

# ASCO 5101 Engine Start Modules

Complete NEC® 2017 Engine-Generator Start Compliance

An engine-generator must start automatically when it receives a start signal from an automatic transfer switch. If signaling wires are damaged, an engine will not receive the start signal needed to begin supplying mission-critical power. Without Engine Start Circuit monitoring, facility personnel will never know when wiring is compromised, placing the facility at risk for an extended outage. For this reason, **NEC Article 700.10** requires monitoring of engine start circuits to detect compromised wiring.



**ATS Engine Start Module  
ASCO Model 5101-ATS**



**Generator Engine Start Module  
ASCO Model 5101-GEN**

The ASCO Engine Start Monitoring System is the perfect solution for complying with new 2017 NFPA 70 requirements:

- Continually monitors operability of ATS Engine Start Circuits
- Indicates faults at local and remote annunciators
- Automatically starts engine-generators when faults occur

With ASCO Engine Start Modules installed at the ATS and Engine-Generator, control wiring is continually monitored. If an open fault or a short fault occurs, the engine automatically starts and an alarm relay activates annunciators at the generator and any remote locations. This solution fully complies with the 2017 NEC requirements.

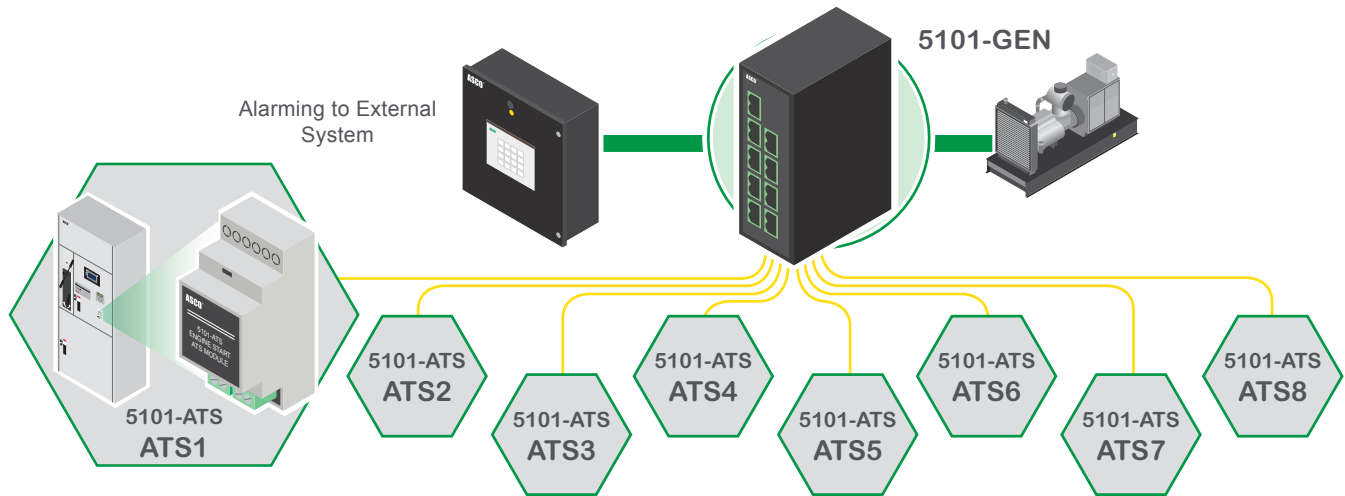
<p>Complies with Mandated NEC® Start Circuit Monitoring Requirement</p>	<p>Monitors conditions, annunciates faults, and starts engines in accordance with Article 700.10(D)(3) of NFPA 70.</p>
<p>Easily Fitted to New Equipment and Legacy Systems</p>	<p>Uses one module at each engine, and one module at each ATS. Installs on standard engine control wiring, easing deployment on new and existing backup power equipment.</p>
<p>Integrates with ASCO PowerQuest Solutions</p>	<p>Interfaces with the ASCO PowerQuest products and external building management systems to provide real-time e-mail messages, remote alarms, and Internet access to critical power information and controls.</p>



## Operating Description

Up to 8 ATS engine start circuits can be monitored from a single Generator Engine Start Module (5101-GEN). A Transfer Switch Engine Start Module (5101-ATS) is installed at each ATS. These modules monitor signaling on start circuit wires, and differentiate between normal and fault conditions. During normal operations, the modules relay start signals to the engine.

When a fault is detected in wiring between the modules, the 5101-GEN starts the generator and issues an alarm. An ASCO 5705 8-Device Annunciator can provide full NEC 2017 engine start compliance; meet NFPA 110 alarm and test reporting requirements; and provide remote generator and ATS testing, alarming and notification information via e-mail to portable devices.



## Features

- The generator module monitors up to 8 ATSs.
- The generator module provides two Form C contacts, one for engine start and one for alarming.
- Status LEDs for each channel are provided on the Generator module, allowing for quick assessment of system status (channel disabled, wiring fault, engine start inactive, engine start active).
- ATS module is compatible with, and wires into, any contact-based engine start signal.

## Main Specifications

Parameter	Description
DC Power	9-27V (GEN- Module) / ATS module does not require power
Ride Through	6s after power is removed
Mounting	35mm DIN
Operating Temperature Range	-20° to 70°
Maximum Distance	Connection wiring between ATS-module and GEN-module shall not exceed 1000 ft.
Maximum Resistance-Loop Wire	Resistance must be less than 100Ω ohms
Generator Module Start Contact	1A 30VDC (Form C)
Generator Module Alarm Contact	1A 30VDC (Form C)
Wire Gauge	12-30 AWG stranded

## Ordering Information

Catalog No.	5101-ATS Kit	5101-GEN Kit	5101-ATS Accessory
Part No.	1256473	1256475	Acc 7ES
Description	ATS Module Field Kit	Engine Module Field Kit	Factory-Installed ATS Module