



(1) EC-TYPE-EXAMINATION CERTIFICATE (Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**



(3) EC-type-examination Certificate Number:

PTB 11 ATEX 2027 X

(4) Equipment: Solenoid, type 0519

(5) Manufacturer: nass magnet GmbH

(6) Address: Eckenerstraße 4-6, 30179 Hannover, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report PTB Ex 12-20290.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2009, EN 60079-7:2007, EN 60079-18:2009, EN 60079-31:2009

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:



**II 2 G Ex e mb IIC T4,T6 Gb and
II 2 D Ex tb mb IIIC T130°C,T80°C Db IP 65 or IP67**

Zertifizierungssektor Explosionschutz
On behalf of PTB:

Braunschweig, March 30, 2012

Dr.-Ing. U. Johannsmeyer
Direktor und Professor



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(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 11 ATEX 2027 X

(15) Description of equipment

The solenoid of type 0519 is used for the control in installations and systems where the occurrence of explosive atmospheres consisting of gas/air or dust/air mixtures is to be assumed. It is comprised of a magnet coil, an armature system and mounting accessories.

Technical data

Type of voltage

Alternating voltage, 50 Hz to 60 Hz or direct voltage with max. 45% residual ripple

Voltage tolerance


-10 % ... +10 %


Permissible operating pressure

≤ 40 bar (4000 kPa)

Butt mounting

yes, center-to-center distance ≥ 55 mm

Type	0519 00 / xxxx xx						
Marking	 II 2 G Ex e mb IIC T4 Gb II 2 D Ex tb mb IIIC T130°C Db IP65, IP67						
Temperature class	T4						
Ambient temperature	-40°C ... +60°C						
Medium temperature	-40°C ... +70°C						
Type number	Rated voltage		Rated current		Limit power		Fusing [mA]
	AC $U_{N,AC}$ [V]	DC $U_{N,DC}$ [V]	AC $I_{N,AC}$ [mA]	DC $I_{N,DC}$ [mA]	AC $P_{G,AC}$ [W]	DC $P_{G,DC}$ [W]	
0519 00/7148	12		898	990	7.54	8.93	1600
0519 00/7149	24		439	486	7.71	9.20	1000
0519 00/7153	36		291	322	7.77	9.29	600
0519 00/7150	48		189	209	6.93	8.31	400
0519 00/7151	110		90	100	7.58	9.10	200
	115	-	95	-	8.18	-	
	120	-	99	-	8.79	-	
0519 00/7152	125		79	87	7.51	9.0	150
0519 00/7137	220		47	53	7.90	9.51	100
	230	-	50	-	8.48	-	
	240	-	52	-	9.16	-	

Type	0519 60 / xxxx xx						
Marking	 II 2 G Ex e mb IIC T6 Gb II 2 D Ex tb mb IIIC T80°C Db IP65, IP67						
Temperature class	T6						
Ambient temperature	-40°C ... +50°C						
Medium temperature	-40°C ... +70°C						
Type number	Rated voltage		Rated current		Limit power		Fusing [mA]
	AC $U_{N,AC}$ [V]	DC $U_{N,DC}$ [V]	AC $I_{N,AC}$ [mA]	DC $I_{N,DC}$ [mA]	AC $P_{G,AC}$ [W]	DC $P_{G,DC}$ [W]	
0519 60/7196	12		399	440	3.77	4.48	1000
0519 60/7156	24		179	198	3.57	4.28	500
0519 60/7154	36		108	119	3.30	3.97	250
0519 60/7197	48		90	100	3.68	4.43	200
0519 60/7198	110		40	44	3.74	4.51	100
	115	-	42	-	4.06	-	
	120	-	43	-	4.38	-	
0519 60/7155	125		31	35	3.41	4.11	75
0519 60/7195	220		20	22	3.74	4.52	50
	230	-	21	-	4.06	-	
	240	-	22	-	4.39	-	

(16) Test report PTB Ex12-20290

(17) Special conditions for safe use

1. An external fuse (according to DIN 41571 or IEC 60127-2-1) corresponding to the type shall be connected in series to each solenoid as short circuit protection. Alternatively, a motor protecting switch with short circuit- and thermal instantaneous tripping can be connected in series. This shall be adjusted to the respective rated current of the solenoid. The rated voltage of the fuse shall be higher than or equal to the specified rated voltage of the magnet. The breaking capacity of the fuse link shall be equal to or higher than the prospective maximum short-circuit current (usually 1500 A). The fuse may be accommodated inside the associated supply unit or shall be connected in series separately.
2. Connecting cables and connecting lines shall be suitable for permanent application in a temperature range of – 40 °C up to + 105 °C.
3. When using silicone or silicone-containing cables for connection or cables which are not scratch-proof, these shall be protected against mechanical damage.

(18) Essential health and safety requirements

Met by compliance with the standards mentioned above.

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, March 30, 2012



Dr.-Ing. U. Johannsmeyer
Direktor und Professor

1 SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 11 ATEX 2027 X

(Translation)

Equipment: Solenoid, type 0519

Marking:  II 2 G Ex e mb IIC T4,T6 Gb and
II 2 D Ex tD mb IIIC T130°C,T80°C Db with IP65, IP67

Manufacturer: nass magnet GmbH

Address: Eckenerstraße 4-6
30179 Hannover, Germany


Description of supplements and modifications


The solenoid of type 0519 is used for the control in installations and systems where the occurrence of explosive atmospheres consisting of gas/air or dust/air mixtures is to be assumed. It is comprised of a magnet coil, an armature system and mounting accessories.

