



# ***Service Manual Supplement***

## ***Telematics***

***Models Equipped with an 8 pin  
Telematics Ready Connector***

Part No. 1274265GT  
Rev B  
March 2019

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# Introduction

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## Important

The purpose of this document is to provide device connections for OEM Telematics providers.

Read, understand and obey the safety rules and operating instructions.

This manual provides detailed information for the machine owner and Telematics provider.

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## Compliance

### Wireless Certifications

- Telematic device(s) should comply with specific wireless carrier certifications where applicable and comply with the following:
  - N. America – PTCRB, FCC/IC
  - Europe – CE, RED 2014/53/EU
- Owners must verify the RF safety compliance in accordance with the Telematics device certifications.

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## Technical Publications

Genie has endeavored to deliver the highest degree of accuracy possible. However, continuous improvement of our products is a Genie policy. Therefore, product specifications are subject to change without notice.

Readers are encouraged to notify Genie of errors and send in suggestions for improvement. All communications will be carefully considered for future printings of this and all other manuals.

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## Contact Us:

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1274265GT Rev B, March 2019

First Edition, Second Printing

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# Introduction

## Revision History

Revision	Date	Section	Procedure / Page / Description
A	5/2016		Initial Release
A1	11/2016	Software Specifications	Pages 7, 8, 11, and 12.
A2	1/2017	Software Specifications	Remove Telematics Software Specifications Section
B	3/2019	Cover	Update description on front cover.
		Safety Rules	Add warning for use on EE rated machines.

## Safety Rules

### General Safety



This machine is equipped with a connection for a telematics device. If a telematics device has been installed, additional information may need to be communicated to those that operate or service this machine and possibly the general public. Communications that need to be considered include:

- A hazard decal warning of the specific hazards related to the radio frequency exposure and the required steps to take so as to avoid them. This could apply to the operator, service personnel or even the general public.
- Additional operator and service training regarding the potential hazard.

If a telematics device has been installed, before placing the machine into service, it is the owners' responsibility to clearly understand the installed telematics device as it relates to its performance and market compliance and to ensure that the necessary steps have been taken to inform and train operators, service personnel and the general public (when applicable) regarding the potential hazards related to radio frequency exposure and how to avoid them.



**Telematic devices are not approved for use on Genie models equipped with an EE rating.**

**Installing a Telematics device on an EE rated machine will invalidate the machine's EE rating.**



# Telematics I/O Specifications

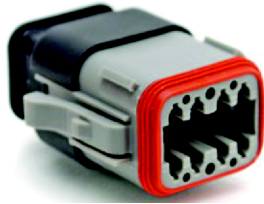
## Telematics Ready Connector

The telematics connector installed on all Genie machines is an 8 pin Deutsch DT series panel mount receptacle. Depending on the equipment it may be an in-line receptacle.



## Telematics Device Connector

OEM suppliers can connect their telematic devices by equipping with a 8 pin Deutsch plug.



## Telematics Ready Connector Components

Genie Telematics Ready Connector parts and tools are available through Genie Parts Sales.

Website: <http://www.genielift.com>

Phone: (877) 367-5606

Email: [AWP.PartsSalesPO@terex.com](mailto:AWP.PartsSalesPO@terex.com)

Genie part number	Description
61794GT	Crimper, Deutsch, Light Duty
60433GT	Lock, Plug, 8 pin, 14-18 GA (used with p/n 119060GT)
60447GT	Lock, Receptacle, 8 pin (used with p/n 87755GT and 119069GT)
73713GT	Terminal Pin, 16-18 GA (used with p/n 87755GT and 119069GT)
73714GT	Terminal Socket, 16-18 GA (used with p/n 119060GT)
87755GT	Connector, Receptacle, 8 Pin, 14-18 GA
119060GT	Connector, Plug, 8 pin, 14-18 GA
119069GT	Connector, Receptacle, 8 Pin, 14-18 GA

## Telematics I/O Specifications

### Telematics Ready Connector Function Pin Out

Refer to the TRC I/O map to capture machine function states including the remote disable feature.

#### Unavailable I/O

Some Genie models do not support all of the discrete outputs. If a particular circuit feature is not available it shall be left unconnected. There shall be no substitution or other optional wiring.

Refer to the appropriate *TRC Function Pin Out* for your model.

