

High-speed response! Battery powered! 1 rank higher functions for your application!

High-speed Dispensing / Selection

3QR High-response specifications

Industry top level
Response time **2ms**



Features high-response specifications

- High response
2±0.5ms/1±0.5ms (ON/OFF)
- Long service life 100 million operations
- Coil surge voltage reduced

Applications



Dispenser



Taping machine

Battery drive / Continuous energization

3QR Free power supply specification

Industry's first
Free power supply
Solenoid

Patent
pending



Features free power supply specifications

- Can be used with 5 to 32 VDC
Ideal for battery drive
- Proprietary electronic circuit technology enables
stable operation even with voltage fluctuations
- Continuous energization enabled at low exoergic temps (0.9 W)



3QR high-response / Free power supply specifications

CKD Corporation

<https://www.ckd.co.jp/en/>

LN-006A

●Contact a CKD Sales representative for special specifications of this product.

3QR high-response / Free power supply specifications

Common specifications

Item	Description	
	High-response specifications	Free power supply specification
Valve and operation	Direct acting poppet valve	
Working fluid	Compressed air, low vacuum	
Min. working pressure MPa	-100 kPa	
Max. working pressure MPa	0.7 MPa	
Proof pressure MPa	1.05 MPa	
Ambient temperature °C	-5 to 40°C (no freezing)	-5 to 50°C (no freezing)
Fluid temperature °C	5 to 40	5 to 50
Lubrication	Not available	
Degree of protection	Dust-proof	
Vibration resistance m/s ²	50 or less	
Shock resistance m/s ²	300 or less	
Atmosphere	Cannot be used in corrosive gas environments	

Electrical specifications

Item	Description	
	High-response specifications	Free power supply specification
Rated voltage V	24 DC	5 to 32 DC
Voltage fluctuation range	-10% to +4%	-
Starting current A	0.38	0.4
Holding current A	0.15	0.26
Power consumption (holding) W	2.6	0.9
Startup time ms	5	50
Thermal class	B	

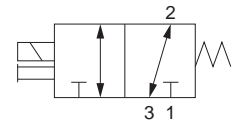
- *1: High-response specifications cannot be used with continuous energization. Max. continuous energizing time 5 mins.
- *2: The free power supply specification can be used with continuous power supply, but the accumulated time of the power supplied causes deterioration, resulting in shortening the service life operating cycle.
- *3: Products will be sold after specifications are exchanged in the specification sheet.

Performance characteristic

Item		Description			
		High-response specifications		Free power supply specification	
		Direct piping	Base piping	Direct piping	Base piping
Response time ^{*4}	ms	ON:2±0.5ms OFF:1±0.5ms		ON:5ms or less OFF:10ms or less	
Flow Rate Characteristics dm ³ /(s·bar)	Flow path 1 → 2	0.36	0.36	0.30	0.30
	Flow path 2 → 1	0.38	0.40	0.32	0.34
	Flow path 2 → 3	0.38	0.40	0.32	0.36
	Flow path 3 → 2	0.36	0.40	0.30	0.34

*4: JIS B 8419:2010 Depending on dynamic performance test (supply pressure 0.5MPa, 20°C, no lubrication, constant voltage (24 VDC), initial values during continuous energization)

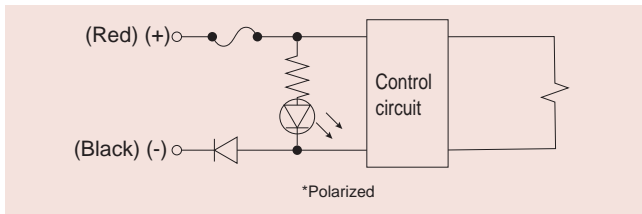
2-position universal



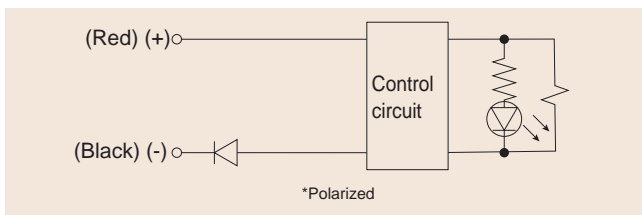
Port Nos. 1, 2, 3 will display the following:
 Port 1: P, NC
 Port 2: A, COM
 Port 3: R, NO

Connection circuit

● High-response specifications



● Free power supply specification



Both high-response and free power supply specifications have polarity. Note that incorrect wiring will cause inactivity.

How to order

● High-response specifications

3QRA1 10 - M5 - C2 H- FLA *** - 3**
 Model No. Electrical connections^{*1}

● Free power supply specification

3QRB1 10 - M5 - C2 - FLA *** - 3**
 Model No. Electrical connections^{*1}

- *1: Fill in the 5-digit number ***** after the order model number is selected.
- *2: Large flow rate H cannot be selected for free power supply specifications.
- *3: Manifold specifications can also be selected.
- *4: Voltage for high response specifications is 24 VDC only.

If the goods and/or their replicas, the technology and/or software found in this catalog are to be exported from Japan, Japanese laws require the exporter makes sure that they will never be used for the development and/or manufacture of weapons for mass destruction.

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