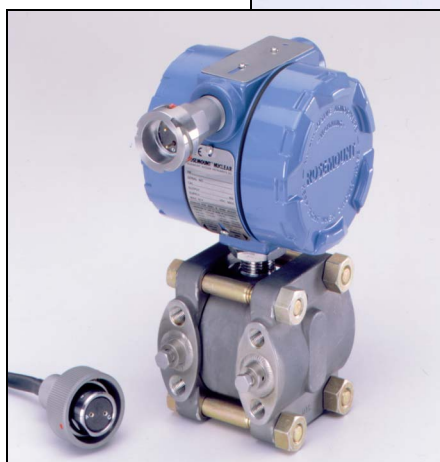
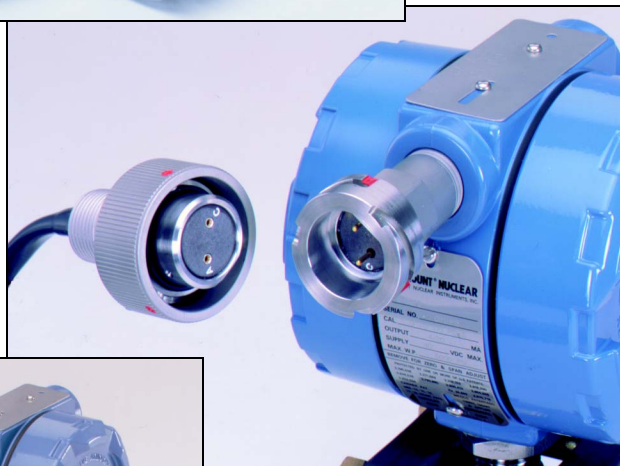
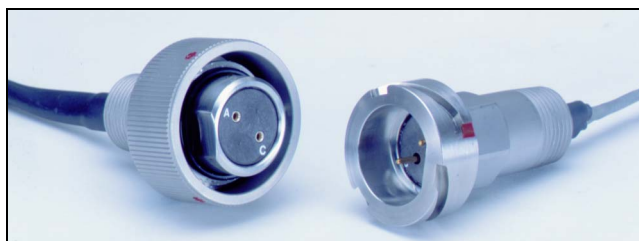


# Quick Disconnect (QDC) Nuclear Electrical Connector

manufactured by **EGS** A Division of  
NUS Instruments  
A SCIENTECH, Inc., Company



## Product Description

The EGS-manufactured 1/2-inch bayonet style quick-disconnect (QDC) nuclear electrical connector (EGS Model 880701-B) can now be purchased from Rosemount Nuclear Instruments, Inc. The bayonet style QDC is a true quick disconnect device that can be locked and unlocked with a simple twist of the hand. The QDC prevents moisture and water from penetrating the transmitter housing. Rosemount Nuclear has seismically qualified the 1/2-inch QDC for use with its nuclear qualified transmitters with no impact on existing published seismic specifications. The QDC can be ordered individually or factory-mounted to the Rosemount Nuclear transmitter.

## FEATURES AND BENEFITS

- Easy installation and assembly to Rosemount Nuclear transmitters
- Option to factory-mount the QDC to Rosemount Nuclear transmitters
- Qualified for use with Rosemount Nuclear transmitters
- Small and lightweight
- No special tools or preassembly required
- Maintenance free (other than o-ring replacement)
- Locking indicator on bayonet for ease of verification

## QUALIFICATION STANDARDS AND REPORTS

Successfully qualified by test in accordance with:

IEEE 572-1985  
IEEE 323-1974/1983  
IEEE 344-1987  
IEEE 382-1980  
10 CFR 50.49

EGS Report PEI-TR-880701-04 (latest revision) provides qualification details for the 1/2-inch QDC. Supplemental seismic qualification details provided by EGS Report EGS-TR-880706-05.

Rosemount Report D9900158 demonstrates that published seismic performance specifications of Rosemount Nuclear transmitters are maintained when the QDC is installed.

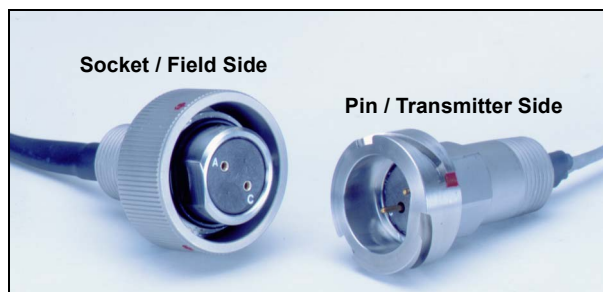


FIGURE 1. 1/2-inch Bayonet Style Quick Disconnect (QDC) Nuclear Electrical Connector

