

# Instructions



## Transducer and transformer for potentially explosive atmosphere

### Description

The coupling transformer connects the transducer to measuring instrument. The transformer provide galvanic isolation and a diode safety barrier between the transducer and the instrument. The coupling transformer itself shall be installed in unclassified area.

The Shock Pulse Transducers are also certified for use together with the portable instruments type A30/T30 with certificate Nemko 03ATEX185. The code of the portable instruments is Ex ib I/IIB T4 which also will be the code of the transducers, when used together.

### SAFETY

This equipment must only be installed, used and maintained by competent personnel. Such personnel shall have undergone training, which included instruction on the various types of protection and installation practices, the relevant rules and regulations, and on the general principles of area classification. Appropriate refresher training shall be given on a regular basis (See EN 60079-17).

The installation, use and maintenance of this equipment must comply with the appropriate European, national and local regulations, which may include reference to the IEC standards IEC60079-14, IEC60079-17 and IEC60079-19. In addition, particular industries or end users may have specific requirements relating to the safety (or health) and these requirements should also be met. Instructions and specifications issued by the manufacturer must be followed.

No maintenance is required. The equipment is not repairable. Do not use damaged equipment.

### Specific conditions for safe use

Connection from Coupling Transformers to Shock Pulse Transducers must be evaluated in the end-installation whereof the allowed limits for use of cable must not be exceeded. The following limits applies:

Ratio L/R 506 $\mu$ H/ $\Omega$ . Co: 29nF for IIC or Co: 288nF for IIB or 888nF for IIA.

The intrinsically safe plug (50 $\Omega$  LINE) of the Coupling Transformer shall be isolated from metal parts which may be earth connected and shall withstand a voltage test of 500 V AC for one minute.

### Marking and list of standards

See EC Declaration of Conformity, last page.

**42011, 42111, 42211**

**42011 L69**

Art. no.	Thread (t)	Length
42011	M8	75.5
42011 L69	M8	127.5
42111	UNC 5/16"	75.5
42211	M10	75.5

**14196**

**15127**



## Technical data, transducer 42011, 42011 L69, 42111 and 42211

Approvals:	CE, ATEX, IECEx
Measuring range:	Max. 80dBSV
Environment:	-20°C to +80°C Max. 0.7 MPa (7 bar)
Enclosure:	Stainless steel, acid proof IP67 (depends on TNC plug)
Electrical connector:	TNC
Mounting:	15 Nm (torque) 42011/42011 L69 (M8), 42111 (UNC 5/16"), 42211 (M10)
Weight:	70 g (42011, 42111, 42211) 130 g (42011 L69)

## Technical data, transformer 14196 and 15127

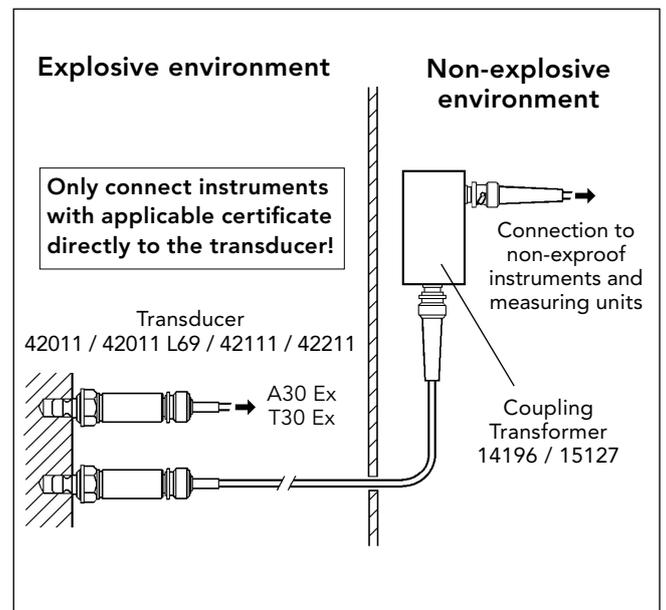
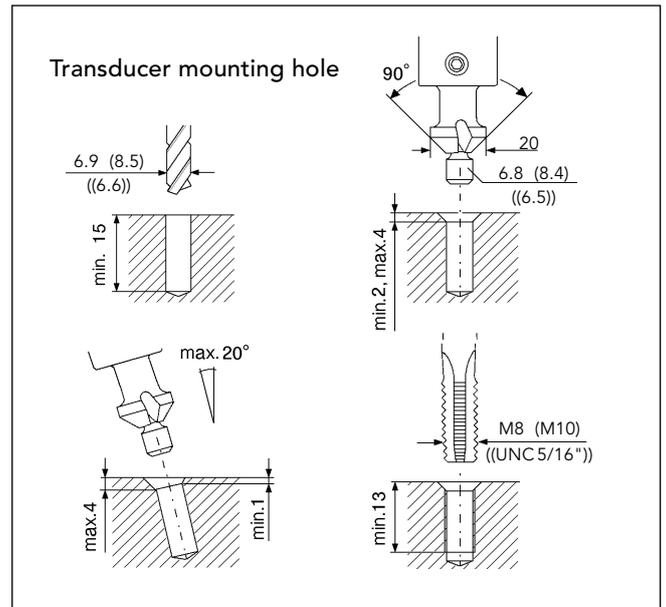
Approvals:	CE, ATEX, IECEx
Environment:	-20°C to +55°C
Enclosure:	Plastic, epoxy sealed
Electrical connector:	TNC – 50Ω LINE (to transducer in hazardous area) BNC – METER (to instrument in safe area)
Mounting:	Max. 3 Nm (torque of fastening screws) 14196 (right angle), 15127 (straight)
Weight:	160 g

## Installation

1. Select the measuring point.
2. Drill, countersink, thread and clean the mounting hole.
3. Mount and torque the transducer.
4. Connect the cable.

