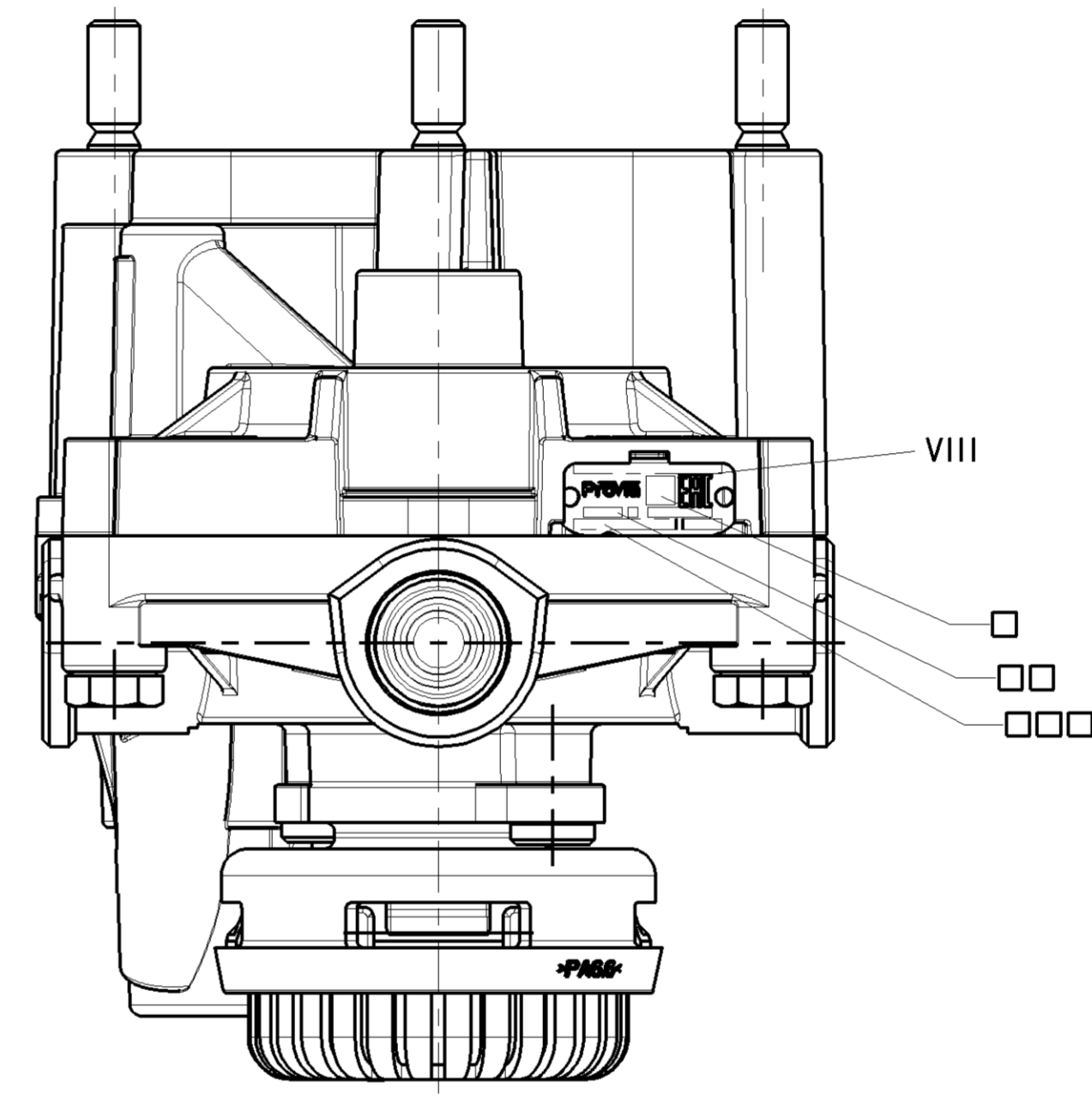
