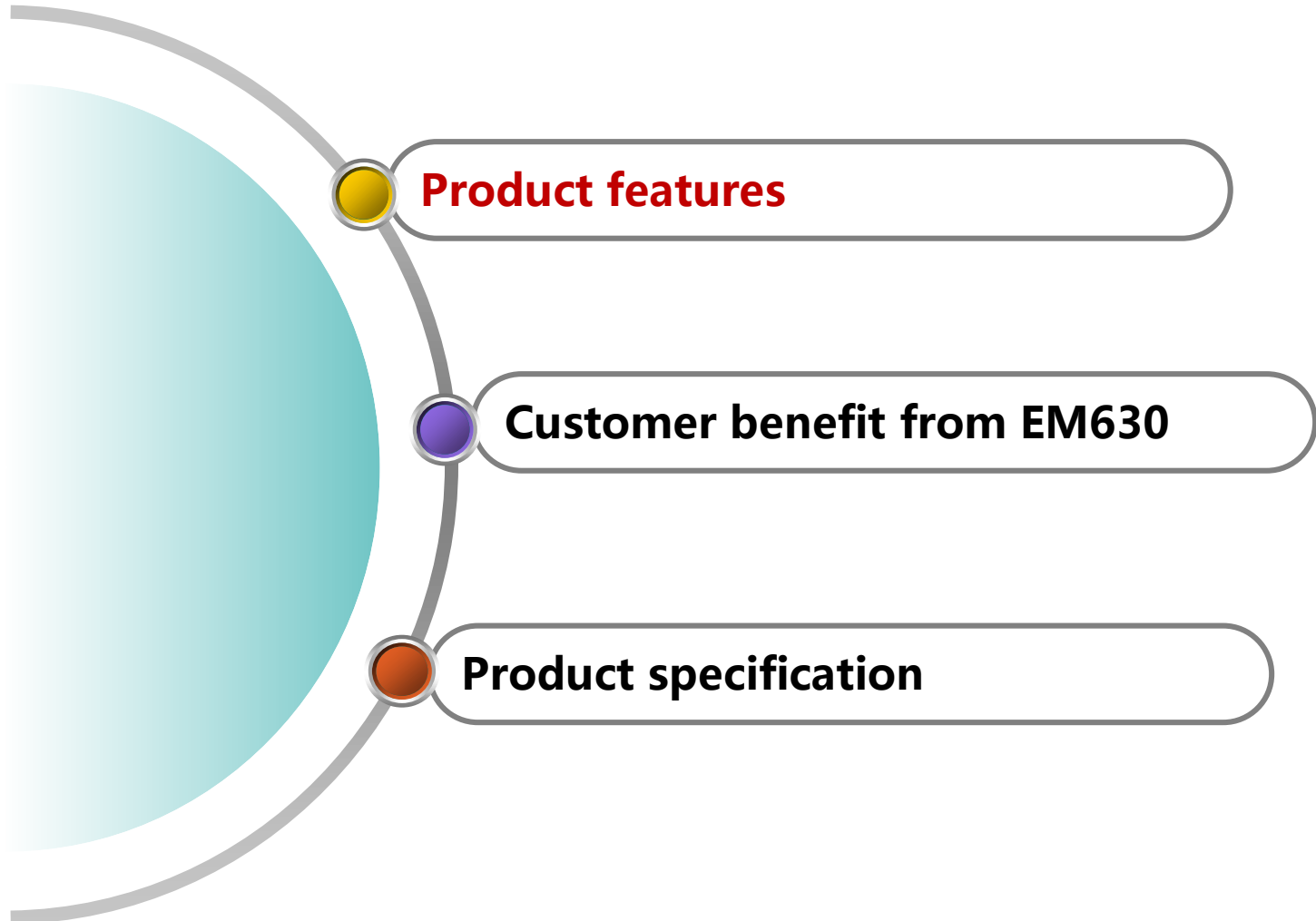


EM630 Specialized inverter for hoist

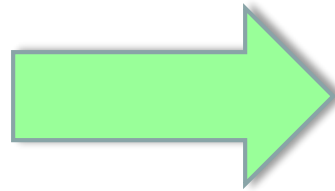
Dec 24, 2013

EM630 Specialized inverter for hoist **SINEE**



EM630 Specialized inverter for hoist

SINEE



EM330D
Open loop inverter for hoist

EM630
Close loop inverter for hoist

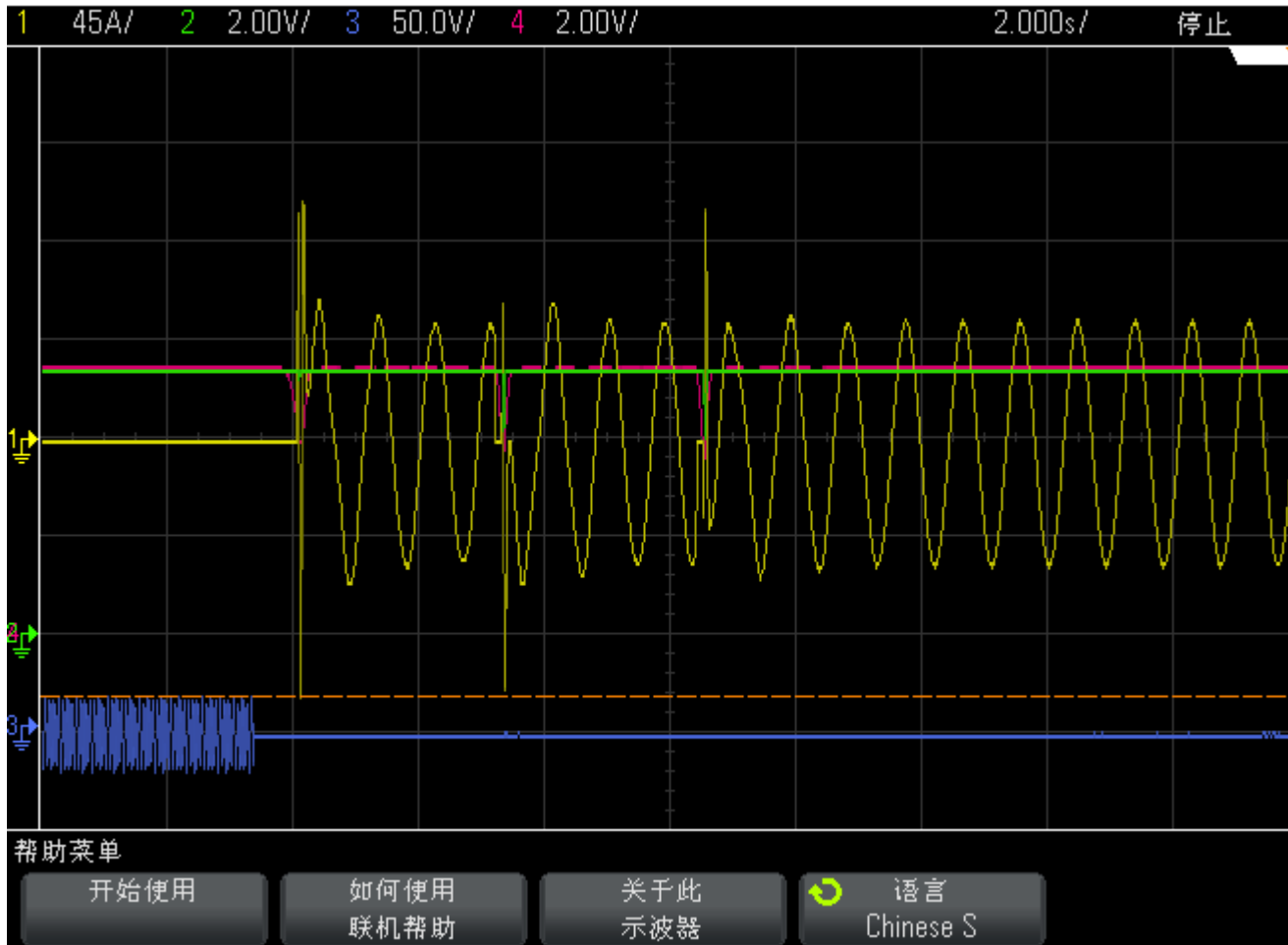
- EM630 mainly used in Tower crane and bridge crane, Close loop control hoisting equipments
- Zero servo function can prevent hook gliding when the brake fails

■ Main features

- Closed loop vector control, provide over speed protection;
- Big torque at low frequency;
- Zero servo: Safely release in case of brake failure;
- Brake control logic- Brake releases after current and time is up, more safe;
- Expandability: Support multiple encoders and I/O.

