

## Product data sheet

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Date: October, 2008

FieldQ

# Smart - Control Modules

## QC01: (24VDC) & QC02: (85-254VAC/VDC)

### Description:

These FieldQ QC01 and QC02 Smart Control Modules offer an integrated concept for "On/Off" valve automation. Its compact and robust construction incorporates IPT technology with auto-initialization for easy setting of feedback switches.

### Construction:

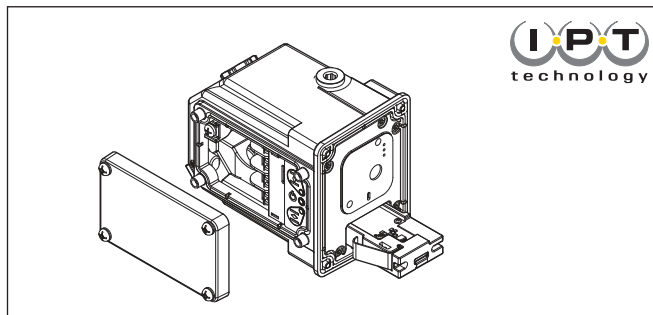
The Control Module is mounted at the side of the Pneumatic Module in front of the basic actuator housing. Inside are terminals available for connecting control and feedback wiring. Two cable entries are available for this purpose.

### Features:

- Supports both single and double acting actuators.
- **One entry for all wiring** (control and feedback).
- **IPT-technology** (Intelligent Position Tracking).
- **Automatic initialization** for easy setup of the actuator. **Pressing 4 seconds** simultaneously the "Open" and "Closed" reassignment buttons starts auto-initialization procedure and sets automatically the feedback limit switches.
- **Readjustable or Reversible position feedback** using the reassignment buttons.
- **Three indication LED's** for "Status", "Open" and "Closed" position. Status LED indicates:

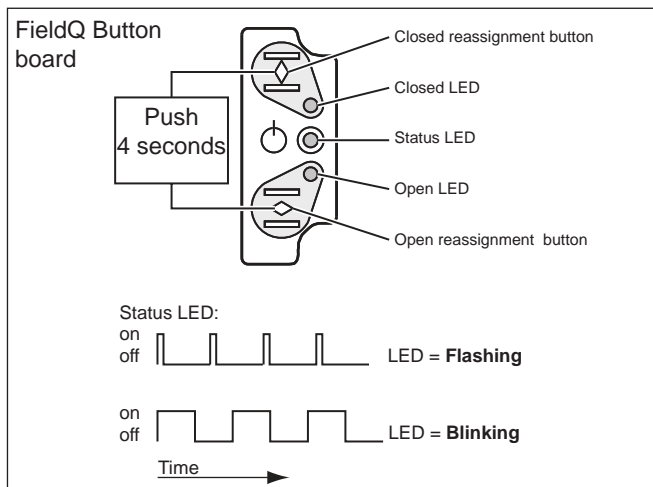
Initialization procedure running	Blinking
Successful initialization procedure	LED is on
No or failed initialization	Flashing

- Control Module **is easily plugged in** the Pneumatic Module.
- Modular functionality for **easy update** towards present and future bus systems.
- **The power supply and all inputs and outputs are galvanic isolated** which offers greater flexibility for systems connection.



### General Specifications:

Material housing	: Aluminium alloy
Cable entries	: 2x M20x1.5 or 2x 1/2"NPT
Electrical connections	: Internal terminal strip.
Enclosure	: IP65 / NEMA 4X
Finish	: Polyester non-TGIC based powder coating.
Operating media	: Air or inert gasses, filtered at 50 micron
Temperature	: -20° to +80°C / -4° to 176°F
Dimensions	: See data sheet : 1.603.01 - metric 1.603.04 - imperial/UNC 1.603.02 - DIN 3337



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### Options:

#### Manual Control

Can be added as kit or factory option in 2 versions, "Push button" or a "Push and lock" button.



#### Glands and plugs

FieldQ Control Modules QC01 or QC02 can be shipped with plastic or metal glands (M20x1.5 or 1/2"NPT) and rated IP65/NEMA4X or higher.

#### Hazardous area modules:

##### - Non-Incendive of Non-Sparking

Control Modules QC01 and QC02 are available with optional Non-Incendive of Non-Sparking approvals as listed below:

- **IECEX** : ExnA II T4  
: Ex tD A22 T90°C / IP65  
: Certificate : KEM 07.0046X
- **ATEX** :  II 3 G Ex nA II T4  
:  II 3 D Ex tD A22 T90°C / IP65  
: Certificate : KEMA 02ATEX1258X
- **FM** : Non-Incendive, Class I, II, III, Div.2,  
Group ABCDFG T4, Type 4X/IP65  
: Class I, Zone 2, IIC T4
- **CSA** : Non Incendive: Class I, II, III, Div.2,  
Groups ABCDFG, T4  
: Ex nA II T4 (Class I, Zone 2)  
: Certificate: 1477696