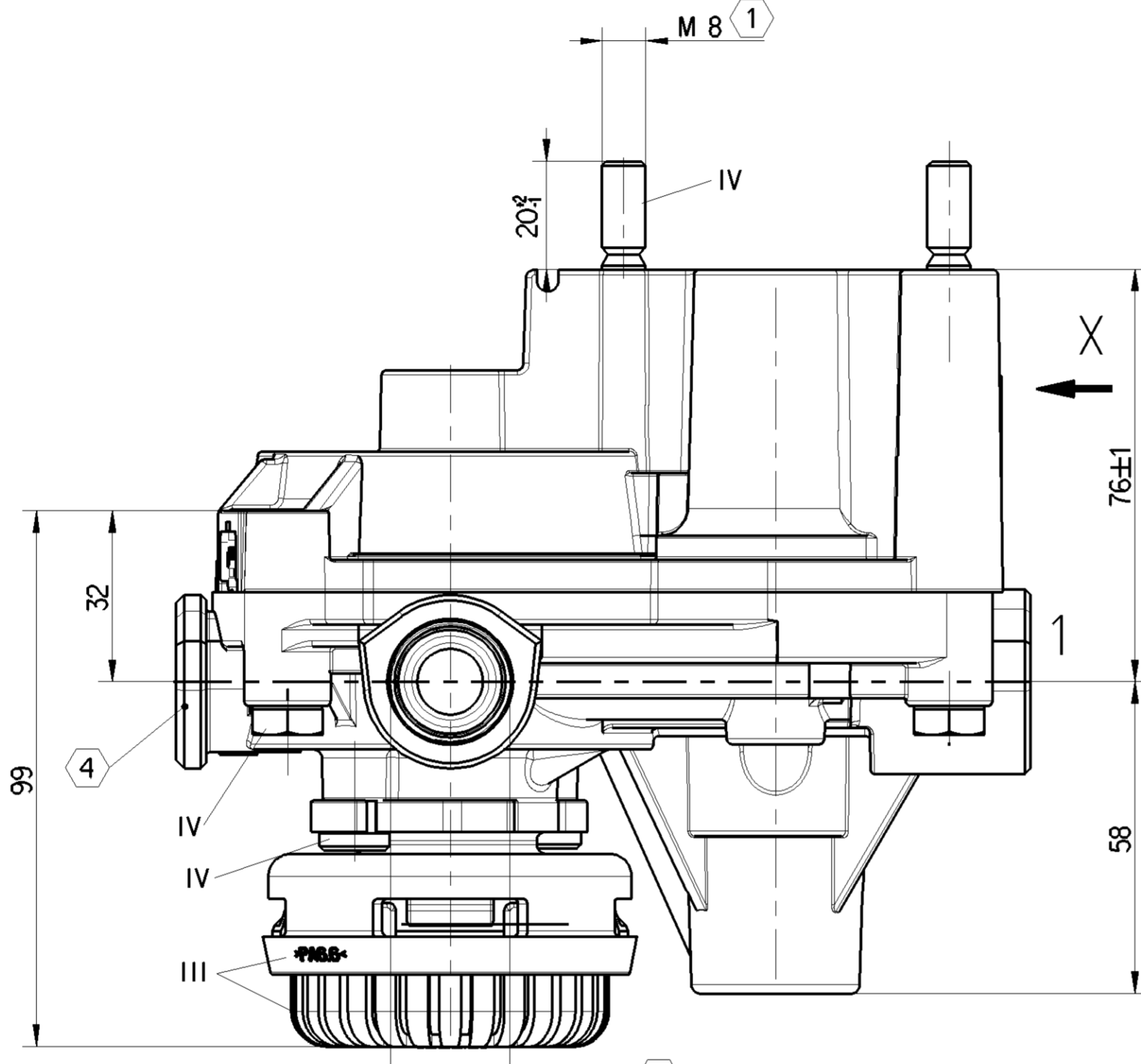
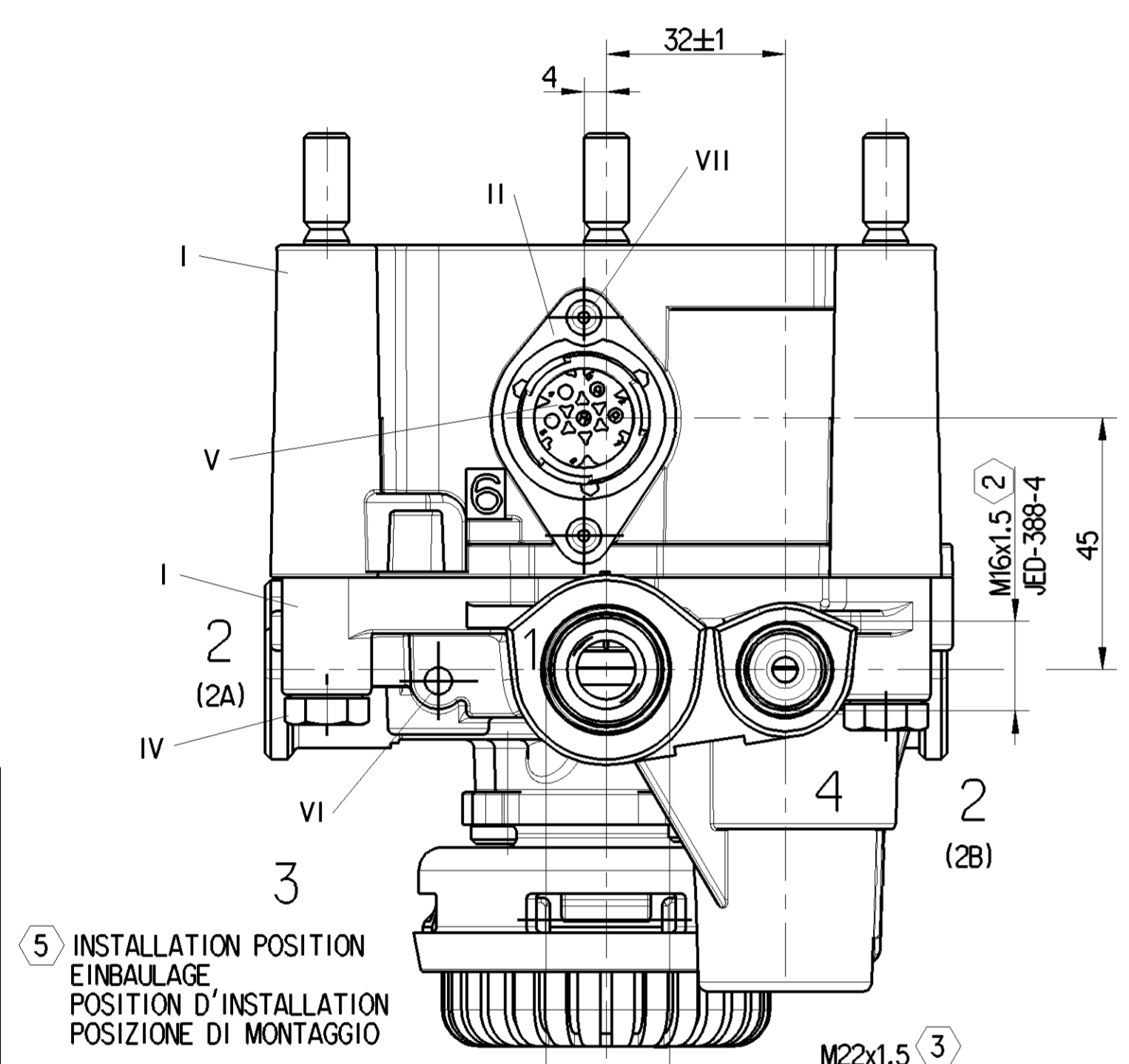