#### Basic TRC Connector I/O Map

Connector Pin-out	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	8-32 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device ground
3	Digital Output 1	12 or 24VDC	Engine Run, Hour meter, Motor Controller Enable 12/24V = active, 0V = inactive	Monitor engine run hours
4	Digital Output 2	12 or 24 VDC	Key Switch Activation 12/24V = active, 0V = inactive	Monitor machine utilization
5	Digital Output 3	12 or 24 VDC	Foot Switch Activation 12/24V = active, 0V = inactive	Monitor machine utilization
6	Digital Input 1	12 or 24 VDC	Remote Machine Disable Configurable Active High or Active Low control via wiring at the Disable Relay	Remote disable engine start
7*	Databus H	CAN HIGH	Genie Databus	J1939 Engine Messages, Receive Proprietary Genie Telematics Message
8*	Databus L	CAN LOW	Genie Databus	J1939 Engine Messages, Receive Proprietary Genie Telematics Message

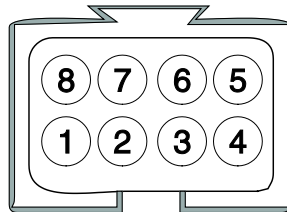
# TRC Function Pin Out

## GR, GRC, QS and Slab Scissor Models

This Legend Only Applies to the Following Genie Models

GS-1530	GS-1532	GS-2046	GR-12	QS-12	Z-33/18
GS-1930	GS-1932	GS-2646	GR-15	QS-15	Z-40/23
	GS-2032	GS-2646 AV	GR-20	QS-20	Z-60/37
	GS-2632	GS-3246	GRC-12		
	GS-3232	GS-4047			

Genie installed Telematics connector is wired with an Active High digital input.



Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	24 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	
2	System Ground	0 VDC	Battery Negative	Device ground
3	Digital Output 1	24 VDC	Hour Meter Enable 24V = enabled, 0V = disabled	Monitor machine run hours
4	No Connection	X	X	X
5	No Connection	X	X	X
6	No Connection	X	X	X
7*	Databus H	CAN HIGH	Genie Databus	Receive Proprietary Genie Telematics Message
8*	Databus L	CAN HIGH	Genie Databus	Receive Proprietary Genie Telematics Message

\* Genie proprietary databus support

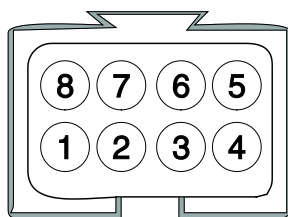
## TRC Function Pin Out

### GS-2669, GS-3369 and GS-4069 DC and Bi-Energy Models

This Legend Only Applies to the Following Genie Models

GS-2669 DC	GS-2669 BE
GS-3369 DC	GS-3369 BE
GS-4069 DC	GS-4069 BE

Genie installed Telematics connector is wired with an Active High digital input.



Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	24 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device ground
3	No Connection	X	X	X
4	No Connection	X	X	X
5	No Connection	X	X	X
6	No Connection	X	X	X
7*	Databus H	CAN HIGH	Genie Databus	Receive Proprietary Genie Telematics Message
8*	Databus L	CAN LOW	Genie Databus	Receive Proprietary Genie Telematics Message

\* Genie proprietary databus support



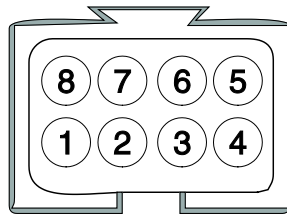
# TRC Function Pin Out

## GS-69 RT, GS-84 RT and GS-90 RT Models

This Legend Only Applies to the Following Genie Models

GS-2669 RT	GS-3384 RT	GS-3390 RT
GS-3369 RT		GS-4390 RT
GS-4069 RT		GS-5390 RT

Genie installed Telematics connector is wired with an Active High digital input.