## Approved accessories

93035	TNC dust cap, IP67
13008	TNC cable plug, crimp, IP67, stainless steel
15837	TNC cable plug, crimp, IP67, stainless steel, conduit hold
90267	Coaxial cable, 105 pF/m
42811	Shock Pulse Transducer with Quick Connector, Ex
42911	Glue-on Shock Pulse Transducer, Ex



Manufacturer

SPM Instrument AB  
Finningevägen 71  
645 42 Strängnäs  
Sweden

Product(s)

Type	Shock Pulse Transducers Types SPM 42xxx Coupling transformers
Model(s)	42011, 42111, 42211, 42811, 42911, 42011 L69 14196, 15127
Batch/Ser.No	Batch No yyww (year week) is used for traceability

EC directives and harmonized standards

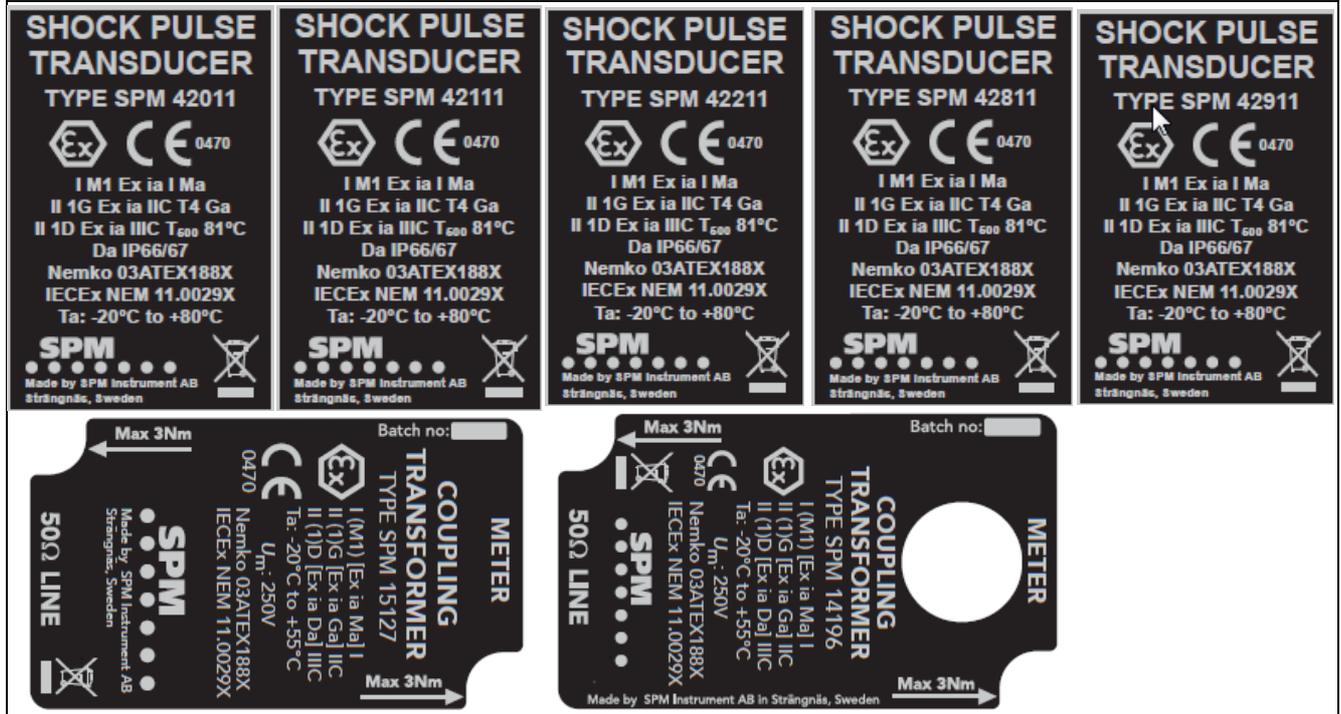
Reference No	Title [remark]
94/9/EC	Equipment for explosive atmosphere (ATEX-directive)
EN 50303:2000	Group I - Category M1 equipment
EN 60079-0:2012	Explosive atmospheres - Equipment - General requirements
EN 60079-11:2012	Explosive atmospheres - Equipment protection by intrinsic safety "i"
EN 60079-26:2006	Explosive atmospheres - Equipment with equipment protection level (EPL) Ga

Other specifications

Reference No	Title [remark]
IECEx NEM 11.0029X	IECEx Certificate of Conformity
IEC 60079-0:2011	Explosive atmospheres - Equipment - General requirements
IEC 60079-11:2011	Explosive atmospheres - Equipment protection by intrinsic safety "i"
IEC 60079-26:2006	Explosive atmospheres - Equipment with equipment protection level (EPL) Ga

EC-Type Examination

Certificate	Nemko 03ATEX188X
NB	NEMKO, Gaustadelleén 30, Oslo N-0314, Norway. NB number 0470
Relevant provisions: Length marking, e.g. 'L69', not shown.	



The undersigned, representing the manufacturer, herewith declares that the product(s) is in conformity with the provision of the above EC directives, harmonized standards and other specifications.

Strängnäs, June 2015

Per-Ola Lidholm, Manager Research & Development Department