

Product description Variants Order No.

TAPCON 230 Basic/ Pro/ Expert

Digital Voltage Controller 6GC61

Utilization:

Transformer voltage controller

Function:

integrated tap position capture, measuring function (U, I, P, Q, S, cos phi, phi, I sin phi, f), record function statistic function (number of taps, number per tap position), free-programmable in- and outputs, supervision of all tap changer functions, limit values supervision (>U, <U, >I), rated value of voltage and current settable

Appointments:

Display 128x128 LCD-Module negativ blue Backlight LED white, 9 free-programmable LED's, status LED, Life contact, navigation keys, function keys, TAPCON-trol® visualization and engineering software

Housing; binary inputs and outputs

Steal panel - surface mounting with window; 8 BI, 7 BO, 1 Life contact

Additional auxiliary voltage supply

AUX DC OUT

without

additional auxiliary voltage DC 70 V to 210V signal voltage ³⁾

Power supply (voltage supply, signal voltage)

AC 110 V...350 V/ DC 88 V ... 265 V (Standard)

Installation (terminal connection "EASY-Cable")

flush mounting

Region specific presetting/ functional characteristic

German

English

French

Spanish

Russian

Italian

Portuguese

Communication interface

without interface

CI-Card (communication interface)

IEC-61850 Card (communication interface)

+Tap position capture)

without interface

IEC 61850, electrical **RJ45** and optical **LWL LC-connector** 1310nm ²⁾

Additional measured data storage

without

Tap position capture

no functions

Analog signal 4 - 20 mA ⁴⁾; resistor contact range ⁴⁾

Digital signal via BCD - Code, Gray - Code, Dual-Code ⁴⁾

N/O contact range (external module)

Setting voltage level remotely

no functions

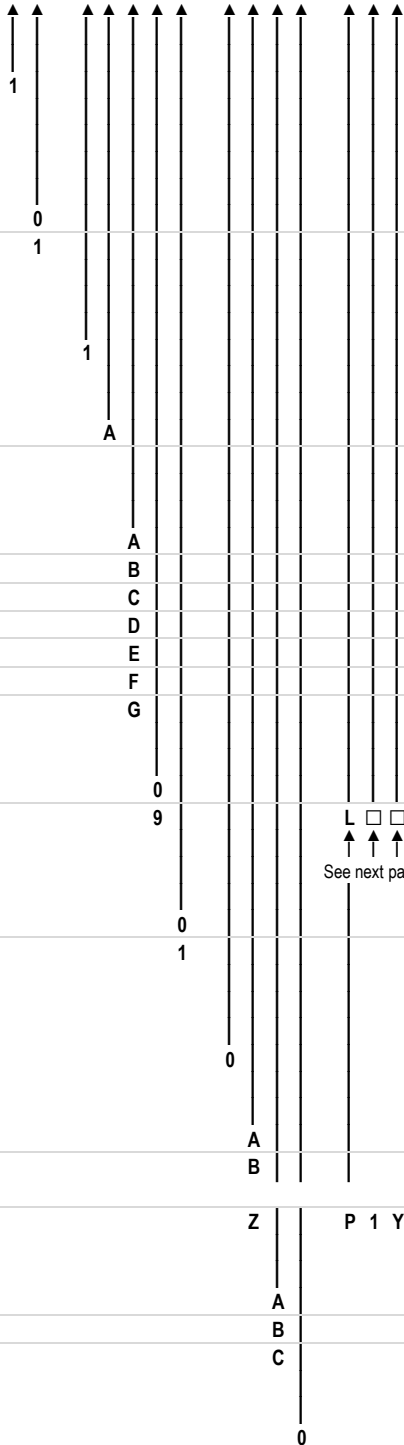
4 - 20 mA ¹⁾

Resistor contact range ¹⁾

Accessories optical Fiber - adapter cable

no accessories

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Short code
6 G C 6 1 - -



(continued on next page)

1) Pos.15 only in relation with digital tap position capture Pos.14
 2) Not possible with Pos.11=9
 3) Pos. 7 only from Pos. 14 available
 4) If Pos.11 or Pos.12 than Pos.14 = B - D = 0€

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Communication interface

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Short code
	6	G	C	6	1	□	-	□	□	□	□	□	-	□	□	□	L □ □
without interface											0						□ □
CI-Card (communication interface)											9						↑ ↑
Electrical RS232/ RS485																	1
Electrical RJ45 and optical fiber ST plug 850nm																	2
Ethernet																	
Electrical RJ45 and optical fiber ST plug 850nm																	7
Serial																	
<u>Available communication interfaces +</u>																	
<u>Tap position capture (Pos.14)</u>																	
IEC 60870-5-101 ¹⁾																	A
IEC 60870-5-103 ¹⁾																	B
DNP3																	D
Modbus ASCII ^{1) 2)}																	E
Modbus RTU ²⁾																	F
TAPCON-trol® (remote parameterization)																	G

