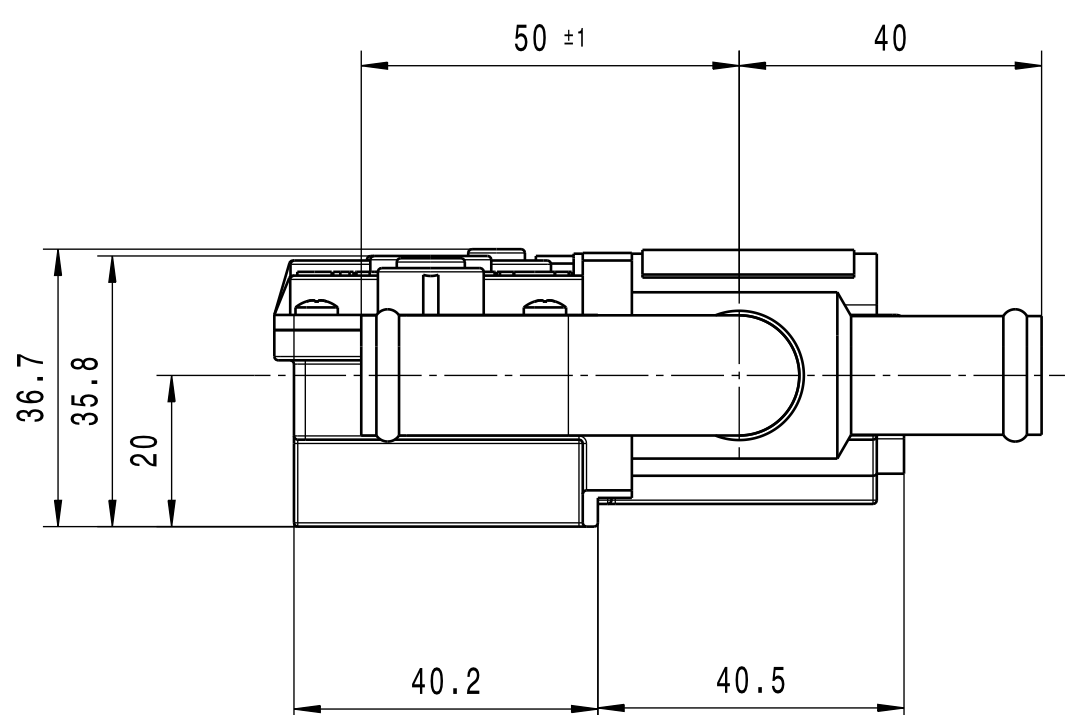
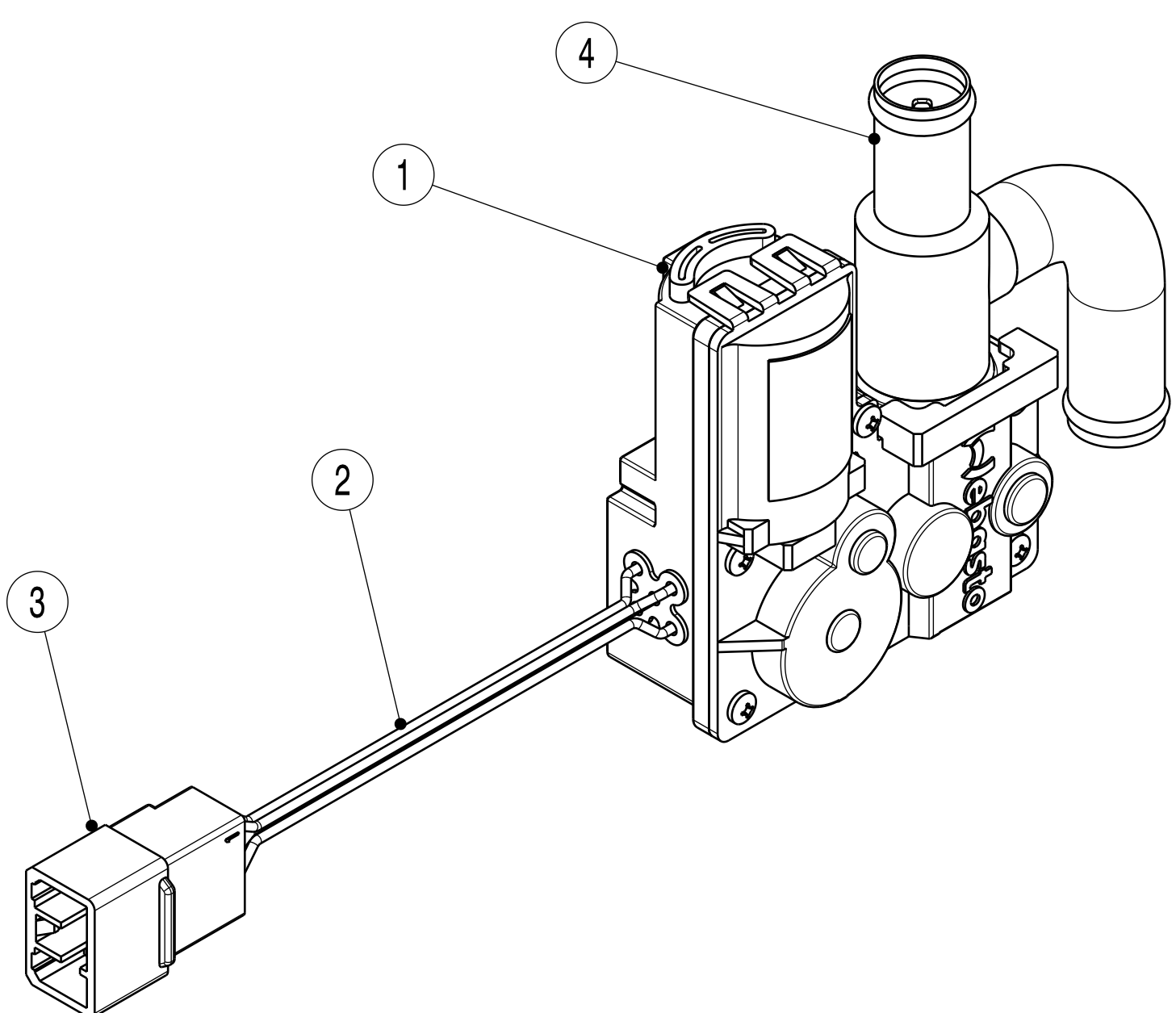


4	1		VALVE BODY ASSEMBLY	
3	5	172777-1	TERMINALS	
3	1	172504-1	CONNECTOR	