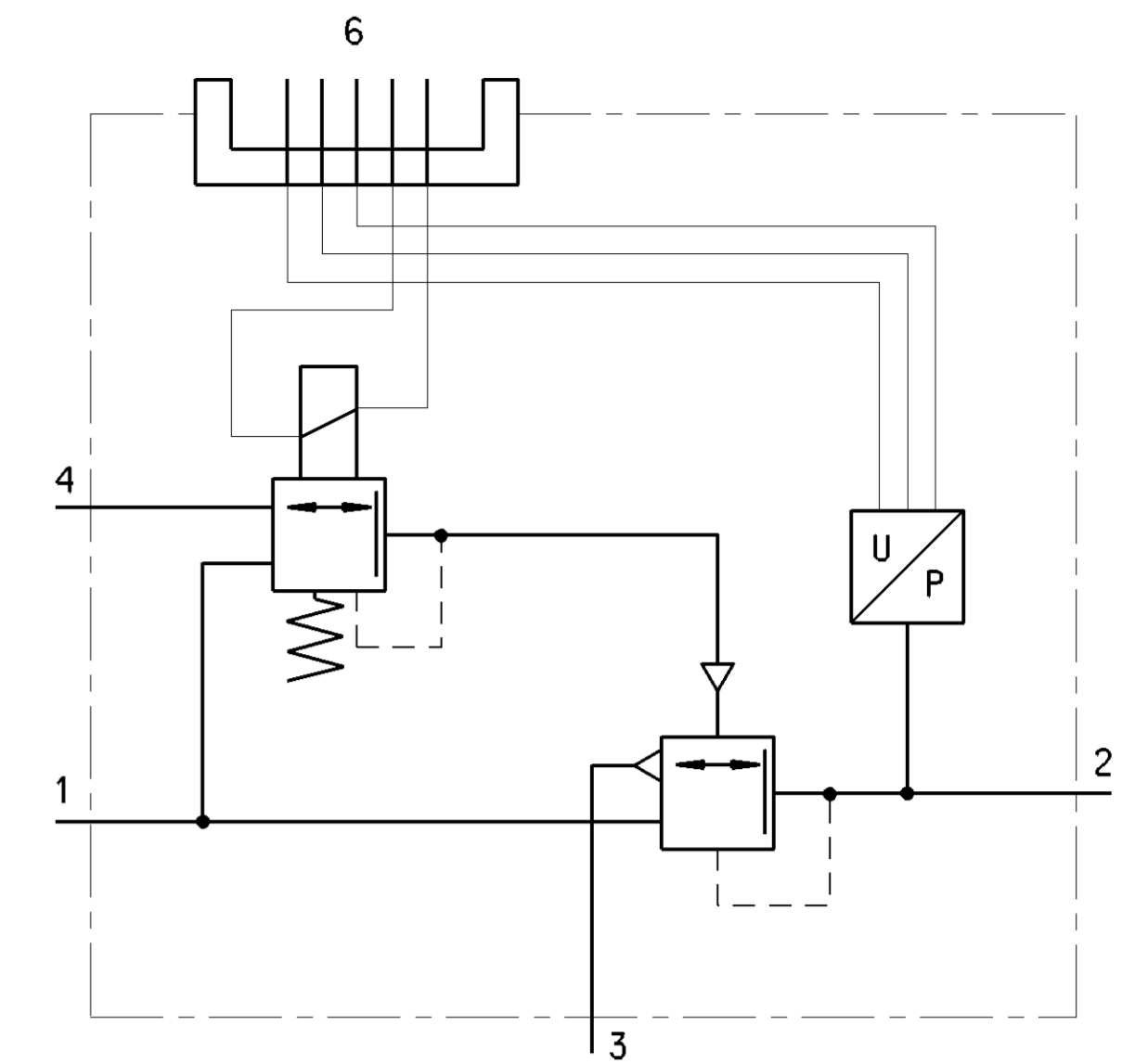