In the future the technical data as well as the special conditions apply as follows:

Technical data

Type of voltage	Alternating voltage, 50 Hz to 60 Hz or direct voltage with max. 45% residual ripple
Voltage tolerance	-10 % ... +10 %
Butt mounting	yes, center-to-center distance \geq 55 mm

Type	0519 00 / xxxx xx						
Marking	 II 2 G Ex e mb IIC T4 Gb II 2 D Ex tb mb IIIC T130°C Db IP65, IP67						
Temperature class	T4						
Ambient temperature	-40°C ... +60°C						
Medium temperature	-40°C ... +70°C						
Type number	Rated voltage		Rated current		Limit power		Fusing [mA]
	AC $U_{N,AC}$ [V]	DC $U_{N,DC}$ [V]	AC $I_{N,AC}$ [mA]	DC $I_{N,DC}$ [mA]	AC $P_{G,AC}$ [W]	DC $P_{G,DC}$ [W]	
0519 00/7148	12		898	990	7.54	8.93	1600
0519 00/7149	24		439	486	7.71	9.20	1000
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0519 00/7150	48		189	209	6.93	8.31	400
0519 00/7151	110		90	100	7.58	9.10	200
	115	-	95	-	8.18	-	
	120	-	99	-	8.79	-	
0519 00/7152	125		79	87	7.51	9.0	150
0519 00/7137	220		47	53	7.90	9.51	100
	230	-	50	-	8.48	-	
	240	-	52	-	9.16	-	

Type	0519 60 / xxxx xx						
Marking	 II 2 G Ex e mb IIC T6 Gb II 2 D Ex tb mb IIIC T80°C Db IP65, IP67						
Temperature class	T6						
Ambient temperature	-40°C ... +50°C						
Medium temperature	-40°C ... +70°C						
Type number	Rated voltage		Rated current		Limit power		Fusing [mA]
	AC $U_{N,AC}$ [V]	DC $U_{N,DC}$ [V]	AC $I_{N,AC}$ [mA]	DC $I_{N,DC}$ [mA]	AC $P_{G,AC}$ [W]	DC $P_{G,DC}$ [W]	
0519 60/7196	12		399	440	3.77	4.48	1000
0519 60/7156	24		179	198	3.57	4.28	500
0519 60/7154	36		108	119	3.30	3.97	250
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0519 60/7198	110		40	44	3.74	4.51	100
	115	-	42	-	4.06	-	
	120	-	43	-	4.38	-	
0519 60/7155	125		31	35	3.41	4.11	75
0519 60/7195	220		20	22	3.74	4.52	50
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	240	-	22	-	4.39	-	

Special conditions for safe use

1. An external fuse (according to DIN 41571 or IEC 60127-2-1) corresponding to the type shall be connected in series to each solenoid as short circuit protection. Alternatively, a motor protecting switch with short circuit- and thermal instantaneous tripping can be connected in series. This shall be adjusted to the respective rated current of the solenoid. The rated voltage of the fuse shall be higher than or equal to the specified rated voltage of the magnet. The breaking capacity of the fuse link shall be equal to or higher than the prospective maximum short-circuit current (usually 1500 A). The fuse may be accommodated inside the associated supply unit or shall be connected in series separately.
2. Connecting cables and connecting lines shall be suitable for permanent application in a temperature range of -40 °C up to $+105\text{ °C}$.
3. When using silicone or silicone-containing cables for connection or cables which are not scratch-proof, these shall be protected against mechanical damage.
4. The armature tube should be subjected to a routine test with 1.5 fold the nominal operating pressure.

Applied standards

EN 60079-0:2009, EN 60079-7:2007, EN 60079-18:2009, EN 60079-31:2009

Test report: PTB Ex 12-22177

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, October 1, 2012


Dr.-Ing. T. Horn



2. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 11 ATEX 2027 X (Translation)

Equipment: Solenoid, type 0519

Marking:  **II 2 G Ex e mb IIC T4,T6 Gb and
II 2 D Ex tD mb IIIC T130 °C,T80 °C Db with IP65, IP67**

Manufacturer: nass magnet GmbH

Address: Eckenerstraße 4-6, 30179 Hannover, Germany

Description of supplements and modifications

The solenoid of type 0519 is provided with alternative cable entries.

In the future the marking will read as follows:

 **II 2 G Ex e mb IIC T4, T6 Gb**
 **II 2 D Ex tD mb IIIC T130°C, T80°C Db
IP65, IP 67**

All further specifications of the EC-type examination certificate and the 1st supplement apply without changes.

Applied standards

EN 60079-0:2012, EN 60079-7:2007, EN 60079-18:2009, EN 60079-31:2009

Test report: PTB Ex 15-24203

Konformitätsbewertungsstelle, Sektor Explosionsschutz

Braunschweig, February 5, 2015

On behalf of PTB:


Dr.-Ing. T. Horn
Regierungsrat



Sheet 1/1

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.