



- 1-channel
- Input frequency 1 mHz ... 12 kHz
- Analogue output 0/4 mA ... 20 mA
- Measuring range parameterizable
- 2 relay outputs
- 1 electronic output, isolated
- Each output can be assigned individual parameters, such as a limiting value (high/low alarm), incrementing, pulse separator or error message output
- Start-up override
- Restart inhibit
- Lead breakage (LB) and short-circuit (SC) monitoring
- Bounce filter
- Parameterization via PC or control panel (optional)

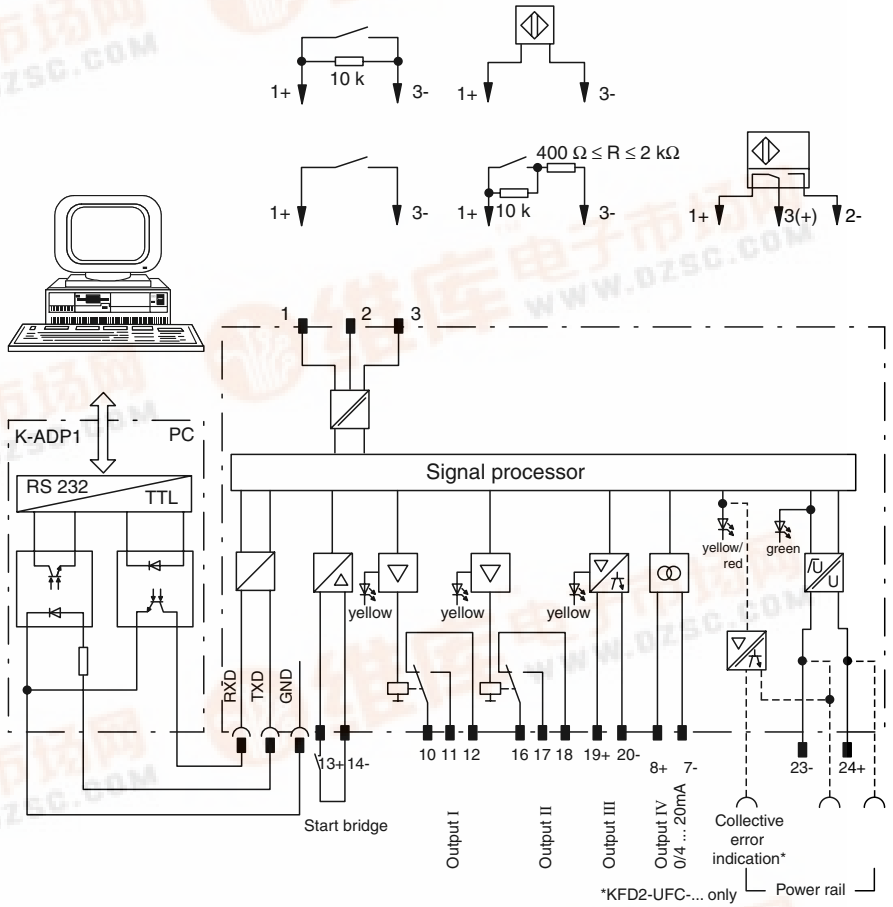
48 ... 253 V AC / 20 ... 90 V DC

KFU8-UFC-1

48 ... 253 V AC / 20 ... 90 V DC

KFU8-UFC-1.D

(with control panel)



Aufbau

Front View

Housing type B2
(see Catalogue DIN-RAIL
Housing system description)

LED yellow/red:
Input pulses/
Fault signal

LED yellow:
Output I-III

Programming jack



Removable terminal green

LED green:
Power supply

Control panel

Keypad

Removable terminals green



Power supply

| | |
|---------------------------------|----------------------------------|
| Connection type | terminals 23+, 24- |
| Rated operational voltage U_e | 20 ... 90 V DC / 48 ... 253 V AC |
| Rated operational current | - |
| Power loss/Power consumption | ≤ 2 W; 2.5 VA / 2.2 W; 3 VA |