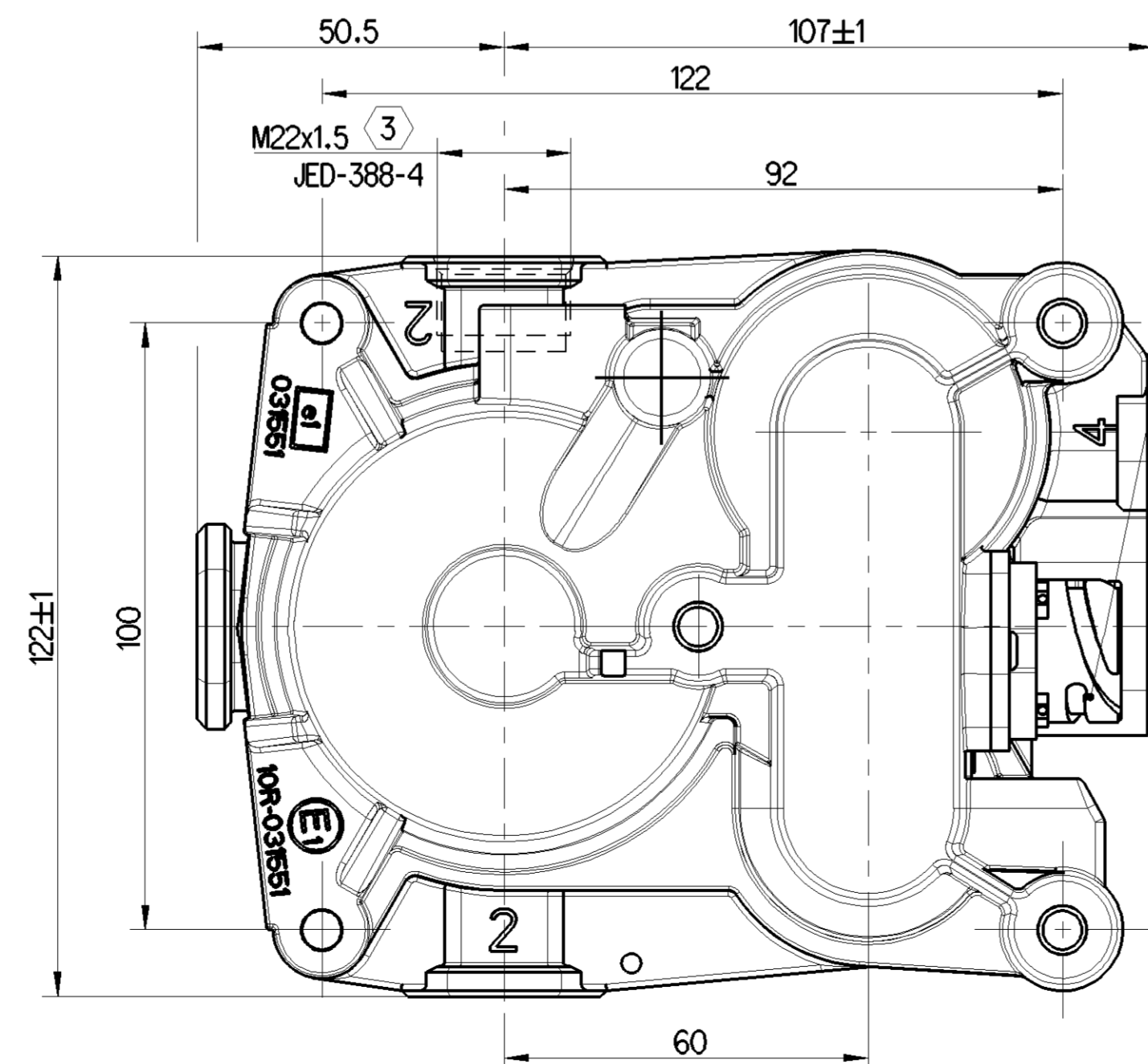
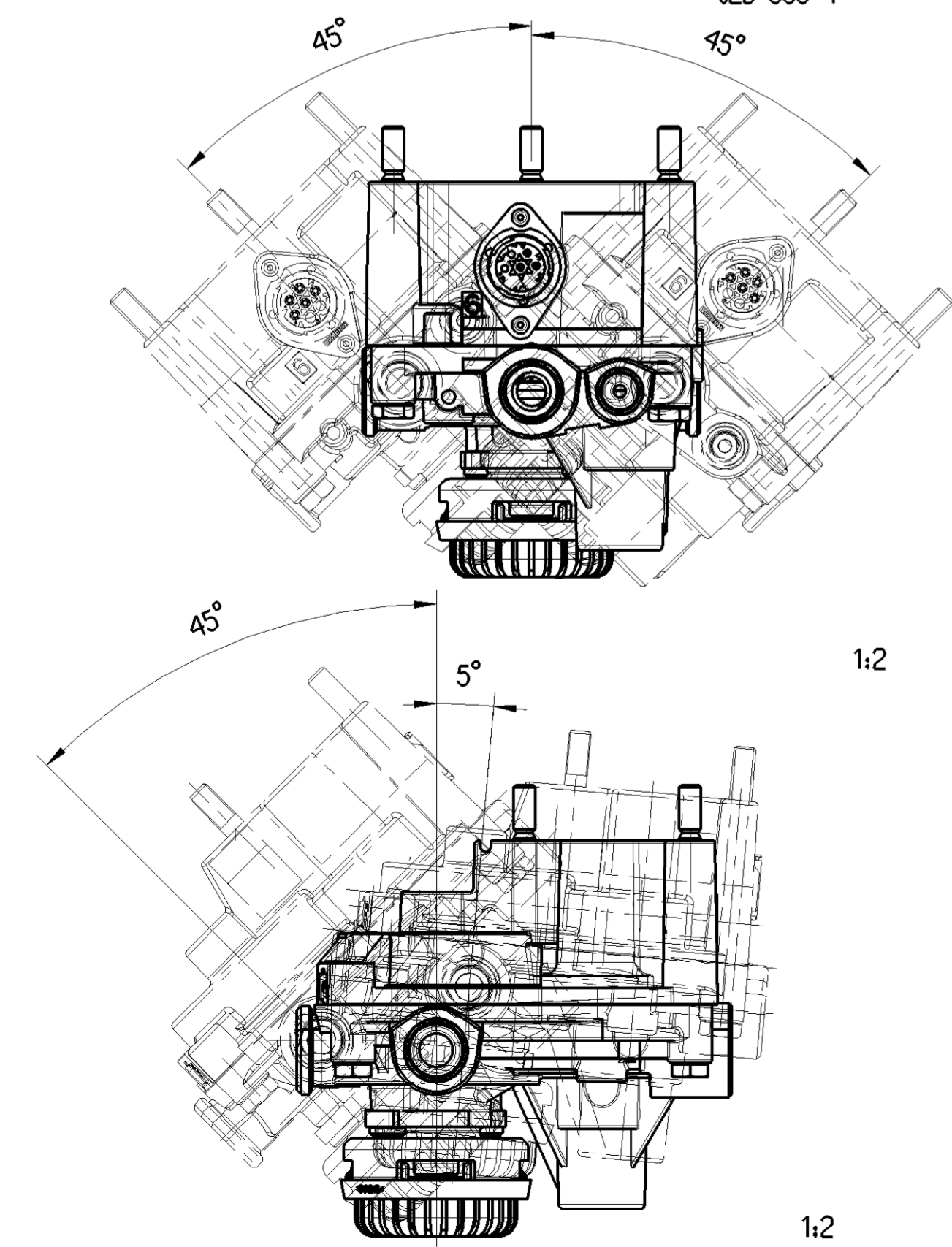
	MATERIAL AND SURFACE PROTECTION MATERIAL UND OBERFLÄCHENSCHUTZ MATERIAU ET PROTECTION SUPERFICIELLE MATERIALE E PROTEZIONE SUPERFICIALE	PORT ANSCHLUSS ORIFICE ORIFIZIO	FUNCTION FUNKTION FONCTION FUNZIONE
I	Al JED-029M1 / JED-259-3	6	
II	PA6.6 JED-359-1		PRESSURE SENSOR, DRUCKSENSOR
III	PA6.6 JED-354-1		CAPTEUR DE PRESSION, SENSORE DI PRESSIONE
IV	Fe JED-051M4 / JED-256.1	6.1	Ue +
V	Cu Ni Si / Gal Sn1 JED-570-516	6.2	GROUND, MASSE, MASSE, MASSA
VI	Fe JED-024M0	6.3	SIGNAL, SIGNAL, SIGNAL, SEGNALE
VII	Al Mg2 Mn0.3		
VIII	Al JED-077-1 / JED-007-1		SOLENOID, MAGNET, AIMANT, SOLENOIDE
IX		6.4	HIGH, HIGH, HIGH, ALTO
X		6.5	LOW, LOW, LOW, BASSO



