


















Company Information	Company Name	TOTECH CORPORATION			Industry	Trading / Service																			
	Website	https://www.totech.co.jp/																							
Technology / Solution	Tech/Solution Name	DC hybrid switch																							
	Which field does the tech/solution contribute to?	Quality Infrastructure and Smart City																							
	"Quality Infrastructure" Which category can the tech/solution be applied to?	Road/Bridge	<input checked="" type="checkbox"/>	Port	<input type="checkbox"/>	Airport	<input type="checkbox"/>																		
		Water and Sewage	<input checked="" type="checkbox"/>	Power generation /Energy	<input type="checkbox"/>	Railroad	<input type="checkbox"/>																		
		Housing	<input type="checkbox"/>	ICT	<input type="checkbox"/>	Others (Free Writing)	0																		
	"Smart City" Which problem can the tech/solution solve?	Traffic/Mobility	<input type="checkbox"/>	Energy	<input type="checkbox"/>	Disaster Prevention	<input checked="" type="checkbox"/>																		
		Infrastructure Maintenance	<input type="checkbox"/>	Community Activation /Sightseeing	<input type="checkbox"/>	Health/Medical	<input checked="" type="checkbox"/>																		
		Agriculture, Forestry and Fisheries	<input checked="" type="checkbox"/>	Environment	<input type="checkbox"/>	Security	<input type="checkbox"/>																		
		Logistics	<input checked="" type="checkbox"/>	Urban Planning /Maintenance	<input type="checkbox"/>	Others (Free Writing)	0																		
	Key words	DC power cutoff switch																							
Overview of the tech/solution	<p>Since an arc is generated when a DC power supply is cut off, it deteriorates significantly over time, and there was no simple cut-off switch for a large capacity power supply. Hybrid switches that do not generate arcs are expected to be used in a wide range of applications, not only because they are compact and have a long service life. For example, when a switch for DC1500V is used as a mega solar generation cutoff switch, a PCS (power conditioner) for 1500V can be installed and the number of panels for each system can be increased, reducing costs. It is also connected to</p>																								
Description of the tech/solution	<p>Outline of Hybrid Type DC Switch :</p> <ul style="list-style-type: none"> ① DC Switch generate Arc when current cutoff ② Low Reliability for switch because of Arc ③ Sometimes Failure cause for Electrical Equipment <p>→ Hybrid Type of DC Switch is the main trend for DC Switch</p> <p>Application :</p> <ul style="list-style-type: none"> EV/Hybrid Car DC Switchboard PV Rapid Shut Down <table border="1"> <thead> <tr> <th></th> <th>Current Technology</th> <th>Hybrid Switch</th> </tr> </thead> <tbody> <tr> <td>Capacity</td> <td>Small</td> <td>Big</td> </tr> <tr> <td>Noise</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Size</td> <td>Big</td> <td>Small</td> </tr> <tr> <td>Price</td> <td>High</td> <td>Low</td> </tr> <tr> <td>Reliability</td> <td>Low</td> <td>High</td> </tr> </tbody> </table> <p>Hybrid Type of DC Switch :</p> <ul style="list-style-type: none"> External Gate Circuit Method : After Mechanical Contact Switch off, send off signal to Semiconductor SW Arc Voltage Utilization Method : After Mechanical Contact Switch off, using Arc Voltage, send on signal to Semiconductor SW <p>Feature:</p> <ul style="list-style-type: none"> No Requirement for External Power Supply and Control Circuit Require big capacity of Semiconductor Gate because low voltage 								Current Technology	Hybrid Switch	Capacity	Small	Big	Noise	Yes	No	Size	Big	Small	Price	High	Low	Reliability	Low	High
	Current Technology	Hybrid Switch																							
Capacity	Small	Big																							
Noise	Yes	No																							
Size	Big	Small																							
Price	High	Low																							
Reliability	Low	High																							
Glocal Expansion	Asia	Considering development	Africa	Consider if requested	Middle East	Consider if requested	Europe	Consider if requested																	
	Russia	Consider if requested	Oceania	Consider if requested	North America	Consider if requested	Mid/South America	Consider if requested																	

Case Study	Country	—																
	City	—																
	Project name	—																
	Project Overview	—																
	Discription of the project	—																
	Website of the project	—																
SDGs	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
																		
Note (Award etc.)	—																	