Compatibility for EMC, climate and mechanical load

for drivers, axis cards, transducers and sensors

Electronic drivers, axis cards and transducers are the most critical valve components concerning the risk of electromagnetic interferences, water entrance and mechanical stress. As per applicable International Standards, the following tables summarize the environmental resistance features of Atos industrial electronic devices:

- on-board and off-board drivers
- on-board and off-board axis cards
- LVDT and pressure transducers
- inductive position switch and inductive proximity sensors

1 EMC ELECTROMAGNETIC COMPATIBILITY according to Directive 2014/30/UE

The EMC Directive identifies the ability of a device, equipment or system to function in an electromagnetic environment in a satisfactory manner (immunity), without produce intolerable electromagnetic interferences into any equipment in same environment (emission).

	**CEI EN 61000-6-2**	Immunity for industrial environments
	**CEI EN 61000-6-3**	Emission standard for residential, commercial and light-industrial environments
	**CEI EN 61000-6-4**	Emission standard for industrial environments

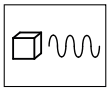
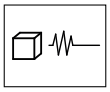
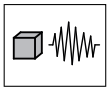
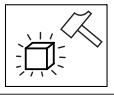
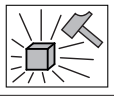
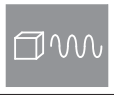
2 IP INGRESS PROTECTION CLASSIFICATION according to CEI EN 60529

IP (Ingress Protection) coding system indicates the degree of protection provided by an enclosure against access to hazardous parts, against ingress of solid foreign objects, ingress of water and to give additional information in connection with such protection. The minimum ensured IP protection reported for each component is intended with relevant connectors correctly installed.

Ingress Protection	Protection against solid objects	Protection against liquids penetration
IP20	**2** = protected against solid bodies of superior dimensions to 12 mm; protect against the access with a finger	**0** = not protect
IP65	**6** = totally protect against the powder; protect against the access with a wire	**5** = protect against water jets
IP66		**6** = protect against powerful water jets
IP67		**7** = protect against the effects of temporary immersion

3 MECHANICAL RESISTANCE TEST CONDITIONS according to CEI EN 60068-2-6 (Vibrations, Sine & Random) - CEI EN 60068-2-27 (Shock)

The Mechanical Resistance test determines the ability of components, equipment and other articles to withstand specified severities of sinusoidal/random vibration and shock.

	**Sine test**	10 cycles 5-2000-5 Hz with logarithmic frequency variation 1 Octave/min 5-57 Hz amplitude 1.5 mm (p-p) 57-2000 Hz acceleration 10 g Tested on three axes X, Y, Z
	**Random test**	20-2000 Hz Spectral acceleration density 0.05 g^2/ Hz Testing time 30 min. each axis Tested on three axes X, Y, Z
	**Random test**	20-2000 Hz Spectral acceleration density 0.05 g^2/ Hz Testing time 24 hours each axis Tested on three axes X, Y, Z
	**Shock test**	Half sine wave shock 50 g / 11 ms Three tests for each axis, in positive and negative direction, for a total of 18 individual shocks Tested on three axes X, Y, Z
	**Shock test**	Half sine wave shock 100 g / 6 ms Three tests for each axis, in positive and negative direction, for a total of 3000 individual shocks Tested on three axes X, Y, Z
	**Sine test** (old procedure)	0 ÷ 63 Hz; 0,7 ÷ 6 g
	**Shock test** (old procedure)	Shock 50 g; impact time 11 ms

Ingress Protection:

IP66 / IP67

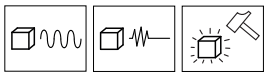
EMC:

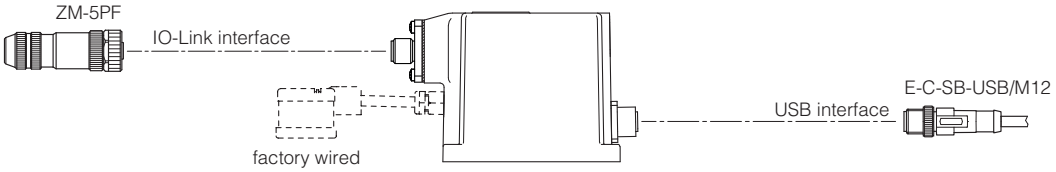
Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:





Notes:
- above data refer to the electronics only and may differ from those indicated in the technical table of the valve, which shows complete product data
- the use of metallic connectors is strongly recommended in order to fulfill EMC requirements

Directional valves:

DHZO-AE* technical table FS160
DKZOR-AE* technical table FS160
DPZO-AE* technical table FS170

DHZO-AE*-60 technical table TFS050

Pressure valves:

RZMO-AE*-010 technical table FS007
RZMO-AE*-030 technical table FS065
AGMZO-AE* technical table FS035
RZGO-AE*-010 technical table FS015
RZGO-AE*-033 technical table FS070
AGRCZO-AE* technical table FS050
LICZO-AE* technical table FS300
LIMZO-AE* technical table FS300
LIRZO-AE* technical table FS300
DHRZO-AE* technical table FS025

RZMO-AE*-010 500 bar technical table TFS035

Flow valves:

QVHZO-AE* technical table FS410
QVKZOR-AE* technical table FS410

Ingress Protection:

IP66 / IP67

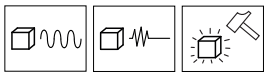
EMC:

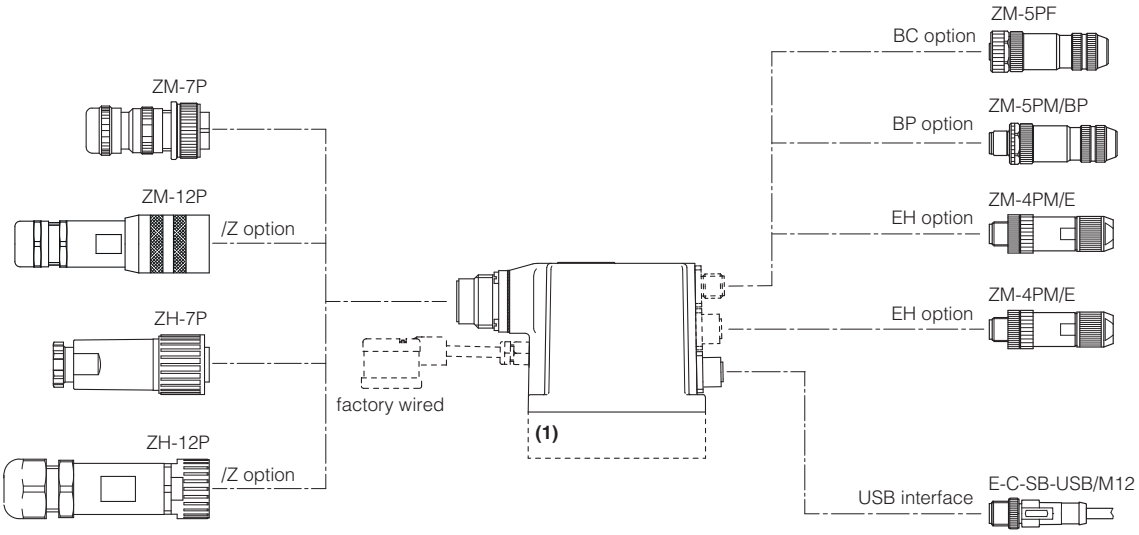
Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:





