

6602

HART I/O expansion module
for SCADAPack 470 | 474 | 570 | 575
Smart RTUs



At a glance

The 6602 HART® I/O expansion module brings HART instruments and actuators to the SCADAPack™ x70 Remote Terminal Unit (RTU).

Easy: Retrieval and viewing of configuration, multivariable process values, device status, and diagnostics, over HART¹.

Effective: Device vendor DTMs² hosted by RemoteConnect™ software provide tailored operator access to each HART device.

Remote Access: Asset Management Systems (AMS) have access to HART devices over TCP/IP using HART pass-through³ via the SCADAPack x70 RTU.

Two module variations:

- 8 analog inputs and 4 analog outputs
- 8 analog inputs only

Simultaneous logic access to HART data and 4...20 mA loop data.


Conformal-coated circuit boards for enhanced reliability in adverse environments.

Wide operating temperature range:
-40...70 °C (-40...158 °F)

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Specifications – Analog HART Inputs/Outputs

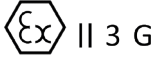
I/O	
HART	<ul style="list-style-type: none"> • HART scan rate <10 seconds typical⁴ • HART pass-through provided by SCADAPack x70 RTU supports HART protocol revisions 5, 6, and 7 • Each device communicates on a separate 4...20 mA analog channel
Analog Inputs	<ul style="list-style-type: none"> • 8 analog inputs: • Software-configurable as 4...20 mA (HART enabled) or 0...20 mA (HART disabled) • Uni-polar, differential • Resolution: 24-bit ADC (effective: 14-bits over the measurement range) • Accuracy: $\pm 0.1\%$ of full scale at 25 °C (77 °F), $\pm 0.2\%$ over operating temperature range • Scan rate: typical 270 mSec for 8 channels with no filtering (Fast setting), 800 mSec with 50/60 Hz filtering • Isolation: 50 Vac/70 Vdc from channel to channel, and 250 Vac/350 Vdc to logic and chassis • Input Resistance: 280 Ω • Under-range: 4...20 mA measures to 0 mA • Common Mode Rejection: -80 dB (@60 Hz. when configured for 50/60Hz filtering)
Analog Outputs	<ul style="list-style-type: none"> • 4 analog outputs: • Software-configurable as 4...20 mA (HART enabled) or 0...20 mA (HART disabled) • Uni-polar • Resolution: 16-bit DAC • Accuracy: $\pm 0.15\%$ of full scale at 25 °C (77 °F), $\pm 0.35\%$ over operating temperature range • Power Supply: 12...30 Vdc, external, shared by each channel • Power Requirement: 20 mA (internal supply) plus up to 20 mA per output (from external supply) • Isolation: 250 Vac/350 Vdc to RTU logic and chassis • Load Range: 12 Vdc: 0...450 Ω, 24 Vdc: 0...1050 Ω, 30 Vdc: 250...1350 Ω • Status & Reporting: Open Loop status, output value poll
General	
Power Supply	<ul style="list-style-type: none"> • Power consumption 1.3 W from internal 5 Vdc supply (source: SCADAPack x70 RTU) • One external 12...30 Vdc power supply for analog outputs, up to 20 mA per loop.
I/O Terminations	Plug-in terminal blocks, 0.0810...3.31 mm ² (28...12 AWG), solid or stranded
Dimensions	102.0 mm (4.02 in.) wide, 182.4 mm (7.18 in.) high, 47.1 mm (1.85 in.) deep
Enclosure	Corrosion resistant zinc-plated steel with black enamel paint
Environment	<ul style="list-style-type: none"> • Conformal coated • -40...70 °C (-40...158 °F) operating, -40...85 °C (-40...185 °F) storage • Cold start at -40 °C (-40 °F) • 5% RH to 95% RH, non-condensing
Certifications	<ul style="list-style-type: none"> • EMC and radio frequency FCC 47 CFR Part 15, Subpart B • ICES-003 • CE and RCM markings • General safety UL/CSA 61010-2-201 • Hazardous locations cULus Non-Incendive Electrical Equipment for use in Class I, Division 2, • Groups A, B, C and D, T4, -40 °C \leq Ta \leq +70 °C
Shock & Vibration	<ul style="list-style-type: none"> • IECEx/ATEX: Ex nA IIC T4 Gc -40 °C \leq Ta \leq +70 °C 
This product is RoHS-compliant	

