INSTRUCTIONS

DLP3**B0001**

BLOCK RECLOSING FEATURE FOR ZONE 1 AND ZONE 2 PHASE FAULTS
DLP3 WITH KEYPAD

Introduction

These instructions, GEK-100601, together with GEK-99346, constitute the complete instructions for the DLP3****B0001.

Description

This relay has the following differences from the standard relay described in GEK-99346:

1. Two new items to block reclosing: one for Zone 1 phase faults and one for Zone 2 phase faults

Attachments

1. New settings table with added settings:
   RBZ1PH for Zone 1 phase faults
   RBZ2PH for Zone 2 phase faults

TABLE IN-5: DLP SETTINGS

NOTE: In = rated current, either 1 A or 5 A.

CATEGORY: Z1DIST – Zone 1 distance

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
0101	Select Zone 1 GROUND	SELZ1G	N/A	YES/NO	YES/NO
0102	Select Zone 1 PHASE	SELZ1P	N/A	YES/NO	YES/NO
0103	Phase Reach (M1/M1G)	Z1R	Ohms	0.01 – (50) (5/In)	xxx.xx
0104	Ground Reach (M1/M1G)	Z1GR	Ohms	0.01 – (50) (5/In)	xxx.xx
0105	Select Zone 1 Ground Unit	SELZ1U	N/A	0 (Mho) 1 (Reactance)	x
0106	Reach setting of mho unit supervision reactance unit	Z1SU	Ohms	0.01 – (50) (5/In)	xxx.xx
0107	Zero-sequence current compensation (K0)	Z1K0	N/A	1.0 – 7.0	x.x

CATEGORY: Z2DIST – Zone 2 distance / GDOC (Pilot Zone)

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
0201	Select Zone 2 GROUND	SELZ2G	N/A	YES/NO	YES/NO
0202	Select Zone 2 PHASE	SELZ2P	N/A	YES/NO	YES/NO
0203	Phase Reach (MT/MTG)	Z2R	Ohms	0.01 – (50) (5/In)	xxx.xx
0204	Ground Reach (MT/MTG)	Z2GR	Ohms	0.01 – (50) (5/In)	xxx.xx
0205	Select Zone 2 Ground Unit	SELZ2U	N/A	0 (Mho) 1 (GDOC) 2 (Mho + GDOC)	x
0206	Select Zone 2 Timers	SELZ2T	N/A	YES/NO	YES/NO
0207	Phase Timer Setting	PUTL2P	secs.	0.10 – 3.00	x.xx
0208	Ground Timer Setting	PUTL2G	secs.	0.10 – 3.00	x.xx
0209	Phase Characteristic Angle	Z2PANG	Degrees	90, 105, 120	xxx
0210	Ground Characteristic Angle	Z2GANG	Degrees	90, 105, 120	xxx

CATEGORY: Z3DIST – Zone 3

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
0301	Select Zone 3 GROUND	SELZ3G	N/A	YES/NO	YES/NO
0302	Select Zone 3 PHASE	SELZ3P	N/A	YES/NO	YES/NO
0303	Phase Reach (M3/M3G)	Z3R	Ohms	0.01 – (50) (5/In)	xxx.xx
0304	Ground Reach (M3/M3G)	Z3GR	Ohms	0.01 – (50) (5/In)	xxx.xx
0305	Phase Timer Setting	PUTL3P	secs.	0.10 – 10.00	x.xx
0306	Ground Timer Setting	PUTL3G	secs.	0.10 – 10.00	x.xx
0307	Phase Characteristic Angle	Z3PANG	Degrees	90, 105, 120	xxx
0308	Ground Characteristic Angle	Z3GANG	Degrees	90, 105, 120	xxx

CATEGORY: Z4DIST – Zone 2 distance / GDOC (Pilot Zone)