Input

| | |
|---|---|
| Connection type | 2-wire sensor: terminals 1+, 3- |
| Input I | sensor |
| Input resistance | 4.7 kOhm |
| Input pulse length/Input pulse interval | ≥ 50 μ s / ≥ 50 μ s |
| Voltage | 22 V |
| Current | max. 30 mA; limitation 40 mA |
| Lead monitoring | breakage $I \leq 0.15$ mA; short-circuit $I > 6.5$ mA |
| Input II | start-up override: 1 ... 1000 s, adjustable in steps of 1 s |
| Quiescent voltage/Short-circuit current | 18 V / 5 mA |
| Active/Passive | $I > 4$ mA (for min. 100 ms) / $I < 1.5$ mA |

Output

| | |
|------------------------|--|
| Connection type | output I: terminals 10, 11, 12; output II: terminals 16, 17, 18 output III: terminals 19+, 20-; output IV: terminals 8+, 7- |
| Output I and II | signal, relay |
| Contact loading | 250 V AC / 2 A / $\cos \varphi \geq 0.7$; 40 V DC / 2 A |
| Mechanical life | 5×10^7 switchings |
| Pull-in/Drop-out delay | approx. 20 ms / approx. 20 ms |
| Output III | electronic output, passive |
| Signal level | 1-signal: (L+) - 2.5 V (50 mA, short-circuit/overload proof) 0-signal: switched off (off-state current ≤ 10 μ A) |
| Voltage U_m | 40 V |
| Output IV | analogue |
| Current range | 0 ... 20 mA or 4 ... 20 mA |
| Quiescent voltage | ≤ 24 V DC |
| Load | ≤ 650 Ohm |
| Fault signal | downscale $I \leq 3.6$ mA, upscale ≥ 21 mA (accord. to NAMUR NE 43) |

Transfer characteristics

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|--|---|
| Measurement range f_n | 0.001 Hz ... 12 kHz |
| Resolution | frequency measurement: 0.1 %; current output: < 10 μ A |
| Duration of measurement/Response delay | approx. 100 ms / ≤ 200 ms |
| Deviation | frequency measurement: 0.1 % of final value; current output: < 10 μ A |
| Temperature | frequency measurement: 0.003 % / $^{\circ}$ C (30 ppm); current output: 0.005 % / $^{\circ}$ C (50 ppm) |

Galvanic isolation

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|--|--|
| Input/Other circuits | safe galvanic isolation acc. to DIN EN 50020, voltage peak value 375 V |
| Output I/Mains and reset | safely isolated in accordance with DIN VDE 0106 Part 101, design isolation voltage 253 V_{eff} |
| Output I, II/Other circuits | safely isolated in accordance with DIN VDE 0106 Part 101, design isolation voltage 253 V_{eff} |
| Mutual output I, II, III | safely isolated in accordance with DIN VDE 0106 Part 101, design isolation voltage 253 V_{eff} |
| Output III, IV/Mains | safely isolated in accordance with DIN VDE 0106 Part 101, design isolation voltage 253 V_{eff} |
| Output III/IV/Start-up override | function insulation acc. to DIN EN 50178, design isolation voltage 253 V_{eff} |
| Start-up override/Mains and collective error | safely isolated in accordance with DIN VDE 0106 Part 101, design isolation voltage 253 V_{eff} |
| Interface/Mains/Output III | safely isolated in accordance with DIN VDE 0106 Part 101, design isolation voltage 253 V_{eff} |

Ambient conditions

| | |
|---------------------|---|
| Ambient temperature | -20 ... 60 $^{\circ}$ C (253 ... 333 K) |
|---------------------|---|

Standard conformity

| | |
|-------------------------------|------------------------------------|
| Input | according to DIN EN 60947-5-6 |
| Coordination of insulation | accord. to DIN EN 50178 |
| Galvanic isolation | accord. to DIN EN 50178 |
| Climatic conditions | accord. to DIN IEC 721 |
| Electromagnetic compatibility | accord. to EN 50081-2 / EN 50082-2 |

Mechanical specifications

| | |
|------|-------|
| Mass | 300 g |
|------|-------|

