Simcenter SCADAS RS overview table

			Rugged and connected data acquisition system					
			24-Channel Bridge Unit	24-Channel Sensor Unit	12-Channel Universal Unit	Recorder Unit	Digital Pulse & CAN Unit	Uninterruptable Power Supply Unit
			SCRS-B24	SCRS-S24	SCRS-U12	SCRS-REC	SCRS-DI	SCRS-UPS
								
Features	Common features	Designed for demanding test conditions	✓	✓	✓	✓	✓	✓
		Easy mounting and instrumentation	✓	✓	✓	✓	✓	✓
		Toolless stacking	✓	✓	✓	✓	✓	✓
		Centralized and distributed configurations	✓	✓	✓	✓	✓	✓
		Flexible power distribution across multiple units	✓	✓	✓	✓	✓	✓
		IEEE1588 Precision Time Protocol synchronization	✓	✓	✓	✓	✓	✓
		Standardized connectors for digital and analog inputs	✓	✓	✓	✓	✓	✓
		Input connectors isolated from Unit supply: ±100 V isolation voltage (Class II)	✓	✓	✓	✓	✓	✓
		Use with Simcenter Testlab or on-board Simcenter SCADAS Recorder or Configuration Apps	✓	✓	✓	✓	✓	✓
	Environmental	100 g shock and 10 g (RMS) vibration resistance	✓	✓	✓	✓	✓	✓
		Fully protected against humidity, water and dust tight - IP66/IP67 certified	✓	✓	✓	✓	✓	✓
		Wide ambient pressure ranges: 0.5 bar to 1.3 bar	✓	✓	✓	✓	✓	✓
		Wide operating temperature ranges	-40 to +65 °C -40 to 149 °F	-40 to +65 °C -40 to 149 °F	-40 to +85 °C -40 to 185 °F	-40 to +65 °C -40 to 149 °F *	-40 to +65 °C -40 to 149 °F	-40 to +65 °C -40 to 149 °F
	Built-in intelligence	On-board Simcenter SCADAS RS Web App	✓ Configuration App	✓ Configuration App	✓ Configuration App	✓ Recorder App	✓ Configuration App	
		Instrumentation & channel setup	✓	✓	✓	✓	✓	
		Calibration, validation and monitoring	✓	✓	✓	✓	✓	
		Measurement autonomy				✓		
		Data recording, reduction and processing				✓		
		Intelligent triggering				✓		
		Power management: If available power reaches a critical level, an automatic safe shutdown will be carried out, preventing data loss or corrupted measurements						✓
		Panel button				✓ (start/stop)		✓ (on/off)
		Remote voltage or switch input						✓ (on/off)
	Daisy chaining	Distribute power and data over distances up to 50 m	✓	✓	✓	✓	✓	✓
		Up and downstream connectors	1x up 1x down	1x up 1x down	1x up 1x down	1x up 4x down	1x up 1x down	1x up 1x down
		Delivers power up to 5x Units with typical power consumption						✓
		Manages data streams as a switch of high-speed downstream chains				✓		
	DC Power input	From daisy chain	✓	✓	✓	✓	✓	
		From Siemens certified AC/DC adapter single-Unit (only for setup)	✓	✓	✓	✓	✓	
		From Siemens certified AC/DC adapter for UPS						✓
		From 9.5 to 54 VDC battery source						✓
		From built-in internal buffer protecting from cranking or unregulated power sources, and enabling extended periods of insufficient DC power						✓
	Connectivity	Ethernet to network or host PC (setup/monitoring)	✓	✓	✓		✓	✓
		1 Gb Ethernet: UTP to network or host PC				✓		
		Wi-Fi: 5.0GHz and 2.4GHz networks				✓		
		LTE: Trough external modem				✓		
		Synchronize multiple REC Units				✓		
	Internal storage	Non-volatile memory for channel setup	✓	✓	✓	✓ System level	✓	
		SSD drive with 220 GB free user space				✓		
		Recording setup template and measurement files				✓		
	Inputs isolation	Connector to connector			✓	✓	✓	
		Channel to channel			✓			
	GNSS	GPS, GLONASS, BeiDou				✓		
	CAN bus	4x CAN (CAN2.0B, CAN-FD)				✓	✓	
		TCK8 module: Thermocouple sensors K type (2x per CAN, up to 64x channels)				✓	✓	
	Digital Pulse & Tacho	Channels				9x	9x	
		Up to 1 Mpulse/s				✓	✓	
		DC supplies of 5 V and 12 V				✓	✓	
		TTL, HTL (single ended and differential), RS422/RS485				✓	✓	
		Rotary or linear encoder sensors (ref, sense of rotation, pulse)				✓	✓	
		Zero position based on reference pulse (for encoder type sensors)				✓	✓	
	Pulse & Tacho conversion	Counts (linear or angular position), and rate (frequency, speed, RPM, fuel flow, ...)			✓	✓	✓	
		Signal available up to 3 kHz			✓	✓	✓	
	Analog Pulse & Tacho	Channels			1x			
		Up to 18 kpulse/s			✓			
		Variable reluctance up to 400 Vpp			✓			
Conditioning options	Analog channels	Total	24x	24x	12x			
	Sample rates per channel	Selectable rates	0.2 Hz to 24 kHz	0.2 Hz to 24 kHz	0.2 Hz to 48 kHz			
		24-bit ΔΣ ADC multiple-step decimation	✓	✓	✓			
	Bandwidths per channel (-3 dB)	Selectable bandwidths	Up to 4 kHz	Up to 4 kHz	Up to 8 kHz			
		Bessel, Butterworth, Gaussian and Steep FIR filters	✓	✓	✓			
	Differential conditioning per channel	Voltage up to ±10 V	✓	✓	✓			
		Current loop 0/4-20 mA (over shunt resistor)	✓ **	✓	✓			
		DC and AC coupled	✓	✓	✓			
	Single ended conditioning per channel	Voltage up to ±60 V		✓	✓			
		ICP® sensors		✓	✓			
		DC and AC coupled		✓	✓			
	Supply power per channel	Unipolar DC: 15 V		✓	✓			
		Unipolar DC: 5 V	✓		✓			
		Bipolar DC: 1V (±0.5 V), 3V (±1.5 V), 10V (±5 V)	✓		✓			
		Bipolar AC: 0.6 Vrms, 2 Vrms, 6 Vrms	✓		✓			
	Bridge conditioning per channel	Full and half bridges (120 Ω, 350 Ω, 1000 Ω, ... free entry)	✓		✓			
		Quarter bridges with completion resistor 120 Ω	✓ (B24-120)		✓			
		Quarter bridges with completion resistor 350 Ω	✓ (B24-350)		✓			
		Ratio metric ranges from 3 mV/V to 10000 mV/V	✓		✓			
		Strain gauges	✓		✓			
		Load cells	✓		✓			
		Piezo-resistive and piezo-capacitive sensors	✓		✓			
		RTD sensors	✓		✓			
		Internal and external shunt calibration	✓		✓			
	Other conditioning per channel	Inductive AC LVDT/RVDT	✓		✓			
		Potentiometers	✓		✓			

(*) Under certain conditions. (**) Only if sensor is externally supplied.

siemens.com/simcenterscadas