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
0401	Select Zone 4 GROUND	SELZ4G	N/A	YES/NO	YES/NO
0402	Select Zone 4 PHASE	SELZ4P	N/A	YES/NO	YES/NO
0403	Phase Reach (M4/M4G)	Z4R	Ohms	0.01 – (50) (5/In)	xxx.xx
0404	Ground Reach (M4/M4G)	Z4GR	Ohms	0.01 – (50) (5/In)	xxx.xx
0405	Phase Offset Reach	Z4OR	N/A	0.00 – 0.40	x.xx
0406	Phase Timer Setting	PUTL4P	secs.	0.10 – 10.00	x.xx
0407	Ground Timer Setting	PUTL4G	secs.	0.10 – 10.00	x.xx
0408	Phase Characteristic Angle	Z4PANG	Degrees	80, 90, 95, 105, 110, 120	xxx
0409	Ground Characteristic Angle	Z4GANG	Degrees	80, 90, 95, 105, 110, 120	xxx
0410	Select Direction	SELZ4D	N/A	0 (Forward) 1 (Reverse0	x

CATEGORY: CURVSUPVIS – Overcurrent Pilot/Supervision

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
0501	Ground Pilot Trip O/C (IPT)	PUIPT	Amps	(0.10 – 1.00)(In)	xx.xx
0502	Ground Pilot Block O/C (IPB)	PUIPB	Amps	(0.05 – 0.75)(In)	xx.xx
0503	Trip Supervision O/C setting (IT)	PUIT	Amps	(0.04 – 0.80)(In)	xxx.xx
0504	Block Supervision O/C setting (IB)	PUIB	Amps	(0.04 – 0.40)(In)	xxx.xx

CATEGORY: OVERCUR – Overcurrent Backup

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
0601	Select Phase Inst. O/C PH4	SELPH4	N/A	YES/NO	YES/NO
0602	Select Inst. O/C setting	PUPH4	Amps	(0.4 – 20.0)(In)	xxx.x
0603	Select Ground Inst. O/C IDT	SELIDT	N/A	YES/NO	YES/NO
0604	Directional Control of IDT	SELDIDT	N/A	YES/NO	YES/NO
0605	Ground Instantaneous O/C setting	PUIDT	Amps	(0.1 – 16.0)(In)	xx.x
0606	Select Ground Time O/C (TOC)	SELTOC	N/A	YES/NO	YES/NO
0607	Directional Control of TOC	SELDTOC	N/A	YES/NO	YES/NO
0608	Ground Time O/C Setting	PUTOC	Amps	(0.04 – 3.00)(In)	xx.xx
0609	Ground Time O/C Time Dial	TDTOC	N/A	0.5 – 10.0	xx.x

CATEGORY: BLK RECLOS – Reclosing

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
0701	All of the Above	SELALL	N/A	YES/NO	YES/NO
0702	Out-of-step block	RBOSB	N/A	YES/NO	YES/NO
0703	All Zone 2 phase units	RB3PH	N/A	YES/NO	YES/NO
0704	Ground Time O/C TOC	RBTOC	N/A	YES/NO	YES/NO
0705	Zone 2 Timers	RBZ2T	N/A	YES/NO	YES/NO
0706	Zone 3 Timers	RBZ3T	N/A	YES/NO	YES/NO
0707	Zone 3 Timers	RBZ4T	N/A	YES/NO	YES/NO
0708	Zone 1 phase units	RBZ1PH	N/A	YES/NO	YES/NO
0709	Zone 2 phase units	RBZ2PH	N/A	YES/NO	YES/NO

CATEGORY: OUTOFSTEP – Out-of Step Blocking

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
0801	Select phase trip to coordinate with	SELPTZ	N/A	0 (Zone 2) 1 (Zone 3) 2 (Zone 4)	x
0802	Characteristic angle	MOBANG	Degrees	30 – 130	xxx
0803	Select block trip actions	SELOSB	N/A	0 (block all tripping); 1 (block channel trip + Zone 1 – 4 trip); 2 (block none0	x

CATEGORY: LINEPU – Line Pickup

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
0901	Select Line Pickup	SELLPU	N/A	YES/NO	YES/NO
0902	Select Timer Bypass	SELTBP	N/A	YES/NO	YES/NO
0903	Positive-sequence O/C setting	PUI1	Amps	(0.2 – 3.0)(In)	xx.x

