SIPROTEC 4, MLFB upgrades

SIPROTEC 4 MLFB upgrades are a method of being able to add additional functions to the relay after purchase. An executable upgrade file is purchased for the specific relay and the new features to be enabled. The MLFB upgrade can also be used to keep the electronic version of the MLFB, displayable in the front panel LCD, up to date with other physical changes made to the relay. Such physical changes may be jumper changes from 1 A to 5 A current input (or vice versa), changing SCADA interface type, or protection data interface card changes.

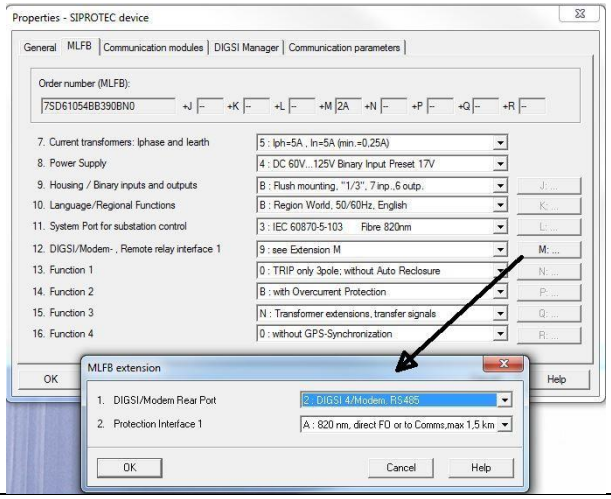
We always recommend having the MLFB information in the relay updated to accurately reflect the device's current configuration. On any SIPROTEC 4 relay, to find the MLFB via the front panel menu, use the front panel keys to select in order:

1. Main Menu
2. Settings (4)
3. Setup/Extras (10)
4. MLFB/Version (5)

To order an MLFB upgrade you need the current MLFB and serial number. It is likely a firmware upgrade is in order too, so the existing firmware and hardware version should also be obtained. Given that MLFB's form is reported slightly differently in different locations, here is a guide:

When communication the MLFB we recommend you use the form as used for ordering (as found in the SIPROTEC catalogue), with the hardware version, firmware version and serial number provided.

Using an example of a specific 7SD610 Line Diff Relay configuration here is how the MLFB is reported:

Location	Notes
DIGSI 4.87	The MLFB is divided into indexed and coded segments. A 9 is used to denote additional codes are used for that segment. In the example, position 12 is a 9, so an M prefix is used for the extra code, in this case being "2A". This code may be reported as 2A in some locations, +M2A in others or as part of the main MLFB, as shown in following examples.
	

HV Power Measurements & Protection Ltd
P O Box 26-074, Epsom, Auckland 1344
Unit 4, 1 Porters Ave, Eden Terrace, Auckland 1024,
New Zealand
P: +64-9- 377 2001
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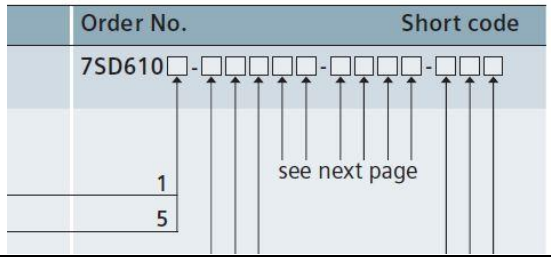
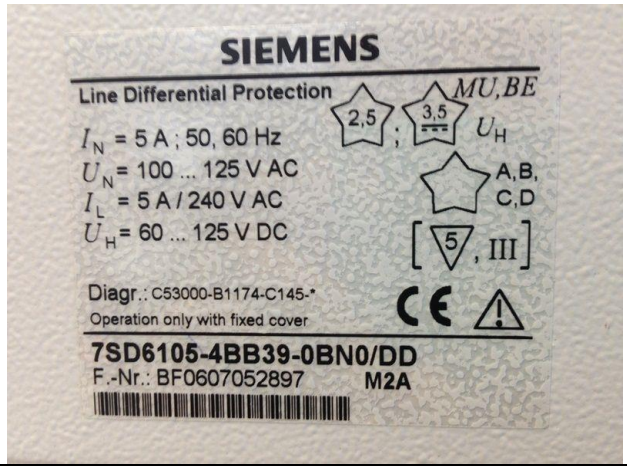
E: sales@hvpowerautomation.com

