

# Technical Bulletin

**envirotouch™**  
the intelligent, energy  
saving solution

## What is the envirotouch switch?

The envirotouch is a range of intelligent, timer based switches which allows easy, point-of-use control of lighting and electrical devices. It includes multiple preset, countdown timer options or cycles, so with the simple press of a button it will automatically turn off the appliance, after the desired time. For example, select 45 minutes for classroom lights or 60 minutes for a heater, and they will switch off automatically. Designed for simple retrofitting of current switches and power sockets; can be hard-wired to light circuits or used with plug-in appliances to give intelligent control, but at a fraction of the cost.

## Where can it be used?

### COMMERCIAL & INSTITUTIONAL

- Lighting control, both indoor and outdoor
- Control of appliances such electric heaters, fans, mobile A/C units etc.
- Ideal for school classrooms, offices, hospitals, universities, aged care facilities, government buildings, retail shops, high-rise, halls, staff kitchens etc.

### RESIDENTIAL

- Lighting control, both indoor and outdoor
- Domestic appliances such as heaters, fans, lamps, coffee machines, irons, electric blankets, battery chargers, pumps etc.
- Ideal for all applications where electric devices are used



## FEATURES

### Intelligent control

Multiple timer options at the push of a button. Preset operating cycles on the TT-ET4 heated towel rail switch.

### Automatic Countdown timer

15, 45, 60 & 120 minute options (not on towel rail options). Set and the device will automatically turn off.

### User Friendly operation

Can be used as a simple on-off switch or enjoy all the benefits of timer control.

### Simple retrofitting

Easy to replace current switches and power points. (Requires neutral connection)

**Low installation costs on new builds** Installation costs on new projects are the same as a standard switch – no extra cost or hassle involved.

**Elegant and subtle design blends with all décor.**

### “Turn-off” indicator

Imminent turn-off technology will dim the lights to warn you that turn off will occur in one minute.



**envirotouch™**

**Table 1. Calculation of savings and abatement cost for commercial applications.**

Energy Consuming Device	Scenario	Energy Savings year (kWh)	Cost Savings year (\$)	GHG <sup>1</sup> Savings year (kg)	TT-ET1	TT-ET2	TT-ET3	Payback period (years)
					'Abatement cost' <sup>2</sup> \$ <sub>DCF</sub> /tonne CO <sub>2</sub>			
BCA lighting 10W/m <sup>2</sup> (15x15m room) 2250W	Prevent light being left on 2hrs per day during working days of year	1139	171	911	-134	-133	-	0.44
BCA lighting 10W/m <sup>2</sup> (10x10m room) 1000W	Prevent light being left on 2hrs per day during working days of year	506	76	405	-123	-122	-	0.99
Appliance on hours (2400W)	Prevent heater being left on during working days of winter months 2hrs per day	405	61	324	-	-	-123	1.31
Appliance on hours (2000W)	Prevent heater being left on during winter months 2hrs per day	337	51	270	-	-	-112	1.56
Lights 8 x 50W (Eg. halogen lit room)	Prevent lights being left on 2hrs per day during working days of year	292	44	234	-109	-108	-	1.72

<sup>1</sup> Electricity tariff based on commercial rate of \$0.15/kWh

<sup>2</sup> Based on RRP of \$75.95 for TT-ET1 and \$79.95 for other models. Does not include installation cost.

Abatement cost based on first year cost of switch, ten year discounted energy cost savings and total tonnes of CO<sub>2</sub> abated.

Assumptions: 253 working days/year; 4 winter months; Electricity price \$0.15; GHG emissions of 0.8kg/kWh<sub>elec</sub>

**Table 2. Calculation of savings and abatement cost for residential applications.**

Energy Consuming Device	Scenario	Energy Savings year (kWh)	Cost Savings year (\$)	GHG <sup>1</sup> Savings year (kg)	TT-ET1	TT-ET2	TT-ET3/4	Payback period (years)
					'Abatement cost' <sup>2</sup> \$ <sub>DCF</sub> /tonne CO <sub>2</sub>			
Appliance on hours (2400W)	Prevent heater being left on during winter months 2hrs per day	584	146	467	-	-	-220	0.55
Appliance on hours (2000W)	Prevent heater being left on during winter months 2hrs per day	487	122	389	-	-	-216	0.65
Heated towel rail (80W)	Prevent towel rail being left on 16hrs per day throughout the year	467	117	374	-	-	-215	0.68
Lights 8 x 50W (Eg. halogen lit room)	Prevent lights being left on 3hrs per day throughout the year	438	110	350	-215	-214	-	0.69
Appliance on hours (1000W)	Iron, prevented from being left on for 3hrs once a week for a year	156	39	125	-	-	-173	2.05

<sup>1</sup> Electricity tariff based on residential rate of \$0.25/kWh

<sup>2</sup> Based on RRP of \$75.95 for TT-ET1 and \$79.95 for other models. Does not include installation cost.

Abatement cost based on first year cost of switch, ten year discounted energy cost savings and total tonnes of CO<sub>2</sub> abated.

Assumptions: 4 winter months; Electricity price \$0.25; GHG emissions of 0.8kg/kWh<sub>elec</sub>

**Table 3. Discounted Cash Flow Analysis**

DCF calculation for commercial lighting application using single switch<sup>1</sup>

Year	0	1	2	3	4	5	6	7	8	9	Total
Capital	\$75.95	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Savings	\$170.78	\$175.90	\$181.18	\$186.61	\$192.21	\$197.98	\$203.91	\$210.03	\$216.33	\$222.82	\$1,957.74
Cashflow	\$94.83	\$175.90	\$181.18	\$186.61	\$192.21	\$197.98	\$203.91	\$210.03	\$216.33	\$222.82	
Discount factor	1.00	0.91	0.83	0.75	0.68	0.62	0.56	0.51	0.47	0.42	
DCF	\$94.83	\$159.91	\$149.73	\$140.20	\$131.28	\$122.93	\$115.10	\$107.78	\$100.92	\$94.50	
<b>NPV</b>	<b>\$94.83</b>	<b>\$254.73</b>	<b>\$404.46</b>	<b>\$544.67</b>	<b>\$675.95</b>	<b>\$798.88</b>	<b>\$913.98</b>	<b>\$1,021.76</b>	<b>\$1,122.68</b>	<b>\$1,217.18</b>	
GHG emissions abated (kg)	911	911	911	911	911	911	911	911	911	911	<b>9108</b>

<sup>1</sup> Basis: Discount rate 10%; Elec cost escalation per year 3%; commercial electricity tariff at \$0.15/kWh. Assuming BCA lighting 10W/m<sup>2</sup> (15m x 15m room), total 2250W, and scenario for timer savings based on preventing lights being left on 2hrs per day during the working days (253) of the year.

**Thermofilm Australia Pty Ltd**  
 17 Johnston Court, Dandenong South,  
 Victoria 3175  
 Tel: 03 9562 3455  
 Fax: 03 9548 3979  
 Email: info@thermofilm.com.au  
 Website: www.envirotouch.com.au