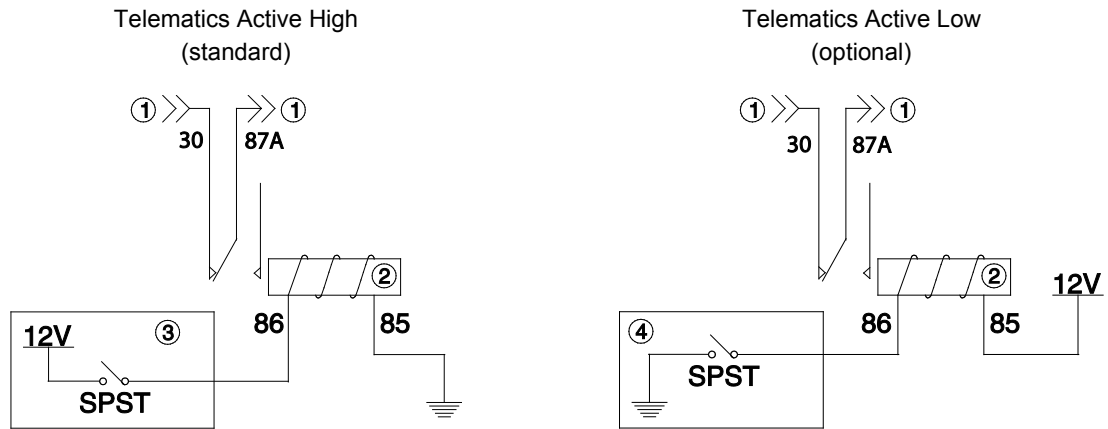


Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	12 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device ground
3	Digital Output 1	12 VDC	IC Engine Run 12V = engine run, 0V = engine off	Monitor engine run hours
4	Digital Output 2	12 VDC	Key Switch Activation 12V = Key SW On, 0V = Key SW Off	Monitor machine utilization
5	No Connection	X	X	X
6	Digital Input 1	12 VDC (standard) or ground (optional)	Remote Machine Disable	Remote disable engine start
7*	Databus H	CAN HIGH	Genie Databus	J1939 engine message
8*	Databus L	CAN LOW	Genie Databus	J1939 engine message

\* Tier IV engine models only

# TRC Function Pin Out

## Remote Disable Engine Start Relay Configuration



- 1 Ignition Start Input
- 2 Relay
- 3 Telematics with Active High input
- 4 Telematics with Active Low input

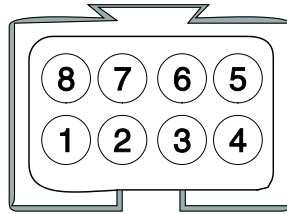
# TRC Function Pin Out

## Z-30N, Z-34 DC and Z-45 DC Models

**This Legend Only Applies to the Following Genie Models**

Z-30/20N	Z-45/25 DC
Z-30/20N RJ	Z-45/25J DC
Z-34/22 DC	

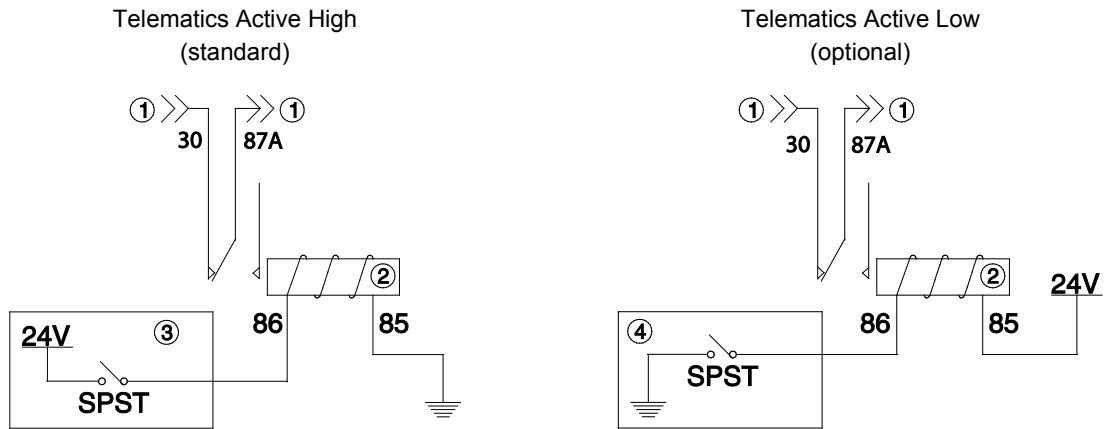
**Genie installed Telematics connector is wired with an Active High digital input.**



Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	24 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device ground
3	Digital Output 1	24 VDC	Hour Meter 24V = active, 0V = inactive	Monitor machine run hours
4	Digital Output 2	24 VDC	Key Switch Activation 24V = Key SW On, 0V = Key SW Off	Monitor machine utilization
5	Digital Output 3	24 VDC	Foot Switch Activation 24V = active, 0V = inactive	Monitor machine utilization
6	Digital Input 1	24 VDC (standard) or Ground (optional)	Remote Machine Disable	Remote disable motor controller
7	No Connection	X	X	X
8	No Connection	X	X	X

