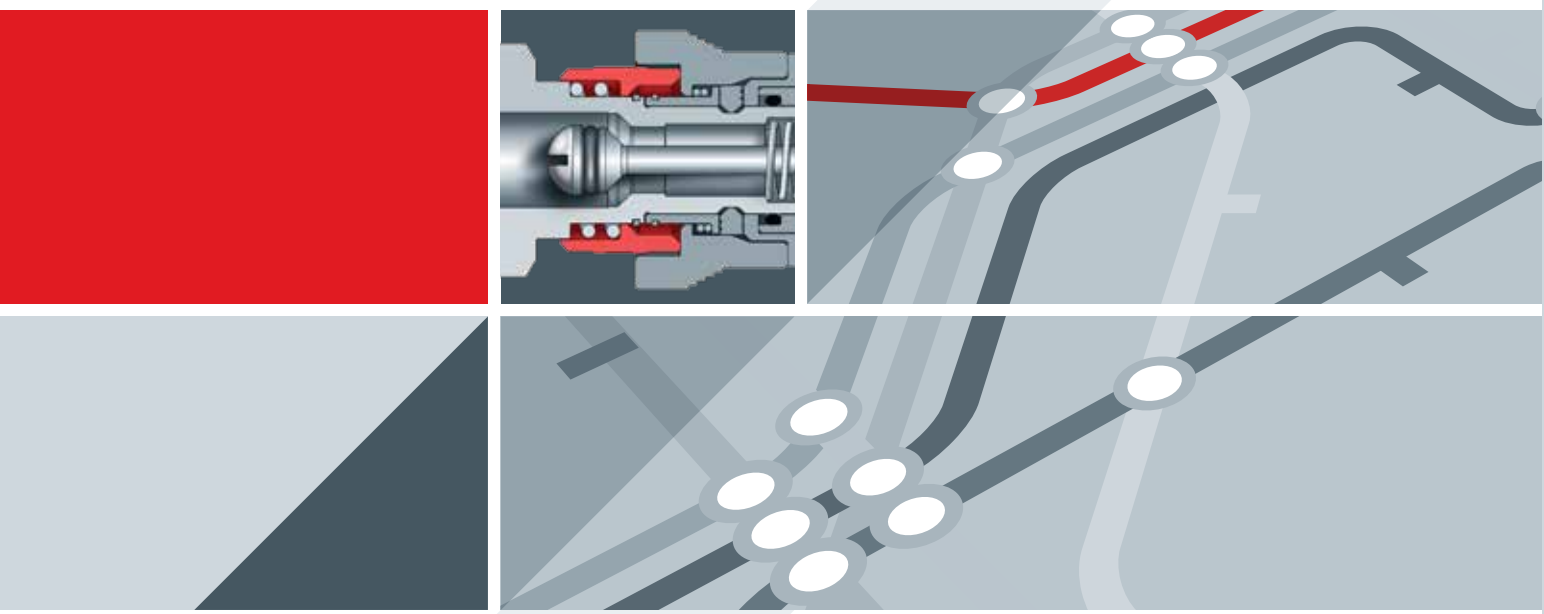


QCLOK[®]

INSTRUMENTATION QUICK CONNECTORS

QUICK CONNECTORS



 **HAM-LET[®]**
ADVANCED CONTROL TECHNOLOGY

FEATURES

- Valved and non-valved stems available
- Working pressure rating: up to 3,000 psig (206 bar)
- Interchangeable and intermixable with major manufacturers' Instrumentation Quick Connectors
- Fluorocarbon FKM O-Rings as standard, other O-rings are available per request
- Smooth and safe connection between the QC-LOK® Connector valves is reached by a simple pushing operation due to a smart heavy duty locking mechanism
- The QC-LOK® Instrumentation Quick Connectors validation tests are based on ANSI/B93.51M-1980

GENERAL

The HAM-LET QC-LOK® Instrumentation Quick Connectors are designed for service in a large variety of applications, with a MAWP of up to 3,000 psig (206 bar).

Single and Double End Shutoff Stems

Single-end shutoff (SESO) - Stems have no valve and remain open when uncoupled.

