

(13) SCHEDULE

(14) EU-Type-Examination Certificate No. TÜV CY 25 ATEX 0207475 X

(15) Description of equipment

The Explosion-proof anticorrosive plug and socket HSP1P Series is comprised with plug, socket and Ex cable glands or Ex stopping plugs. The plug enclosure material is made of PA66 and plug core is fixed inside. The socket dust cover material is made of PA66 or PC and socket enclosure material is made of BMC, interlocking switch and socket core are fixed inside. The ingress protection of enclosure fulfils the requirements of IP66 according to EN 60529.

Identification code:

The identification code is shown as follows:

HSP1P A B C D E

HSP1P: Explosion-Proof anticorrosive plug and sockets

A: Rated current (A):

10, 16, 20, 25, 30, 32, 50, 60, 63, 100, 115, 125.

B: Rated voltage (V):

AC690: 600 ~ 690 AC

AC500: 480 ~ 500 AC

AC415: 380 ~ 415 AC

AC250: 200 ~ 250 AC

AC130: 100 ~ 130 AC

AC50: 36 ~ 50 AC

AC25: 20 ~ 25 AC

DC250: 50 ~ 250 DC

DC50: 36 ~ 50 DC

DC25: 20 ~ 25 DC

C: Number of pins:

2P

3P: 2P+PE or 1P+N+PE

4P: 3P+PE

5P: 3P+N+PE

D: Hardware style:

W-SET: Complete set

W-SCT: Wall socket

PLG: Plug

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Cert No. C 004

C-SET: Coupler complete set

C-SCT: Coupler socket

P-SET: Panel complete set

P-SCT: Panel socket

X-SET: 25° Panel complete set

X-SCT: 25° Panel socket.

E: Auxiliary contact:

OC -Only for 100A, 115A, 125A enclosure; not marked if absent

Technical Data:

Model	Rated current (A)	Ex Marking	Ambient temperature	Wire diameter	Ts cable gland
HSP1P 10 * 2P * HSP1P 16 * 2P * HSP1P 10 * 3P * HSP1P 16 * 3P *	10 16	II 2G Ex db eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +50°C	2.5mm ²	+80°C
		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +65°C		+85°C
		II 2G Ex db eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +60°C	4.0 mm ²	+80°C
		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +65°C		+80°C
HSP1P 20 * 2P * HSP1P 20 * 3P *	20	II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +53°C	2.5mm ²	+80°C
		II 2G Ex db eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +50°C	4.0 mm ²	+80°C
		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +60°C		+80°C
HSP1P 10 * 4P * HSP1P 16 * 4P * HSP1P 10 * 5P * HSP1P 16 * 5P *	10 16	II 2G Ex db eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +50°C	4.0 mm ²	+80°C
		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +65°C		+90°C
		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +50°C		+85°C
		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +50°C		
HSP1P 20 * 4P * HSP1P 20 * 5P *	20	II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +55°C	4.0 mm ²	+80°C
		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +60°C		+80°C
		II 2G Ex db eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +55°C	6.0 mm ²	+80°C
		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +65°C		+80°C
HSP1P 25 * * *	25	II 2G Ex db eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +40°C	4.0 mm ²	+80°C
		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +55°C		+80°C
		II 2G Ex db eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +50°C	6.0 mm ²	+80°C
		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +60°C		+80°C
HSP1P 30 * * * HSP1P 32 * * *	30 32	II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +50°C	6.0 mm ²	+80°C
HSP1P 50 * * * HSP1P 60 * * * HSP1P 63 * * *	50 60 63	II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +40°C	16.0 mm ²	+80°C
		II 2G Ex db eb IIC T4 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +50°C		+85°C

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Model	Rated current (A)	Ex Marking	Ambient temperature	Wire diameter	Ts cable gland
HSP1P 100 *** HSP1P 100 *** OC	100	II 2G Ex db eb IIC T4 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +55°C	35.0 mm ²	+90°C
		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +55°C	50.0 mm ²	+85°C
		II 2G Ex db eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +40°C		+80°C
HSP1P 115 *** HSP1P 115 *** OC	115	II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +40°C	35.0 mm ²	+85°C
		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +45°C	50.0 mm ²	+80°C
HSP1P 125 *** HSP1P 125 *** OC	125	II 2G Ex db eb IIC T4 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +40°C	50.0 mm ²	+80°C
HSP1P 10 * 2P C-SET HSP1P 16 * 2P C-SET HSP1P 10 * 3P C-SET HSP1P 16 * 3P C-SET	10	II 2G Ex db eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +55°C	4.0 mm ²	+80°C
	16	II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +60°C		+80°C
	20	II 2G Ex db eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +40°C		+80°C
II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db		-45°C to +55°C	+80°C		
10	II 2G Ex db eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +48°C	4.0 mm ²		+80°C
	16	II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +60°C		+85°C
HSP1P 20 * 4P C-SET HSP1P 20 * 5P C-SET	20	II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +45°C		+80°C
	HSP1P 20 ** C-SET HSP1P 25 ** C-SET	20	II 2G Ex db eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +50°C	6.0 mm ²
25		II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +63°C		+80°C
		HSP1P 32 ** C-SET	32	II 2G Ex db eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db	-45°C to +50°C