Notes:
- above data refer to the electronics only and may differ from those indicated in the technical table of the valve, which shows complete product data
- the use of metallic connectors is strongly recommended in order to fulfill EMC requirements
- **(1)** only for EH execution

Directional valves:

DHZO-AE* technical table FS160
DKZOR-AE* technical table FS160
DPZO-AE* technical table FS170

DHZO-AE*-60 technical table TFS050

Pressure valves:

RZMO-AE*-010 technical table FS007
RZMO-AE*-030 technical table FS065
AGMZO-AE* technical table FS035
RZGO-AE*-010 technical table FS015
RZGO-AE*-033 technical table FS070
AGRCZO-AE* technical table FS050
LICZO-AE* technical table FS300
LIMZO-AE* technical table FS300
LIRZO-AE* technical table FS300
DHRZO-AE* technical table FS025

RZMO-AE*-010 500 bar technical table TFS035

Flow valves:

QVHZO-AE* technical table FS410
QVKZOR-AE* technical table FS410

Ingress Protection:

IP66 / IP67

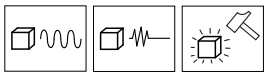
EMC:

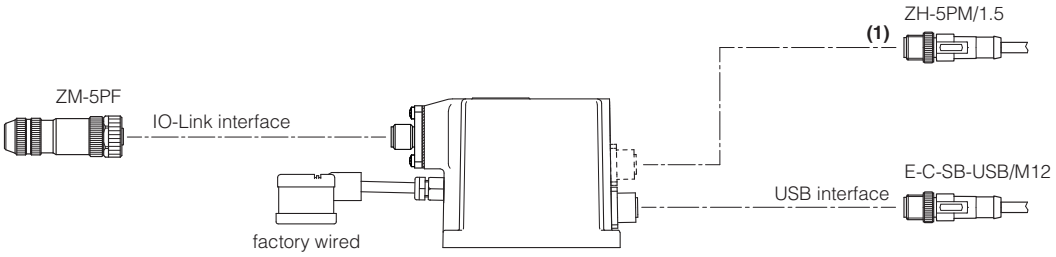
Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:





Notes:
- above data refer to the electronics only and may differ from those indicated in the technical table of the valve, which shows complete product data
- the use of metallic connectors is strongly recommended in order to fulfill EMC requirements
- **(1)** remote pressure transducer connector available only for REB-N and RES-N (see tech. table TFS100)

High performance pressure valves:

RZMO-RE*-010 technical table FS010
RZMO-RE*-030 technical table FS067
AGMZO-RE* technical table FS040
RZGO-RE*-010 technical table FS020
RZGO-RE*-033 technical table FS075
AGRCZO-RE* technical table FS055
LICZO-RE* technical table FS305
LIMZO-RE* technical table FS305
LIRZO-RE* technical table FS305

High performance pressure valves, with remote pressure transducer:

RZMO-RE*-N technical table TFS100
AGMZO-RE*-N technical table TFS100
LIMZO-RE*-N technical table TFS100
LICZO-RE*-N technical table TFS100

Ingress Protection:

IP66 / IP67

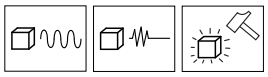
EMC:

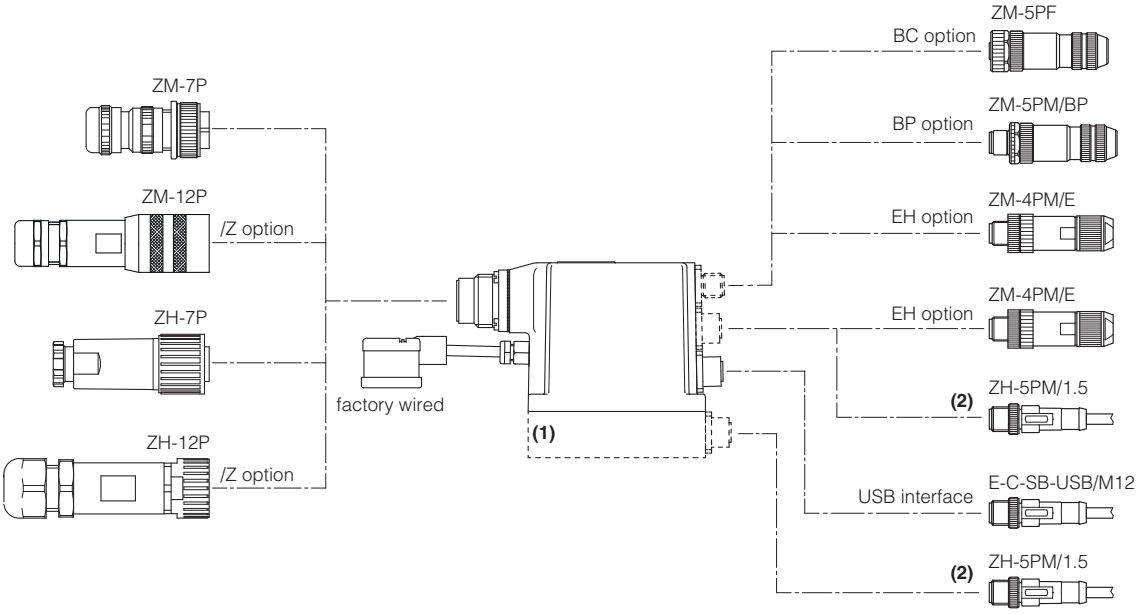
Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:





Notes:
- above data refer to the electronics only and may differ from those indicated in the technical table of the valve, which shows complete product data
- the use of metallic connectors is strongly recommended in order to fulfill EMC requirements
- **(1)** only for EH execution
- **(2)** remote pressure transducer connector available only for REB-N and RES-N (see tech. table TFS100)

High performance pressure valves:

RZMO-RE*-010 technical table FS010
RZMO-RE*-030 technical table FS067
AGMZO-RE* technical table FS040
RZGO-RE*-010 technical table FS020
RZGO-RE*-033 technical table FS075
AGRCZO-RE* technical table FS055
LICZO-RE* technical table FS305
LIMZO-RE* technical table FS305
LIRZO-RE* technical table FS305

High performance pressure valves, with remote pressure transducer:

RZMO-RE*-N technical table TFS100
AGMZO-RE*-N technical table TFS100
LIMZO-RE*-N technical table TFS100
LICZO-RE*-N technical table TFS100

Ingress Protection:

IP66 / IP67

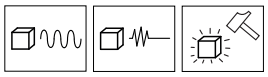
EMC:

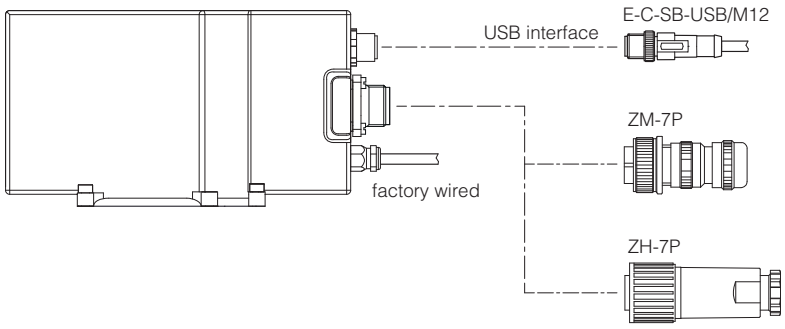
Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:





Notes:
- above data refer to the electronics only and may differ from those indicated in the technical table of the valve, which shows complete product data
- the use of metallic connectors is strongly recommended in order to fulfill EMC requirements

High performance directionals:

DHZE-TID technical table FS155
DKZE-TID technical table FS155
DPZE-TID technical table FS158

Ingress Protection:

IP66 / IP67

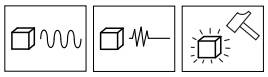
EMC:

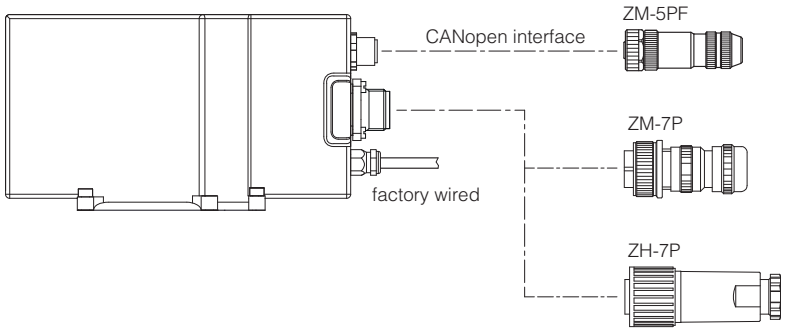
Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:





Notes:
- above data refer to the electronics only and may differ from those indicated in the technical table of the valve, which shows complete product data
- the use of metallic connectors is strongly recommended in order to fulfill EMC requirements

High performance directionals:

DHZE-TID technical table FS155
DKZE-TID technical table FS155
DPZE-TID technical table FS158

Ingress Protection:

IP66 / IP67

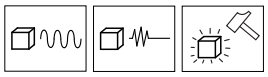
EMC:

Temperature:

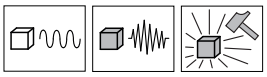
Ambient **-40°C ÷ +60°C**

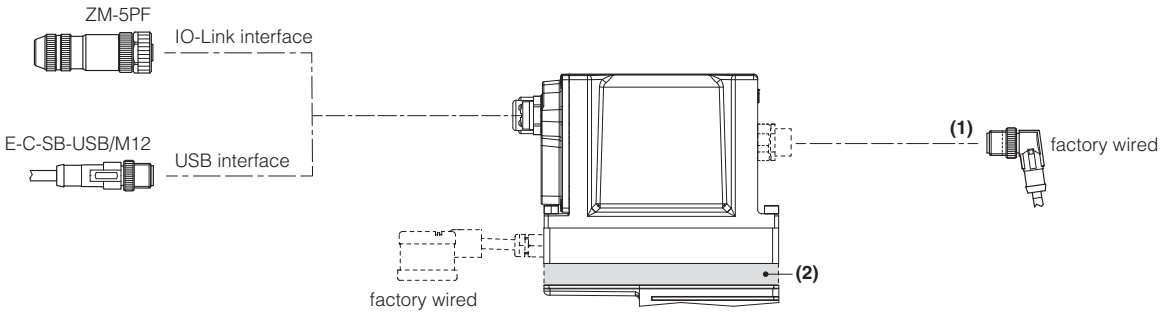
Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Mechanical Resistance with damping plate (/V option):





Notes:
- above data refer to the electronics only and may differ from those indicated in the technical table of the valve, which shows complete product data
- the use of metallic connectors is strongly recommended in order to fulfill EMC requirements
- **(1)** only for piloted valves
- **(2)** damping plate, only for /V option

Servoproportional directionals **(2)**:

DLHZO-TEB technical table FS180
DLKZOR-TEB technical table FS180
DHZO-TEB technical table FS168
DKZOR-TEB technical table FS168
DPZO-LEB technical table FS178
LIQZP-LEB technical table FS340

High performance directionals **(2)**:

DHZO-TEB technical table FS165
DKZOR-TEB technical table FS165
DPZO-TEB technical table FS172
DPZO-LEB technical table FS175
LIQZP-LEB technical table FS330
LIQZH-LEB technical table FS338

LIQZP-TEB technical table TFS325

Flow valves:

QVHZO-TEB technical table FS412
QVKZOR-TEB technical table FS412

(2) LIQZP has replaced LIQZO

Ingress Protection:

IP66 / IP67

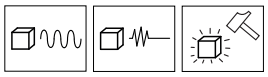
EMC:

Temperature:

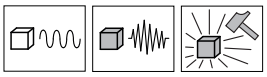
Ambient **-40°C ÷ +60°C**

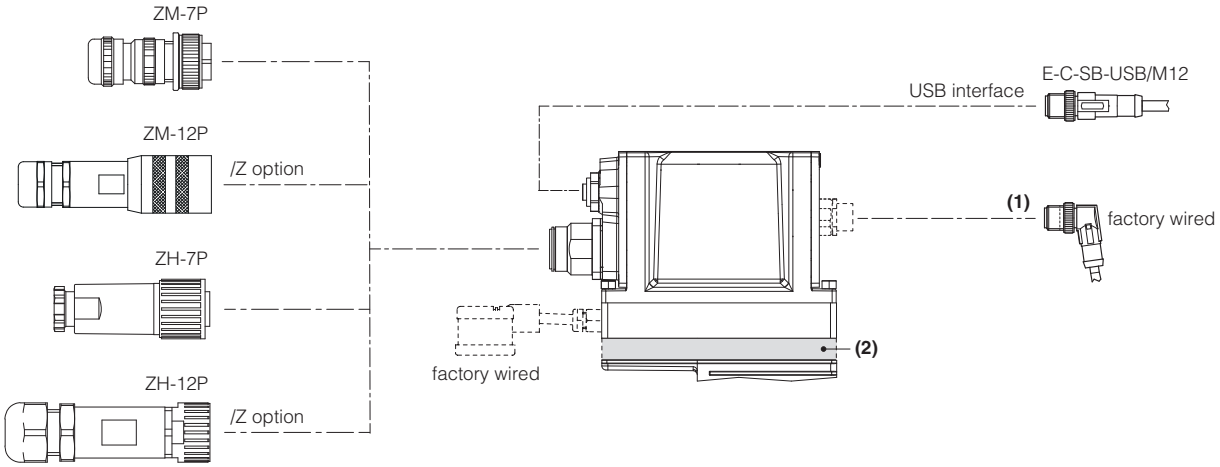
Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Mechanical Resistance with damping plate (/V option):





Notes:
- above data refer to the electronics only and may differ from those indicated in the technical table of the valve, which shows complete product data
- the use of metallic connectors is strongly recommended in order to fulfill EMC requirements
- **(1)** only for piloted valves
- **(2)** damping plate, only for /V option

Servoproportional directionals **(2)**:

DLHZO-TEB technical table FS180
DLKZOR-TEB technical table FS180
DHZO-TEB technical table FS168
DKZOR-TEB technical table FS168
DPZO-LEB technical table FS178
LIQZP-LEB technical table FS340

High performance directionals **(2)**:

DHZO-TEB technical table FS165
DKZOR-TEB technical table FS165
DPZO-TEB technical table FS172
DPZO-LEB technical table FS175
LIQZP-LEB technical table FS330
LIQZH-LEB technical table FS338

LIQZP-TEB technical table TFS325

Flow valves:

QVHZO-TEB technical table FS412
QVKZOR-TEB technical table FS412

(2) LIQZP has replaced LIQZO

Ingress Protection:

IP66 / IP67

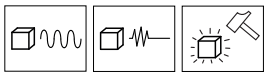
EMC:

Temperature:

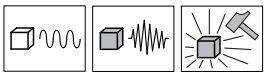
Ambient **-40°C ÷ +60°C**

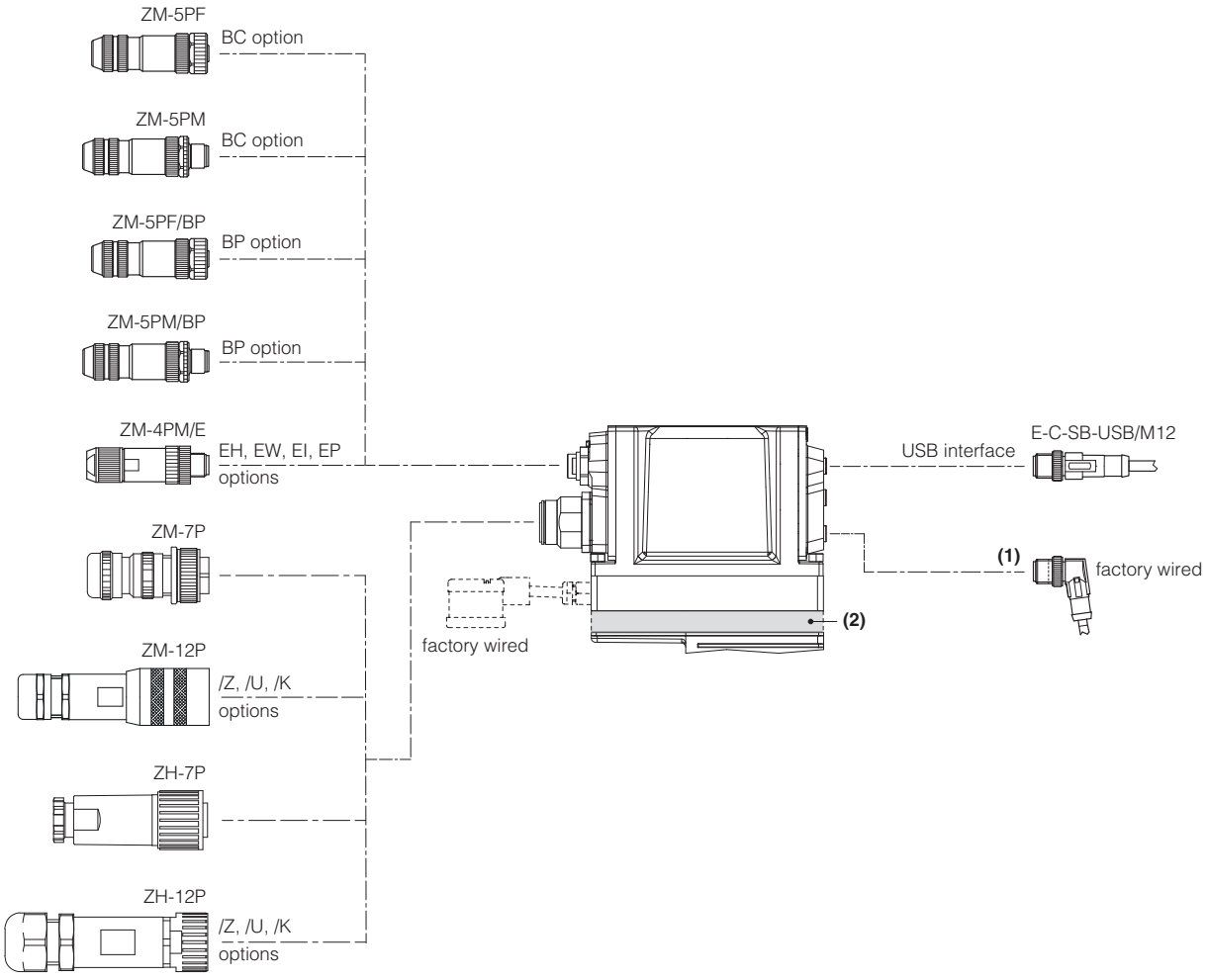
Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Mechanical Resistance with damping plate (/V option):





Notes:
- above data refer to the electronics only and may differ from those indicated in the technical table of the valve, which shows complete product data
- the use of metallic connectors is strongly recommended in order to fulfill EMC requirements
- **(1)** only for piloted valves
- **(2)** damping plate, only for /V option

Servoproportional directionals **(2)**:

DLHZO-TES	technical table FS180
DLKZOR-TES	technical table FS180
DHZO-TES	technical table FS168
DKZOR-TES	technical table FS168
DPZO-LES	technical table FS178
LIQZP-LES	technical table FS340

High performance directionals **(2)**:

DHZO-TES	technical table FS165
DKZOR-TES	technical table FS165
DPZO-TES	technical table FS172
DPZO-LES	technical table FS175
LIQZP-LES	technical table FS330
LIQZH-LES	technical table FS338

Flow valves:

QVHZO-TES	technical table FS412
QVKZOR-TES	technical table FS412

(2) LIQZP has replaced LIQZO

Ingress Protection:

IP66 / IP67

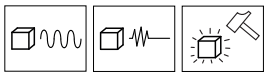
EMC:

Temperature:

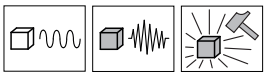
Ambient **-40°C ÷ +60°C**

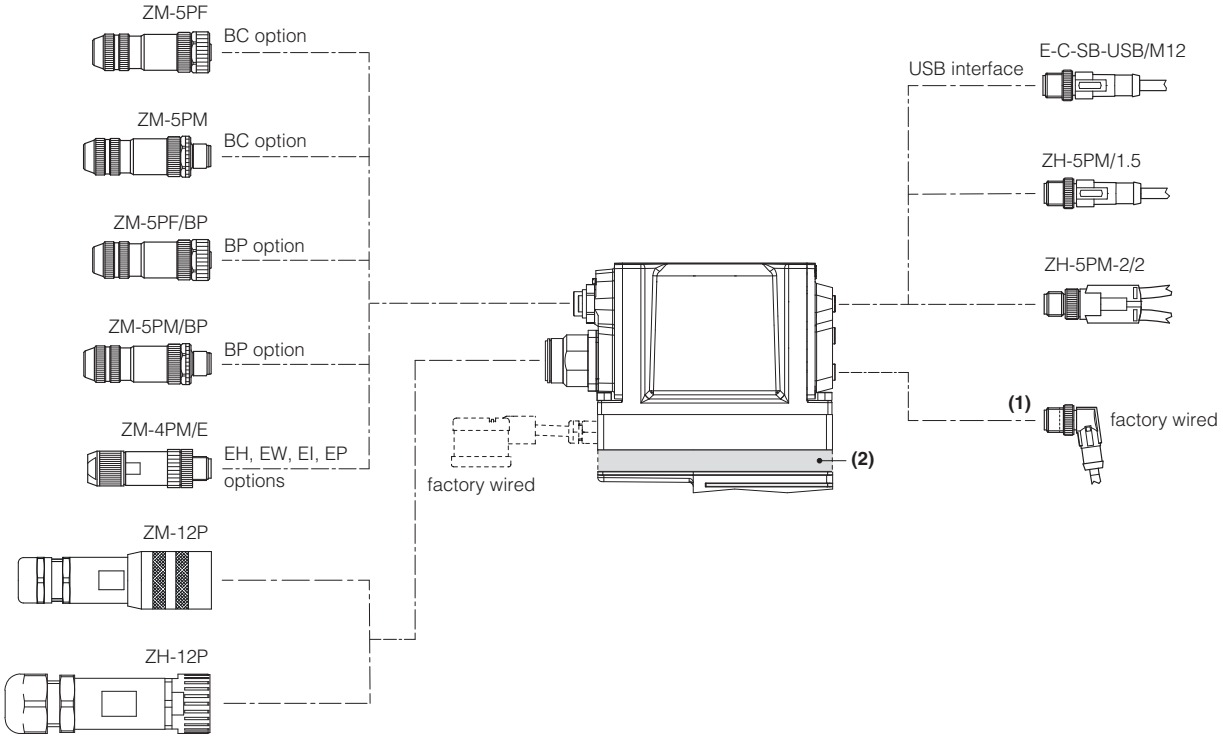
Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Mechanical Resistance with damping plate (/V option):





