(continued on next page)

Variants Order No. Product description Digital differential protection relay for transformers, generators, Housing, binary inputs and outputs, measuring transducer motors small busbars and short lines Housing 1/1 19", 21BI, 24BO, 1 Life contact, 12xI, 1xIEE, 4xU Housing 1/1 19", 29BI, 24BO, 1 Life contact, 16xI, 2x IEE, 5 Backlit, graphic display 14 programmable LEDs, control keys Current transformer: IN navigation buttons, function buttons, 1 A 5) number block. 5 A 5) 5 Auxiliary voltage (power supply, binary input voltage) DC 24 V to 48 V, trigger level 19 V DC 60 V to 125 V $^{1)}\!,$ trigger level 19 V $^{2)}$ 4 DC 110 V to 250 V 1), AC 115/230 V, trigger level 88 V 2) 5 DC 220 V to 250 V $^{\mbox{\tiny 1}}\mbox{, AC 115/230 V, trigger level 176 V <math display="inline">^{\mbox{\tiny 2}}\mbox{)}$ Construction Surface-mounting housing, terminals on top and bottom В Flush-mounting housing, plug-in terminal (2/3 pin connector) D Flush-mounting housing, screw-type terminal Е (direct connection/ring-type cable lugs) Construction (with 5 high-speed trip contacts) Surface-mounting housing, terminals on top and bottom N Flush-mounting housing, plug-in terminal Ρ Flush-mounting housing, screw-type terminal Q Region-specific default settings/ function versions and language settings Region world, IEC/ANSI Α language German (language changeable) Region world, IEC/ANSI, B language English (language changeable) Region word, IEC/ANSI, C language US-english (language changeable) Region world, IEC/ANSI, D language French (language changeable) Region world, IEC/ANSI, E Language Spanish (language changeable) System port (on rear of device) Port B No system port 0 IEC 60870-5-103 Protocol, electrical RS232 1 IEC 60870-5-103 Protocol, electrical RS485 2 IEC 60870-5-103 Protocol, optical 820 nm, ST-connector 3 Further protocols see suplement L 0 PROFIBUS DP slave, electrical RS485 Α PROFIBUS DP slave, optical 820 nm, double ring, ST-connector 3) В D Modbus, electrical RS485 Modbus, optical 820 nm, ST-connector 4) Е DNP3.0, elektrical RS485 G DNP3.0, optical 820 nm, ST-connector 4) Н IEC 61850, 100 Mbit Ethernet, electrical, double, RJ45-connenctor R IEC 61850, 100 Mbit Ethernet, with integrated switch optical, double, LC-connector (EN100) 4)

¹⁾ Transition between the three auxiliary voltage ranges can be selected by means of jumpers

²⁾ For each binary input one of 2 pick-up threshold ranges can be selected with plug-in jumper

³⁾ If position 9 = B (surface-mounting housing) only with RS485 port available, please order the relay with electrical interface and separate fibre-optic converter

⁴⁾ Not available with Pos 9 = B

⁵⁾ Rated current 1/5 A can be selected by means of jumpers

Variants Order No. Product description 7 U T 6 3 🗆 - - - - - -Digital differential protection relay Only Port C (Service interface) for transformers, generators, DIGSI 4 / Modem/Browser, electrical RS232 motors, small busbars and short lines DIGSI 4 / Modem/ Browser/Thermo-box, electrical RS485 Backlit, alphanumeric display with Port C and Port D (Service interface) four lines, 14 programmable LEDs, DIGSI 4 / Modem/Browser, electrical RS232 9 navigation buttons, function buttons, DIGSI 4 / Modem/Browser/Thermo-box, electrical RS485 M 2 🗆 number block. Port D (Additional interface) Thermo-box 1), optical 820 nm, ST-connector (continued from previous page) A Thermo-box 1), electrical RS485 Measuring and monitoring functions Basic measured values, fault recording Extended measured values, min./max., mean values 2 Extended measured values, min./max., mean values transformer monitoring functions (connection to thermo-box/hot spot, overload factor) 1) Differential protection/Backup function 87 T G M L Differential protection transformer, autotransformer, generator, motor, Small busbur, short line 49 Overload protection for one winding 86 Lockout function 50/51 Time-overcurrent protection TOC phase: I>, I>>, Ip, (inrush stabilization) 50N/51N Time-overcurrent protection TOC 3I0: 3 I₀>, 3 I₀>>, 3 I₀p (inrush stabilization) 50G/51G Time overcurrent protection TOC ground: I_E>, I_E>>, I_{Ep} (inrush stabilization) Backup protection + additional current functions 87N Restricted earth fault low impedance 87N TOC single-phase for restricted earth fault high impedance (87 N without external resistor / varistor) ²⁾ 64 or sensitive time overcurrent protection / tank protection 46 Load unbalance protection 50BF Breaker failure protection 74TC Trip circuit supervision Rail protection 16,7 Hz 3) Differential protection+ backup function + additional current functions available protection objects: transformer (1-/3-phase), motor, generator Rail protection 16,7 Hz 3) Ď Differential protection+ backup function + additional current functions available protection objects: transformer (1-/3-phase), motor, generator, Busbar (1-/3-phase) Additional voltage functions 4) Voltage measurement and overexcitation protection В Voltage measurement and overexcitation protection + Over- and Undervoltage protection + Frequence protection Flexible protection functions + Power directional protection - I-Measuring location/ side + Fuse failure monitor - Current supplementary CT Additional functions (general) - Voltage ($V_{\text{ph-ph}},\,V_{\text{ph-E}},\,V_{0},\,$ V_1 , V_2 , V_n) - Active Power forward Multiple protection functions (50,51 50 N/G, 51 N/G, 87 N 4), 50 BF, 49) 5) - Active Power reverse Flexible protection functions - Power Factor Multiple protection functions and flexible protection functions - Frequency

- 1) Monitoring functions only available with external temperature measuring unit 7XV5662-*AD10 (see section Accessories communication).
- 2) Varistor and resistor (see section Accessories).
- 3) Only with MLFB position 16=**1** or **3**.

7UT633 available only.

5) Only if available already through MLFB position 14.