2	1		WIRE JACKET Ø6x70	
1	1		DRIVER ASSEMBLY 12V	
POS.	QTY.	COD.	PART.	DESCRIPTION
				NOTE



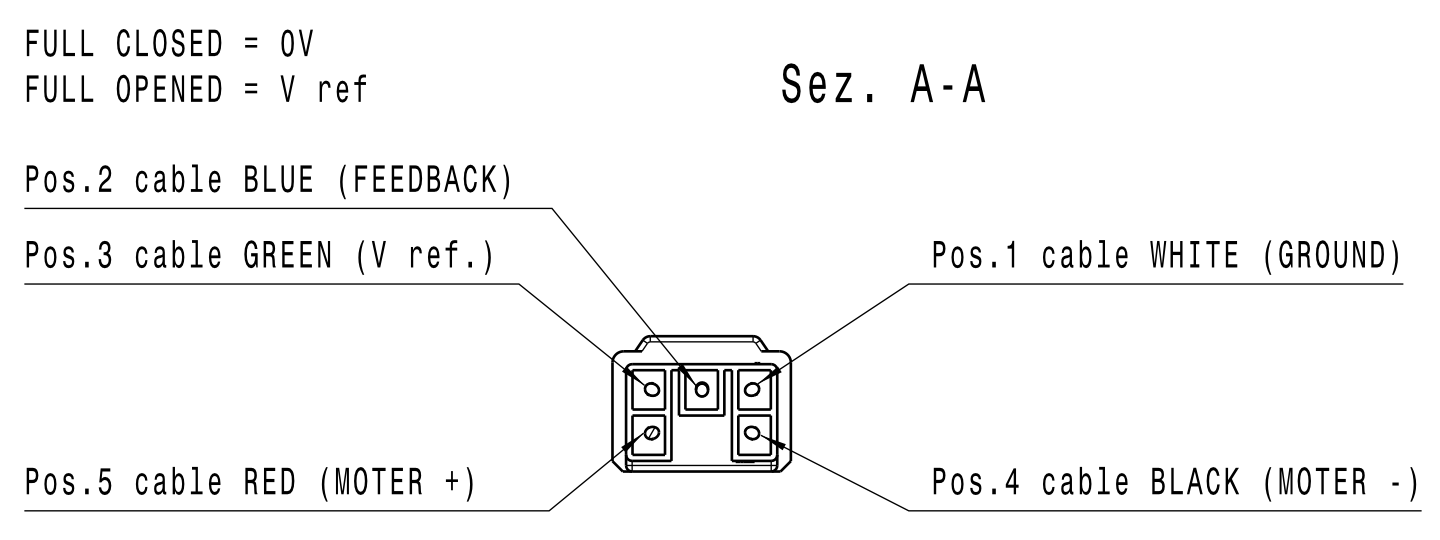
5	4	
+	-	OPEN-CLOSE
-	+	CLOSE-OPEN