Notes:
- above data refer to the electronics only and may differ from those indicated in the technical table of the valve, which shows complete product data
- the use of metallic connectors is strongly recommended in order to fulfill EMC requirements
- **(1)** only for piloted valves
- **(2)** damping plate, only for /V option

Servoproportional directionals, with P/Q controls **(2)**:

DLHZO-TES technical table FS180
DLKZOR-TES technical table FS180
DHZO-TES technical table FS168
DKZOR-TES technical table FS168
DPZO-LES technical table FS178
LIQZP-LES technical table FS340

High performance directionals, with P/Q controls:

DHZO-TES technical table FS165
DKZOR-TES technical table FS165
DPZO-LES technical table FS175

(2) LIQZP has replaced LIQZO

Ingress Protection:

IP66 / IP67

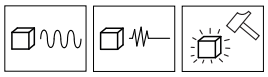
EMC:

Temperature:

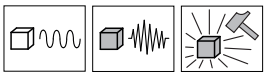
Ambient **-40°C ÷ +60°C**

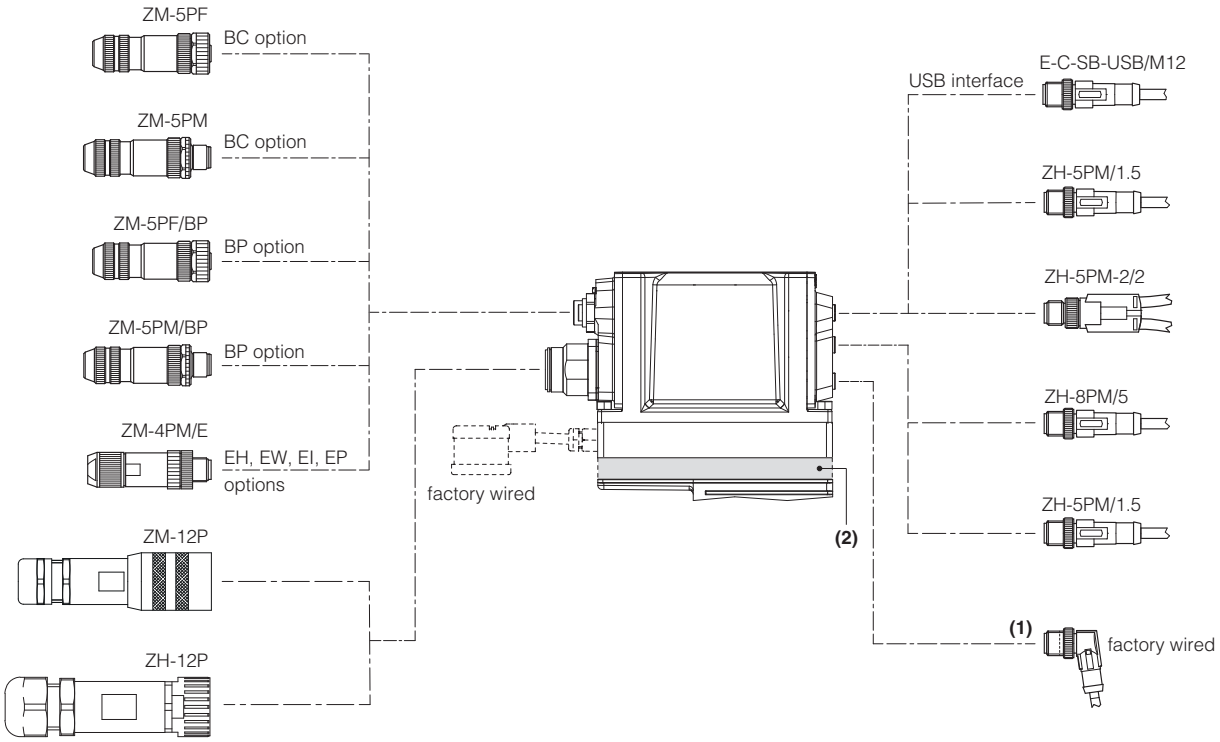
Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Mechanical Resistance with damping plate (/V option):





Notes:
- above data refer to the electronics only and may differ from those indicated in the technical table of the valve, which shows complete product data
- the use of metallic connectors is strongly recommended in order to fulfill EMC requirements
- **(1)** only for piloted valves
- **(2)** damping plate, only for /V option

Axis controls:

DLHZO-TEZ technical table FS610
DLKZOR-TEZ technical table FS610
DHZO-TEZ technical table FS620
DKZOR-TEZ technical table FS620
DPZO-LEZ technical table FS630

Ingress Protection:

IP66 / IP67

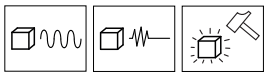
EMC:

Temperature:

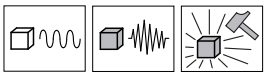
Ambient **-40°C ÷ +60°C**

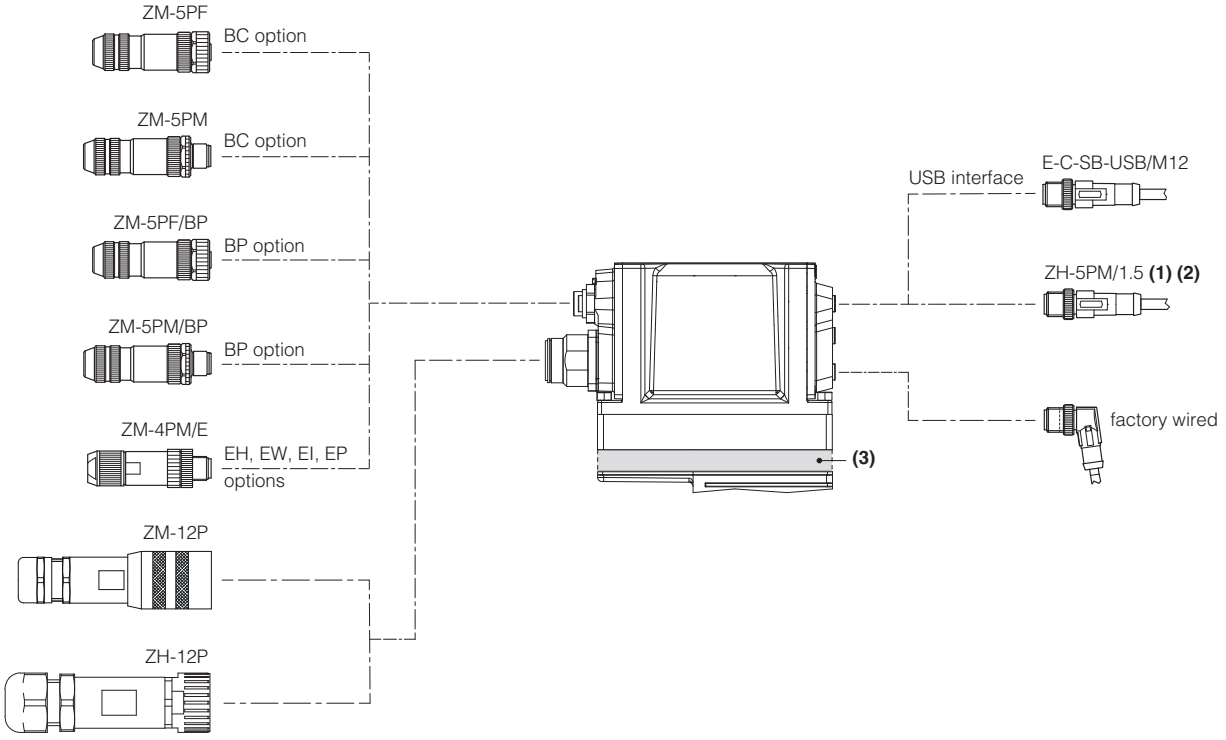
Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Mechanical Resistance with damping plate (/V option):