Rated current	Rated voltage	Number of pins	Frequency
10A 16A 20A	DC: 20 to 25	2 pins (2P)	/
	DC: 36 to 50		50/60Hz Max. 500Hz
	AC: 20 to 25		
	AC: 36 to 50		
	DC: 20 to 25	3 pins (1P+N+PE) (2P+PE)	/
	DC: 36 to 50		50/60Hz Max. 500Hz
	DC: 50 to 250		
	AC: 20 to 25		
	AC: 36 to 50		
	AC: 100 to 130		
	AC: 200 to 250		
	DC: 20 to 25		4 pins(3P+PE)
	DC: 36 to 50	50/60Hz Max. 500Hz	
	AC: 20 to 25		
	AC: 36 to 50		
	AC: 100 to 130		
	AC: 200 to 250		
	AC: 380 to 415		
AC: 480 to 500			
AC: 600 to 690			

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Rated current	Rated voltage	Number of pins	Frequency			
	DC: 20 to 25	5 pins (3P+N+PE)	50/60Hz Max. 500Hz			
	DC: 36 to 50					
	AC: 20 to 25					
	AC: 36 to 50					
	AC: 100 to 130					
	AC: 200 to 250					
	AC: 380 to 415					
	AC: 480 to 500					
20A 25A 30A 32A	AC: 600 to 690	2 pins (2P)	50/60Hz Max. 500Hz			
	DC: 20 to 25					
	DC: 36 to 50					
	AC: 20 to 25					
	AC: 36 to 50					
	DC: 20 to 25			3 pins or 4 pins (1P+N+PE) (2P+PE) (3P+PE)	50/60Hz Max. 500Hz	
	DC: 36 to 50					
	AC: 20 to 25					
	AC: 36 to 50					
	AC: 100 to 130					
	AC: 200 to 250					
	AC: 380 to 415					
	AC: 480 to 500					
	AC: 600 to 690					
20A 25A 30A 32A	DC: 20 to 25	5 pins (3P+N+PE)	50/60Hz Max. 500Hz			
	DC: 36 to 50					
	AC: 20 to 25					
	AC: 36 to 50					
	AC: 100 to 130					
	AC: 200 to 250					
	AC: 380 to 415					
	AC: 480 to 500					
	AC: 600 to 690					
	50A 60A 63A			AC: 100 to 130	3 pins or 4 pins (2P+PE) (3P+PE)	50/60Hz Max. 500Hz
				AC: 200 to 250		
				AC: 380 to 415		
				AC: 480 to 500		
				AC: 600 to 690		
AC: 100 to 130		5 pins (3P+N+PE)				
AC: 200 to 250						
AC: 380 to 415						
AC: 480 to 500						
AC: 600 to 690						
100A 115A 125A	AC: 100 to 130	3 pins or 4 pins (2P+PE) (3P+PE)	50/60Hz Max. 500Hz			
	AC: 200 to 250					
	AC: 380 to 415					
	AC: 480 to 500					
	AC: 600 to 690					
	AC: 100 to 130	5 pins (3P+N+PE)				
	AC: 200 to 250					
	AC: 380 to 415					
	AC: 480 to 500					
	AC: 600 to 690					

Allowable ambient temperature range:
-45°C to +65°C

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Warning labels:

WARNING –DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT! (only for Ex t)
WARNING – DO NOT OPEN WHEN ENERGIZED!
WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

Routine tests:

The dielectric tests shall be conducted as per EN IEC 60079-7:2015/A1:2018 clause 7.1 as below:
apply $2U+1000V$ r.m.s, at least 1500V, 50Hz for 1 minute, or 1,2 times the test voltage, but with reduced duration of at least 100 ms, between each circuit and the enclosure.

The overpressure test shall be 100% conducted as per EN 60079-1:2014 clause 7.1 as below:
Enclosure for switch of size 4, static pressure of at least 1518kPa and duration of at least 10s.
Enclosure for main chamber of switch of size 5, static pressure of at least 1689kPa and duration of at least 10s.

(16) Test documents are listed in the test report No. 25 0207475.

(17) Special conditions for safe use

1. Refer to instruction for the relation between model, ratings, Ex marking and ambient temperature.
2. The equipment shall not be installed in a location where the dust can accumulate, and shall not be installed in a location where the external conditions are conducive to the buildup of electrostatic charge on such surfaces. In addition, only should be cleaned with a damp cloth.
3. Repairs of the flameproof joints shall not be allowed.
4. As the electrical parameter depended on the build-in electrical component, the operating parameters described in the instruction shall be followed.
5. The 90°C high temperature-resistant cable shall be selected. And for HSP1P 100****, HSP1P 115****, HSP1P 125****, the user shall provide additional clamping.
6. Separated certified cable glands or blanking elements, type of Ex e and Ex t, described in the instruction manual shall be used during the operation.
7. Observe the warning
“WARNING - DO NOT OPEN WHEN ENERGIZED!”,
“WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT!” (only for Ex t)
“WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD - SEE INSTRUCTIONS”
8. Each HSP1P series plug shall only be used with an HSP1P series socket covered by this certificate.
9. Metal cable glands or blanking element shall be incorporated with earthing connection when installation if applicable, and the installation layout shall ensure that external metallic labels are not expected to be approached by earthed objects.
10. When the product is used as panel mounting, the local temperature around the socket shall not exceed corresponding maximum T_a .

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(18) Essential Health and Safety Requirements

This EU Type examination certificate covers only the Essential Health and Safety Requirements related to the Directive 2014/34/EU, excluding 1.5.5, 1.5.6 and 1.5.7.

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