1) not with Pos.11 L2x available
 2) not Modbus TCP

Product description	Variants	Order No.
TAPCON ISM		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Digital Voltage Controller 6GC64		6 G C 6 4 □ □ - □ □ □ □ □ □ - □ □ □ □ □ □
		↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑
<u>Housing: binary inputs and outputs</u>		
19" rack1/1 (84TE), 1ph measuring	1	
Transformer voltage controller	2	
19" flush panel mounting 1/1 (84TE), 1ph measuring	1	
19" Housing	3	
Standard 3 setting voltage level remotely	4	
19" rack1/1 (84TE), 3ph measuring	3	
19" flush panel mounting 1/1 (84TE), 3ph measuring	4	
User I/O, RJ45, RS232, RS485		
<u>Current transformer I_N:</u>		
1/5 A (selectable via Software)		
	<u>Power supply (voltage supply, signal voltage, binary switching threshold) binary input/output</u>	
	AC/DC 85 to 265 V, DIO-Modul BI28 BO15	1
	DC 23 to 63 V, DIO-Modul BI28 BO15	2
	AC/DC 85 – 265V, BI42 BO20, BI thresh.170V ¹⁾	3
	DC 23 to 63 V, BI42 BO20, BI thresh. 170 V ¹⁾	4
	AC/DC 85 to 265 V, DIO-Modul BI42 BO20 ¹⁾	5
	DC 23 to 63 V, DIO-Modul BI42 BO20 ¹⁾	6
	<u>Analog inputs/ outputs</u>	
	without	0
	analog canal 1	1
	analog canal 2	2
	analog canal 3	3
	analog canal 4 or temperature input 4	4
	<u>Setting voltage level remotely via digital and analog input</u>	
	3 digital set point values	A
	5 digital set point values	B
	1 analog set point values ²⁾	C
	TAPCON Dynamic Setpoint Control	D
	1 digital set point values	E
	Set point values BCD-Code	F
	3x TAPCON Dynamic Setpoint Control	G
	If Pos9=C then must Pos8 minimum =1	
	<u>Language /Documentation</u>	
	German	A
	English	B
	French	C
	Spanish	D
	Russian	E
	Italian	F
	Portuguese	G
	Korean	H
	Chinese	J
	<u>Interface for remote control parameterization</u>	
	without	0
	electrical RJ45/ Ethernet	1
	optical fibre 1310nm	2
	optical fibre 1310nm	3
	only with communication interface Pos11=L8	

(continued on next page)

1) If Pos11=9 (L4-0) communication-switch/mediaconverter and Pos8 (1-4) analog modul, external power supply is necessary (reference number MR1000631600)
 2) One analog channel at position 8 pre-allocated 2.

Product description	Variants	Order No.
TAPCON ISM		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Short code 6 G C 6 4 □ □ - □ □ □ □ - □ □ □ □ L □ □
(continued from previous page)	<u>Communication interfaces</u>	
	No communication	0
	Communication interface	9
	electrical RS232	
	electrical RS485	
	electrical RJ45/ Ethernet	
	optical fibre SMA-plug 850 nm	
	optical fibre SMA-plug 660 nm	
	optical fibre ST-plug 850 nm	
	optical fibre ST-plug 660 nm	
	optical fibre LC-plug 1310 nm	
	optical fibre LC-plug PRP 1310 nm	
	optical fibre LC-plug HSR 1310 nm	
	<u>Available Communication protocols</u>	
	IEC 60870-5-101	A
	IEC 60870-5-103	B
	IEC 60870-5-104	D
	DNP3	E
	Modbus TCP	F
	Modbus RTU	G
	IEC 61850 Standard	H
	IEC 61850 Expert + GOOSE	J
	DNP 3.0 Mapping configurable	K
	IEC 61850 Mapping configurable	L
	<u>Position Indication</u>	
	without	0
	- digital BCD - Code	1
	- analog Signal 4 - 20 mA ¹⁾	2
	- analog Signal 0 - 10 V ¹⁾	5
	- Analog signal over resistor contact range ¹⁾	6
	- Decade contact range ¹⁾³⁾	7
	- DUAL ¹⁾	8
	- N/O contact range (external modul) ⁴⁾	9
	If Pos13=2-6 than should Pos 8 min=1	
	<u>Additional measured data storage</u>	
	without	A
	with measured data storage	B
	<u>Parallel mode</u>	
	CAN-BUS incl. connecting plug	A
	Without parallel mode	C
	Parallell mode with UK TAPP Stagger with off-limit monitoring	D
	Parallell mode with UK TAPP Stagger with off-limit and switching-intervall monitoring	E
	Parallel mode with Stagger with off-limit and switching-intervall monitoring	F

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1) One analog channel at position 8 pre-allocated 2.
 2) If Pos16=4 then must Pos11=L_H
 3) If Pos11=9 (L4-0) communication-switch/mediacnverter and Pos8 (1-4) analog modul, external power supply is necessary (reference number MR1000631600)
 4) Tap position indication required with indication of the MR serial number or tap position according to the transformer nameplate

Product description	Variants	Order No.
TAPCON ISM		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Kurzangabe
(continued from previous page)		6 G C 6 4 □ □ - □ □ □ □ □ - □ □ □ □ □ L □ □
<u>Additional functions</u>		
without		1
Bankparallellauf ³⁾		2
Kreuzüberwachung ³⁾		3
Dreiwickler ³⁾		4
TAPGUARD		5
BCD Stufenstellungsausgabe ³⁾		6
Topologie Master ³⁾ (Übersicht der Anlagentopologie erforderlich)		7
Topologie Client ³⁾ (Übersicht der Analogentopologie erforderlich)		8
TAPCON Personal Logic Editor		9 R 0 A

3) If Pos11=9 (L4-0) communication-switch/mediacompiler and Pos8 (1-4) analog modul, external power supply is necessary (reference number MR1000631600)