

# DBF TECHNICAL SPECIFICATIONS

PROTECTION	
Thermal Capacity:	
Current circuits:	4 x I <sub>n</sub>
Continuously:	50 x I <sub>n</sub>
During 3 sec:	50 x I <sub>n</sub>
During 1 sec:	100 x I <sub>n</sub>
TIMERS	
1 Phase Timers T1:	0.05 - 2 sec in steps of 0.01 sec
3 Phase Timers T2:	0.05 - 2 sec in steps of 0.01 sec
3 Phase W/O Current Timer T3:	0.05 - 2 sec in steps of 0.01 sec
2nd Stage Timer:	0.05 - 2 sec in steps of 0.01 sec
Internal Arc Timer T4:	0.1 - 2 sec in steps of 0.01 sec

METERING	
Frequency:	50/60 Hz
Rated Phase Current:	0.2 - 2.4 I <sub>n</sub> in steps of 0.01 A Range D
Rated Ground Current:	0.1 - 1.2 I <sub>n</sub> in steps of 0.01 A Range D
Auxiliary Voltage:	24 - 48 VDC ± 20% 110 - 250 VDC ± 20%

INPUTS	
Burdens:	
Current Circuits:	0.5 VA for I <sub>n</sub> = 5 A 0.1 VA for I <sub>n</sub> = 1 A
DC Burden:	
During operation:	12 W
Per each activated input:	8 mA/1W, Vaux: 125 VDC

OUTPUTS	
Signalling contacts:	
Contact Capacity:	
Maximum operating voltage:	380 VAC, 250 VDC
Continuous current:	8 A
Make and carry:	8 A
Breaking capacity:	1760 VA
Tripping Contacts:	
Contact Capacity:	
Maximum Operating Voltage:	440 VAC
Continuous Current:	16 A
Make and Carry:	30 A
Breaking:	4000 VA

COMMUNICATIONS	
Local Communication:	LCD alphanumeric display with two lines of 16 characters per line 20 button frontal keypad
Remote Communication (local or remote PC and communication net):	
Mode:	half duplex
Speed:	1200 to 19200 bps
Physical Media:	RS232 (ports 1, 2 and 3) Plastic fiber optic (port 3 optional) Type of connector: HFBR-4516 Power supplied: -8 dBm Receptor's sensitivity: -39 dBm Wave length: 660 nm Glass fiber optic (port 3 optional) Type of connector: STA Power supplied: -17.5 dBm Receptor's sensitivity: -24.5 dBm Wave length: 820 nm Synchronization: IRIG-B
	<ul style="list-style-type: none"> <li>DB9 connector for RS232 ports on the front (1) and on the rear (2)</li> <li>DB9 connector for RS232 port on the rear (3), with 1 mm plastic fiber optic or 50/125 glass fiber optic option</li> </ul>

MECHANICAL CHARACTERISTICS	
	<ul style="list-style-type: none"> <li>Metallic package in 19" rack and 2 units high</li> <li>Frontal MMI with LCD and keypad</li> <li>Six rear terminal blocks</li> <li>Protection class IP52 (according to IEC 529)</li> </ul>

ENVIRONMENTAL	
Temperature:	
Storage:	-40°C to +85°C
Operation:	-20°C to +55°C
Humidity:	Up to 95% without condensing

TYPE TESTS	
Isolation Test Voltage:	2 kV, 50/60 Hz, 1 min
Surge Test Voltage:	5 kV peak, 0.5 J
Interference:	Class III according to IEC 255-22-1
Electrostatic Discharge:	Class IV according to IEC 255-22-2
Radio Interference:	Class III according to IEC 255-22-3
Fast Transient:	Class IV according to IEC 255-22-4
Sinusoidal Vibration:	Class II according to IEC 255-21-1
Shock:	Class I according to IEC 225-21-2
Radio Frequency Emission:	according to IEC 41B (Sec) 81 and EN55022 class B
Emisitivity:	according to EN50081-2(*)
Susceptibility:	according to EN50082-2(*)

PACKAGING	
Dimensions:	3.40" H x 19" W x 10.35" D (87 mm x 483 mm x 263 mm)
Weight:	
Not packaged:	16.08 lbs (6 kg)
Packaged:	18.76 lbs (7 kg)

APPROVALS	
CE	Compliant

\*Specifications subject to change without notice.

## ORDERING

To order select the basic model and the desired features from the Selection Guide below.

DBF	1	*	*	*	*	1	1	1	*	**	A
DBF											
0											DBF Digital Breaker Tripping
1											RS232 communications
2											Plastic fiber optic and RS232 communications
3											Glass fiber optic and RS232 communications
											RS485 and RS232 communications
											Ranges: Phase: I <sub>n</sub> = 1 A (0.2-2.4 A), Ground: I <sub>n</sub> = 1 A (0.2-2.4 A)
											Ranges: Phase: I <sub>n</sub> = 5 A (1-12 A), Ground: I <sub>n</sub> = 1 A (0.2-2.4 A)
											Ranges: Phase: I <sub>n</sub> = 5 A (1-12 A), Ground: I <sub>n</sub> = 5 A (0.5-6 A)
											Ranges: Phase: I <sub>n</sub> = 5 A (0.5-6 A), Ground: I <sub>n</sub> = 1 A (0.2-2.4 A)
											Ranges: Phase: I <sub>n</sub> = 5 A (0.5-6 A), Ground: I <sub>n</sub> = 1 A (0.1-1.2 A)
											P1, P2, P3: M-Link communications protocol
											P1, P2: M-Link protocol; P3: ModBus® RTU communications protocol
											Spanish language
											English language
											48-125 VDC power supply
											110-250 VDC power supply
											Standard model

### Special Models:†

- MOD 04A: Digital inputs voltage: 48 VDC ± 20%
- MOD 05A: DIV: 110 VDC ± 20%
- MOD 06A: DIV: 125 VDC ± 20%
- MOD 07A: DIV: 250 VDC ± 20%

† In the ordering code, the last three digits are to be replaced by the MOD Code. Example: DBF with DIV of 48 VDC: DBF\*\*\*\*111\*04A.

Online ordering is available for this product.

See pages 15 - 18.

www.GEindustrial.com/pm