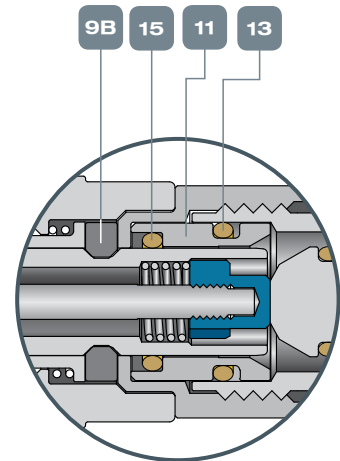
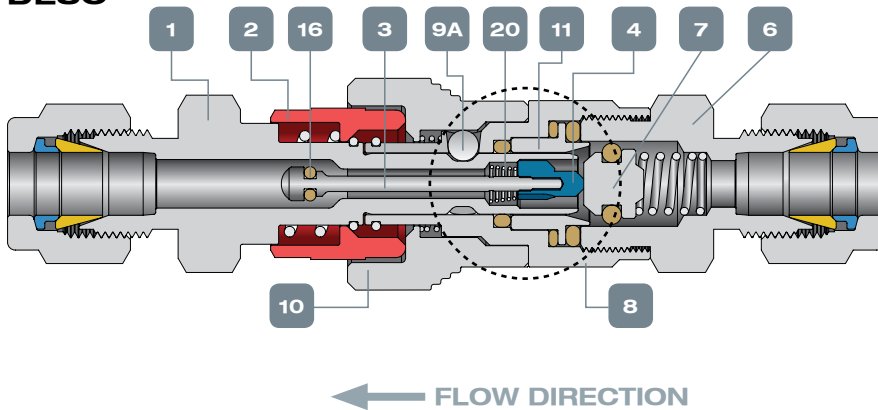
Double-end shutoff (DESO) - Stems have valve and shut off when uncoupled.

MATERIALS OF CONSTRUCTION			MATERIALS OF CONSTRUCTION				
	Components	Material		Components	Material		
Valved and Non-Valved Stems	1	Body	316SS	O-Rings	12	Poppet seal	Fluorocarbon FKM
	2	Sleeve	316SS		13	End connection seal	Fluorocarbon FKM
	3	Stem	316SS		14A*	Body seal	Fluorocarbon FKM
	4	Stem nut	316SS		15	Stem seal	Fluorocarbon FKM
	5	Extender	316SS		16	Stem Internal seal	Fluorocarbon FKM
Body	6	End connection	316SS	Springs	17	Poppet spring	316SS
	7	Poppet	316SS		18	Body sleeve spring	316SS
	8	Body	316SS		19	Stem sleeve spring	316SS
	9A*	Locking Balls	302SS		20	Stem spring	316SS
	9B**	Locking Dogs	316SS		21	Stem sleeve locking ring	316SS
	10	Sleeve	316SS		22	Body sleeve locking ring	316SS
	11	Internal body	316SS				

*A - QC4 Only **B - QC6 and QC8 Only

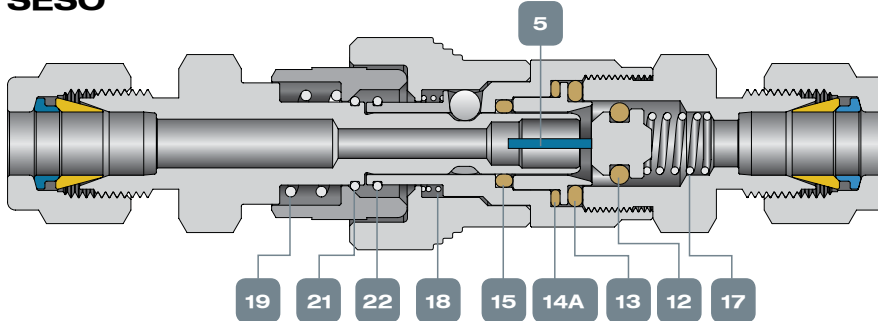
QC4 CROSS SECTION

DESO



Detailed view QC6 and QC8

SESO



CLEANING & PACKAGING

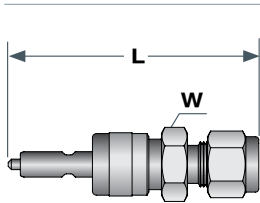
Every Quick connector is cleaned in accordance with Standard Cleaning and Packaging (procedure 8184). Oxygen Clean & Lubricant Free Cleaning and packaging, in accordance with Special Cleaning and Packaging (procedure 8185), is available as an option.