Notes:
- above data refer to the electronics only and may differ from those indicated in the technical table of the valve, which shows complete product data
- the use of metallic connectors is strongly recommended in order to fulfill EMC requirements
- **(1)** only for /S, /X and /SX options
- **(2)** factory wired for /X and /SX options
- **(3)** damping plate, only for /V option

Variable displacement pumps:

PVPC-PES technical table AS170
PVPC-PERS technical table AS170

16 **E-BM-AS** off-board drivers

Ingress Protection:

IP20

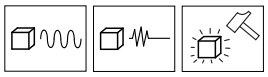
EMC:

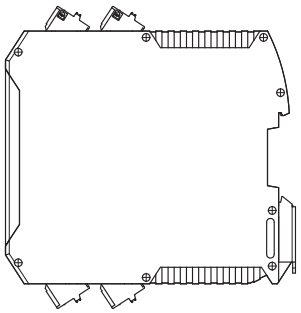
Temperature **(1)**:

Ambient **-20°C ÷ +60°C**

Storage **-25°C ÷ +85°C**

Mechanical Resistance:





(1) Ambient temperature for 05H version used for two single solenoid valves: -20°C ÷ +40°C

Electronics drivers:

E-BM-AS technical table G030

17 **E-BM-AES, E-BM-RES** off-board drivers

Ingress Protection:

IP20

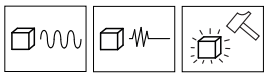
EMC:

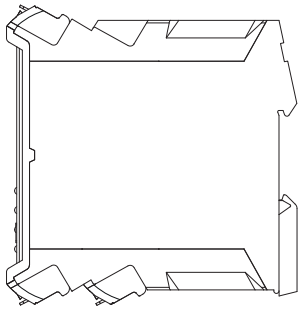
Temperature:

Ambient **-20°C ÷ +60°C**

Storage **-25°C ÷ +85°C**

Mechanical Resistance:





Electronics drivers:

E-BM-AES technical table GS050
E-BM-RES technical table GS203

18 **E-BM-TEB/LEB, E-BM-TES/LES, E-BM-TID/LID** off-board drivers

Ingress Protection:

IP20

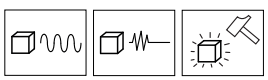
EMC:

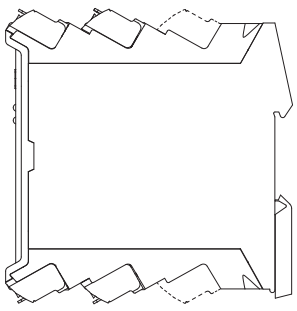
Temperature **(1)**:

Ambient **-20°C ÷ +60°C**

Storage **-25°C ÷ +85°C**

Mechanical Resistance:





(1) Ambient temperature for TES/LES: -20°C ÷ +50°C

Electronics drivers:

E-BM-TEB/LEB technical table GS230
E-BM-TES/LES technical table GS240
E-BM-TID/LID technical table GS235 - phase-out

19 **Z-BM-TEZ/LEZ, Z-BM-KZ** off-board axis cards

Ingress Protection:

IP20

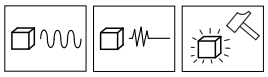
EMC:

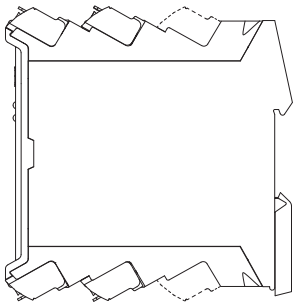
Temperature:

Ambient **-20°C ÷ +50°C**

Storage **-25°C ÷ +85°C**

Mechanical Resistance:





Electronics axis controls:

Z-BM-TEZ/LEZ technical table GS330
Z-BM-KZ technical table GS340

20 **E-MI-AC** plug-in drivers

Ingress Protection:

IP65

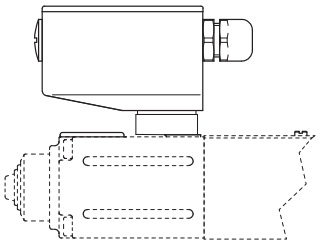
EMC:

Temperature:

Ambient **0°C ÷ +50°C**

Storage **-20°C ÷ +70°C**

Mechanical Resistance:



Electronics drivers:

E-MI-AC technical table G010

21 **E-MI-AS-IR** plug-in drivers

Ingress Protection:

IP65

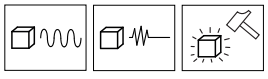
EMC:

Temperature:

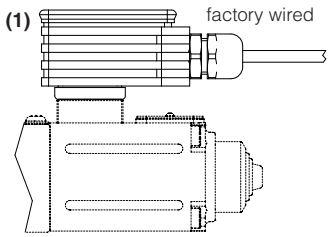
Ambient **-20°C ÷ +50°C**

Storage **-25°C ÷ +85°C**

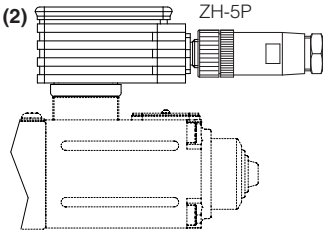
Mechanical Resistance:



(1) factory wired



(2) ZH-5P



Electronics drivers:

E-MI-AS-IR technical table G020

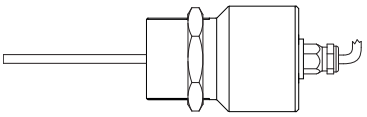
(1) Standard version - with 5 m cable
(2) /M12 option - with 5 poles M12 connector

22 **E-THTZE-4** LVDT transducers

Ingress Protection:

IP66 / IP67

EMC:

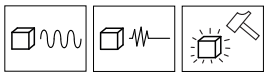


Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

High performance directionals:

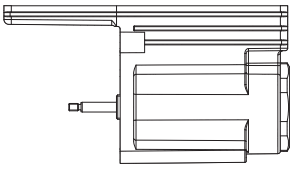
DHZE-TID technical table FS155
DKZE-TID technical table FS155