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Specifications – Analog HART Inputs/Outputs

Certifications (three versions available: S for standard, X for IECEx/ATEX and U for Class I Div 2)

S	EMC and radio frequency FCC 47 CFR Part 15, Subpart B ICES-003 CE and RCM markings General safety UL/CSA 61010-2-201
X	Adds: IECEx/ATEX: Ex nA IIC T4 Gc $-40\text{ °C} \leq T_a \leq +70\text{ °C}$ 
U	Adds: cULus Non-Incendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D, T4, $-40\text{ °C} \leq T_a \leq +70\text{ °C}$

Part numbers

8AI and 4AO	TBUX297590S, TBUX297590X, TBUX297590U
8AI	TBUX297591S, TBUX297591X, TBUX297591U

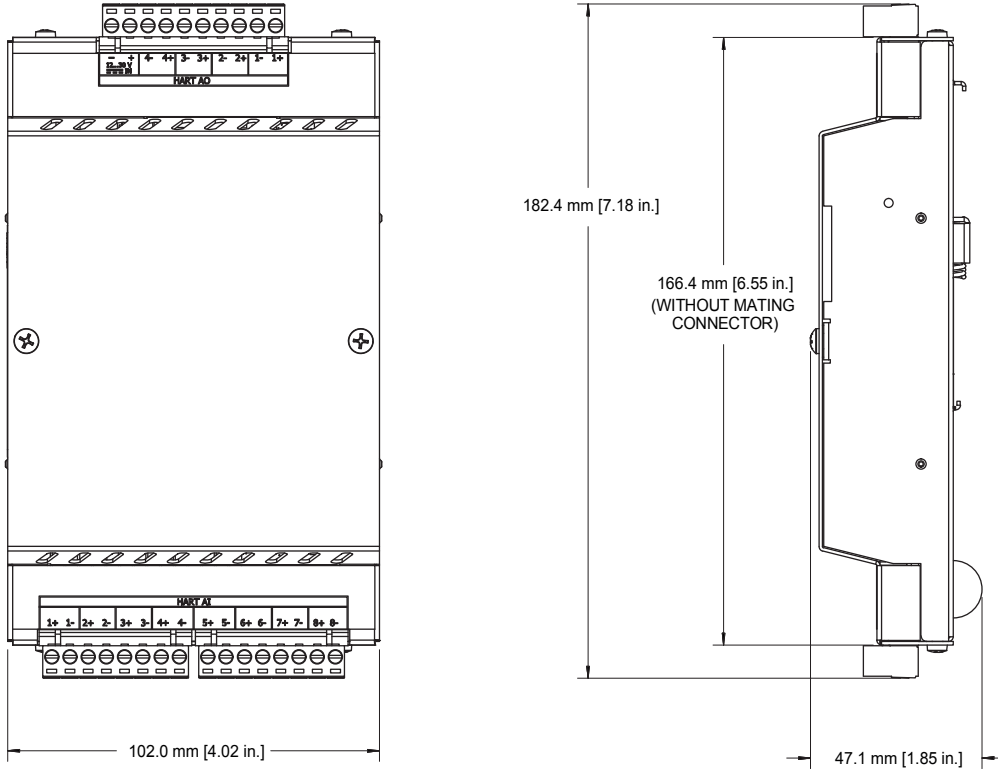
Footnotes

- 6602 module support is limited to one module per SCADAPack, (max. 8 analog inputs and 4 analog output channels).
- DTM – Device Type Manager, plug-in software component by device vendor providing operator interface for configuration, and viewing of data and diagnostics.
- HART pass-through is a TCP/IP service on the SCADAPack, enabled using RemoteConnect software. Pass-through requires installation of a Schneider Electric HART communication DTM on the remote server or AMS (Asset Management Software) system.
- HART scan rate is dependent on the number of connected HART devices, communication loading due to pass-through messaging, and HART device response times.

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Dimensions - both variations (8 AI, 4 AO module is shown)



Note: Accessories sold separately. This product is RoHS-compliant.

Disclaimer: Not all product features are available in every mode of operation. Schneider Electric reserves the right to change product specifications. For ordering information call direct worldwide: +1 (613) 591-1943; Toll Free within North America: +1 (888) 267-2232 or Email: orderstrss@se.com. For more information visit www.se.com

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