

# DTS Angular Rate Sensor (ARS)



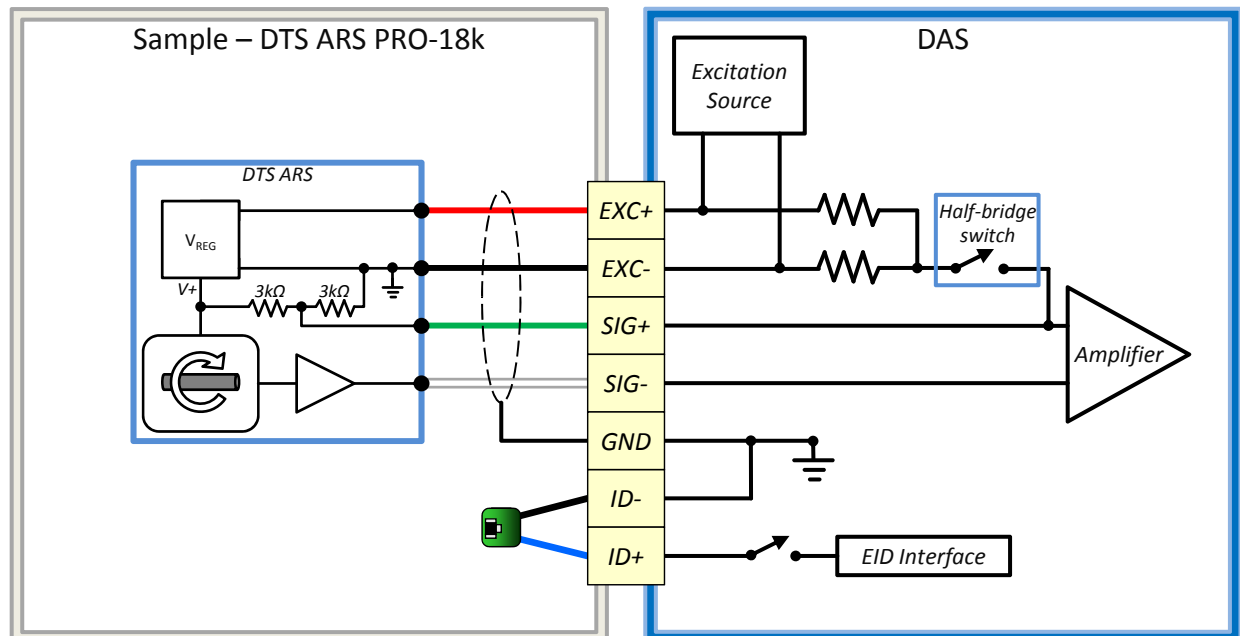
## Application Notes

- This connection is applicable for DTS data acquisition systems. 5 VDC or 10 VDC excitation may be used (4.9 to 14.0 VDC). See table on following page.
- The DTS ARS PRO millivolt output is designed to achieve a full scale output within +/-2 V with a 2.4 VDC center.
- The highest effective bandwidth of the ARS is available at 2000 Hz. To improve the noise signature of the ARS data, choose a filter of 5 kHz or less. The SAE Class 1000 filter with a 1650 Hz -3 db cut-off is commonly chosen.
- Understand your data collection systems hardware anti-alias filter when choosing a software filter for post-test processing.



## Wiring and sensor setup

- Consult your documentation for the corresponding pin numbers of the sensor input connectors.
- The DTS ARS and ARS PRO are wired using the full-bridge configuration.
- Connect the sensor shield to the appropriate ground connection. Any ground (case when available) is required for low level (mV output) transducers.
- The DTS ARS PRO may be shunt checked. Internally, the SIG+ circuit uses 3 kΩ resistors to provide a stable reference voltage and allows shunting. Set your bridge resistance setting to 3000 Ω.
- 'Proportional to Excitation' must be set to 'No'. The applied excitation voltage is internally regulated in the ARS.



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## DTS-Specific Data Acquisition System Notes

- Please note the specific requirements of your system.
- If you need specific connector information, please refer to your owners manual. If additional information is needed, provide a DTS hardware serial number when contacting DTS Support.
- Always provide the make and model of your sensor and include a sensor datasheet when available.

Product Family	Input Range Limitations	Excitation	Software Notes
SLICE NANO/MICRO	None	Select 5 VDC excitation	Proportional to Excitation=No Bridge mode=Full Adjust the offset check voltages to bracket the 'DC Offset' from your calibration sheet by +/-20 mV
SLICE PRO	None	Select 5 VDC excitation	Proportional to Excitation=No Bridge mode=Full Adjust the offset check voltages to bracket the 'DC Offset' from your calibration sheet by +/-20 mV
TDAS PRO SIM	None	Select 5 VDC or 10 VDC excitation	Proportional to Excitation=No Bridge mode=Full Adjust the offset check voltages to bracket the 'DC Offset' from your calibration sheet by +/-20 mV
TDAS G5	None	Select 5 VDC excitation	Proportional to Excitation=No Bridge mode=Full Adjust the offset check voltages to bracket the 'DC Offset' from your calibration sheet by +/-20 mV