5 INSTALLATION POSITION
EINBAULAGE
POSITION D'INSTALLATION
POSIZIONE DI MONTAGGIO

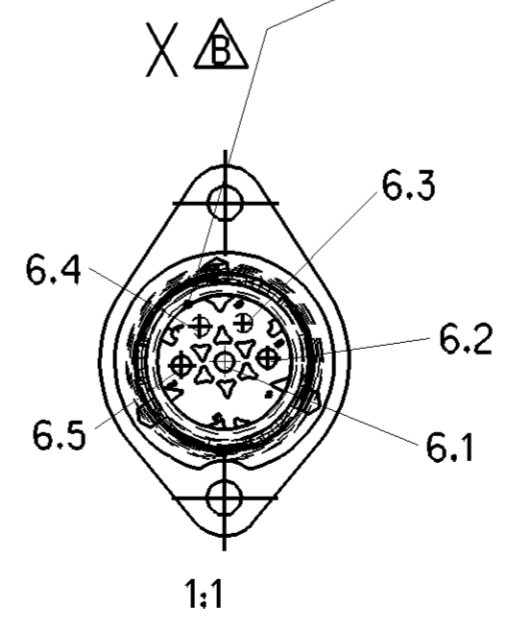
- 4 CONNECTION CLOSED
ANSCHLUSS GESCHLOSSEN
CONNEXION FERME
CONNESSIONE CHIUSO
 - 1 SUPPLY
ENERGIEZUFUSS VOM VORRAT
ALIMENTATION
ALIMENTAZIONE
 - 2 DELIVERY
ENERGIEABFLUSS IN DIE ARBEITSLEITUNG
UTILISATION
MANDATA
 - 3 EXHAUST
ANSCHLUSS ATMOSPHAERE
ECHAPPEMENT
SCARICO
 - 4 BACK UP PORT
REDUNZANSCHLUSS
ORIFICE DE REDONDANCE
ATTACCO DI RIDONDANZA
 - 6 ELECTRICAL CONTROL
ELEKTRISCHER STEUERANSCHLUSS
COMMANDE ELECTRIQUE
COMANDO ELETTRICO
- INSPECTION MARK
PRUEFZEICHEN : (E1) 10 R - 031551
MARQUE DE CONTRÔLE :
STAMPA DI COLLAUDO :

- DATA MATRIX CODING
- DATE OF MANUFACTURE (WW/YY)
- PROVIA IDENTIFICATION NUMBER



OVERALL DIMENSIONS
AUSSENABMESSUNGEN DIN 72585
DIMENSIONS HORS TOUT
MISURE ESTERNE

INSIDE DIMENSIONS
INNENABMESSUNGEN NACH
DIMENSIONS INTERIEUR
MISURE INTERNO



	2	3
FOR THREAD PERMISSIBLE FUER GEWINDE ZULAESSIG POUR FILETAGE ADMISE PER FILETTATURA AMMESSA	M16	M22
TORQUE ACCORDING TO JED-366 ANZUGSMOMENT ENTSPRECHEND JED-366 COUPLE DE SERRAGE SUIVANT JED-366 COPPIA DI SERRAGGIO SECONDO JED-366	MAX. 34 Nm	MAX. 53 Nm

MAX. TORQUE
MAX. ANZUGSMOMENT
COUPLE MAXI DE SERRAGE
COPPIA MASSIMA DI SERRAGGIO

26 Nm

General Specification: ISO 8015, JED-334-1, Size ISO 14405 LP

Further Technical Data: Product Specification

Doc. Code: 035 Sheet: 1 To 23

General Tolerances JED-261

Class	1)	≤ 50	> 50	> 180	> 400
Fine	X	±0.5	±1	±1.5	±2
Medium	X	±1	±2	±3	±4
Coarse		±2	±3.5	±5	±6.5

1) Tolerance Class Applied Crossmarked

Copyright ZF*

Date: 2023-10-19

Signature: Murugan

Checklist: Powlowski

Dimensions in mm

Mass	Scale	Material No.	Date of first issue
2.2 kg	1:1	PRO 643 103 0	2022-02-02

PROPORTIONAL-RELAY VALVE

Doc. Code: 035 Language: ML Sheet: 1/2

Revision: 1x Tech. Resp.: B 5220_AM

DEVICE IS DESIGNED FOR USE IN ZF SYSTEMS AND OTHER DEDICATED RELEASED APPLICATIONS.
6 POWER SUPPLY AND CONTROL ARE ALWAYS PROVIDED BY ZF CENTRAL MODULE.
STANDALONE USAGE NOT ALLOWED.