CHG.	CLZ	QTY	CA-NO.	CHANGE	3D-IM-TR	DRAW	CHECK
#	01			FIRST DRAFT/PRIMA EMISSIONE		25.11.14	R.S. F.F.
#	02			CHANGED PLASTIC BODYS; ADD LABEL AND BAR CODE		16.02.15	R.S. F.F.
A	03		427040	EDIT LABEL, POS. CABLE, ADD ELECTRICAL DIAGRAM		23.03.15	F.B. F.F.
A	04		429801	MODIFY ELECTRICAL DIAGRAM CORRECT		20.05.15	F.B. F.F.
A	05		459163	EDIT LABEL; ADD TABLE AND DIAGRAMS		19.12.16	E.L. F.F.

TECHNICAL DATA SHEET

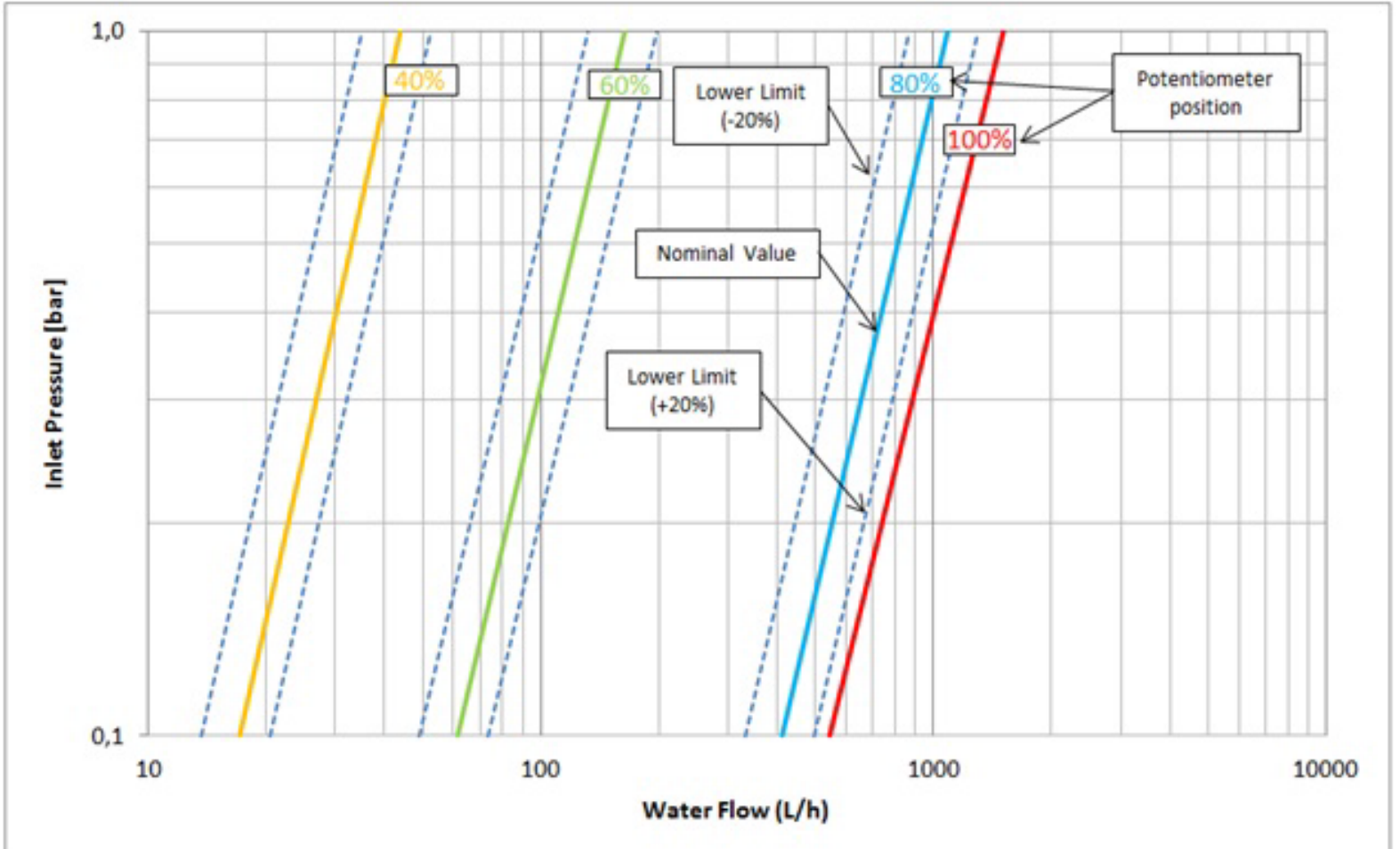
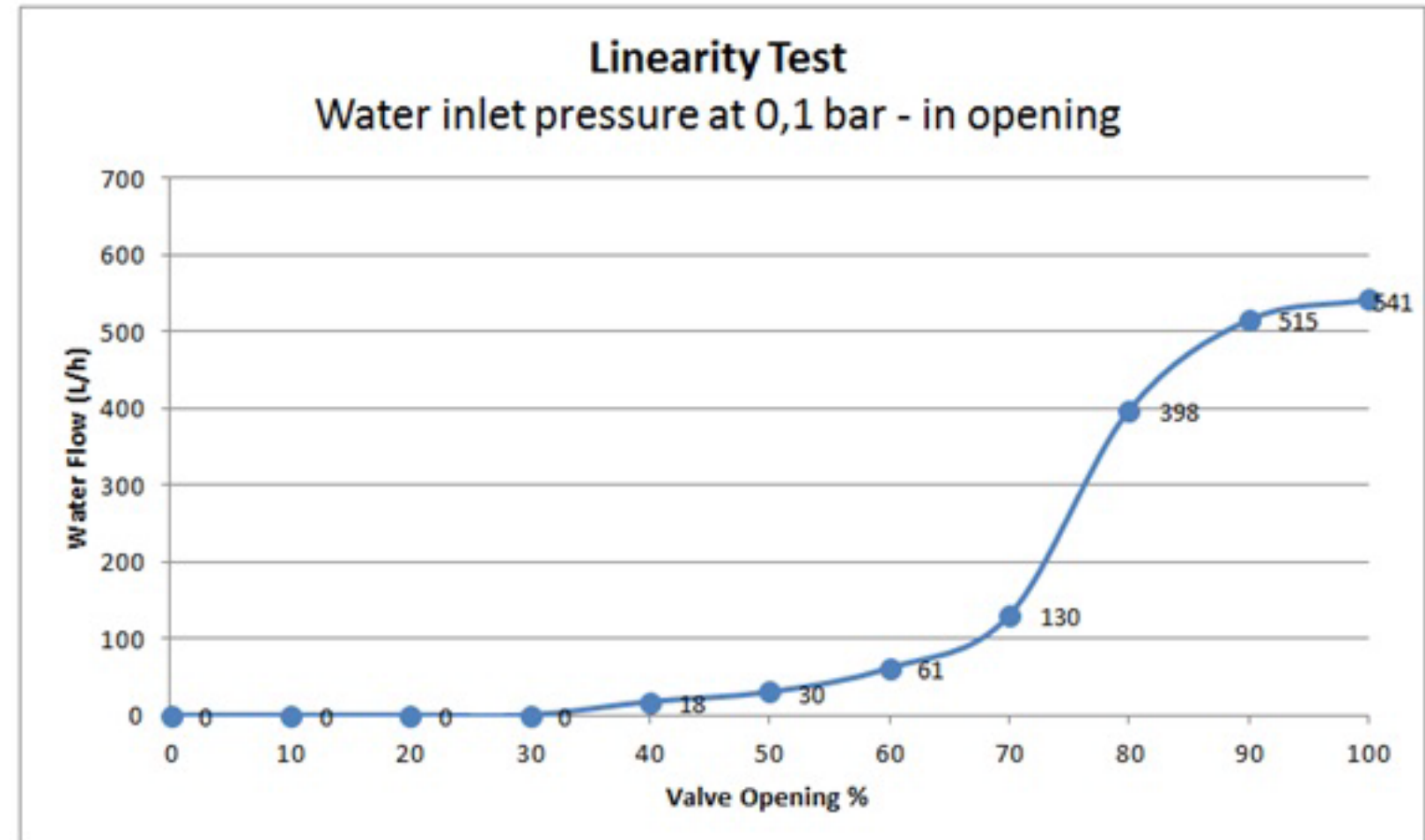
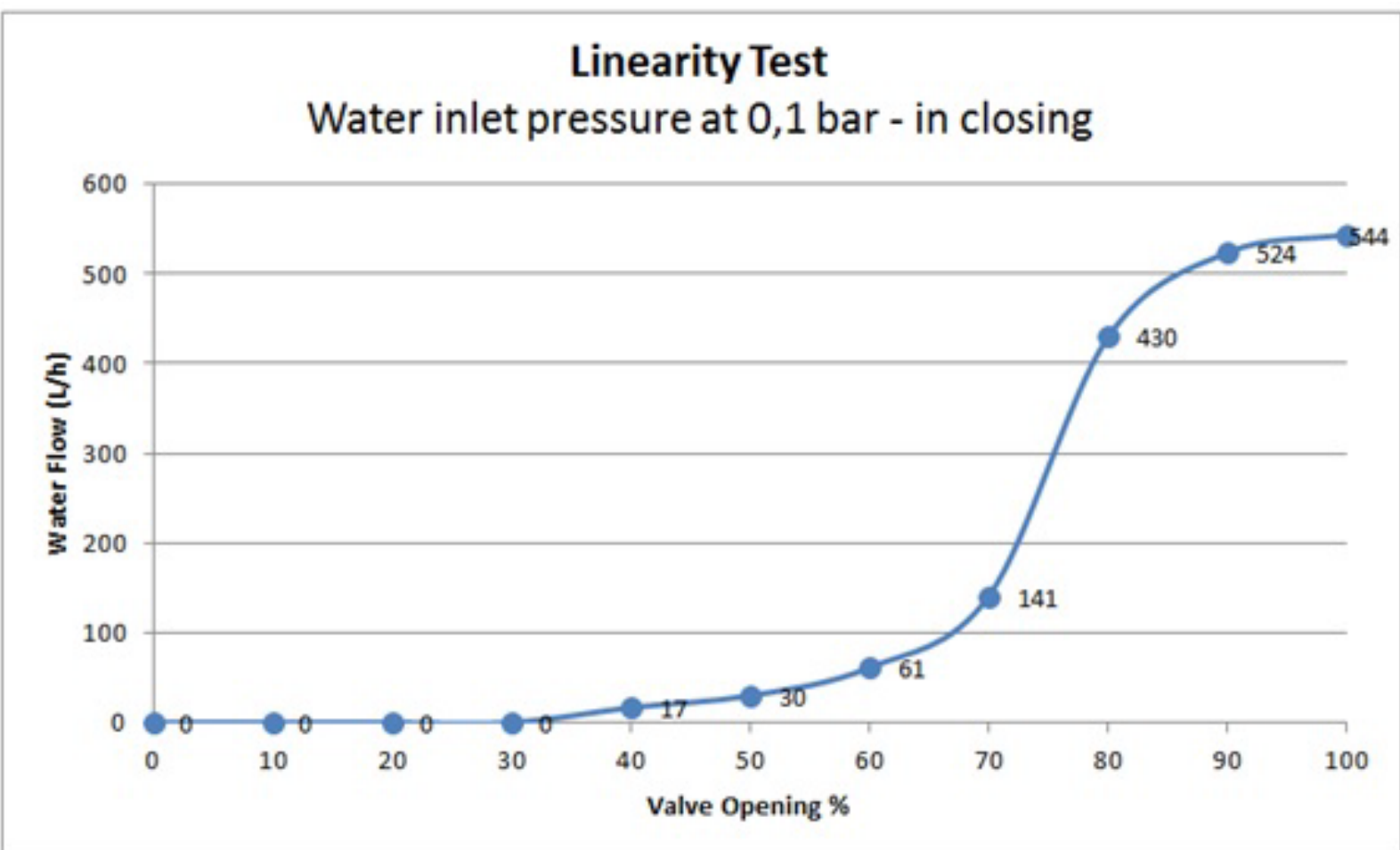
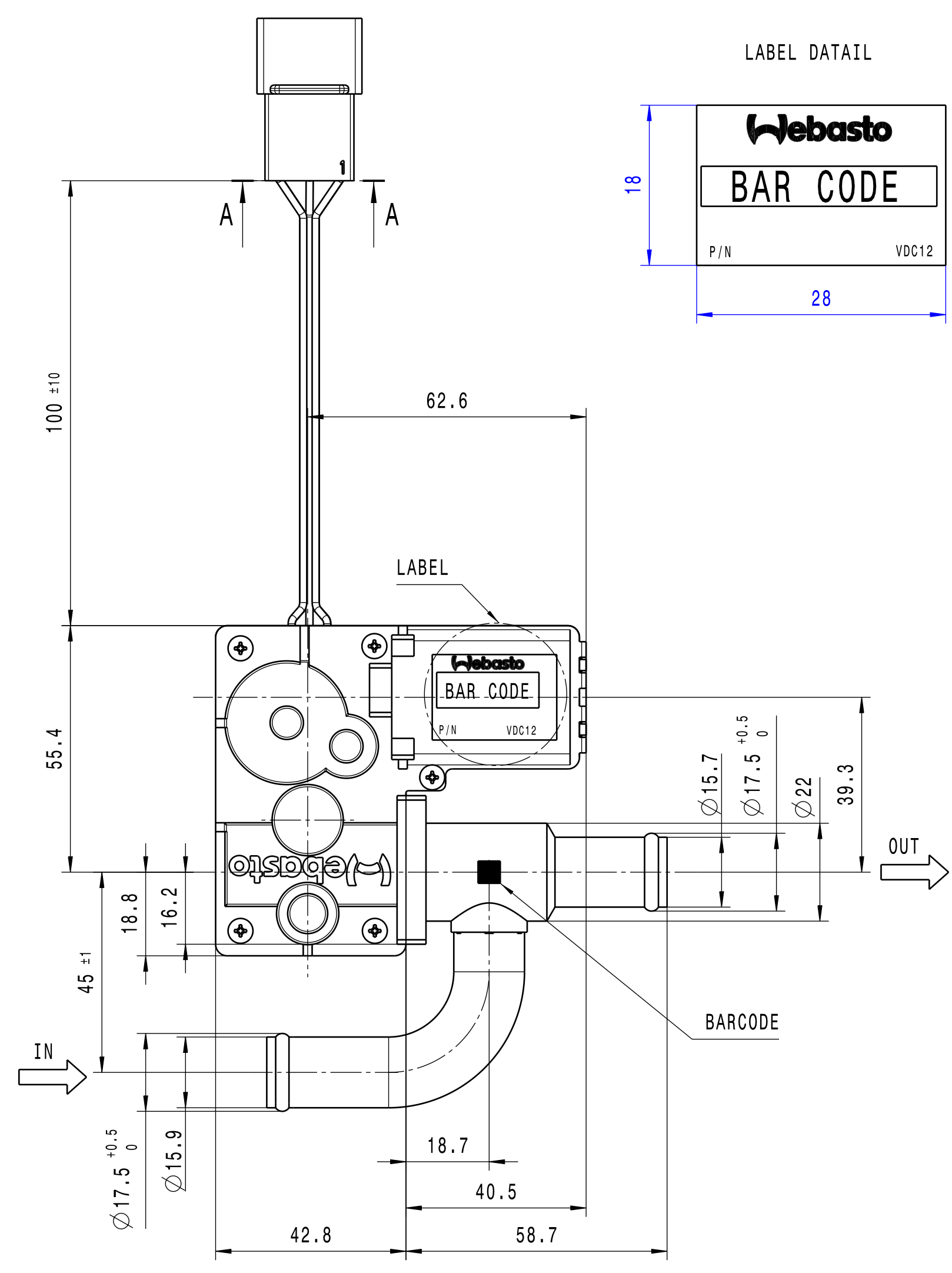
Functional data	Requirement
Nominal voltage	DC 12V
Nominal voltage range	DC 9-16V
Internal protection	IP67
Storage Temperature	-40°C to 120°C
Operating Temperature	-40°C to 100°C
Operating ambient pressure	800 - 1100 mbar