TESTING

The Quick Connectors designs have been tested for Proof and Burst. Every Quick Connector is factory tested for proper assembly by leakage detection at 1000 psig (68 bar) or its maximum working pressure if less than 1000 psig (68 bar). The maximum allowable leakage is 0.1 std cc/min.

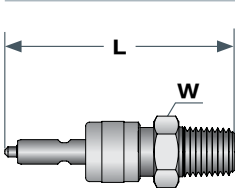
QC-LOK® SERIES DIMENSIONS - STEM

Let-Lok® Stem



Fitting Size	Basic Ordering Numbers		Series	Flow Coefficient (Cv)		Dimensions		
	SESO	DESO		SESO	DESO	L		W
						SESO	DESO	
Dimensions, in. (mm)								
1/8"	QC4-SS-S-L-1/8	NA	QC4	0.08	-	2.27 (57.8)	-	5/8
1/4"	QC4-SS-S-L-1/4	QC4-SS-D-L-1/4	QC4	0.3	0.2	2.36 (59.9)	2.42 (61.5)	5/8
3/8"	QC6-SS-S-L-3/8	QC6-SS-D-L-3/8	QC6	1.0	0.5	2.52 (64.0)	2.64 (67.1)	3/4
1/2"	QC8-SS-S-L-1/2	QC8-SS-D-L-1/2	QC8	2.4	1.5	2.96 (75.2)	3.16 (80.3)	15/16
Dimensions, mm (in.)								
6	QC4-SS-S-L-6MM	QC4-SS-D-L-6MM	QC4	0.3	0.2	59.9 (2.36)	61.5 (2.42)	16
10	QC6-SS-S-L-10MM	QC6-SS-D-L-10MM	QC6	1.0	0.5	67.3 (2.65)	70.4 (2.77)	22
12	QC8-SS-S-L-12MM	QC8-SS-D-L-12MM	QC8	2.4	1.5	75.2 (2.96)	80.3 (3.16)	24

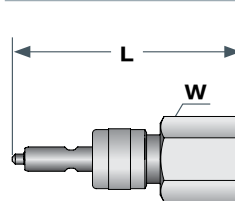
Male Pipe Thread Stem



Fitting Size	Basic Ordering Numbers		Series	Flow Coefficient (Cv)		Dimensions, in. (mm)		
	SESO	DESO		SESO	DESO	L		W inch
						SESO	DESO	
NPT (ISO Tapered, BSPT*)								
1/8"	QC4-SS-S-MN-1/8	QC4-SS-D-MN-1/8	QC4	0.3	0.2	2.07 (52.6)	2.13 (54.1)	5/8
1/4"	QC4-SS-S-MN-1/4	QC4-SS-D-MN-1/4	QC4	0.3	0.2	2.22 (56.4)	2.28 (57.9)	5/8
3/8"	QC6-SS-S-MN-3/8	QC6-SS-D-MN-3/8	QC6	0.8	0.5	2.35 (59.7)	2.47 (62.7)	3/4
1/2"	QC8-SS-S-MN-1/2	QC8-SS-D-MN-1/2	QC8	2.0	1.3	2.84 (72.1)	3.04 (77.2)	15/16
ISO Parallel, BSPP								
1/8"	QC4-SS-S-MG-1/8	QC4-SS-D-MG-1/8	QC4	0.3	0.2	2.07 (52.6)	2.13 (54.1)	5/8
1/4"	QC4-SS-S-MG-1/4	QC4-SS-D-MG-1/4	QC4	0.3	0.2	2.22 (56.4)	2.28 (57.9)	3/4
3/8"	QC6-SS-S-MG-3/8	QC6-SS-D-MG-3/8	QC6	0.8	0.5	2.35 (59.7)	2.47 (62.7)	3/4
1/2"	QC8-SS-S-MG-1/2	QC8-SS-D-MG-1/2	QC8	2.0	1.3	2.84 (72.1)	3.04 (77.2)	15/16

