

# LMP 210-211

Maximum working pressure up to 6 MPa (60 bar) - Flow rate up to 365 l/min



# LMP 210-211 GENERAL INFORMATION

## Description

## Technical data

### Low & Medium Pressure filters

**Maximum working pressure up to 6 MPa (60 bar)**  
**Flow rate up to 365 l/min**

LMP210 is a range of versatile low pressure filter for transmission, protection of sensitive components in low pressure hydraulic systems and filtration of the coolant into the machine tools.

They are also suitable for the off-line filtration of small reservoirs. They are directly connected to the lines of the system through the hydraulic fittings.

#### Available features:

- Flanged connections up to 1 1/2", for a maximum flow rate of 365 l/min (LMP210)
- Female threaded connections up to 1 1/2", for a maximum return flow rate of 365 l/min (LMP211)
- Fine filtration rating, to get a good cleanliness level into the system
- Water removal elements, to remove the free water from the hydraulic fluid. For further information, see the Contamination Management document and the dedicate leaflet.
- Bypass valve, to relieve excessive pressure drop across the filter media
- Visual, electrical and electronic differential clogging indicators

#### Common applications:

Delivery lines, in any low pressure industrial equipment or mobile machines

### Filter housing materials

- Head: Aluminium
- Bowl: Cataphoretic painted steel
- Bypass valve: AISI 304 - Polyamide

### Pressure

- Test pressure: 9 MPa (90 bar)
- Burst pressure: 21 MPa (210 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 6 MPa (60 bar)

### Bypass valve

- Opening pressure 350 kPa (3.5 bar) ±10%
- Other opening pressures on request.

### Δp element type

- Microfibre filter elements - series N: 20 bar
- Fluid flow through the filter element from OUT to IN

### Seals

- Standard NBR series A
- Optional FPM series V

### Temperature

From -25 °C to +110 °C

### Connections

Inlet/Outlet In-Line

### Note

LMP 210 - 211 filters are provided for vertical mounting

## Weights [kg] and volumes [dm<sup>3</sup>]

Filter series	Weights [kg]			Volumes [dm <sup>3</sup> ]				
	Length	1	2	3	Length	1	2	3
<b>LMP 210-211</b>		3.10	4.80	6.40		1.60	2.10	2.80

# GENERAL INFORMATION LMP 210-211

Flow rates [l/min]

Filter series	Length	Filter element design - N Series									
		A03	A06	A10	A16	A25	M25	M60	M90	P10	P25
LMP 210	1	106	130	190	200	221	286	287	287	261	265
	2	153	175	220	237	249	288	289	290	265	269
	3	204	214	248	260	265	289	290	291	277	281
LMP 211	1	118	149	227	240	269	358	359	360	324	330
	2	178	207	268	292	307	361	362	363	329	335
	3	247	260	306	323	329	362	363	364	345	351

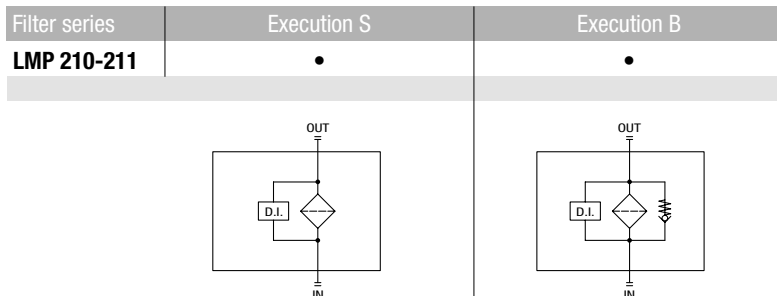
## Maximum flow rate for a complete low and medium pressure filter with a pressure drop $\Delta p = 0.7$ bar.

The reference fluid has a kinematic viscosity of 30 mm<sup>2</sup>/s (cSt) and a density of 0.86 kg/dm<sup>3</sup>.

For different pressure drop or fluid viscosity we recommend to use our selection software available on [www.mpfiltri.com](http://www.mpfiltri.com).