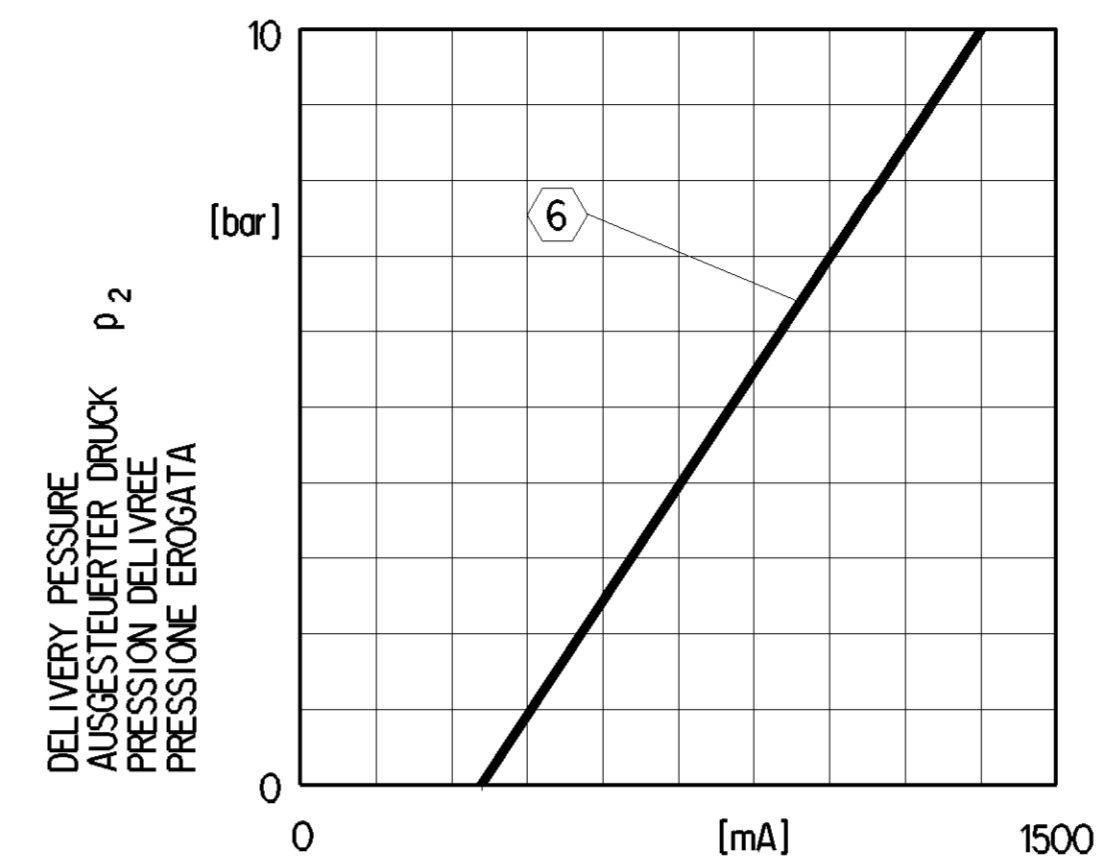
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THE VALVE CORRESPONDS TO THE REGULATIONS FOR ELECTROMAGNETIC DEVICES ACCORDING TO VDE 0580
 GERAET ENTSPRICHT DEN BESTIMMUNGEN FUER ELEKTROMAGNETISCHE GERAETE NACH VDE 0580
 LA VALVE CORRESPOND AUX CONDITIONS POUR DES APPAREILS ELECTROMAGNETIQUES SUIVANT VDE 0580
 LA VALVOLA CORRISPONDE ALLE CONDIZIONI PER APPARECCHI ELETTROMAGNETICI SECONDO VDE 0580