23 **E-THT-4** LVDT transducers

Ingress Protection:

IP66 / IP67

EMC:

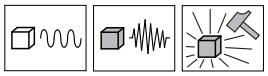


Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Servoproportional directionals **(1) (2)**:

DLHZO-TE* technical table FS180
DLKZOR-TE* technical table FS180
DHZO-TE* technical table FS168
DKZOR-TE* technical table FS168
DPZO-LE* technical table FS178
LIQZP-LE* technical table FS340

High performance directionals **(1) (2)**:

DHZO-TE* technical table FS165
DKZOR-TE* technical table FS165
DPZO-LE* technical table FS175
LIQZP-LE* technical table FS330
LIQZH-LE* technical table FS338

Axis controls **(1)**:

DLHZO-TEZ technical table FS610
DLKZOR-TEZ technical table FS610
DHZO-TEZ technical table FS620
DKZOR-TEZ technical table FS620
DPZO-LEZ technical table FS630

Flow valves:

QVHZO-TE* technical table FS412
QVKZOR-TE* technical table FS412

Variable displacement pumps:

PVPC-PES technical table AS170
PVPC-PERS technical table AS170

(1) For DPZO and LIQZP the E-THT-4 transducer is used for pilot stage **(2)** LIQZP has replaced LIQZO

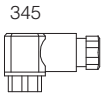
24 **4-ETH** LVDT transducers

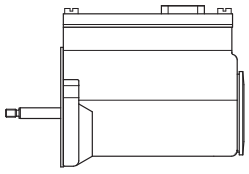
Ingress Protection:

IP65

EMC:

345



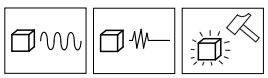


Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Servoproportional directionals **(1) (2):**

DLHZO-T technical table F180
DLKZOR-T technical table F180
DHZO-T technical table F168
DKZOR-T technical table F168
DPZO-L technical table F178
LIQZP-L technical table F340

High performance directionals **(1) (2):**

DHZO-T technical table F165
DKZOR-T technical table F165
DPZO-L technical table F175
LIQZP-L technical table F330

Flow valves:

QVHZO-T technical table F412
QVKZOR-T technical table F412

(1) For DPZO and LIQZP the 4-EHT transducer is used for pilot stage **(2)** LIQZP has replaced LIQZO

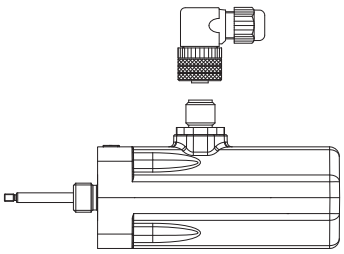
25 **E-THT-8/M12** LVDT transducers

Ingress Protection:

IP66 / IP67

EMC:

ZBE-08

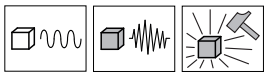


Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Servoproportional directionals:

DPZO-L technical table F178
LIQZP-L size **25** ÷ **40** tech. table F340

High performance directionals:

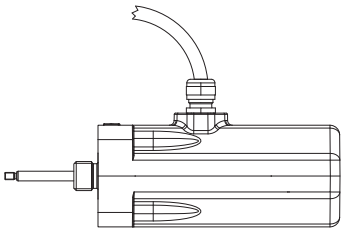
DPZO-L technical table F175
DPZO-T technical table F172
LIQZP-L size **16** ÷ **40** tech. table F330

26 **E-THT-8/P**** LVDT transducers

Ingress Protection:

IP66 / IP67

EMC:

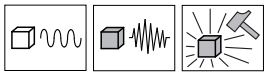


Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Servoproportional directionals:

DPZO-LE* size **1** ÷ **6** tech. table FS178
LIQZP-LE* size **25** ÷ **40** tech. table FS340

High performance directionals:

DPZO-LE* size **1** ÷ **6** tech. table FS175
LIQZP-LE* size **16** ÷ **40** tech. table FS330

LIQZP-TEB size **16** ÷ **40** tech. table TFS325

Axis controls:

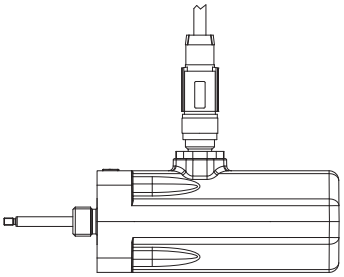
DPZO-LEZ technical table FS630

27 **E-THT-8/TID** LVDT transducers

Ingress Protection:

IP66 / IP67

EMC:

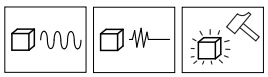


Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

High performance directionals:

DPZE-TID technical table FS158

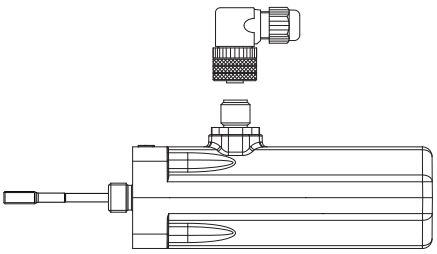
28 **E-THT-15/M12** LVDT transducers

Ingress Protection:

IP66 / IP67

EMC:

ZBE-08

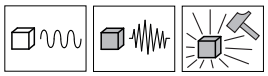


Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Servoproportional directionals:

LIQZP-L size **50** ÷ **80** tech. table F340

High performance directionals:

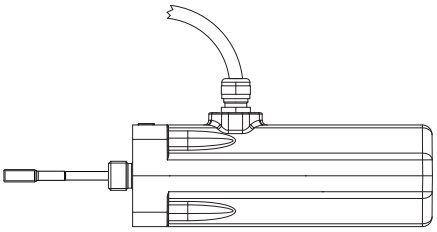
LIQZP-L size **50** ÷ **100** tech. table F330

29 **E-THT-15/P**** LVDT transducers

Ingress Protection:

IP66 / IP67

EMC:

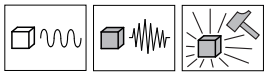


Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Servoproportional directionals:

LIQZP-LE* size **50** ÷ **80** tech. table FS340

High performance directionals:

LIQZP-LE* size **50** ÷ **100** tech. table FS330
LIQZH-LE* size **32** ÷ **100** tech. table FS338

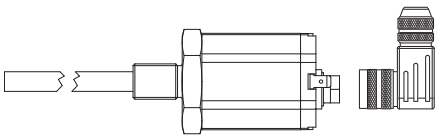
LIQZP-TEB size **50** ÷ **100** tech. table TFS325

30 **E-THT-50-MTS** magnetostrictive linear position transducers

Ingress Protection:

IP67

EMC:



STCO9131-6-PG9

Temperature:

Ambient **-40°C ÷ +80°C**

Mechanical Resistance:

Shock: IEC Standard 60068-2-27

Vibration: IEC Standard 60068-2-27
15 g / 10 ÷ 2000 Hz
(resonance frequencies excluded)

Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

High performance directionals:

LIQZP-LE* size **125** technical table FS330
LIQZP-L size **125** technical table F330

Ingress Protection:

IP67

EMC:

EN 61326 emission (group 1, class B) and interference immunity (industrial application)

Temperature:

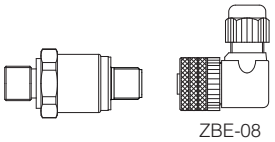
Ambient **-40°C ÷ +100°C**

Storage **-40°C ÷ +100°C**

Mechanical Resistance:

Shock: DIN EN 60068-2-27
40 g / 6 ms / half sinusoid

Vibration: DIN EN 60068-2-6
20 g / 20 ÷ 2000 Hz



ZBE-08

Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

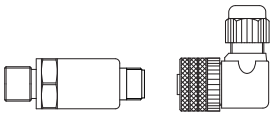
Accessories:

E-ATR-8 technical table GS465

Ingress Protection:

IP66 / IP67

EMC:



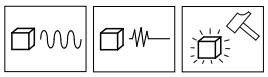
ZBE-08

Temperature:

Ambient **-40°C ÷ +100°C**

Storage **-40°C ÷ +100°C**

Mechanical Resistance:



Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Variable displacement pumps **(1)**:

PVPC-PES technical table AS170
PVPC-PERS technical table AS170

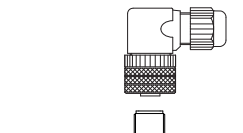
(1) only for /X and /SX options

Ingress Protection:

IP66 / IP67

EMC:

ZBE-08

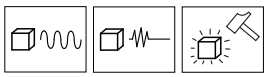


Temperature:

Ambient **-40°C ÷ +100°C**

Storage **-40°C ÷ +100°C**

Mechanical Resistance:

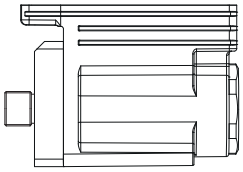


Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

valves **R**
(off-board drivers)

High performance pressure valves:

RZMO-R*-010 technical table FS010
RZMO-R*-030 technical table FS067
AGMZO-R* technical table FS040
RZGO-R*-010 technical table FS020
RZGO-R*-033 technical table FS075
AGRCZO-R* technical table FS055
LICZO-R* technical table FS305
LIMZO-R* technical table FS305
LIRZO-R* technical table FS305



valves **REB** and **RES**
(on-board drivers)

32 **E-THT-FV-10** inductive position switches

Ingress Protection:

IP66 / IP67

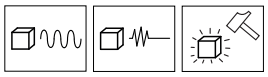
EMC:

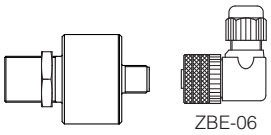
Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:





ZBE-06

Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Safety on-off directionals, single solenoid valves **(1)**:

DHI-06 technical table EY010
DHE-06 technical table EY010
DKE-16 technical table EY010
HF-0611 technical table EY050
HF-0614 technical table EY050
HF-0673 technical table EY050
JO-DL technical table EY105
DPHE technical table EY030
LIDA technical table EY120
LIDAS technical table EY120
LIDASH technical table EY120

(1) only for /FV option

33 **E-THT-FV-20** inductive position switches

Ingress Protection:

IP66 / IP67

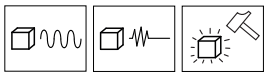
EMC:

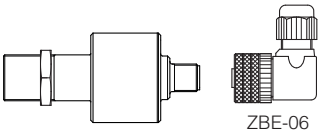
Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:





ZBE-06

Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Safety on-off directional, double solenoid valves **(1)**:

DHE-07 technical table EY010
DKE-17 technical table EY010

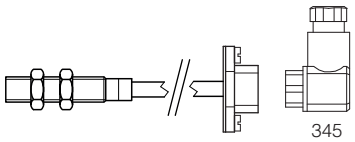
(1) only for /FV option

Ingress Protection:

IP67

EMC:

IEC 61000-4-2 level 2
IEC 61000-4-3 level 3
IEC 61000-4-4 level 2


345

Temperature:

Ambient **-25°C ÷ +70°C**

Mechanical Resistance:

IEC 60947-5-2 / 7.4

Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Safety on-off directionals valves **(1)**:

DHI-06 technical table EY010
DHI-07 technical table EY010
DHE-06 technical table EY010
DHE-07 technical table EY010
DKE-16 technical table EY010
DKE-17 technical table EY010

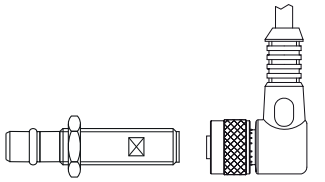
(1) only for /FI option

Ingress Protection:

IP68

EMC:

IEC 61000-4-2 level 2
IEC 61000-4-3 level 3
IEC 61000-4-4 level 3


BKS-B-20-4-03

Temperature:

Ambient **-25°C ÷ +70°C**

Mechanical Resistance:

Shock: EN 60068-2-27
Half-sinus, 30 gn, 11 ms

Vibration: EN 60068-2-6
55 Hz, amplitude 1 mm, 3x30 min

Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Safety on-off directionals valves **(1)**:

LIFI technical table EY120
LIDA technical table TEY120
LIDASH technical table TEY120

(1) only for /FI option

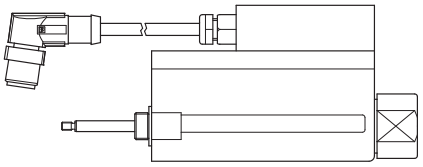
35 OBSOLETE LVDT TRANSDUCERS

35.1 **8-ETHR** LVDT transducers

Ingress Protection:

IP66 / IP67

EMC:

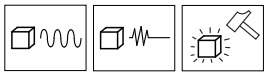


Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Servoproportional directionals:

DPZO-LE* size 8
LIQZO-LE*

High performance directionals:

DPZO-LE* size 8
LIQZO-LE*
LIQZO-TEB

Axis controls:

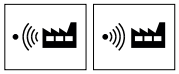
DPZO-LEZ

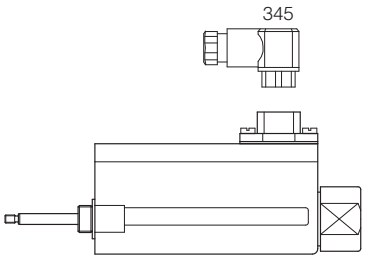
35.2 **8-ETH** LVDT transducers

Ingress Protection:

IP66 / IP67

EMC:



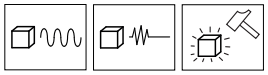


Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Servoproportional directionals:

DPZO-LE* size 1 to 6
DPZO-L
LIQZO-L

High performance directionals:

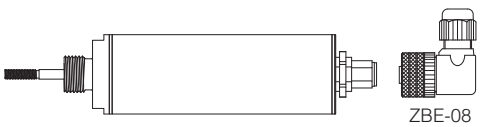
DPZO-LE* size 1 to 6
DPZO-L
DPZO-TE*
DPZO-T
LIQZO-L

35.3 **E-THT-15** LVDT transducers

Ingress Protection:

IP66 / IP67

EMC:

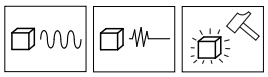


Temperature:

Ambient **-40°C ÷ +60°C**

Storage **-40°C ÷ +70°C**

Mechanical Resistance:



Note: above data refer to the transducer only and may differ from those indicated in the technical table of the valve, which shows complete product data

Servoproportional directionals:

LIQZP-LE* size **50** ÷ **80** tech. table FS340
LIQZP-L size **50** ÷ **80** tech. table F340

High performance directionals:

LIQZP-LE* size **50** ÷ **100** tech. table FS330
LIQZP-L size **50** ÷ **100** tech. table F330
LIQZH-LE* size **32** ÷ **100** tech. table FS338

LIQZP-TEB size **50** ÷ **100** tech. table TFS325