

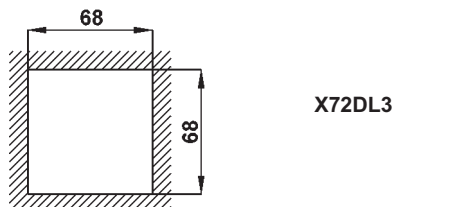
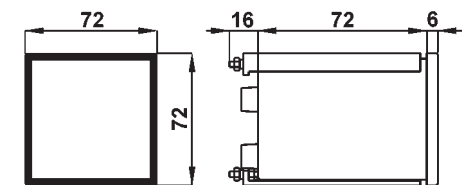
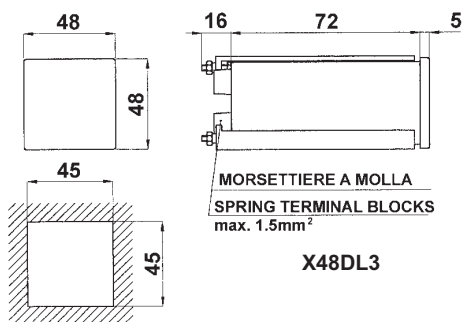
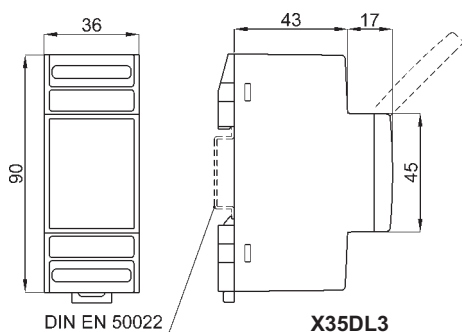
NEW

RELE' DIFFERENZIALI DI TERRA EARTH LEAKAGE RELAYS

- ✓ Display multicolore
Multicolor display
- ✓ Tipo A, F Super Immunizzato
Super Immunized Type A, F
- ✓ Orologio
Real time clock
- ✓ RS485 ModBus RTU



SFRER



4C7296XK
Cornice 96x96mm per X72DL3
96x96mm Frame for X72DL3

DATI TECNICI

display
visualizzazione massima
posizione punto decimale
istogramma
misura corrente differenziale I_{Δ}
aggiornamento letture
risposta in frequenza
precisione di base
filtro in frequenza
antifibrillazione selezionabile
filtro in frequenza
3^a armonica selezionabile
regolazione corrente differenziale di intervento $I_{\Delta n}$
regolazione corrente diff. di non intervento $I_{\Delta no}$
regolazione tempo limite di non intervento Δt_{no}
curva di intervento tempo inverso selezionabile

curva di intervento tempo costante selezionabile

riarmo automatico intervento
contatto di d'intervento
carico nominale

sicurezza

isolamento e sicurezza elettrica
temperatura di funzionamento
temperatura di magazzino
custodia in materiale termoplastico autoestinguente
grado di protezione custodia
grado di protezione morsetti
costruzione a norme

TECHNICAL DATA

display
maximun indication
dot point position
histogram
residual current measure I_{Δ}
display refresh
measurement bandwidth
base precision
selectable
antifibrillation LPF
selectable
3rd harmonic LPF
residual operating current setting $I_{\Delta n}$
residual not operating current setting $I_{\Delta no}$
limiting no-actuating time setting Δt_{no}
selectable inverse
time-current characteristic

selectable constant
time-current characteristic

automatic trip retry
trip contact
nominal load

safety

insulation and safety
operating temperature
storage temperature
self extinguishing thermoplastic material
protection degree for housing
protection degree for terminals
according to