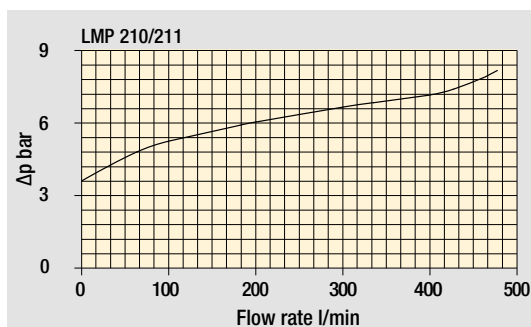
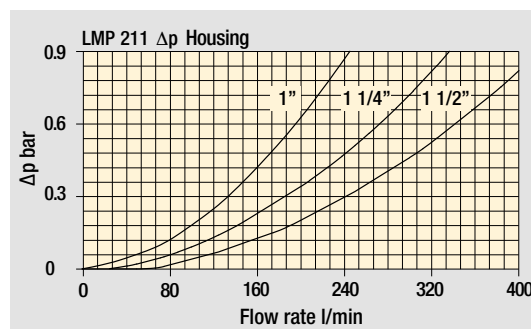
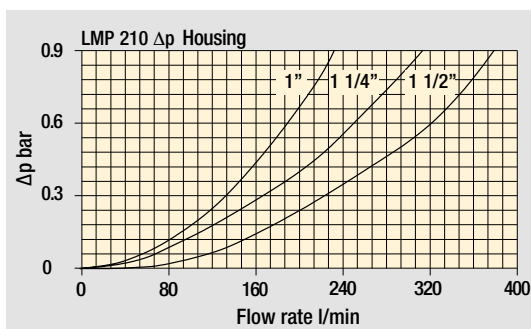
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure. Please, contact our Sales Department for further additional information.

## Hydraulic symbols



## Pressure drop

Filter housings  
 $\Delta p$  pressure drop



Bypass valve  
pressure drop

The curves are plotted using mineral oil with density of 0.86 kg/dm<sup>3</sup> in compliance with ISO 3968.  $\Delta p$  varies proportionally with density.

# LMP 210

## Designation & Ordering code

### COMPLETE FILTER

Configuration example: **LMP210** **3** **B** **A** **F1** **A10** **N** **P01**

**Series and size**  
**LMP210**

**Length**  
**1** | **2** | **3**

**Bypass valve**  
**S** Without bypass      **B** With bypass 3.5 bar

**Seals and treatments**  
**A** NBR  
**V** FPM

**Connections**  
**F1** 1" SAE 3000 psi/M  
**F2** 1 1/4" SAE 3000 psi/M  
**F3** 1 1/2" SAE 3000 psi/M  
**F4** 1" SAE 3000 psi/UNC  
**F5** 1 1/4" SAE 3000 psi/UNC  
**F6** 1 1/2" SAE 3000 psi/UNC

**Filtration rating (filter media)**  
**A03** Inorganic microfiber 3 µm      **M25** Wire mesh 25 µm  
**A06** Inorganic microfiber 6 µm      **M60** Wire mesh 60 µm  
**A10** Inorganic microfiber 10 µm      **M90** Wire mesh 90 µm  
**A16** Inorganic microfiber 16 µm      **P10** Resin impregnated paper 10 µm  
**A25** Inorganic microfiber 25 µm      **P25** Resin impregnated paper 25 µm  
**WA025** Water absorber inorganic microfiber 25 µm

**Element Δp**  
**N** 20 bar

**Execution**  
**P01** MP Filtri standard  
**Pxx** Customized

### FILTER ELEMENT

Configuration example: **CU210** **3** **A10** **A** **N** **P01**

**Element series and size**  
**CU210**

**Element length**  
**1** | **2** | **3**

**Filtration rating (filter media)**  
**A03** Inorganic microfiber 3 µm      **M25** Wire mesh 25 µm  
**A06** Inorganic microfiber 6 µm      **M60** Wire mesh 60 µm  
**A10** Inorganic microfiber 10 µm      **M90** Wire mesh 90 µm  
**A16** Inorganic microfiber 16 µm      **P10** Resin impregnated paper 10 µm  
**A25** Inorganic microfiber 25 µm      **P25** Resin impregnated paper 25 µm  
**WA025** Water absorber inorganic microfiber 25 µm

