

9907-186

GS3/LQ Valve Driver

INSTALLATION, INTERFACE AND VALIDATION WORKBOOK

WOODWARD 9907-186 is a GS3/LQ valve driver for an integrated liquid-fuel metering system. It converts a 4-20 mA command into controlled valve positioning with feedback, shutdown/reset and fault indication.

STEP	GATE	ENGINEERING PURPOSE
01	IDENTIFY	Confirm article, host and hardware
02	ISOLATE	Secure power and stored energy
03	CONNECT	Restore documented interfaces
04	VALIDATE	Prove diagnostics and function

WORKBOOK PURPOSE

Field-ready identity, isolation, connection, commissioning and closeout records for this exact WOODWARD article.

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Installation Readiness Gate

Complete the identity, host-system and isolation checks before disturbing the installed hardware.

- 1

Confirm WOODWARD 9907-186 and the assigned GS3/LQ valve-driver position.
- 2

Place the turbine and fuel system in the approved maintenance state.
- 3

Isolate the 18-32 V DC supply and secure the fuel system.
- 4

Record command, feedback, shutdown/reset, fault and valve-cable connections.

Pre-Work Evidence

EVIDENCE ITEM	RECORDED VALUE
Complete article marking	9907-186
Host / carrier	Woodward GS3/LQ liquid-fuel valve control
Primary system role	Converts the control command into valve position
Acceptance boundary	Complete a controlled valve stroke and fail-safe shutdown test before fuel release.
Source record	GS3/LQ Valve Driver Installation and Operation Manual

WORK AUTHORIZATION RECORD

Work order: _____

Drawing / revision: _____

Checked by: _____

Date: _____

Isolation and Access Register

CONTROL POINT	ENGINEER RECORD
Incoming supply	Isolated / proved
Stored energy	Discharged / proved
Field connections	Identified / protected
ESD control	Established / recorded

Pre-Work Documentation

DOCUMENT	ENGINEER RECORD
Connection photograph	Reference / file
Configuration backup	Reference / revision
Diagnostic baseline	Reference / result

Connection and Installation Sequence

INSTALLATION PRINCIPLE

Record the 4-20 mA command, position-feedback loop, 18-32 V DC supply, shutdown/reset contact, driver-fault contact and valve cable before removing 9907-186. Restore the approved GS3/LQ configuration and complete a controlled stroke and shutdown test before enabling fuel flow.

- 1 Confirm the approved valve, cable length and mechanical fuel arrangement.
- 2 Restore wiring, calibration and turbine-control configuration.
- 3 Review driver supply, feedback, fault and shutdown diagnostics.
- 4 Complete a controlled valve stroke and fail-safe shutdown test before fuel release.

Connection Record

CONNECTION GROUP	AS-FOUND / AS-LEFT RECORD	STATUS
Power / field connection	Reference / terminal	Checked
Signal / interface	Reference / connector	Checked
Ground / shield	Reference / point	Checked
Accessory / carrier	Reference / part	Checked

MODEL-SPECIFIC RELEASE LIMIT

Confirm WOODWARD 9907-186, GS3/LQ driver and valve, 18-32 V DC supply, 4-20 mA command and feedback, shutdown/reset and fault contacts, valve cable, grounding, calibration and controlled stroke results before commissioning.

Interface Acceptance Criteria

ACCEPTANCE ITEM	REQUIRED EVIDENCE
Identity	9907-186
Host match	Woodward GS3/LQ liquid-fuel valve control
Connection proof	Restore wiring, calibration and turbine-control configuration.
Configuration proof	Review driver supply, feedback, fault and shutdown diagnostics.

Commissioning and Acceptance Record

Record each controlled verification step before the equipment returns to automatic operation.

NO.	ACCEPTANCE CHECK	RESULT	RECORD
1	Article and host identity	PASS / FAIL	Initial / date
2	Mechanical installation	PASS / FAIL	Initial / date
3	Power and field wiring	PASS / FAIL	Initial / date
4	Grounding and shielding	PASS / FAIL	Initial / date
5	Configuration restoration	PASS / FAIL	Initial / date
6	Signal or power-path response	PASS / FAIL	Initial / date
7	Diagnostics and alarms	PASS / FAIL	Initial / date
8	Final functional release	PASS / FAIL	Initial / date

Engineering Notes

RECORD AREA	ENGINEER ENTRY
As-found condition	
Corrective action	
As-left configuration	
Outstanding restriction	
Release authorization	

CONTROLLED COMMISSIONING

Complete a controlled valve stroke and fail-safe shutdown test before fuel release.

Diagnostics and Release Log

EVENT	ENGINEERING RECORD
Initial energization	Result / observation
Interface or signal response	Result / observation
Alarm and diagnostic review	Result / observation
Functional release	Name / date

ACCEPTANCE AND RELEASE EVIDENCE

Gas-turbine liquid-fuel control

Positions the metering valve from the turbine control command.

Fuel-bypass regulation

Supports the approved bypass or metering arrangement in the fuel system.

Valve-driver replacement

Restores an exact driver position with recorded loop and cable evidence.

Fuel-system recommissioning

Provides controlled stroke, feedback and shutdown verification before fuel enablement.

Maintenance Verification and Closeout

Gas-turbine liquid-fuel control

Positions the metering valve from the turbine control command.

Fuel-bypass regulation

Supports the approved bypass or metering arrangement in the fuel system.

Valve-driver replacement

Restores an exact driver position with recorded loop and cable evidence.

Fuel-system recommissioning

Provides controlled stroke, feedback and shutdown verification before fuel enablement.

Related Engineering Pages

MODEL	ENGINEERING ROLE	APTER POWER PAGE
WOODWARD 5464-333	Related Apter Power product	View WOODWARD 5464-333 page
WOODWARD 5464-334	Related Apter Power product	View WOODWARD 5464-334 page
WOODWARD 5464-337	Related Apter Power product	View WOODWARD 5464-337 page
WOODWARD 5466-354	Related Apter Power product	View WOODWARD 5466-354 page
WOODWARD 5464-335	Related Apter Power product	View WOODWARD 5464-335 page
WOODWARD 8440-1947	Related Apter Power product	View WOODWARD 8440-1947 page
WOODWARD 8440-2082	Related Apter Power product	View WOODWARD 8440-2082 page
WOODWARD 8440-2028	Related Apter Power product	View WOODWARD 8440-2028 page

MANUFACTURER SOURCE RECORD

GS3/LQ Valve Driver Installation and Operation Manual
Woodward manual 40175_C

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