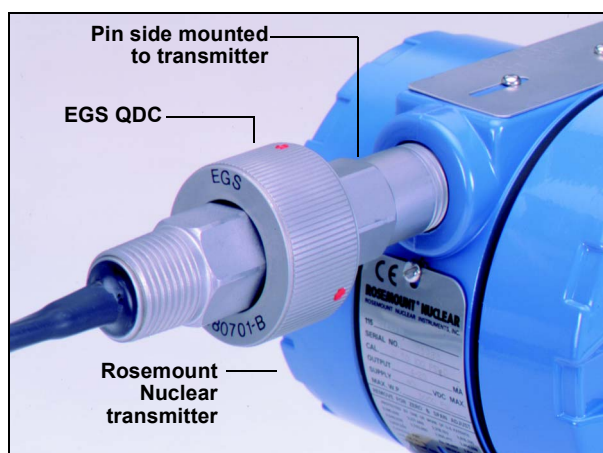


FIGURE 2. Side-mounted QDC (typical of Model 1152 and 1153 Series B Transmitters)  
*Note: Default installation is on transmitter side with zero and span screws.*

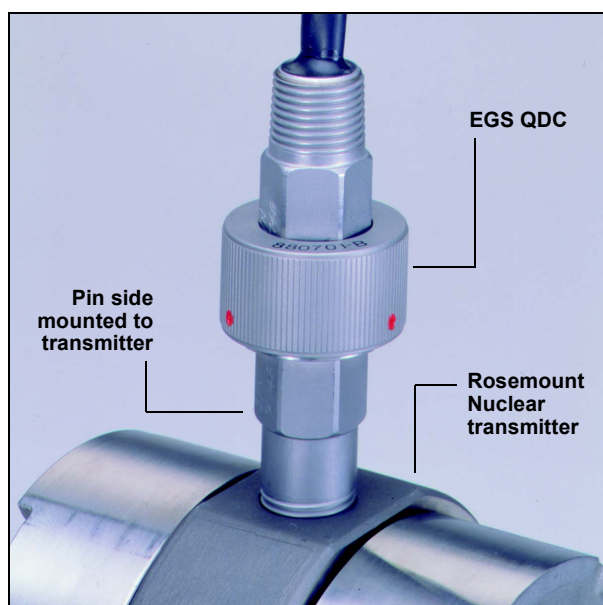


FIGURE 3. Top-mounted QDC (typical of Model 1153 Series D and 1154 Transmitters)

## SPECIFICATIONS

### Qualification Levels<sup>(1)</sup>

<b>Qualified Life</b>	40 years at 150 °F (66 °C)
<b>Radiation</b>	2.5 X 10 <sup>8</sup> rads gamma
<b>Vibration Aging</b>	0.75g, 90 minutes per axis
<b>Thermal Cycling</b>	40 cycles at ΔT = 55 °F (13 °C)
<b>Seismic</b>	8.3 g's ZPA (SSE)
<b>Supplemental Seismic</b>	20 g's per static load
<b>Resonance Frequency</b>	>200 Hz
<b>Accident Peaks</b>	435 °F (224 °C), 77 psig chemical spray, 100% RH
<b>Post-accident Aging</b>	Equivalent to 1 year at 200 °F (93 °C)

(1) See qualification reports for details.

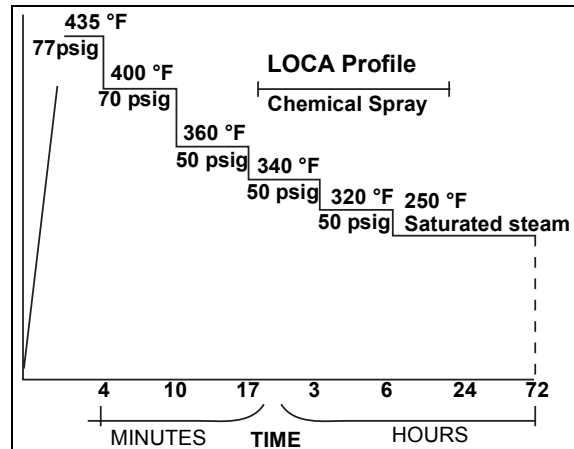


FIGURE 4. LOCA Profile (see qualification reports for details)

### Physical Specifications

<b>Weight:</b>	0.6 lb. (0.27 kg) without pigtails 1.3 lb. (0.59 kg) with standard pigtails
<b>Dimensions:</b>	See Figure 5.
<b>Insulator Material:</b>	PEI
<b>O-ring Material:</b>	EPDM
<b>Potting Material:</b>	Patel type 3
<b>Lead wire Material:</b>	Rockbestos Firewall III (XLPE)
<b>Field Cable Material:</b>	Rockbestos Firewall III (XLPE)

### Electrical Specifications

<b>Wire Size (AWG)</b>	16 AWG
<b>Pin Availability – 1/2-inch NPT</b>	2, 3
<b>Rated voltage (volts)</b>	600
<b>Rated current at 125 °C (amps)</b>	13
<b>Rated contact resistance (ohms)</b>	0.003
<b>Field cable length (pigtail)</b>	20 feet (6 m)
<b>Transmitter side lead wire length</b>	3 feet (0.9 m)