# TRC Function Pin Out

## Remote Disable Engine Start Relay Configuration



- 1 Ignition Start Input
- 2 Relay
- 3 Telematics with Active High input
- 4 Telematics with Active Low input

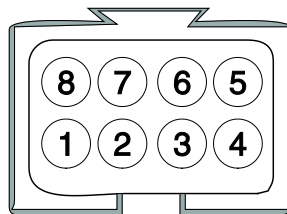
# TRC Function Pin Out

## S and Z Booms, IC and Bi-Energy Models

This Legend Only Applies to the Following Genie Models

S-40	S-60	S-80	Z-34/22 (BE)
S-40 TRAX	S-60 X	S-80 X	Z-34/22 (IC)
S-45	S-60 XC	S-85	Z-45/25 (BE)
S-45 TRAX	S-60 TRAX		Z-45/25 (IC)
	S-65		Z-45/25J (IC)
	S-65 TRAX		Z-45/25 XC
			Z-51/30
			Z-62/40

Genie installed Telematics connector is wired with an Active High digital input.



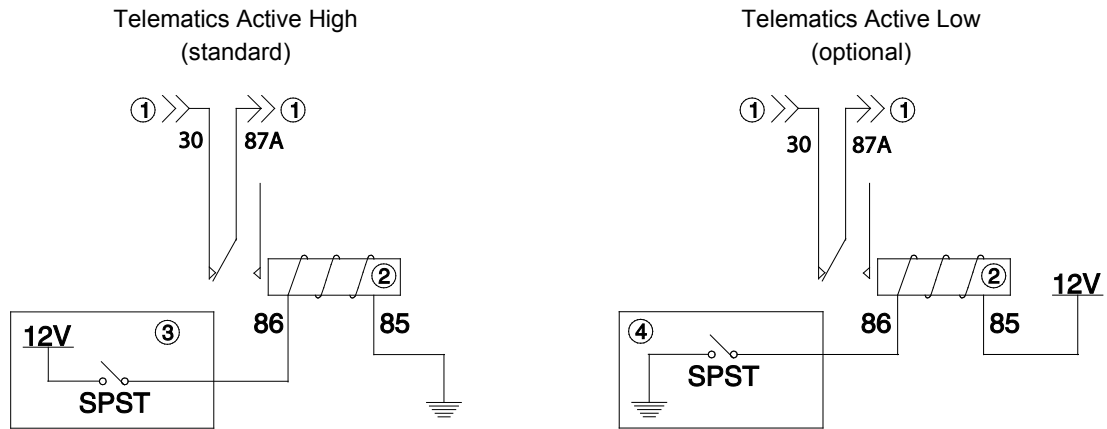
Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	12 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device ground
3	Digital Output 1	12 VDC	IC Engine Run 12V = engine run, 0V = engine off	Monitor engine run hours
4	Digital Output 2	12 VDC	Key Switch Activation 12V = Key SW On, 0V = Key SW Off	Monitor machine utilization
5	Digital Output 3	12 VDC	Foot Switch Activation 12V = active, 0V = inactive	Monitor machine utilization
6	Digital Input 1	12 VDC (standard) or ground (optional)	Remote Machine Disable	Remote disable engine start
7 *	Databus H	CAN HIGH	Genie Databus	J1939 engine message
8 *	Databus L	CAN LOW	Genie Databus	J1939 engine message

\* Tier IV engine models only



# TRC Function Pin Out

## Remote Disable Engine Start Relay Configuration



- 1 Ignition Start Input
- 2 Relay
- 3 Telematics with Active High input
- 4 Telematics with Active Low input

