



# 123456

IHH50	O SENSOR CO	ONNECTIONS
PIN	SYMBOL	DESCRIPTION
А	+E	+Excitation
В	+S	+Signal
С	-E	-Excitation, TEDS return
D	–S	–Signal
Е	TEDS_IO	TEDS Data
F	24_OUT	24V output
G	GND_OUT	Ground/Shield
Н	5_OUT	5V Output
J	-V	-V and -mA Amplified Input Connections
К	+V	+V and +mA Amplified Input Connections
L	PLEAD	Leading pulse from sensor
М	PLAG	Lagging pulse from sensor

IPM65	<b>0</b> STRAIN GA	UGE INPUT
PIN	SYMBOL	DESCRIPTION
1	G	Ground/Shield
2	TEDS	TEDS Data
3	–S	–Signal
4	+S	+Signal
5	–E	-Excitation
6	+E	+Excitation

### NECESSARY COMPONENTS

- TEDs chip
- IHH500/IPM650
- SENSIT™ Test and Measurement Software
- IHH500 USB Cable (FSH03570) or IPM650 USB Cable (GOD04123)



#### TEDS TEMPLATE

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This tab in SENSIT allows the user to read and write to a TEDS Chip. The table displays information related to the Basic TEDS Information and the TEDS Template Information.



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OK

Cancel



🚭 Transducer Type Template ID

33

Please Select The Transducer Type Template ID

30: High-Level Voltage Output Sensors 33: Bridge Sensors

#### HOW TO ACCESS TEDS TEMPLATE

Open SENSIT, verify serial number displayed in initial loading window, click Help tab, and then Transducer Electronic Datasheets (TEDS). This will open a new window allowing access to the TEDS template to read or write to the TEDS chip.

#### HOW TO READ TEDS TEMPLATE INFORMATION

Click Read TEDS Template.

#### HOW TO CREATE NEW TEDS TEMPLATE INFORMATION

 Click New TEDS Template and specify the Template ID number in the input box below. (Type 33 for Bridge Sensors and 30 for High Voltage Amplified output sensors. Both follow the same procedure with different inputs.)

Calibration Template ID	×
Please Select The Calibration Template ID 40: Calibration Table	OK Cancel
Press The Cancel Button To Proceed Without Creating A Calibration Template.	

- Specify the Calibration Template ID. In the new window press OK with no input. Note: In the following steps a LRF350 500lbs 2 mV/V output will be used as an example for template 33 and a PMP300 50 PSI 0-10 VDC Output for template 30.
- For sensors with dual direction output click Enable Dual Scaling or else leave as Disable Dual Scaling ONLY if dual direction output value available. Dual Direction output will be input later in User Data.
- Dual Scaling Enable Dual Scaling Disable Dual Scaling

TEDS Template		7000						
Read TEDS Template	Basic	TEDS Trans	ducer Type	Template   Calibration Te	emplate	User Data		
New TEDC Translate		Function	Select	Description	Bits	Value		Units
New TEDS Template	•	Basic	•	Manufacturer ID	14	Futek Advanced Sensor Technology, Inc.	-	
Save TEDS Template		Basic		Product Type	5	L	-	-
Basic TEDS Options		Basic	-	Product Category	10	RF	-	
FUTEK Basic TEDS		Basic		Product Series	11	350	*	
Standard Basic TEDS		Basic		Serial Number	24	123456		



4. Input Product Type, Product Category, Product Series, and Serial number for unit in **Basic TEDS** Tab. (LRF350 and PMP300 used as examples for reference.)

PRODUCT	ТҮРЕ
SYMBOL	PRODUCT
L	Load Cell
Т	Torque Sensor
Р	Pressure Sensor
М	Multi-Axis Sensor

**Product Category:** Letters specifying which product family sensor is part of. (Ex: RF for LRF350 and MP for PMP300)

**Product Series:** Numbers used to specify sensor model. Ex: 350 for LRF350 and 300 for PMP300

## How to Program Transducer Electronic Data Sheets (TEDS)

- 5. On Transducer Type Template, Input sensor information corresponding to specs.
  - Template ID, Full Scale Electrical Value Precision, Mapping Method, Bridge Type, Bridge Element Impedance, Response Time, and Measurement Location ID can be left untouched with template provided values.
  - Maximum Electrical Output must be converted from mV/V to V/V. (Example: 2 mV/V would be 0.002 V/V.)
  - Excitation Levels, voltage that will be supplied to sensor for power, can be found on Unit spec sheet. Nominal excitation level can be stated using Calibration excitation on spec sheet.