EM630 zero servo performance—static **SINEE**

Waveform: Open the brake at a state of rest



Yellow: Output current

Blue: Brake control signal

Green: Given speed

Pink: Feedback speed by encoder

帮助菜单

开始使用

如何使用
联机帮助

关于此
示波器

语言
Chinese S

EM630 zero servo performance—static **SINEE**



EM630 zero servo performance—dynamic **SINEE**

Waveform: Zero servo control the load to stop when go up



Yellow: Output current

Blue: Brake control signal

Green: Given speed

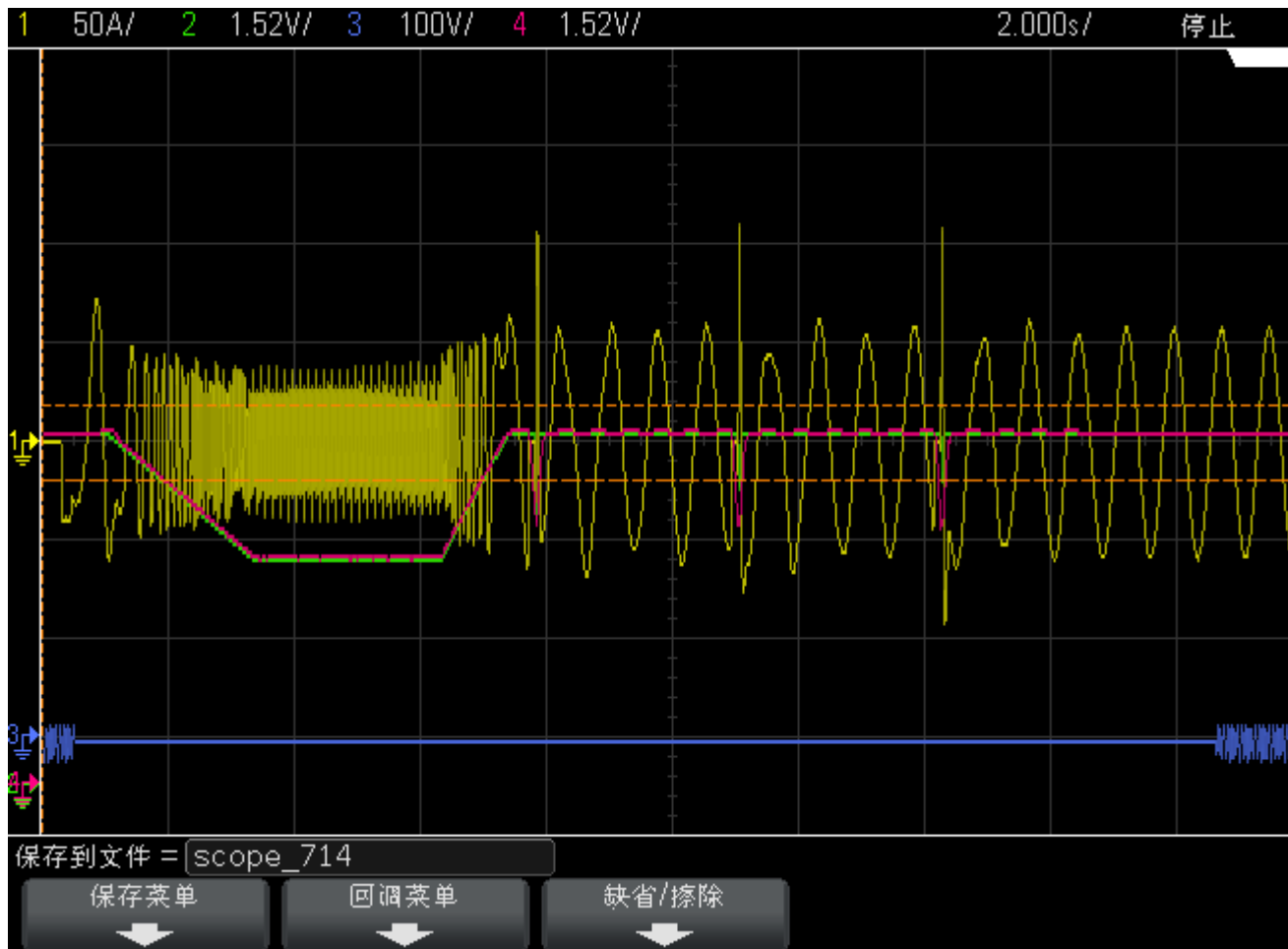