**Seals and treatments**  
**A** NBR  
**V** FPM

**Element Δp**  
**N** 20 bar

**Execution**  
**P01** MP Filtri standard  
**Pxx** Customized

### CLOGGING INDICATORS

See page 726

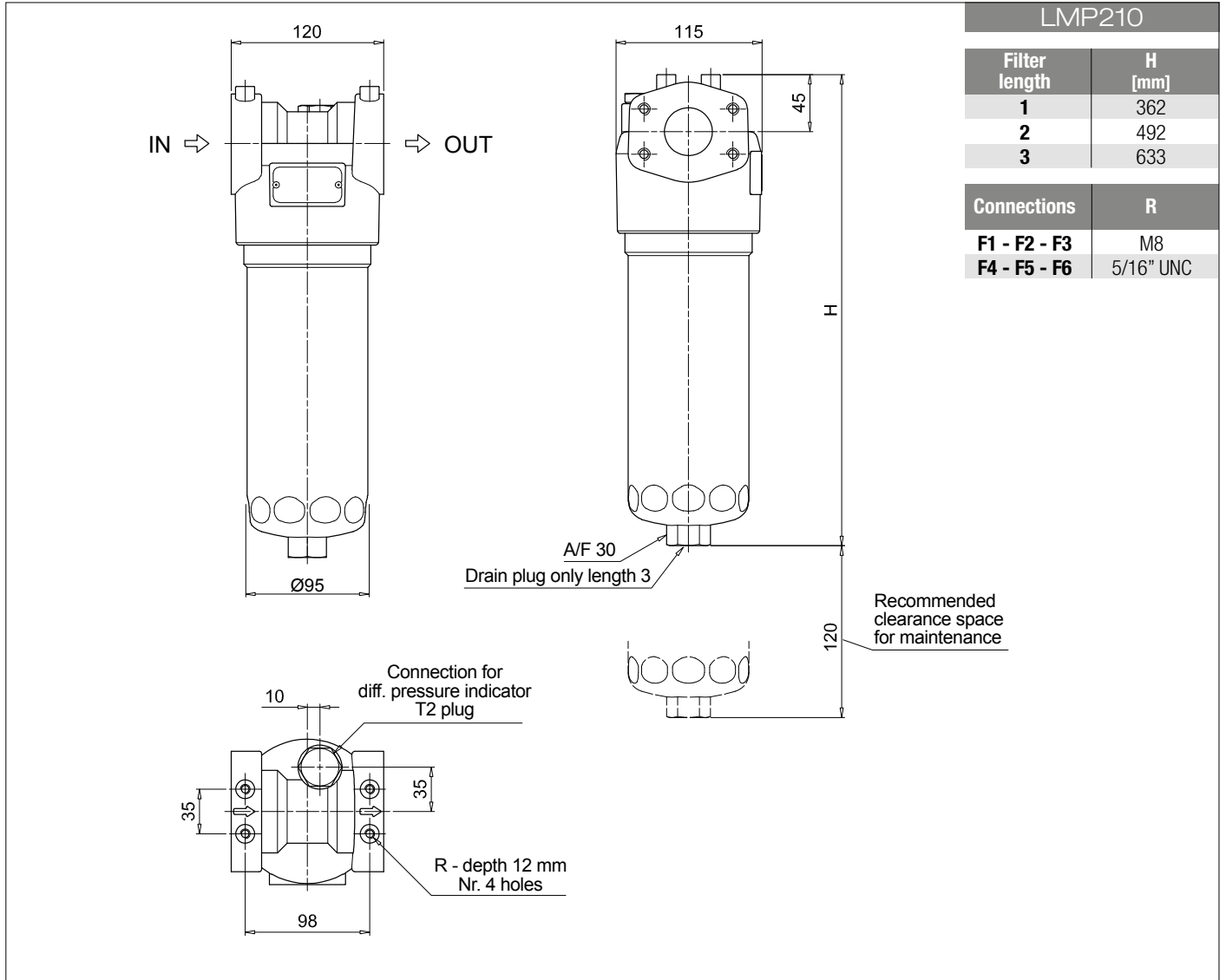
**DEA** Electrical differential pressure indicator  
**DEM** Electrical differential pressure indicator  
**DEU** Electrical differential pressure indicator  
**DLA** Electrical / visual differential pressure indicator

**DLE** Electrical / visual differential pressure indicator  
**DTA** Electronic differential pressure indicator  
**DVA** Visual differential pressure indicator  
**DVM** Visual differential pressure indicator