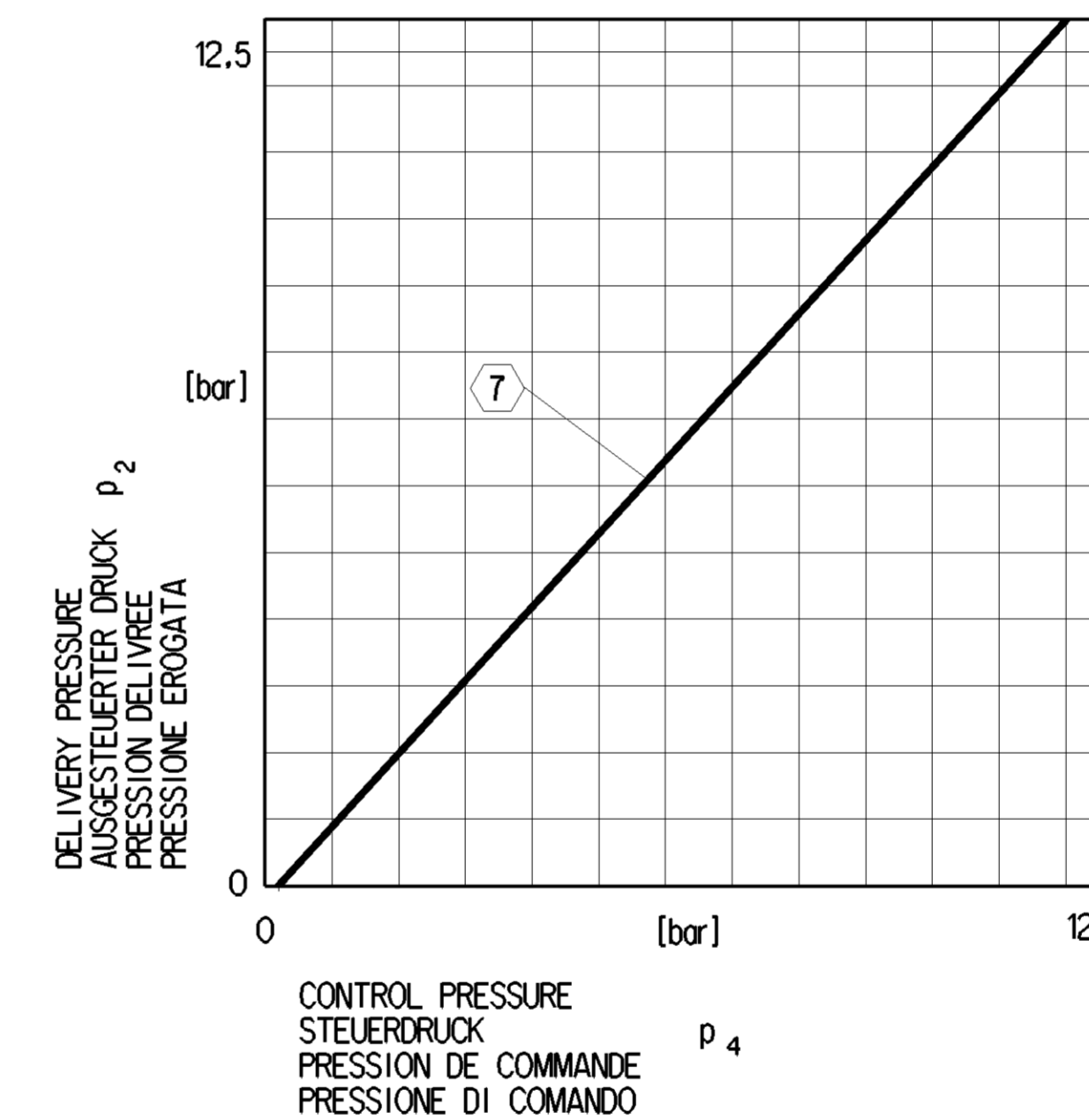
- 1.1 WORKING MEDIUM : AIR (CONTAINING WATER, OIL AND ALCOHOL)
 ARBEITSMEDIUM : LUFT (WASSER-, OEL- UND ALKOHOLHALTIG)
 FLUIDE D'UTILISATION: AIR (CHARGE D'EAU, D'HUILE ET D'ALCOOL)
 FLUIDO DI ESERCIZIO : ARIA (CONTENENTE ACQUA, OLIO ED ALCOOL)
- 1.2 AMBIENT ENVIRONMENT: AIR (CONTAINING WATER, SALT, DUST AND OIL)
 UMGEBUNGSMEDIUM : LUFT (WASSER-, SALZ-, STAUB- UND OELHALTIG)
 FLUIDE AMBIENT : AIR (CHARGE D'EAU, DE SEL, DE POUSSIERE ET D'HUILE)
 FLUIDO AMBIENTE : ARIA (CONTENENTE ACQUA, SALE, POLVERO ED OLIO)
- 2.1 THERMAL RANGE OF APPLICATION UNDER NORMAL AMBIANT CONDITIONS :
 THERMISCHER ANWENDUNGSBEREICH UNTER NORMALEN UMGEBUNGSBEDINGUNGEN: -40°...+80°C
 PLAGE DE TEMPERATURE EN UTILISATION CONTINUE DE :
 CAMPO D'APPLICAZIONE TERMICA NELLE NORMALI CONDIZIONE AMBIENTALI :
- 2.2 SHORT TERM RESISTANCE TO HEAT : WITHOUT FUNCTION
 KURZZEITIGE WAERMEBESTAENDIGKEIT : +110°C OHNE FUNKTION
 RESISTANCE THERMIQUE TEMPORAIRE : (p₁ = 0 bar, max. 1h) SANS FONCTION
 RESISTANZA TERMICA PER BREVE PERIODO: SENZA FUNZIONE
- 3.1 WORKING PRESSURE (SUPPLY) :
 BETRIEBSDRUCK (VORRAT) : p₁ = 5...12,5 bar
 PRESSION D'UTILISATION (ALIMENTATION) :
 PRESSIONE DI ESERCIZIO (ALIMENTAZIONE) :
- 3.2 MAX. PERMISSIBLE WORKING PRESSURE (WITHOUT FUNCTION) (SUPPLY) :
 MAX. ZULAESSIGER BETRIEBSDRUCK (OHNE FUNKTION) (VORRAT) : p₁ = 13 bar
 PRESSION D'UTILISATION MAXI ADMISSIBLE (SANS FONCTION) (ALIMENTATION) :
 PRESSIONE DI ESERCIZIO MAX. AMMISSIBILE (SENZA FUNZIONE) (ALIMENTAZIONE) :
- 3.3 OUTPUT PRESSURE :
 AUSGANGSDRUCK : p₂ = 10 bar / ED = 100%
 PRESSION DE SORTIE :
 PRESSIONE D'USCITA :
- 4 MIN. FLOW PASSAGE / NOMINAL DIAMETER : PORT 1 - 2 :
 MIN. DURCHFLUSSEFFNUNG / NENNWEITE : ANSCHLUSS 1 - 2 : 78.5 mm² / NW 10
 MIN. ORIFICE CALIBRE / DIAMETRE NOMINAL : ORIFICE 1 - 2 :
 MIN. PASSAGIO LIBERO / DIAMETRO NOMINALE: ORIFIZIO 1 - 2 :
 PORT 2 - 3 :
 ANSCHLUSS 2 - 3 : 78.5 mm² / NW 10
 ORIFICE 2 - 3 :
 ORIFIZIO 2 - 3 :

