xxxxxxx.8821.xxxxx
ETM pulse solenoid

- ETM pulse
- Solenoid with 13 or 16 mm diameter core tube
- For cyclical actuation of Buschjost valves
- Compact design
- Easily commissioned
- Flexible timing adjustment
- Universal solenoid
- International approvals

CE

Technical features

Actuating solenoid with built-in electronic timer. Two potentiometers and two slide switches in the terminal box allow flexible adjustment of pulse and interval duration. When the power is switched on, there is a delay of about 1.5s before the valve is opened for a preset pulse duration.

This is followed by a break (Pause). The durations involved are generated by a microcontroller.
The power supply may be interrupted to carry out an operating test without waiting for the break. The (N) terminal can be used to operate the built-in solenoid independently of the cycle set, or to operate an external „reference solenoid" in parallel with the internal coil.

The 110/120 V version's solenoid coil is operated by means of an integral bridge rectifier. In this case external solenoids can only be supplied with power using an additional rectifier.

The pulse solenoid conforms to the Electromagnetic (EMC) (2014/30/EU) and Low Voltage (2014/35/EU) Directives.

Technical data – standard models

Part Number	Supply type	Supply voltage	Voltage range ±	Frequency	Power Consumption		Weight
					Inrush	Holding	(kg)
8821.02400	DC	24 V	10%	–	10 W	10 W	0,65
8821.11050	AC	110 V	10%	50 Hz	11 VA	11 VA	0,65
8821.12060	AC	120 V	10%	60 Hz	11 VA	11 VA	0,65
8821.23050	AC	230 V	10%	50 Hz	24 VA	50 VA	0,65

Standards

EMC interference:
EN 61000-6-3:2007

EMC interference immunity:
EN 61000-6-2:2005

Design acc. to:
nach DIN VDE 580

Technical Data

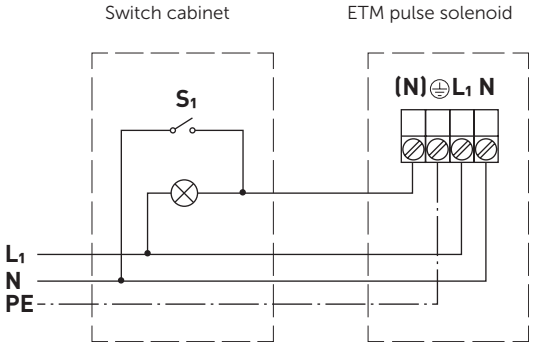
Switching current, external	max. 1 A, (über Klemme (N) bzw. (–))	
Terminals:	Schraubklemmen, max. Anschlussquerschnitt 2,5 mm^2	
Cable gland:	PG 13,5	
Protection:	IP 65 to EN 60529, inlet of PG cable gland must face vertically downwards	
Permissible relative humidity:	max. 95 %	
Medium temperature:	max. 80°C	
Ambient temperature:	20 ... +55°C	
Sum of medium and ambient temperature:	+100°C	
Pulse duration (Impuls):	0,05 ... 1,00 s	short time range S1 = 0
	0,5 ... 10,0 s	long time range S1 = 1
Break duration, standard (Pause):	17,0 ... 360 s	short time range S3 = 0
	5,6 ... 120 min	long time range S3 = 1
Setting tolerance:	±5 % of limit	
Reproducibility:	±1 % of limit	

For test purposes, eg. when commissioning, slide switch S2 can be used to select a test mode with a much shorter break. Switching from Test ON to Test OFF and reverse only effective after power switched off and on again!
Break duration in test mode:

0,05 ... 1,00 s S2 = 1, S3 = 0
937,5 ms ... 20,0 s S2 = 1, S3 = 1

CAUTION!, this mode may only be used briefly (for up to 10 minutes), since with an unfavourable setting it can lead to overheating of the solenoid coil burning out the electronics.