#### Ambient temperature:

- T4 @ Ta = : QC01: -20°C...+75°C (-4°F...167°F)  
: QC02: -20°C...+73°C (-4°F...163°F)

##### - Intrinsically safe:

For information about intrinsically safe Control Modules, see 1.604.011

##### - Short circuit monitoring and line break detection

For information about Control Modules with short circuit monitoring and line break detection (IEC 60947 part 5-6, NAMUR switch characteristics), see 1.604.011



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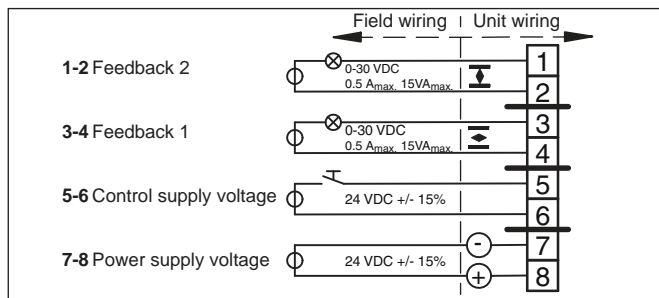
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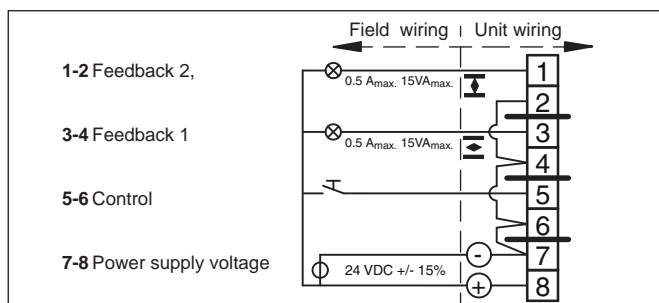
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# Wiring & Electrical Specifications QC01 & QC 02

## QC01



QC01, 24VDC electric connections, separate circuits



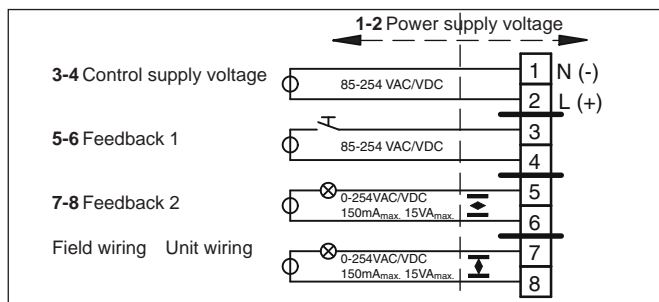
QC01, 24VDC electric connections, common “-”

### Electrical data QC01 : 24VDC

Power supply input :	
Voltage	24 VDC (±15%)
Maximum current	125 mA
Power (nominal)	2.5 W
Control signal input :	
Voltage	24 VDC (±15%)
Maximum current	5 mA
Contacts	Potential free
Feedback switches output:	
Voltage	0-30 VDC
Current DC	500 mA (maximum) 1 mA (advised minimum)
Resistance (nom.)	0.5 Ohm (On state)
Maximum power	15 W
Electric contacts	Potential free
Polarity:	
Dependent	Power supply
Independent	Control signal + feedback switches.

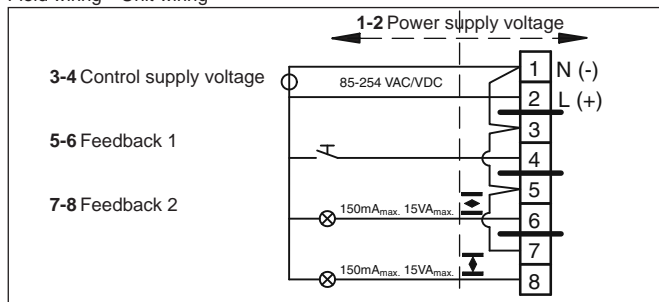
- For Non-Incendive (Cl. I Div2) or Non-Sparking (Zone 2) hazardous area applications, see Installation Guide : DOC.IG.QC01.1

## QC02



QC02, 85-254 VAC/VDC electric connections, separate circuits

Field wiring Unit wiring



QC02, 85-254 VAC/VDC electric connections, single power

### Electrical data QC02 - 85-254 VAC/VDC

Power supply input :	
Voltage	85-254 VAC/VDC (rated mains 95-230V) 50/60Hz
Maximum current (*)	60 mA
Power (nominal)	2.8 W
Control signal input :	
Voltage	85-254 VAC/VDC, 50/60Hz
Maximum current	2.5mA at 115 V 5mA at 230 V
Feedback output:	
Voltage	0-254 VAC/VDC, 50/60Hz
Maximum current	150mA (AC or DC)
Maximum power	15 W
Electric contacts	Potential free

(\*) The QC02 module has a fuse in the supply live line. It is not allowed to replace this fuse in the field.

- For Non-Incendive (Cl. I Div2) or Non-Sparking (Zone 2) hazardous area applications, see Installation Guide : DOC.IG.QC02.1



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