TEDC Tamalat								
Deed TEDS T	a malata	Basic	TEDS Transducer Type Templ	ate Calibration T	emplate User Data			
Read TEUS I	emplate		Function	Select	Description	Bits	Value	Units
New TEDS Te	emplate	•	ID		Template ID	8	33	
Save TEDS T	emplate		Measurement	Select Case	Physical Measurand (Units)	6	К	
			Measurement	Case 0.45	Minimum Physical Value	32	0	
Basic TEDS Op	tions		Measurement	Case 0-45	Maximum Physical Value	32	0	
FUTEK Bas	ic TEDS		Electrical Signal Output		Transducer Electrical Signal Type		Bridge Sensor	
Standard B	asic TEDS		Electrical Signal Output	Select Case	Full-Scale Electrical Value Precision	2	32-bit Precision	
Dual Scaling			Electrical Signal Output	Case 2	Minimum Electrical Output	32	0	V/V
Enable Dua	I Scaling		Electrical Signal Output	Case 2	Maximum Electrical Output	32	0	V/V
Disable Du	al Scaling		Electrical Signal Output	-	Mapping Method		Linear	
			Electrical Signal Output	-	Bridge Type	2	Full	
			Electrical Signal Output	-	Bridge Element Impedance	18	1	Ω
			Electrical Signal Output		Response Time	6	0.001	s
			Excitation Supply	-	Excitation Level, Nominal	9	0	v
			Excitation Supply	-	Excitation Level, Minimum	9	0	V
			Excitation Supply	-	Excitation Level, Maximum	9	0	v
			Calibration Information	-	Calibration Date	16	11/3/2016	
			Calibration Information	-	Calibration Initials	15	AAA	
			Calibration Information	-	Calibration Period	12	365	days
			Miscellaneous	-	Measurement Location ID	11	1	
		Re	1 C	f 19 🔉 >				

TLUG Template		Function	Select	Description	Bits	Value	1	Units
TEDS Template	+	ID		Template ID	8	30		
TEDS Template		Measurement	Select Case	Physical Measurand (Units)	6	к	•	
		Measurement	Case 0.45	Minimum Physical Value	32	0		
TEDS Options		Measurement	Case 0-45	Maximum Physical Value	32	0		
TER Basic TEDS		Electrical Signal Output		Transducer Electrical Signal Type		Voltage Sensor	•	
andard Basic TEDS		Electrical Signal Output	Select Case	Full-Scale Electrical Value Precision	2	0-10V	-	
icaing		Electrical Signal Output	Case 0	Minimum Voltage Output		0		v
able Dual Scaling		Electrical Signal Output	Case 0	Maximum Voltage Output		10		v
sable Dual Scaling		Electrical Signal Output		Mapping Method	14	Linear	•	
		Electrical Signal Output		AC or DC Coupling	1	DC	•	
		Electrical Signal Output		Sensor Output Impedance	12	1		0
		Electrical Signal Output		Response Time	6	0.001		\$
		Power Supply	Select Case	Excitation / Power Requirements	1	No Power Supply / Excitation Source	•	
		Power Supply	Case 0	No Power Supply Or Excitation Source				
		Calibration Information		Calibration Date	16	3/6/2017		
		Calibration Information		Calibration Initials	15	AAA		
		Calibration Information		Calibration Period	12	365		days
		Miscellaneous		Measurement Location ID	11	1	Т	
	R	ecord: << 1 0	f 18 > >		_			_