LCD retroilluminato multicolore
multicolor backlight LCD
3 cifre / digits
automatica / automatic
10 livelli /levels (0-100% $I_{\Delta n}$)
tipo / type AC, A, F - TRMS
500ms (valore medio / average value)
2,5Hz - 2500Hz
+/- 0,5%
IEC 62423, VDE 0664-T-100
Attenuazione / attenuation 80% @ 150Hz
30mA - 30A
80% - 98% $I_{\Delta n}$
istantaneo/istantaneous 20ms - 30s
istantaneo / instantaneous $I_{\Delta n} = 30\text{mA}$ (IEC60947-2 Tab.B.1)
selettivo / selective 60ms $I_{\Delta n} > 30\text{mA}$ (IEC60947-2 Tab.B.2)
ritardato / delayed 20ms-30s $I_{\Delta n} > 30\text{mA}$
ritardato / delayed 20ms $I_{\Delta n} = 30\text{mA}$ (IEC60947-2 Tab.B.1)
ritardato / delayed 20ms-30s $I_{\Delta n} > 30\text{mA}$
0-10 tentativi / retries
SPDT (COM, NO, NC)
6A, 250Vac AC1; 6A, 24Vdc DC1
3A, 250Vac AC15; 2A, 24Vdc DC13 (IEC60947-5-1)
standard (ND) o positiva (NE)
standard (ND) or positive (NE)
IEC 61010-1, IEC 60947-1
0...+25...+50°C
-30...+70°C
UL 94-V0
IP20 (X35DL3); IP52 (X48DL3 - X72DL3)
IP20
EN 60947-2 Allegato / Annex M (2007)
EN 62423 (2013)

DESCRIZIONE

I relè differenziali di terra serie X...DL3 sono stati progettati per rilevare in modo intuitivo e automatico le correnti di fuga. La loro particolarità è quella di permettere un controllo continuo e immediato, attraverso il display multicolore, dello stato di isolamento.

Funzioni principali:

- ✓ indicazione digitale continua della corrente dispersa
- ✓ memorizzazione della corrente di intervento
- ✓ orologio interno (ore, minuti, giorno, mese) con memorizzazione ultimi 10 eventi
- ✓ uscita RS485 Modbus RTU, Misure, archivio eventi, oscilloscopio
- ✓ filtro in frequenza antifibrillazione selezionabile
- ✓ filtro in frequenza 3^a armonica selezionabile
- ✓ visualizzazione e misura THD
- ✓ misure in AC fino 2500Hz

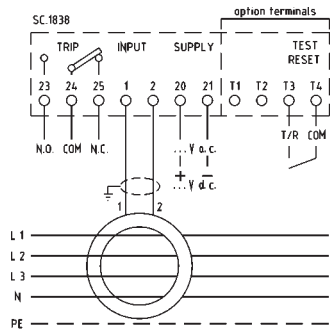
DESCRIPTION

The X...DL3 series earth leakage relays are designed to measure the leakage or unbalanced currents caused by conductors or appliances insulation losses and to react, in case the set limits are exceeded, switching off the power supply to the defective system. Thanks to their distinctive feature (the displaying of the leakage current) it is possible to continuously monitor the insulation state and to program the preventive maintenance in order to avoid unexpected power breaks

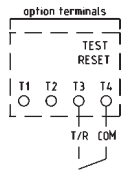
Main function:

- ✓ continuous digital indication of the leakage current
- ✓ storing of the intervention current values
- ✓ internal clock (hours, minute, day, month) and storage of the last 10 events
- ✓ RS485 Modbus RTU output, measurements, event archive, scope
- ✓ selectable antifibrillation filter
- ✓ selectable 3rd harmonic filter
- ✓ measure and display of the THD
- ✓ AC measurements up to 2500Hz

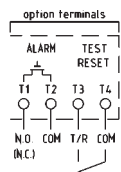
SCHEMI DI INSERZIONE - WIRING DIAGRAMS
X35DL3 - X48DL3



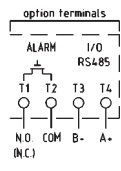
Opzione - Option
Test Reset Input



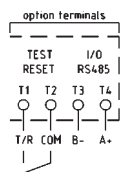
Opzione - Option
Test Reset Input
+
Photo-mos Alarm