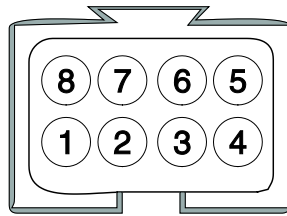
# TRC Function Pin Out

## S and Z Booms, ALC-1000 Models

**This Legend Only Applies to the Following Genie Models**

S-100	S-100 HD	SX-105 XC	Z-80/60
S-105	S-120 HD	SX-125 XC	ZX-135/70
S-120		SX-135 XC	
S-125		SX-150	
		SX-180	

**Genie installed Telematics connector is wired with an Active High digital input.**



Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	12 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device ground
3	Digital Output 1	12 VDC	IC Engine Run 12V = engine run, 0V = engine off	Monitor engine run hours
4	Digital Output 2	12 VDC	Key Switch Activation 12V = Key SW On, 0V = Key SW Off	Monitor machine utilization
5	Digital Output 3	12 VDC	Foot Switch Activation 12V = active, 0V = inactive	Monitor machine utilization
6	Digital Input 1	12 VDC (standard) or ground (optional)	Remote disable engine start	Remote Machine Disable
7 *	Databus H	CAN HIGH	Genie Databus	J1939 Engine Messages, Receive Proprietary Genie Telematics Message
8 *	Databus L	CAN LOW	Genie Databus	J1939 Engine Messages, Receive Proprietary Genie Telematics Message

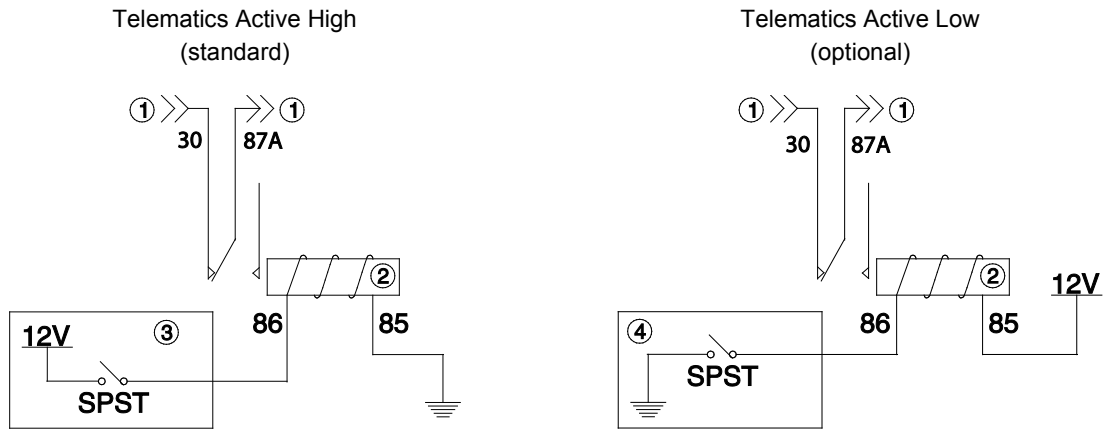
\* Tier IV engine models only

\* Genie proprietary databus support



# TRC Function Pin Out

## Remote Disable Engine Start Relay Configuration



- 1 Ignition Start Input
- 2 Relay
- 3 Telematics with Active High input
- 4 Telematics with Active Low input



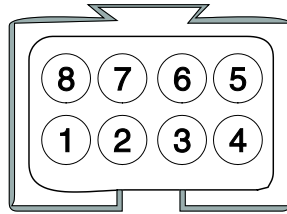
# TRC Function Pin Out

## GTH Models

**This Legend Only Applies to the Following Genie Models**

GTH-636	GTH-1256
GTH-844	GTH-1544
GTH-1056	GTH-5519

**Genie installed Telematics connector is wired with an Active High digital input.**



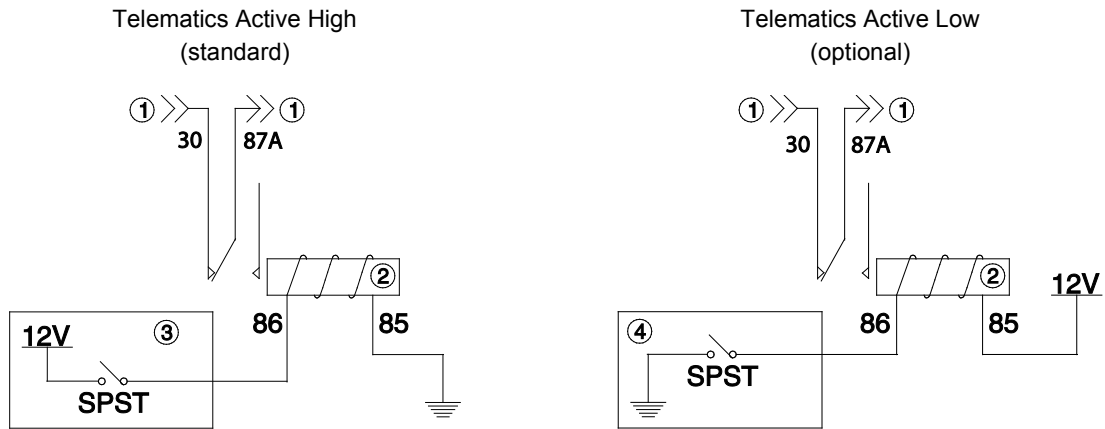
Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	12 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device ground
3	Digital Output 1	12 VDC	IC Engine Run 12V = engine run, 0V = engine off	Monitor engine run hours
4*	Digital Output 2	12 VDC	Boom Angle Status 12V = boom >55°, 0V <55°	Monitor boom angle status
5	Digital Output 3	12 VDC	Parking Brake 12V = active, 0V = inactive	Monitor machine utilization
6	Digital Input 1	12 VDC (standard) or Ground (optional)	Remote Machine Disable	Remote disable engine start
7	Databus H	CAN HIGH	Databus HIGH J1939	J1939 engine message
8	Databus L	CAN LOW	Databus LOW J1939	J1939 engine message