Operating ambient humidity	20 + 95% relative humidity
Operating fluid temperature	Max 115°C
Operation fluid pressure	continuous operation <2,5barG; pressure peaks <3,5barG
Operating fluid range	0 + 2000 l/h
Internal fluid pressure drop 100% open	Max. 22mbar at 360 l/h at 80°C±5 (valve fully open)
Internal fluid leakage	Max. 20cn³/min at 0,3bar differential pressure (valve close)
Operation time	Max 10s, min 6s for from fully closed to fully open and vice versa
Water flow vs. opening stroke	see drawing - (water/glycol 50% -50%; fluid inlet temperature 85°C)
Water flow vs. opening/pressure/tolerance	see drawing
Lock current	320mA max
Insulation resistance	Min. 10MΩhm at 500V
Noise Level	50dB(A) at 10 cm distance and nominal voltage without water inside
EMC requirements	According to EN 13309 (2010) and EN 14982 (2009)
Mounting position	Each position
Electrical & Mechanical	
Tightness	Valve not in operation. Ambient temperature: -40°C to 100°C; fluid temperature: -40°C to 105°C; System pressure: 5,0bar gauge +/-0,1bar. Fluid water-glycol 50%/50%. 90min at each temperature.
Under pressure	Ambient temperature: 23°C, system pressure: 5mbar absolute +/-0,5mbar. Fluid air (vacuum) for 3min.
Burst pressure	Ambient temperature: 23°C, fluid oil. Pressure increasing rate: 0,5bar/min 1. system pressure: 5barG +/-0,1bar. Time for retaining the pressure 10min. No damage. 2. system pressure: 6,5barG +/-0,1bar. Time for retaining the pressure 5min. No damage. 3. system pressure: increase up to bursting, but not higher than 9barG +/-0,1bar. Time for retaining the pressure 5min. Damage can occur.