Pink: Feedback speed by encoder

EM630 zero servo performance—dynamic **SINEE**



EM630 zero servo performance—dynamic **SINEE**

Waveform: Zero servo control the load to stop when go down



Yellow: Output current

Blue: Brake control signal

Green: Given speed

Pink: Feedback speed by encoder

EM630 zero servo performance—dynamic **SINEE**



EM630 zero servo performance—dynamic **SINEE**

Waveform: Zero servo control the load to stop when go up V/F Control



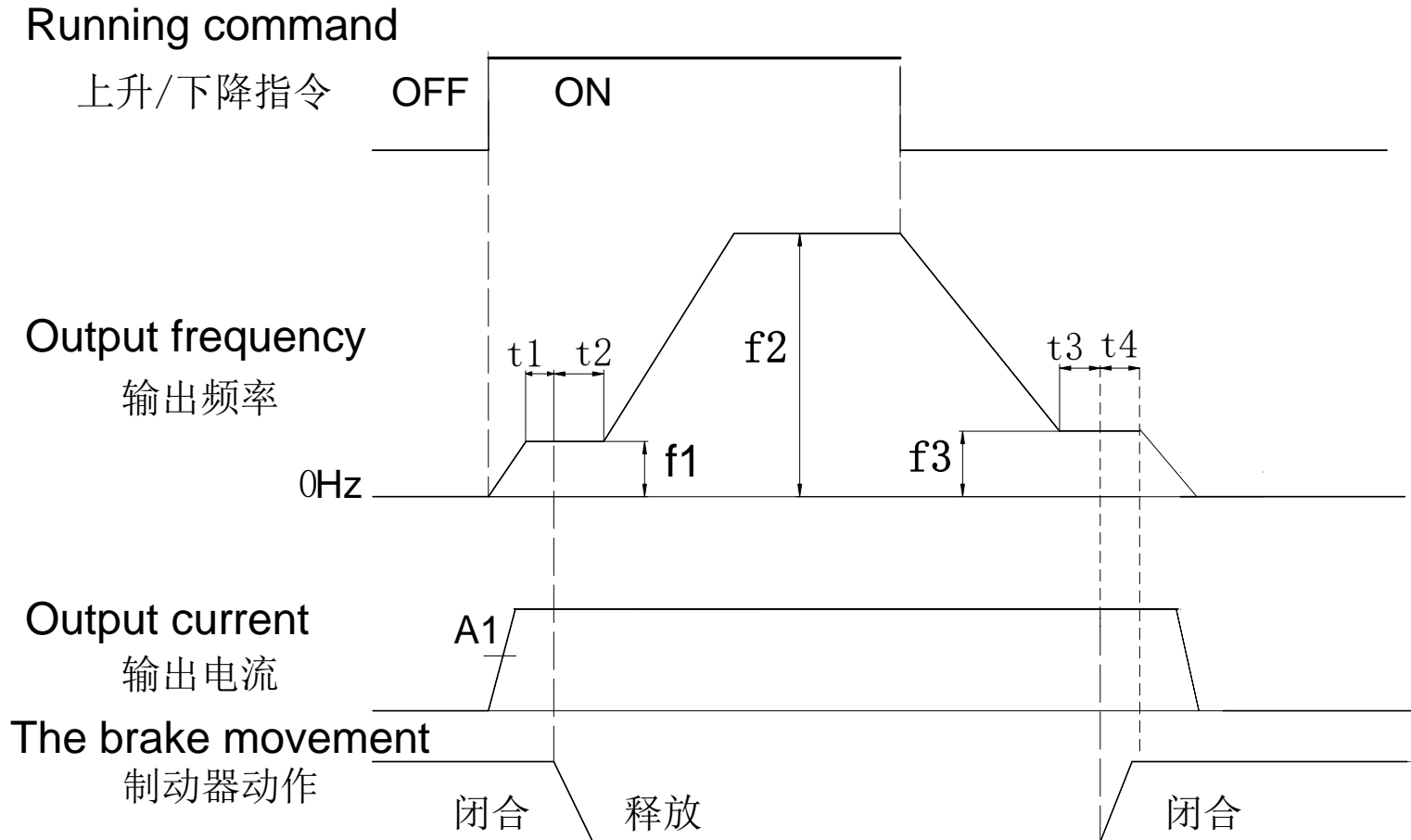
Yellow: Output current

