

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

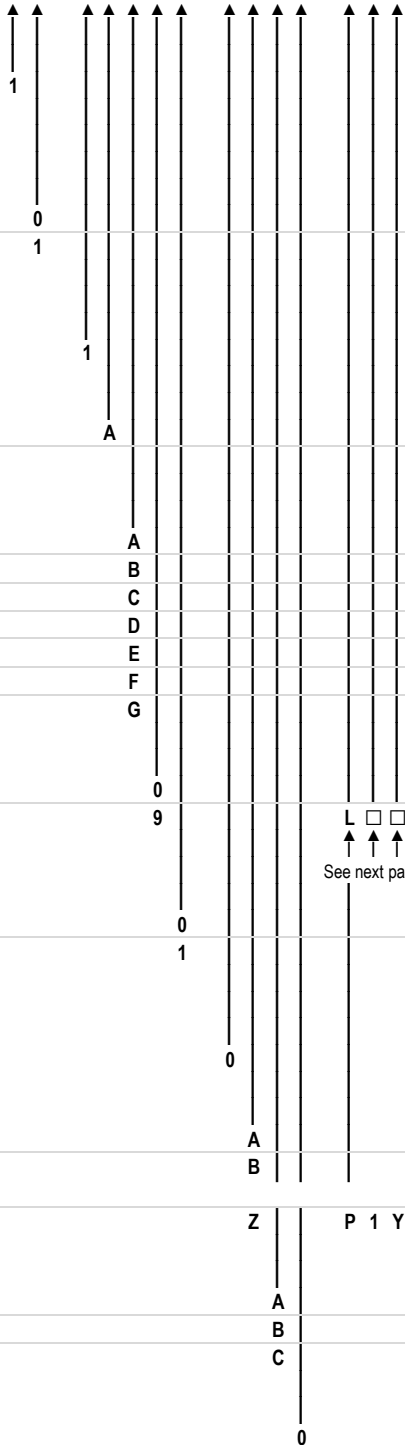
4 - 20 mA ¹⁾

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 □ □ - □ □ □ □ □ □ - □ □ □ □ □ □ □ □ □ □



See next page

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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		
19" flush panel mounting 1/1 (84TE), 3ph measuring		
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⁾ If Pos13=2-6 than should Pos 8 min=1	9
	<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.
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Kurzangabe 6 G C 6 4 □ □ - □ □ □ □ □ - □ □ □ □ L □ □
TAPCON ISM		
(continued from previous page)		
<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)