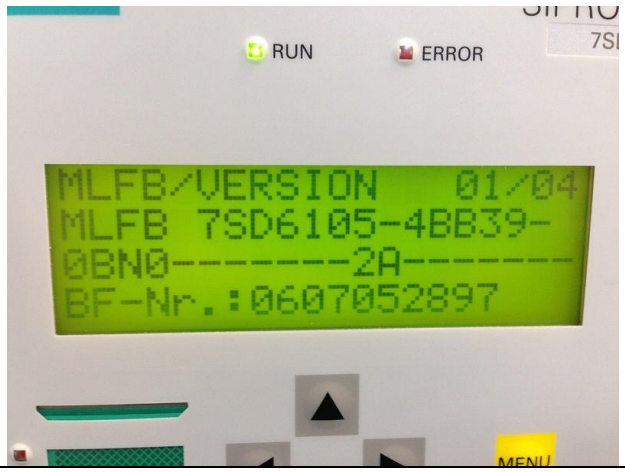
Location	Format	Notes
Catalogue:	7SD6105-4BB39-0BN0-M2A	



Location	Format	Notes
Rating label	7SD6105-4BB39-0BN0/DD M2A	/DD indicates the hardware revision (processor type), and this is important to know to check compatibility with older/newer firmware The "M2A" section appears on a different line



Location	Format	Notes
LCD screen	7SD6105-4BB39- 0BN0-------2A-------	Note the "M" does not appear. This relay has IEC 103 SCADA card, if it was fitted with "LOH" or similar card, the "L" extension would be missing in this screen Use the down arrow from this screen to show firmware version information etc.



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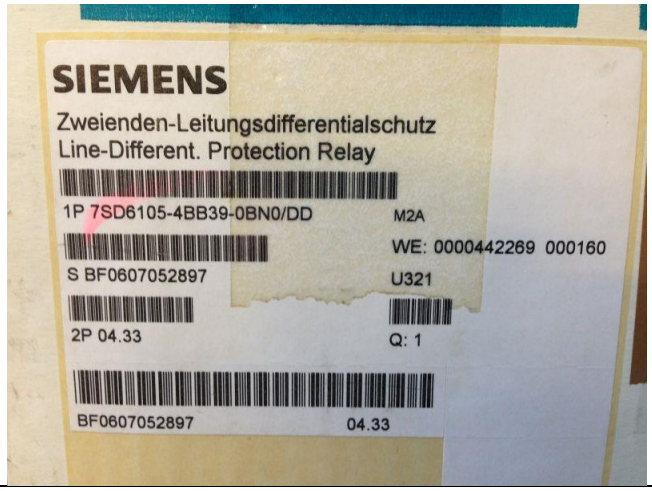
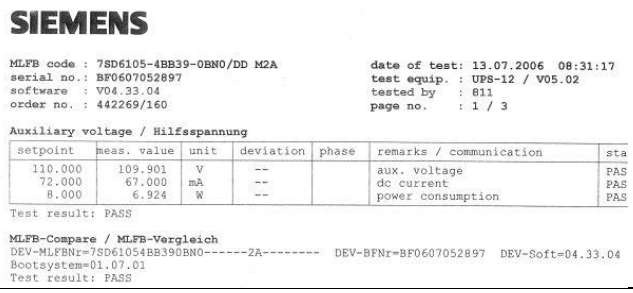
Location	Format	Notes
Shipping box	7SD6105-4BB39-0BN0/DD M2A	Hardware version is indicated within MLFB



Location	Format	Notes
Test certificate	7SD6105-4BB39-0BN0/DD M2A 7SD6105-4BB39-0BN0---2A---	MLFB is reported differently in heading and MLFB section



SIEMENS

MLFB code : 7SD6105-4BB39-0BN0/DD M2A
serial no.: BF0607052897
software : V04.33.04
order no. : 442269/160

date of test: 13.07.2006 08:31:17
test equip. : UPS-12 / V05.02
tested by : 811
page no. : 1 / 3

Auxiliary voltage / Hilfsspannung

setpoint	meas. value	unit	deviation	phase	remarks / communication	sta
110.000	109.901	V	--		aux. voltage	PAS
72.000	67.000	mA	--		dc current	PAS
8.000	6.924	W	--		power consumption	PAS

Test result: PASS

MLFB-Compare / MLFB-Vergleich
DEV-MLFBNr=7SD61054BB390BN0------2A-------- DEV-BFNr=BF0607052897 DEV-Soft=04.33.04
Bootsystem=01.07.01
Test result: PASS

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