Blue: Brake control signal

Green: Given speed

Pink: Feedback speed by encoder

Brake Control Logic

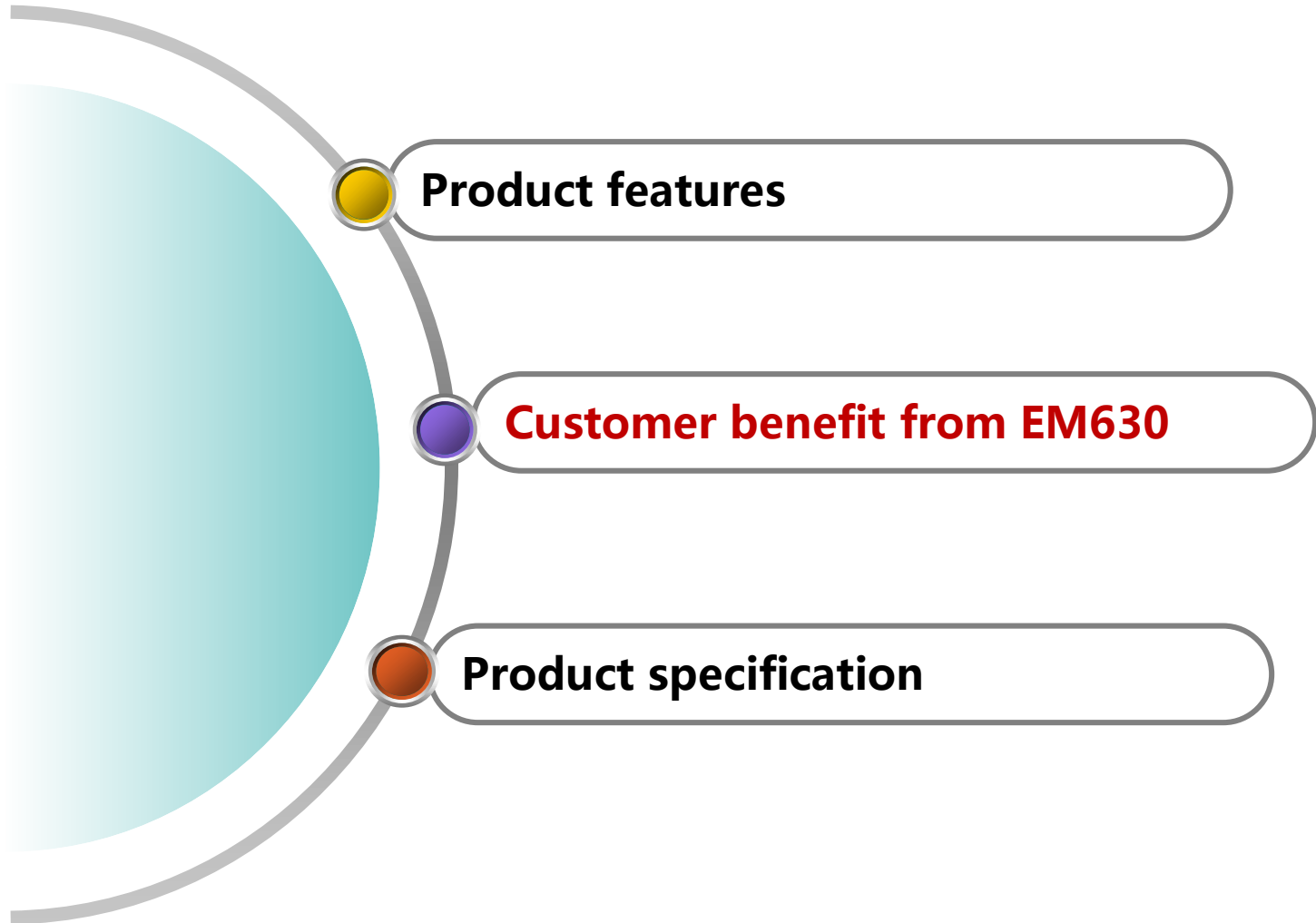


When Close loop vector control , f_1 and f_3 is 0.5Hz, $t_1 = t_3 = 0s$

- For example of 60t.m crane---hoist machine

Sparts	Tradition crane		Inverter crane		
	Configure	Price (RMB)	Configure	Price (RMB)	Save
Motor	Configure 1 : 3 type of speed motor ,24kW 4/8/24 poles	9000	Y Series 22kW Frequence	4000	5000
	Configure 2 : Coiling rotor motor , special motor for crane 24kW	12000			8000