Template 33 before Sensor information input

DS Template	Basi	TEDS Transducer Type Templa	ate Calibration T	emplate User Data			
ead TEUS Template		Function	Select	Description	Bits	Value	Units
ew TEDS Template		ID		Template ID	8	33	
ave TEDS Template		Measurement	Select Case	Physical Measurand (Units)	6	lb	-
		Measurement	Case 0-45	Minimum Physical Value	32	0	lb
sic TEDS Options		Measurement	Case 0-45	Maximum Physical Value	32	500	lb
FUTEK Basic TEDS		Electrical Signal Output	-	Transducer Electrical Signal Type		Bridge Sensor	
Standard Basic TEDS		Electrical Signal Output	Select Case	Full-Scale Electrical Value Precision	2	32-bit Precision	
al Scaling		Electrical Signal Output	Case 2	Minimum Electrical Output	32	0	V/V
Enable Dual Scaling		Electrical Signal Output	Case 2	Maximum Electrical Output	32	0.002	V/V
Disable Dual Scaling		Electrical Signal Output	-	Mapping Method		Linear	-
		Electrical Signal Output		Bridge Type	2	Full	
		Electrical Signal Output	-	Bridge Element Impedance	18	1	Ω
		Electrical Signal Output	-	Response Time	6	0.001	s
		Excitation Supply	-	Excitation Level, Nominal	9	10	V
		Excitation Supply		Excitation Level, Minimum	9	1	V
		Excitation Supply	-	Excitation Level, Maximum	9	18	V
		Calibration Information		Calibration Date	16	11/3/2016	
		Calibration Information	-	Calibration Initials	15	NWH	
		Calibration Information	-	Calibration Period	12	365	days
		Miscellaneous		Measurement Location ID	11	1	
	R	icord: < 🛛 1 0	f 19 > >				

Template 33 after Sensor information input

Template 30 before Sensor information input

	Base TEDS Indisoucer type relition	te Calibration T	emplate User Data				
Read TEDS Template	Function	Select	Description	Bits	Value		Uni
New TEDS Template	▶ ID		Template ID	8	30		
Save TEDS Template	Measurement	Select Case	Physical Measurand (Units)	6	psi		
	Measurement	Case 0.45	Minimum Physical Value	32	0		DS
Basic TEDS Options	Measurement	Case 0.45	Maximum Physical Value	32	50		psi
POTEK Basic TEDS	Electrical Signal Output		Transducer Electrical Signal Type		Voltage Sensor	*	
Standard Basic TEDS	Electrical Signal Output	Select Case	Full-Scale Electrical Value Precision	2	0-10V		
Dual Scaling	Electrical Signal Output	Case 0	Minimum Voltage Output		0		v
Enable Dual Scaling	Electrical Signal Output	Case 0	Maximum Voltage Output		10		v
Disable Dual Scaling	Electrical Signal Output		Mapping Method		Linear	*	
	Electrical Signal Output		AC or DC Coupling	1	DC	*	
	Electrical Signal Output		Sensor Output Impedance	12	1		0
	Electrical Signal Output		Response Time	6	0.001		5
	Power Supply	Select Case	Excitation / Power Requirements	1	Power Supply / Excitation Source		
	Power Supply	Case 1	Power Supply Level, Nominal	9	24		v
	Power Supply	Case 1	Power Supply Level, Minimum	9	14		v
	Power Supply	Case 1	Power Supply Level, Maximum	9	30		v
	Power Supply	Case 1	Power Supply Type	2	DC	*	
	Power Supply	Case 1	Maximum Current at Nominal Power Level	6	0.001		A
	Calibration Information		Calibration Date	16	11/3/2016		-
	Calibration Information		Calibration Initials	15	NWH		
	Calibration Information		Calibration Period	12	365		day
	Miscellaneous		Measurement Location ID	11	1		

Template 30 after Sensor information input

TEDS Template	Basix	TEDS Transo	ducer Type	Template Calibration Template User Data			
Read TEDS Template		Function	Coloct	Description	Dite	Malua	Unite
New TEDS Template		Function	Select	IPM500: Desimal Points	7	value	Onits
Save TEDS Template	1	User Data	-	IPM500: User Text (20 Chars)	140	U	
Jave 1200 remplate		User Data		IPM500: Analog Output Setup	2	Current Un-Filtered	
Basic TEDS Options		User Data		IPM500: Analog Low	32	0	
FUTEK Basic TEDS		User Data		IPM500: Analog High	32	0	
Standard Basic TEDS		User Data		IPM500: "Gain Correction	32	0	
Dual Scaling		User Data		IHH500/IPM650: Reverse Electrical Output	32	0.002	V/V
	1.0						

 On User Data tab, if reverse direction output is known input value in IHH500/IPM650: Reverse Electrical Output. Verify Enable Dual Scaling is enabled on Dual Scaling option.

#### HOW TO SAVE TEDS TEMPLATE INFORMATION

After you have filled in all of the required Basic TEDS Information and TEDS Template Information, click Save TEDS Template.

Please Note: When writing to the TEDS Chip, the data will be overwritten. Please be cautious as there is no way to retrieve the information once it has been overwritten.

#### Drawing Number: SP1210

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**10 Thomas, Irvine, CA 92618 USA** Tel: (949) 465-0900 Fax: (949) 465-0905

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