

IPAQ C520

HART Compatible Universal Dual-input 2-wire Transmitters



The IPAQ C520 transmitters are universal, isolated, dual-input temperature transmitters with additional voltage and resistance input. The IPAQ C520N is approved for Non-Incendive use in Ex-Zone 2. C520X/C520XS are Intrinsically Safe versions for use in Ex-Zone 0, 1 and 2. The transmitters are compatible with the HART 6 protocol. Typical characteristics are the high accuracy, stability and reliability combined with a robust housing.

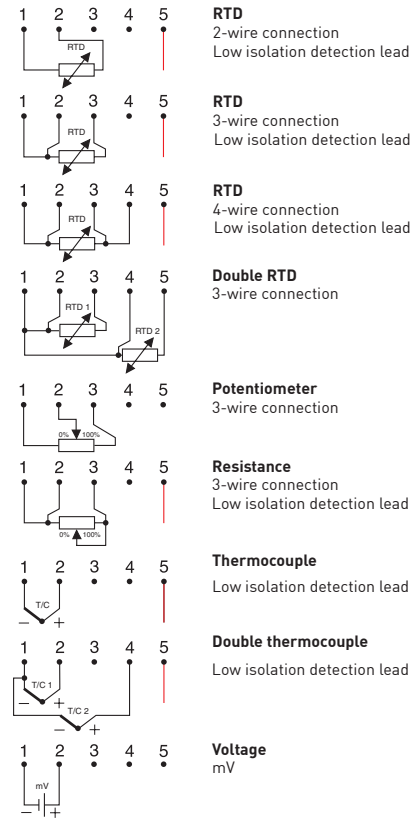
- Universal, dual-input for RTD and T/C
- SIL 2 compatible according to IEC 61508-2
- 5 year guaranteed stability
- Withstands 10 g vibrations
- Complies with NAMUR NE 21, NE 43, NE 53, NE 89 and NE 107
- EMC immunity according to Criteria A
- Sensor Backup
- Sensor Drift Monitoring
- Sensor Isolation Monitoring
- Sensor matching
- 50 point customized linearization
- Integrated in Emerson AMS and Siemens PDM systems

Specifications:

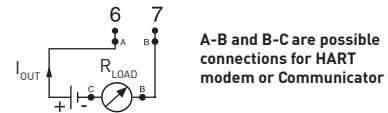
| Input RTD | | |
|--|----------------------------------|--|
| Pt100 | [IEC 60751, $\alpha=0.00385$] | -200 to +850 °C |
| PtX (10 ≤ X ≤ 1000) | [IEC 60751, $\alpha=0.00385$] | Corresp. to max. 4 000 Ω |
| Pt100 | [JIS C 1604, $\alpha=0.003916$] | -200 to +850 °C |
| Ni100 | [DIN 43760] | -60 to +250 °C |
| Ni120 | [Edison Curve No. 7] | -60 to +250 °C |
| Ni1000 | [DIN 43760] | -50 to +180 °C |
| Cu10 | [Edison Cu Windings No. 15] | -50 to +200 °C |
| Input connections | One sensor | 2-, 3- and 4-wire connection |
| | Two sensors | 2- and 3-wire connection |
| Input Thermocouple | | |
| | T/C types | B, C, D, E, J, K, N, R, S, T |
| Input Resistance | | |
| | Potentiometer | 100 to 4000 Ω, 2-, 3- and 4-wire connection |
| Input Voltage | | |
| | | -10 to +1000 mV |
| Double inputs for RTD and Thermocouple | | |
| Measure mode | | T1 or T2 or difference, average, min, max of T1 and T2 |
| Sensor Redundancy | | Automatic switchover to undamaged sensor |
| Sensor Drift Monitoring | | Adjustable maximum temp. difference T1-T2 |
| Output | | |
| Output signal | Temperature linear | 4-20 mA, 20-4 mA or customized |
| NAMUR compliance | Measure and fail currents | NAMUR, NE 43 |
| Galvanic isolation | | |
| | | 1500 VAC, 1 min |
| Ex-classifications | | |
| | C520N | ATEX: II 3 G Ex nL IIC T4-T6 Pending: FM, CSA, IECEx, GOST |
| | C520X/C520XS | ATEX: II 1 G Ex ia IIC T4-T6 Pending: FM, CSA, IECEx, GOST |
| Power supply | | |
| | C520/C520N/C520S | 10 to 36 VDC, Standard power supply |
| | C520X/C520XS | 10 to 30 VDC, I.S. power supply |
| Ambient temperature | | |
| | Storage/operation | -40 to +85 °C |
| Accuracy | | |
| | RTD (Pt and Ni sensors) | Max. of ± 0.1 °C or ± 0.05 % of span |
| | Thermocouple | Typical ± 0.05 % of span |
| | Resistance/voltage | See data sheet |
| Long-term stability | | |
| | | Max. drift: ± 0.05 % of span / 5 years |
| Connection head | | |
| | | DIN B or larger |

Input connections

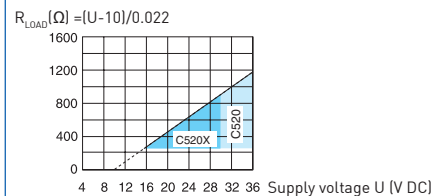
See data sheet for more alternatives



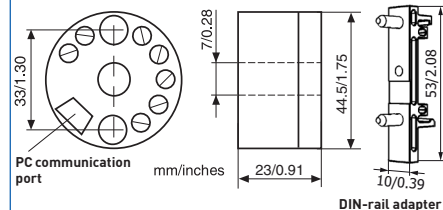
Output connections



Output load diagram



Dimensions



Ordering information

| | |
|---------------------------------------|------------|
| C520 | 70C5200010 |
| C520S, SIL 2 compatible | 70C5200S10 |
| C520N | 70C520N010 |
| C520X | 70C520X010 |
| C520XS, SIL 2 compatible | 70C520XS10 |
| ICON PC configuration kit (USB-conn.) | 70CFGUS001 |
| Configuration | 70CAL00001 |
| Head mounting kit | 70ADA00027 |