

## Instructions

Type DQ Valve Position Monitors are designed to provide high accuracy feedback of valve position to plant control systems. These instructions outline the requirements for ensuring a long and trouble free service life from the monitors.

### Installation - Mounting

Attach mounting plate (1) to the actuator using fasteners (2) and lockwashers (2a) provided with mounting kit (if supplied by Imtex).

Loosen indicator cover set screw (3) and rotate indicator cover (4) to desired viewing angle. Retighten set screw (3).

Rotate coupling spacer (5) and indicator drum (6) to desired position (OPEN or CLOSED appearing through indicator window).

Fit torque coupler (7) or NAMUR drive block (7a) using screw (8) supplied in kit.

Fit monitor assembly to actuator ensuring that the torque coupler/NAMUR drive block (7/7a) engages the pinion of the actuator (9). Secure the assembly using the bolts (10) and lockwashers (11) provided with the mounting kit.

Fine tune the indicator cover (4) by loosening set screw (3). Retighten set screw when completed.

Operate the actuator to ensure proper alignment between monitor and actuator. Eccentricity of the shaft must not exceed 0.25mm. If it should be necessary, re-align monitor by loosening mount bolts (10). Retighten bolts when satisfied with alignment.

### Installation - Wiring & Switch Setting

Once the monitor is fitted to the actuator, remove cover (12). NOTE: On flameproof enclosures, the cover lock screw (13) must be loosened prior to cover removal.

Bring field wiring into the enclosure via the conduit entries (14) fitted with a suitable cable gland. Use blanking plugs to block off any un-used cable entries. NOTE: Suitable IP rated glands and plugs must be used to maintain monitor IP rating. When enclosures are located in a hazardous area, only certified cable glands and blanking plugs can be used.

Connect field wiring to the terminals (15) within the enclosure according to the wiring diagram and terminal labelling. Connect earth conductor (which forms part of the supply cable) to the internal earth point (18).

Drive the actuator to the first required indication position and set the bottom switch by lifting and rotating the bottom cam (16). Secure the cam by allowing it to fully re-engage with the spline (17).

Repeat the process for each switch in-turn by lifting/pushing down the appropriate cam, rotating and re-engaging when desired position is reached.

Once completed, verify that indication is required by fully stroking the actuator. Then refit cover (12), ensuring, the cover lock screw (13) is retightened.

### SPECIAL CONDITIONS FOR CERTIFIED ENCLOSURES - ATEX / IECEx

Installation should be carried out by suitably trained personnel to an applicable Code of Practice (eg IEC/EN60079-14 & IEC/EN61241-14).

Only suitably certified and temperature rated cable glands and blanking plugs are permitted for use with ATEX/IECEx certified enclosures.

WARNING - The cable entry temperature rise is 2 deg C above ambient - ensure use of suitably temperature rated cable & gland.

⚠ WARNING - The unit contains non-conducting parts and must not be installed in locations where external conditions (such as high pressure steam) might cause a build up of electrostatic charge. In addition clean only with a damp cloth.

WARNING - Do not install on an external source of heating or cooling e.g. by hot/cold air blowing temperature units

WARNING - Locate monitor to prevent propagating brush discharges

WARNING - Monitor should not be opened when energised or an explosive atmosphere may be present. The cover screw (13) must be loosened before opening and re-tightened before the monitor re-enters service.

### Maintenance

The Type DQ requires no servicing during normal working life, if installed correctly. However, it is advisable to check mounting screws/bolts, o-rings and terminal wiring for signs of loosening or corrosion as part of the routine plant maintenance to ensure continued operation. Ensure safety warnings are observed during maintenance. Inspection & maintenance to ATEX/IECEx certified enclosures to be carried out by suitably trained personnel with applicable code of practice (eg IEC/EN60079-17 & IEC/EN61241-17). Repairs to Type DQ ATEX/IECEx flameproof enclosures are not permitted. Please consult factory.