### PLUGS

See page 747

**T2** Plug



# LMP 211

## Designation & Ordering code

### COMPLETE FILTER

Series and size **LMP211** Configuration example: **LMP211** **3** **B** **A** **D** **6** **A10** **N** **P01**

**Length**  
**1** | **2** | **3** |

**Bypass valve**  
**S** Without bypass | **B** With bypass 3.5 bar

**Seals and treatments**  
**A** NBR  
**V** FPM

**Connections**  
**A** G 1"  
**B** G 1 1/4"  
**C** G 1 1/2"  
**D** 1" NPT  
**E** 1 1/4" NPT  
**F** 1 1/2" NPT  
**G** SAE 16 - 1 5/16" - 12 UN  
**H** SAE 20 - 1 5/8" - 12 UN  
**I** SAE 24 - 1 7/8" - 12 UN

**Connection for differential pressure indicator**  
**6** With plugged connection

**Filtration rating (filter media)**  
**A03** Inorganic microfiber 3 µm | **M25** Wire mesh 25 µm  
**A06** Inorganic microfiber 6 µm | **M60** Wire mesh 60 µm  
**A10** Inorganic microfiber 10 µm | **M90** Wire mesh 90 µm  
**A16** Inorganic microfiber 16 µm | **P10** Resin impregnated paper 10 µm  
**A25** Inorganic microfiber 25 µm | **P25** Resin impregnated paper 25 µm  
**WA025** Water absorber inorganic microfiber 25 µm

**Element Δp**  
**N** 20 bar

**Execution**  
**P01** MP Filtri standard  
**Pxx** Customized

### FILTER ELEMENT

Element series and size **CU210** Configuration example: **CU210** **3** **A10** **A** **N** **P01**

**Element length**  
**1** | **2** | **3** |

**Filtration rating (filter media)**  
**A03** Inorganic microfiber 3 µm | **M25** Wire mesh 25 µm  
**A06** Inorganic microfiber 6 µm | **M60** Wire mesh 60 µm  
**A10** Inorganic microfiber 10 µm | **M90** Wire mesh 90 µm  
**A16** Inorganic microfiber 16 µm | **P10** Resin impregnated paper 10 µm  
**A25** Inorganic microfiber 25 µm | **P25** Resin impregnated paper 25 µm  
**WA025** Water absorber inorganic microfiber 25 µm

**Seals and treatments**  
**A** NBR  
**V** FPM

**Element Δp**  
**N** 20 bar

**Execution**  
**P01** MP Filtri standard  
**Pxx** Customized

### CLOGGING INDICATORS

See page 726

**DEA** Electrical differential pressure indicator  
**DEM** Electrical differential pressure indicator  
**DEU** Electrical differential pressure indicator  
**DLA** Electrical / visual differential pressure indicator

**DLE** Electrical / visual differential pressure indicator  
**DTA** Electronic differential pressure indicator  
**DVA** Visual differential pressure indicator  
**DVM** Visual differential pressure indicator