Contacto circuit	LC1D80C*6 (正反转*2 调速*4)	1900	0	0	1900元
Inverter	/	0	EM630-030-3B	*	*
Resistance	/	0	15ohm/24kW	*	*
Encode	/	0	1024 increasing encode	400 ~ 800	400 ~ 800

EM630 Specialized inverter for hoist **SINEE**



Tower crane after driving by EM630 SINEE

System cost: Almost the same.

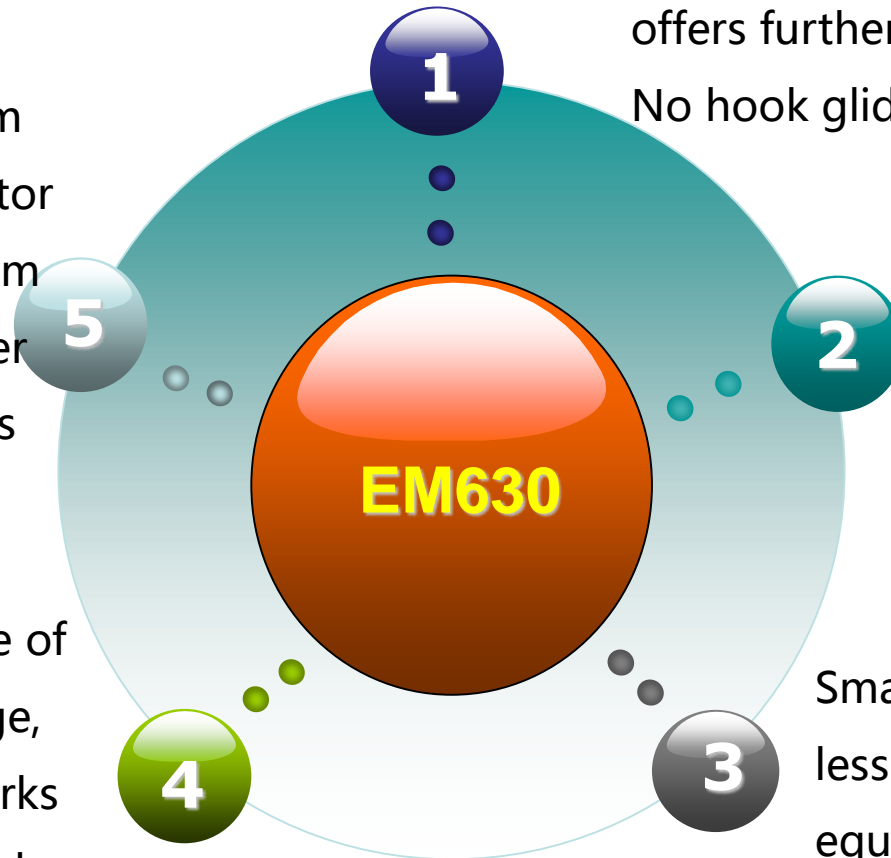
the cost freed from motor and contactor is similar to the sum of inverter, encoder and brake resistors

Larger tolerance of the input voltage,
The inverter works with mains supply $380V \pm 20\%$