Erosion	Ambient temperature 23°C, fluid temperature 105°C, fluid pressure: >=1,5barG, water-glycol 50%/50% + molding sand (grain size <0.6mm, quantity 1g/l). Volume flow: 2000 l/h for 600 hours.
Pressure cycling	Oil temperature at 110°C ±5 and fluid pressure at the entrance of the valve (valve in open position). Once the fluid temperature is achieved, set a pressure of 5bar for 10min. Then apply pressure variations of ±1bar with period time of 10s. During the test keep the max pressure value (6bar) and the minimum pressure (4bar) for about 4s. Repeat 60.000 times the entire cycle.
Sinusoidal vibration	According to Std: FIAT 7.R0100 Class V2. Sinusoidal vibration amplitude of 5 mm peak-to-peak (between 5 and 12 Hz) and then 30 m/s² (between 12 and 200 Hz). Sweep frequency between 5 and 200 Hz and rate of change of 1 oct/min. 8 hours for each axis (x,y,z).
Random vibration	According to Std: FIAT 7.R0100 Class V2. Random vibrations in the range 5-1000 Hz, the initial slope of the contour >30 db/oct. PSD g²/Hz 0.213 to 10 Hz. Overall grms 3,15. 8 hours duration for each axis (x,y,z). Simultaneously with the vibrations apply a temperature profile whose basic cycle is the following: 2 hours: ramp up from -30°C to +100°C 2 hours: constant temperature +100°C 2 hours: ramp down from +100°C to -30°C 2 hours: constant temperature -30°C
Life time requirements / durability	Min. 100.000 cycles open/close position; Fluid water-glycol 50/50%; Inlet pressure 3barG; Water Temperature 90°C ±5.
Cable tensile strength	100N at room temperature 23°C for 30s
Mass closure requirements	500Veff, 50Hz Sinus for 1 min at 23°C ±2. Fault current <1mA.