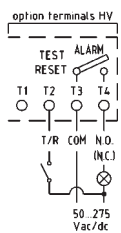
Opzione - Option
RS485 Modbus RTU
+
Photo-mos Alarm



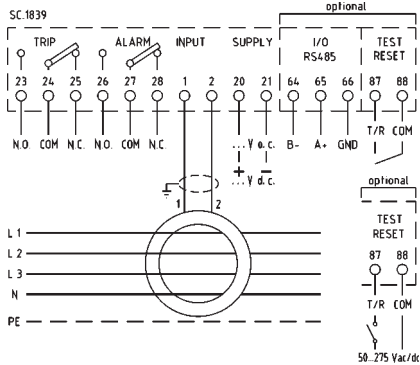
Opzione - Option
RS485 Modbus RTU
+
Test Reset Input



Opzione - Option
HV Test Reset Input
+
Relè Alarm



SCHEMI DI INSERZIONE - WIRING DIAGRAMS
X72DL3



Dati tecnici aggiuntivi

test automatico
presenza sensore

Allarme (opzione)*
regolazione Alarme
ritardo di attivazione
ritardo di rilascio
carico nominale relè*

carico nominale photo-mos

sicurezza

Test-Reset Input (opzione)
chiusura contatto
presenza tensione, opz. HV

Modbus RTU (opzione)
Baud Rate
parametri programmabili
indirizzo programmabile
funzione oscilloscopio

Orologio (opzione)
mem. archivio eventi

* nota

Additional technical data

automatic sensor
connection test

Alarm (option)*
Alarm setting
activation delay
release delay
relay nominal load*

photo-mos nominal load

safety

Test-Reset Input (option)
contact closing
voltage presence, HV option

Modbus RTU (option)
Baud Rate
programmable parameters
programmable address
scope function

Real Time Clock (option)
Archive event store

* note

iniezione corrente sul secondario
secondary current injection

SPST (COM, NO)
OFF - 5+100%I_{Δn}
come intervento / as Trip - 20ms+30s
LATCH - 20ms+30s
6A, 250Vac AC1; 6A, 24Vdc DC1
3A, 250Vac AC15; 2A, 24Vdc DC13 (IEC 60947-5-1)
100mA, 250Vac/dc (CAT II) - 150Vac/dc (CAT III)
350Vpk (including overvoltage)
standard (ND) o positiva (NE)
standard (ND) or positive (NE)

Segnale / command >2s

50+275 Vac/dc da precisare / to be specified

RS485 isolata/insulated, A+, B-, GND (optional)
9600, 19200, 38400, 57600 bps
Parity and Stop bits
1+247
120 campioni a 12bit con scala Ampiezza e tempi
120 samples (12bits), with amplitude and time scales

RTC con/with Battery backup
ultimi 10 eventi, con Timestamp
last 10 events, with Timestamp

relè standard per/for X72DL3....

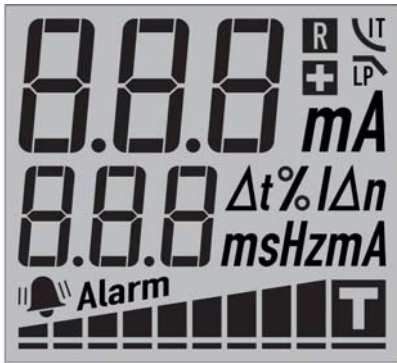
CODICE - CODE

		X	__	D	L	3	__	__	__	__	__
Dimensioni - Size	2 mod. DIN	X	3	5	D	L	3				
	48x48mm	X	4	8	D	L	3				
Range Corrente - Current Range	30mA - 30A	Fn	50-60Hz	(standard)	0	3	0				
	300mA - 300A	Fn	50-60Hz	(standard)	3	0	0				
	30mA - 30A	Fn	400Hz		Q	3	0				
	300mA - 300A	Fn	400Hz		Q	3	C				
Opzioni - Options	Test Reset Input									R	1 0
	Test Reset Input + Photo-mos Alarm									R	1 L
	RS485 Modbus RTU + Photo-mos Alarm									M	1 L
	RS485 Modbus RTU + Test Reset Input									B	1 0
	HV Test Reset Input + Relè Alarm									H	1 1
Alimentazione - Aux.supply	230Vac	±10%;	3VA								2
	20+60 Vac/dc	< 4VA /	2,5W								L
	80+260 Vac/dc	< 6,5VA /	2,5W								H
Orologio - Real TimeClock	no										
	si - yes										C