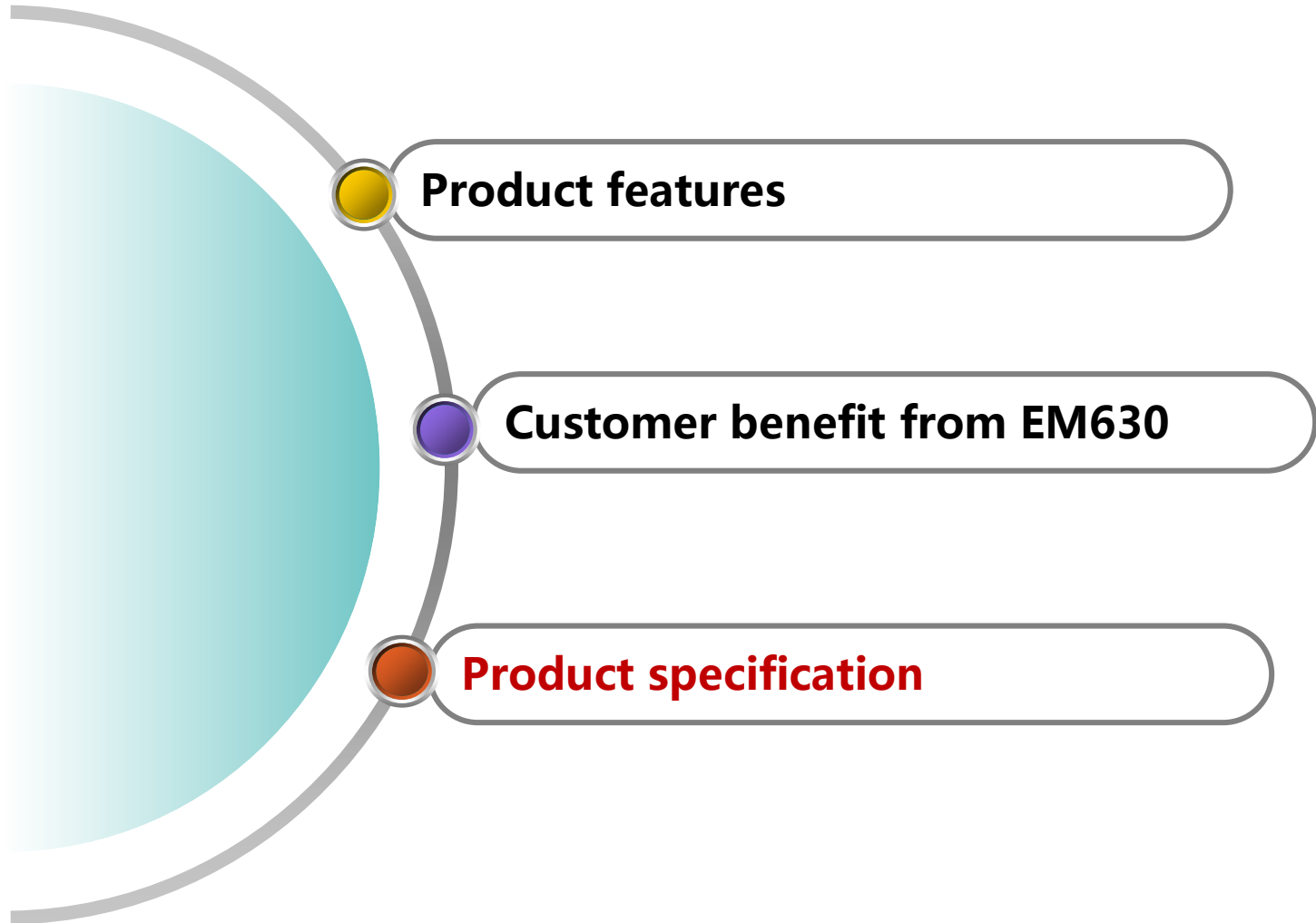
Safety improves, the zero servo offers further safety protection,
No hook gliding

Life of brake is getting longer and maintenance cost is lower

Smaller starting current, less influence to other equipments in the same power grid.



EM630 Specialized inverter for hoist **SINEE**



■ Model

- **EM630-022-3 ~ EM630-045-3**

It refers to EM630 specialized inverter for hoist, 22~45kW, 380V±20%

- **EM630-022-3B ~ EM630-045-3B**

Same as above but there is built-in braking choke

■ Capacity selection

- For tower crane, overload may occur during instantaneous starting, quick acceleration and deceleration, in this case, the inverter should be 1~2 power bigger.

■ Launch plan

- Pilot Phase : 380V 22kW~45kW
- 4kW~18.5kW、 55kW~160kW in the process of R&D.

SINEE

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