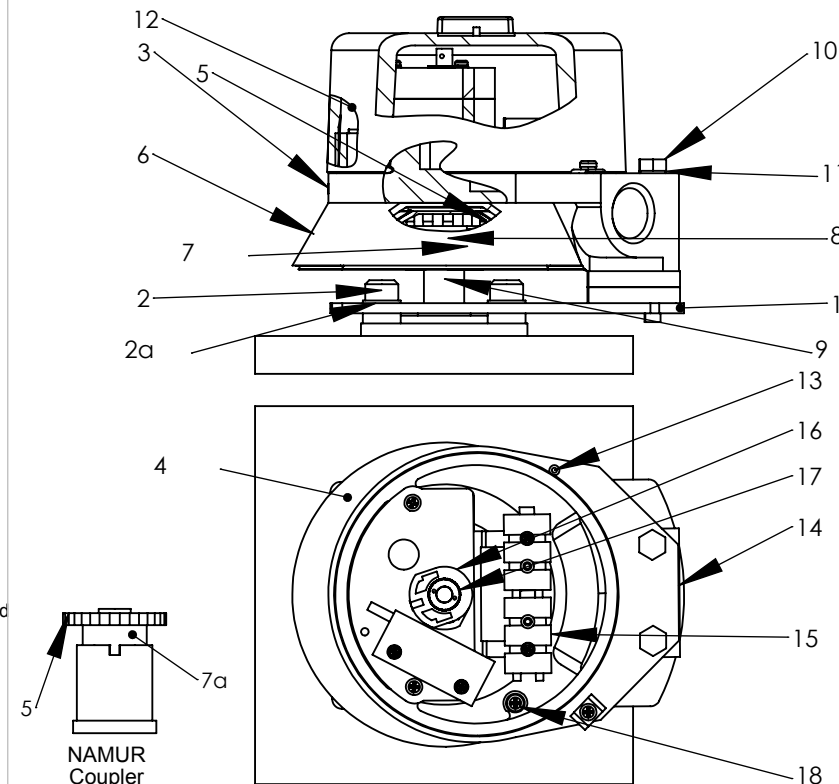
REV	DRAWN	DATE	CHK'D	ECO
	PT	7.2.12		12-1785
A	PT	14.2.17		17-2618
B	PT	1.2.18		18-2692

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## Reference Diagram



### Additional Instructions for Safe Use

The certification for this monitor relies upon the following materials used in its construction:

- Stainless Steel
- EDPM 70 Seals

If the equipment is likely to come into contact with aggressive substances, then it is the responsibility of the user to take suitable precautions that prevent it from being adversely affected, thus ensuring that the type of protection provided by the equipment is not compromised. Aggressive substances might be: acidic liquids or gases that attack Stainless Steel, or direct and prolonged contact with some Hydrocarbons that could affect the seals. Regular checks/inspections should be carried out if aggressive substances are present.

UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN MILLIMETERS  
SURFACE FINISH:  
TOLERANCES:  
LINEAR:  
ANGULAR:

TITLE:

Installation, Operating & Maintenance

DQ 25 & 58 - IECEx/ATEX

DEBUR AND  
BREAK SHARP  
EDGES

MATERIAL:

WEIGHT(g):

DWG NO.

A190273

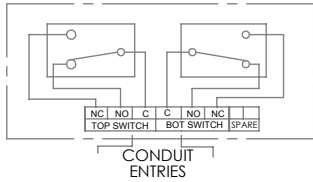
STATUS  
S

SCALE:1:5

SHEET 1 OF 2

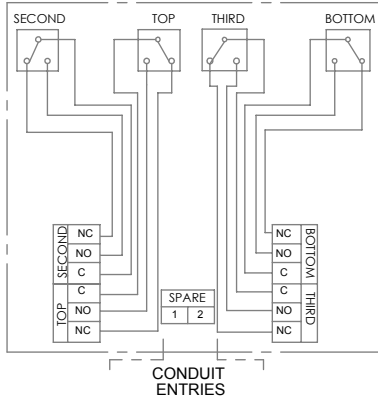
### Wiring Diagrams

MONITOR - 2 x SPDT Switch - DQ25



NOTE: Spare Terminals are Non-Standard Feature

MONITOR - 4 x SPDT Switch - DQ 58



NOTE: Spare Terminals are Non-Standard Feature

### Referenced Standards

The following standards have been referred to in these instructions and are applicable to the use of this product when used in an environment where an explosive atmosphere may be present:

- IEC 60079-0:2017 7th Ed
- IEC60079-7:2015 5th Ed
- IEC 60079-18:2014 4th Ed
- EN60079-0:2012
- EN60079-7:2015
- EN60079-18:2015

### Cable Entries

The number and type of cable entry on the Monitor can be determined by reference to the 6th digit of the monitor part number. For example, in part number -

DQ25S5SR

the sixth digit is a '5' which corresponds to the monitor having 2 off M20 x 1.5 cable entry. Refer to table below for details.

CABLE ENTRY GUIDE	
DIGIT	ENTRIES SUPPLIED
5	(2) M20 x 1.5
6	(3) M20 x 1.5
8	(1) 3/4" NPT (central entry) (1) 1/2" NPT (offset entry)
9	(1) 3/4" NPT (central entry) (2) 1/2" NPT (offset entry)
B	(2) 1/2" NPT
C	(3) 1/2" NPT

NPT Threads conform to ANSI/ASME B1.20.1 and shall be made up wrench tight

Metric Thread tolerance to ISO 965-1 and ISO 965-3

### Operating Data

#### DQ25 & 58 (-xSW) - SPDT Reed Switch

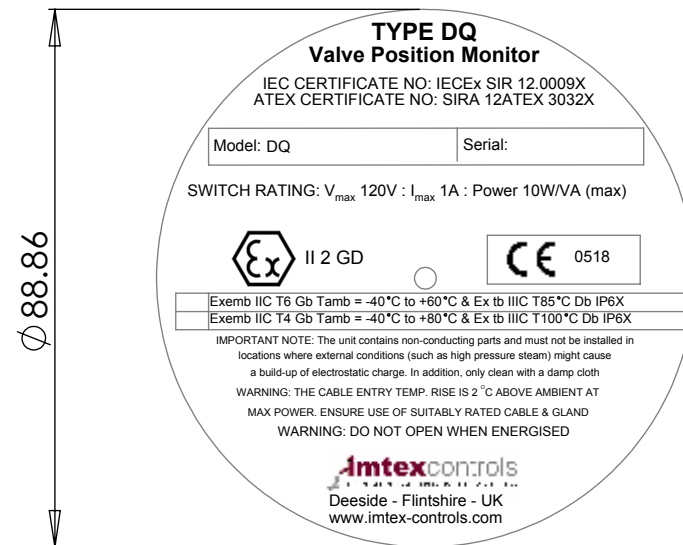
Electrical Ratings: 0.5A (Switching)  
1.0A Max (Steady State)  
120V Max (Voltage)  
10W/WA Max (Power)

Temp Range: -40 to +80 Deg C

**Installation of Reed Switches:** If switches are installed at the end of long cable runs, it is the responsibility of the installer to ensure suitable precautions are taken to ensure cable capacitance does not induce premature switch failure. Consult Imtex for further information

### Product Markings

The label on the monitor should be as below:



REV	DRAWN	DATE	CHK'D	ECO
	PT	7.2.12		12-1785
A	PT	14.2.17		17-2618
B	PT	1.2.18		18-2692

UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN MILLIMETERS  
SURFACE FINISH:  
TOLERANCES:  
LINEAR:  
ANGULAR:

TITLE:  
**Installation, Operating & Maintenance**  
**DQ25 & 58 - IECEx/ATEX**

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DEBUR AND BREAK SHARP EDGES

MATERIAL:

WEIGHT(g):

DWG NO.

**A190273**

STATUS  
S

SCALE:1:5

SHEET 2 OF 2