* For ISO Tapered (BSPT) change MN to MR

Female Pipe Thread Stem

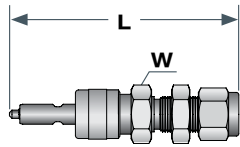


Fitting Size	Basic Ordering Numbers		Series	Flow Coefficient (Cv)		Dimensions, in. (mm)		
	SESO	DESO		SESO	DESO	L		W inch
						SESO	DESO	
NPT (ISO Tapered, BSPT*)								
1/8"	QC4-SS-S-FN-1/8	QC4-SS-D-FN-1/8	QC4	0.3	0.2	2.01 (51.1)	2.07 (52.6)	5/8
1/4"	QC4-SS-S-FN-1/4	QC4-SS-D-FN-1/4	QC4	0.3	0.2	2.26 (57.4)	2.32 (58.9)	3/4
3/8"	QC6-SS-S-FN-3/8	QC6-SS-D-FN-3/8	QC6	0.8	0.5	2.35 (59.7)	2.47 (62.7)	7/8
1/2"	QC8-SS-S-FN-1/2	QC8-SS-D-FN-1/2	QC8	2.0	1.3	2.82 (71.6)	3.02 (76.7)	1 1/16
ISO Parallel, BSPP								
1/8"	QC4-SS-S-FG-1/8	QC4-SS-D-FG-1/8	QC4	0.3	0.2	2.01 (51.1)	2.07 (52.6)	5/8
1/4"	QC4-SS-S-FG-1/4	QC4-SS-D-FG-1/4	QC4	0.3	0.2	2.26 (57.4)	2.32 (58.9)	3/4
3/8"	QC6-SS-S-FG-3/8	QC6-SS-D-FG-3/8	QC6	0.8	0.5	2.35 (59.7)	2.47 (62.7)	7/8
1/2"	QC8-SS-S-FG-1/2	QC8-SS-D-FG-1/2	QC8	2.0	1.3	2.82 (71.6)	3.02 (76.7)	1 1/16

* For ISO Tapered (BSPT) change FN to FR

QC-LOK® SERIES DIMENSIONS - STEM

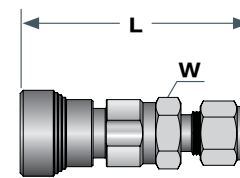
Let-Lok® Bulkhead Stem



Fitting Size	Basic Ordering Numbers		Series	Flow Coef- ficient (Cv)		Dimensions				
	SESO	DESO		SESO	DESO	L		W	Max Panel Thickness	Min Panel Hole Dia
Dimensions, in. (mm)										
1/4"	QC4-SS-S-LB-1/4	QC4-SS-D-LB-1/4	QC4	0.3	0.2	2.74 (69.6)	2.80 (71.1)	5/8	0.25 (6.4)	15/32 (11.9)
3/8"	QC6-SS-S-LB-3/8	QC6-SS-D-LB-3/8	QC6	1.0	0.5	2.92 (74.2)	3.07 (78.0)	3/4	0.44 (11.17)	19/32 (15.1)
1/2"	QC8-SS-S-LB-1/2	QC8-SS-D-LB-1/2	QC8	2.4	1.5	3.43 (87.1)	3.63 (92.2)	15/16	0.50 (12.7)	25/32 (19.8)
Dimensions, mm (in.)										
6	QC4-SS-S-LB-6MM	QC4-SS-D-LB-6MM	QC4	0.3	0.2	69.6 (2.74)	71.1 (2.80)	16	6.4 (0.25)	11.9 (15/32)
10	QC6-SS-S-LB-10MM	QC6-SS-D-LB-10MM	QC6	1.0	0.5	77.7 (3.06)	78.7 (3.10)	22	11.2 (0.44)	16.7 (21/32)
12	QC8-SS-S-LB-12MM	QC8-SS-D-LB-12MM	QC8	2.4	1.5	87.1 (3.43)	92.2 (3.63)	24	12.7 (0.50)	19.6 (49/64)

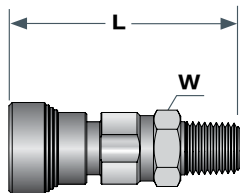
QC-LOK® SERIES DIMENSIONS - BODY

Let-Lok® Body



Fitting Size	Basic Ordering Number	Series	Dimensions	
			L	W
Dimensions, in. (mm)				
1/8"	QC4-SS-B-L-1/8	QC4	2.26 (57.4)	5/8
1/4"	QC4-SS-B-L-1/4	QC4	2.30 (58.4)	5/8
3/8"	QC6-SS-B-L-3/8	QC6	2.58 (65.5)	3/4
1/2"	QC8-SS-B-L-1/2	QC8	3.09 (78.5)	15/16
Dimensions, mm (in.)				
6	QC4-SS-B-L-6MM	QC4	58.4 (2.30)	16
10	QC6-SS-B-L-10MM	QC6	68.1 (2.68)	22
12	QC8-SS-B-L-12MM	QC8	78.5 (3.09)	24