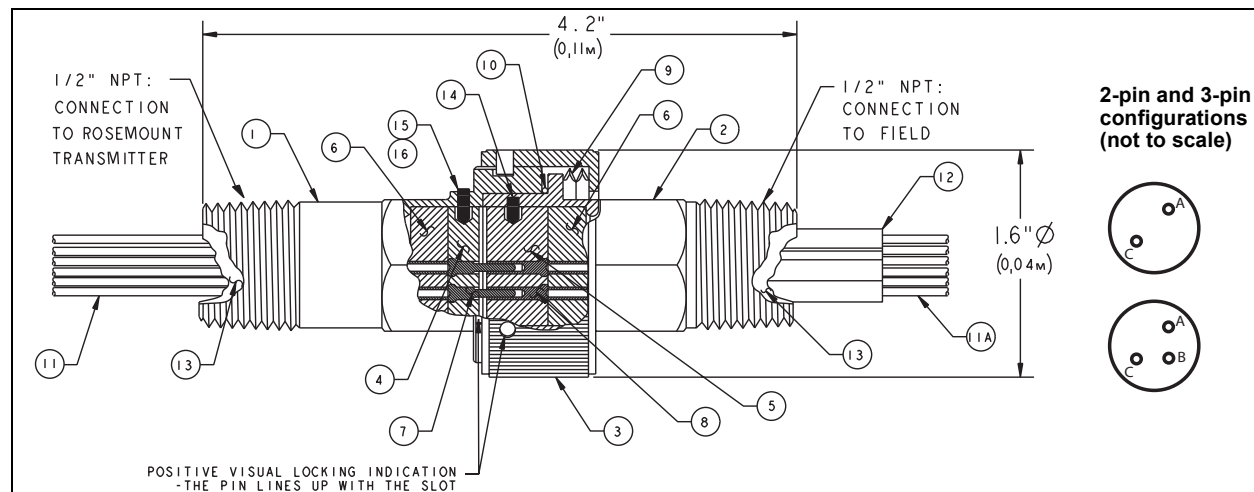


FIGURE 5. Dimensional Drawing

#### Figure 5 Key

1. Pin (transmitter side)	6. Insulator	10. O-ring	13. Potting
2. Socket (field side)	7. Pin	11. Lead wire	14. Set screw
3. Bayonet ring	8. Socket	11A. Field Cable (pigtail)	15. Set screw sealant
4. Insulator	9. Spring	12. Strain relief	16. Set screw
5. Insulator			

## INSTALLATION

The QDC can be installed to the transmitter using the integral lead wire. See Figure 6. Detailed installation instructions are provided in EGS Report EGS-TR-880706-01 (latest revision).

See Figures on page 2 for mounting configuration.

If QDC is ordered separately, not mounted by Rosemount Nuclear, qualification of QDC pin side interface becomes user responsibility. Required flex or rigid conduit to be customer-supplied.

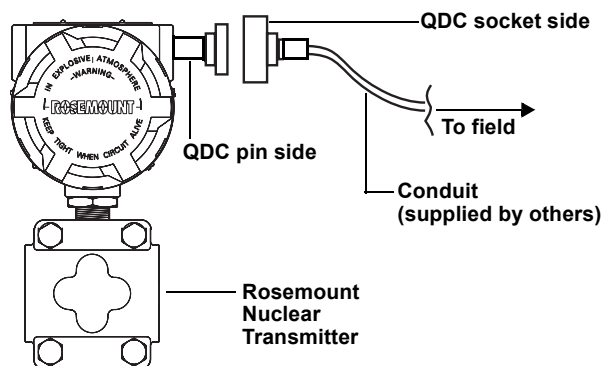


FIGURE 6. Typical QDC Installation on Rosemount Transmitter

## Ordering Information<sup>a</sup>

### 1/2-inch Bayonet Style Quick Disconnect (QDC) Nuclear Electrical Connector

Part Description	Number of Pins	Pin Side Mounted <sup>b</sup>	EGS Part Number <sup>c</sup>	Rosemount® Part Number
Pin and Socket Complete	2	No	880701-2-16-BPE3F3F	01154-0054-0216
Pin and Socket Complete	2	Yes	880701-2-16-BPE3F3F	01154-0056-0216
Pin Side Only	2	No	880701-2-16-BPE3FXX	01154-0054-1216
Pin Side Only	2	Yes	880701-2-16-BPE3FXX	01154-0056-1216
Socket Side Only	2	N/A	880701-2-16-BPEXX3F	01154-0054-2216
Spare O-Ring Kit	N/A	N/A	N/A	01154-0043-0001

**Example of Typical Order: To order 2-pin complete (pin and socket) QDC with pin side mounted to transmitter and socket side placed in transmitter box, place order for Rosemount part number 01154-0056-0216.**

a. For configurations or options not listed, please contact Rosemount Nuclear.

b. Standard mounting per Figure 2. Specify if opposite mounting is required.

c. The EGS part number is provided only for customer convenience. Always use the Rosemount part number when ordering.

## NOTE

Product and technical information related to the QDC is taken from EGS product data sheet, “NUS/EGS - Quick Disconnect (QDC) Electrical Connector” and is intended for general product information only. As it may not represent the most current information, please contact EGS at 1+ (256) 722-8500 for confirmation.

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