

SIL3 PLe - INCREMENTAL ENCODERS – DSU9X RANGE

ELECTRICAL CHARACTERISTICS / FUNCTIONAL SAFETY PARAMETERS

| Electronic Version | Output signals | Operating Voltage +V | Supply current | Current per channel pair | Short circuits proof | Reverse polarity protected | PFD | PFH | MTTFd | DC |
|--------------------|----------------|----------------------|--------------------|--------------------------|----------------------|----------------------------|----------|----------|-------|------|
| 2G2 | Digital | 5V +/-5% | 100mA with no load | 40mA | Yes | Yes | 7,51E-05 | 8,58E-10 | 1331 | HIGH |
| 5G2 | TTL RS422 | 11-30V | | | Not to +V | | 9,52E-05 | 1,09E-09 | 1050 | |
| 5G5 | Digital HTL | | | | Yes | | 9,52E-05 | 1,09E-09 | 1050 | |
| 2WT | Sine Cosine | 5V +/-5% | 70mA with no load | 10mA | Yes | | 4,29E-05 | 4,90E-10 | 2328 | |
| 5WT | 1Vpp | 11-30V | | | Not to +V | | 6,60E-05 | 7,53E-10 | 1515 | |

Safety mission time: 20 years

STANDARDS CONFORMITY

| | |
|------------------------------------|--|
| Protection(EN 60529) | IP 66 |
| Humidity (EN 60068-2-38) | 93% @ 65°C |
| Shock (EN60068-2-27) | ≤ 500m.s ⁻² (during 6 ms) |
| Vibration (EN60068-2-6) | ≤ 200m.s ⁻² (10 ... 2 000 Hz) |
| EMC Immunity Test | EN 61000-6-2,increased levels |
| EMC Emission Test | EN 61000-6-4,increased levels |
| Isolation | 1000 Veff |
| Salt Sparay (EN 60068-2-11 part 2) | 168h |

| | |
|---|---------------|
| Functional safety | IEC 61508 |
| | IEC 62061 |
| | ISO 13849-1 |
| | IEC 61800-5-2 |
| | IEC 62061 |
| Encoders usable up to SIL3 / PLe with external specific requirements, see safety user manual for details. | |
| ZZ/ are not safety signals. | |

ELECTRICAL CONNECTIONS

| | | 0V | +V | A or S | B or C | Z | A/ or S/ | B/ or C/ | Z/ | Ground |
|----|-----------------------------|-------------------------------|-------------------------------|----------|-----------|---------|----------|----------|----------|-------------------|
| G6 | M23 - 12 pins CW | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Connector Body |
| G8 | M23 - 12 pins CCW | 10 + 11 | 2 + 12 | 8 | 5 | 3 | 1 | 6 | 4 | Connector Body |
| G3 | PVC cable 8 wires 8230/020 | WH white | BN brown | GN green | YE yellow | GY grey | PK pink | BU blue | RD red | General shielding |
| GP | PUR cable 12 wires 8230/050 | WH white + WH/GN white /green | BU blue + BN/GN brown / green | GY grey | BN brown | RD red | PK pink | GN green | BK black | General shielding |

AVAILABLE RESOLUTION

1024 2048

ORDERING REFERENCE (Contact the factory for special versions, ex: shaft size, resolution, connection)

| | Shaft Ø | IP | Supply | Output stage | Output signals | Resolution | Connection | Orientation | Reduction hub | Anti-rotation |
|----------|--|-----------------|--------------------------------|--|----------------|-----------------|--|---|---|-----------------------|
| DSU9X | 30: 30mm Reduction hub available | 01: IP66 | Digital signals: 2G2, 5G2, 5G5 | | | 2048 max | G6: M23 12 pins CW G8: M23 12 pins CCW GP: PUR cable 12 wires G3: PVC cable 8 wires | R : radial Example : R020 : radial cable 2m | ** : No reduction hub U2 : Reduction hub | DW**: 9445/045 |
| | | | 2:5Vdc 5:11 to 30Vdc | G2: driver 5Vdc RS422 G5: push-pull | 9: AA/ BB/ ZZ/ | | | | | |
| | | | Sine-wave signals: 2WT, 5WT | | | | | | | |
| | | | 2: 5Vdc 5:11 to 30Vdc | WT: sine 1Vpp | N: SS/ CC/ ZZ/ | | | | | |
| Ex:DSU9X | 30 / | 01 / | 5 | G2 | 9 // | 01024 // | GP | R050 // | ** | DW** |

Made in France