CATEGORY: REMOTEOPEN – Remote Open Detector

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
1001	Select remote open detector	SELROD	N/A	YES/NO	YES/NO
1002	Time delay setting (TL20)	PUTL20	msec.	10 – 100	xxx
1003	Fuse failure block	SELFFB	N/A	YES/NO	YES/NO

CATEGORY: LINEPU – Line Pickup

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
1101	Select line overload	SELOVL	N/A	YES/NO	YES/NO
1102	Level 1 OC setting	PULV1	Amps	(1.0 – 4.0)(In)	xx.x
1103	Level 2 OC setting	PULV2	Amps	(2.0 – 8.0)(In)	xx.x
1104	Level 1 time delay (TL31)	PUTL31	sec.	10 – 990	xxx
1105	Level 2 time delay (TL32)	PUTL32	sec.	10 –99	xx

CATEGORY: SCHEMESEL – Scheme Selection

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
1201	Select Scheme	SELSCM	N/A	0 (Step distance); 1 (permissive overreaching); 2 (permissive underreaching); 3 (hybrid) 4 (blocking)	x
1202	Number of receivers	NUMRCVR	N/A	0, 1, 2	x

CATEGORY: SCHEMETIM – Scheme Logic Timers

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
1301	Trip integrator pickup (TL1)	PUTL1	msecs.	1 – 50	xx
1302	'b' contact coordination pickup (TL5) breaker 1	PUTL5	msecs.	0 – 200	xxx
1303	'b' contact coordination dropout (TL5) breaker 1	DOTL5	msecs.	0 – 200	xxx
1304	'b' contact coordination pickup (TL6) breaker 2	PUTL6	msecs.	0 – 200	xxx
1305	'b' contact coordination dropout (TL6) breaker 2	DOTL6	msecs.	0 – 200	xxx
1306	PUTT/POTT coordination pickup (TL4)	PUTL4	msecs.	0 – 50	xx
1307	Weak infeed trip pickup (TL16)	PUTL16	msecs.	8 – 80	xx

CATEGORY: LINE QTY – Line Quantities

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
1401	Positive-sequence angle of maximum reach (ZR1)	POSANG	Degrees	45 – 90	xx
1402	Zero sequence angle of maximum reach (ZR0)	ZERANG	Degrees	45 – 90	xx
1403	Positive-sequence impedance	ZP	Ohms	0.01 – (50)(In)	xxx.xx
1404	Zero-sequence current compensation for Z2, Z3	K0	N/A	1.0 – 7.0	x.x
1405	Line Length	LINELEN	Miles/km	0.0 – 200.0 miles 0.0 – 322.0 km	xxx.x

CATEGORY: CONFIG – Configuration Settings

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
1501	Unit ID number	UNITID	N/A	0 – 9999	xxxx
1502	System frequency	SYSFREQ	Hz	50, 60	xx
1503	Number of breakers	NUMBKRS	N/A	1, 2	x
1504	Trip circuit continuity	TRIPCIRC	N/A	0 (None) 1 (Breaker 1) 2 (Breaker 2) 3 (Both0	x
1505	Primary/secondary units for reports	SELPRIM	N/A	0 (primary) 1 (secondary0	x
1506	CT ratio	CTRATIO	N/A	1 – 5000	xxxx
1507	PT ratio	PTRATIO	N/A	1 – 7000	xxxx
1508	Units of distance for reports	DISTUNIT	N/A	0 (miles) 1 (km)	x
1509	Communications baud rate	BAUDRATE	N/A	300, 1200, 2400	xxxx
1510	Phase designation	PHASDESG	N/A	0 (A-B-C) 1 (A-C-B)	x

CATEGORY: SCADA DTA – SCADA DTA Interface

SETT#	DESCRIPTION	ABBREV	UNITS	RANGE	FORMAT
1601	Fault location lock	FLTLOCK	sec.	0 – 99.9	xx.x
1602	Fault location reset	FLTRESET	min.	0 – 999	xxx

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