Male Pipe Thread Body



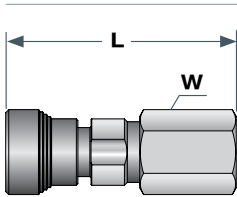
Fitting Size	Basic Ordering Number	Series	Dimensions, in. (mm)	
			L	W
NPT (ISO Tapered, BSPT*)				
1/8"	QC4-SS-B-MN-1/8	QC4	2.01 (51.1)	5/8
1/4"	QC4-SS-B-MN-1/4	QC4	2.16 (54.9)	5/8
3/8"	QC6-SS-B-MN-3/8	QC6	2.38 (60.5)	3/4
1/2"	QC8-SS-B-MN-1/2	QC8	2.97 (75.4)	15/16
ISO Parallel, BSPP				
1/8"	QC4-SS-B-MG-1/8	QC4	2.01 (51.1)	5/8
1/4"	QC4-SS-B-MG-1/4	QC4	2.16 (54.9)	3/4
3/8"	QC6-SS-B-MG-3/8	QC6	2.38 (60.5)	3/4
1/2"	QC8-SS-B-MG-1/2	QC8	2.97 (75.4)	15/16

* For ISO Tapered (BSPT) change MN to MR



QC-LOK® SERIES DIMENSIONS - BODY

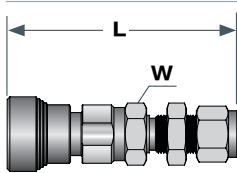
Female Pipe Thread Body



Fitting Size	Basic Ordering Number	Series	Dimensions, in. (mm)	
			L	W
NPT (ISO Tapered, BSPT*)				
1/8"	QC4-SS-B-FN-1/8	QC4	2.16 (54.9)	5/8
1/4"	QC4-SS-B-FN-1/4	QC4	2.42 (61.5)	3/4
3/8"	QC6-SS-B-FN-3/8	QC6	2.57 (65.3)	7/8
1/2"	QC8-SS-B-FN-1/2	QC8	3.22 (81.8)	1 1/16
ISO Parallel, BSPP				
1/8"	QC4-SS-B-FG-1/8	QC4	2.16 (54.9)	5/8
1/4"	QC4-SS-B-FG-1/4	QC4	2.42 (61.5)	3/4
3/8"	QC6-SS-B-FG-3/8	QC6	2.57 (65.3)	7/8
1/2"	QC8-SS-B-FG -1/2	QC8	3.22 (81.8)	1 1/16

* For ISO Tapered (BSPT) change FN to FR

Let-Lok® Bulkhead Body



Fitting Size	Basic Ordering Number	Series	Dimensions		Max Panel Thickness	Min Panel Hole Dia
			L	W		
Dimensions, in. (mm)						
1/4"	QC4-SS-B-LB-1/4	QC4	2.67 (67.8)	5/8	0.25 (6.4)	15/32 (11.9)
3/8"	QC6-SS-B-LB-3/8	QC6	2.98 (75.7)	3/4	0.44 (11.17)	19/32 (15.1)
1/2"	QC8-SS-B-LB-1/2	QC8	3.56 (90.4)	15/16	0.50 (12.7)	25/32 (19.8)
Dimensions, mm (in.)						
6	QC4-SS-B-LB-6MM	QC4	67.8 (2.67)	16	6.4 (0.25)	11.9 (15/32)
10	QC6-SS-B-LB-10MM	QC6	75.9 (2.99)	22	11.2 (0.44)	16.7 (21/32)
12	QC8-SS-B-LB-12MM	QC8	90.4 (3.56)	24	12.7 (0.50)	19.6 (49/64)

Overall Length Calculation for QC Series

To calculate the overall length in the coupled position, subtract the insertion depth from any overall Stem and Body combination length

- SESO 1/4" : 28.6 mm (0.89 inch)
- DESO 1/4" :30.2 mm (0.95 inch)
- SESO 3/8" : 30.0 mm (1.18 inch)
- DESO 3/8" :33.0 mm (1.3 inch)
- SESO 1/2" : 37.6 mm (1.48 inch)
- DESO 1/2" : 42.7 mm (1.68 inch)