CODICE - CODE

		X	7	2	D	L	3	__	__	__	__
Range Corrente - Current Range	30mA - 30A	Fn	50-60Hz	(standard)	0	3	0				
	300mA - 300A	Fn	50-60Hz	(standard)	3	0	0				
	30mA - 30A	Fn	400Hz		Q	3	0				
	300mA - 300A	Fn	400Hz		Q	3	C				
Opzioni - Options	Test Reset Input									R	1 1
	HV Test Reset Input									H	1 1
	RS485 Modbus RTU + Test Reset Input									B	1 1
	RS485 Modbus RTU + HV Test Reset Input									A	1 1
Alimentazione - Aux.supply	230Vac	±10%;	3VA								2
	20+60 Vac/dc	< 4VA /	2,5W								L
	80+260 Vac/dc	< 6,5VA /	2,5W								H
Orologio - Real TimeClock	no										
	si - yes										C

VISUALIZZAZIONI - DISPLAY



Riarmo automatico e Curva tempo inverso
Automatic trip retry & Inverse time current curve

Sicurezza positiva e Filtro passa basso
Positive safety & Low pass filter

Corrente differenziale
Residual current measure

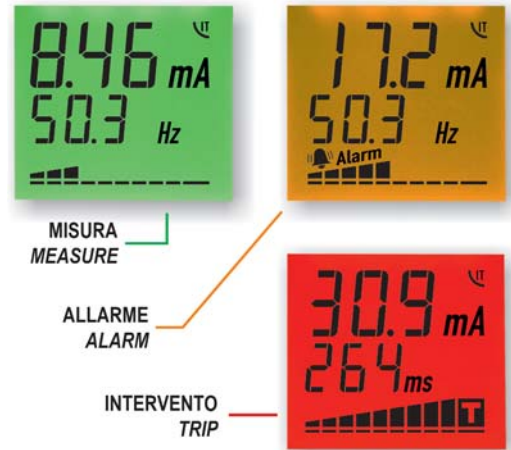
Frequenza - Tempo intervento - Impostazioni
Frequency - Trip delay - Main setting