Notes on use of „(N)“ or „(–)“ terminal

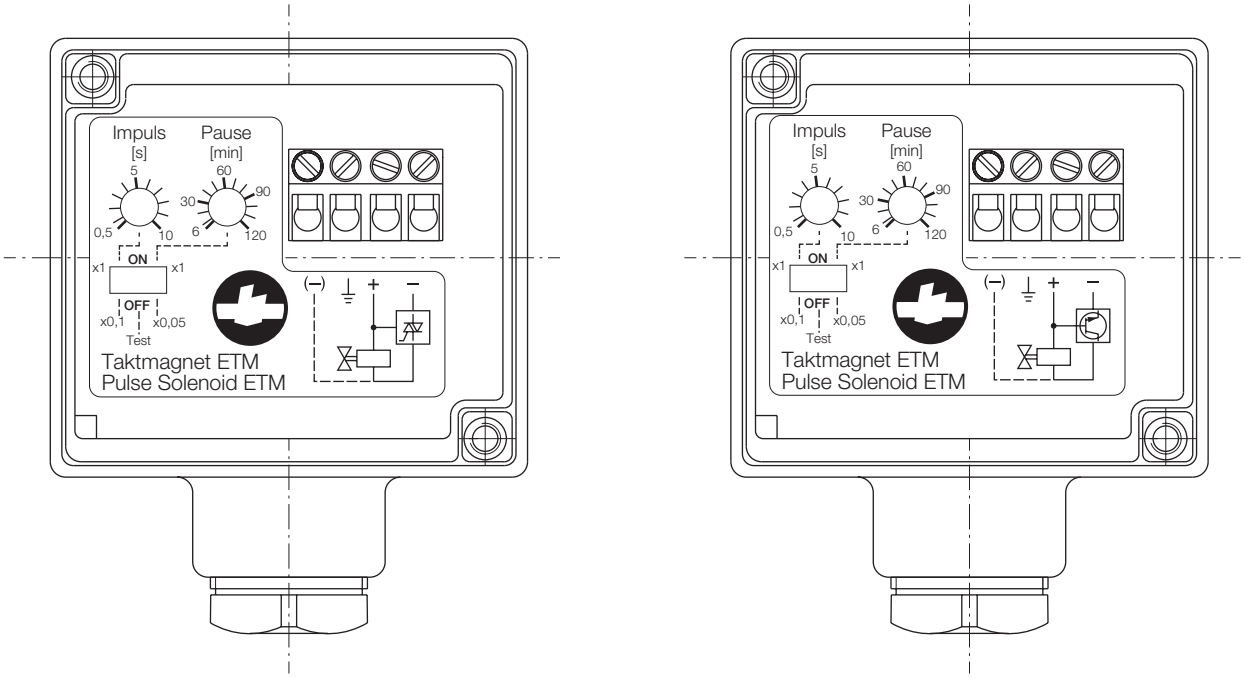


2 functions can be implemented by means of this terminal:
Operation of an external load (indicator light, external solenoid, etc). The wiring required must be provided in a separate housing.

IMPORTANT: Note that the maximum permissible current of 1A must not be exceeded through the (N) or (-) terminal! In the case of the 110/120 V AC version, an external load must be operated using an external rectifier.

Independent operation of the solenoid, without affecting the timing already set. This function bridges the internal electronic switch.

Connection/Operation



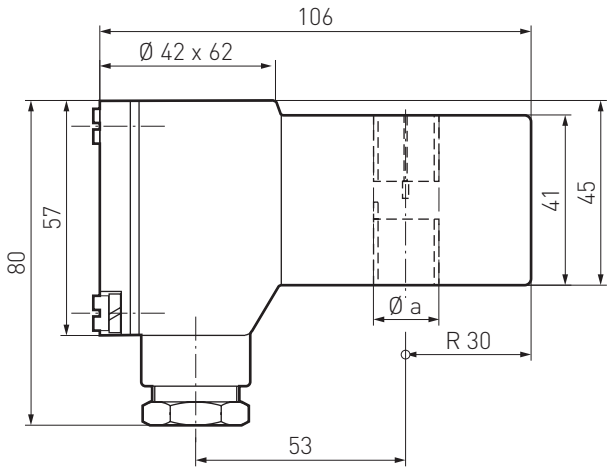
Terminal assignment

a.c. versions		d.c. versions	
L1	Phase	+	+24 V
N	Neutral	–	0 V
	Earth (PE)		Earth (PE)
(N)	Switching output (see note)	(–)	Switching output (see note)

Note: The Earth (PE) connection is not required if the 24 V pulse solenoid is supplied via an isolating transformer.

Installation and commissioning

Install the pulse solenoid in an easily accessible location, taking account of the permissible medium and ambient temperatures. Permanent IP 65 protection is only achieved with the cable gland facing vertically downwards. A hood or similar shield must be used to protect pulse solenoids installed outdoors against direct sunlight and rain. Make the electrical connection in accordance with local regulations and accepted practice.
To avoid any electric shock hazard, the switches and potentiometers may only be adjusted with the pulse solenoid disconnected from the power.



Pulse solenoids may be combined with the following solenoid valves:

Series	Connection	Pressure range
82050 *1)	G3/4 ... 2	1 – 16 bar
82170 *1)	G1/4 ... 2	1 – 16 bar
82400 *2)	G1/4 ... 2	0,1 – 16 bar

*1) ø 16 mm core tube diameter
*2) on request

Caution:
The maximum permissible operating temperatures depend on the pulse solenoid's technical data.
ø a = 13 or 16 mm core tube diameter
mount bushing only to core tube Ø 13 mm