Environmental	
Resistance to reagents	All used materials have to withstand: Water and glycol in any mixture; Refrigerant; Oil (refrigerant oil, motor oil, transmission oil, hydraulic oil, automatic transmission oil, brake fluid); Humidity; Cleaning supplies (windscreen washer fluid, interior cleaner, spirit, cleaner solvent, protective lacquer remover); Antifreeze (coolant 100%, anti-freeze for windscreen washer fluid 100%); Fuel (diesel and petrol); Brake fluid; Protective lacquer; Battery fluid (37% sulfuric acid); As well as all their mixtures and reaction products; Environmental conditions (salt-humidity).
Resistance to sulfur dioxide containing atmosphere	According to DIN 50018 KWF 2,0 S with 24 cycles
SWAAT	Min 25 days according to ASTM Standard Practice G85 - Annex A3 and ASTM Test Method G43-75. Ambient temperature 49°C Glacial acetic acid concentration: 39,14ml/gal Sea salt concentration: 0,45lbs/gal
Dust and water protection	IP67 according to Reference Std. CEI EN 60529
Temperature cycling	Temperature cycling test according to std. FIAT 7.R0100 Class T3. Temperature profile: 2 hours: ramp up from -30°C to +100°C 2 hours: constant temperature +100°C 2 hours: ramp down from +100°C to -30°C 2 hours: constant temperature -30°C Repeat for 10 full cycles
Medium temperature cycling	Ambient temperature: 23°C +/-5 Lower temperature: -40°C ±2 for 5 min. Upper temperature: 105°C ± 2 for 5 min. Time to change the medium temperatures: increasing temperatures 10s, decreasing temperatures 10min. Operating pressure: low: 1,5barG, high 2,5barG. Time to change the pressure: each 10s. Cycle number 250.
Temperature shock	According to FIAT 7.G2120 Class T3: 30 min at -40°C and 30 min at +120°C for 16 hours
Humidity	Relative humidity 95% for min 48 hours at 40°C ±2
Storage resistance	16 hours at -40°C and 16 hours at +120°C

Sez. A-A



Barcode include information:
part number, manufacturing data, shift number, item number
For example: 0011502110012

- 001: part number
- 15: 2015 year
- 02: February
- 11: the 11th day
- 1: day shift; 0: night shift
- 0012: the 12th part



- Technical requirements:
- Surface is clean without pollution;
 - No sharp edges allowed;
 - Label should be paste firm;
 - The initial state of valve is full closed;
 - Dimensions not shown on drawing shall be taken from 30 model;

Other specifications from
WTIT-UT -1177-15 00 Product Technical Specification
2/2 way water flow control valve with 12VDC or 24VDC

TOLERANCING ACCORDING TO ISO 8015
Tolleranza secondo normativa ISO 8015

- ENGLISH LANGUAGE IS BINDING
La lingua inglese è vincolante
- ITALIAN LANGUAGE IS BINDING
La lingua italiana è vincolante

COMPLIES WITH DIRECTIVE 2000/53/EC IN THE MOST RECENT AMENDMENT.
EXEMPTIONS ACCORDING TO ANNEX II ARE NOT PERMITTED.
Conforme alla direttiva 2000/53/EC nella versione più recente.
Non sono ammesse le esenzioni secondo l'allegato II.
FOR MISSING DIMENSIONS SEE CAD-DATA SET
Per le dimensioni non quotate fare riferimento al modello CAD

REF. PROJ. 304		1		INVIATO IN DATA		CAD-SISTEM		CATIA V5 R19			
PROPOSED DIVISION FOR NEW TOLERANCES				VOLTAGE		RESIST		SURFACE			
250 ±0.05 - 0V				-		-		-			
MATERIAL				SEE NOTE VEDI NOTA				MATERIAL: 40			
SURFACE PROTECTION				SEE NOTE SURFACE TREATMENT VEDI NOTE TRATTAMENTO SUPERFICIALE				SUPPL. DRAW: N			
PART NAME				WATER FLOW CONTROL VALVE AMP MIC-MKII 12VDC				MATERIAL: 40			
				RUBINETTO CABLATO AMP MIC-MKII 12V				SUPPL. DRAW: N			
DATE: 19.12.16		19.12.16		SCALE: 1:1		PUL. VERBALE: 40		PART-NO.		CLZ. CLZ.	
NAME: E.L.		F.F.		APP.		STATUS: 1		9232398		AO5	
REPLACED BY:	