Barra grafica con icona Trip e Allarme
Bargraph with Trip icon and Alarm

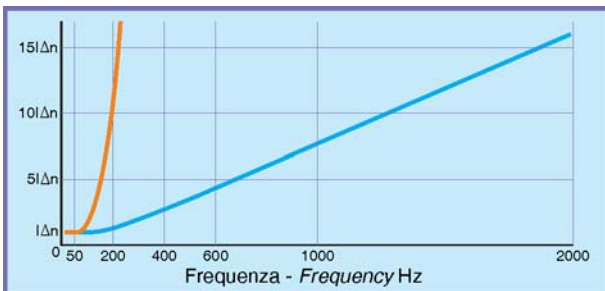


FUNZIONE TASTI - KEYS FUNCTION

Test / Scroll Up - Reset / Scroll Down - Escape / Enter

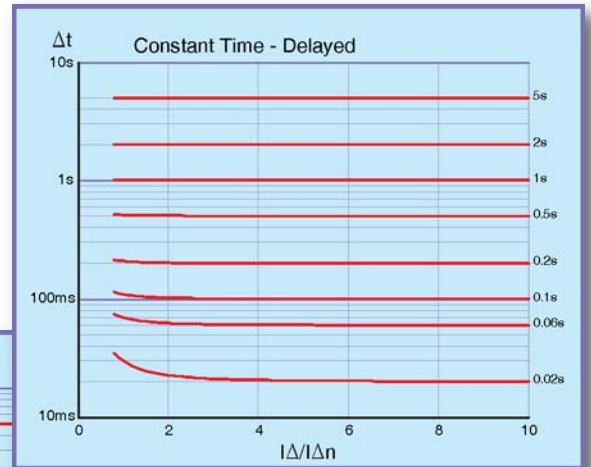
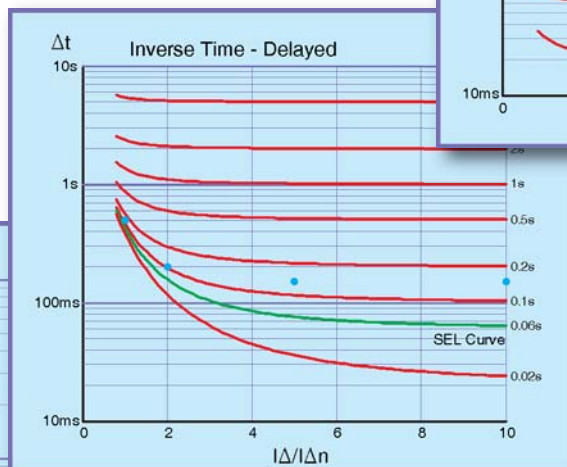
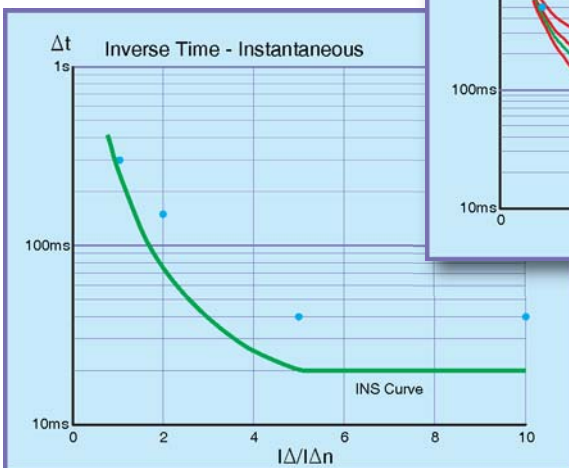


GRAFICI - CHARTS



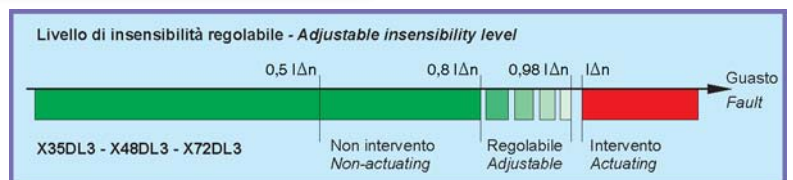
— = Filtro di terza armonica
— = Filtro antibrillazione

— = 3rd harmonic filter
— = Antibrillation filter



EN 60947-2

- = Massima durata di interruzione (INS/SEL)
- = Tempo limite di non intervento (INS/SEL)
- = Tempo limite di non intervento
- = Maximum break time (INS/SEL)
- = Limiting non-actuating time (INS/SEL)
- = Limiting non-actuating time



TRASFORMATORI PER RELE' DIFFERENZIALI DI TERRA - TRANSFORMER FOR EARTH LEAKAGE RELAYS

DIMENSIONI FINESTRA HOLE/WINDOW SIZE	∅ 22,5mm	∅ 24mm □ 32x10	∅ 35mm	∅ 60mm	∅ 80mm	∅ 110mm	∅ 160mm	∅ 210mm	∅ 300mm	∅ 350mm	□ 325x125	□ 470x160
NUCLEO CHIUSO CLOSED CORE	TDC022	TDC032	TDC035	TDC060	TDC080	TDC110	TDC160	TDC210	TDC300	TDC350	TDC321	TDC471
NUCLEO APRIBILE SPLIT CORE						TDA110	TDA160	TDA210				

NEW! NEW!

Dimensioni e dati tecnici vedi catalogo generale - Dimension and technical data see general catalogue



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