\* Genie proprietary databus support



# TRC Function Pin Out

## Remote Disable Engine Start Relay Configuration



- 1 Ignition Start Input
- 2 Relay
- 3 Telematics with Active High input
- 4 Telematics with Active Low input

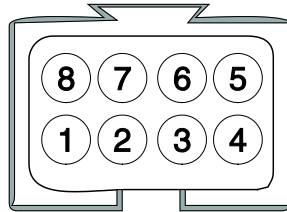
# TRC Function Pin Out

## Light Tower Models

This Legend Only Applies to the Following Genie Models

AL4                      AL5                      AL5HT                      RL4

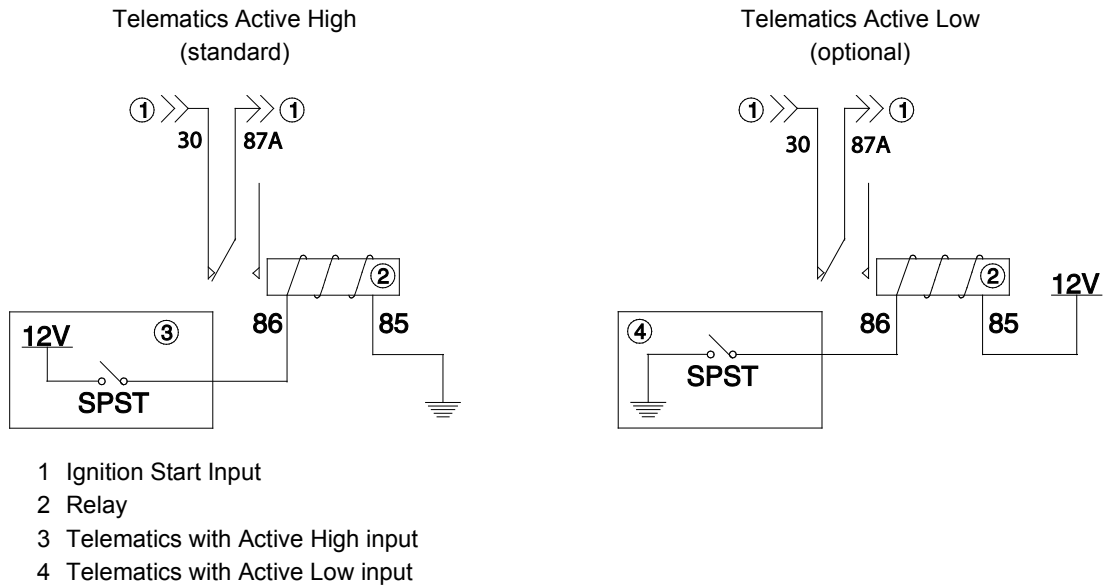
Genie installed Telematics connector is wired with an Active High digital input.



Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	12 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device ground
3	Digital Output 1	12 VDC	Hour Meter 12V = enabled, 0V = disabled	Monitor machine run hours
4	No Connection	X	X	X
5	No Connection	X	X	
6	Digital Input 1	12 VDC	Remote Machine Disable	Remote disable engine start
7	No Connection	X	X	X
8	No Connection	X	X	X

# TRC Function Pin Out

## Remote Disable Engine Start Relay Configuration



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