






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	Uninterruptible Power Supply Unit	
		SCRS-B24	SCRS-S24	SCRS-U12	SCRS-REC	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 150 °F	-40 to +65 °C -40 to 150 °F	-40 to +85 °C -40 to 185 °F	-40 to +65 °C -40 to 150 °F **	-40 to +65 °C -40 to 150 °F	
Built-in intelligence	On-board Simcenter SCADAS RS Web App	✓ Configuration App	✓ Configuration App	✓ Configuration App	✓ Recorder 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	
	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: 5G and 2G networks				✓		
	USB3: Data transfer to external HD *				✓		
	LTE: Trough external modem				✓		
	Synchronize multiple REC Units				✓		
Internal storage	Non-volatile memory for channel setup	✓	✓	✓	✓ System level		
	SSD drive with 230 GB free user space				✓		
	Recording setup template and measurement files				✓		
Inputs isolation	Connector to connector			✓	✓		
	Channel to channel			✓	✓		
Conditioning options	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	
		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)				✓	
	Pulse & Tacho conversion	Zero position based on reference pulse (for encoder type sensors)				✓	
		Counts (linear or angular position), and rate (frequency, speed, RPM, fuel flow, ...)			✓	✓	
	Analog Pulse & Tacho	Signal available up to 3 kHz			✓	✓	
		Channels			1x		
		Up to 18 kpulse/s			✓		
	Analog channels	Variable reluctance up to 400 Vpp			✓		
		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 sensors	✓		✓			
	RTD sensors	✓		✓			
Other conditioning per channel	Internal and external shunt calibration	✓		✓			
	Inductive AC LVDT/RVDT	✓		✓			
	Potentiometers	✓		✓			



(*) Available in 2022. (**) Under certain conditions. (***) Only if sensor is externally supplied.