- 5 VOLTAGE :
 SPANNUNG : 24 +8/-6.5 V
 TENSION :
 TENSIONE :
- 5.1 MAX. CONTINUOUS VOLTAGE BETWEEN PORTS 6,4 AND 6,5 : 8 V
 MAX. DAUERSPANNUNG ZWISCHEN ANSCHLUSS 6,4 UND 6,5 : 8 V
 TENSION PERMANENTE MAX. ENTRE ORIFICE 6,4 ET 6,5 : 8 V
 TENSIONE PERMANENTE MAX. FRA ORIFICIO 6,4 E 6,5 : 8 V
- 6 MAX. CURRENT (SOLENOID) : DIRECT CURRENT
 MAX. STROM (MAGNET) : I_{max} = 1.4 A GLEICHSTROM
 COURANT MAX. (AIMANT) : COURANT CONTINU
 CORRENTE MAX. (SOLENOIDE) : CORRENTE CONTINUA
- 7 DEGREE OF PROTECTION : COMPLETE DEVICE WITH MOUNTED COUPLING :
 SCHUTZART : KOMPLETTES GERAET MIT MONTIERTER KUPPLUNG : IP 6K 6K, IP 6K 9K
 DEGRE DE PROTECTION : APPAREIL COMPLET AVEC L' ACCOUPLEMENT MONTE :
 GRADO DI PROTEZIONE : APPARECCHIO COMPLETO CON ACCOPPIAMENTO MONTATO :
 ELECTRICTERMINALS WITH MOUNTED COUPLING :
 ELEKTRISCHE ANSCHLUESSE MIT MONTIERTER KUPPLUNG : IP 6K 7
 BORNES ELECTRIQUES AVEC L' ACCOUPLEMENT MONTE :
 TERMINALI ELETTRICI CON ACCOPPIAMENTO MONTATO :
- 8 PROTECTION CLASS :
 SCHUTZKLASSE : IIII
 CLASSE DE PROTECTION:
 CLASSE DI PROTEZIONE:

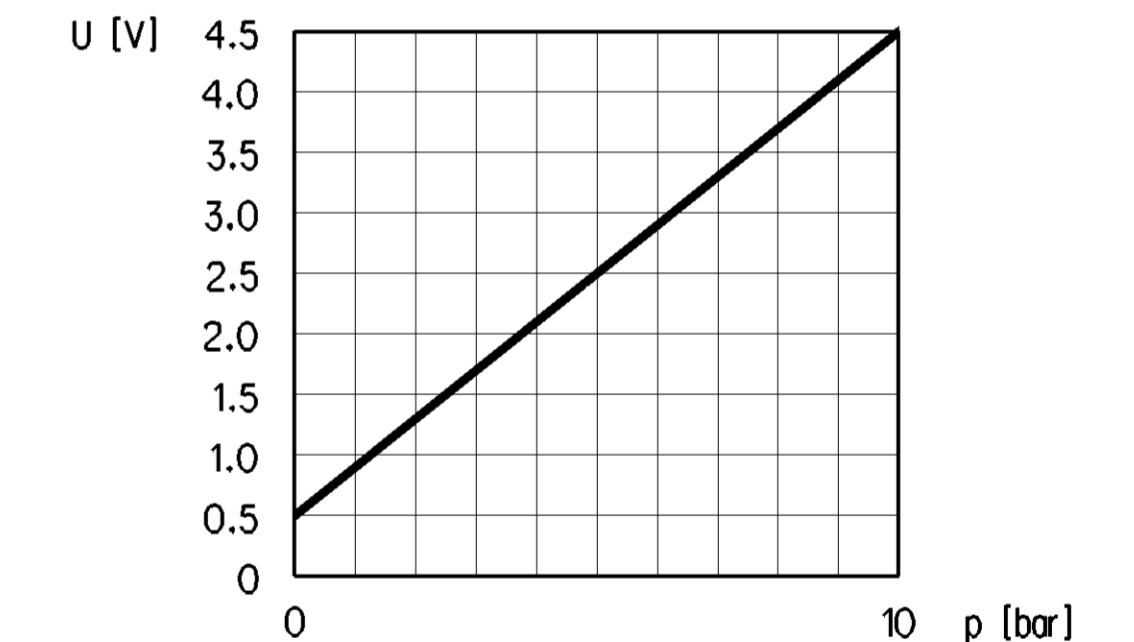
FURTHER TECHNICAL DATA SEE PRODUCT SPECIFICATION.
 WEITERE TECHNISCHE DATEN SIEHE PRODUKT SPEZIFIKATION.
 POUR INFORMATIONS COMPLEMENTAIRES VOIR LES SPECIFICATIONS DU PRODUIT.
 PER INFORMAZIONI ULTERIORI VEDI LA SPECIFICAZIONE DEL PRODOTTO.



- 6 CHARACTERISTIC CURVE : FAILURE OF BACK UP PORT 4
 KENNLINIE : AUSFALL DES REDUNDANZANSCHLUSSES 4
 COURBE CARACTERISTIQUE : DEFAILLANCE DU ORIFICE DE REDONDANCE 4
 CURVA CARATTERISTICA : DIFETTO DELL' ATTACCO DI RIDONDANZA 4
- 7 CHARACTERISTIC CURVE : FAILURE OF ELECTRICAL CONTROL 6
 KENNLINIE : AUSFALL DES STEUERANSCHLUSSES 6
 COURBE CARACTERISTIQUE : DEFAILLANCE DU COMMANDE ELECTRIQUE 6
 CURVA CARATTERISTICA : DIFETTO DEL COMANDO ELETTRICO 6



CHARACTERISTIC CURVE PRESSURE SENSOR
 KENNLINIE DRUCKSENSOR
 COURBE CARACTERISTIQUE CAPTEUR DE PRESSION
 CURVA CARATTERISTICA SENSORE DI PRESSIONE



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General Specifications: ISO 8015, JED-334-1, Size ISO 14405 LP		Copyright z*	
Further Technical Data: Product Specification		Date	Signature
Doc. Code: 035	Sheet: 1 To 23	2023-10-19	Murugan
General Tolerances JED-261		Checked: Pawlowski	
Range of Nominal Dimensions (± mm)			
Class	1)	< 50	> 50 < 180
		±0.5	±1
		±1	±1.5
		±2	±3
		±3	±4
		±5	±6.5
		±8	±10
		±12	±15
		±18	±25
		±25	±30
		±30	±40
		±40	±50
		±50	±60
		±60	±70
		±70	±80
		±80	±90
		±90	±100
		±100	±120
		±120	±150
		±150	±200
		±200	±250
		±250	±300
		±300	±400
		±400	±500
		±500	±600
		±600	±800
		±800	±1000
		±1000	±1200
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		±60000	±80000
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