GAS AND OIL-SURGE RELAYS / SELECTION

QJ50 / QJ80

DN50 / DN80 Buchholz relays

Installed in the pipe between the transformer tank and conservator. Gas accumulation and oil surge operate the selected alarm / trip contacts. A gas collection arrangement and signal memory can be specified in the order code.

01 Operating and setting data

Parameter	DN50	DN80
Operating temperature	-40 to +100 °C	-40 to +100 °C
Gas accumulation	250-300 mL	250-300 mL
Oil velocity setting range	0.6-1.2 m/s	0.7-1.5 m/s
Factory velocity setting	0.8 ± 0.1 m/s	1.0 ± 0.1 m/s

Installation: pipe axis parallel to the tank cover. The conservator end may be slightly higher; the catalog specifies a maximum inclination of **4%** from horizontal (not 4 degrees).

02 Order-code examples

QJ4-80ATH-J: design 4, DN80, 500 mL gas collection box (A), hot-humid environment (TH), signal memory (-J).
QJ3-50TH: design 3, DN50, hot-humid environment.

B denotes a 600 mL gas collection box; TA denotes a dry tropical environment. Collection-box capacity is different from the gas accumulation operating value.

Scope: models on printed catalog pages 31-32. QJ25, QJ9-80 float-series and digital relays are separate series. Confirm the complete order code and contact arrangement.

MODEL REFERENCES / ELECTRICAL CONTACTS

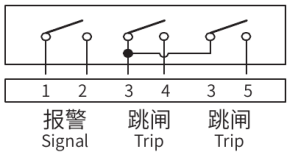
Models & contact arrangements

03 Cable outlet count by model

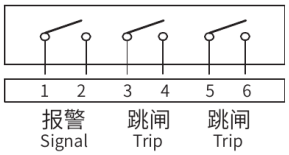
Pipe	One outlet	Two outlets
DN50	QJ1-50, QJ4-50	QJ3-50, QJ12-50, QJ13-50, QJ16-50
DN80	QJ1-80, QJ2-80, QJ4-80	QJ3-80, QJ6-80, QJ12-80, QJ13-80, QJ16-80, QJ19-80

04 Original wiring diagrams

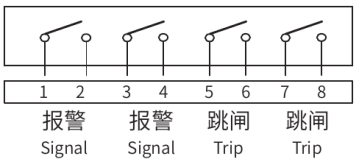
QJ1型、QJ2型、QJ4型



QJ3型、QJ6型、QJ12型



QJ13型、QJ19型



QJ16型

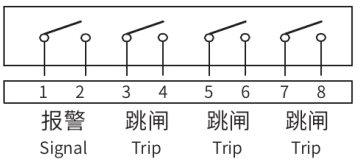


Diagram groups: QJ1 / QJ2 / QJ4; QJ3 / QJ6 / QJ12; QJ13 / QJ19; QJ16. The original alarm / trip labels, terminals and contact symbols are retained.

05 Contact capacity

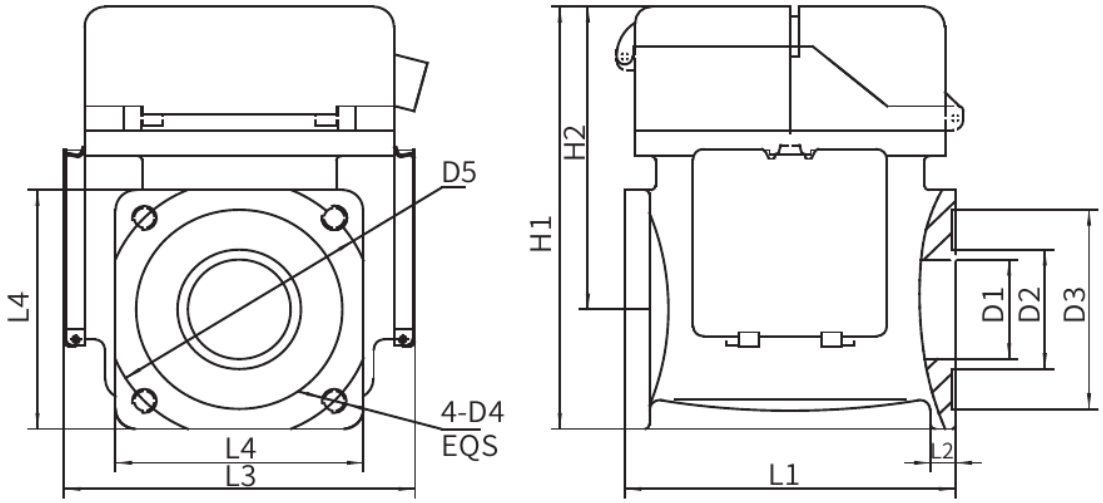
Supply	Voltage	Current	Catalog condition
DC	220 V	0.3 A	Time constant: S <= 5 x 10^{-3} s
AC	220 V	0.3 A	Power factor: cos phi <= 0.6

Contact arrangement varies by design number. Match the exact model and suffixes before connecting the alarm or trip circuit.

MECHANICAL / INSTALLATION

Outline & mounting dimensions

Original drawing geometry and labels. Dimensions below are in millimetres.



06 Dimension reference

Dimension	QJ1-50	Other DN50*	QJ1-80	Other DN80*
D1	dia. 50	dia. 50	dia. 80	dia. 80
D2	dia. 60	/	dia. 85	/
D3	dia. 100	/	dia. 110	/
D4	M12	dia. 14	M12	dia. 18
D5	dia. 130	dia. 125	dia. 130	dia. 160
H1	212	215	212	235
H2	152	154	152	154
L1	160	185	160	185
L2	12	15	12	15
L3	170	170	170	170
L4	120	125	120	160

* Other DN50: QJ3 / 4 / 12 / 13 / 16-50. Other DN80: QJ2 / 3 / 4 / 6 / 12 / 13 / 16 / 19-80. Slash (/) means no value is supplied in the catalog table; do not substitute zero.