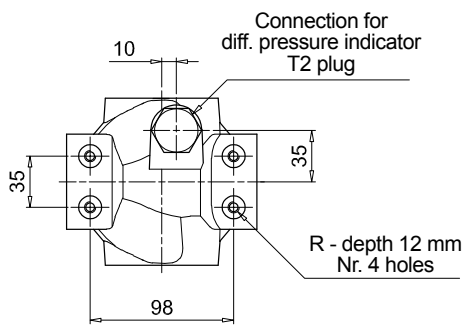
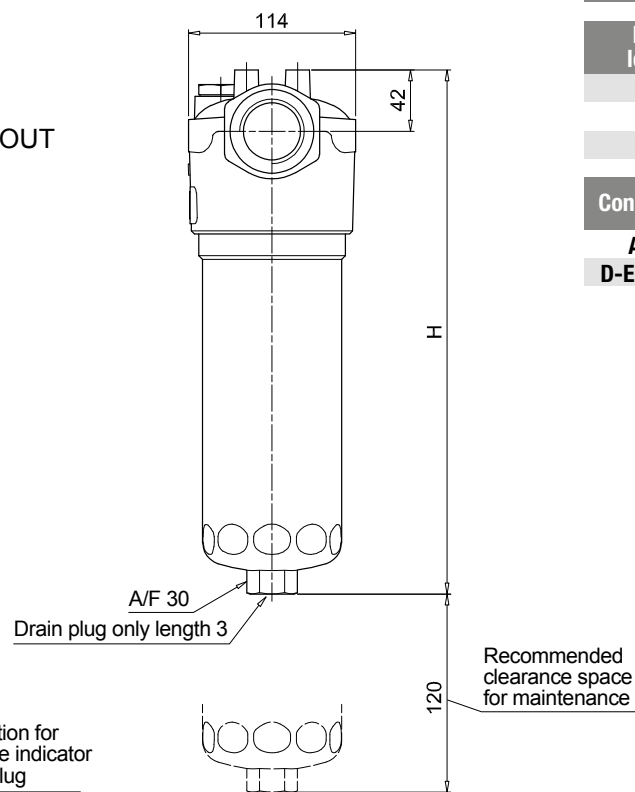
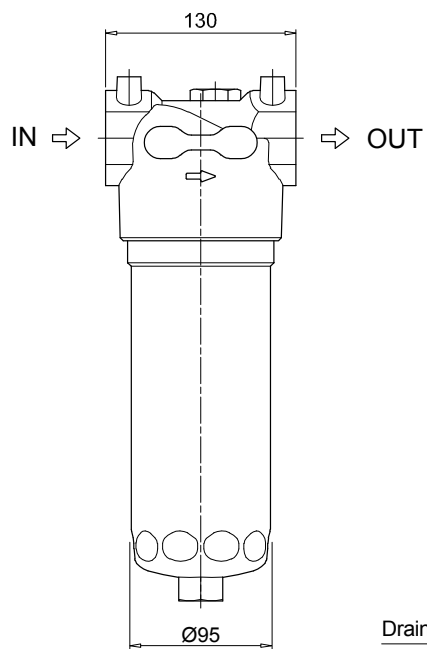
### PLUGS

See page 747

**T2** Plug

# LMP 211

## Dimensions



LMP211	
Filter length	H [mm]
1	358
2	488
3	629
Connections	R
A-B-C	M8
D-E-F-G-H-I	5/16" UNC

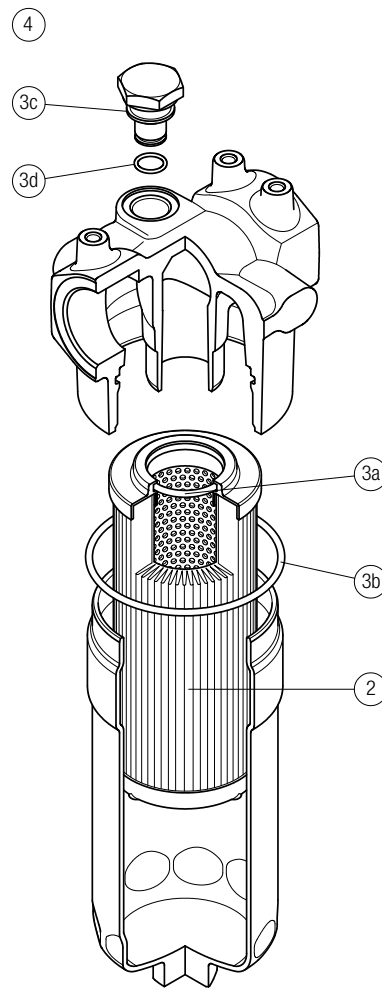
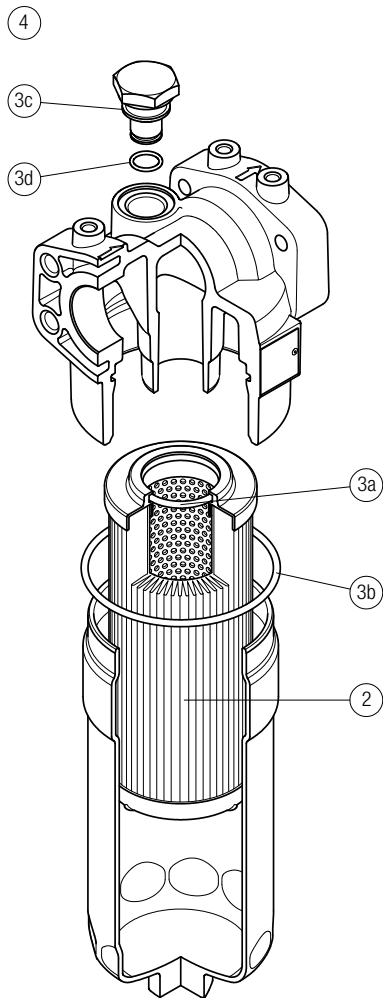
Recommended clearance space for maintenance