Dimensions are for reference only, and are subject to change without notice

RECOMMENDATIONS

- It is recommended to install a filter ahead of the QC-LOK®
- Hanging hoses or other accessories should be supported in order to prevent side loads
- The QC-LOK® should be coupled or uncoupled at room temperature, and while the bodies and stems are aligned
- Stem seal O-Rings should be lubricated from time to time

Pressure-Temperature Ratings	
Coupled	*MAWP QC4 3000 psig (206 bar) @ 70°F (21°C)
	*MAWP QC6 1500 psig (103 bar) @ 70°F (21°C)
	*MAWP QC8 750 psig (51.7 bar) @ 70°F (21°C)
	*MAWT 400°F (204°C) @ 250 psig (17.2 bar)
Uncoupled and When Coupling and Uncoupling	*MAWP 250 psig (17.2 bar) @ 70°F (21°C)

*MAWP - Maximum Allowable Working Pressure

*MAWT - Maximum Allowable Working Temperature

Note:

Uncoupled QC-LOK is rated up to 70°F (21°C)

Pressure & Temperature ratings are for stainless steel construction and Fluorocarbon FKM Seals

Spillage and Air Inclusion		
Size	Spillage CM ³	Air Inclusion CM ³
1/4"	0.3	0.3
3/8"	1.0	1.0
1/2"	3.0	3.0

Definitions:

Spillage: Volume of flowing media that will be released from the system while disconnecting the DESO (only) Quick Connector.

Air Inclusion: Volume of air that will be entered to the system while connecting the DESO (only) Quick Connector.

Maximum Flow Rate	
Size	Water Flow U.S. gal/min (L/min) at 70°F (20°C)
QC4	4 (15)
QC6	6 (22)
QC8	10 (37)

O-RINGS

Different materials are available for special applications

O-Ring Material	Temperature Rating °F (°C)
Buna N	-35 to 250 (-37 to 121)
Ethylene Propylene (EPDM)	-70 to 250 (-57 to 121)
Fluorocarbon FKM	-15 to 400 (-26 to 204)
Polychloroprene (CR)	-35 to 225 (-37 to 107)
Perfluoroelastomer	-15 to 500 (-26 to 260)

WARNING

- Always take notice of pressure rating restrictions that apply to coupling or uncoupling
- SESO should not be uncoupled under pressure
- QC-LOK® should not be rotated while coupled

QC4 SERIES ORDERING INFORMATION

QC4 - SS - B - L - 1/4 - [] - []

Series	Material	Connector Type	End Connection	Size	O - Ring
QC4- 1/4" Body	SS - 316	B - Body	L - LET-LOK® (Tube)	1/8 6MM	BLANK - Fluorocarbon FKM
QC6- 3/8" Body		S - SESO Stem	LB - LET-LOK® Bulkhead	1/4 6MM	BU - BUNA N
QC8- 1/2" Body		D - DESO Stem	NB - NPT Bulkhead	3/8 10MM	EP - EPDM
			MN - Male NPT	1/2 12MM	NE - Polychloroprene (CR)
			FN - Female NPT		KZ - Perfluoroelastomer
			MG - Male ISO Parallel		
			FG - Female ISO Parallel		
			MR - Male ISO Tapered		
			FR - Female ISO Tapered		
			H - Hose Connector		
			HL - ONE-LOK®		

DESO Stems can't be made with 1/8" ends

Treatment

OC - Oxygen Clean



LF - Lubricant Free

High-Flow Quick Connectors

The full-flow option contains a full flow body and a SESO stem. To order a full flow body, please select the relevant letters and "HF".
Example: QC4-SS-B-FN-1/4-HF

BODY AND STEM PROTECTORS

Body & stem protectors prevent entry of contaminants & damages caused upon uncoupling of the bodies and stems. The protectors do not contain pressure.

STEM PROTECTOR	BODY PROTECTOR
QC4-SS-SP QC6-SS-SP QC8-SS-SP	QC4-SS-BP QC6-SS-BP QC8-SS-BP
	

Warning!

The system designer and user have the sole responsibility for selecting products suitable for their special application requirements, ensuring their safe and trouble-free installation, operation, and maintenance. Application details, material compatibility and product ratings should all be considered for each selected product. Improper selection, installation or use of products can cause property damage or personal injury.

QC-LOK, Rev.05, January 2014