# LMP 210-211 SPARE PARTS

Order number for spare parts

LMP 210

LMP 211



Item:	Q.ty: 1 pc.	Q.ty: 1 pc.		Q.ty: 1 pc.	
Filter series	Filter element	Seal Kit code number		Indicator connection plug	
LMP 210-211	See order table	NBR	FPM	NBR	FPM
	2	02050435	02050436	T2H	T2V



# CLOGGING INDICATORS LOW & MEDIUM PRESS. FILTERS

## Designation & Ordering code

### DIFFERENTIAL PRESSURE INDICATORS

Series	Configuration example 1:	DE	M	20	H	F	50	P01	
<b>DE</b> Electrical differential pressure indicator	Configuration example 2:	DE	U	50	V	A	50	P01	UL
<b>DL</b> Electrical/Visual differential pressure indicator	Configuration example 3:	DL	E	50	V	A	71	P01	
<b>DT</b> Electronic differential pressure indicator	Configuration example 4:	DT	A	20	H	F	70	P01	
<b>DV</b> Visual differential pressure indicator	Configuration example 5:	DV	M	50	V			P01	

Type	DE	DL	DT	DV
<b>A</b> Standard type	•	•	•	<b>A</b> With automatic reset
<b>M</b> With wired electrical connection	•	-	-	<b>M</b> With manual reset
<b>U</b> Standard type 210 bar, UL certified	•	-	-	<b>S</b> With automatic reset
<b>E</b> For high power supply	-	•	-	
<b>S</b> Compact version	•	-	-	

Pressure setting	DEA	DEM	DEU	DES	DLA	DLE	DTA	DVA	DVM	DVS
<b>12</b> 1.2 bar	•	•	-	•	•	•	•	•	•	•
<b>20</b> 2.0 bar	•	•	•	-	•	•	•	•	•	-
<b>25</b> 2.5 bar	-	-	-	-	-	-	-	-	-	•
<b>40</b> 4.0 bar	-	-	-	•	-	-	-	-	-	•
<b>50</b> 5.0 bar	•	•	•	-	•	•	•	•	•	-

Seals	DEA	DEM	DEU	DES	DL	DT	DVA	DVM	DVS
<b>H</b> HNBR	•	•	-	•	•	•	•	•	•
<b>V</b> FPM	•	•	•	-	•	•	•	•	-

Thermostat	DEA	DEM	DEU	DES	DLA	DLE	DT
<b>A</b> Without thermostat	•	•	•	•	•	•	-
<b>F</b> With thermostat	-	•	-	-	-	•	•

Electrical connections	DEA	DEM	DEU	DES	DLA	DLE	DT
<b>10</b> Connection AMP Superseal series 1.5	-	•	-	•	-	-	-
<b>20</b> Connection AMP Timer Junior	-	•	-	-	-	-	-
<b>30</b> Connection Deutsch DT-04-2-P	-	•	-	•	-	-	-
<b>35</b> Connection Deutsch DT-04-3-P	-	•	-	-	-	-	-
<b>50</b> Connection EN 175301-803	•	-	•	-	-	•	-
<b>51</b> Connection EN 175301-803, transparent base with lamps 24 Vdc	-	-	-	-	•	-	-
<b>52</b> Connection EN 175301-803, transparent base with lamps 110 Vdc	-	-	-	-	•	-	-
<b>70</b> Connection IEC 61076-2-101 D (M12)	-	-	-	-	-	-	•
<b>71</b> Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc	-	-	-	-	•	-	-
<b>80</b> Connection Stud #10-32 UNF	-	-	-	•	-	-	-

Option
<b>P01</b> MP Filtri standard
<b>Pxx</b> Customized

Certifications	DEU	OTHERS
Without	-	•
<b>UL</b> UL certification	•	-

### PLUGS

Series	Configuration example	T2	H
<b>T2</b> Plug			
<b>T4</b> Plug			

Seals	T2	T4
<b>A</b> NBR	-	•
<b>H</b> HNBR	•	-
<b>V</b> FPM	•	-